Develop a java program that prints all real solutions to the quadratic equation ax^2+bx+c and use quadratic formula. If discreminant $b^2-4ac$is negative, display a message stating that there is no real solution.

```
import java.util.Scanner;

class Quadraticequations

{

  public static void main(String args[]){

        Scanner input=new Scanner(System.in);

        System.out.println("Enter the value of a:");

        double a=input.nextDouble();

        System.out.println("Enter the value of b:");

        double b=input.nextDouble();

        System.out.println("Enter the value of c:");

        double c=input.nextDouble();

        if(a==0)

        {

        System.out.println("Invalid input");

        }

        else

        {

        double d=(b*b)-(4*a*c);

        if(d>0)

                {

                double r1=(-b+Math.sqrt(d))/(2*a);

                double r2=(-b-Math.sqrt(d))/(2*a);

                System.out.println("The roots are real and distinct: "+r1+ " and "+r2);

                }

        else if(d==0)

        {

                double r1=(-b/(2*a));

                System.out.println("The roots are real and equal: "+r1+" and "+r1);

        }
```

```
        else
        {
                double r1=-b/(2*a);
                double r2=Math.sqrt(Math.abs(d))/(2*a);
                System.out.println("The roots are distinct and imaginary"+" r1= "+r1+" +i "+r2 +" r2= "+r1+" -i "+r2);
        }
}
}
}
```

OUTPUT