C Language

Data Types :-

- 1. Primitive Data type
  - 1. Int
  - 2. long Int
  - 3. float
  - 4. double
  - 5. char

Data Types :-

- 2. Non Primitive Data types :-
  - Derived data type
  1. Array
  2. Function
  3. Pointer
  - User defined data type
  1. Structure
  2. Union

Types of Operators

- Arithmetic operators : +,-,*,/,%
- Increment / Decrement :
  1. Pre increment
  2. Post increment
  3. Pre Decrement
  4. Post Decrement

Types of Operators

- Assignment Operator :- ==
- Comparison Operator :- <,>,<=,>=,==,!=
- Ternary Operator :- ? :
- Bitwise Operator :- \(OR), &(AND)
- Shift Operator:- << , >>

Types of Loops

- Entry Control Loop
  1. For Loop
  2. While Loop

- Exit control
  1. Do while loop

Array

- An array is a data structure that stores a collection of elements of the same data type in contiguous memory locations.
  - Types of Arrays are:
  - 1D single dimension
  - 2D multi dimension

Function

- A set of statement that when called perform some specific tasks.
- Types of Function:-
  1. With return type and with argument
  2. With return type and without argument
  3. Without return type and with argument
  4. Without return type and without argument

String

- A string is a sequence of character terminated by null character (\0).
- Inbuilt functions are :
  1. Strlen(argument)
  2. Strrev(argument)
  3. Strcpy(argument1, argument2)
  4. Strcmp(argument1, argument2)
  5. Strcat(argument1, argument2)
  6. Strupr(argument)
  7. Strlwr(argument)

Example:

```
#include<stdio.h>
int main() – main file
{
        int a=10;
        long int b=20000;
        float c= 12.22;
        double d=12.234567;
        char ch='A';
        printf("The value of a=%d",a);
        printf("\nThe value of b=%ld",b);
        printf("\nThe value of c=%f",c);
        printf("\nThe value of d=%f",d);
        printf("\nThe value of ch= %c",ch);
}
```

Thank you

-Ashish Ram