Aim:

Write code to calculate **roots** of a **quadratic equation**.

Write a class `QuadraticRoots` with `main` method. The method receives three arguments, write code to parse them into `double` type.

For example:

> if the values **2, 5, 3** are passed as arguments, then the output should be **First root is : -1.0 Second root is : -1.5**
> If the values **3, 2, 1** are passed then the output should be **Roots are imaginary**
> Similarly, if the values **2, 4, 2** are passed then the output should be **Roots are equal and value is : -1.0**

Note: Make sure to use the **print()** and not the **println()** method.

Note: Please don't change the package name.

Source Code:

q10851/QuadraticRoots.java

```java
package q10851;
class QuadraticRoots
{
    double a,b,c;
    void getData(String c1,String c2,String c3)
    {
        a=Double.valueOf(c1);
        b=Double.valueOf(c2);
        c=Double.valueOf(c3);
    }
    void roots ()
    {
        double d;
        if(a==0)
        {
            double root;
            root=-c/b;
            System.out.println("linear equation "+root);
        }
        else
        {
            d=(b*b)-(4*a*c);
            if(d==0)
            {
                double root=-b/(2*a);
                System.out.println("Roots are equal and value is : "+root);
            }
            else if(d>0)
            {
                double r1,r2;
                r1=(-b+Math.sqrt(d))/(2*a);
```

```
            r2=(-b-Math.sqrt(d))/(2*a);
            System.out.println("First root is : "+r1+" Second root is : "+r2);
        }
        else
        System.out.println("Roots are imaginary");
    }
  }
  public static void main(String a[])
  {
      QuadraticRoots r=new QuadraticRoots();
      r.getData(a[0],a[1],a[2]);
      r.roots();
  }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
First root is : -0.6047152924789525 Second root is : -1.3952847075210475

Test Case - 2
User Output
Roots are equal and value is : -1.0

Test Case - 3
User Output
Roots are imaginary