Develop a Java program that prints all real solutions to the quadratic equation ax2+bx+c = 0. Read in a, b, c and use the quadratic formula. If the discriminate b2-4ac is negative, display a message stating that there are no real solutions.

```
import java.util.Scanner;
import java.lang.Math;

class Quadratic {
public static void main (String args[]){
Scanner s =new Scanner (System.in);

System.out.println("Enter the values of a, b and c");
double a= s.nextInt();
double b= s.nextInt();
double c= s.nextInt();

//Discriminant is D
double D=b*b-4*a*c;
double root1, root2;
if(D>0){
System.out.println("Roots are real and Unique");
root1= -b+Math.sqrt(D)/(2*a);
root2= -b-Math.sqrt(D)/(2*a);
System.out.println("Root1= "+root1+" AND "+"Root2= "+root2);
}
else if(D==0) {
System.out.println("Roots are real and equal");
root1=root2=-b/(2*a);
System.out.println("Root1=Root2= "+root1);
}
else {
```

```
System.out.println("There are no real solutions");

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

double imagpart=Math.sqrt(-D)/(2*a);

System.out.println("Root1= "+realpart+" + "+imagpart+"i"+" AND "+"Root2= "+realpart+" - "+imagpart+"i");

}

}

}
```

OUTPUT:

```
C:\Users\BMSCECSE\Desktop>java Quadratic
Enter the values of a, b and c
2
-11
14
Roots are real and Unique
Root1= 11.75 AND Root2= 10.25

C:\Users\BMSCECSE\Desktop>java Quadratic
Enter the values of a, b and c
1
7
3
Roots are real and Unique
Root1= -3.9586187348508903 AND Root2= -10.04138126514911

C:\Users\BMSCECSE\Desktop>java Quadratic
Enter the values of a, b and c
1
3
7
There are no real solutions
Root1= -1.5 + 2.1794494717703337i AND Root2= -1.5 - 2.1794494717703337i

C:\Users\BMSCECSE\Desktop>java Quadratic
Enter the values of a, b and c
1
-10
25
Roots are real and equal
```