**Day 1 :**

**20-09-2020**

Programming language

Software

System software OS

Application software

C

C++

Java

Python

C#

JavaScript

Etc

Java : Java is a pure object oriented and platform independent programming language.

object : object is any real world entity.

Properties or state -🡪 have 🡪name, age, height, color,

Person

Behavior -🡪do/does 🡪 teaching, sleeping, taking etc

Place

Bank

Car

Mobile

Account

Employee

Class : blue print of object or template of object.

Class syntax

class ClassName {

fields/ variables

functions / methods

}

class Demo {

public static void main(String args[]) {

System.out.println("welcome to java");

}

}

We have to same the program with ClassName.java

Java 1.0 Java 18

Java 8, 11 and 15 etc

Java

JDK : Java Development kit

JRE : Java run time environment

Variable : Variable is name which hold value and value can change during the execution of program.

a=10

a=30;

Data Types : data types is a type of data which tells what type of value it can hold.

2 types

1. Primitive data type
2. Non primitive data type or reference data type.

Primitive data type : it is use to store only value.

8 types

1. byte 1 byte
2. short 2 byte
3. int 4 byte
4. long 8 byte

without decimal (number type)

1. float 4 byte
2. double 8 byte

with decimal (number type)

1. char 2 byte : any single character
2. boolean 1 bit : true or false.

datatype variableName;

dataTyep variableName = value;

int a;

int b=100;

**Day 2:**

**22-09-2020**

Operator : Operator is use to do mathematical operation on variable.

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

Conditional operator : >, <, >=, <=, ==, !=

Logical operator : &&, ||, !

&& : both the condition must be true then result is true

|| : any condition must be true then result is true

! : negation

Assignment operator : = int a=10;

a+b=c+d; error

a+b == c+d;

increment and decrement :

variable++ n++ increment the value by one

variable-- n-- decrement the value by one

int a=10;

a=a+1;

or

a++

a=a-1;

or

a--

pre increment and post increment or pre decrement and post decrement

a=10;

a++ post increment a-- post decrement

++a pre increment --a pre decrement

If we use the variable alone then there is no difference between pre and post increment or decrement.

But if we use this variable with increment or decrement in expression or assigning to another variable then pre an post behave differently.

Pre : first increment and then we can use the value

Post : first use then increment the value.

Ternary operator : condition ? true : false;

If statement : it is use to execute set of statement base upon condition.

1. Simple if

If(condition) {

}

1. If else

If(condition) {

}else {

}

1. If else if

If(condition) {

}else if(condition) {

}else if(condition) {

}else {

}

1. Switch statement

Syntax

switch(variableName) {

case value1: block1;

break;

case value2: block2;

break;

case value3: block3;

break;

default : wrong block

break;

}

switch, case, break and default are keywords.

Variablename must be type of int, char or string.

Taking the value through keyboards in Java

1. Using Scanner class
2. DataInputStream
3. BufferedReader
4. Command Line interface

Using Scanner class

We have to create the Scanner class object.

Scanner is a pre-defined class which provided set of methods which help to take the value through keyboards.

Syntax

Scanner obj = new Scanner(System.in);

Scanner is pre-defined class part of utill package. Package is a collection of classes and interfaces.

#include<stdio.h>

printf(“”);

Scanner obj = new Scanner(System.in);

obj.nextByte();

obj.nextShort();

obj.nextInt();

obj.nextLong();

obj.nextFloat();

obj.nextDouble();

obj.nextBoolean();

no nextChar()

String : String is pre-defined class which help to store more than one character.

**Day 3:**

**24-09-2020**

Looping : looping is use to execute set of statement again and again till condition become false.

While loop

Do while loop

For loop

For each or enhanced loop

Initialization : start and end position

Condition : must be true

Body of the loop

Increment or decrement

While loop

Initialization i=1,n=10;

while(i>=n) { entry loop

do the task

increment or decrement , i++ or n--

}

Do while loop

Initialization i=1,n=10;

do{

do the task

increment or decrement , i++ or n--

} while(i<=n); exit loop

For loop

Syntax

1 2 4

for(initialization ; condition ; increment / decrement ){

body for the for loop 3

}

1st block only once then it check the condition . It will execute 2, 3 and 4 till condition become false.

Display numbers in reverse order.

Display only even or odd number

Sum of natural numbers.

Sum of even number or odd number.

array : array is known a reference data type which is use to store more than one value of same type.

int a=10;

a=20;

a=30;

int abc[];

int []abc;

int [] abc;

int[] abc;

int abc[]={10,20,30,40,50,60}; array with initialization

array store using index position and index position start from zero.

abc[0];

abc[1];

abc[5];

int xyz[]=new int[10]; array created with memory size 10.

xyz[0]; default vale is zero.

xyz[0]=100;

xyz[1]=200;

for each loop

for(datatype variableName: arrayname) {

}

Sum of array elements. Take the value through keyboards.

Sum of array of even or odd elements. Take the value through keyboards.

Store n number of employee details like id, name, salary.

Store n number of employee details like id, name, salary, designation

If desg is Manager 5000 bonus

If des is Develop 300 bonus

else

1500