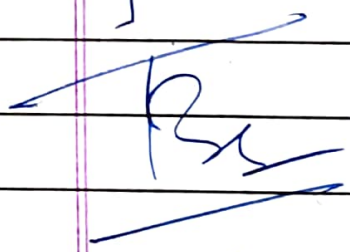
Manual
Date 9/10/24
Page

LAB-I

1) Develop a Java program that prints all real solutions to the quadratic eqn $ax^2+bx+c=0$.

```
import java.util.Scanner;
import java.lang.Math;
class quadratic {
  int a,b,c;
double d, r1, r2;
void inputval()
{
  Scanner s = new Scanner (System.in);
  System.out.println ("Enter the values of a,b,c:");
  a = s.nextInt();
  b = s.nextInt();
  c = s.nextInt();
}
void calc()
{
  d = b*b - 4*a*c;
  if (d==0) {
  r1 = (double)((-b)/(2*a));
  System.out.println ("Roots are real & equal \n"+
      " roots are: \n" +r1);
}
else if (d>0){
  r1 = ((-b) + (Math.sqrt(d)))/(double)(2*a);
  r2 = ((-b) - (Math.sqrt(d)))/(double)(2*a);
  System.out.println (r1 + " " + r2);
}
else {
  r1 = (-b)/(2*a)
```

```
        or2=Math.sqrt(-d / 2*a);
        System.out.println("Roots are imaginary\n" +
            "Roots are: \n" + or1 + "i" + or2);
    }
  }
}
class run{
  public static void main(String z[])
{
  quadratic q = new quadratic();
  q.inputval();
  q.calc();
}
}
```



09/10/24