

```
import java.util.*;
class Quadratic
{
public static void main(String [] arg)
{
Scanner s =new Scanner(System.in);
System.out.println("Enter a,b,c of the equation ax^2+bx+c=0:");
double a=s.nextDouble();
double b=s.nextDouble();
double c=s.nextDouble();
double d=b*b-4.0*a*c;
double roots1,roots2;
System.out.println(d);
if(d>0)
{
System.out.println("roots are real and unequal");
roots1=(-b-Math.sqrt(d))/(2.0*a);
roots2=(-b+Math.sqrt(d))/(2.0*a);
System.out.println("root1 :"+roots1+" root2:"+roots2);
}
else if(d==0)
{
System.out.println("Roots are real and equal ");
roots1=(-1*b)/(2*a);
roots2=roots1;
System.out.println("root1: "+roots1+"root2:"+roots2);
}
else
{
System.out.println("roots are imaginary ");
}
}
```

```
at java.util.Scanner.nextDouble(Scanner.java:2413)
at Quadratic.main(Quadratic.java:8)
```

C:\Users\Hima\Desktop\java>java Quadratic

Enter a,b,c of the equation $ax^2+bx+c=0$:

1 -1 -6

roots are real and unequal

root1 :-2.0 root2:3.0

C:\Users\Hima\Desktop\java>java Quadratic

Enter a,b,c of the equation $ax^2+bx+c=0$:

1 2 1

roots are real and unequal

root1 :-1.0 root2:-1.0

C:\Users\Hima\Desktop\java>javac Quadratic.java

C:\Users\Hima\Desktop\java>java Quadratic

Enter a,b,c of the equation $ax^2+bx+c=0$:

1 1 1

-3.0

roots are imaginary

C:\Users\Hima\Desktop\java>java Quadratic

Enter a,b,c of the equation $ax^2+bx+c=0$:

1 -1 -6

25.0

roots are real and unequal

root1 :-2.0 root2:3.0

C:\Users\Hima\Desktop\java>java Quadratic

Enter a,b,c of the equation $ax^2+bx+c=0$:

1 2 1

0.0

Roots are real and equal

root1: -1.0root2:-1.0

C:\Users\Hima\Desktop\java>java Quadratic