Program 1

1) Develop a Java program that prints all real solution to Quadratic Equation $ax^2+bx+c=0$ Read a, b, c and use Quadratic formula.

```
import java.util.Scanner;
import java.lang.Math;
class Quadratic
 {
   Scanner s= new Scanner(System.in);
   Syste
  int a, b, c;
  double r1, r2, d;
  void getd();
  {
   Scanner s= new Scanner (System.in);
   System.out.println("enter the coefficients a&c");
   int a= s.nextInt();
   int b= s.nextInt();
   int c= s.nextInt();
}
```

```
void compute()
{
    if (a!=0)
    d= d*d-4*a*c;
    if(d>0) {
    System.out.println("Roots are real and distinct");
        r1= -b**b-4*a*c
    r1 = -b+ Math.sqrt(d)/(2*a);
    r2 = -b- Math.sqrt(d)/(2*a);
    System.out.println("Roots are real and distinct");
    System.out.println("The roots are:"+r1+" "+r2);

else if (d==0)
    {
        r1=r2= (-b)/(2*a);
    System.out.println("Roots are real and equal");
    System.out.println("Roots are r1=r2 "+r1);
    }
    else
    System.out.println("The roots are imaginary");
    }
else if (a==0)
    System.out.println("Invalid output");
```

```
    }
}
class Quad
  {
    public static void main (String args[])
    {
      Quadric sl = new Quadratic();
      sl.getd();
      sl.compute();
    }
  }
```

output:

Enter the value of a, b, c

1

2

3

The roots are imaginary.

Enter the value of a, b, c

1

5

1

The roots are reals and distinct

roots are :- -2.7087,

Enter the values a,b,c

1

2

3

roots are real & equal

the root is -1.0.