**Class 1 (Basic in C++)**

* Programming Language
* Variables
* Conditional Statements (kaam kiya ya nhi  **OR**  ya to yai kr lo ya to wo )
* Looping (Finite number of step) (jab hum kahi jaate hai ya Bi-Cycle ke tyar)
* Function (birthday Party, Marriage , Hawan , lunch , class , job etc..)
* Array

**Basic Program RAM**

Int main()

{

cout<<”Hello World”;

return 0; \*Memory allocate for program

}

Basic Program

Compiler

(Where we Code)

OS

(operating System)

**Compiler:** Compile the program code and find the error if no error in program then its convert the program code into machine code.

Computer understand only 0 & 1 (Low level language and Machine code/language)

High level Language it understand by humans basically written in English.

\*\*Assembler middle language ( add 79H) 0111 1001 (1 byte)

\*\*C++ is case Sensitive Language

**Class 2 (Variables)**

A variable is a main memory location that hold the value that may be modified by the program.

Int – integer (0 to 9)

Float – decimal numbers 4.999

Char – character (‘a’ to ‘z’ & ‘A’ to ‘Z’)

String – set of characters

Double - Decimals point (money) 99.99 [100 paise = 1 rupess]

Decimal – Decimals numbers 0.9999

***\*\*****255(0 to 9, a to z, A to Z, symbols)*

**How Declare Variables & Initialize**

int a;

float f;

char c;

string z;

**(LHS) (RHS)**

**Assignment Operator** ( = ): assign the value in variables.

Syntax : =

int a;

10

a = 10; 1000;

a=10

RAM

c= ‘a’

Char = ‘a’; 1015;

**Arithmetic Operator (+,-,\*,/,%)**

Addition : + (Use)

Subtraction : -

Multiply : \*

Divide : /

Mode : %

**Basic Syntax**

#include<iostream.h> //library Functions

using namespace std; //Calling/linking for objects

**\*Basic Hello World Program**

int main()

{

cout<<”hello World”;

//Cout is predefine function which use to Print the Output on console

return 0;

}

**\*Sum Program on Define Number**

[10+20=30]

int main()

{

int a , b;

a = 10; // A is 10

b = 20; // B is 20

int c;

c = a+b; //sum 30

cout<< ” Sum of “ << a <<” +” << b <<” : “<<c; //Sum of A+B : 30

return 0;

}

**Sum Program By user Input**

int main()

{

int a , b;

cout<<” Enter First Number : “;

cin>>a;

cout<<”Enter Second Number : “;

cin>>b;

int c;

c = a+b;

cout<<”Sum of A + B : “<<c; //Sum of A+B : 30

return 0;

}

**Homework: Left Arithmetic Operator program**

**Class 3 (Basic Programs)**

**Q: Write a Swap Program for two number**

**First number = 10**

**Second number = 20**

**First number = 20**

**Second number = 10**

**(Arithmetic Operator)**

int main()

{ first second

20

10

int first, second;

first = 10; 1000 1004

second =20;

int temp; temp

cout<<”Befoe Swap first : “<<a<<” Second : “<<b<<endl;

10

temp=10;

first=20; 1020

second=temp;

cout<<”first : ”<<a<<”second : “<<b;

return 0;

}

**\*\*Home Work**

**Q2: Write the Program of swap of two number without using third variable? (User input)**

**Q3: Write the Program of swap of two number without using third variable? (User Input)**

**CLASS 5**

**\*Relational Operators (Boolean 0 or 1 , O means False or 1 means True )**

|  |  |
| --- | --- |
| **Greater Than** | **>** |
| **Greater Than Equal to** | **>=** |
| **Less Than** | **<** |
| **Less than Equal to** | **=<** |
| **Equal to** | **==** |
| **Not Equal to** | **!=** |

**\*Logical Operators (Compare)**

|  |  |
| --- | --- |
| **AND** | **&&** |
| **OR** | **||** |
| **Not** | **!** |

**And means if both true then result is true**

**OR means if any of one Condition is correct then result is true**

**Not means NOT**

**Example:-**

**int main()**

**{**

**Int a=20,b=20;**

**cout<<Sum is : “<<(a>b); // false = 0**

**cout<<Sum is : “<<(a>=b); // True = 0**

**cout<<Sum is : “<<(a<=b); // true = 1**

**cout<<Sum is : “<<(a<b); // false = 1**

**cout<<Sum is : “<<(a==b); // true = 1**

**cout<<Sum is : “<<(a!=b); // false = 0**

**return 0;**

**}**

**Example:-**

**int main()**

**{**

**int a=20,b=20;**

**cout<<(a&&b); //0 1 = 0**

**cout<<(a||b); // 0 1 = 1**

**cout<<(a!b); //**

**retrun 0;**

**}**