S.No: 2	Exp. Name: ***Write a Java code to calculate the Roots of a Quadratic equation***	Date:2023-09-09

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 equa
l 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

```
package q10851;
import java.io.*;
class QuadraticRoots
{
   public static void main(String args[])
   {
      double a,b,c,d,r1,r2,x;
      a=Double.parseDouble(args[0]);
      b=Double.parseDouble(args[1]);
      c=Double.parseDouble(args[2]);
      d=(b*b)-4*a*c;
      x=Math.sqrt(d);
      if(d > 0)
      {
            r1=(-b+x)/(2*a);
              r2=(-b-x)/(2*a);
            System.out.print("First root is : "+r1+" Second root is : "+r2);
      }
      else if(d==0)
      {
            System.out.print("Roots are equal and value is : "+(-b/(2*a)));
      }
      else
      {
            System.out.print("Roots are imaginary");
      }
   }
}
```

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