

Visual Studio Code interface showing a Java file named `Quadratic.java` being edited. The Explorer sidebar on the left shows the project structure with files like `Array.java`, `Dimension.class`, `Main.class`, `Main.java`, `Quadratic.class`, and `Quadratic.java`. The main editor displays the code for `Quadratic.java`, which includes a `main` method that calculates the roots of a quadratic equation using the discriminant.

```
1  import java.util.Scanner;
2
3  public class Quadratic {
4      Run | Debug
5      public static void main(String[] args) {
6          Scanner s=new Scanner(System.in);
7          System.out.println("Enter co-efficients a,b and constant c rrespectively:");
8          double a=s.nextDouble();
9          double b=s.nextDouble();
10         double c=s.nextDouble();
11         s.close();
12         double dc,dn;
13         double r,sqrt;
14         dn=2*a;
15         dc=Math.pow(b,2)-4*a*c;
16         if(dc==0){
17             r=-b/dn;
18             System.out.println("Roots are = "+r);
19         }
20         else if(dc>0){
21             r=-b/dn;
22             sqrt=(Math.sqrt(dc))/dn;
23             System.out.println("Real Roots = "+(r+sqrt)+" and "+(r-sqrt));
24         }
25         else{
26             r=-b/dn;
27             sqrt=(Math.sqrt(-dc))/dn;
28             System.out.println("Discriminant is negative ,so No real roots are posible");
29             System.out.println("Imaginary rooots are: "+r+"+i*"+sqrt+" and "+r+"-i*"+sqrt);
30         }
31     }
32 }
33
34
```

The status bar at the bottom indicates the current file is `Quadratic.java` at line 17, column 10, with 4 spaces, UTF-8 encoding, and CRLF line endings. The bottom of the screen shows the Windows taskbar with the search bar and various application icons.

Visual Studio Code interface showing a Java project named "Quadratic.java". The Explorer sidebar on the left lists files: .vscode, Array.java, Dimension.class, Dimension.java, Main.class, Main.java, Quadratic.class, and Quadratic.java. The Terminal window displays the execution of the Quadratic.java program in a PowerShell environment.

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\Users\Chaya Shetty\Desktop\jv> javac Quadratic.java
PS C:\Users\Chaya Shetty\Desktop\jv> java Quadratic
Enter co-efficients a,b and constant c respectively:
1
4
4
Roots are = -2.0
PS C:\Users\Chaya Shetty\Desktop\jv> java Quadratic
Enter co-efficients a,b and constant c respectively:
1
5
6
Real Roots = -2.0 and -3.0
PS C:\Users\Chaya Shetty\Desktop\jv> java Quadratic
Enter co-efficients a,b and constant c respectively:
1
1
1
Discriminant is negative ,so No real roots are possible
Imaginary roots are: -0.5+i*0.8660254037844386 and -0.5-i*0.8660254037844386
PS C:\Users\Chaya Shetty\Desktop\jv> java Quadratic
Enter co-efficients a,b and constant c respectively:
1
8
3
Real Roots = -0.3944487245360109 and -7.60555127546399
PS C:\Users\Chaya Shetty\Desktop\jv>
```

The status bar at the bottom indicates the current file is "Quadratic.java" at line 17, column 10, with 4 spaces, UTF-8 encoding, and CRLF line endings. The bottom of the screen shows the Windows taskbar with the search bar and various application icons.