1. Explain JDK, JRE and JVM?

**JVM**:- JVM ( Java Virtual Machine) is an abstract machine. It is called as virtual machine because it not exists physically. It provides runtime environment to java byte code which was created after compilation. It also run those programs which h are written in other languages and compiled to java byte code. JVM perform three main tasks. First it loads the code then it verifies the code and executes the code. It provides runtime environment to the code.

**JDK** :- JDK stands for Java Development Kit. It is a software development environment which is used to develop java applications. It contains JREand development tools. JDK contains Java Virtual Machine and other resources such as interpreter , class loader to complete the development of java application.

**JRE**:- it is Java Runtime Environment. It is a collection of software tools which are used for developing java applications. It is used to provide the runtime environment. It contains a set of libraries and other files that JVM uses at runtime.

1. Why java is platform independent?

Java is platform independent because it uses a virtual machine The java programming language and all APIs are compiled into bytecodes. Bytecodes are effectively platform-independent. The virtual machine takes care of the differences between the bytecodes for the different platforms. The run-time requirements for Java are therefore very small. The Java virtual machine takes care of all hardware-related issues so that no code has to be compiled for different hardware.

1. List down all primitive data types in java in order of their capacities.

boolean - 1bit

Char - 2byte

byte - 1byte

short -2 byte

int - 4 byte

long - 8 byte

float - 4 byte

double - 8 byte

1. Which of the following are valid variable names?

a. \_$\_$\_$ b. my$Var

c. 1\_emp\_no d. good@str

e. $ 9 f. V$A$V

Ans:- a,b,e,f

1. Write a Java program to enter two numbers and perform all arithmetic operations.

class Arithmetic

{

public static void main(String args[])

{

int num1,num2,sum,sub,mul,div;

num1=24;

num2=6;

sum=num1+num2;

sub=num1-num2;

mul=num1\*num2;

div=num1/num2;

System.out.println("Addition= "+sum);

System.out.println("Subtraction= "+sub);

System.out.println("Multiplication= "+mul);

System.out.println("Division= "+sum);

}

}

1. Write a java program to calculate area of circle.

import java.util.\*;

class Area

{

public static void main(String args[])

{

double radius,area;

Scanner S = new Scanner(System.in);

System.out.println("Enter radius of circle");

radius=S.nextDouble();

area=3.14\*(radius\*radius);

System.out.println("Diameter of circle= "+diameter);

System.out.println("Circumference of circle= "+circumference);

System.out.println("Area of circle= "+area);

}

}

7) Swap values of two integer variables using third variable.

(Note - also do same program without using third variable)\

By using 2 variables

Import java.lang.\*;

class Swap

{

Public static void main(String args [])

{

Int num1=40, num2=50;

num1=num1+num2;

num2=num1-num2;

num1= num1-num2;

System.out.println(“num1= “+num1+”num2= “+num2);

}

}

By using third variable

Import java.lang.\*;

class Swap

{

public static void main(String args[])

{

int num1=40,num2=50,t;

t=num2;

num2=num1;

num1=t;

System.out.println(“num1= “+num1+”num2= “+num2);

}

}

1. Write a Java program to convert days into years, weeks and days.

import java.util.\*;

class YearWeekDay

{

public static void main(String args[])

{

int m,year,week,day;

Scanner S = new Scanner(System.in);

System.out.println("Enter the no of days");

m=S.nextInt();

year=m/365;

System.out.println("No of years= "+year);

week=m/7;

m=m%7;

System.out.println("No of weeks= "+week);

day=m;

System.out.println("No of days= "+day);

}

}

1. Write a Java program to enter marks of five subjects and calculate total and

Percentage.

import java.lang.\*;

class TotalPerc

{

public static void main(String args[])

{

int sub1,sub2,sub3,sub4,sub5,total,perc;

sub1= 79;

sub2= 67;

sub3= 91;

sub4= 56;

sub5= 77;

total=sub1+sub2+sub3+sub4+sub5;

perc= total/100

System.out.println(“Total of marks is” +total+”and percentage are “+perc);

}

}