Week3 — lab Prog 1

```
import java.util.Scanner;
public class program1{
    public static void main(String[] args){
    // Taking input
    Scanner input = new Scanner(System.in);
    System.out.println("Enter value of: ");
    System.out.print("a: ");
    double a = input.nextDouble();
    System.out.print("b: ");
    double b = input.nextDouble();
    System.out.print("c: ");
    double c = input.nextDouble();

    //Calculating Discriminant
    double discriminant = b*b - 4*a*c;

    // Checking for roots
    double r1, r2; // r1 = root1, r2 = root2
    if (discriminant > 0) {
        System.out.println("Real and Distinct
                            roots");
        r1 = (-b + Math.sqrt(discriminant))/(2*a);
        r2 = (-b - Math.sqrt(discriminant))/(2*a);
        System.out.println("Roots are" + r1 +"
                            and" + r2);
```

```
else if (discriminant == 0)
{
    System.out.println("Real and Equal
                        Roots");
    r1 = -b/(2.0*a);
    r2 = r1;
    System.out.println("Roots are "
                        +r1+" and "+r2);
}
else
    System.out.println("No real
                        solutions");
    }
}
```