

WEEK-1

Exercise 1 a) Write a JAVA program to display default value of all primitive data type of JAVA

AIM:

```
Import java.lang.*;
class Defaultval
{
    static byte b;
    static shorts;
    static int i;
    static long l;
    static float f;
    static double d;
    static char c;
    static boolean bl;
public static void main(String args[])
{
    System.out.println("Byte:"+b);
    System.out.println("Short :"+s);
    System.out.println("Int :"+i);
    System.out.println("Long :"+l);
    System.out.println("Float :"+f);
    System.out.println("Double :"+d);
    System.out.println("Char :"+c);
    System.out.println("Boolean :"+bl);
}
}
```

OUTPUT:

Exercise 1 b) Write a java program that display the roots of a quadratic equation $ax^2+bx=0$. Calculate the discriminate D and basing on value of D, describe the nature of root.

AIM:

```
import java.util.*;
class Quadratic
{
    public static void main(String arg[])
    {
        double a,b,c;
        double x1,x2,disc;
        Scanner sc=new Scanner(System.in);
        System.out.println("enter a,b,c values");
```

```

        a=sc.nextDouble();
        b=sc.nextDouble();
        c=sc.nextDouble();
        disc=(b*b)-(4*a*c);
    if (disc==0)
    {
        System.out.println("roots are real and equal ");
        x1=x2=-b/(2*a);
        System.out.println("roots are "+x1+", "+x2);
    }
    else if(disc>0)
    {
        System.out.println("roots are real and unequal");
        x1=(-b+Math.sqrt(disc))/(2*a);
        x2=(b+Math.sqrt(disc))/(2*a);
        System.out.println("roots are "+x1+", "+x2);
    }
    else
    {
        System.out.println("roots are imaginary");
    }
}

```

OUTPUT:

c) Write a case study on public static void main(250 words)

AIM: A case study on public static void main(250 words)

Explanation: Public static void main(String args[]) { }

Java program processing starts from the main() method which is a mandatory part of every Java program.

Public

The first word in the statement, public, means that any object can use the main method. The first word could also be static, but public static is the standard way. Still, public means that it is truly the main method of the program and the means by which all other code will be used in the program.

Static

Even though you could write static public or public static, the program will work just fine. Still, it's more common to use public static. In the context of Java, the static keyword means that the main method is a class method. What this also means is that you can access this method without having an instance of the class (Remember that the public keywords makes the method accessible by all classes, so this makes it possible.)

Void

is used to define the Return Type of the Method. It defines what the method can return. Void means the Method will not return any value.

main

is the name of the Method. This Method name is searched by JVM as a starting point for an application with a particular signature only.

String args[] : is the parameter to the main Method.