**C Programming**

**C language:-**

C is a high level language.

It is a mother level Language.

It is a structured programming language .

It is a System programming language.

It developed by Dennis Ritchie in 1972 at AT & T Bell Laboratories. In USA.

**Features of C:-**

1. Simple
2. Portable
3. Speed
4. Libraries
5. Structured
6. System…..etc

Note.

It be create any program in C language. Then some software need.

Turbo C++

Dev C

VS Code

Notepad++

Netbeans…etc

**Compiler:-**

It is an application that convert source into machine code.

Source Code 🡪 Compiler 🡪 Machine Code

Ext. .c/.cpp

**Keyword:-**

It is reserve word,it is predefined into complier.

In C 32 Keyword are available.

Ex. If, for, while,do…..

**Header Files:-**

It is also known as library files. It saved in include folder.

Ex. Stdio.h conio.h, math.h ….etc

It be create c programming then be use some symbol.

#:- It is preprocessor directive.

Stdio.h standard/input/output

Conio.h console/input/output

Clrscr(); it is used to clear screen.

Void main() :- It is show the starting pointing of program.

It is used to hold the screen when we not press any key.

It is one character input function.

Gets(); it is use to read the hole string value

**Structured Programming:-**

Documentation Block ( optional block)

Header Section (essential block)

Global Section (optional Block)

Main section (essential block)

IOP input processing output

UDF user defined function

Scanf(); is a input function. It is used to read intger ,float ,char.

It takes input from user.

Syntax:-

Scanf(“%formate-specifier”,&variablename);

Scanf(“%d”,&a);

Printf();

It is used to print result in console.

Syntax:-

Printf(“string=%formate-specifier”,variable);

**Variables:-**

Which hold some space into the memory and which value can be changed during the program.

Data\_type variablename;

Int a,b,c;

Float a;

**Rules of Variable:-**

1. Variable cant start with number

Valid--- int a;

Invalid—int 1a;

1. In variable can not used keyword

Int ram;

Int @ram;

1. Space are not allow in variable declaration

Int ram

Int ra m

1. Define multiple variable use comma

Int a,b,c;

**Types of variable:-**

1. Local Variable
2. Global Variable
3. Local Variable:-

It is used to declare variable inside of the main function

Then this process is define local variable.

Syntax:-

Valid function(){

Local variable

}

Ex.

Void main(){

Int a;

}

1. Global Variable:-

It is created outside of the valid function.

Syntax:-

Variable declare

Valid function(){}

Ex.

Int a;

Void main(){

}

#include<stdio.h>

Int main(){

Printf(“heloo”);

Return 0;

}

#include<stdio.h>

#include<conio.h>

void main(){

Printf(“heloo”);

Getch();

}

**Operator:-**

Operator which perform the relation between two operands.

Ex. A+b,a-b,a\*b,a/b;

Here is (a,b) operends (\*,/,)is operator

Types of operator:-

Arithmetic operator

Relational operator

Logical Operator

Conditiponal Operator

Assignment operator

Increament Decreament

Bitwise operator

1. Arithmetical Operator:- It perform the all mathematical operation

Ex. Addition(+)

Sub(-)

Mutli(\*)

Div(/)

Modulus(/)

1. Relational Operator:- it perform relation between two operator.

Ex.

Greater then (a>b)

Greater then equal (a>=b)

Less then (a<b)

Less then or equal (a=<b)

Equality (a==b)

Not equal (a!=b) etc.

1. Logical operator:- It perform

Assignment Operator :- Assignment operator is used to assign the value.

* It is represent this symbol(‘=’).

Note –

Assignment operator is always assign the value right hand side to left side.

Ex. Int x;

X=100;

Increament/Decreament Operator :- If u want ot increase the value into there value then this process is known as increament ope

Ex.

Int a;

A=100;

A++;

A=a+1;

A+=1;

Decreamnet ope is the opposite of increament ope

Ex.

Int a;

A=100

a--;

a=a-1;

a-=1;

Bitwise Operator:- It is use to in c program first convert bit and then perform all operation.

Ex.

& and

| or

^ xor

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **x** | **y** | **X&y** | **X||y** | **X^y** |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 |

Wap in c use bit 12 and 25

12=00001100

25=00011001

Bitwise & :-00001000

8 result