12/12/2023

Program 3:- Quadratic

Develop a Java program on quadratic

```
import java.util.Scanner;
class Quadratic
{
  int a,b,c;
  double r1,r2,d;
  void get()
  {
    Scanner s = new Scanner(System.in);
    System.out.println("Enter the coefficient of
    a,b,c");
    a = s.nextInt();
    b = s.nextInt();
    c = s.nextInt();
  }
void compute()
{
  while(a==0)
  {
    System.out.println("Not a Q equation");
    System.out.println("Enter a non zero value for
                        a:");
```

```
Scanner s = new Scanner (System.in);
a = s.nextInt();
{
d = b * b - 4 * a * c;
if (d == 0)
{
  s1 = (-b)/(2*a);
  System.out.println("roots are real and equal");
  System.out.println("root1 = root2 = " + s1);
}
  s1 = ((-b) + (Math.sqrt(d)))/(double)(2*a)
  s2 = ((-b) - (Math.sqrt(d)))/(double)(2*a)
  System.out.println("roots are real & distinct")
  System.out.println("roots = " s1 + "root2 = "+s2);
}
else if (d<0)
{
  System.out.println("roots are imaginary");
  s1 = (-b)/2(*a)
  s2 = Math.sqrt(-d)/(2*a)
  System.out.println("root1 : "+s1+"+i"+s2);
  System.out.println("root1 = "+s1"-i"+s2);
}
}
}
```

```
class Quadratic Run
{
    public static void main (String args[])
    {
        quadratic q = new Quadratic ();
        q.get ();
        q.compute ();
    }
}
```

output :- My name is Rohit Gandhi
My USN is 2023BMS02599
Enter the coefficient of a, b, c
1
5
3
Roots are real and distinct
Root 1 = -0.6972243622680054 and Root 2 = -4.302775637731995

output 2 :- My name is Rohit Gandhi
My USN is 2023BMS02599
Enter the coefficient of a, b, c :
1, 0, -1
Roots are real and distinct
Roots 1 = 1.0 Root 2 = -1.0

Program 6:-

Factorial :-

```
class factorial {
  public static void main (String args[])
  {
    int fac = 1;
    System.out.println("Enter a no");
    Scanner sc = new Scanner(System.in);
    int n = sc.nextint();
    for(int i = 1 ; i <= n ; i++) {
      fact = fac * i ;
    }
    System.out.println("The factorial : " + fac);
```

Complete