8. Quadratic [Input] 1st lab program

```
Import java.util.Scanner;
 Class Quadratic
{
int a, b, c;
double r1, r2, d;
void getd () {
Scanner s = new Scanner (System.in);
System.out.println ("Enter the coefficients
  of a, b, c");
a = s.nextInt();
  b = s.nextInt();
  c = s.nextInt();
};
void compute()
{
while (a==0){
System.out.println ("Not a quadratic equation");
System.out.println ("Enter a non Zero value for a:");
a = s.nextInt(); }
d = b*b - 4*a*c;
 if (d==0) {
r1 = (-b)/(2*a);
System.out.println ("Root1 = Root2 =" + r1); }.
 else if (d>0) {
r1 = ((-b) + (Math.sqrt(d)))/(double)(2*a);
r2 = ((-b) - (Math.sqrt(d)))/(double)(2*a);
System.out.println ("Roots are real");
System.out.println (Root1 = " + r1 + Root 2 = " + r2);
 } else if (d<0) {
{ System.out.println ("Roots are imaginary");
r1 = (-b)/(2*a);
r2 = Math.sqrt(-d)/(2*a);
```

```
System.out.println("Root1 = " + r1 + " " + i + r2);
System.out.println("Root1 = " + r1 + " -i " + r2);
}}}
class Quadratic Main
{
public static void main(String args[])
{ Quadratic q = new Quadratic();
q.getd(); q.compute(); }}
```

→ [Output] for Quadratic eq:.

The value of a, b, c.
0 1 2
a cant be zero.

The value of a, b, c.
1 -2 1

Equal roots.
The roots are +1

The value of a, b, c.
1 1 -6.
The root1 and root2 are 2.

:");

The value of a, b, c.
1 2 10.
10){
The root 1 is -10 + i18.
The root2 is -1.0 - i18.

};

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