



# **WACHEMO UNIVERSITY**

college of engineering and  
technology  
department  
computer science  
programming II  
assignment

# 1.function

what is function over loading?

function overloading is function that allows used to define multiple with the same name but different arrgument or parrameter lists.that have multiple function with the same name,but ech function can accept different types or d/nt numbers of parrameters.

when call an overload function the compiller determines which version of the function to excute based on the argument provided.

it mathces the arguments with the parrameters of the available function definition and selects the most appropriate one.

# 1.example of functions overloading

```
#include<iostream>
using namespace std;
int sum(int a, int b);
float sum(float a,float b);
int main()
{
    int x=5,y=6,g;
    float k,i=4.3,j=5.3;
    g=sum(x,y);
    k=sum(i,j);
}
int sum(int a,int b)
{
    int sum;
    sum=a+b;
    return sum;
}
float sum(float i,float j)
{
    float z;
    z=i+j;
    return z;
}
```

## 2.passing array values In afunction

how to pass array values In afunction?

passing array values in afunction

involves providing an array as an argument to afunction. this allows the function to access and manipulate the elements of the array.when passing an array to afunction ,passing the memory address of the first elements of the array.

# passing array values in a function

array is a data structure which allows a collective of name to be given to a group of which all have the same type. an individual elements of an array is identified by its own unique index.

# example

## to calculate the students average by using array as a function in C++ .

```
#include<iostream>
using namespace std;
int avg(int [ ],int)
void main( )
{ int avrage;
int mark[5]={78,65,43,56,87};
avrage=avg(mark,5);
cout<<"avrage is"<<avrage;
}
int avg(int [ ],int a)
{int i,sum=0,avrage=0;
for(i=0;i<a;i++)
{ sum=sum+mark[ i];
}
avrage=sum/a;
}
```

# 3.inline function

inline is a request to the compiler(not a command)to make a function an inline function in order to reduce the over head of calling function.if a function is treated as an inline by the compiler,the function's code is replaced by a single line of code.

there should only be one instruction in the inline function.

# inline function

it is a way to suggest or request the compiler to replace the function call with actual code of the function. the overall inline function provides a way to optimize code execution by avoiding the overhead of function calls.

# example inline function

```
#include<iostream>
using namespace std;
inline int sum(int k,int l);
int main()
{int a=8,b=10,result;
result=sum(a,b);
cout<<"the sum is"<<result;
}
inline int sum(int n,int m)
{
    int sum;
    sum=n+m;
    return sum;
}
```

# 4.function overriding

function overriding is a feature of inheritance and is used to achieve run time polymorphism. the function signature(name and parameters) in the derived class must match exactly with the function signature in the base class for overriding to occur.

function overriding occurs when a derived class provides a specific implementation of a method that is already defined in its base class.

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