

Chapter One

Introduction to Accounting and Business

1.1. Introduction

Accounting is the process of identifying, measuring, recording, classifying, summarizing, interpreting and communicating an organization's economic activities to users for decision making. Accounting has rightly been termed as the **language** of the business. The basic function of a language is to serve as a means of communication. Accounting also serves this function. The main purpose of accounting is to ascertain profit or loss during a specified period and reports operating results for specified period of time, and also to show financial condition or position of the business on a particular date and to have control over the firm's property. Such accounting records are required to be maintained to measure the income of the business and communicate the information so that it may be used by managers, owners, governmental agencies and other interested parties. Accounting is a discipline which records, classifies, summarizes and interprets financial information about the activities of a concern so that intelligent decisions can be made about the concern.

1.2. Nature of Accounting

- (i) Accounting as a service activity: -Its function is to provide quantitative information for economic decision.
- (ii) Accounting as a profession: -A profession is a career that involves the acquiring of a specialized formal education before rendering any service.
- (iii) Accounting as a language: -Accounting is rightly referred to as the "language of business". It is one means of reporting and communicating information about a business.
- (iv) Accounting as science or art:- Science is a systematized body of knowledge. It is also based on some fundamental principles, e.g. the double entry system. Art requires a perfect knowledge, interest and experience to do a work efficiently. Art also teaches us how to do a work in the best possible way by making the best use of the available resources.
- (v) Accounting as an information system: Accounting discipline will be the most useful one in the acquisition of all the business knowledge in the near future.

1.3. Objectives of Accounting

The following are the main objectives of accounting:

- 1. To keep systematic records: Accounting is done to keep a systematic record of financial transactions.
- 2. To protect business properties: provides protection to business properties from unjustified and unwarranted use.
- 3. To ascertain the operational profit or loss: helps in ascertaining the net profit earned or loss suffered on account of carrying the business.
- 4. To ascertain the financial position of the business: The Profit and Loss Account gives the amount of profit or loss made by the business during a particular period.
- 5. To facilitate rational decision making: Accounting takes collection, analysis and reporting of information at the required points of time to facilitate rational decision-making.
- 6. Information System: Accounting functions as an information system for collecting and communicating economic information about the business enterprise.

There are six major steps in accounting process:

1. **Analyzing** - is looking at events, or transactions that have expressed in monetary terms have taken place and thinking about how they affect the business.
2. **Recording** - is entering financial information about events into the accounting system.
3. **Classifying** - is sorting and grouping similar items and /or events rather than merely keeping numerous items and /or events all together.
4. **Summarizing** - is bringing the various similar items of information together to determine a result.
5. **Interpreting** - is deciding the meaning and importance of the information in various reports.
6. **Reporting** - is communicating the results to decision makers.

1.4. Users of Accounting Information

The basic objective of accounting is to provide information which is useful for persons inside the organization and for persons or groups outside the organization. There are two types of users of accounting information's. These are:

1. **Internal Users:** are those persons or groups which are working within the organization. These include management and employees.
2. **External Users:** External users are those groups or persons who are outside the organization for whom accounting function is performed. Those are Investors, Creditors, suppliers, bankers, Consumers, governmental agencies, and etc.

1.5. Types of Business Organizations

An **organization** is a group of individuals who come together to pursue a common set of goals and objectives. There are typically two types of organizations: *business* and *non-business*. A **business organization** sells products or services for profit. A **non-business organization**, such as a charity or hospital, exists to meet various societal needs and does not have profit as a goal. All organizations record, report, and, most importantly, *use* accounting information for making decisions. Three types of businesses operated for profit include service rendering, merchandising, and manufacturing businesses.

1. **Service rendering businesses:** - provide services rather than products to customers.
2. **Merchandising businesses:** - they purchase goods for resale at a profit from other businesses to customers.
3. **Manufacturing businesses:** - change basic inputs into products that are sold to customers.

1.6. Forms of Business Organization

a) Sole proprietorship

A **sole proprietorship** is a business owned by one person. From accounting point of view the affairs of sole proprietorship is separable from the affair of the owner. But from legal point of view, it is not a separate legal entity, which means that the business and the owner are considered to be the same.

b) Partnership

Partnership is a business owned by two or more individuals. From accounting point of view the affairs of sole proprietorship is separable from the affairs of

the owners/ partners like that of sole proprietorship. But from legal point of view, it is not a separate legal entity.

c) Corporation

Corporation is an artificial person created by the law, and it is a separate legal entity. Both from accounting and legal point of view the affairs of the corporation are separable from the affairs of the owners.

A **corporation** is a business owned by one or more owners. The owners are known as shareholders. **Shareholders** own shares of the corporation. **Shares** are units of ownership in a corporation.

1.7. Accounting Principles and Practices

The goal of accounting is to ensure information provided to decision makers is useful. To be useful, information must be relevant and faithfully represent a business's economic activities. This requires **ethics**, beliefs that help us differentiate right from wrong, in the application of underlying accounting concepts or principles. There are underlying accounting concepts or principles, or rules of accounting that are included with in **Generally Accepted Accounting Principles (GAAP)**. There are a number of accounting principles or rules that guide the development of GAAP. These are:

1. **Business Entity concept**: Requires that each economic entity maintains separate records.
Example: A business owner keeps separate accounting records for business transactions of an entity and for personal transactions.
2. **Going Concern concept**: Assumes that the business organizations will be in operation for **indefinite** period of time.
3. **Monetary Unit**: Requires that financial information be communicated in stable units of money.
4. **Time-period or periodicity concept**: implies that the economic activities of an enterprise can be divided into artificial time periods. The life of a business entity should be broken into equal segments of periods for report purpose.
5. **Historical Cost principle**: Requires that each economic transaction be based on original cost. It requires companies to account and report based on acquisition costs rather than at current fair market value for most assets and **liabilities**.
6. **Revenue realization/Recognition principle**: requires companies to record when:
 - ✓ Revenue is realized or realizable and earned, not when cash is received.
 - ✓ Requires that revenues be recorded when earned and not necessarily when cash is received.
 - ✓ This way of accounting is called **accrual basis** of accounting.
7. **Matching principle**: Expenses have to be matched with revenues as long as it is reasonable to do so. It requires that expenses be reported in the period in which they are incurred, not when cash is paid.
8. **Objectivity**: the company financial statements provided by the accountants should be based on objective (factual) evidence.
9. **Materiality concept**: Allows accounting principle to be violated if the effect on the financial statements is so immaterial that users will not be misled. Example, basket/bin purchased can be reported as an expense rather than as an asset

since it is immaterial. But if it makes a difference in decision making, it has to be included in the financial reports because it is material.

10. **Consistency concept:** It means that the company should use the same accounting principles and methods from year to year or for a long period of time. It requires that a business use the same accounting policies and procedures from period to period.
11. **Conservatism:** States that assets, and net income should neither be overstated nor understated in the reports during the prevalence of inflation and deflation respectively. When choosing between two solutions or principles, the one that will likely neither overstate nor understate assets and net income be selected.
12. **Full Disclosure:** If certain information is important to an investor or lender, or to other parties using the financial statements, that information should be disclosed. It requires that accounting information communicate sufficient information to allow users to make knowledgeable decisions.

1.8. The Accounting Equation and Elements of the Equation

The accounting equation is composed of assets and equities. Assets can be categorized into current assets and long term assets as discussed here under. The resources owned by a business are its **assets**. Examples of assets include cash, land, buildings, and equipment. The rights or claims to the assets are divided into two types: (1) the rights of creditors and (2) the rights of owners. The rights of creditors are the debts of the business and are called **liabilities**. The rights of the owners are called **owner's equity**. The following Accounting equation shows the relationship among assets, liabilities, and owner's equity:

$$\text{Assets} = \text{Liabilities} + \text{Owner's Equity}$$

Assets

What is an Asset?

- ✓ **Assets** are economic resources that provide future benefits to the business.
- ✓ Assets are the properties owned by a business enterprise.
- ✓ Examples of assets include cash, accounts receivable, prepaid expenses, equipment, and trucks, and etc.

Liabilities

What is a Liability?

- ✓ A **liability** is an obligation to pay an asset in the future. It is also known as **debt**.
- ✓ Liabilities are debts and obligations owed by the business organizations.
- ✓ Example of liabilities include Account payable, Note payable, unearned revenue, Tax payable etc.

Owner's equity/Shareholders' Equity

What is shareholders' equity?

- o Shareholders' equity represents the net assets owned by the owners (the shareholders).
- o Net assets are assets minus liabilities.
- o It is difference between what is owned (assets) and what is owed (liability).
- o It is also called capital, net worth, net asset and proprietorship.

Revenues

What is revenue?

Revenues are increases in capital due to inflow of resources as the result of business operations such as, provision of services or sales of goods. Example: Sales revenue, service revenue, interest income etc.

Expenses

What is expense?

Expenses are decreases in capital due to outflow of resources as the result of business operations. Example: Salary expense, wages expense, supplies expense etc.

1.9. Business Transactions and Financial Statements

1.9.1. Business transactions

Business transactions are economic events or conditions about business enterprise that must be recorded. Transactions may be identified as **external or internal**. **External transactions** involve economic events between the company and some outside enterprise or party. For example: for Jimma University, purchase of different equipment from a supplier, the payment of monthly rent to the house owner, and collection of fee from students are external transactions. **Internal transactions** are economic events that occur entirely within one company. The use of office supplies illustrates this type of transaction for the Jimma University. The equality of the basic accounting equation must be preserved. Therefore, each transaction must **have a dual effect on the equation**. For example, if an individual asset is increased, there must be a corresponding:

1. Decrease in another asset, or
2. Increase in a specific liability, or
3. Increase in owner's equity.

It follows that two or more items could be affected when an asset is increased. For example, as one asset is increased Br. 30,000, another asset could decrease Br. 18,000, and a specific liability could increase Br. 12,000. Note also that any change in an individual liability or ownership claim is subject to similar analysis.

Transaction Analysis and Accounting Equation

Assume that Mr. Chala establishes a computer programming to be known as Software Gallery(SG).

Transaction-1

Mr. Chala decide to open a computer Programming to be known as Software galley(SG). Assume that Mr. Chala decides to open a computer programming service. On September 1, 2015 he invests \$15,000 cash in the business, which he names Software Gallery (SG).

$$\begin{array}{rclcl} \text{Assets} & = & \text{Liabilities} & + & \text{Owner's Equity} \\ \text{Cash} & & \text{Chala, Capital} & & \\ (1) +15,000 & & + 15,000 & & \\ \$15,000 & = & & & \$15,000 \end{array}$$

There is an increase in the asset Cash, \$15,000, and an equal increase in the owner's equity, Mr. Chala, Capital, \$15,000.

Transaction-2

SG purchases computer equipment for \$7,000 cash.

$$\begin{array}{rclcl} \text{Assets} & = & \text{Liabilities} & + & \text{Owner's Equity} \\ \text{Cash} + \text{Equipment} & = & & + & \text{Chala, Capital} \end{array}$$

$$\begin{array}{rcl}
 \text{Old} & & \\
 \$15,000 & = & \$15,000 \\
 (2) - 7,000 + 7,000 - & & \\
 \text{New} & &
 \end{array}$$

$$\$8,000 + \$7,000 = \$15,000$$

Cash is decreased by \$7,000 and the asset Equipment is increased by \$7,000.

Transaction-3

SG purchased supplies expected to last for several months for \$1,600 from ABC Supply Company.

- ✓ ABC agrees to allow SG to pay this bill next month, in October.
- ✓ This transaction is referred to as a purchase on account or a credit purchase.

$$\begin{array}{rcl}
 \text{Assets} & = & \text{Liabilities} + \text{Owner's Equity} \\
 \text{Cash} + \text{Supplies} + \text{Equip.} & = & \text{Accts. Pay.} + \text{Chala, Capital} \\
 \text{Old } \$8,000 & + \$7,000 = & \$15,000 \\
 (3) \quad + \$1,600 & + \$1,600 & \\
 \text{New } \$8,000 + \$1,600 + \$7,000 & = & + \$1,600 + \$15,000 \\
 \underbrace{\hspace{10em}}_{\$16,600} & & \underbrace{\hspace{10em}}_{\$16,600}
 \end{array}$$

The asset Supplies is increased by \$1,600 and the liability Accounts Payable is increased by the same amount.

Transaction-4

SG receives \$1,200 cash from customers for programming services it has provided.

- ✓ This transaction represents the SG's principal revenue-producing activity.

$$\begin{array}{rcl}
 \text{Assets} & = & \text{Liabilities} + \text{Owner's Equity} \\
 \text{Cash} + \text{Supplies} + \text{Equip.} & = & \text{Accts. Pay.} + \text{Chala, Capital} \\
 \text{Old } \$8,000 + \$1,600 + \$7,000 & = & \$1,600 + \$15,000 \\
 (4) \quad + 1,200 & & + 1,200 \\
 \text{New } \$9,200 + \$1,600 + \$7,000 & = & \$1,600 + \$16,200 \\
 \underbrace{\hspace{10em}}_{\$17,800} & & \underbrace{\hspace{10em}}_{\$17,800}
 \end{array}$$

- ✓ Cash is increased by \$1,200 and Chala Capital is increased by \$1,200.

Transaction-5

SG receives a bill for \$250 from the Daily News for advertising but postpones payment of the bill until a later date.

$$\begin{array}{rcl}
 \text{Assets} & = & \text{Liabilities} + \text{Owner's Equity} \\
 \text{Cash} + \text{Supplies} + \text{Equip.} & = & \text{Accts. Pay.} + \text{Chala, Capital} \\
 \text{Old } \$9,200 + \$1,600 + \$7,000 & = & \$1,600 + \$16,200 \\
 (5) \quad \text{Advertising Expense} & + 250 - 250 &
 \end{array}$$

$$\begin{array}{ccccccc} \text{New} & \$9,200 & + & \$1,600 & + & \$7,000 & = & \$1,850 & + & \$15,950 \\ & \underbrace{\hspace{1.5cm}} & & \underbrace{\hspace{1.5cm}} & & & & & & \\ & & & & & & & \$17,800 & & \$17,800 \end{array}$$

Accounts Payable is increased by \$250 and Chala, Capital is decreased by \$250.

Transaction-6

SG provides \$3,500 of programming services for customers.

- ✓ Cash of \$1,500 is received from customers, and the balance of \$2,000 is billed on account.

$$\begin{array}{ccccccc} \text{Assets} & = & \text{Liabilities} & + & \text{Owner's Equity} \\ \text{Cash} + \text{Accts. Rec.} + \text{Supplies} + \text{Equip.} & = & \text{Accts. Pay.} & + & \text{Chala, Capital} \\ \text{Old} & \$9,200 & + & \$1,600 & + & \$7,000 & = & \$1,850 & + & \$15,950 \\ (6) & + & 1,500 & + & 2,000 & & & & + & 3,500 \\ \text{New} & \$10,700 & + & \$2,000 & + & \$1,600 & + & \$7,000 & = & \$1,850 & + & \$19,450 \\ & \underbrace{\hspace{2.5cm}} & & \underbrace{\hspace{2.5cm}} & & & & & & & \\ & & & & & & & \$21,300 & & & \$21,300 \end{array}$$

- ❖ Cash is increased by \$1,500; Accounts Receivable is increased by \$2,000, and Chala, Capital is increased by \$3,500.

Transaction-7

Expenses paid in cash for September are store rent, \$600; employees' salaries, \$900; and utilities, \$200.

$$\begin{array}{ccccccc} \text{Assets} & = & \text{Liabilities} & + & \text{Owner's Equity} \\ \text{Cash} + \text{Accts. Rec.} + \text{Supplies} + \text{Equip.} & = & \text{Accts. Pay.} & + & \text{Chala, Capital} \\ \text{Old} & \$10,700 & + & \$2,000 & + & \$1,600 & + & \$7,000 & = & \$1,850 & + & \$19,450 \\ (7) & - & 1,700 & \text{Rent Expense} & & - & 600 & & & & \\ & & \text{Salaries Expense} & & - & 900 & & & & & \\ & & & & & & & & \text{Utilities Expense} & & - & 200 \\ \text{New} & & & & & & & & & & \\ \$ & 9,000 & + & \$2,000 & + & \$1,600 & + & \$7,000 & = & \$1,850 & + & \$17,750 \\ & \underbrace{\hspace{2.5cm}} & & \underbrace{\hspace{2.5cm}} & & & & & & & \\ & & & & & & & \$19,600 & & & \$19,600 \end{array}$$

- ✓ Cash is decreased by \$1,700 and Chala, Capital is decreased by the same amount.

Transaction-8

SG pays its \$250 Daily News advertising bill in cash.

$$\begin{array}{ccccccc} \text{Assets} & = & \text{Liabilities} & + & \text{Owner's Equity} \\ \text{Cash} + \text{Accts. Rec.} + \text{Supplies} + \text{Equip.} & = & \text{Accts. Pay.} & + & \text{Chala, Capital} \\ \text{Old} & \$9,000 & + & \$2,000 & + & \$1,600 & + & \$7,000 & = & \$1,850 & + & \$17,750 \\ (8) & - & 250 & & & & & - & 250 & & \end{array}$$

New

$$\begin{array}{ccccccccc} \$8,750 & + & \$2,000 & + & \$1,600 & + & \$7,000 & = & \$1,600 & + & \$17,750 \\ & & \underbrace{\hspace{10em}} & & \underbrace{\hspace{10em}} & & & & & & \\ & & \$19,350 & & \$19,350 & & & & & & \end{array}$$

- ✓ Both Cash and Accounts Payable are decreased by \$250. Since the expense was previously recorded, it is not recorded now.

Transaction 9

The sum of \$600 in cash is received from customers who have previously been billed for services (in Transaction 6).

<u>Assets</u>					=	<u>Liabilities</u>	+	<u>Owner's Equity</u>	
<u>Cash</u>	+	<u>Accts. Rec.</u>	+	<u>Supplies</u> + <u>Equip.</u>	=	<u>Accts. Pay.</u>	+	<u>Chala, Capital</u>	
Old \$8,750	+	\$2,000	+	\$1,600 + \$7,000	=	\$1,600	+	\$17,750	
(9)+ 600	-	600							
New \$9,350	+	\$1,400	+	\$1,600 + \$7,000	=	\$1,600	+	\$17,750	
$\underbrace{\hspace{10em}}_{\$19,350}$						$\underbrace{\hspace{10em}}_{\$19,350}$			

- ✓ Cash is increased by \$600 and Accounts Receivable is decreased by the same amount. Chala, Capital is not increased because the revenue was already recorded.

Transaction 10

Mr. Chala withdraws \$1,300 in cash from the business for his personal use.

<u>Assets</u>					=	<u>Liabilities</u>	+	<u>Owner's Equity</u>	
<u>Cash</u>	+	<u>Accts. Rec.</u>	+	<u>Supplies</u> + <u>Equip.</u>	=	<u>Accts. Pay.</u>	+	<u>Chala, Capital</u>	
Old \$9,350	+	\$1,400	+	\$1,600 + \$7,000	=	\$1,600	+	\$17,750	
(10)- 1,300									
New \$8,050	+	\$1,400	+	\$1,600 + \$7,000	=	\$1,600	+	\$16,450	
$\underbrace{\hspace{10em}}_{\$18,050}$						$\underbrace{\hspace{10em}}_{\$18,050}$			

- ✓ Cash is decreased by \$1,300 and Chala, Capital is also decreased by the same amount. This is not an expense, but rather a withdrawal of owner's equity.

Summary of Transactions

The transactions of Software Gallery (SG) are summarized in the following table to show their cumulative effect on the basic accounting equation.

	Assets				Liability	Owner's equity	
Trans action	Cash +	Account Receivable +	Supplies +	Equipment =	Account payable +	Mr. Chala's Capital	
1	Br. 15,000	+				+Br.15,000	Investment
2	<u>-</u> <u>7,000</u> 8,000			+Br. <u>7,000</u> 7,000		<u>15,000</u>	
3	<u>8,000</u>	+	+ <u>Br.1,600</u> 1,600	<u>7,000</u>	+Br.1,600 <u>0</u> 1,600	<u>15,000</u>	
4	<u>+1,200</u> 9,200	+	<u>1,600</u>	<u>7,000</u>	<u>1,600</u>	+1,200 16,200	Service revenue
5	<u>9,200</u> 0	+	<u>1,600</u> +	<u>7,000</u> 0 =	+250 1,850 +	<u>-250</u> 15,950	Advertis ing expense
6	<u>+1,500</u> 10,700	<u>+2,000</u> 2,000 +	<u>1,600</u>	<u>7,000</u> 0 =	<u>1,850</u>	<u>+3,500</u> 19,450	Service revenue
7	<u>-</u> 1,700	<u>2,000</u> 0 +	<u>1,600</u> +	<u>7,000</u>	<u>1,850</u> 0 +	-600 -900 <u>-200</u> 17,750	Rent Exp. Salaries exp Utility
8	<u>-250</u> 8,750	<u>2,000</u> +	<u>1,600</u> +	<u>7,000</u>	<u>-250</u> 1,600 +	<u>17,750</u>	
9	<u>+600</u> 9,350	<u>-600</u> 1,400 +					
10	-1,300					- 1,300	Drawin gs
	Br.8,050	Br.1,400 +	Br.1,600 +	Br.7,000 =	Br.1,600 +	Br.16,450	
	Br.18, 050				Br.18,050		

1.9.2. FINANCIAL STATEMENTS

After the effect of business transactions has been identified, analysed, recorded, classified, and summarized, the essential information is communicated to users(internal & external). So, financial statements are accounting statements that

communicate accounting information to users. The four principal financial statements are income statement, owner's equity statement, balance sheet and cash flows statements which are prepared from the summarized accounting data:

- ✓ Income Statement: a summary of revenues and expenses of a business entity for a specific period of time such as a month, or a year.
- ✓ Owner's Equity Statement: a summary of the changes in owner's equity of a business entity for a specific period of time such as a month, or a year.
- ✓ Balance Sheet: shows assets, liabilities, and owner's equity at a specific date, or as of specific date.
- ✓ Statement of Cash Flows: indicates cash inflows (receipts) and outflows (payments) for a specific period of time. The primary purpose of a statement of cash flows is to provide financial information about the cash receipts and cash payments of an enterprise for specific period of time. To achieve this purpose and to aid investors, creditors, and others in their analysis of cash, the statement of cash flows reports (1) the cash effects of a company's operations during a period, (2) its investing transactions such as purchase and sales of fixed assets, (3) its financing transactions such as cash investments by the owner, and borrowings and cash withdrawals by the owner, or of the owner.

Software Gallery Income statement For the Month Ended September 30, 2015	
Revenues:	
Service revenue.....	Br 4,700
Expenses:	
Salaries expense.....	Br 900
Rent expense	600
Advertising expense.....	250
Utilities expense.....	<u>200</u>
Total expenses.....	<u>1,950</u>
Net income.....	<u>Br 2,750</u>

Net income of br 2,750 shown on the income statement is added to the beginning balance of owner's capital in the owner's equity statement.

Software Gallery Statement of Owner's equity For the Month Ended September 30, 2015	
Chala, capital, September 1, 2015.....	Br -0-
Add: Investments.....	Br 15,000
Net income.....	<u>2,750</u>
	<u>17,750</u>
Less: Drawings.....	(<u>1,300</u>)
Chala, capital, September 30, 2015.....	Br <u>16,450</u>

Net income of Br 2,750 carried forward from the income statement to the owner's equity statement. The owner's capital of Br 16,450 at the end of the reporting period

is shown as the final total of the owner's equity column of the summary of transactions(Illustration 1-10).

Ending capital=Beginning capital + Net income + Investment - Withdrawals

Where, Net income= Revenue - expenses

Software Gallery
Balance Sheet
September 30,2015

Assets

Cash.....	Br 8,050
Accounts receivable.....	1,400
Supplies.....	1,600
Equipment.....	<u>7,000</u>
Total assets.....	<u>Br 18,050</u>

Liabilities and Owner's equity

Liabilities

Accounts payable.....	Br 1,600
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Owner's equity

Chala, capital.....	<u>16,450</u>
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Total liabilities and Owner's equity.....	<u>Br18,050</u>
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Software Gallery
Statement of Cash Flows

For the Month Ended September 30, 2015

Cash flows from operating activities:

Cash receipt from revenues.....	Br 3,300
Cash payments for expenses.....	<u>(1,950)</u>
Net cash provided by operating activities.....	1,350

Cash flows from investing activities

Purchase of equipment.....	(7,000)
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Cash flows from financing activities

Cash investment by owner.....	Br 15,000
Cash payment for withdrawal.....	<u>(1,300)</u>

Net cash provided by financing activities.....	<u>13,700</u>
Net increase in cash.....	8,050
Cash at the beginning of the period.....	<u>-0-</u>
Cash at the end of the period	<u>Br 8,050</u>

Cash of Br 8,050 on the balance sheet and statement of the cash flows is shown as the final total of the cash column of the Summary of Transactions(Illustration 1-10).

Unit Two

Accounting Cycle for a Service-Giving Business

2.1. Characteristics of Accounts

Accounting Cycle: - is a sequence of procedures used to record, classify and summarize accounting information in financial reports on a regular basis.

Accounts:

- ✓ Are the basic storage units for accounting data and are used to accumulate amounts from similar transactions
- ✓ Are records that kept for the individual asset, liability, capital, revenue, expense, and dividend components
- ✓ An accounting form that is used to record the changes caused by business transactions
- ✓ Account is an individual record or form used to record or to summarize information related to each asset, each liability and each aspect of owner's equity, each expense and revenue.
- ✓ Used to record the changes caused by business transactions
- ✓ Account is a storage bin.

The accounting cycle usually starts from occurrence of business transactions:

- When occurrence or events that are expressed in terms money appears in business transactions, source documents should be prepared.
- After business documents were prepared, it should be recorded in a journal. Recording transactions in the Journal is known as **Journalizing**.
- Then we post it to the ledger accounts. Posting to the ledger is for **classification**
- In order to check our record in a journal and posting in ledgers, we need to use trial balance. This is to **summarize data**.

- After the trial balance is prepared, we need to prepare worksheet. This is *year end procedure*.
- Then financial statement is prepared. This step involves preparation of **financial reports**.
- Closing temporary account follows. *It is year end procedure* and
- Finally post-closing trial balance is prepared. *It is also year end procedure*.

2.2. Classification of Accounts

There are 5 types of Accounts

- 1) Assets
- 2) Liabilities
- 3) Owners' Equity (Stockholders' Equity for a corporation)
- 4) Revenues
- 5) Expenses

1. Assets: is any physical thing (tangible) or right (intangible) that has a value is an asset.

a. Current asset: asset that may reasonably be expected to be realized in cash or sold or used up usually within one year or less through the normal operation of the business.

Example: cash, account receivable, supplies, inventory, short term notes receivable.

b. Plant assets (fixed assets): It is tangible asset used in the business that are of a permanent or relatively fixed nature. Fixed assets include: equipment, machinery, buildings, and land.

2. Liabilities: debts owed to outsiders (creditors).

a. Current liabilities: liabilities due within a short time (usually one year or less) and that are to be paid out of current assets.

Example: account payable, short note payable, salaries payable, interest payable, tax payable, unearned revenue.

b. Long-term liability: liability that will not be due for a comparatively long time (usually more than one year) or company's obligations not expected to be paid within one year (or a longer operating cycle). Example: long-term notes payable, bonds payable, lease liabilities.

3. Owner's equity: residual claim against the business asset after the total liabilities are deducted.

4. Revenues: gross increase in owner's equity as a result of the operation such as sale of merchandize, performance of service to customer, rental of property, lending of money, and other business and professional activities.

5. Expenses: decrease in owner's equity as a result of the operation. And costs that have been consumed in the process of producing revenue are expired costs or expenses.

Drawings: drawings represent account that is used to record the amount of withdrawals made by the owner of sole proprietorship, and partnership form of business organizations. And dividend is used to record payment made to shareholders by a corporation.

Standard form of account has three major parts:

1. The account title and number
2. The left side, which is called the debit side
3. The right side, which is called the credit side.

There are two forms of accounts: two amount columns **account** and four amount column **account**.

Two amount column account:

Account Title: _____ Account No.: _____

Date	Item	Post Ref.	Debit	Date	Item	Post Ref.	Credit

Four-amount column account:

Account Title: _____ Account No.: _____

Date	Item	Post. Ref.	Debit	Credit	Balance	
					Debit	Credit

The following advantages of the four-column account as compared with the two-column are: **The four-column account:**

- 1) provides an easy means of analyzing and examining the accounts,
- 2) presents transactions in their chronological order of occurrence as the journal does, facilitating easy location,
- 3) uses only one date column, saving space and time required for analysis, and
- 4) Makes balance of an account always available after each transaction is transferred to the account.

Accounts are often grouped together in a book form; such a grouping of accounts is called a **ledger**. Thus, accounts are frequently referred to as **ledger accounts**. A skeleton version of a standard form of account, used for ease analysis of account balance is called **T-account**.

The T-account has three parts:

1. The account title
2. Space for recording increases in the amount of the item, and
3. Space for recording decreases in the amount of the item

Title of account	
Left Side	Right side
(Debit side)	(Credit side)

- ✓ The left side of any account is the **debit** side and the right side is called the **credit** side.

2.3. Chart of Accounts

- ✓ A group of accounts for a business entity is called a ledger.
- ✓ Thus, Chart of accounts is the list of accounts with their names and account numbers in the ledger.

- ✓ The accounts are normally listed in the order in which they appear in the financial statements.
- ✓ For example:
 - ↳ The balance sheet accounts are listed first, in the order of assets, liabilities, and owner's equity.
 - ↳ The income statement accounts are then listed in the order of revenues and expenses
- ✓ Outline the order of accounts in the ledger
 - Directory of accounts available in the ledger
 - Each account number has two digits
 - ✓ The 1st digit indicates the major division of the ledger in w/c the account is placed.
 - ✓ Accounts beginning with number:
 - ↳ 1-represents assets;
 - ↳ 2-liability;
 - ↳ 3-Owner's equity (Owner's equity capital and drawings);
 - ↳ 4-Revenue and
 - ↳ 5-Expenses.
- ✓ The 2nd digit indicates the position of account within its division.
 - ✓ The advantage of such numbering system is the later insertion of new accounts in their proper sequence without disturbing other account number.

Chart of Account

Classification

Balance Sheet	Income Statement
---------------	------------------

Account No	Account Title	Account No	Account Title

1. Asset Account: 4. Revenue Account:

- | | |
|-------------------------|---------------------|
| 11. Cash | 41. Sales |
| 12 . Account receivable | 42. Fees earned |
| 13 .Supplies | 43. Interest income |
| 14 .Prepaid Rent | 44. Rent income |
| 15 .Furniture | |

16. Office equipment 5. Expenses Account:

- | | |
|------------------------------|---------------------------|
| 17. Accumulated depreciation | 51. Supplies expense |
| 2. Liability Account: | 52. Salaries expense |
| 21. Account payable | 53. Rent expense |
| 22. Notes payable | 54. Depreciation expense |
| 23 .Salaries payable | 55. Utilities expense |
| 3. Owner's equity Account: | 56. Miscellaneous expense |
| 31. Biftu, Capital | |
| 32. Biftu, Drawing | |
| 33. Income Summary | |

2.4. Rules of Debit and Credit

- When an amount is entered on the left side of an account, it is a debit, and the account is said to be debited.
- When an amount is entered on the right side, it is a credit, and the account is said to be credited.
- The abbreviations for debit and credit are **Dr.** and **Cr.**, respectively.
- Whether an increase in a given item is debited or credited depends on the category of the item.
- By convention, asset and expense increases are recorded as debits, whereas liability, capital, and income increases are recorded as credits.
- Asset and expenses decreases are recorded as credits, whereas liability, capital, and income decreases are recorded as debits. The following tables summarize the rule.

Debit and Credit rules of accounts:

<i>Account</i>	<i>Increase side</i>	<i>Decrease side</i>	<i>Normal Balance</i>
Any Asset	Debit	Credit	Debit
Any Liability	Credit	Debit	Credit
Owner's equity (Capital)	Credit	Debit	Credit
Any Revenue	Credit	Debit	Credit
Any Expense	Debit	Credit	Debit
Owner's drawing	Debit	Credit	Debit

2.5. Normal Balance of an account:

Account balance is the difference between the increase and decrease recorded in an account. The normal balance of all accounts are positive rather than negative because the sum of the increases recorded in an account is usually equal to or greater than the sum of the decreases recorded in the account.

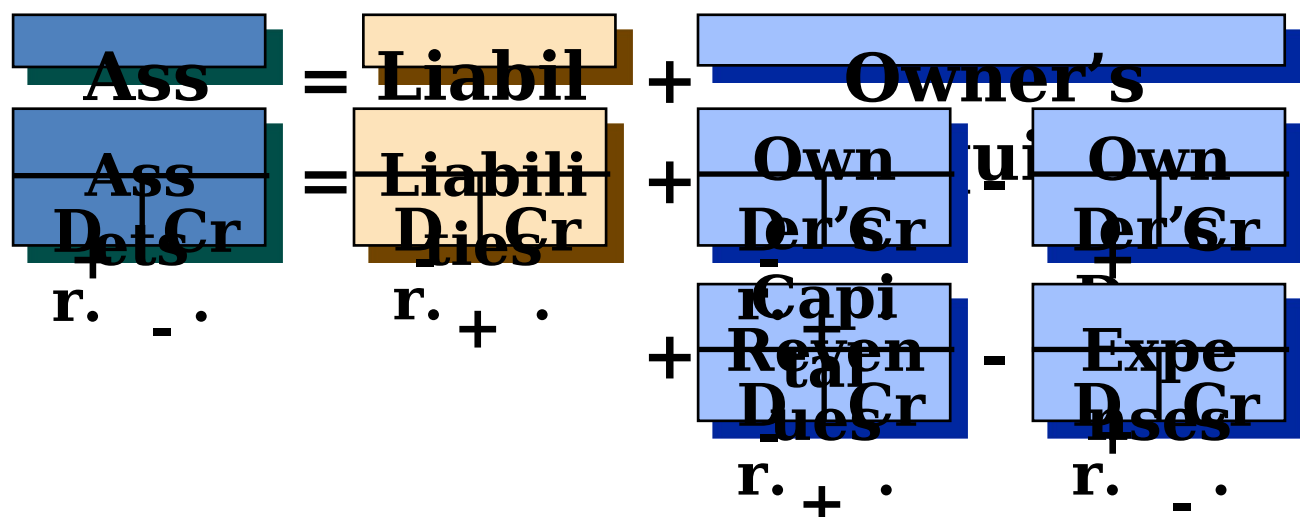
Double-Entry System

- ↳ Equal debits and credits made accounts for each transaction
- ↳ Total debits always equal the total credits
- ↳ Accounting equation always stays in balance
i.e. Assets = Liabilities + Equity

Debit and Credit Effects on Assets, Liabilities, Owners Equity, Revenue, and Expenses

Debits	Credits
Increase assets	Decrease assets
Decrease liabilities	Increase liabilities
Decrease owners equity	Increase Owners equity
Increase drawing	Decrease drawing
Decrease revenue	Increase revenue
Increase expense	Decrease expense

EXPANDED BASIC EQUATION AND DEBIT/CREDIT RULES AND EFFECTS



2.6. Analyzing and Recording Transactions

Journal

The **journal** is the book of original entry for accounting data. Afterward, the data is transferred or posted to the ledger, the book of subsequent or secondary entry. The various transactions are evidenced by sales tickets, purchase invoices, check stubs, and so on. On the basis of this evidence, the transactions are entered in chronological order in the journal.

Thus,

- ✓ Is the book in which the records of business are written.
- ✓ It is a chronological record of events.

General journal:

- ✓ Is the original book of entry
- ✓ Information recorded on this book is usually extracted from the source documents such as invoices, receipts, contracts agreements and many other relevant documents.
- ✓ It would usually show the account to be debited and credited and short description on the transaction.
- ✓ Information on this book will be posted to the ledger.
- ✓ General journal is used to record all kinds of entries

Typically, a general journal has; ***spaces for dates, account titles and explanations, references, and two amount*** columns.

The journal makes several significant contributions to the recording process:

1. It discloses in one place the complete effect of a transaction.
2. It provides a chronological record of transactions.
3. It helps to prevent or locate errors because the debit and credit amounts for each entry can be readily compared.

Special Journals:

- ✓ A journal in which only one kind of business transaction is recorded is a special journal used to record only one type of entries.
- ✓ Special journals differ from the general journal or the combination journal in that they are meant only for specified types of transactions-only one type.

Journalizing

- ↳ The process of recording a transaction in the journal is called ***journalizing***. The entry in the journal is called a ***journal entry***.

The flow of accounting data from the time a ***transaction occurred*** to its recording in the ***ledger*** may be shown in the following diagram. Periodically the journal entries are transferred to the accounts in the ledger. This process of transferring the debits and credits from the journal entries to the accounts is called ***posting***. The flow of a transaction from its authorization to its posting in the accounts is shown in the diagram below

Posting

- ↳ The process of transferring the debits and credits from the journal entries to the accounts in the ledger is called posting
- ↳ The process of transferring information from the journal to the ledger for the purpose of summarizing is called ***posting*** and is ordinarily carried out in the following steps:
 1. Record the amount and date. The date and the amounts of the debits and credits are entered in the appropriate accounts.
 2. Record the posting reference in the account. The number of the journal page is entered in the account.

Illustration of Analyzing and Recording Transactions

To illustrate recording a transaction in an all-purpose journal and posting in a manual accounting system, we will use the following steps:

Step- 1: The date of the transaction is entered in the Date column.

Step -2: The title of the account to be debited is recorded at the left-hand margin under the Description column, and the amount to be debited is entered in the Debit column.

Step-3: The title of the account to be credited is listed below and to the right of the debited account title, and the amount to be credited is entered in the Credit column.

Step-4: A brief description may be entered below the credited account.

Step-5: The PR(Posting Reference) column is left blank when the journal entry is initially recorded. We will use this column later in this chapter when we transfer the journal entry amounts to the accounts in the ledger.

Example:

Nafyad, an Accountant, opened an office on January 1, 2012. During the month, he completed the following transaction related with his professional practice:

January 1. Transferred cash from a personal bank account to an account to be used for the business, \$30,000, equipment \$2,400 and supplies \$400.

Analysis: The three assets accounts, cash, equipment, and supplies increase and debited for \$30,000, \$2,400 and \$400 respectively. The owner's equity in these assets is equal to the sum of assets, i.e.

\$32,800. Then assets debited for the total amount and Nafyad, Capital credited for the same amount.

Step 2

Journal		Step		Page	
1					
Date		Description	PR	Debit	Credit
2012	1	Cash		\$30,00	00
Jan				0	
		Equipment		\$2,400	00
		Supplies		\$400	00
		Nafyad, Capital			\$32,80
					00
		(Investment of Cash, Equipment and Supplies)			

January 4. Purchased used automobile for \$18,300, paying \$16,000 cash and agreed to pay the remaining at the end of this month.

Analysis: The asset automobile increased and debited for \$18,300. On the other hand cash decreased and credited for \$16,000 and account payable increased and credited for \$2,300.

Journal		Page	
1			
Date	Description	PR	Credit

2012 Jan	4	Automobile		\$18,300	00		
		Cash				\$16,000	00
		Account payable				\$2,300	00
(Purchase of Automobile)							

January 5. Paid office rent for month January cash \$400

Analysis: Rent expense increased and debited for \$400: the asset cash decreased and credited for \$400

Journal

Page 1

Date		Description	PR	Debit		Credit	
2012 Jan	5	Rent Expense		\$400	00		
		Cash				\$400	00
(Paid rent for January)							

January 7. Paid cash for supplies \$300

Analysis: The asset supplies increased and debited for \$300 and cash decreased and credited for the same amount.

Journal

Page

1

Date		Description	PR.	Debit		Credit	
2012 Jan	7	Supplies		\$300	00		
		Cash				\$300	00
(Purchased supplies on cash)							

January 8. Purchased office equipment on account \$4,200

Analysis: Asset equipment increased and debited for \$4,200: the liability account payable increased and credited for \$4,200.

Journal

Page

2

Date		Description	PR	Debit		Credit	
2012 Jan	8	Equipment		\$4,200	00		
		Account payable				\$4,200	00
(Purchased Equipment on account)							

January 12. Paid cash for insurance policies for the following 6 months on automobile \$810

Analysis: The asset prepaid insurance increased and debited for \$810: the asset cash decreased and credited for \$810.

Journal

Page

2

Date		Description	PR	Debit		Credit	
2012	1	Prepaid insurance		\$810	0		
Jan	2				0		
		cash				\$810	00
(Paid premium for 6-months policy)							

January 14. Received cash from a client for service delivered, \$5,700

Analysis: Asset cash increased and debited for \$5,700: the revenue fees earned increased and credited for \$5,700.

Journal

Page

2

Date		Description	PR.	Debit		Credit	
2012	1	Cash		\$5,700	0		
Jan	4				0		
		Fees earned				\$5,700	00
(Received fees from customers)							

January 17. Paid cash to creditors on account \$2,100

Analysis: The payment decrease the liability account payable and debited for \$2,100: cash decreased and credited for \$2,100

Journal

Page

2

Date		Description	PR	Debit		Credit	
2012	1	Account payable		\$2,100	0		
Jan	7				0		
		Cash				\$2,100	00
(Paid creditors on account)							

January 25. Paid cash for miscellaneous expense \$120

Analysis: Expenses affect owner's equity: the owner equity decreases by the amount of expense paid. The expense \$120 increased and debited: cash credited for \$120.

Journal

Page 2

Date		Description	PR.	Debit		Credit	
2012	2	Miscellaneous expense		\$120	0		
Jan	5				0		
		Cash				\$120	00
(Paid expenses)							

January 27. Recorded fee earned on account for service delivered, payment to be received in Feb, \$4,500

Analysis: Account receivable increased and debited for \$4,500: fees earned increased and credited for \$4,500

Journal

Page

3

Date		Description	PR.	Debit		Credit	
2012	2	Account receivable		\$4,500	0		
Jan	7				0		
		Fees earned				\$4,500	00
(Recorded fees earned on account)							

January 28. Paid salary of assistant \$1,500

Analysis: Similar to transaction of Jan. 25

Journal

Page

3

Date		Description	PR	Debit		Credit	
2012	2	Salary expenses		\$1,500	0		
Jan	8				0		
		Cash				\$1,500	00
(Paid salary expense for January)							

January 30. Paid account payable \$2,300 for automobile purchased on January 2

Analysis: account payable decreased & debited for \$2,300: cash decreased & credited for \$2,300.

Journal

Page

3

Date		Description	PR	Debit		Credit	
2012	3	Account payable		\$2,300	0		
Jan	0				0		
		Cash				\$2,300	00
(Paid creditors on account)							

January 31. Paid gas, oil, and repairs on automobile for April \$170

Analysis: Similar to transaction of Jan. 25

Journal

Page

3

Date		Description	PR	Debit		Credit	
2012	3	Utility expense		\$2,300	0		
Jan	1				0		
		cash				\$2,300	00
(Paid expense for gas, oil & repairs)							

January 31. Nafyad withdraw Birr 1,200 for personal use.

Analysis: withdrawing affects Owner's equity: Nafyad drawing increased and debited: cash decreased and credited.

Date		Description	Post Ref.	Debit		Credit	
2012	3	Nafyad,		\$2,300	0		
Jan	1	drawing			0		
		Cash				\$2,300	00
(Nafyad withdrew cash for personal use)							

Date		Item	Post Ref.	Debit		Credit		Balance			
								Debit		Credit	
Jan	1		1	\$30,00	0			\$30,00	00		
				0	0			0			
	4		1			\$16,00	00	\$14,00	00		
						0		0			
	5		1			\$400	00	\$13,60	00		
								0			
	7		1			\$300	00	\$13,30	00		
								0			
	12		1			\$810	00	\$12,49	00		
								0			
	14		1	\$5,700	0			18,190	00		
					0						
	17		2			\$2,100	00	16,090	00		
	25		2			\$120	00	\$15,97	00		
								0			
	28		2			\$1,500	00	\$14,47	00		
								0			
	30		2			\$2,300	00	\$12,17	00		
								0			
	31		2			\$170	00	\$12,00	00		
								0			
	31		2			\$1,200	00	\$10,8	00		
								00			

Account: Account Receivable

Account No.

12

Date		Item	Post Ref.	Debit		Credit		Balance			
								Debit		Credit	
	2		2	\$4,50	00			\$4,50	00		
	7			0				0			

Account: Prepaid Insurance
13

Account No.

Date	Item	Po st Ref .	Debit	Credit	Balance			
					Debit		Credit	
	1	1	\$810	00			\$810	00
	2							00

Account: Supplies

Account No. 14

Date	Item	Po st Ref .	Debit	Credit	Balance			
					Debit		Credit	
	1		\$400	00			\$400	00
	7	1	\$300	00			\$700	00

Account: Equipment

Account No. 15

Date	Item	Po st Ref .	Debit	Credit	Balance			
					Debit		Credit	
	1		\$2,400	00			\$2,400	00
	8	1	\$4,200	00			\$6,600	00

Account: Automobile

Account No. 16

Date	Item	Po st Ref .	Debit	Credit	Balance			
					Debit		Credit	
	4	1	\$18,300	00			\$18,300	00

Account: Account Payable

Account No. 21

Date	Item	Po st Ref .	Debit	Credit	Balance			
					Debit		Credit	
	4	1		\$2,300			\$2,300	00
				00				00

	8		1			\$4,200	00			\$6,500	00
	17		2	\$2,100	00					\$4,400	00
	30		2	\$2,300	00					\$2,100	00

Account: Nafyad, Capital

Account No. 31

Date	Item	Post Ref	Debit	Credit	Balance	
					Debit	Credit
	1			\$32,800		\$32,800

Account: Nafyad, Drawing

Account

No. 32

Date	Item	Post Ref	Debit	Credit	Balance	
					Debit	Credit
	31	1	1200		1200	

Account: Fees earned

Account No. 41

Date	Item	Post Ref	Debit	Credit	Balance	
					Debit	Credit
	14	2		\$5,700		\$5,700
	27	2		\$4,500		\$10,200

Account: Rent expense

Account No.

51

Date	Item	Post Ref	Debit	Credit	Balance	
					Debit	Credit
	5	1	400		400	

Account: Salary expense

Account No. 52

Date	Item	Post Ref	Debit	Credit	Balance	
					Debit	Credit

			.								
	2		2	\$1,500	0			\$1,500	0		
	8				0				0		

Account: Utility expense

Account No.

53

Date	Item	Post t Ref	Debit	Credit	Balance	
					Debit	Credit
		.				
	3	2	\$170	0	\$170	0
	1			0		0

Account: Miscellaneous expense

Account No.

54

Date	Item	Post t Ref	Debit	Credit	Balance	
					Debit	Credit
		.				
	2	2	\$120	0	\$120	0
	5			0		0

2.7. Preparing a Trial Balance

The equality of debits and credits in the ledger must be proved at the end of each accounting period. This is made by preparing a trial balance. Trial balance is a summary listing of the titles and balances of the accounts in the ledger.

Trial Balance of NafyadTrading is shown below

NafyadTrading Trial Balance January 31, 2012

Account Title	Debit		Credit	
Cash	\$10,800	00		
Account receivable	4,500	00		
Prepaid insurance	810	00		
Supplies	700	00		
Equipment	6,600	00		
Automobile	18,300	00		
Account payable			2,100	00
Nafyad, Capital			32,800	00
Nafyad, Drawing	\$1,200			
Fees earned			10,200	00
Rent expense	400	00		
Salary expense	1500	00		
Utility expense	170	00		
Miscellaneous	120	00		

	expense				
Total		<u>45,100</u>	00	<u>45,100</u>	00

2.8. The Adjusting Process -Accrual vs cash basis of accounting

Meaning of Adjusting Entries

- ✓ Adjusting entries are entries made at the end of the accounting period to bring the balances of accounts that do not show their true balance to the true balance to be reported on the financial reports.
- ✓ Adjusting entries are required every time financial statements are prepared.

The Need of Adjusting Entries

- ✓ To report all revenues earned during the accounting period, or fiscal period.
- ✓ To report all expenses incurred to produce the revenues earned in the same accounting period, or fiscal period.
- ✓ To accurately report the assets on the balance sheet date. Some assets may have been used up during the accounting period.
- ✓ To accurately report the liabilities on the balance sheet date. (Expenses may have been incurred, but not yet paid.)

Types of Adjusting Entries

The number of adjustments needed at the end of each accounting period/fiscal period(at the end of the month, quarter, semi-annual or at the end of the year) depends entirely upon the nature of the company's business activities. However, most adjusting entries fall in to one of the four general categories:

1. Converting assets to expenses
2. Converting liabilities to revenue
3. Accruing unpaid expenses, and
4. Accruing uncollected revenue

2.8.1 Deferrals:

- ✓ Deferrals are previously recorded assets, liabilities, revenues, or expenses that need to be adjusted at the end of the period to reflect revenues earned or expenses incurred in the current accounting period.
- ✓ Some of the deferred items for which adjusting entry would be made include: prepaid insurance, prepaid rent, office supplies, depreciation, and unearned revenue.

Deferral adjustments are of two types:

1. Prepaid expense (Assets/expense) adjustments
 - ✓ Transfer amounts from asset accounts to expense accounts
2. Unearned revenue (deferred Revenue) implies Liability/revenue adjustments
 - ✓ Transferring amounts from liability to revenue accounts.

1. Converting assets to Expenses /Prepaid Expense Adjustments:

Prepaid expenses are expenses paid in cash and recorded as assets before they are used or consumed. Prepaid expenses expire with the passage of time or through use and consumption.

- An asset-expense account relationship exists with prepaid expenses.
- Prior to adjustment, assets are overstated and expenses are understated.
- The adjusting entry results in a debit to an expense account and a credit to an asset account/ prepaid expenses.

Example 1: Assume that on January 1, Nafyad Trading paid Br 810 for the coming six months including January for insurance coverage. This results in Br 135 insurance premium expiration as of January 31 (the end of the month). Therefore, the following entry would be necessary: Therefore, on January 1, the following journal entry is made:

Date	Journal entry	Debit	Credit
2012 Jan. 1.	Prepaid insurance	810	
	Cash		810

On January 1, the amount paid represents future benefits (insurance coverage) to Nafyad trading. The adjusting entry as of January 31 is to debit Insurance Expense and credit Prepaid Insurance. On January 31, the following adjusting entry is prepared:

Date	Adjusting entry	Debit	Credit
2012 Jan. 31	Insurance Expense	135	
	Prepaid Insurance		135

Example 2: Assume that Nafyad Trading purchased Br 700 of supplies on account and debits Supplies as of January 1, 2012. At the end of January 31 2012, Br 425 of supplies was on hand. The adjusting entry would, therefore, be:

Date	Adjusting entry	Debit	Credit
2012 Jan. 31	Supplies expense	275	
	Supplies		275

2. Converting liabilities (unearned revenue) to Revenue/ Unearned Revenue Adjustments:

These are cash received before providing products or services. The cash received is debited to cash and credited to the liability(unearned revenue) account. Revenues are recorded when the work or service is provided. So, we owe the work - it's a liability. At the end of the period, we reduce the liability to reflect the portion of the work that has been done (this increases a revenue account).

- Unearned revenues are revenues received in advance and recorded as liabilities before they are earned.
- Unearned revenues are subsequently earned by rendering service to a customer.
- A liability-revenue account relationship exists with unearned revenues.
- Prior to adjustment, liabilities are overstated and revenues are understated.
- The adjusting entry results in a debit to a liability account and a credit to a revenue account.

Example: Assume that on December 1, the dental office accepted a Br 2,400 payment from local businesses to provide dental care to their employees over the next three months. The initial entry on December 1 would be as follows:

Date	Journal entry	Debit	Credit
2012 Dec. 1	Cash	2,400.00	
	Unearned Dental Fees		2,400.00

The amount of cash received on December 1 represents what the dental office owes to clients in the future. This is a liability since either the cash received must be returned or the services must be delivered.

From December 1 to December 31, one month of dental service has been provided; Br 800 x 1 month = Br 800 dental fee revenue. The remainder of Br 1,600 (Br 2,400 - Br 800) represents future dental service owed to customer (a liability). December 31 adjusting entry would be:

Date	Adjusting entry	Debit	Credit
2012 Dec. 31	Unearned Dental Fees	800.00	
	Dental Fees Earned		800.00

2.8.2 ACCRUAL ADJUSTMENTS

- ✓ *Accruals* are revenues that have been earned and expenses that have been incurred by the end of the current accounting period, but that will be collected or paid in a future accounting period.
- ✓ Accruals occur when no cash has been received or paid, but the company has undertaken activities that result in earning revenues or incurring expenses.
- ✓ Unlike deferrals, no original entry has been *recorded*.

Examples:-

- Interest earned but not yet collected on a loan: Accrued Interest Receivable (Asset) (or simply Interest Receivable) – *accrued revenue*.
- Wages earned by employees but not yet paid: Accrued Wages and Salaries Payable (Liability) (or simply Wages and Salaries Payable) – an *accrued expense*.

Accrual adjustments are of two types:

- accrued revenue and
- accrued expenses

1. Accruing uncollected Revenue (Accrued Revenue):

- Accrued revenues are revenues earned, but not yet received in cash.
- Accrued revenues may accumulate with the passing of time as in the case of interest and rent, or through services performed, but not billed or collected.
 - ✓ Accrued revenue requires an asset/revenue adjustment
 - ✓ An asset-revenue account relationship exists with accrued revenues.
 - ✓ Prior to adjustment, both assets and revenues are understated.
 - ✓ The adjusting entry results in a debit to an asset account and a credit to a revenue account

To illustrate, consider a 12% note payable (Br. 1500) due on March 31, 2009 was received by your business. The note was received on October 1, 2008. The interest revenue earned on this note until Dec. 31, 2008 is calculated using the following formula:

$$\text{Interest} = \text{Principal} \times \text{Rate} \times \text{Time} = \\ I = PRT$$

Therefore, the interest in this specific case would be,

$$\text{Interest} = 1,500 \times 12\% \text{ per year} = 1,500 \times 12\% \times 3/12 \\ \text{year} \\ = \text{Br. 45}$$

The adjusting entry to record the interest expense incurred in October is:

Date	Adjusting entry	Debit	Credit
2008 Dec. 31	Interest Receivable	45	
	Interest Income		45

2. Accruing unpaid Expenses (Accrued Expense):

- Accrued expenses are expenses incurred, but not yet paid or recorded.
- Accrued expenses result from the same causes as accrued revenues and include interest, rent, taxes, and salaries.
 - ✓ A liability-expense account relationship exists with accrued expenses.
 - ✓ Prior to adjustment, both liabilities and expenses are understated.
 - ✓ The adjusting entry results in a debit to an expense account and a credit to a liability account.

Example: Accrued salaries: Some types of expenses, such as employee salaries and commissions, are paid for after the services have been performed. Assume that at Wisdom Service Company, salaries were last paid on October 26 (Friday); the next payment of salaries will not occur until November 9 (Friday). Three working days remain in October (Oct 29-31).

At October 31, the salaries for these days represent an accrued expense and related liability to Wisdom Company. The employees receive total salaries of Br.2,000 for a five-day workweek, or Br.400 per day.

Thus, accrued salaries at October 31 are Br.1,200 (Br. 400 x 3), and the adjusting entry is:

Date	Adjusting entry	Debit	Credit
Oct. 31	Salaries expense	1,200	
	Salaries payable (To record accrued salaries)		1,200

Depreciation:

- ✓ A portion of cost plant assets, or fixed assets is simply allocated to each accounting period.
- ✓ This process is called **depreciation**.
- ✓ Depreciation is an example of a **deferred expense**. In this case the cost is deferred over a number of years, rather than a number of months. Principles of accounting II will cover depreciation methods in great detail. However, one simple approach is called the straight-line method.
- ✓ Under this method, an equal amount of asset cost is assigned to each year of service life. In other words, the cost of the asset is divided by the years of useful life, resulting in annual depreciation expense.

Example: On January 1, 2012 the company buys Truck for Br 12,000. It expects the Truck to last 5 years. It decides to use the straight line method, with a salvage value (SV) of Br 2,000. The depreciable value is Br 10,000 (Br 12,000 cost - Br 2,000 SV). The annual depreciation expense is Br 2,000 (Br10,000/ 5 years).

At the end of 5 years, the company has expensed Br10,000 of the total cost. The Br2,000 salvage value remains on the books.

General Journal

Date	Journal entry	Debit	Credit
Jan. 1, 2012	Delivery Trucks	Br12,000	
	Cash		Br12,000
	To record purchase of delivery truck		
Dec-31	Depreciation Expense	Br2,000	
	Accumulated Depreciation		Br2,000
	To record depreciation expense for the year		

Book Value & Salvage Value

Book value is the difference between the cost of an asset, and the related accumulated depreciation for that asset

Book Value = Cost - Accumulated Depreciation

Book Value = (Br12, 000 - Br10, 000) = Br2, 000

The company will stop depreciating the truck after the end of the fifth year. The truck cost Br12,000, but only Br10,000 in depreciation expense was taken. The remaining book value is equivalent to the salvage value established when the vehicle was purchased. Book value will be used to calculate any gain or loss when the truck is sold, or traded.

Summary of Adjustment and Their Effects on the Financial Statements

Types of Adjustment	Before Adjustment		Adjusting Entries
	Balance Sheet	Income Statement	
Prepaid Expense (Deferred Expense)	- Asset overstated - Owner's Equity overstated	- Expense Understated - Net Income Overstated	Expense... Dr Asset Cr
Unearned Revenue (Deferred Revenue)	- Liability overstated - Owner's Equity Understated	- Revenue Understated - Net Income Understated	Liability Dr Revenue..... Cr
Accrued Expense	- Liability Understated - Owner's Equity overstated	- Expense Understated - Net Income Overstated	Expense ---- Dr Liability ---- Cr
Accrued Revenue	- Asset Understated - Owner's Equity Understated	- Revenue Understated - Net Income Understated	Asset ---- Dr Revenue ---- Cr
Fixed Assets	- Asset overstated - Owner's Equity overstated	- Expense Understated - Net Income Overstated	Expense ---- Dr Contra Asset ----Cr

Meaning and Importance of Reversing Entries

- ✓ A reversing entry is simply an entry that reverses the debits and the credits of the previous adjusting entry.
- ✓ Reversing entries are *optional*.
- ✓ They are used in order to make the accounting process more consistent or to make later recording of related transaction simpler.

If the company has the accounting policy of preparing reversing entries, the adjusting entries for all accruals and for the deferrals that are **first recorded as expense and revenue** (income statement) accounts are reversed.

2.10. PREPARING A WORKSHEET

A worksheet is a multiple column form that maybe used in the adjustment process & in preparing financial statements. As its name suggests, the worksheet is a working tool. A worksheet is not a permanent accounting record. It is a device used to make it easier to prepare adjusting entries & the financial statements. In small businesses with relatively few accounts & adjustments, a work sheet may not be needed while it is indispensable for large companies with numbers accounts.

There are **five steps** to prepare worksheet

1. Prepare a trial balance on the work sheet
2. Enter the adjustments in the adjustments columns
3. Enter adjusted balances in the adjusted trial balance columns.
4. Extend adjustment trial balance amounts to appropriate financial statement columns
5. Total the statement columns, compute the Net Income /loss, and complete the worksheet

To prepare a worksheet for Nafyad trading, the following adjustments are given.

Adjustment data:

- a. Prepaid insurance is \$675 at the end of January.
- b. At the end of January supplies inventory shows \$425.
- c. Depreciation expense of equipment for the month is \$250.
- d. Depreciation expense of automobile for the month is \$450.

The adjusting entries of NafyadTrading are journalized here under.

2012,Jan. **Adjusting Entries**

31

Insurance expense	135	
Prepaid Insurance		135
Supplies expense	275	
Supplies		275
Depreciation expense- Equipment	250	
Accumulated depreciation- Equip.....		250
Depreciation expense- Automobile	450	
Accumulated depreciation- Automobile		450

**NafyadTrading
Work Sheet**

	Trial balance				Adjustment				Adjusted Trial Balance				Income statement				Balance sheet			
	Debit		Credit		Debit		Credit		Debit		Credit		Debit		Credit		Debit		Credit	
Cash	10,800								10,800	00							10,800	00		
Account receivable	4,500								4,500	00							4,500	00		
Prepaid insurance	810						135(a)	00	675	00							675	00		
Supplies	700						275(b)	00	425	00							425	00		
Equipment	6,600								6,600	00							6,600	00		
Accum dep.- Equipment							250(c)	00			250	00							250	00
Automobile	18,300								18,300	00							18,300	00		
Accum dep.- Automobile							450(d)	00			450	00							450	00
Account payable			2,100	00							2,100	00							2,100	00
Nafyad, Capital			32,800	00							32,800	00							32,800	00
Nafyad, Drawing	1,200								1,200	00							1,200	00		
Fees earned			10,200	00							10,200	00			10,200	00				
Rent expense	400								400	00			400	00						
Salary expense	1500								1500	00			1500	00						
Utility expense	170								170	00			170	00						
Miscellaneous expense	120								120	00			120	00						
Total	45,100		45,100	00																

	00		00																
Insurance expense					135(	00			135	00			135	0					
					a)									0					
Supplies expense					275(	00			275	00			275	0					
					b)									0					
Dep. expense Equip.					250(	00			250	00			250	0					
					c)									0					
Dep. expense Auto.					450(	00			450	00			450	0					
					d)									0					
					111	0	111	0	4580	0	4580	00	3,300		10,2	0			
					0	0	0	0	0	0	0			00	0				
Net income													6,900	0				6,90	0
														0				0	0
Total													<u>10,200</u>	<u>0</u>	<u>10,2</u>	<u>0</u>	<u>42,5</u>	<u>00</u>	<u>42,5</u>
													<u>0</u>	<u>00</u>	<u>0</u>	<u>00</u>		<u>00</u>	<u>0</u>

For the Month Ended January 31, 2012

2.11. PREPARING FINANCIAL STATEMENTS FROM A WORKSHEET

After a worksheet has been completed, all the data that are required for the preparation of financial statements are at hand.

NafyadTrading
Income Statement
For the Month Ended January 31, 2012

Fees earned			10,200	0
Rent expense	400	0		
Salary expense	1500	0		
Utility expense	170	0		
Miscellaneous expense	120	0		
Insurance expense	135	0		
Supplies expense	275	0		
Depreciation expense-Equipment	250	0		
Depreciation expense-Automobile	450	0		
Total expenses			(3,300)	0
Net Income			<u>6,900</u>	<u>0</u>

NafyadTrading
Statement of Owners' Equity
For the Month Ended January 31, 2012

Nafyad, Capital, January 1, 2012			32,800	0
Add: net Income for the month	6,900	0		
Less: withdrawals	1,200	0		
Increase in owner's equity			5,700	0
Nafyad, Capital, January 31, 2012			<u>38,500</u>	<u>0</u>

**Nafyad Trading
Balance Sheet
January 31, 2012**

Assets				
<i>Current Assets</i>				
Cash	10,800	00		
Account receivable	4,500	00		
Prepaid insurance	675	00		
Supplies	425	00		
<i>Total current Assets</i>			16,400	00
<i>Plant Assets</i>				
Equipment	6,600	00		
Less: Accumulated dep.- Equipment	250	00	6350	00
Automobile	18,300	00		
Less: Accumulated dep.- Automobile	450	00	17,850	00
<i>Total plant assets:</i>			24,200	00
<i>Total Assets</i>			<u>40,600</u>	00

			<u>0</u>	0
Liabilities				
Current liabilities:				
Account payable			2,100	0
				0
Owner's Equity				
Nafyad, Capital, January 31, 2012			38,500	0
				0
Total Liabilities and Capital			<u>40,600</u>	0
			<u>0</u>	0

2.12 ADJUSTING AND CLOSING ENTRIES

Adjusting entries: at the end of accounting period or fiscal period in our case at the end of the month adjusting entries appearing in the work sheet are recorded in the journal and posted to the ledger and it is dated as of the last day of the period, even though they are usually recorded at a later date.

The adjusting entries of Nafyad Trading are journalized here under.

Date	Description	Pos t ref.	Debit	Credit
Jan. 31	Adjusting Entries			
31	Insurance expense Prepaid Insurance		13500	13500
31	Supplies expense Supplies		27500	27500
31	Depreciation expense- Equipment Accumulated depreciation- Equip...		25000	25000
31	Depreciation expense- Automobile Accumulated depreciation- Automobile		45000	45000

Closing Entries

An account title income summary is used for summarizing the data in the revenue and expense accounts- it is used only at the end of accounting period and both opened and closed during the closing

process. Other account titles used for the summarizing account are expense and revenue summary, profit and loss summary, and income and expense summary. **Four entries** are required in order to **close the temporary accounts** of NafyadTrading. These are:

1. Each revenue account is debited for the amount of its balance & income summary is credited for the total revenue.
2. Each expense account is credited for the amount of its balance & income summary is debited for the total expense
3. Income summary is debited for the amount of its balance (net income) & the capital account is credited for the same amount.
4. The drawing account is credited for the amount of its balance & the capital account is debited for the same amount.

Closing entries for NafyadTrading is as follows

1.	Fees earned	10,200		
	Income summary	0	10,200	0
2.	Income summary	3,300		
	Rent expense		400	0
	Salary expense		1500	0
	Utility expense		170	0
	Miscellaneous expense		120	0
	Insurance expense		135	0
	Supplies expense		275	0
	Depreciation expense- Equipment		250	0
	Depreciation expense- Automobile		450	0
3.	Income summary	6,900		
	Nafyad, Capital	0	6,900	0
4.	Nafyad, Capital	1,200		
	Nafyad, Drawing		1,200	0

2.13. POST-CLOSING TRIAL BALANCE

The last procedure of the accounting cycle is the preparation of a trial balance after all of the temporary accounts have been closed. It is to make sure that the ledgers are in balance at the beginning of the new accounting period for permanent account, or balance sheet accounts. Balance sheet accounts cannot be closed at the end of fiscal period.

NafyadTrading
Post-closing Trial Balance
January 31, 2012

Assets	Debit		Credit	
<i>Current Assets</i>				
Cash	10,800	00		
Account receivable	4,500	00		
Prepaid insurance	675	00		
Supplies	425	00		
Equipment	6,600	00		
Accumulated dep.- Equipment			250	00
Automobile	18,300	00		
Accumulated dep.- Automobile			450	00
Account payable			2,100	00
Nafyad, Capital			38,500	00
<i>Total</i>	<u>41,300</u>	<u>00</u>	<u>41,300</u>	<u>00</u>

Chapter Three

Accounting for Cash and Receivable

CASH:-is a medium of exchange that the bank accepts for deposit at face value. It is the liquid asset, which ready for immediate use. It includes paper money, coins, certain undeposited negotiable instrument, (such as check, bank draft and money order), amounts in checking and saving accounts and demand certificates of deposit.

Check-is a written instrument signed by the depositor ordering the bank to pay a certain sum of money to the order of designated person. Check is a written order signed by the depositor or authorized person called (drawer), ordering the bank (drawee) to pay specific sum of money to the person designated (payee).

3.1.Control over cash

Cash is the asset most likely to be misused, diverted and misappropriated by employees. Hence, the company should control cash by using Bank account.

Bank account is a means of control over cash. There are various types of bank accounts. The two common ones are:

- i. saving account and
 - ii. Checking account both are demand deposit
- Saving account/deposit/is accounts that pay interest that do not have specific maturity, and that usually withdrawn upon demand.

Bank statement -Bank statement shows the beginning balance, checks, and other debits (deduction by the bank)

and other credits (addition by the bank), and the balance at the end of the period.

Bank statement- is a form prepared by the bank and sent to the depositor to show transactions in the account. The bank statement shows/reports/ the beginning balance, deposit made, checks cleared, charges to the account (e.g. bank service fees), credit to the account (e.g. interest earned on the account balance) and ending balance.

3.2.Bank reconciliation

Sometimes the bank balance(bank statement) and the depositor's balance(depositor's record) are **not** likely to be equal on any specific date because of the following reason:

- i. **Delay by either party** in recording transactions. Ordinarily, there is a time lag of one day or more between the date a check written and the date that the check presented to the bank. The bank may also debit or credit the depositor's account for transactions about w/c the depositor will not be informed until later.

- ii. **Error by either party** in recording transaction

Bank Reconciliation is, therefore, the arrangement/ process of bringing the balance per bank statement and the balance per company books /depositor/ in to agreement.

The following items will be in a time lag between the two parties.

1. Deposits outstanding- these are cash receipts send for deposit to the bank but not received by the bank. Due to this items bank balance is less than depositor's balance.

2. Check outstanding- these are check issued for payment by depositors but not yet paid by the bank. Due to this balance, the bank balance is larger than the balance per depositor's ledger.

3. Bank credit memos- the bank might credit the depositor's balance by collecting receivables or by advancing some amount of loan or the like. The depositor will not have the information concerning these items and depositor's balance is less than bank statement balance.

4. Bank service charge- amounts the bank deducted from the depositor's balance for the services it has rendered during the month. Because of these balance, the balance per depositor's ledger is greater than the balance per bank statement. Bank service charge is supported by bank debit memorandum.

5. A check returned for not sufficient fund (NSF)- a check received from a credit customer is always debited

to the depositor's ledger and sent to the bank for deposit. However, if the credit customer who has issued the check has no sufficient balance in deposit, the check is returned to the depositor marked NSF being deducted from the depositor's balance. Like bank service charge, it is supported by a debit memo and due to this balance, the balance per bank statement is less than the balance per depositor's ledger.

6. Concerning error- either the bank or the depositor might have made errors that have resulted in overstatement or understatement of either balance.

Illustration: 1

The bank statement for ABC company's indicates a balance of \$ 5,039.67 as of July 31. The balance in cash in ABC Company's ledger as of the same date is \$ 3,352.985. Use of the procedures outlined above reveals the following reconciliation items.

Deposit of July 31 not recorded on bank statement.....\$1,224.3

Check outstanding: N^o 813, \$1,591,

N^o 865, \$653.085,

N^o950, \$72.9.....\$2,316.985

Note plus interest of \$12 collected by bank (credit memorandum)

not recorded in cash receipts journal.....\$612

Bank service charge (debit memorandum) not recorded in cash payment-

Journal..... \$4.5

Check N^o 650 for \$ 1,098.39 to Bona Company on account, recorded

in cash payment journal as \$1,084.89\$13.5

Required: prepare Bank reconciliation

ABC Company	
Bank reconciliation	
July 31, 2015	
Balance per bank statement.....	
\$5,039.67	

Add: deposit of July 31 not recorded by bank.....	\$1,224.3
Subtotal	\$6,263.97
Deduct: outstanding check of N ^o 813.....	\$1,591,
N ^o 865.....	\$653.085,
N ^o 950, ...	\$72.9..... 2,316.985
Adjusted balance-	\$
<u>3,946.985</u>	
Balance per depositor's record.....	\$3,352.985
Add: note & interest collected by bank-.....	\$ <u>612</u>
Deduct: bank service charges	4.5
Error in recording check	
13.5.....	\$ <u>18</u>
Adjusted balance	
<u>\$3,946.985</u>	

Entries based on bank reconciliation

After bank reconciliation has been prepared, the depositor to bring its cash in bank account to a correct balance shall record journal entry.

The entries for ABC Company based on the bank reconciliation above are as follows:

July 31 cash in bank.....	612
Notes receivable.....	600
Interest income.....	12
	(To record note collected by bank)
July 31	Miscellaneous expense/ service charge
exp.....	4.5
Account payable.....	13.5
Cash in bank.....	18
(Bank service charge and error in recording check N ^o 650)	

Illustration 2

The records prepared by XYZ Company Shows a balance of cash on deposit at June 30 of \$6,273.855. The bank balance as of June 30 shows \$ 7,500. The purpose of bank reconciliation is to identify the items that make up the

difference of \$ 1,226.145 and to determine the correct cash balance. Assume that the specific steps to be taken in preparing bank reconciliation have been carried out and that the following reconciling items have been discovered:

- a) A deposit of \$466.605 mailed to the bank on June 30 does not appears on the bank statement
- b) A credit memorandum issued by the bank on June 29 in the amount of \$750 was returned with the June bank statement. This credit represents the proceeds of a note receivable. XYZ Company has not yet recorded the collection of the note.

c) Four checks issued in June month have not yet been paid by the bank:

Check N ^o :	Date June	Amount
601	14	150
777	23	15.375
790	25	603.75
795	29	307.5

- d) Debit memorandum issued by the bank on June 30 for a \$ 18 service charge was enclosed with the June bank statement
- e) Check N^o 850 was issued June 22 in the amount of \$ 127.5 but it was erroneously listed on the check sub and in the cash payment journal as \$87. Check in payment of telephone service, was paid by the bank, returned with the June bank statement as of \$87 charge to the account. The cash account is overstated b/c of error in \$40.5. (127.5-87)
- f) No entry has yet been made in XYZ Company's account to reflect the bank's action on June 29 of charging against the NSF check for \$75.375

Required: prepare Bank reconciliation

XYZ company

Bank reconciliation

June 30, 2014

Balance	per	depositor's	June
30,2014.....		\$ 6,273.855	
Add: note receivable collected by the bank.....		\$750.00	
Deduct: bank service charge.....		\$18.00	
:NSF.....			
.....	\$ 75.375		
:Error in check sub N ^o			
850.....		<u>\$40.500</u>	

Adjusted	cash
balance	
<u>\$6,889.98</u>	

Balance	per	bank
statement.....		
\$7,500.00		
Add: deposit of June 30 not recorded by bank.....	\$466.605	
Deduct: outstanding check N ^o -601,777,790, 795.....	<u>\$1,076.625</u>	
Adjusted	cash	
balance.....		
<u>\$6,889.98</u>		

Illustration III

The following data are accumulated for use in reconciling the bank account of Sifancompany.

- Balance per bank statement at Feb 28, \$7,929.50
- Balance per depositor's records at Feb 28, \$6,017.05
- A check for \$230 in payment of a voucher was erroneously recorded in the check register as \$320
- Checks outstanding, \$2,510.40
- Bank debit memorandum for service charges as,\$16.70
- Deposit in transit, not recorded by bank, \$671.25

Required: prepare bank reconciliation

Sifancompany Bank reconciliation Feb 28,2015

Balance per bank statement	\$7929.50	Balance per depositor	\$6017.05
Add: Deposit in transit	<u>\$671.25</u>	Add: Error	<u>\$90.00</u>
Sub-total	8,600.75	Sub-total	\$6,107.05
Deduct: Check outstanding	<u>(\$2,510.40)</u>	Deduct: Bank service charge	<u>(16.70)</u>
Adjusted balance	<u>\$6,090.35</u>	Adjusted balance	<u>\$6,090.35</u>

Controlling cash receipts
Internal control of cash receipts
Retail business receives cash from two main sources:

1. over the counter from cash customer and
2. By mail from charge /credit/ customers making payment on account.

At the end of the business day, each salesclerks counts the cash in the assigned cash drawer and record the amount on the memorandum form. An employee from cashier's department counts the cash and compares the total with memorandum and the tape, noting any differences.

3.3. Petty cash and change fund

Petty cash is a small amount of cash set aside for making minor cash payment for which writing of check is not practicable. In most business, there is a frequent need for the payment of relatively small payment, such as postage, for transportation charge, for purchase of urgently needed supplies at nearby retail stores. Payment by check in such case would result in delay, annoyance, and excessive expense of maintaining the records. Yet because of these small payment may occur frequently and therefore, amount to a considerable total sum, it is desirable to retain close control over such payment. This may be by maintaining special cash fund called petty cash.

Establishing a petty cash fund

To establish a petty cash fund:

- ✓ Estimate the amount of cash needed for disbursements of relatively small amount during the month or week.
- ✓ Prepare a voucher for the amount established and so on.

Illustration

Assume that a petty cash fund of \$100 is established on August one. At the end of August, the petty cash receipts indicate expenditure for the following items.

Office supplies	\$26.00
Postage (office supplies)	24.00
Store supplies	33.00
Newspaper	5.70

To record the establishment and replenishment of the petty cash fund, the entries would be as follows.

August 1	petty cash.....	\$100
	Account payable.....	\$100

August 1	Account payable.....	\$100
----------	----------------------	-------

	Cash in bank.....	
\$100		
Replenishment:		
August 31	Office supplies	50
	Store	
	supplies	33
	Miscellaneous exp (N/paper)	5.7
	Account payable.....	88.7
August 31	Account	
	payable.....	88.7
	Cash in bank.....	88.7

Cash change funds

When a company or retail stores makes most of its sales on a cash basis and some amount of cash is maintained for making changes. Such fund is called change funds. That is, a business that receives directly from customers must maintain fund of currency and coin in order to make change. The journal entry to record the establishment of the change fund debits cash on hand and credits cash in bank for the amount withdrawn from bank and are placed for the custody of the responsible cashier. Sifan company Established change fund of birr 800 on January 2014 and placed it in the hand of the only cashier. In the next day, cash on the hand of the cashier was deposit ticket was prepared for the appropriate amount. The entries to record the above transaction will be:

January 1, 2014	Cash on hand.....	800
	Cash in bank	800
	(To record the change fund established)	

	Cash in bank	birr 1,110.50
	Sales.....	1,110.50
	(To record daily cash sales)	

Cash Short and Over

The amount of cash actually received during a day often does not agree with the record of cash receipts. For example, if the actual cash received from cash sale is less than the amount indicated by register, the entry would debit to cash short and over. Sometimes, the cash collected from daily cash sales may not be equal to the reading of the cash register tape. Such minor differences are believed to arise from making changes and are accounted for in the cash short or over ledger account. If cash collection is greater than sales, cash short and over

is credited, and if cash collection is less than sales, cash short and over is debited.

Cash in bank.....	4,000
Cash short and over.....	50
Sale.....	
.....	4,050

But, when cash actually collected is greater than sale:

	Cash in
bank	660
Sale.....	600
	Cash short and
over.....	60

3.4. CLASSIFICATION OF RECEIVABLE

Receivables are all money claims against people or other entities (debtors). Many companies sell on credit/ on accounts in order to sell more services or goods.

i. **Accounts receivables-** are normally informal claims expected to be collected within a relatively short period, whereas notes receivables are formal, written instruments of credit.

ii. **Note Receivable-** is a written promise to pay a sum of money on demand or at definite period.

If a note and account receivables are originate from sales transactions, they are called **trade** receivable. Non-trade receivables are those other than trade receivables and include interest receivables, rent receivables, loans by the company to other entities and so on. Accounts receivable arise from credit sales to customers by both retailers and wholesalers. The amount of credit sales has increased in recent years, reflecting several factors including an efficient banking system and a sound economy. Merchandising businesses can sell their merchandises either on cash or on credit basis.

Accounts receivable are current assets because by definition, they will be converted to cash within the normal operating cycle.

When sales are made on account, the entry is:

Accounts receivable	XX
Sales revenue.....	XX

3.4.1. Internal control of receivable

3.4.2.Accounting for uncollectible accounts

Indications are as follows: bankruptcy, closing of the business, disappearance of the debtor, & Failure of repeated attempts to collect receivable.

- 1) **Allowance method** which is sometimes called reserve method which provides in advance for uncollectible receivable.
- 2) **Direct write-off** method. It recognizes the expense only when certain accounts are judged worthless.

Illustration: Assume that the accounts receivable account has a balance of \$202,000 at the end of the period. Based on a careful study, it is estimated that a total of \$4000 will eventually prove to be uncollectible. The amount expected to be realized from the accounts is, therefore, \$198,000 net realizable value, and the \$4000 reduction in value is the uncollectible accounts expense for the period. The adjusting entry to record the expense and the reduction in the asset is as follows:

When an account is believed to be uncollectible, it is written off against allowance account as in the following entry:

Allowance for doubtful account\$210
 Account receivable.....\$210

An account receivable that has been written off against the allowance account may later be collected. In such a case, the account should be reinstated by an entry that is the exact reverse of the write-off entry. Assume that the account of \$210 written off in the preceding journal entry is later collected. The entry to reinstate the account would be as follows.

Account receivable.....\$210
 Allowance for doubtful account.....\$210

2.Direct write-off method of accounting for uncollectible

The use of Allowance method, as previously illustrated, result in the uncollectible account expense being reported in the period in which sales are made. This matching of expense with related revenue is the preferred method of accounting for uncollectible receivable. However, there are situations in which it is impossible to estimate, with reasonable accuracy, the uncollectible at the end of the period. It is satisfactory to delay recognition of uncollectibility until the period in which certain amounts are believed to be worthless and are actually written off as an expense. Accordingly, allowance account or an adjusting entry is not needed at the end of the period.

May 10. Uncollectible account expense..... 100
 Account receivable-xy.....100
 (To write-off uncollectible account)

If an account that has been written-off collected, the account should be reinstated.

3.4.3.Estimating uncollectible account expenses (Bad Debts Expense)

Methods of estimating bad debts expense

There are two common methods of estimating uncollectible account or bad debt expense: the amount of sales method, and the age of the receivable accounts at the end of the fiscal period.

1. Estimate based on sales

Account receivable is acquired as a result of sales on account. The amount of such sales during the year may therefore be used to determine the probable amount of

the accounts that will be uncollectible. The amount of this estimate is **added to whatever balance exists in allowance for doubtful accounts**. To illustrate assume that the allowance account has a credit balance of \$700 before adjustment. If it is known `from past experience that about 1% of charge sales will be uncollectible and the charge sales for a certain year amount to \$300,000, the adjusting entry for uncollectible accounts at the end of the year would be as follows:

Dec 31 uncollectible account expense.....3000
 Allowance for doubtful account.....3000

After the adjusting entry is posted, the balance in the allowance account is \$3,700. If there had been a debit balance of \$200 in the allowance account before the year end adjustment, the amount of adjustment would still have been \$3,000. The balance in the allowance account, after adjusting entry is posted, would be \$2,800 (\$3,000-\$200).

The percent of sales method uses statement relations to estimate bad debt expenses. It is based on the idea that a given percent of a company's credit for the period are uncollectible. The income statement would then report that percent as the amount of bad debts expense.

To illustrate, assume ABCcompany has credit sales of Birr 500,000 in 2016. Based on past experience and the experience of similar companies, ABC estimates 0.6% of credit sales are uncollectible. Using this prediction, ABC expect Birr 3,000 of bad debts expense from 2016's sales (computed as Birr 500,000x0.006=Birr 3,000). The adjusting entry to record this estimated expense is:

Dec.31 Uncollectible account expense.....3000
 Allowance for doubtful account.....3000

This entry doesn't mean the December31, 2016 balance in Allowance for Doubtful Accounts will be Birr 3000. A Birr 3000 balance occurs only if the account had a zero balance prior to posting the adjusting entry. For several reasons, the unadjusted balance of Allowance for Doubtful Accounts cannot be zero. Unless a company is in its first period of operations, the allowance account will have a zero balance only if the prior amounts written-off as uncollectible exactly equal to the prior estimated bad debts.

2.Accounts Receivable method

The accounts receivable methods use balance sheet relation to estimate bad debts, primarily, the relation

between accounts receivable and the allowance amount. It is based on the idea that some portion of the end-of period account receivable balance is not collectible. The objective for this bad debts adjusting entry is to make the Allowance for Doubtful Account balance equal to the portion of outstanding account receivable estimated as uncollectible. To obtain this required balance for the Allowance for Doubtful Accounts, we compare its balance before the adjustment with our estimated balance. Account is done in one of two ways: (1) simple estimates of percent uncollectible from the total outstanding account receivable and (2) aging account receivable.

a. Percent Accounts Receivable method

The percent of accounts receivable approach assumes a given percent of a company's outstanding receivable are uncollectible. This estimated percent is based on experience and the experience of similar companies. Current conditions such as recent economic trends and difficulties faced by customers do also have impacts on it. The total dollar amount of all outstanding receivable is multiplied by an estimated percent to get the estimated dollar amount of uncollectible account. This amount is reported in the balance sheet as the balance for allowance for Doubtful Accounts. We prepare an adjusting entry debiting Bad Debts Expense and crediting Allowance for Doubtful Accounts. The amount of adjustment is the amount necessary to give us the required balance in Allowance for Doubtful Accounts.

Assume ABC company had Birr 50,000 of outstanding accounts receivable on December 31, 2015 past experience suggests 5% of outstanding receivable are uncollectible. This means that after the adjusting entry is posted, we want the Allowance for Doubtful Accounts to show a Birr 2,500 credit balance computed as 5% of Birr 50,000=2500). Before the adjustment, the account appears as:

Prior to the December 31, 2015 adjustment, the allowance for doubtful account has a credit balance of Br 200. **The Adjusting entry** to give the allowance the required Birr 2,500 balance is:

Dec. 31 Bad Debts Expense	2,300
Allowance for Doubtful Account.....	2,300

b. Aging of Accounts receivable method

Both the percent of sales (income statement) method and the percent of accounts receivable (balance sheet) method use information from experience to estimate the amount of bad debts expense. Another balance sheet method using receivables information produces a more precise estimate and uses experience and current information. The aging of accounts receivable method examines each account receivable to estimate the amount uncollectible. Receivables are classified by how long they are past their due dates. Then, estimates of uncollectible amount are made assuming the longer an amount is past due the more likely it is to be uncollectible.

In aging accounts receivable outstanding at the end of a period, we examine each account and classify it by how much time has passed since it was due. Classification depends on the judgment of a company's management. However, classes are often based on 30-days (or one-month period). After the outstanding amounts are classified (or aged), experience is used to estimate the percent of each class that is uncollectible. These percents are applied to the amount in each class to get the required balance of the Allowance for Doubtful Account.

Aging of Accounts Receivable

Age Interval	Balance	Estimated uncollectible Amount
Not past due	75,000	2% = 1500
1-30 days past due	4000	5% = 200
31-60 days past due	3100	10% = 310
61-90 days past due	1900	20% = 380
91-180 days past due	1200	30% = 360
181-365 days past due	800	50% = 400
> 365 days past due	300	80% = 240

Total	86,300	Br 3,390
--------------	---------------	-----------------

The longer an accounts receivable remains outstanding, the less likely that it will be collected. In the aging of receivables, an aging schedule is prepared by classifying each receivable by its due date. Based on the above exhibit, the desired balance for the allowance for doubtful accounts is estimated as Br 3,390. Assume that the unadjusted balance of the allowance account is credit balance of Br 510. The amount to be added to this balance is therefore Br 2,880 (3,390- 510).

Then the adjusting entry will be:

Uncollectible accounts expense.....2880

Allowance for doubtful account.....2880

Estimation of uncollectible accounts expense based on aging of receivables emphasizes on the current net realizable value of receivables and hence the amount of uncollectible receivables estimated by aging is the adjusted balance of receivables. Required adjustment for Accounts Receivable is Br.3,390 .

3.5. NOTES RECEIVABLE

Promissory notes are used in many transactions, including paying for products and services, in the lending and borrowing of money, and to pay for accounts receivable. In this section, we will discuss computations of maturity date and maturity value of a note, how to record receipt of a note, how to account for discounting of a note before it matures. We also discuss cases of dishonored note.

Interest bearing note

The typical notes receivable requires the payment of a specified face amount, also called principal, at a specified maturity date or dates. In addition, interest is paid at a stated percentage of the face amount. Interest is the cost of borrowing money for the borrower or the profit for lending money for the lender. Unless otherwise stated, the rate of interest on a note is the rate charged for the use of the principal for one year.

Interest on notes is calculated as: $I = (P)(R)(T)$

Where, I=Interest, P=Principal, R=Annual Interest Rate, and T=Time (Period)

For example-On January 1, 2017, Chilalo Trading sold fertilizers to cooperatives agreeing to accept, Br 700,000, 12-month, 12% notes. The note is payable on December 31, 2017.

The entry is:

Jan-1, 2007 Notes receivable.....700,000

Sales revenue.....700,000

(To record the sale of fertilizers)

Dec, 31, 2017. Cash.....784,000

Notes receivable.....700,000

Interest income (700,000x12%x1yr) ...84,000

(To record the collection of cash at maturity)

Maturity Date and Period

The maturity date of a note is the day on which the note (principal and interest) must be repaid. The period of a note is the time from the date of the note to its maturity date. Many notes mature in less than a full year, and the period covered by them is often expressed in days. When the time of a note is expressed in days, the maturity date is the specified number of days after the date of the note. As an example, a five-day note dated June 15 matures and is due on June 20. A 90-day note dated July 10 matures on October 8. Thus October 8, due date, is computed as shown below:

Maturity Date Computation:

Day in July	3	
	1	
Minus: the date of	<u>1</u>	
the note	<u>0</u>	
Days remaining in		2
July		1
Add: days in August		3
		1
Add: days in		3

September	0	
Days to equal 90 days, or	.	→
Maturity Date, October	<u>8</u>	M atu rity Dat e

Period of the note in	<u>9</u>
days	<u>0</u>

The period of a note is sometimes expressed in months or years. When months are used, the note matures and is payable in the month of its maturity on the same day of the month as its original date. A three-month note, dated July 10, for instance, is payable on October 10. The same analysis applies when years are used.

Receipt of a Note

Notes receivable is usually recorded in a single notes receivable account to simplify record keeping. We need only one account because the original notes are kept on file. This means, that we can understand the maker, rate of interest, due date, and other information by examining the actual note.

To illustrate the recording for the receipt of a note, assume ABC receives a note of the Birr 1,000. 90-day, 12%.

This transaction is recorded as:

July 10 Notes receivable	1,000
Sales.....	1,000
(Sold merchandise in exchange for a 90-day, 12% note)	

Companies also sometimes accept a note from an overdue customer as a way of granting a time extension on a ***past-due account receivable***. When this occurs, a company may collect part of the past-due balance in cash. This partial payment forces a concession from the customer, reduces the customer's debt and produces a note for a smaller amount. ABC, for instance, agreed to accept Birr 400 in cash and a Birr 600, 60-day, 15% note to settle its Birr 1000 past-due account. ABC made the following entry to record receipt of this cash and note:

Oct. 5	Cash.....	400
	Note Receivable.....	600
	Accounts Receivable.....	1,000
	Received cash and note to settle	

Discounting notes Receivable

Although it is not a common transaction, a company in need of cash may transfer its **notes receivable to a bank**. The discount or (interest) charged by the bank is computed on the maturity value of the note for the period of time the bank must hold the note, namely the time that will pass between the date of the transfer and the due date of the note. The amount of the proceeds paid to the endorser is the excess of the maturity value over the discount.

To illustrate, assume that a 90-day, 12% note receivable for \$1,800, dated November 8, is discounted at the payee's bank on December 3 at the rate of 14%. The data used in determining the effect of the transaction are as follows:

Face	value	of	the	note	dated
Nov.8.....					
					\$1,800
Interest	on	note-90		days	at
12%.....					<u>54</u>
Maturity	value	of	note	due	Feb.
6.....					\$1,854
Discount		period-Dec		3	to
Feb.6.....					65days
Discount	on	maturity	value-65	days	at
14%.....					<u>46.87</u>
Proceeds.....					
					<u>.\$1,807.13</u>

The excess of the proceeds received by the endorser from discounting the note, \$1,807.13 over its face value, \$1800, is recorded as interest income. The entry for the transaction, in general journal form, is as follows:

Dec 3.	Cash.....	\$1,807.13
	Note receivable.....	1,800
	Interest income.....	7.13

Honoring and dishonoring a Note

The principal and interest of a note are due on its maturity date. The maker of the note usually honors the note and

pays it in full. But sometimes a maker dishonors the note and does not pay it at maturity.

Recording an Honored Note

We use the ABC note transaction above to illustrate the honoring of a note. When ABC collects a note on its due date, It records its receipt as:

Cash..... 615
 Notes receivable.....600
 Interest income.....15
(Collected note with interest of
 Birr 600 x 15% x 60/360).

Interest Earned, also called Interest Revenue, is reported on the current period's income statement.

Recording a Dishonored Note

When a maker of a note is unable or refuses to pay at maturity, the note is said to be dishonored. The act of dishonoring a note does not relieve the maker of the obligation to pay. The payee should use every legitimate means to collect.

The balance of the Notes Receivable account normally includes only those notes that have not been matured. When a note is dishonored, we, therefore, remove the amount of this note from the notes receivables account and charge it back to an account receivable from its maker. For instance, Hawani holds a Birr 800, 12%, 60-day note of Bontu.

At maturity, Bontu dishonored the note. Hawani records this dishonoring of its notes receivable as follows:

 Accounts receivable-Bontu... 816
 Interest income..... 16
 Notes receivable.....800
 To charge account of Bontu for a dishonored note and
 interest of Birr 800 x 12% x 60/360

Charging dishonored note back to the account of its maker serves two purposes. First, it removes the amount of the note from the notes receivable account, leaving in the accounts that have not been matured. It also records the dishonored note in the maker's account.

Second, and more important, if the maker of the dishonored note applies for credit in the future; his or her account will show all past dealings, including the dishonored note. Restoring the account also reminds the company to continue collection efforts. Note that Bontu

owes both principal and interest. The above entry records the full amount owed in Bontu's account and credits the interest earned. This ensures that interest is included in efforts to collect from Bontu.

When a discounted note receivable is dishonored, the holder usually notifies the endorser of such facts and asks for payment. If the request for payment and notification of dishonor are timely, the endorser is legally obligated to pay the amount due on the note. The entire amount paid to the holder by the endorser, including the interest, should be debited to the account receivable of the maker.

End-of-Period Interest Adjustment

When notes receivable are outstanding at the end of an accounting period, accrued interest is computed and recorded. This recognizes both the interest revenue when it is earned and the added asset (interest receivable) owned by the holder of the note. For instance, on December 16, ABC accepted a Birr 3,000, 60-days, 12% note from a customer in granting an extension on a past-due account. When ABC's accounting period ends on December 31, Birr 15 of interest has accrued on this note ($\text{Birr } 3,000 \times 12\% \times 15/360$). The following adjusting entry records this revenue:

Dec. 31	Interest receivable.....	15
	Interest income	15
	To record accrued interest adjustment.	

This adjusting entry means interest receivable appears on the balance sheet as a current asset.

Presentation of receivables in the balance sheet

Accounts receivables are current assets because they will be converted in to cash with in the current accounting period. Hence, it is reported as current asset in the balance sheet section. However, notes receivables may be classified as current or non-current asset depending on the expected payment dates. Receivables are reported in the balance sheet at net realizable value. Allowance for doubtful account is a contra account to accounts receivable. In the current asset section of the balance sheet, accounts receivable would be reported net of the allowance as follows

	Accounts
receivable.....	450,000
Less: allowance for doubtful account.....	<u>50,000</u>

Balance.....400,000

Chapter Four

Accounting for Inventories

4.1. Meaning and importance of inventories

Inventories are asset items held for sale in the ordinary course of business or goods that will be used or consumed in the production of goods to be sold.

They are mainly divided into two major categories:

- ✓ Inventories of merchandising businesses; and
 - ✓ Inventories of manufacturing businesses
- i. *Inventories of merchandising businesses:* are merchandise purchased for resale in the normal course of business. These types of inventories are called **merchandise inventories**.
 - ii. *Inventories of manufacturing business:* manufacturing businesses are businesses that produce physical output. They normally have three types of inventories. These are:
 - o Raw material inventory
 - o Work in process inventory
 - o Finished goods inventory

1. Raw material inventory - is the cost assigned to goods and materials on hand but not placed into production. Raw materials include the wood to make a chair or other office furniture's, the steel to make a car etc.

2. Work in process inventory- is the cost of raw material on which production has been started but not completed, and the direct labor cost applied specifically to this material and allocated manufacturing overhead costs. In simple terms,

work in process inventory refers to the cost of those items that started in production but not yet completed.

3.Finished goods inventory - is the cost identified with the completed but unsold units on hand at the end of each period. In this chapter, only the determination of the inventory of merchandise purchased for resale commonly called **merchandise inventory** will be discussed.

Importance of Inventories

Merchandise purchased and sold is the most active elements in a merchandising business, i.e. in wholesale and retail type of businesses. This is due to the following reasons:

1. The sale of merchandise is the principal source of revenue for them.
2. The cost of merchandise sold is the largest deductions from sales.
3. Inventories (ending inventories) are the largest of the current assets for those firms.

4.2 Determining actual quantities included in Inventory

Regardless of the system used, the measurement of inventory and the cost of goods sold starts with determining the physical quantities of goods. Determining the physical quantity that should be included in inventory is a simple matter because it consists of items in the possession of the company. The physical count of inventory is needed under both inventory systems. Under periodic inventory system, it is needed to determine the cost of inventory and goods sold.

The inventory account under perpetual inventory systems is always up to date. Yet events can occur where the inventory account balance is different from inventory on hand. Such events include theft, loss, damage, and errors. The physical count (sometimes called "taking an inventory") is used to adjust the inventory account balance to the actual inventory on hand.

We determine a birr amount for physical count of inventory on hand at the end of a period by:

- ✓ Counting the units of each product on hand;
- ✓ Multiplying the count for each product by its cost per unit; and
- ✓ Adding the cost for all products.

At the time of taking an inventory, all the merchandise owned by the business on the inventory date, and only such merchandise, should be included in the inventory. Goods-in-transit, consignment sales and sales returns are important areas that should be considered while taking the physical inventory.

The legal title to the merchandise in transit on the inventory date is known by examining purchase and sales invoices of the last few days of the current accounting period and the first few days of the following accounting period. This legal title depends on **shipping terms** (agreements).

- 1. Goods-in-transit:** At the end of the reporting period, it is important to ensure a proper inventory cut-off. This means determining the ownership of goods that are in-transit between the seller and buyer. The types of shipping terms determine the legal title and the ownership of the items, which are in-transit.

There are two main types of shipping terms. FOB shipping point and FOB destination. FOB stands for 'Free On Board'.

- a. FOB shipping point** - the ownership title passes to the buyer when the goods are shipped (when the goods are loaded on the means of transportation, i.e. at the seller's point). The purchaser is responsible for freight (transportation) charges.

- b. FOB destination** - the title passes to the buyer when the goods arrive at their destination, i.e. at the buyer's point.

Therefore, in general, goods in transit purchased on FOB shipping point terms are included in the inventories of the buyer and excluded from the inventories of the seller. Moreover, goods in transit purchased on FOB destination terms are included in the inventories of the seller and excluded from the inventories of the buyer.

2. Goods on Consignment sale:

Under this arrangement, the goods are physically transferred to the other company called the consignee. It is a special sales transaction where owner (consigner) transfers the products to an agent, called consignee.

There are also problems with goods on consignment at the time of taking inventory. The ownership of consigned items still belongs to the owner not the agent. A consignee agrees to sell the goods for the owner(consigner) usually on commission basis and the consigned items are included in the consigner's inventories and excluded from the consignee's inventories.

4.3: The Effects of Inventories on Financial Statements

What makes inventories special than any of other accounting items is their multidimensional effect. Their effect is not limited in one financial statement or even within a single period. When you complete this section,

you will probably be amazed by the fact that inventory in affecting many accounting calculations, financial statements of different periods.

Effect of Ending Inventory on Current Period's Financial Statements

Ending inventory is the cost of merchandise on hand at the end of the accounting period. Let us see its effect on current period's financial statements.

The effect of ending inventory is reflected in both income statements and balance sheets. First, let us see its effect on the income statement:

Income Statement

a). Ending inventory is used in calculating cost of goods sold in the income statement. ***Cost of goods (merchandise) sold = Beginning inventory + Net purchase - Ending inventory.***

As you see, ending inventory is a deduction in calculating cost of merchandise sold. So, it has an indirect (negative) relationship to cost of merchandise sold, i.e. if ending inventory is understated, the cost of merchandise sold will be overstated, and if ending inventory is overstated, the cost of merchandise sold will be understated.

b). The cost of the merchandises sold will then subsequently be used in calculating the gross profit of the enterprise.

Gross Profit = Net sales - Cost of merchandise sold

Here, the cost of merchandise sold had indirect relationship to gross profit. So, the effect of ending inventory on gross profit is the opposites of the effect on cost of merchandise sold. That is, if ending inventory is understated, the gross profit will be understated and if ending inventory to overstated, the gross profit will be overstated.

c) *Operating income = Gross Profit - Expenses*

Gross profit and operating income have direct relationships. Thus, the effect of ending inventory on net income is the same as its effect on gross profit.

Balance Sheet

Now let us see the effect of ending inventory on the balance sheet. A balance sheet is a financial statement that lists all assets, liabilities and capitals of an organization on a specific date. The ending inventory of an organization affects the two major components of a balance sheet:

1. ***Current Assets*** - Ending inventory is part of current assets, even the largest. Therefore, it has a direct (positive)

relationship to current assets. If ending inventory balance is understated (overstated), the total current assets will be understated (overstated). Since current assets are part of total assets, ending inventory has direct relationship to total assets.

2. **Liabilities:** No effect on liabilities. Inventory misstatement has no effect on liabilities.

3. **Owners' equity** - The net income will be transferred to the owners' equity at the end of accounting period. Closing income summary account does this. Therefore, net income has direct relationship with owners' equity at the end of accounting period. The effect of ending inventory on owners' equity is the same as its effect on net income, i.e. if ending inventory is understated (Overstated), the owners' equity will be understated (Overstated).

Illustration:

The effect of inventory on the Current Period's Statements

An error in the determination of the inventory amount at the end of the period will cause an equal misstatement of gross profit and net income, and the amount reported for both assets and owner's equity in the balance sheet will be incorrect by the same amount. The effects of understatements and overstatements of merchandise inventory at the end of the period are demonstrated in the following three sets of condensed income statements and balance sheets.

The first set of statements is based on a correct ending inventory of \$30,000; the second set, on an incorrect ending inventory of \$22,000; and the third set, on an incorrect ending inventory of \$37,000. In all three cases, net sales are \$200,000, merchandise available for sale is \$140,000, and expenses are \$55,000.

Income Statement for the Year		Balance Sheet at End of Year	
1. Inventory at end of period correctly stated at \$30,000			
Net sales ...	\$200,000	Merchandise inventory	\$30,000
Cost of goods sold.....	110,000	Other assets	80,000
			
Gross profit ...	\$90,000	Total asset	\$110,000

	00		<u>00</u>
Expenses	<u>55</u>	Liabilities.....	\$30
.....	<u>000</u>		,00
			0
Net	<u>\$35</u>	Owner's equity	<u>80</u>
income.....	<u>,00</u>		<u>000</u>
	<u>0</u>		
		Total liability and	<u>\$11</u>
		capital	<u>0,0</u>
			<u>00</u>

2. Inventory at end of period incorrectly stated at \$22,000; (understated by \$8,000).

Net sales	\$20	Merchandise	\$22,00
	0,0	inventory	0
	00		
Cost	118	Other assets	<u>80,000</u>
of mdse	,00		
sold	0		
Gross	\$82	Total assets	
profit	,00		\$
	0		<u>102</u>
			<u>,00</u>
			<u>0</u>
Expenses	<u>55</u>	Liabilities.....	\$30,00
.....	<u>000</u>		0
Net	<u>\$27</u>	Owner's equity ...	<u>72,000</u>
income	<u>,00</u>		
	<u>0</u>		
		Total	
		liab.&Owner's	\$
		equ.	<u>102</u>
			<u>,00</u>
			<u>0</u>

3. Inventory at end of period incorrectly stated at \$37,000; (overstated by \$7,000).

Net sales	\$20	Merchandise	\$37,00
	0,0	inventory	0
	00		
Cost of mdse	103	Other assets ...	<u>80,000</u>
sold	,00		
	0		
Gross profit	\$97	Total	<u>\$11</u>
	,00	assets.....	<u>7,0</u>

	0		<u>00</u>
Expenses ...	<u>55.</u>	Liabilities.....	\$30,00
	<u>000</u>		0
Net income	<u>\$42</u>	Owner's equity	<u>87,000</u>
	<u>.00</u>		
	<u>0</u>		
		Total	
		liab.&Owner'eq	\$
		uity	<u>117</u>
			<u>.00</u>
			<u>0</u>

Note that in the illustration the total cost of merchandise available for sale was constant \$140,000. It was the way in which the cost was allocated that varied.

Effect of Ending Inventory on the Following Period's Financial Statement

The ending inventory of the current period will become the beginning inventory for the following period. So, it will have the same effect as beginning inventory of the current period. Let us summarize it.

Income Statement of the Following Period

- a) Ending inventory is used in calculating cost of goods sold in the income statement. ***Cost of goods (merchandise) sold = Beginning inventory + Net purchase - Ending inventory.***

As you see, ending inventory of the previous period will become beginning inventory of the following period. Therefore, when ending inventory of the current period increases (erroneously), it means that beginning inventory of the next period increases too. Due to this cost of goods sold of the next period increases.

- b) The cost of the merchandises sold of the following period will then subsequently be used in calculating the gross profit of that period.

Gross Profit = Net sales - Cost of merchandise sold

In this case, you have to note that, ending inventory of the previous period has increased cost of goods sold of the following period. Therefore, gross profit of the following period will decrease as cost of the goods sold increase.

- c) ***Operating income = Gross Profit - Operating Expenses***

The effect of ending inventory on the following period's operating income is the same with that of gross profit.

Balance sheet of the following period

The ending inventory of the current period will not have an effect on the following period's balance sheet items. This is because the balance sheet of the following period reports only ending inventory of that period instead of ending inventory of the previous period.

4.4: Inventory Systems: Periodic Vs Perpetual.

You have seen the meaning and effect of inventory on financial statements. The next question that you would probably ask is what techniques we can apply to calculate that balance of inventory. In this section, you are going to see the systems applied to determine cost and physical quantity of inventory.

4.4.1. Periodic Inventory System

There are two principal systems of inventory accounting: periodic inventory and perpetual inventory system.

Under the periodic inventory system, there is no continuous record of merchandise inventory account. The inventory balance remains the same throughout the accounting period, i.e. the beginning inventory balance. This is because when goods are purchased, they are debited to the **purchases** account rather than merchandise inventory account. The revenue from sales is recorded each time a sale is made. No entry is made to record for the cost of goods sold. So, **a physical inventory** must be taken periodically to determine **the cost of inventory on hand and goods sold**.

The periodic inventory system is less costly to maintain than the perpetual inventory system, but it gives management less information about the status of merchandise. This system is often used by retail enterprises that sell many kinds of low unit cost merchandise such as groceries, drugstores, hardware etc.

The journal entries to be prepared are:

1. At the time of purchase of merchandise:

Purchases	XX	
Accounts payable or cash		XX

2. At the time of sale of merchandise:

Accounts receivable, or cash	XX	
Sales		XX

3. To record purchase returns and allowance:

Accounts payable, cash	XX	
Purchase returns and allowance		XX

4. To close beginning inventory:

Income Summary	XX	
----------------	----	--

Merchandise inventory (beginning) XX

5. To record ending inventory:

Merchandise inventory (ending) XX

Income summary XX

4.4.2. Perpetual Inventory System

Under this system the accounting record continuously disclose the amount of inventory. So, the inventory balance will not remain the same in the accounting period. All increases are debited to merchandise inventory account and all decreases are credited to the same account.

There are no purchase returns and allowances accounts in this system. At the time of sale, the cost of goods sold is recorded in addition to Journal entry for the sale. So, we can determine the cost of inventory as well as goods sold from the accounting record. No need of physical counting to determine their costs. Companies that sell items of high unit value, such as appliances or automobiles, tend to use the perpetual inventory system.

Given the number and diversity of items contained in the merchandise inventory of most business, the perpetual inventory system is usually more effective for keeping track of quantities and ensuring optimal customer service. Management must choose the system or combination of systems that is best for achieving the company's goal.

Journal entries to be prepared are:

1. At the time of purchase of merchandise:

Merchandise inventory XX

Accounts payable/cash XX

2. At the time of sale of merchandise

Accounts receivable or cash XX

Sale XX

Cost of goods sold XX

Merchandise inventory XX

To record the cost of merchandise sold

3. To record purchase returns and allowances

Accounts payable, or cash XX

Merchandise inventory XX

No adjusting entry or closing entry for merchandise inventory is needed at the end of each accounting period under **perpetual inventory system**.

Consider the following transactions recorded under periodic and perpetual system

Suppose on January 1, 2016; Chilalo-merchandising company had 120 units of merchandises that cost Br. 8 per Unit. The following transactions were completed during 2016.

February 5: Purchased on credit 150 units of at Br. 10 per unit

February 9: Returned 20 defective units from February 5 purchases to the supplier.

June 15: Purchased for cash 230 units of merchandise at Br. 9 per unit.

September 6: Sold 220 units each at a price of Br. 15 per unit. These goods are 120 units from the beginning inventory and 100 units for February purchases.

December 31: 260 units are left on hand, 30 units from February 5 purchases.

Required: Prepare general journal entries for Chilalo Trading to record the above transactions and adjusting or closing entry for merchandise inventory on December 31.

- Under periodic inventory system, and
- Under perpetual inventory system

Solution

a) Periodic inventory system

February 5; Purchases (150 x Br. 10)	Br1,500
Account payable	Br1,500
February 9: Account payable (20 x Br. 10)	200
Purchase returns and allowance.....	200
June 15; Purchases (230 x Br. 9).....	2,070
Cash	2,070
September 6: Cash (220 x Br. 15)	3,300
Sales	3,300
December 31: To record or close the merchandise inventory account	
Income summary (120 x Br.8)	960
Merchandise inventory (beginning)	960
Merchandise inventory (ending)	2,370
Income summary [(30xBr.10) + (230 x Br. 9)....	2,370

b) Perpetual inventory system

February 5 Merchandise inventory	Br1,500
Accounts payable	Br1,500

February 9:	Accounts payable	200
	Merchandise inventory	200

June 15:	Merchandise inventory	2070
	Cash	2,070

September 6: i) To record the sales

Cash	3,300
------	-------

Sales	3,300
-------	-------

ii) To record cost of merchandise sold

= (120 x Br.8) + (100 x Br.10)

= Br. 960 + Br. 1,000 = Br. 1,960

Cost of merchandise sold	1,960
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Merchandise inventory	1960
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December 31: No entry is needed to record or close merchandise inventory account.

4.5.DETERMINING THE COST OF INVENTORY

In this section, we will discuss the determination of the cost of inventory. Usually, the amount and size of inventories to be recorded and reported are large in number. Due to this, assigning a monetary value for these bulky merchandise inventories could be a complex activity. Considering this fact we will apply various inventory cost flow assumptions. This section discusses about the inventory costing methods and assumptions.

Cost of Merchandise Inventories

Regardless of whether the perpetual or periodic system is used, it is necessary to assign dollar amounts to the physical quantities of goods sold and goods remaining in ending inventory. Unless each item of inventory is specifically identified and traced through the system, assigning dollars is accompanied by making an assumption regarding how goods and their associated costs flow through the system.

Costs included in merchandise inventory are those expenditures necessary, directly or indirectly, to bring an item to a salable condition and location. In other words, cost of an inventory item includes its invoice price minus any discount, plus any added or incidental costs necessary to put it in a place and condition for sale. Added or incidental costs can include import duties, transportation-in, storage, insurance against losses while the goods are in transit, and so on.

Minor costs that are difficult to allocate to specific inventory items may be excluded from inventory cost and treated as operating expenses of the period. This is based on materiality principle or the cost-to-benefit constraint.

4.5.1. Inventory Costing Methods under Periodic Inventory System

One of the most important decisions in accounting for inventory is determining the per unit costs assigned to inventory items. When all units are purchased at the same unit cost, this process is simple since the same unit cost is applied to determine the cost of goods sold and ending inventory.

However, when identical items are purchased at different costs, a question arises as to what amounts are included in the cost of merchandise sold and what amounts remain in inventory. I think you recall that a periodic inventory system determines cost of merchandise sold and inventory at the end of the period. We must record cost of merchandise sold and reductions in inventory as sales occur using a perpetual inventory system. How we assign these costs to inventory and cost of merchandise sold affects the reported amounts for both systems.

There are **four methods** commonly used in assigning costs to inventory and cost of merchandise sold. These are:

- ✓ Specific identification
- ✓ First-in-first-out (FIFO)
- ✓ Last-in-first-out (LIFO)
- ✓ Weighted average

Inventory costing methods under periodic inventory system

Illustration:

Hawani Company has the following merchandises:

Jan-1	Beginning inventory		80 units@ Br. 60=	Br.4, 800
Feb. 16	Purchase		400 units@ 56=	22,400
Sep. 2	Purchase		160 units@ 50=	8,000
Nov. 26	Purchase		320 units@ 46=	14,720
Dec. 4	Purchase		<u>240</u> units@ 40=	<u>9,600</u>
Total		<u>1200</u> Units		Br. <u>59,520</u>

The ending inventory consists of 400 units.

1. Specific Identification Method

When each item in inventory can be directly identified with a specific purchase and its invoice, we can use specific

identification (also called specific invoice pricing) to assign costs. This method is appropriate when the variety of merchandise carried in stock is small and the volume of sales is relatively small. We can specifically identify the items sold and the items on hand.

Example

From the above illustration, the ending inventory consists of 400 units, 100 units from each of the last purchases. So, the items on hand are specifically known from which purchases they are:

Cost of ending inventories under specific identification method.

Br. 40 x 100	=	Br.4,000
Br. 46 x 100	=	4,600
Br. 50 x 100	=	5,000
Br. 56 x 100	=	<u>5,600</u>
<u>400 units</u>		<u>Br.19,200</u>

Cost of Ending inventory cost = Br. 19,200

The cost of merchandise sold = Cost of goods available for sale - Ending inventory

$$= \text{Br. } 59,520 - \text{Br. } 19,200 = \text{Br. } \underline{\underline{40,320}}$$

2. First-in, First-out (FIFO)

This method of assigning cost to inventory and the goods sold assumes inventory items are sold in the order acquired. This means the cost flow is in the order in which the expenditures were made. So, to determine the cost of ending inventory, we have to start from the most recent purchase and continue to the next recent. Because the first purchased items (old purchases) are the first to be sold they are used (included) in the computation of cost of goods sold.

For example, easily spoiled goods such as fruits, vegetables etc., must be sold near the time of their acquisition. So, the inventory on hand will be from the recent purchases. As an example, consider the previous illustration.

The cost of ending inventory under FIFO method

= Br. 40 x 240	=	9,600
= Br. 46 x <u>160</u>	=	<u>7,360</u>
400 units		<u>Br.16,960</u>

Cost of Ending inventory: Br.16,960

Cost of merchandise sold = Br.59, 520 -Br.16,960
= Br.42,560

3. Last-in, first-out (LIFO)

This method of assigning cost assumes that the most recent purchases are sold first. Their costs are charged to cost of goods sold, and the costs of the earliest purchases are assigned to inventory. The cost flow is in the reverse order in which expenditures were made.

In calculating the cost of goods sold, we will start from the earliest purchases.

As an example, take the previous illustration

The cost of ending inventory under LIFO method

$$= \text{Br. } 60 \times 80 = \text{Br. } 4,800$$

$$= \text{Br. } 56 \times \frac{320}{400} = 17,920$$

$$\text{Ending inventory cost} = \text{Br. } \underline{22,720}$$

$$\begin{aligned} \text{Cost of merchandise sold} &= \text{Br. } 59,520 - \text{Br. } 22,720 \\ &= \text{Br. } \underline{37,000} \end{aligned}$$

4. Weighted Average Method

This method of assigning cost requires computing the average cost per unit of merchandise available for sale. That means the cost flow is an average of the expenditures.

To calculate the cost of ending inventory, we will calculate first the cost per unit of goods available for sale.

$$\text{Cost of goods available for sale}$$

$$\text{Average cost per unit} = \frac{\text{Total units available for sale}}$$

Then the weighted average unit cost is multiplied by units on hand at the end of the period to calculate the cost of ending inventory. Also, the same average unit cost is applied in the computation of cost of goods sold.

$$\text{Weighted average unit cost} = \frac{\text{Br. } 59,520}{1,200} = \text{Br. } 49.60$$

$$\text{Ending inventory cost} = \text{Br. } 49.60 \times 400 = \text{Br. } \underline{19,840}$$

$$\begin{aligned} \text{Cost of merchandise sold} &= \text{Br. } 59,520 - \text{Br. } 19,840 \\ &= \text{Br. } \underline{39,680} \end{aligned}$$

4.5.2 Comparison of Inventory Costing Methods

If the cost of units and prices at which they are sold remains stable, all the four methods yield the same results. However, if prices change, the three methods usually yield different amounts for:

- ✓ Ending inventory
- ✓ Cost of merchandise sold
- ✓ Gross profit or net income

In periods of rising (increasing) prices: (or if there is inflationary trend):

a. FIFO yields - Higher ending inventory

- Lower cost of merchandise sold

- Higher gross profit (net income)

- b. LIFO yields** - Lower ending inventory
 -Higher cost of merchandise sold
 -Lower gross profit (net income)
- c. Weighted average** yields the results between the two.
- In periods of declining (decreasing/ deflationary) prices**
- a. FIFO yields** -Lower ending inventory
 -Higher cost of merchandise sold
 -Lower gross profit or net income
- b. LIFO yields** - Higher ending inventory
 -Lower cost of merchandise sold
 -Higher gross profit or net income
- c. Weighted average** - yields results that fall between the values of FIFO and LIFO

4.5.3. Inventory Costing Methods under Perpetual Inventory System

Under perpetual inventory system, we will apply the inventory costing methods each time sale of merchandise is made. We calculate the cost of goods (merchandises) sold and inventory on hand at the time of each sale. This means the merchandise inventory account is continually updated to reflect purchase and sales.

Illustration:

The beginning inventory, purchases and sales of Chilalo Company for the month of January were as follows:

		Units	Unit Cost
Jan. 1	Inventory	15	Br. 10.00
6	Sale	5	
10	Purchase	10	Br. 12.00
20	Sale	8	
25	Purchase	8	Br. 12.50
27	Sale	10	

3	Purchase	15	Br.14.
0			00

1. First-in, First-out Method (FIFO)

Assignment of costs to goods sold and inventory-using FIFO is the same for both the perpetual and periodic inventory systems. Because each withdrawal of goods is from the oldest stock/inventory on hand. The oldest is the same whether we use periodic inventory system or perpetual inventory system. Let us calculate the cost of goods sold and ending inventory under perpetual inventory system from the above illustration.

Perpetual - FIFO

Date	Purchase			Cost of merchandise sold			Inventory balance		
	Qty	Unit Cost	Total cost	Qty	Unit cost	Total cost	Qty	Unit cost	Total cost
Jan.1							15	10.00	150.00
6				5	Br.10.00	Br.50.00	10	10.00	100.00
10	10	Br.12.00	Br.120.00				10	10.00	100.00
							10	12.00	120.00
20				8	10.00	80.00	2	10.00	20.00
							10	12.00	120.00
25	8	12.50	100.00				2	10.00	20.00
							10	12.00	120.00
							8	12.50	100.00
27				2	10.00	20.00	2	12.00	24.00
				8	12.00	96.00	8	12.50	100.00
30	15	14.00	210.00				2	12.00	24.00
							8	12.50	100.00
							15	14.00	210.00
				23		Br.246.00	25		Br.334.00

So, the cost of merchandise sold and ending inventory under perpetual - FIFO method are Br. 246 and Br. 334 respectively.

Let us see them under periodic - FIFO method:

$$\begin{aligned}\text{Units on hand} &= \text{units available for sale} - \text{units sold} \\ &= (15 + 10 + 8 + 15) - (5 + 8 + 10) \\ &= 48 - 23 = \underline{25}\end{aligned}$$

$$\text{Cost of ending inventory} = \text{Br. } 14 \times 15 = \text{Br. } 210$$

$$\text{Br. } 12.50 \times 8 = 100$$

$$\begin{aligned}\text{Br. } 12 \times 2 &= \underline{24} \\ &= \text{Br. } \underline{334}\end{aligned}$$

$$\begin{aligned}\text{Cost of goods available for sale} &= \text{Br. } 15 \times 10 + \text{Br. } \\ 120 &+ \text{Br. } 100 + \text{Br. } 210 = \text{Br. } \underline{580}\end{aligned}$$

$$\begin{aligned}\text{Cost of goods sold} &= \text{Br. } 580 - \text{Br. } 334 \\ &= \text{Br. } \underline{246}\end{aligned}$$

So, the same results of cost of goods sold and ending inventory under both periodic inventory systems.

2. Last-in, First-out Method (LIFO)

Unlike FIFO method, different results may occur under periodic and perpetual inventory system. The most recent purchase change when new purchase occurs.

Let us calculate first the cost of goods sold and ending inventory for the above illustration under perpetual inventory system. Then, we will see the results under periodic inventory system.

Perpetual - LIFO

Date	Purchase			Cost of merchandise sold			Inventory balance		
	Qty	Unit Cost	Total cost	Qty	Unit cost	Total cost	Qty	Unit cost	Total cost
Jan. 1							15	10.00	150.00
6				5	Br.10.00	Br.50.00	10	10.00	100.00
10	10	Br.12.00	Br.120.00				10	10.00	100.00
							10	12.00	120.00
20				8	Br.12.00	96.00	10	10.00	100.00
							2	12.00	24.00
25	8	12.50	100.00				1	10.00	100.00
							0	12.00	24.00
							2	12.50	100.00
							8		
27				8	12.50	100.00	1	10.00	100.00
				2	12.00	24.00	0	0	
30	15	14.00	210.00				10	10.00	100.00
							15	24.00	210.00
				23		Br.270.00	25		Br.310.00

So, the cost of merchandise sold and ending inventory under LIFO perpetual inventory system are Br.270 and Br. 310 respectively.

The results under periodic inventory system are:

Cost of ending inventory = Br. 10 x 15 = Br. 150

= Br 10 x 12= Br 120

Br. 270

Cost of merchandise sold = Br. 580 - 270

= Br.310

As you see, the results are different under periodic & perpetual inventory systems.

3. Weighted Average Cost Method

Under this method, the average unit cost is calculated each time purchased is made to be applied on the sales made after the purchases. The results may be different under periodic and perpetual inventory system.

Let us calculate the cost of merchandise sold and ending inventory comes out from the previous illustration under perpetual inventory system.

Weighted average Cost Method (Moving Average)

Date	Purchase			Cost of merchandise sold			Inventory balance		
	Qty	Unit Cost	Total cost	Qty	Unit cost	Total cost	Qty	Unit cost	Total cost
Jan. 1							15	10.00	150.00
6				5	Br.10.00	Br.50.00	10	10.00	100.00
10	10	Br.12.00	Br. 120.00				20	11.00 <u>=100+120</u> 10+10	220.00
20				8	Br.11.00	88.00	12	11.00	132.00
25	8	12.00	100.00				20	11.60 <u>132+100</u> 12+8	232.00
27				10	11.60	116.00	10	11.60	116.00
30	15	14.00	210.00				15	13.04 <u>116+210</u> 10+15	326.00
				23		Br.254.00	25	Br.13.04	Br.326.00

So, the cost of goods sold and ending inventory under perpetual inventory system are Br. 254.00 and Br. 326.00, respectively.

The results under periodic inventory system are:

$$\text{Weighted average unit cost} = \frac{\text{Br. } 580}{48} = \text{Br. } 12.08$$

$$\text{Ending inventory cost} = \text{Br. } 12.08 \times 25 \\ = \text{Br. } 302$$

$$\text{Cost of merchandise sold} = \text{Br. } 580 - \text{Br. } 302 \\ = \text{Br. } \underline{278}$$

So, the result is different under periodic and perpetual inventory systems.

4.6. Additional valuation problems for inventories

4.6.1: Inventory Valuation: Lower of Cost or Market (LCM) Method

Inventory valuation is:

It was explained how costs are assigned to ending inventory and cost of goods sold using one of the four costing methods (FIFO, LIFO, weighted average, or specific identification). Yet, the cost of inventory is not necessarily the amount always reported on a balance sheet. Accounting principles require that inventory be reported at cost. However, sometimes it might be necessary to value inventories at a value other than cost. Especially, when there exists a significant difference in historical purchasing price and current market cost of inventories.

One alternative technique of inventory valuation is based on a comparison of the market value of inventories against their cost and taking whichever is lower. Merchandise inventory is then said to be reported on the balance sheet at the lower of cost or market (LCM).

In applying LCM, **cost** is the acquisition price of inventory computed using one of the **historical** cost methods – specific identification, FIFO, LIFO, and Weighted average. Whereas, **market** is defined as the **current** market value (cost) of replacing inventory. It is the current cost of purchasing the same inventory items in the usual manner. It is important to know that market is not defined as the sales prices.

A decline in market cost reflects a loss of value in inventory. This is because the recorded cost of inventory is higher than the current market cost. When this occurs, a loss is recognized. This is done by recognizing the decline in merchandise inventory from recorded cost to market cost at the end of the period.

LCM is applied in one of three ways:

- (1) Separately to individual items
- (2) To major categories of items
- (3) To the whole of inventories

The less similar the items that make up inventory are, the more likely it is that companies apply LCM to individual items. Advances in technology further encourage the individual item application.

Illustration

The following are the inventory of ABC motor sports, retailer.

Inventory	units	Cost	
Items on hand		per unit	market
Cycles:			
Roadster	30	Br. 25,000	Br. 23,333
Sprint	20	9,000	9,500
Off Road:			
Trax-4	10	10,000	11,000
Blaz'm	6	16,000	14,500

Let us see LCM computation under the three ways:

(1) Separately to each individual item

Inventory	Total cost	Total	LCM
item		market	
Roadster	Br.750,000	Br.700,00	Br.700,000
	0	0	
Sprint	180,00	190,00	180,000
	0	0	
Categorie s sub total	Br.930,000	Br.890,000	
Trax-4	100,000	112,000	100,000
Blaz'm	96,000	87,000	87,000
Categorie s sub total	Br.196,000	Br199,000	
Totals	<u>Br.1,126,000</u>	<u>Br.1,089,000</u>	<u>Br.1,067,000</u>

(2) Major categories of items

Inventory	Categories	Categories	
ry	total cost	total	LCM

		market	
Cycles	Br. 930,000	Br.890,000	Br. 890,000
Off. Road	196,000	199,000	196,000
Totals	<u>Br.1,126,000</u>	<u>Br.1,089,000</u>	<u>Br. 1,089,000</u>

- ✓ When LCM is applied to the whole inventory, the market cost is Br1,089,000. Since this market cost is Br. 37,000 lower than Br. 1,126,000 recorded cost, it is the amount reported for inventory on the balance sheet.
- ✓ When LCM is applied to individual items of inventory, the market cost is Br. 1,067,000. Since market is again less than Br. 1,126,000 cost, it is the amount reported for inventory.
- ✓ When LCM is applied to the major categories of inventories, the market is Br. 1,089,000 which is also lower than cost.

4.6.2. Estimating Inventory Cost

Techniques of estimating inventories.

In practice, an inventory amount is estimated for some purposes. When it is impossible to take a physical inventory or to maintain perpetual inventory records.

Example

- 1) Interim financial statements are needed. It may be too costly to take physical inventory. This is especially the case when periodic inventory system is used.
- 2) When a catastrophe such as a fire, flood etc has destroyed the inventory. In such case, to ask claims from insurance companies, there is a need of estimating inventory.

There are two common techniques of inventory cost estimation; **retail method** and the **gross profit** method. Let us first see the retail method of inventory cost estimation:

4.6.2.1. Retail Method of Inventory Costing

As the name implies, this method is mostly used by retail businesses. The estimate is made based on the relationship between the cost and the retail price of merchandises available for sale.

The steps to be followed to apply this method are:

1. ***Calculate the cost to retail ratio by using the following formula***

$$\frac{\text{Cost of merchandise available for sale}}{\text{Retail price of merchandise available for sale}}$$

2. ***Calculate the ending inventory at retail price***

Ending inventory at retail price = Retail price of merchandise available for sale **less** Sales

3. Calculate the estimated cost of ending inventory

Estimated cost of ending inventory = Cost to retail ratio (calculated in step-1)

X **Ending inventory at retail** (calculated in step-2)

Example

	Cost	Retail
Sept. 1, beginning inventory	Br. 35,000	Br. 50,000
Purchases in September (net)	125,000	150,000
Sales in September (net)		140,000
	<u>Br.35,000+Br.125,000</u>	

(1) Cost retail ratio = $\frac{\text{Br.50,000}+\text{Br.150,000}}{\text{Br.35,000}+\text{Br.125,000}} = 0.80$

This implies that for every one Birr retail price 0.80 birr or 80 cents is the cost of that inventory and the remaining 20 cents is gross profit.

(2) Ending inventory at retail = (Br.50,000+Br.150,000)- 140,000
= Br.60,000

(3) Estimated ending inventory at cost = 0.80 X Br.60,000
= Br.48,000

4.6.2.2.Gross Profit Method

Can you guess probably how can we use the concept of gross profit to estimate inventory cost?

Gross profit method also known as the gross margin method refers to the amount of income that an organization earns from selling of items after deducting their cost. This method uses an estimate of the gross profit realized during the period to estimate the cost of inventory. The gross profit rate may be estimated based on the average of previous period's gross profit rates. The gross profit rate will tell you the percentage or ratio of gross profit from every one birr sales.

Usually the gross profit rate is calculated with the following formula:

$$\frac{\text{Sales}-\text{cost of goods sold}}{\text{Sales}}$$

The steps to be followed in applying the gross profit method are:

(1) The gross profit rate is estimated and then estimated gross profit is calculated in birr value.

Estimated gross profit (in Birr) = Gross profit rate X sales

(2) Cost of merchandise sold is estimated

Estimated cost of merchandise sold = sales - Estimated gross profit

(3) Calculate the estimated cost of ending inventory

Estimated cost of ending inventory is equal to:

Cost of merchandise available for sale - Estimated cost of merchandise sold.

Please recall that cost of merchandises available for sale is the sum of cost of beginning inventory and net cost of purchases.

Example

Beginning inventory cost:..... Br.46, 000

Net purchases during the period.....210,000

Net sales during the period..... 240,000

Estimated gross profit rate 40%

The ending inventory is estimated as follows:

(1) Estimated gross profit = $0.4 \times 240,000$

= Br.96,000

(2) Estimated cost of merchandise sold

= Br.240,000 - Br.96,000

= Br.144,000

(3) Estimated cost ending inventory

= (Br.46, 000 + 210,000) - Br.144, 000

= Br.256, 000 - Br.144,000

= Br.112,000

ChapterFive

Accounting for Plant Assets

Introduction

Plant assets are major expenditures for many companies. They make up a large part of assets on the balance sheet. Plant assets are future benefits for any organizations. It is helpful to think of a plant asset as an amount of usefulness contributing to the operations of a company throughout the asset's life. While the plant assets are used in the operation of the business, their value gradually **decline**. An accounting method to account for such decline in service capacity of plant assets is called **depreciation**, and this will be discussed in this chapter. You will also study how depreciation is computed and recorded.

Additional expenditures are incurred to make the plant assets render better service. Hence, you will be introduced with the *revenue expenditures and capital expenditures*. The accounting treatment at time of *disposing plant assets* will also be explained. The basic *plant assets disposal methods* such as selling, exchanging for other asset, and discarding are included in the discussion.

Nature, Cost And Depreciation of Plant Assets

In this chapter, you will learn about characteristics of plant assets that differentiate them from other assets. Then you will be able to determine the acquisition cost of plant assets and record their initial cost in a journal.

5.1: Characteristics of Plant Assets:

Assets that can be used by a business enterprise for a relatively long period usually more than a year are called long-term assets. Long-term assets are divided into tangible and intangible assets.

Long-term assets are classified as plant assets, intangible assets, and natural resources.

Tangible assets (also called plant assets or fixed asset) are assets with physical substance that can be charged in the operations of a business for a relatively longer period. Examples are land, buildings, equipment, machineries, truck, etc.

Plant assets, or fixed assets, are acquired by business enterprise for use in their operation over years for an indefinite or limited economic life. The carrying values of these long-term assets are normally based on historical costs. Measurement problems associated with plant assets include identifying the types and amounts of expenditures that make up the original recorded cost of the particular asset.

Plant assets have the following characteristics:

- (a) They are acquired for use in operations, not for sale.
- (b) They are tangible i.e. they have physical existence.
- (c) Their economic benefit diminishes through time or use, except land.

The above-mentioned characteristics of plant assets help us to distinguish plant assets from other types of assets. For example, plant assets differ from intangible assets with respect to physical existences. This is because intangible assets are assets without a physical feature that can be charged in the operations of business for long period. They generally consist of rights or advances held such as goodwill, patents, copyrights, franchise, trademarks, organizations costs etc.

Plant assets basically differ from inventories and long-term investments because of the fact that inventories are acquired for sale, not for use, and investments are not currently in use for operation. A company that purchases a computer for purpose of reselling it reports the computer on the balance sheet as merchandise inventory, not as a plant asset. However, if the same company purchased the same computer for use in operations, it is a plant asset, not a merchandise inventory.

When a land is held as a factory site that will be used in operations, the land is part of a plant asset. But when the land is held for future expansion, it is an investment; not a plant asset.

5.2:Acquisition Cost of Plant Assets

Plant assets are initially recorded at their cost called *original costs*. This cost becomes historical as time passes. This is because usually the record of plant assets does not reflect subsequent changes in the market values of plant assets. The initial cost of a plant asset is equal to the cash and/or the cash equivalent, which is given up in order to acquire the asset *and* to prepare it for use. In other words, initial cost includes the asset's (1) implied cash price and (2) cost of preparation for use.

Often an asset's historical cost is simply the amount of cash paid or that should be paid when the asset is acquired and ready for use. Consider, for example, the following expenditures for a certain piece of **equipment**:

Purchase price factors:

Gross invoice price	Br 10,000
Sales tax	<u>400</u> <u>10,400</u>

Related expenditures:

Freight charges	Br. 200
Installation costs	500
Testing of installed machine	<u>300</u> <u>1,000</u>
Cost of equipment	<u>11,400</u>

The total initial equipment cost is Br. 11,400, consisting of a cash purchase price of Br. 10,000 and preparation costs of Br. 1,000. The sales tax is a necessary component of the purchase price and should not be included in the tax expense account. Similarly, the costs of freight, installation, and testing are expenditures necessary to get the asset in a condition and position ready for use. The journal entry would be:

Equipment	11,400
Cash (A/P)	11,400

If an asset's purchase price is not immediately paid in cash, as an accountant you should determine the cash equivalent purchase price at the acquisition date and record that amount in the asset account.

A purchase of **land** often raises some interesting questions about related expenditures. Suppose a firm retains a local real estate broker at a fee of Br.2,000 to locate appropriate site for its new office building. The property eventually chosen has an old residence on it, which will be razed. The terms of the sale include a payment of Br 40,000 to the seller, with the buyer paying off an existing mortgage of Br 10,000 and Br 300 of accrued interest. In addition, the buyer agrees to pay accrued real estate taxes of Br 800. Other related expenditures include legal fees of Br 400 and a title insurance premium of Br 500. A local salvage company will raze the old residence; level the lot, keeps all the materials, and pays the firm Br 200.

If we apply the general plant asset measurement rule, we compute the initial cost of the land as follows:

Payment to the seller	Br 40,000
Commission for finding property	2,000
Payment of mortgage and interest due at time of sale	10,300
Payment of property taxes owed by seller	800
Legal fees	400
Title insurance premium	<u>500</u>
	Br 54,000
Less: Net recovery from razing cost of land	(200)
Cost of Land.....	Br <u>53,800</u>
Journal entry: Land.....	53,800
Cash (A/P.).....	53,800

ACTIVITY 1: Determining the cost of plant assets

Dear student, this activity helps you how to determine the cost of specific plant asset and make accounts record.

1. Suppose ABC Company signs a Birr 300,000 note payable to purchase a land for a new Store site. ABC also pays Birr 10,000 in back property tax, Birr 8,000 in transfer taxes, Birr 5,000 for removal of an old building but received Birr 1500 from salvage proceeds of the old building, Birr 1,000 of survey fee, and Birr 26,000 to pave the parking lot that has limited economic life, all in cash.

Required: a) What is the cost of this land? Show the computation

- b) Record the entry for the purchase of land.

2. What amount is recorded as the cost of new machine given the following data related to its purchase?

Gross purchase price, Birr 700,000;

Sales tax, Birr 49,000;

Purchase discount taken, Birr 21,000;

Freight to move machine to factory area terms: FOB shipping point, Birr 3,500;

Assembly costs, Birr 3,000;

Cost of foundation for machine, Birr 2,500;

Cost of spare parts used in maintaining the machine, Birr 4,200.

Now, if you have attempted the above work, check your answer with the following feedback.

1. Cost of the land would be:

a). Purchase price of land 300,000

Add: related costs:

Back property tax 10,000

Transfer tax 8,000

Removal of building (5000-1500) 3,500

Survey fee 1,000

Total incidental costs 22,500

Total cost of land Birr 322,500

- b). ABC's entry to record purchase of land is:

Land 322,500

Notes payable	300,000
Cash	22,500

2. The cost of the machine can be determined as follows.

Purchase price	Birr 700,000
Add: Sales tax	49,000
Assembly costs	3,000
Cost of foundation	2,500
Less: Purchase discount	(21,000)
Total cost of the machine	Birr 733,500

5.3. Accounting for Depreciation

In this part, you will learn about accounting for depreciation and related issues. In determining periodic depreciation, you have to identify *causes of depreciation* and apply a given type of *depreciation method*. If plant assets are acquired other than the beginning of the year, it is required to determine *partial year depreciation*. When new information is obtained, it may be necessary to *revise depreciation*.

As plant assets are used in the operation of a business, their value to provide service decreases through usage and the passage of time.

Depreciation is a decline in the value of the plant assets. It is the allocation of the cost of a plant asset over its useful economic life. As plant assets are used over time in the operation of the business, their capacity to yield service declines. The part of the original cost of the asset that is assigned to the bundle of service benefits that have been used up is called depreciation. Depreciation is not a process of valuation because businesses do not record depreciation based on appraisals of the plant assets. Depreciation does not mean that the business sets aside cash to replace assets as they become fully depreciated. Depreciation affects neither cash inflow nor cash outflow directly.

With the exception of land, the use of plant assets in operation to generate revenue consumes their economic potential usually before they are totally worthless. Eventually, these assets are disposed of and possibly replaced with similar assets.

5.3.1. Causes of Depreciation

With the exception of land, the use of plant assets to generate revenue consumes their economic potential. Several factors are naturally related to the periodic allocation of depreciation. Depreciation can be caused by *physical factors* which include wear and tear from use, natural deterioration through interaction with natural elements and the passage of time, and *functional factors* which include inadequacy and technical obsolescence. A plant asset becomes inadequate if its capacity is not sufficient to meet the demands of increased production. Obsolescence is a more important consideration than physical deterioration particularly in developed economies. A plant asset is obsolete if the commodity it produces is no

longer in demand or if a newer plant asset such as machine can produce a commodity of better quality or at a great reduction of cost.

Physical factors that affect the asset's useful life are the normal wear and tear that result from usage and the passage of time. Economic factors include obsolescence and inadequacy.

For some plant assets, physical wear and tear from operations and from the elements may be the primary cause of depreciation. For example, physical deterioration takes its toll on the usefulness of trucks that move goods from one place to another. The store fixtures used to display merchandise are also subject to physical wear and tear.

Assets such as computers and airplanes may be obsolete before they physically deteriorate. An asset is obsolete when another asset can do the job better or more efficiently. Thus; an asset's useful life may be much shorter than its physical life. In short, the term obsolescence means the process of becoming out of date or obsolete.

Inadequacy of a plant asset may necessitate replacement with a large unit even though the asset is in good physical condition. Obsolescence and inadequacy are often closely associated. Both relate to the opportunity for economical and efficient use of an asset rather than to its physical condition.

Four factors affect the computation of depreciation. They are:

- ✓ Cost of the plant asset
- ✓ Residual/salvage value of the plant asset
- ✓ Depreciable cost, and
- ✓ Estimated economic (useful) life of the plant asset.

Cost- is the net purchase price plus all reasonable and necessary expenditures to get the asset in place and ready for use.

Residual value- also known as salvage value or disposal value or scrape value represents the estimated market value of the asset at the time of its retirement.

Depreciable cost- Represents the difference between the asset cost and its estimated residual value.

Estimated economic (useful) life- it represents the total number of service units expected from the asset. These service units may be measured in terms of years the asset is expected to be used, units expected to be produced, miles or kilometers expected to be driven or similar measures.

To record the periodic depreciation of plant assets, an expense account called Depreciation expense and a contra asset account called Accumulated depreciation account are used. Hence, the journal entry to record depreciation of plant assets would be:

Depreciation expense Dr. XXX

Accumulated depreciation - specific plant asset Cr. XXX

5.3.2 Depreciation Methods

We have seen that with the use of a plant asset in operation, depreciation should be recorded to account for the decline in the service capacity of the plant asset. However, the actual amount of the cost applicable to the utilized productive capacity can hardly be known. Thus depreciation is an estimated amount.

The optimum estimate of economic life is required. The estimate of economic life affects income measurement of the organization. Therefore, tax authorities and revenue agencies will produce guidelines, which should be followed. For example, in Ethiopia, the economic life of plant assets look like the following:

- Building 20 years
- Machinery 8 years
- Vehicles 5 years
- Furnishings 10 years

This doesn't mean that a well-built building will be worthless after 20 years. On the other hand, after being on use for 5 years, a machine may be out of order due to obsolescence.

Depreciation methods primarily differ in the amount of cost allocated to each period.

The most common methods of computing depreciation for plant assets are:

- 1-The straight line method
- 2-The sum- of- the- years- digits method
- 3-The double-declining balance method
- 4-The units of production method

As an illustration, assume that an equipment costs Br 1,000 and has an estimated useful life of 5 years. The estimated salvage value at the end of the five-year period is Br100. Different depreciation methods are used to *allocate* the amount depreciated throughout the life of the plant asset.

1. Straight Line Method

Straight-line depreciation method is the simplest method to compute depreciation. The straight-line method assumes that the owner receives equal benefits from an asset each day of the asset's life. According to the straight-line method of estimating depreciation, an equal part of the cost of the asset is allocated to each day of an asset's life. In each accounting period, equal amount of depreciation is recorded. Based on the above data and using straight-line depreciation method, annual depreciation is calculated as follows:

$$\text{Annual Depreciation} = \frac{\text{Original Cost} - \text{Salvage Value}}{\text{Estimated useful Life}}$$

For the above example,

$$= \frac{\text{Br } 1,000 - \text{Br } 100}{5 \text{ years}} = \text{Br. } 180 \text{ per year}$$

The entry to record each year's depreciation expense is:

Depreciation Expense	180
Accumulated Depreciation --- Equipment	180

(To record depreciation expense for the year.)

Depreciation Expense is added to the expenses of the firm in determining net income, and is closed at year-end to the Income Summary account. The offsetting credit is posted to the contra account, Accumulated Depreciation, which is deducted from the related plant asset account on the balance sheet to compute the asset's book value, or carrying value. In this manner, the original cost of an asset is maintained in the asset account, and the cumulative balance of depreciation taken is carried in the contra account as long as the asset is in service.

The annual depreciation expense, accumulated depreciation and the effect of depreciation adjustment on the book value of the asset is indicated below:

Period (Year)	Balance of Asset Account	Periodic Depreciat ion Expense	End-of Period (Year) Balance	
			Accumula ted Depreciat ion Account	Book Value
1	Br 1,00 0	Br 180	Br 180	Br 820
2	1,00 0	180	360	640
3	1,00 0	180	540	460
4	1,00 0	180	720	280
5	1,00 0	180	900	100
Total depreciation		Br 900		

Based on the above data, you can observe that:

- The plant asset account always shows the original cost of the asset,
- Each period reflects Br 180 of depreciation expense,
- The accumulated depreciation account balance is cumulative and shows the portion of the original cost taken as depreciation to date,
- The asset's book value is the original cost less total accumulated depreciation to date, and
- The asset's book value at the end of five years equals the estimated salvage value.

Straight-line allocation is best suited to an asset with a relatively uniform periodic usage and a low obsolescence factor. These types of assets can provide approximately equal utility during all periods of their useful lives.

2. Sum of the Years' Digits Method

The basic idea behind the sum of the years' digits method is that more service benefits are received in the early years of an asset's life when it is new, and fewer benefits are received each year as the asset grows older. Many assets are efficient when first purchased but become less efficient as time passes. The sum-of-the-years'-digits (SYD) method is a method of accelerated depreciation because it assigns more depreciation to the early years of the plant asset's life and less to later ones.

Depreciation according to sum-of the-years-digit method is calculated based on the economic life of the plant asset.

Annual Depreciation = (Original Cost - Salvage Value) x Remaining useful Life

Sum of the years digit

Sum of the years digit = the sum of the years of the economic life of the plant asset

$$= 1 + 2 + 3 + \dots + n$$

Or
$$= \frac{n(n+1)}{2}$$
 where n is the life of the plant asset.

As per the above illustration data, the sum of the years digit = 1 + 2 + 3 + 4 + 5 = 15

Or
$$= \frac{5(5+1)}{2} = 15$$

Accordingly, calculation of depreciation based on the SYD method for each year is as follows.

Year of Useful Life	Years remaining ÷ Sum of the years	Depreciable Cost	Depreciation Expense
1	5/15	x Br 900	= Br 300
2	4/15	x 900	= 240
3	3/15	x 900	= 180
4	2/15	x 900	= 120
5	1/15	x 900	= 60
Total depreciation			900

As an accelerated depreciation method, the SYD approach is most appropriate when the asset renders greater utility during its early life and less in its later life. Accelerated depreciation is suitable for assets with either a high technological obsolescence factor in the early life phase or a high maintenance factor in their later life phase.

3. Double Declining Balance Method

Double declining balance method is an accelerated depreciation method even more during the early years than the sum-of-the-years' digits method. This method is based on the same idea as the sum-of-the-years' digits method and is used for assets that provide even more consumable service benefits in the early years and therefore require more depreciation in those years. Double declining balance method, another accelerated depreciation method, applies a constant percentage or rate each year to the book value at the beginning of the year. For example, the declining-balance rate for an asset with an estimated life of 5 years would be double the straight-line rate of 20%; or 40%. This rate is then applied to the cost of the asset for the first year of its use and thereafter to the declining book value (cost minus accumulated depreciation). Thus,

$$\frac{100\% \times 2}{5} = 100\% \times 2 = 40\%$$

$$\text{Double declining balance Rate} = \frac{\text{Years of useful life}}{5}$$

Then, the annual depreciation would be:

$$= \text{Rate} \times \text{the book value of the plant asset at the beginning of that year}$$

Using the same example, the annual depreciation is calculated as follows.

Year of useful Life	Original Cost	Beginning Accumulated Depreciation	Beginning Book Value	Double declining depreciation rate	Amount of Depreciation Expense
1	Br 1000	Br 0	Br 1,000	40%	Br 400
2	1,000	400	600	40%	240
3	1,000	640	360	40%	144
4	1,000	784	216	40%	86
5	1,000	870	130		<u>30*</u>
Total amount depreciated					<u>900</u>

* 5th year depreciation = 900 – 870 = 30. Please note that it is not 130 x 40%. Observe that in the fifth year depreciation expense is only Br 30, the amount needed to reduce the asset's book value to the estimated salvage value of Br 100. Assets are not depreciated below their salvage values.

4. Units of Production Method

The units-of-production method allocates depreciation in proportion to the asset's use in operations. The amount of depreciation depends on the number of units the asset produces in that period. First, the depreciation per unit of production is computed by dividing the depreciable cost by the asset's projected units-of-production capacity. Therefore,

$$\text{Depreciation per Unit} = \frac{\text{Original Cost} - \text{Salvage Value}}{\text{Estimated Total Units of Production}}$$

The units of output depreciation method requires some way of measuring the asset's output during a particular period of time. Units-of-production capacity may represent miles driven, tons hauled, hours used, or number of cuttings, drilling, or stampings of parts. Suppose the above example is drilling equipment that will drill an estimated 45,000 parts during its useful life. The depreciation per unit of production is:

$$\frac{\text{Br } 1,000 - \text{Br } 100}{45,000 \text{ parts}} = \text{Br } 0.02 \text{ per part}$$

To find periodic depreciation expense, the number of units produced during the period multiplies the depreciation per unit of production. If 8,000 units are drilled during the first year, then 8,000 x Br 0.02 = Br 160 is the first year's depreciation expense. If 12,000 parts are drilled the next year, that year's depreciation expense is 12,000 x Br 0.02 = Br 240.

The units-of-production approach is particularly appropriate when physical wear and tear is the major cause of depreciation and the amount of use varies from period to period. Of course, if use is uniformly spread over the asset's life, the same allocation of depreciation would result from either the straight-line or units-of-production method.

Partial year Depreciation

Plant assets are purchased and disposed of at different times during the year. In all the above discussions, we have assumed all plant assets were bought [purchased] at the beginning of the fiscal year and thus the depreciation in each method was computed for a full year. But it is possible that an asset can be bought any time within a year.

When a plant asset is purchased or disposed of at a time other than the beginning or end of an accounting period, depreciation is recorded for part of a year. Thus it is necessary to recognize and record the depreciation expense for the period.

To illustrate, assume that your office bought a machine on March 1, year 1. The cost of the machine is Br 50,000. The estimated salvage value is Br 10,000. The useful life is estimated as four years starting from March 1, year 1. If the accounting period ends on June 30, for year 1 and the consecutive

years, then the depreciation expense under each method of depreciation will be as follows.

(1) Straight-line depreciation method.

$$\text{Year 1} = 4/12 \times (50,000 - 10,000)/4 = 3,333$$

$$\text{Year 2} = (50,000 - 10,000)/4 = 10,000$$

(2) Sum of the years digit method

$$\text{Sum-of-the-years' digits} = 4(4 + 1) \div 2 = 10$$

$$\text{Year 1} = 4/12 \times 4/10 \times (50,000 - 10,000) = 5,333$$

$$\text{Year 2} = 8/12 \times 4/10 \times (50,000 - 10,000)$$

$$+ 4/12 \times 3/10 \times (50,000 - 10,000) = 14,667$$

(3) Double declining balance method

$$\text{Rate} = \frac{1}{4} \times 2 \times 100\% = 50\%$$

$$\text{Year 1} = 4/12 \times 50\% \times 50,000 = 8,333$$

$$\text{Year 2} = 50\% \times (50,000 - 8,333) = 20,834$$

Please note that unit of production method would not give you a different result for the fact depreciation depends on the usage of the plant asset, not the period of time under consideration.

Calculating depreciation expense

This activity helps you to apply different depreciation methods to calculate the expired cost of plant assets.

Assume that a company purchases a truck on April 1 for Birr 500,000. Its estimated life is 20 years, and its estimated residual value is Birr 80,000. The company's fiscal year ends on December 31.

Required: For the first two years, compute the depreciation amount of the truck under each of the following depreciation methods.

A. Straight Line Method,

B. Sum of the Years Digit Method, and

C. Double Decline Balance Method

Activity : Applying depreciation methods

It helps you to apply different depreciation methods.

The following data are related to Bona Company for acquiring truck:

<u>Data Item</u>	<u>Amount</u>
Cost of truck	Br 41,000
Estimated residual value	<u>1,000</u>
Depreciable cost	<u>40,000</u>

Estimated useful life:

Years 5 years

Unit of production 100,000 miles

Required:

1. Assuming that the asset is acquired at the beginning of the year, calculate annual depreciation for the first year under the following depreciation methods:

a). Straight-line method

- b). Units of production method, assuming that actual number of miles driven are 20,000, 30,000, 25,000, 15,000 and 10,000 for years one to five respectively.
 - c). Double declining balance method
 - d). Sum of years digits method
2. Compute annual depreciation under each method starting from year one through year 5

Revision of Depreciation

Depreciation allocation is based on estimate of useful life and salvage value. Circumstances change and original estimates may be too higher, or too low. Once it is determined that original estimates are wrong, the computation of periodic depreciation expense for the asset's remaining useful life must be revised. You revise a depreciation estimate by allocating the remaining depreciable cost of the asset over its remaining useful life.

Revising an estimate of the useful life or salvage value of a plant asset is called ***Change in accounting estimate***. A change in accounting estimate results from new information or new developments or improved judgment. A change in accounting estimate will not affect prior period records but only future financial reports.

Consider a plant asset with original cost of Br 1000, salvage value of Br 100 and five years life. Now suppose that just before recording the fourth year's depreciation, it was learnt that the asset's life will be six years instead of five and that its salvage value will be Br 40. The revised depreciation expense to be taken during the remaining useful life using a straight-line depreciation method is computed as follows:

Original asset cost	Br 1,000
Depreciation already recorded (3 years @ Br 180)	<u>540</u>
Book value at start of fourth year	460
Revised salvage value	<u>40</u>
Revised remaining depreciable cost	<u>420</u>
Revised remaining useful life	3 years
Revised periodic depreciation expense for fourth, fifth, and sixth years	
$\text{Br } 420/3 = \underline{\text{Br } 140 \text{ per year}}$	

Revision of depreciation

This activity enables you to make a revision of periodic depreciation based on current information. Assume a machine was purchased on Meskerem 1, 1990. The initial cost of the machine was Birr 10,000. The estimated salvage value of the asset was zero. The estimated useful life was estimated as five years. Straight-line method of depreciation is chosen.

On Meskerem 1, 1993, it is estimated that this machine can be used for the next 4 years with estimated salvage value of zero. Note that on this date the

machine has been in use for three years [from Meskerem 1, 1990 to Pagume 5, 1992]. Thus, it was depreciated for three years. The accumulated depreciation on Meskerem 1, 1993 is Birr 6,000 = [Birr2,000 X 3 years]. Therefore, the book value of the machine is Birr4,000 = [Birr 10,000 - Birr6,000].

Required: Determine the new or revised depreciation expense per year.

5.4. Revenues and capital expenditures

Additional expenditures are incurred to make the plant assets render better service. Hence, you will be introduced with the *revenue and capital expenditures*.

5.4.1. Revenue Expenditure and Capital Expenditure

During the life of an asset, expenditure may be incurred to keep the asset operating economically. These expenditures fall into two categories namely *revenue expenditures* (ordinary repairs and regular maintenance), and *capital expenditures* (improvements and extraordinary repairs). Such expenditures will be recognized as an expense or cost of the plant asset.

A misclassification of expenditures results in incorrect financial statements for several periods. For example, capitalizing revenue expenditure overstates the current period's income and understates the income in subsequent periods. Similarly, if a capital expenditure is immediately expensed, then the current period's income is understated and income is overstated during the subsequent periods.

1. Revenue Expenditures

Expenditures incurred for, or associated with, assets that will provide economic benefits only during the current accounting period are called revenue expenditures. Such expenditures are incurred in order to maintain the normal operating efficiency of the assets. Such expenditures are expensed when they are incurred. The following list identifies three common types of revenue expenditures:

- ✓ Expenditures for ordinary maintenance and repairs of existing plant assets. Periodic upkeep - such as lubrication, cleaning, and replacement of minor parts - is necessary to maintain an asset's expected level and length of usefulness. These periodic upkeep costs are charged to expense as they are incurred.
- ✓ Expenditures to acquire *low-cost items* that benefit the firm for several periods. Most businesses purchase items with relatively small cost that provide service for more than one year such as paperweights, puncher, stapler, paper cutter, and wastebaskets. Because of the small Birr amounts involved, establishing these items as assets and depreciating them over their expected useful lives really serves no useful purpose.
- ✓ Expenditures considered immaterial or insignificant are recorded as revenue expenditure.

Identifying the classification of expenditure

Dear student this activity helps you to identify the type of expenditure.

Assume that ABC Company bought a building for Birr 120,000 on Meskerem 1, 1988. The building has estimated useful life of 20 years. The salvage value at the end of its life is Birr 20,000. After 5 years of use, ABC Company made an additional expenditure of Birr 12,000 to paint the building. The color of the paint was different from the original. What type of expenditure is it and how is it going to be accounted for?

2. Capital Expenditure

Costs incurred for, or associated with, assets that will provide economic benefits over several accounting periods are called capital expenditures. All capital expenditures associated with a particular asset are added to the cost of that asset. Some expenditure incurred after the asset is acquired and placed in service are considered as capital expenditures if they increase the life of the asset by more than one year beyond the original estimate or improve the quality or quantity of the asset's output.

Capital expenditures are supposed to give a service for more periods and are recorded as asset particularly fixed assets. Capital expenditures increase the book value of long-term assets. Capital expenditures are costs incurred in relation to *additions, betterments, and extraordinary repairs of plant assets*. Those costs, which may improve the efficiency or the life of the plant asset, are treated as the cost of the plant asset.

a. Additions

There may be a need to add parts or extend the existing plant asset that may cost significant amount. Adding a new wing to a building or expanding the size of an asphalt parking lot are examples of additions. These capital expenditures, since they improve the service of the plant asset, should be debited to an asset account. Sometimes, separate account (depreciation schedule) should be used for an addition when its estimated useful life differs for the remaining useful life of the existing plant asset.

b. Betterments

Betterments improve the quality of services rendered by a plant asset but do not necessarily extend its useful life. Examples include adding a power winch to a highway service truck or air conditioning to an automobile. In each instance, the vehicle's Services are enhanced, but its useful life is not changed. Expenditures for betterments are debited to the appropriate asset account, and the subsequent periodic depreciation expense is increased to allocate the additional cost over the asset's remaining useful life.

To illustrate, let us assume Sifan Service Station purchased a new service truck for Br. 6,500 on January 2, 20X1. Its estimated useful life is six years with a salvage value of Br 500. Using the straight-line method, Br 1,000 of depreciation expense is recorded on December 31, 20X1 $[(Br\ 6,500 - Br\ 500)/6 = Br\ 1,000]$. On January 2, 20X2, a power winch costing Br 700 is

added to the truck. The truck's useful life does not change, but its estimated salvage value increase to Br 600.

(A) The January 2, 20X2, entry to record the new winch is:

Truck 700
 Cash 700

 To record cost of power winch added to truck.

(B) Annual depreciation expense of Br 1,120 for the years from 20X2 to 20X6 is computed as follows:

Original truck cost	Br 6,500
Power winch cost	<u>700</u>
Total cost	Br 7,200
Depreciation recorded in 20X1	<u>1,000</u>
Book value after 20X2 betterment	Br 6,200
Revised salvage value	<u>600</u>
Remaining Depreciable cost	<u>Br 5,600</u>
Remaining useful life	<u>5 Years</u>

Revised periodic depreciation expense for 20X2 to 20X6 = Br 5,600/5 = Br1,120 per year

(C) The December 31, 20X2 entry to record depreciation expense is

 Depreciation Expense ---- Truck 1,120
 Accumulated Depreciation ---- Truck 1,120
 To record 20X2 depreciation on truck

c. **Extraordinary Repairs**

Extraordinary repairs are expenditures that extend an asset's expected useful life beyond the original estimate. These capital expenditures are debited to the asset's Accumulated Depreciation account (which increases the asset's book value).

Assume Br 12,800 worth of equipment is purchased. It has an estimated useful life of eight years and a salvage value of Br 800. Annual straight-line depreciation expense is Br 1,500 [(Br 12,800 --- Br 800)/8]. At the beginning of the seventh year, the equipment is extensively overhauled at a cost of Br 2,200. The overhaul extends the equipment's useful life for an estimated two years beyond the original estimate with no change in the expected salvage value.

(1) The cost is debited to Accumulated depreciation account though it is capital expenditure.

 Accumulated depreciation --- Equipment 2,200

Cash 2,200

(To record cost of equipment overhaul)

(2) Annual depreciation expense of Br 1,300 for the coming periods is computed as follows:

Original cost			Br12,800
Less: Accumulated depreciation	Br(9,000)		
Add: Extraordinary repairs	<u>Br 2,200</u>		<u>(6,800)</u>
Book value at start of seventh year			Br 6,000
Salvage value			<u>800</u>
Remaining depreciable cost			<u>Br 5,200</u>
Revised remaining useful life			<u>4 years</u>
Revised periodic deprecation expense for years 7 to 10 =			
Br 5,200/4= <u>Br1,300 per year</u>			

In practice, the distinctions among additions, betterments, and extraordinary repairs to plant assets often become blurred. Some expenditure, for example, may improve an asset's quality of services and extend its useful life. Accountants must use reasonable judgment to identify (and account for) the primary effect of the transaction.

Accounting treatment for additional expenditures

Assume that ABC Company purchased a building on January 1, 2000 for Birr210, 000. The useful life of the building was estimated as 20 years. The salvage value was estimated as Birr10, 000. ABC uses a straight-line method of depreciation. After using the building for 5 years, [on January 1, 2005] ABC added a wing to that building at a cost of Birr150, 000. The wing is estimated to have a useful life of 15 years and no salvage value. ABC uses a straight-line method of depreciation.

- Is the additional expenditure be classified as revenue or capital expenditure?
- Record the necessary journal entry for the additional expenditure.
- Determine the annual deprecation of the building after the additional expenditure.

The answer for activity is given below for your checking.

- This expenditure increases the capacity of the original building. Therefore, it is classified as capital expenditure. It must be recorded on the building account.*
- The journal entry will be:*

Building 150,000

Cash 150,000

c) The original depreciation was Birr 10,000 per annum [(210,000 - 10,000)/20 years]. The accumulated depreciation on January 1, 2005 is Birr 50,000 [Birr 10,000 X 5 years]. The book value of the building is, therefore, Birr 160,000 [Birr 210,000 - Birr 50,000]. The additional expenditure will be added to the building to get new book value. The new book value is Birr 310,000 [Birr 160,000 + Birr 150,000]. The new book value will be depreciated for the remaining life of the building. The original building has 15 years [20 years - 5 years] remaining, which is the same with the new wing added to it. Therefore, the remaining life of the building will be 15 years.

$$\begin{aligned}\text{The depreciation expense per year} &= \frac{\text{New book value} - \text{Salvage value}}{\text{Remaining useful life}} \\ &= \frac{\text{Birr 310,000} - \text{Birr 10,000}}{15 \text{ years}} \\ &= \underline{\underline{\text{Birr 20,000}}}\end{aligned}$$

5.5: Disposal of Plant Assets

There is a common saying that human beings are born, grow and finally die. The same is for plant assets from the enterprise point of view. Actually they are not born, but purchased, they don't grow instead put in operation and absorb capital and revenue expenditures. How do they die? This sub unit tries to explain about it. Plant assets cannot be used forever and may wear out or the business may replace them with newer model.

A plant asset rarely lasts exactly as long as its estimated life. The purpose of depreciation is to spread the depreciable cost of the asset over the economic life of the asset. If the asset is still used in the business beyond the end of its estimated life, its cost and accumulated depreciation remain in the ledger accounts. If the residual value is zero, the book value of a fully depreciated asset is zero. If such an asset is discarded no gain no loss results.

A plant asset may be disposed by:

- 1-Discarding it as worthless
- 2-Selling it; or
- 3 -Trading it with a new asset.

1. Disposal of Plant Assets through Abandonment /Discarding/

A company may simply stop using an asset that no longer has service potential. If such an asset has been fully depreciated, no gain or loss arises. If the asset has a non-zero book value, however, the company must recognize a loss equal to the book value.

For example, assume that at the end of 2017, RT-Corporation discarded equipment with a historical cost of Birr 8,000, on which accumulated depreciation of Birr 7,000 has been recorded.

The disposal entry can be recorded as follows:

Accumulated depreciation	7000
Loss on disposal of equipment	1000
Office equipment	8000

2. Disposal of Plant Assets through Sale

The entry to record the sale of an asset for cash is similar to the one illustrated above except that the receipt of cash should also be recorded.

Take the above office equipment and consider the following three cases.

Case-1: Sold the office equipment equal to the book value, Br 1,000. In this case no gain no loss results.

Cash	1,000
Accumulated depreciation	7,000
Office equipment	8,000

Case-2: Sold an equipment at Br 2,500, gain of Br 1,500

Cash.....	2,500
Accumulated depreciation.....	7, 000
Office equipment.....	8, 000
Gain on sale of plant asset.....	1,500

Case-3: Sold an equipment at Br 500, loss of Br 500

Cash.....	5,00
Accumulate depreciation.....	7,000
Loss on sale of plant asset.....	500
Office equipment.....	8,000

3. Disposal of Plant Assets through Exchange

Businesses often exchange (trade in) their old plant assets for similar or dissimilar assets. To record the exchange, the business must remove the balances for the asset being exchanged and its related accumulated depreciation account from the book and record the other consideration given or received. If you exchange one plant asset for another similar asset, you should recognize the loss. However, the computed gain should not be recognized unless there is a cash that is received because of the exchange transaction. Even when you receive cash, you recognize only the proportionate amount of gain. But if one plant asset is exchanged for another dissimilar plant asset, any computed gain or loss should be recognized in the accounting record because the earning process is considered complete.

Why are losses, but not gains, recognized in exchange of similar assets exchange? The Accounting Principles Board has reasoned that a company should not record a gain merely because it has substituted one plant asset for another similar plant asset. Losses are recorded, however, because conservatism favors the recognition of losses rather than gains.

Let's assume that Hawani acquires a new similar computer in exchange for the old computer that originally cost Birr 12,500 and has accumulated depreciation of Birr 8,500 and paying cash of Br 18,000. The current fair value of the new computer is Br 19,000. The cost of the new computer cannot be Br 22,000 (Br 4,000 book value + Br 18,000 cash) because it has

fair market value of Br 19,000 explicitly stated. The cost of the new computer, then, must be Br 19,000.

The gain or loss calculation sheds some light on what really happened:

Fair market value of new computer	Birr 19,000
Less: Book value of asset given:	
Book value of old computer (Br 12,500 – Br 8,500)...	(4,000)
Book value of cash given	<u>(18,000)</u>
Loss indicated (and recorded)	<u>(3,000)</u>

Hawani will be required to record a loss on this transaction because the book value of the two assets given up (the old computer, Br 4,000, plus cash, Br 18,000) is Br 3,000 more than the value of the asset acquired, Br 19,000.

The entry to record the exchange is:

Office Equipment (new computer)	19,000
Accumulated depreciation (old computer)	8,500
Loss on exchange of assets	3,000
Office Equipment (old computer)	12,500
Cash	18,000

To record trade of old computer for new one

Activity: Disposal of plant assets

Dear student, this activity helps you to identify the gain or loss to be realized when a plant asset is exchanged for another similar asset.

Assume that the old delivery car of Chilalo Company cost Birr 9,000 and has accumulated depreciation totaling Birr 8000. It is exchanged for a similar new delivery car with a cash price (fair market value) of Birr 11,000. You are required to record the appropriate entry if the car dealer offers:

- Birr 1,000 trade in allowance and Chilalo company pays cash birr 10,000 for the remaining.
- Birr 600 trade in allowance and Chilalo company pays cash birr 10,400 for the remaining
- Birr 1,300 trade in allowance and Chilalo company pays the balance of birr 9,700 in cash.

Chapter Six

Payroll and other current liabilities

Introduction

This chapter will introduce you with the one common and very familiar organizational practice; called payroll accounting. In this chapter, you will be studying the basic procedures and techniques to be applied in accounting to properly record, calculate, summarize and report personal income related transactions.

The chapter is composed of three systematic sections. The first section deals with the need for and terms used in payroll accounting. The second section presents about the major accounting procedures involved in determining the employment income. The third section deals with notes payables, interest expense and contingent liabilities.

Each of these concepts will be illustrated and discussed by taking in to account the current Ethiopian tax-laws. As much as possible this unit attempts to give you adequate knowledge about **payroll systems** in Ethiopia. This chapter is very essential as it tries to familiarize you with the employment income tax system in Ethiopia. Here after you know how to calculate the income tax and you can right now calculate and know how much tax liability you are paying from your monthly salary income. To better understand the concept you will find activities and in-text questions and self-test exercises.

6.1: Importance of payroll accounting

Dear student! Have you ever hear about payroll? This word is the issue of all employees in the globe. This section introduces you with the need for appropriate payroll accounting and other important terms in payroll.

Accounting system for **payroll and payroll taxes** are concerned with the records and reports associated with the employer-employee relationship. It is important that the accounting system provide a safeguard to ensure that payments are in accordance to management's general plans and its specific authorizations.

Employees of an organization are entitled to receive remuneration at regular intervals following the close of each payroll period.

Payroll accounting is important for the following reasons:

- ✓ Payroll often represents the largest expense that a company incurs.
- ✓ Both federal and state governments require that detailed payroll records be kept
- ✓ Employees are sensitive to payroll errors or irregularities.
- ✓ Adequate payroll system safeguards the financial resources of the organization from misuse and theft.

6.1.1 Definition of payroll related terms

Payroll accounting involves so many generally accepted and standardized terms. This helps to attain uniformity in the system both within the organization and with other related parties. The following are the most common terms used in payroll accounting:

- 1. Salary and Wages:** Salary and Wages are usually used interchangeably. However, the term wages is more correctly used to refer to payments to

unskilled-manual labor. It is usually paid based on the number of hours worked or the number of units produced. Therefore, wages are usually paid when a particular piece of work is completed weekly.

On the other hand, salaries refers to payments to employees who render managerial, administrative or similar services, and they are usually paid to skilled labor on a monthly or yearly basis.

Both wages and salaries are related to an 'employee,' that is, individual who works primarily to one organization and whose activities are under the direct supervision of the employer.

2. **The Pay Period:** - A pay period refers to the length of time covered by each payroll payment.
3. **The Pay Day:** it is the day on which wages or salaries are paid to employees. This is usually on the last day of the pay period. Usually the last day of the month in Ethiopia.
4. **A payroll Register (sheet):** is the list of employees of a business along with each employee's gross earning; deductions, and net pay (take home pay) for a particular pay period. Then input for payroll register is the employees work hour duration summarized from any of the following sources:

Attendance sheets: is where employees sign at the time of arrival in the working area. It is usually placed in offices and administrative areas.

Punched (clock) cards; is an electronically recorded card, where each employee will have his/her own card for registering both at the time entering and leaving the working place. This mechanism is commonly placed at the gate of manufacturing plants.

Time cards: is more or less similar to punched card except that the time is manually written in hand written format by the employee.

5. **Gross earnings:** Total income earned by an employee during pay period.
6. **Employment income tax:** are taxes collected from the earnings of employees by the employer organization as per the regulations of the government. These have to be submitted (paid) to the government (Tax authority) because employer organization is only acting as an agent of the government in collecting these taxes from employees.
7. **Payroll Deductions:** are deductions from the gross earnings of an employee such as employment income taxes (withholding taxes), labor union dues, fines, credit association pays etc.
8. **Net Pay: Net pay** is the earning of an employees after all deductions have been made. This is take home pay amount collected by an employee on the pay day.

$$\text{Net Pay} = \text{Gross Earning} - \text{Total Deductions}$$

9. **Pay Check:** a business can pay payroll by writing a check for the amount of the net pay. A check is prepared in the name of each employee and

handed to employee. Alternatively a check for the total net pay of all employees can be prepared so that it will be paid in cash at the organization for each employee.

6.1.2 Basic Components of a payroll Register

1. Employee Number

Number assigned to employees for identification purpose when a relatively large number of employees are involved in a payroll register. It is always helpful to assign an identification number (ID N^o) to individually identify employees. This is because; sometimes there could be identical name for two or more employees in an organization.

2. Name of employees

Even though it is advisable to assign an employee identification number, it does not avoid the need for including their names. A complete record of employee should include both the name and Id No. of the employee.

3. Earnings

Money earned by an employee from various sources. This may include:

- a. **Basic Salary** – A flat monthly salary of an employee for carrying out the normal work of an employment and subject to change with the position of the employee.
- b. **Allowances**- Money paid monthly to an employee for special reasons, like:
 - **Position allowance**- a monthly paid amount to an employee for assuming a particular office responsibility.
 - **Housing Allowance** – a monthly allowance given to cover housing costs of the individual employee when the employment contract requires the employer to provide housing but the employer fails to do so.
 - **Hardship allowance**- a sum of money given to an employee to compensate for an inconvenient circumstance caused by the employer. For instance, unexpected transfer to a difficult and distant work area.
 - **Desert allowance**- a monthly allowance given to an employee because of assignment to a relatively hot region.
 - **Transportation (fuel) allowance**- a monthly allowance to an employee to cover cost of transportation up to the workplace if the employer has committed itself to provide transportation service.
- c. **Overtime Earning**: Overtime work is the work performed by an employee beyond the regular working hours. Overtime earnings are therefore the amount paid to an employee for overtime work performed.

Article 33 of proclamation No: 64/1975 discussed the following about how overtime work should be paid.

A worker shall be entitled to be paid at a rate:

- i.. one and one-quarter ($1\frac{1}{4}$, **1.25**) times his ordinary hourly rate for overtime work performed before 10:00 P.M in the evening time or 4o'clock in the evening(night) in Ethiopia time.
- ii. one and one half ($1\frac{1}{2}$, or **1.5**) times his ordinary hourly rate for overtime work performed between 10:00 P.M and six 6:00 A.M in the morning in western time or from 4 o'clock to 12 o'clock in the morning in Ethiopia time.
- iii. **Two times the ordinary hourly rate** for overtime work performed on weekly rest days.
- iv. Two and one half ($2\frac{1}{2}$, or **2.5**) times the ordinary hourly rate for overtime work performed on a public holiday.

Gross Earning = Basic Salary +allowances + Overtime Earning

- 4. Deductions:** are subtractions made from the earnings of employees required by the government or permitted by the employee himself. The following are the most common deductions from employee's earning:
- a. **Employment Income Tax:** Every citizen is required to pay employee tax to the government in almost all countries. In Ethiopia also, income tax is charged on the gross earnings (i.e, taxable income) of the employee at the rate indicated under schedule A of the current Proclamation- Income tax proclamation.
 - b. **Pension contribution:** All permanent employees working in government , and non-government organizations are required to pay pension contribution(currently 7% of basic salary).

The tax rates under schedule A are Presented below

Table 1.1:Employment Income Tax Schedule

Employment Income (Per Month)		Differenc e	Income Tax rate
Over Birr	To Birr		
0	600	600	Exempt (free from Tax)
601	1650	1,050	10%
1651	3200	1550	15%
3201	5250	2050	20%
5251	7800	2550	25%
7801	10900	3100	30%
Over 10900	-	-	35%

* In computing and withholding tax, the income tax proclamation indictates that income attributable to the month of Nehassie and Pagume shall be aggregated (added) and treated as the income of one month.

Taxable income includes any payment or gains in cash or in kind received from employment by an individual, including income from former employment or otherwise or from prospective employment.

Practically all income of individual may be taxable. Proclamation No. 286/2002 designates the following category of income as non-taxable:

1. Income from employment received by casual employees who are not regularly employed provided that they do not work for more than one month for the same employer in any twelve months period
2. Pension contribution, provident fund and all forms of retirement benefits contributed by employers in an amount that doesn't exceed 15% of the monthly salary of the employee.
3. Payments made to (an employee) as a compensation or gratitude in relation to:
 - ✓ Personal injuries suffered by that person
 - ✓ The death of another person

Illustration on payroll registers

Enjoy company has four employees whose salaries are paid according to the Ethiopian Calendar month. The following data relates to the month of Meskerem, 2010.

Name of employee	Basic salary	Position allowance	Overtime Worked (hr)	Duration of OT work
Olyad	7530	-	4	6-10 pm
Berihun	6020	-	8	Sunday
Anas	5300	300	-	-
Oda	3470	-	-	-

Additional Information

- ✓ The employees usually are expected to work for 40 hours per week
- ✓ All employees are permanent except Oda
- ✓ Berihun agreed to contribute Br 300 to credit association

Required:

- 1-calculate the gross earnings, deductions and net pay
- 2-prepare the payroll register of Enjoy for the month of Meskerem
- 3-Record the payment of Net pay, employment income tax(withholding tax), pension contribution.

Solution

Gross earnings = Basic salary + Allowance + Overtime earnings
--

A)-Over time earnings and Gross earnings

Over time earnings = OT hrs worked X hourly rate X OT rate

$$\text{Hourly rate} = \frac{\text{Basic salary}}{\text{Total monthly working hours}}$$

1-Olyad.

$$\text{OT earnings} = 4 \text{ hours} \times (7530 / 160) \times 1.25 = \text{Br } 235.3125$$

$$\begin{aligned} \text{Total Gross earnings of Olyad} &= \text{basic salary} + \text{OT earnings} \\ &= 7530 + 235.3125 = 7765.3125 \end{aligned}$$

2- Berihun.

$$\text{OT earnings} = 8 \text{ hours} \times (6020 / 160) \times 2 = 602$$

$$\text{Total gross earnings of Berihun} = 6020 + 602 = 6622$$

3-Anas., has not worked overtime work. His gross earnings is basic salary plus his position allowance= 5300 + 300 = 5600

4- Oda has not worked overtime work. Gross earnings are his basic salary only. That is Br 3470

B)- Deductions and net pay

1-Olyad: taxable income= 7765.3125

I) Income tax:

Earnings	tax rate	Income tax	
0-600	0	= Br 0	
601-1650	on 1050 10%	= 105	
1651-3200	on 1550 15%	= 232.5	
3201-5250	on 2050	20%	= 410
5251- 7765.3125	on 2515.3125	25%	= <u>628.83</u>

Total income tax..... Br 1376.33

II) Pension contribution

$$\text{Basic salary} \times 7\% = \text{Br } 7530 \times 0.07 = \mathbf{527.1}$$

$$\mathbf{\text{Total deductions (Br 1376.33 + 527.1) = Br 1903.43}}$$

III) Net pay = Gross earnings - deductions

$$7765.3125 - 1903.43 = 5861.8825$$

2- Berihun: Taxable Income: 6622

I) Income tax

Earnings	tax rate	Income tax
0-600 -		Br 0
601-1650 on 1050	10%	105
1651- 3200 on 1550	15%	232.5
3201- 5250 on 2050	20%	410
5251-6622 on 1371	25%	<u>342.75</u>
Total income tax.....		Br 1090.25

II) Pension contribution

$$\text{Basic salary} \times 7\% = 6020 \times 0.07 = 421.4$$

III) Payment to credit association = Br 300

$$\text{Total deductions} = 1090.25 + 421.40 + 300 = 1811.65$$

IV) Net pay = Gross earnings - deductions

$$6622 - 1811.65 = 4810.35$$

3- Anas : Taxable income = 5600

I) Income tax

Earnings	Tax rate	Income tax
0-600 -		Br 0
601- 1650 on 1050	10%	105
1651- 3200 on 1550	15%	232.50
3201- 5250 on 2050	20%	410
5251- 5600 on 350	25%	<u>87.5</u>
Total income tax.....		Br 835

II) Pension contribution:

$$\text{Basic salary} \times 7\% = 5300 \times 0.07 = 371$$

$$\text{Total deductions} = 835 + 371 = 1206$$

III) Net pay = Gross earnings-- deductions

$$= 5600 - 1206 = 4394$$

$$\text{4-Oda: gross earnings} = 3470$$

I) Income tax-

Earnings	tax rate	Income tax
0- 600		Br 0
601- 1650 on 1050	10%	105
1651- 3200 on 1550	15%	232.50
3201- 3470 on 270	20%	<u>54</u>
Total income tax.....		Br 391.5

II) Net pay = Basic salary-Income tax

$$= 3470 - 391.50 = 3078.5$$

Payroll Register of Enjoy

Enjoy company
Payroll Register sheet
For the month of meskerem

Name of employee	Basic salary	Allowance	Overtime	Gross Earnings	Income Tax	Pension	Other deduction	Total deduction	Net pay	Sig
Olyad	7530	-	235.31	7765.3125	1376.33	527.1	-	1903.43	5861.8825	
Berihun	6020	-	602	6622	1090.25	421.4	300	1811.65	4810.35	
Anas	5300	300	-	5600	835	371	-	1206	4394	
Oda	3470	-		3470	391.50	-	-	391.50	3078.5	
Total	22,320	300	837.31	23457.3125	3693.08	1319.50	300	5312.58	18144.7325	

Proving the payroll

The accuracy of the payroll calculation can be checked using the appropriate journal entry as follows

Total earnings:

Basic salary.....	22,320
Allowances.....	300
Overtime.....	837.3125
Grand total.....	<u>23,457.3125</u>

Deductions:

Employment income tax.....	3,693.08
Pension contribution.....	1,319.50
Other deductions.....	<u>300.00</u>

Total deductions.....5,312.58

Net pay total.....18,144.7325

Total deductions plus net pay.....**23,457.3125**

✓ ***Journal entry to record Payroll***

Salary expense.....	23,457.3125
salary payable.....	18,144.7325
Pension payable.....	1,319.50
Tax payable.....	3,693.08
Credit ass.payable.....	300

✓ ***Journal entry to record Payroll expense payment:***

salary payable.....	18,144.7325
Pension payable.....	1,319.50
Credit ass.payable.....	300
Tax payable.....	3,693.08
cash.....	23,457.3125

6.2: Current liabilities and contingent liabilities

This section introduces you with current and contingent liabilities. Liabilities that are to be paid out of current assets and are due within a short time usually within one year are called current liabilities.

6.2.1 Nature of current liabilities

Most current liabilities arise from two basic transactions:

- ✓ Receiving goods or services prior to making payment
- ✓ Receiving payment prior to delivering goods or services.

An example of the first type of transaction is accounts payable. Accounts payable arises from purchase of merchandise for on account. An example of the second type of liability is unearned rent arising from the receipt of rent in advance.

Some additional examples of current liabilities are wages payable, salary payable, interest payable and taxes payable.

The current liability section of the balance sheet can contain items that are used to finance business operations, such as short-term notes payable and the portion of long-term debt that is due within the current period.

Notes Payable: Notes may be issued when the merchandise or other assets are purchased. They may be also issued to creditors to temporarily satisfy an account payable created earlier. For example, assume that a business issues a 90-day, 12% note for Br 1000, dated August, 1, 2016 to Brothers company for a 1000 overdue account. The entry to record the issuance of the note is:

Accounts payable	1000
Notes payable.....	1000

(Issued a 90-day, 12% note on account)

When the note matures, the entry to record the payment of Br 1000 principal and Br 30 interest ($1000 \times 12\% \times 90/360$) is as follows:

Notes payable.....	1000
Interest expense.....	30
Cash-----	1030

(Paid principal and interest due on note)

6.2.2: Current portion of long-term liability

Long-term liabilities are often paid back in periodic payments, called installments. Long-term liability installments that are due within the coming year must be classified as current liability. The total amount of the installment due after the coming year is classified as long term liability.

Example: ADAMA textile on January 1 purchased Cotton from Humeracompany for Br 6,000,000, payment to be made in three equal annual payments from January 2016. Assume a debt of Br.2, 000,000 will due in the year 2016. So, the debt of Br 2,000,000 that will due in the current year will be reported as current liability and the remaining Br 4,000,000 will continue as long-term liability in the balance sheet.

6.2.3: Contingent liabilities

Some past transactions will result in liabilities if certain events occur in the future. These potential obligations are called Contingent liabilities.

If a contingent liability is probable and the amount of the liability can be reasonably estimated, it should be recorded in the accounts.

If it is hard to reasonably estimate the amount of the contingent liability, such contingents should be disclosed in notes to the financial statements. That is such contingents cannot be reported in the body of the financial statements as current or long-term liabilities.

