Week-3

Neehal - 1BM19CS097.

Develop a Java program that prints all real solutions to the quadratic equation $ax^2+bx+c=0$. Read in a, b, c and use the quadratic formula. If the dis b^2-4ac is -ve, display a message stating that there are no real solutions.

```
import java.util.Scanner;
public class Main {
public static void main (String[] args) {
        Scanner sc = new Scanner (System.in);
        int a, b, c;
        Double d, s1, s2;
       System.out.print ("Enter values of a,b,c of a quadratic
                                                    equ:");
a = sc.nextInt();
b = sc.nextInt();
c = sc.nextInt();
sc.close();
d = (double)((b*b)-(4*a*c));
if (a==0){
System.out.println ("Invalid");
 return;
}
If (d<0) {
System.out.println ("No real solutions!");
} else is (d==0) {
      s1 = (double) ((-b+Math.sqrt(d))/(2*a));
      s2 = (double) ((-b-Math.sqrt(d))/(2*a));
System.out.printf ("Roots are Real and Equal: %.4f and %.4f",
                                                    s1, s2);
```

```
} else {
    s1 = (double) ((-b + Math.sqrt(d)) / (2 * a));
    s2 = (double) ((-b - Math.sqrt(d)) / (2 * a));
System.out.printf("Roots are Real and Distinct : %.4f and
                                        %.4f", s1, s2);
    }
}
}
```