Program - 1

Quadratic Equation

```java
import java.util.Scanner;
Class quadratic
{
    public static void main (String args[])
    {
        Scanner s = new Scanner (System.in);
        System.out.println ("Enter the values a b and c")?
        double a, b, c, d, r1, r2;
        a = S.nextFloat();
        b = S.nextFloat();
        c = S.nextFloat();
        d = (b*b) - (4*a*c);
        if (d>0)
        {
            r1 = (-b + Math.pow (d, 0.5)) / (2*d);
            r2 = (-b - Sq Math.pow(d, 0.5)) / (2*d);
            System.out.Println ("Roots are "+ r1 + " and "+ r2);
        }
        else if (d==0)
        {
            r1 = -b/(2*a);
            System.out.Println ("Roots are equal and value
                                    is " + r1);
        }
}
```

```java
        else
        {
            System.out.Println(" Roots are imaginary");
        }

    }

}
```

Output

1. Enter a b and C
   2 4 2
   Roots are equal and value is -1.0.

2. Enter values a b and c
   1 5 6
   Roots are Real and distinct and the values are

3. Enter value a b and c
   1 2 3
   Roots are imaginary