

Function

A function is a group of statements that together perform a task. Every C program has at least one function, which is **main()**, and all the most trivial programs can define additional functions.

- Any 'c' program contains at least one function .it must be main
- there is no limit in the number of function that might be present in 'c' program
- A function can call any number of time
- A function can call itself . Such a process called recursion .
- A function may have number of - arguments but only one return type .

There are basically two type of function

- User Defined function
- Library function

- User Defined function

A function defined by user is called user defined function . All these functions are usually defined for local propose within the program .

Before define a function the function prototype should be defined . The default return type is integer

There three steps that must be written using any user defined function

- a) Function declaration
- b) function calling
- c) Function Definition

function declaration

A function **declaration** tells the compiler about a function name and how to call the function. The actual body of the function can be defined separately.

A function declaration has the following parts

Syntax:

```
return_type function_name( parameter list );
```

Example:

```
Int add(int ,int)
```

function calling

The function calling means that the function is called by other functions. Depending on the definition of the function , the function may be called with or with out argument

A function declaration has the following parts

Syntax:

```
function_name( argument list );
```

Example:

```
add(a,b)
```

function Definition

The body of a function contains one or more statements that define the purpose of the function

Syntax:

```
return_type function_name( parameter list );
```

Example:

```
int add(int a, int b)
```

Function Category

- **Function With argument and return value**
- **Function with argument and No return value**
- **Function with no argument and no return value**
- **Function with no argument and return value**