Date:09/10/2020

Program:Roots of quadratic equation

```
import java.util.Scanner;
class Rootsofquadraticequation{
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: