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# C Language



# Data Types :-

- I. 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

-Achal Chhag

