

/*Develop a java program that prints all real solutions to the quadratic equation on $ax^2+bx+c = 0$. Read in a ,b ,c and use the quadratic formula. If the discriminate b^2-4ac is negative, display a message stating that there 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 solutions");

        }

        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 distinct");

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:-

The screenshot shows a Java development environment with the following interface elements:

- Top Bar:** File, Edit, Selection, View, Go, Run, Terminal, Help.
- Search Bar:** OOOJAVA.
- Terminal:** Displays the command-line session:

```
PS C:\Users\88nin\OneDrive\Documents\OOJAVA & 'C:\Program Files\Java\jre-1.8\bin\java.exe' '-cp' 'C:\Users\88nin\AppData\Roaming\Code\User\workspaceStorage\4adb2a2142c21b587a630072dbc95c75\redhat.java\jdt_ws\OOJAVA_ad619349\bin' 'quadratic'  
● Enter the value of a:  
3  
Enter the value of b:  
6  
Enter the value of c:  
3  
Roots are real and equal  
Root: -1.0
```
- Code Editor:** A floating window titled "quadratic.java" is open, showing the Java code for a quadratic equation solver.
- AI Integration:** An "Ask about your code" button is present in the floating window, along with a note: "AI responses may be inaccurate." and a link: "Generate Agent Instructions".
- Bottom Status Bar:** Shows file statistics (0 0 ▲ 1), Java status ("Java: Ready"), and other developer tools like Lint, Prettier, and Go Live.

The screenshot shows a dark-themed code editor interface. At the top, there's a navigation bar with File, Edit, Selection, View, Go, Run, Terminal, Help, and a search bar containing "OOJAVA". The main area has a left sidebar with various icons for file operations like copy, paste, search, and refresh. The central part is divided into two sections: a "CHAT" section on the left and a "TERMINAL" section on the right.

TERMINAL

```
PS C:\Users\88min\OneDrive\Documents\OOJAVA> & 'C:\Program Files\Java\jre-1.8\bin\java.exe' '-cp' 'C:\Users\88min\AppData\Roaming\Code\User\workspaceStorage\4adb2a2142c21b587a630072dbc95c75\redhat.java\jdt_ws\OOJAVA.ad619349\bin' 'quadratic'
● Enter the value of a:
8
Enter the value of b:
5
Enter the value of c:
7
No real solutions
○ PS C:\Users\88min\OneDrive\Documents\OOJAVA>
```

CHAT

Ask about your code

AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.

quadratic.java +
Add context (#), extensions (@), commands (/)

Ask ▾

Ln 12, Col 47 Spaces: 2 UTF-8 CRLF ⚙ Java 🛡 Signed out 🎤 Go Live ⚙ Prettier

The screenshot shows a dark-themed code editor interface. At the top, a navigation bar includes File, Edit, Selection, View, Go, Run, Terminal, Help, and a search bar containing "OOJAVA". To the right are standard window control buttons (minimize, maximize, close) and a vertical toolbar with icons for Chat, Terminal, Search, and others.

TERMINAL

```
PS C:\Users\88nin\OneDrive\Documents\OOJAVA> & 'C:\Program Files\Java\jre-1.8\bin\java.exe' '-cp' 'C:\Users\88nin\AppData\Roaming\Code\User\workspaceStorage\4adb2a2142c21b587a630072dbc95c7\redhat.java\jdt_ws\OOJAVA_ad619349\bin' 'quadratic'
● Enter the value of a:
2
● Enter the value of b:
9
● Enter the value of c:
4
The values of roots are real and distinct
Root 1= -0.5
Root 2= -4.0
○ PS C:\Users\88nin\OneDrive\Documents\OOJAVA>
```

CHAT

Ask about your code

AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.

File quadratic.java +
Add context (#), extensions (@), commands (/)

Ask ▾

Ln 8, Col 41 Spaces: 2 UTF-8 CRLF { Java Signed out Go Live Prettier