```java
import java.util.Scanner;
class quad
{
    public static void main (String args[])
    {
        System.out.println("Enter the cofficients a, b & c of quadratic equation ax2+bx+c=0 and where a is not 0");
        Scanner sc = new Scanner(System.in);
        double a = sc.nextInt();
        if (a==0)
        {
            System.out.println("a can't be zero");
        }
        else
        {
        double b=sc.nextInt();
        double c=sc.nextInt();
        double z=b*b-4*a*c;
        Equation eq=new Equation();
        if (z<0)
        {
            System.out.println("There are no real solutions");
        }
        else if(z==0)
        {
            System.out.println("The solutions are real and equal");
            eq.check(a,b,c);
            eq.display();
        }
        else
        {
            System.out.println("The solutions are real and distinct");
            eq.check(a,b,c);
            eq.display();
        }
        }
    }
}
class Equation
{
    double a;
    double b;
    double c;
```

```java
        Equation eq=new Equation();
        if (z<0)
        {
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        {
            System.out.println("The solutions are real and equal");
            eq.check(a,b,c);
            eq.display();
        }
        else
        {
            System.out.println("The solutions are real and distinct");
            eq.check(a,b,c);
            eq.display();
        }
        }
    }
}
class Equation
{
    double a;
    double b;
    double c;
    double r1;
    double r2;
    void check(double a,double b,double c)
    {
        this.a=a;
        this.b=b;
        this.c=c;
        double z=Math.pow( b*b-4*a*c , 0.5 );
    r1=(-b-z)/(2*a);
    r2=(-b+z)/(2*a);
    }
    void display()
    {
        System.out.println(r1);
        System.out.println(r2);
    }
}
```

```
Command Prompt                                                    —    ☐    ✕

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C:\Users\arpit>cd desktop

C:\Users\arpit\Desktop>javac quad.java

C:\Users\arpit\Desktop>java quad
Enter the cofficients a & b & c of quadratic equation ax2+bx+c=0 and where a is not 0
1 -2 1
The solutions are real and equal
1.0
1.0

C:\Users\arpit\Desktop>java quad
Enter the cofficients a & b & c of quadratic equation ax2+bx+c=0 and where a is not 0
4 4 1
The solutions are real and equal
-0.5
-0.5

C:\Users\arpit\Desktop>java quad
Enter the cofficients a & b & c of quadratic equation ax2+bx+c=0 and where a is not 0
1 1 1
There are no real solutions

C:\Users\arpit\Desktop>_
```