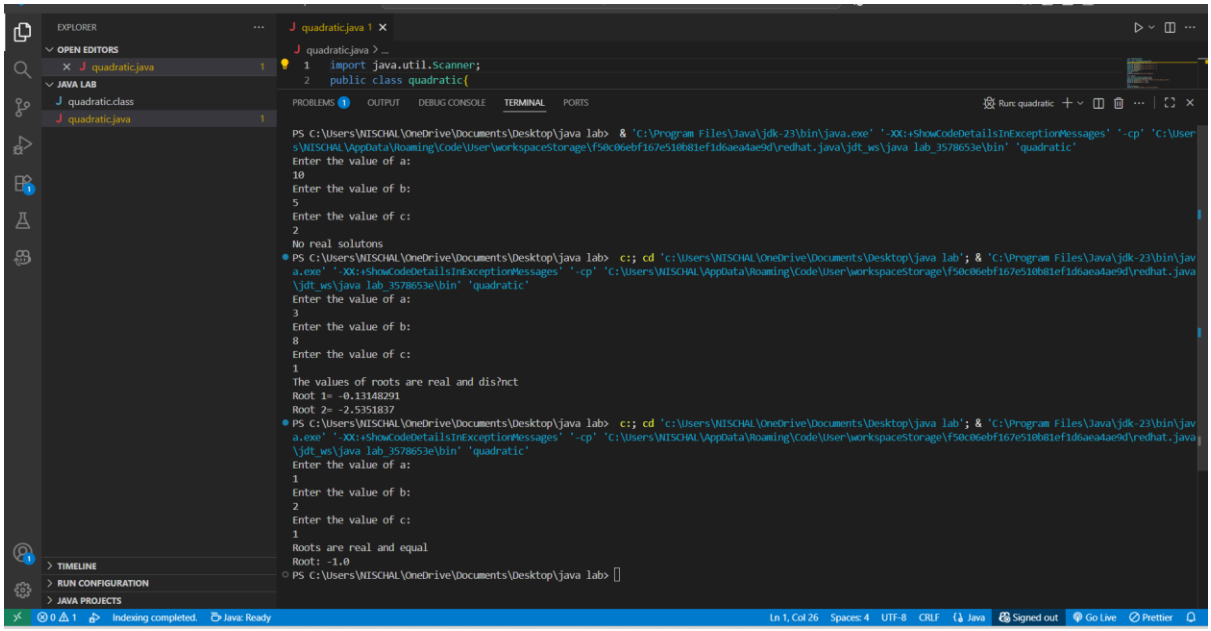
Develop a java program that prints all real solutions to the quadratic equation ax^2 + bx+c= q. Read in a,b,c and use the quadratic formula. If the discriminate b^2-4ac in negative, display a message stating that are no real solutions.

```
import java.util.Scanner;
public class quadratic{
public static void main(String[] args){
Scanner sc=new Scanner(System.in);
System.out.println("Enter the value of a: ");
float a=sc.nextFloat();
System.out.println("Enter the value of b: ");
float b=sc.nextFloat();
System.out.println("Enter the value of c: ");
float c=sc.nextFloat();
float d=b*b-4*a*c;
if(d<0){
System.out.println("No real solutons");
}
else if(d>0){
float r1=(float)(-b+Math.sqrt(d))/(2*a);
float r2=(float)(-b-Math.sqrt(d))/(2*a);
System.out.println("The values of roots are real and dis□nct");
System.out.println("Root 1= "+r1);
System.out.println("Root 2= "+r2);
}
else{
float r3=-b/(2*a);
System.out.println("Roots are real and equal");
System.out.println("Root: "+r3);
}
}
}
```

Output:


EXPLORER
OPEN EDITORS
quadratic.java 1
JAVA LAB
quadratic.class
quadratic.java 1
quadratic.java 1
quadratic.java > ...
1 import java.util.Scanner;
2 public class quadratic{
PROBLEMS 1
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
Run: quadratic
PS C:\Users\NISCHAL\OneDrive\Documents\Desktop\java lab> & 'C:\Program Files\Java\jdk-23\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\NISCHAL\AppData\Roaming\Code\User\workspaceStorage\f50c06ebf167e510b81ef1d6aea4ae9d\redhat.java\jdt_ws\java lab_3578653e\bin' 'quadratic'
Enter the value of a:
10
Enter the value of b:
5
Enter the value of c:
2
No real solutons
PS C:\Users\NISCHAL\OneDrive\Documents\Desktop\java lab> c:; cd 'c:\Users\NISCHAL\OneDrive\Documents\Desktop\java lab'; & 'C:\Program Files\Java\jdk-23\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\NISCHAL\AppData\Roaming\Code\User\workspaceStorage\f50c06ebf167e510b81ef1d6aea4ae9d\redhat.java\jdt_ws\java lab_3578653e\bin' 'quadratic'
Enter the value of a:
3
Enter the value of b:
8
Enter the value of c:
1
The values of roots are real and dis?nct
Root 1= -0.13148291
Root 2= -2.5351837
PS C:\Users\NISCHAL\OneDrive\Documents\Desktop\java lab> c:; cd 'c:\Users\NISCHAL\OneDrive\Documents\Desktop\java lab'; & 'C:\Program Files\Java\jdk-23\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\NISCHAL\AppData\Roaming\Code\User\workspaceStorage\f50c06ebf167e510b81ef1d6aea4ae9d\redhat.java\jdt_ws\java lab_3578653e\bin' 'quadratic'
Enter the value of a:
1
Enter the value of b:
2
Enter the value of c:
1
Roots are real and equal
Root: -1.0
PS C:\Users\NISCHAL\OneDrive\Documents\Desktop\java lab>
TIMELINE
RUN CONFIGURATION
JAVA PROJECTS
Indexing completed.
Java: Ready
Ln 1, Col 26
Spaces: 4
UTF-8
CRLF
Java
Signed out
Go Live
Prettier