Lab - 1

```
import java.util.Scanner;

class Quadratic {
    public static void main(String[] args) {
        float a,b,c;
        Scanner takeInput = new Scanner(System.in);
        System.out.println("Enter the values of a, b, c
            :");
        a= takeInput.nextFloat();
        b= takeInput.nextFloat();
        c= takeInput.nextFloat();

        double calcDiscriminant = Math.pow(b,2)
                                  -(4*a*c);
        double root1 = (-b + Math.sqrt(calcDiscriminant
                        ))/(2*a);
        double root2 = (-b - Math.sqrt(calcDiscriminant
                        ))/(2*a);

        if (calcDiscriminant > 0) {
            System.out.println("The roots are real and
              distinct: " +root1 + ", " +root2);
        }
        else if (calcDiscriminant == 0) {
            System.out.println("The roots are real
              and equal: " +root1);
        }
```

```
        else {
            System.out.println("There are no real
            solutions to this equation");
        }

    }

}
```

```
pranavsastry@Pranavs-iMac:~/Documents/OOJ-Lab/Lab 1$ runj Quadratic
Enter the values of a, b, c:
4 6 3
There are no real solutions to this equation
pranavsastry@Pranavs-iMac:~/Documents/OOJ-Lab/Lab 1$ runj Quadratic
Enter the values of a, b, c:
1 -5 6
The roots are real and distinct: 3.0, 2.0
pranavsastry@Pranavs-iMac:~/Documents/OOJ-Lab/Lab 1$
```