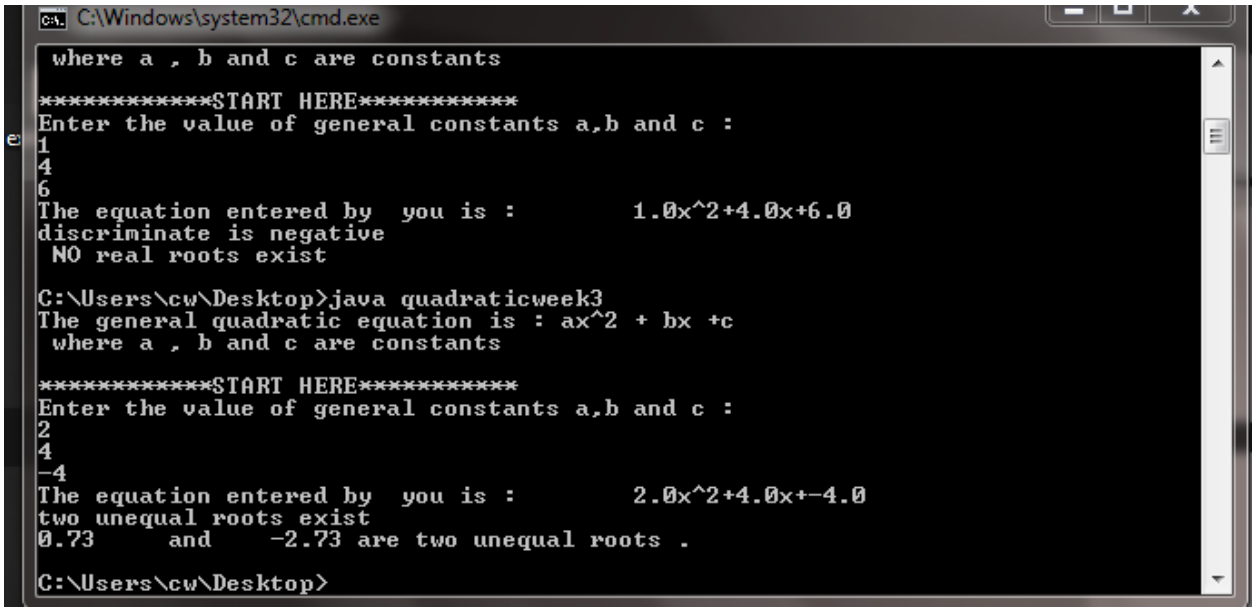
```
import java.util.*;

import java.lang.Math;

import java.text.DecimalFormat;

class quadraticweek3{

public static void main( String args[]){

Scanner sc=  new Scanner (System.in);

DecimalFormat df = new DecimalFormat("##.##");

System.out.println("The general quadratic equation is : ax^2 + bx +c \n where a , b and c are constants
\n ");

System.out.println("***********START HERE***********");

System.out.println("Enter the value of general constants a,b and c :");

float a=sc.nextFloat();

float b=sc.nextFloat();

float c=sc.nextFloat();

System.out.print("The equation entered by  you is : \t " + a +"x^2+"+ b +"x+"+ c +"\n");

float d=(float)(b*b - ( 4.0*a*c));


                if(d<0)

                {

                System.out.println("discriminate is negative \n NO real roots exist");



                }

                else if(d==0)

                {
```

```
System.out.println("two equal roots exist");

float x= (float)(- b/(2*a));

System.out.println(x + "\t and \t" + df.format(x)+ "are two equal roots .");



}

else if(d>0)

{

System.out.println("two unequal roots exist");

float x= (float)((- b/(2*a))+(Math.sqrt(d)/(2*a)));

float y= (float) ((- b/(2*a))-(Math.sqrt(d)/(2*a)));



System.out.println(df.format(x) + "\t and \t" +df.format(y)+ " are two unequal roots .");



}else

System.out.println("invalid enteries");

}

}
```



week - 3

```
import java.util.*;
import java.lang.Math;

class quadratic week 3 {
public static void main (string args[]) {
Scanner sc = new Scanner (System.in);
System.out.println ("The general quadratic
equation is : ax^2+bx+c \n where a, b
  and c are constants \n");
System.out.println ("***** START HERE *****
System.out.println ("Enter the value of general
  constants a, b and c : ");
  double a = sc.nextDouble ();
  double b = sc.nextDouble ();
  double c = sc.nextDouble ();

System.out.print ("The equation entered by you
  is : \t" + a+"x^2+"+b+"x+"+c+"\n");

double d = (b*b - (4.0*a*c));

  if (d<0)
   {
     system.out.println ("Discriminate is negative \n
No real roots exist");
   }
  else if (d==0)
  {
   system.out.println("two equal roots exist");
```

```
        double x = (-b/(2*a)) ;

system.out.println (x + "\t and \t" + x+ " are
  two equal roots.");
}

else if (d>0)
 {
  system.out.println (" two unequal roots exist");

 double x = (-b/(2*a)) + (Math.sqrt(d)/(2*a));

double y = (-b/(2*a)) - (Math.sqrt(d))/(2*a));

  System.out.println (x + " \t and \t" + y +
" are two unequal roots.");
 }

  else
 System. out println (" Invalid Enteries");
}

}
```