```
import java.util.Scanner;
class Quadratic{
public static void main(String args[]){
Scanner input=new Scanner(System.in);
System.out.println("Enter co-efficient of a:");
double a = input.nextDouble();
System.out.println("Enter co-efficient of b:");
double b =input.nextDouble();
System.out.println("Enter co-effiecient of c:");
double c=input.nextDouble();
double d=b*b-4*a*c;
if(d>0){
double r1=(-b +Math.sqrt(d))/2*a;
double r2=(-b -Math.sqrt(d))/2*a;
System.out.println("Roots are:"+ r1+" "+r2);
else if(d==0){
double r1=-b/2*a;
double r2=-b/2*a;
System.out.println("Roots are: "+r1+" "+r2);
else if(d<0){
System.out.println("Roots are rational");
else{
System.out.println("Invalid input");
```

```
D:\24BECS409>javac Quadratic.java
D:\24BECS409>java Quadratic
Enter co-efficient of a:
10
Enter co-efficient of b:
20
Enter co-efficient of c:
30
Roots are rational
D:\24BECS409>
```

```
ovadrate equation lab program -
 im port java util Scanner;
  class Quadratic (
 public states youd main (Staing angs (3) {
 Scannon input new Scannon (System. in);
 System. out Prentin ("Enter 10 - effectent of a: ");
 double a = input. next Double ();
System out printin ("Enter co-officient of b: ");
  double b = enput next Doubles;
System. out printin ("Entor co-efficient of c:");
   double a= input next Doubleis;
 double d = b * b - 4 * a * c; 139 fai
 Santo St. new Samer Coloxbi) !!
 double ni = (-b + Math squild) /2 * a;
 double 40 = (-b +- Math. Squt(d)) /3 * a;
 System out printing "Roots are; " +1" "+11+
 else if (d==0)(= 100 100 100); 3
double 911=-5/2 xa; 0 9/19) 40-3000
double no = - 5/2 + a;
Bystem. out prentin ("Roots are; " + " "++11+""
                                   + 912); 4
else : 1 (d < 0) {
System. out println ("Roots are rational") 3 9
System. out. prentln ("Invalid enput");
                 O/P: Enter 10-efficient of a: 10
                  Enter co-efficient of b: 20
Enter co-efficient of c: 30
Roots are reational.
```