

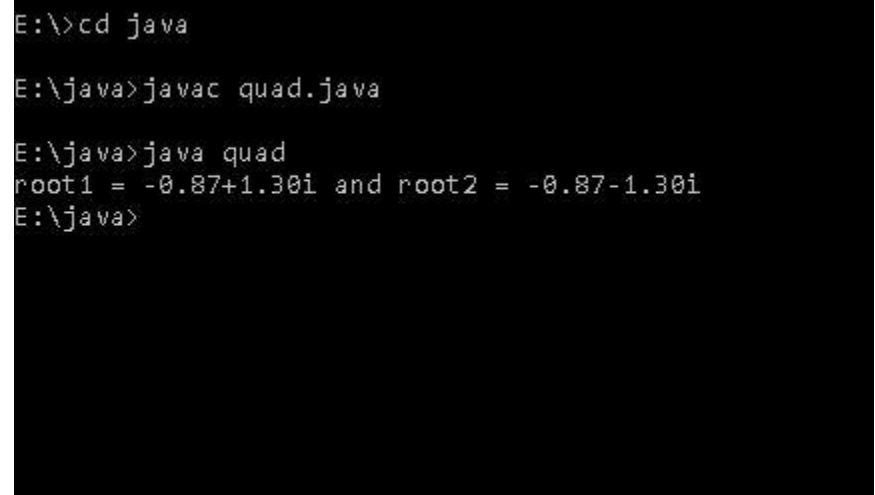
Java Program Quadratic Equation

Code:

```
public class quad {  
  
    public static void main(String[] args) {  
  
        double a = 2.3, b = 4, c = 5.6;  
        double root1, root2;  
  
        double determinant = b * b - 4 * a * c;  
  
        // condition for real and different roots  
        if(determinant > 0) {  
            root1 = (-b + Math.sqrt(determinant)) / (2 * a);  
            root2 = (-b - Math.sqrt(determinant)) / (2 * a);  
  
            System.out.format("root1 = %.2f and root2 = %.2f", root1 , root2);  
        }  
        // condition for real and equal roots  
        else if(determinant == 0) {  
            root1 = root2 = -b / (2 * a);  
  
            System.out.format("root1 = root2 = %.2f;", root1);  
        }  
        // if roots are not real  
        else {
```

```
double realPart = -b / (2 * a);  
double imaginaryPart = Math.sqrt(-determinant) / (2 * a);  
  
    System.out.format("root1 = %.2f+%.2fi and root2 = %.2f-%.2fi", realPart, imaginaryPart,  
realPart, imaginaryPart);  
    }  
    }  
}
```

Output:



```
E:\>cd java  
E:\java>javac quad.java  
E:\java>java quad  
root1 = -0.87+1.30i and root2 = -0.87-1.30i  
E:\java>
```