CONSTANTS

The values that cannot be changed during the execution of a program are calledconstants.

Types of C constants:

C constants can be divided into following categories

➢ Numeric Constant

    a) Integer Constant

    b) Floating Point Constant

➢ Character Constant

➢ String Constant

➢ Enumeration constant

Integer Constant

An integer constant is formed with the sequence of digits. There are three types of integerconstants.

- **Decimal constant:** (base 10)

It is formed with decimal numbers (may be in between 0 to 9)

    Example:

```
const int a= 42;
const int a =-782;
```

- **Octal constant:** (base 8)

It is formed with octal numbers (Starts with leading 0 and remaining may be inbetween 0 to 7)

    Example:

```
const int a= 042;
```

- **Hexadecimal constant:** It is formed with hexadecimal numbers (Starts withleading 0x and remaining may be in between 0 to 9 or A to F)

    Example:

```
const int a= 0x7D;
```

Floating Point Constant

A floating point constant is made up of sequence of numeric digits with a decimal point.

Example:

```
const float distance = 126.0;
```

Rules for floating point Constants:

- A floating point constant must have at least one digit.

- It must have a decimal point

- It is either positive or negative

- Default sign is positive.

- Commas or blank spaces are not allowed

Character Constant

The character constant contains a single character enclosed within a pair of single quotesymbol.
Example:

const char a= „s‟;

String Constant

A string constant is a sequence of characters enclosed in double quotes. The characters may be letters, number, special characters and blank spaces, etc. At the end of string „\0‟ is automatically placed.
Example:

const char a[10]="Hi";

Enumeration Constant

Enumeration constant is the user defined constant based on the standard integer type.

They allow the programmer to name a finite set together with its elements.

Keyword : enum

Syntax

enum identifier{const1, const 2….constn);

Assigning value to enumeration constant

- When no value is assigned to enumeration constant,

Default value of const1 is 0
Default value of const2 is 1

Example:

enum Day{ Monday, Tuesday, Wednesday, Thursday};
Monday=0
Tuesday=1
Wendesday=2
Thursday=3

Program:

```
#include   <stdio.h>
#include<conio.h>
void main()
{
    enum Day{ Monday =1, Tuesday, Wednesday, Thursday};enum No{ A= 3, B };
    printf("Wednesday  =  %d",  Wednesday);
    printf("B = %d ", B);



}
```