ManaBarnootaaHaayiliigi
ሃይሊግትምህርትቤት
Heilig School

☎0221124055 ✉1045 Adama, Ethiopia E-mail: heiligschool@gmail.com

Grade 9 Subject: ICT
Date:- 24/05/2013 -06/06/2013 E.C. 1st sem **Note: 4**

- **Generation of Computers**

A computer is an electronic device that accepts processes, stores and outputs data under the control of sets of instructions.
Computers have come across a long way to acquire the current form and capability. It took around 50
years of continuous developments to bring the computer in its present form.
The evolution of computers is mainly divided into five main generations.

First Generation computers (1940–1956)

The U.S. census Bureau developed the first business computer in the year 1951. This computer was called
Universal Automatic Computer (UNIVAC). It used vacuum tube vacuum tube circuits were called the First Generation Computers.

Features:-

1. They used vacuum tubes.
2. They had a very big size.
3. They consumed huge electricity.
4. They were prone to failures.
5. They generated a lot of heat.
6. They only supported machine language.

Second Generation computers (1956–1964)

Bell Labs of U.S.A. invented transistors that were used instead of vacuum tubes. Transistors are electronic circuits that are small in size.

FEAUTURES

1. They used transistors instead of vacuum tubes.
2. They were smaller in size as compared to the first generation computers.
3. They generated lesser heat.
4. They were more reliable and faster than the first generation computers.
5. They used core memories, magnetic tapes and disks.

6. They used lesser electricity.
7. They could be programmed by using machine as well as assembly language.

Third Generation computers (1964–1971)

The Third Generation Computers used Large Scale Integrated (LSI) circuits for processing. The LSI circuits were invented in mid 1960s.

FEAUTURES

1. They used integrated circuits.
2. They had a small size as compared to the second generation computers.
3. They consumed less electricity.
4. They were faster and reliable than the second generation computers.
5. They supported high level language.

Fourth Generation computers (1971–Present)

Very Large Scale Integrated (VLSI) chips were invented in the year 1969. The computers that used VLSI chips were called the Fourth Generation Computers.

FEAUTURES

1. They contain high-speed microprocessors.
2. They contain huge storage volumes in the form of magnetic and optical storage.
3. They contain main memories up to GBs (Gigabytes).
4. They are companied by great developments in the fields of networks.

Fifth Generation computers (Future)

Recent research has focused on developing “thinking computers”. These computers are called the Fifth Generation Computers. Fifth generation computers will have the power to learn and apply knowledge to solve a problem.

Types Of Computers

Computers can be classified into super computers, mainframe computers, minicomputers, and microcomputers (personal computers) on the basis of the following:

1. Size
2. Cost
3. Performance

(i) Speed of processing data
(ii) Storage capacity
(iii) Ability to handle input and output devices

Super computers

I/the largest, fastest, and costliest computers.
ii/ used in fields like science and defense, for designing and launching missiles, weather forecasting, biomedical research, aircraft design and automobile design.
(iii) There are only a few super computers throughout the world. Some examples are IBM Blue Gene/L, IBM Roadrunner and Cray Jaguar.

Mainframe computers

i/ small general-purpose computers, also called midrange servers. perform more complex tasks and cost
more than microcomputers.
(ii) They are larger in size and they have small to medium storage capacity.
(iii) They are used for processing data and analyzing results of experiments.
They are also used for controlling and monitoring production processes.
(iv) Some examples are PDP 11/42 and VAX 11.

l Microcomputers

(i) Microcomputers are also called Personal Computers (PCs). These computers use microprocessors.
(ii) They are small in size. Also, they do not have large storage capacities.
(iii) They can perform difficult tasks. They are used mainly for desktop publishing, accounting, statistical
analysis, graphics designing and project management.
(iv) Some examples are Apple II, IBM PC, PS/2 and Macintosh.
The classification of PCs is as:
1. **Desktops:** These PCs are those in which the case or main housing sits on a desk, with keyboard in
front and screen (monitor) often on top.
2. **Portables:** These PCs are so small that they can be placed on your lap.
The portables are classified as:
(i) **Laptops:** These are small-sized machines that have the same power of a desktop. The weight of a
laptop is around 7 to 12 kg. The drawback of a laptop is that it is too bulky. Examples: Toshiba 5200C
and SLT/286.
(ii) **Notebooks:** These are smaller than a laptop and are designed to overcome the drawbacks of a laptop. They have the size of a notebook but are as powerful as a desktop. They weigh 3 to 4 kg.
(iii) **Palmtops or Personal Digital Assistants (PDAs):** These are handheld computers which have the size
of a pocket calculator. They are not as powerful as a desktop.