FUNCTIONS

- Concept of function, using functions, call by value and call by reference mechanism to working with functions-example programs, passing arrays to functions, scope and extent, storage classes, recursion.

Definition:

- A function is a self-contained block of code that performs a particular task.

or

- A function as series of instructions or group of statements with one specific purpose.

or

- A function is a program segment that carries out some specific, well defined task.

Advantages of functions

- Separating mechanism of function from its particular use in the larger program.
- Code reusability (writing the code only once and can be used any number of times).
- Code modularity.
- Code manageability.
- Identification of errors will be difficult in a large complex program which can be overcome by making use of functions...
- Easier to programming and understand ability.
- Most commonly used functions can be stored as standard libraries which can be used further.

Types of functions

C functions can be classified into two types, namely

I. Library functions or pre-defined functions or standard functions or built in functions
II. User defined functions

1. Built in Functions

These functions are defined in the library of C compiler which is used frequently in the C program.

C supports many built in functions like

- ✓ Mathematical functions – sqrt(), pow()..,
- ✓ String manipulation functions – strlen(), strcmp(),..
- ✓ Input and output functions – printf(), scanf().
- ✓ Memory management functions – malloc(), free(),..
- ✓ Error handling functions.

2. User Defined Functions

Even though many functions are provided by C compiler, these functions are not enough to perform customized functions. The user can construct their own functions to perform some specific task. This type of functions created by the user is termed as User defined functions.