Day 1

20-09-2022

Software

Application software : This type of software mainly use to develop the application.

System software : Operating system : it is to run the machine. OS window, unix, linux etc.

Programming language :

C 1970

C++ 1980

Java 1990

Python

C#

JavaScript

Go lang

Etc

What is Java ?

Java is pure object oriented and platform independent programming language.

object : object is any real world entity.

Properties or state --🡪 have -🡪 name, age, weight, color, height etc.

Person

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

Bank

Place

Car

Customer

Employee

class : blue print of object or template of object.

syntax of class

class ClassName {

property or variable or fields

behavior – function / methods

}

IDE

class

Java software

JDK : Java Development kit : which help to develop the application

JRE : Java run time environment :which help to run the application.

javac ProgramName.java : to compile the program

java classname : it is use to run the program

Day 2

22-09-2022

Variables : variable is a name which hold value and value can change during the execution of a program.

a=10;

name =”Raj Deep”;

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

2 types

1. Primitive data types : it is use to store only value.
2. Non primitive data types or reference data type: it use to store value as well as reference of another value.

Primitive data types :

8 types

1. byte 1 byte : -128 to 127 range
2. short 2 byte
3. int 4 byte
4. long 8 byte : without decimal
5. float 4 byte
6. double 8 byte : with decimal
7. char 2 byte : any single character a to z or symbol or number
8. boolean 1 bit : true or false

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

1. Arithmetic operator : +, -, \*, /, %(remainder)
2. Conditional operator : >, >=, <, <=, ==, !=
3. Logical operator : && (and), || (or) , !(negation)

&& if all condition is true then result is true

|| if any condition is true then result is true

1. Assignment operator : =

int a=10;

int b = 40+60;

int c+d = 100+400; Error

1. Increment and decrement

int a=10;

a = a+1;

or

a++ increment the value by one

a= a-1;

or

a-- decrement the value by one

a=10;

c=30;

value a 10;

value c 30;

a = c; assigning the value of c in a variable

a == c; comparing the value of a and c

a = c+d; error

a+b == c+d comparing

Day 3

27-09-2022

Conditional statement

1. If statement

if(condition) {

true block

}

1. If else

if(condition) {

}else {

}

1. If else if
2. Switch statement

**If and else example**

class IfStatement {

public static void main(String args[]) {

int age = 25;

if(age>21) {

System.out.println("You can vote!");

}else {

System.out.println("You Can't vote");

}

System.out.println("Finish");

}

}

If else if program

class IfElseIfStatement {

public static void main(String args[]) {

int m1=70, m2=90,m3=50;

int total = m1+m2+m3;

int avg = total/3;

if(avg>90) {

System.out.println("A++ Grade");

}else if(avg>75) {

System.out.println("A Grade");

}else if(avg >65){

System.out.println("B Grade");

}else {

System.out.println("C Grade");

}

System.out.println("Thank You!");

}

}

switch : in switch user can take decision which block want to execute.

Syntax

switch(variableName){

case label1: block1;

break;

case label2: block2;

break;

case label3: block3;

break;

default : defaultblock

break;

}

switch, case, break and default are keywords

in Switch we can use variable of type int or char or String etc.

class SwitchStatement {

public static void main(String args[]) {

int choice = 5;

switch(choice) {

case 1: System.out.println("First block");

System.out.println("First block finish");

break;

case 2: System.out.println("Second block");

System.out.println("Second block finish");

break;

case 3: System.out.println("Third block");

System.out.println("Third block finish");

break;

default : System.out.println("Wrong choice");

break;

}

System.out.println("Finish");

}

}

Taking the value through keyboards in Java

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

Scanner : Scanner is pre-defined class part of util package which provided lot of pre defined methods which help to take the value through keywords.

Syntax to create the Scanner class object

Scanner sc =new Scanner(System.in);

sc.nextByte();

sc.nextShort()

sc.nextInt()

sc.nextLong();

sc.nextFloat();

sc.nextDouble();

sc.nextBoolean();

sc.nextChar() no methods

Scanner class with switch statement

import java.util.\*;

class InputValue {

public static void main(String args[]) {

Scanner sc = new Scanner(System.in);

/\*System.out.println("Enter the value of a");

int a = sc.nextInt();

System.out.println("Enter the value of b");

int b = sc.nextInt();

int sum = a+b;

System.out.println("Sum is "+sum);\*/

//System.out.println("Value of a is "+a);

int choice,a,b,sum,sub;

System.out.println("1:Add 2:Sub");

System.out.println("Plz enter your choice");

choice = sc.nextInt();

switch(choice) {

case 1: System.out.println("Enter the value of a");

a = sc.nextInt();

System.out.println("Enter the value of b");

b = sc.nextInt();

sum = a+b;

System.out.println("Sum of two number is "+sum);

break;

case 2: System.out.println("Enter the value of a");

a = sc.nextInt();

System.out.println("Enter the value of b");

b = sc.nextInt();

sub = a-b;

System.out.println("Sub of two number is "+sub);

break;

default : System.out.println("Wrong choice");

break;

}

System.out.println("Finish");

}

}

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

While loop

Do while loop

For loop

Initialization : start and end position

Condition : true

Body of the loop

Increment or decrement the value

While loop

Initialization

while(condition) { entry loop

do the task

increment or decrement

}

Do while loop

Initialization

do {

do the task

increment or decrement

}while(); exit loop

For loop

1 2 4

for(initialization;condition; increment/ decrement) {

body of for loop 3

}

Initialization only once

Check the condition if condition is true then body of the loop and increment or decrement and then again check the condition till condition become false. – 2,3,4