

Date:09/10/2020

Program:Roots of quadratic equation

```
import java.util.Scanner;

class Rootsofquadraticcequation{

public static void main(String[] args){

int a,b,c;

double dis,x1,x2,real,imag;

Scanner myobj=new Scanner(System.in);

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

a=myobj.nextInt();

b=myobj.nextInt();

c=myobj.nextInt();

dis=b*b-4*a*c;

if(a==0 && b==0)

System.out.println("No roots exist");

else if(dis>=0)

{

System.out.println("The roots of quadratic equation are");

x1=(-b+Math.sqrt(b*b-4*a*c))/(2*a);

x2=(-b-Math.sqrt(b*b-4*a*c))/(2*a);

System.out.println("x1="+x1 +"\\nx2="+x2);

}
```

```

if(dis<0)
{
System.out.println("No real roots exist");

real=-b/(2*a);

imag=(Math.sqrt(-(b*b-4*a*c)))/(2*a);

System.out.println("And the imaginary roots are
x1=":+real+'+'+"i"+imag+"\nx2=":+real+'-'+"i"+imag);

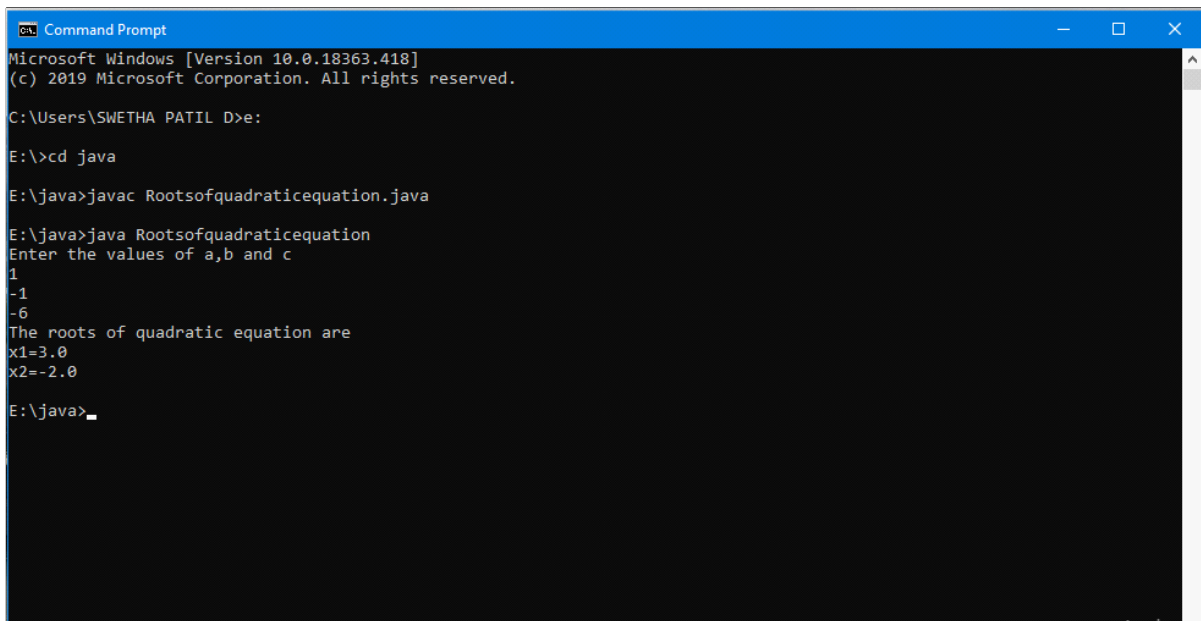
}

}

}

```

Output:



```

Command Prompt
Microsoft Windows [Version 10.0.18363.418]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\SWETHA PATIL D>e:

E:\>cd java

E:\java>javac Rootsofquadraticcequation.java

E:\java>java Rootsofquadraticcequation
Enter the values of a,b and c
1
-1
-6
The roots of quadratic equation are
x1=3.0
x2=-2.0

E:\java>_

```