LAB 1

1.
```
import java.util.Scanner;
Public class Quadratic {
  Public static void main (String[] args){
    Scanner s = new Scanner (System.in);
    System.out.println(" Enter co-efficient: a, b,
                        and constant C respectively);
    double a= s.nextDouble();
    double b = s.nextDouble();
    double c = s.nextDouble();
    s.close();
    double dc, dn;
    double r, sqrt;
    dn = 2 * a;
    dc = Math.pow(b,2) - 4 * a * c;
  if (dc == 0){
      r = b/dn;
      System.out.println("Roots are = "+r);}
  else if( dc >0){
      r = -b/dn;
      sqrt = (Math.sqrt(dc)/dn;

    System.out.println("Real Roots = "+(r+sqrt)
                        +"and"+(r-sqrt));
  }
```

```
else {
    r = -b/dn;
    sqrt = (Math.sqrt(-dc)/dn))/dn;

System.out.println("Discriminant is -ve, so No
                    real Roots are possible);
System.out.println("Imaginary roots are: "
    +r+" +i* "+sqrt+" and "+r+" -i* "+sqrt);
  }
 }
}
```