12/12/23

OOJ Lab Observation:

1. Demonstrate ParseInt()
2. Scanner Class
3. 1D and 2D array
4. Factorial of a num
5. Palindrome.
6. Sum of digits
7. Conversions

Lab program 1:

Quadratic Equation:

```
import java.util.Scanner;
class Quadratic {
    int a, b, c;
    double r1, r2, d;
    void get()
    {
      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:");
```

```
Scanner s = new Scanner (System.in);
a = next Int();
}
d = b*b - 4*a*c;
if (d==0){
    r1 = (-b)/(2*a);
    System.out.println("Roots are real and equal");
    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("Root1 = "+r1+" Root2 = "+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 QuadraticMain{
    public static void main(String args[]){
    Quadratic q = new Quadratic();
    q.getd();
    q.compute();
    }
}
```

C OP

Enter the coefficients of a, b, c

1

2

3

Roots are imaginary

Root 1 = -1.0 + i1.4142135623730951

Root 2 = -1.0 - i1.4142135623730951

Enter the coefficients of a, b, c

1

-4

4

Roots are real and equal.

Root 1 = Root 2 = 2.0

Enter the coefficients of a, b, c

5

6

1

Roots are real and distinct

Root 1 = -0.2 Root 2 = -1.0

(1) ParseInt()

class Rectang

public stati

int length

length = Int

breadth = I

int area =

System.out

System.out

System.o

}

}