```
import java.io.*;
import java.util.*;
import java.lang.*;
public class quadratic
{
   private static double a;
   private static double b;
   private static double c;
   public static void read()
   {
      Scanner sc=new Scanner(System.in);
      System.out.println("Enter the Co-Effcient a");
      a=sc.nextDouble();
      System.out.println("Enter the Co-Effcient b");
      b=sc.nextDouble();
      System.out.println("Enter the Co-Effcient c");
      c=sc.nextDouble();
      System.out.println("THANK YOU FOR ENTERRING THE CO-EFFCIENTS");
   }

   public static void calc()
   {
      read();
      double d=b*b-4*a*c;
      if(d>0)
      {
         System.out.println("ROOTS ARE READ AND DISTINCT");
         System.out.println("FIRST ROOT IS " + (-b+Math.sqrt(d))/(2*a));
         System.out.println("FIRST ROOT IS " + (-b-Math.sqrt(d))/(2*a));
      }
      else if(d==0)
```

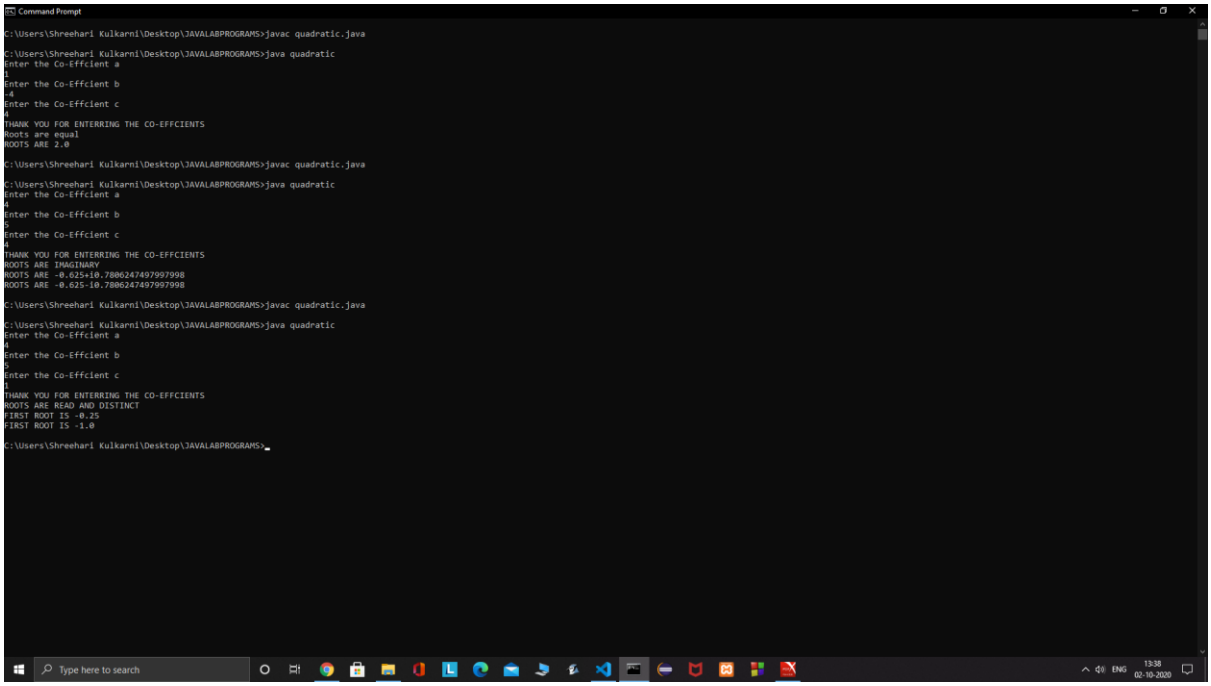
```
        {
            System.out.println("Roots are equal");
            System.out.println("ROOTS ARE " + (-b)/(2*a));
        }
        else
        {
            System.out.println("ROOTS ARE IMAGINARY");
            System.out.println("ROOTS ARE " + -b/(2*a) + "+" +"i" + (Math.sqrt(-d))/(2*a));
            System.out.println("ROOTS ARE " + -b/(2*a) + "-" +"i" + (Math.sqrt(-d))/(2*a));
        }

    }

    public static void main(String[] args)
    {
        calc();
    }
}
```

OUTPUT:

OUPUT IS SHARED IN THE NEXT PAGE


Command Prompt
C:\Users\Shreehari Kulkarni\Desktop\JAVALABPROGRAMS>javac quadratic.java
C:\Users\Shreehari Kulkarni\Desktop\JAVALABPROGRAMS>java quadratic
Enter the Co-Effclent a
1
Enter the Co-Effclent b
-4
Enter the Co-Effclent c
4
THANK YOU FOR ENTERRING THE CO-EFFCIENTS
Roots are equal
ROOTS ARE 2.0
C:\Users\Shreehari Kulkarni\Desktop\JAVALABPROGRAMS>javac quadratic.java
C:\Users\Shreehari Kulkarni\Desktop\JAVALABPROGRAMS>java quadratic
Enter the Co-Effclent a
1
Enter the Co-Effclent b
5
Enter the Co-Effclent c
4
THANK YOU FOR ENTERRING THE CO-EFFCIENTS
ROOTS ARE IMAGINARY
ROOTS ARE -0.625+10.780624749799798
ROOTS ARE -0.625-10.780624749799798
C:\Users\Shreehari Kulkarni\Desktop\JAVALABPROGRAMS>javac quadratic.java
C:\Users\Shreehari Kulkarni\Desktop\JAVALABPROGRAMS>java quadratic
Enter the Co-Effclent a
1
Enter the Co-Effclent b
5
Enter the Co-Effclent c
4
THANK YOU FOR ENTERRING THE CO-EFFCIENTS
ROOTS ARE READ AND DISTINCT
FIRST ROOT IS -0.25
FIRST ROOT IS -1.0
C:\Users\Shreehari Kulkarni\Desktop\JAVALABPROGRAMS>
Type here to search
ENG
13:38
02-10-2020