

Output:-

12 12 12
12 12 12
12 12 12

javac helloworld.java
java helloworld
<D:\dilbit>\helloworld class

→ class hello

{

 public static void main (String args [])

{

 System.out.println ("hello world");

}

}

Output: hello world.

→ import java.util.Scanner;

class Quadratic

{

 int a,b,c;

 double r1,r2,d;

 void getd()

{

 Scanner s=new Scanner (System.in);

 System.out.println ("Enter the coefficients
 of a,b,c");

 a=s.nextInt();

 b=s.nextInt();

 c=s.nextInt();

 void compute()

while ($a == 0$)

↳

System.out.println("Not a quadratic equation
");

System.out.println("Enter a non zero
value for a: ");

Scanner s = new Scanner(System.in);
 $a = s.nextInt();$

↳

$$d = b^2 - 4ac;$$

if ($d == 0$)

↳

$$r_1 = (-b) / (2 * a);$$

System.out.println("Roots are real & equal");

System.out.println("Root1 = Root2 = " + r1);

} else if ($d > 0$)

↳

$$r_1 = ((-b) + \sqrt{d}) / (2 * a);$$

$$r_2 = ((-b) - \sqrt{d}) / (2 * a);$$

System.out.println("Roots are real
and distinct");

System.out.println("Root1 = " + r1 + "Root2 =
" + r2);

↳

else if ($d < 0$)

↳

System.out.println("Roots are imaginary");

$$r_1 = (-b) / (2 * a);$$

$$r_2 = \sqrt{-d} / (2 * a);$$

System.out.println("Root1 = " + r1 + " + i " + r2);

System.out.println("Root1 = " + r1 + " - i " + r2);

```
}  
class QuadraticMain
```

```
public static void main(String args[])
```

```
{  
    Quadratic q = new Quadratic();  
    q.getd();  
    q.compute();  
}
```

Output 1:

Rani IBM22CS217

Enter the coefficients of a,b,c

1

-5

2

roots are real and distinct

Root1 = 4.5615528120

Root2 = 4.5615528128

Output 2: Rani IBM22CS217

Enter the coefficients of a,b,c

1

2

1

roots are real and equal

Root1 = Root2 = 1.0

output3:

Ram 1BM22CS217

Enter the coefficients of a,b,c

O

U

T

not a quadratic equation

enter a non zero value for a.

1

roots are imaginary.

root 1 = -2.0 + i NaN

root 2 = -2.0 - i NaN.