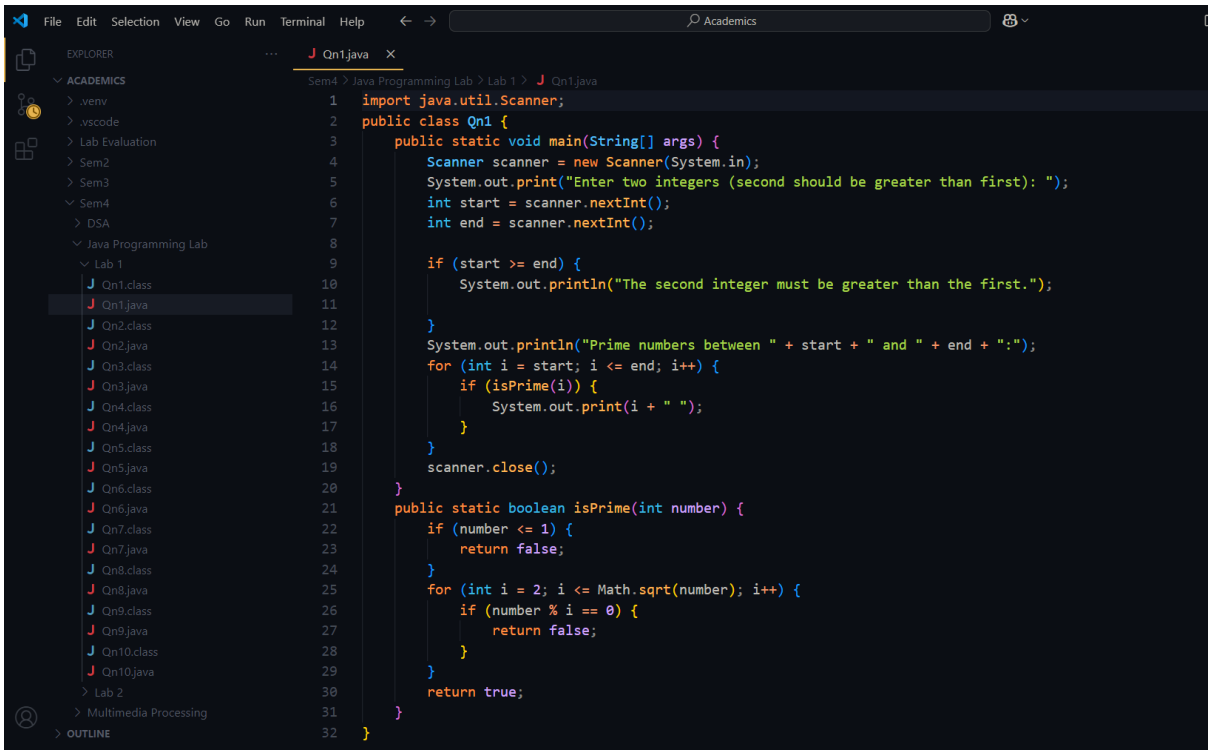
EX-1

1,Code:

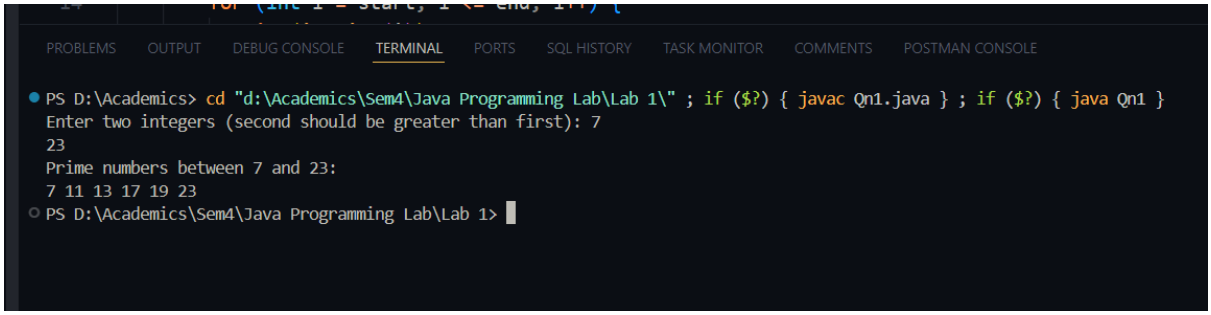


```java
import java.util.Scanner;
public class Qn1 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter two integers (second should be greater than first): ");
        int start = scanner.nextInt();
        int end = scanner.nextInt();

        if (start >= end) {
            System.out.println("The second integer must be greater than the first.");

        }
        System.out.println("Prime numbers between " + start + " and " + end + ":");
        for (int i = start; i <= end; i++) {
            if (isPrime(i)) {
                System.out.print(i + " ");
            }
        }
        scanner.close();
    }
    public static boolean isPrime(int number) {
        if (number <= 1) {
            return false;
        }
        for (int i = 2; i <= Math.sqrt(number); i++) {
            if (number % i == 0) {
                return false;
            }
        }
        return true;
    }
}
```

Output:

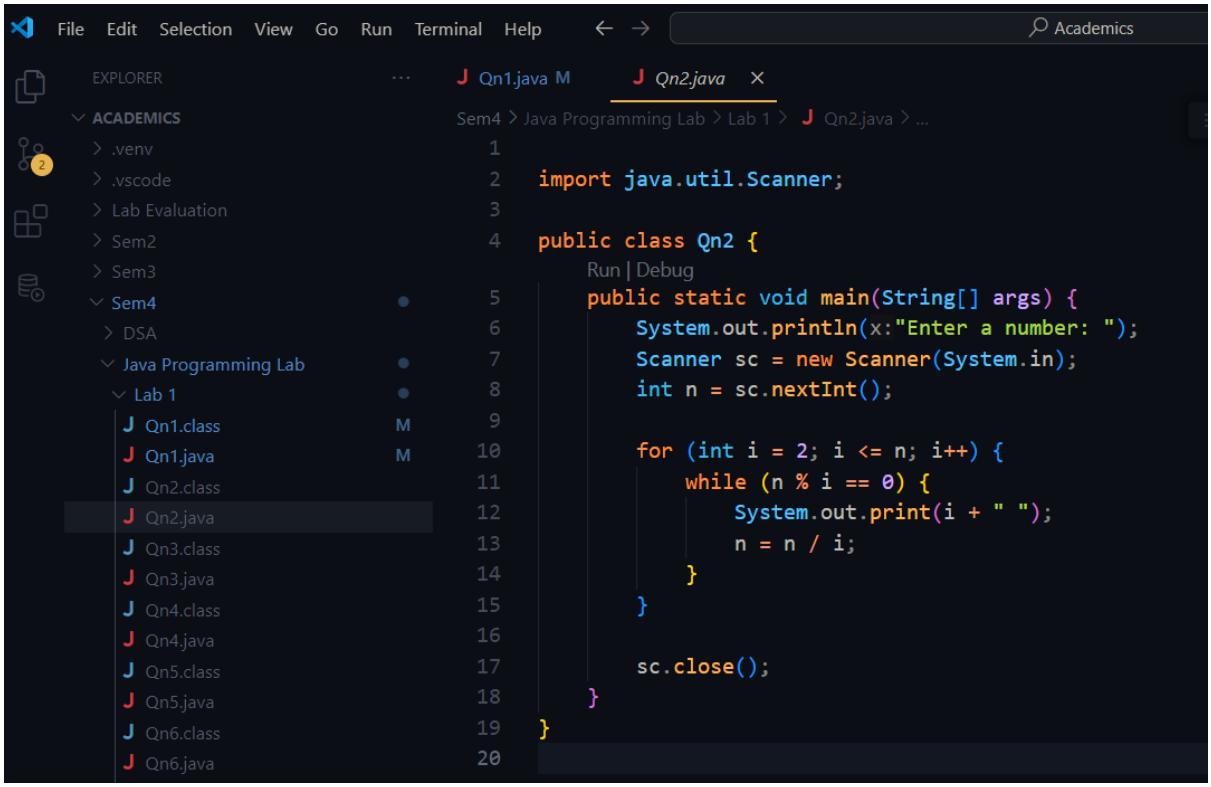


```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  SQL HISTORY  TASK MONITOR  COMMENTS  POSTMAN CONSOLE

PS D:\Academics> cd "d:\Academics\Sem4\Java Programming Lab\Lab 1\" ; if ($?) { javac Qn1.java } ; if ($?) { java Qn1 }
Enter two integers (second should be greater than first): 7
23
Prime numbers between 7 and 23:
7 11 13 17 19 23
PS D:\Academics\Sem4\Java Programming Lab\Lab 1>
```

Qn2,

Code:

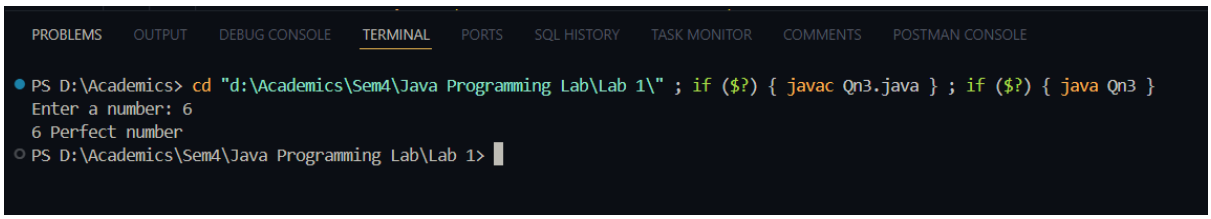


Output:

Qn3

Code:

Output:



Qn 4,

Code:

Output:

Qn5,

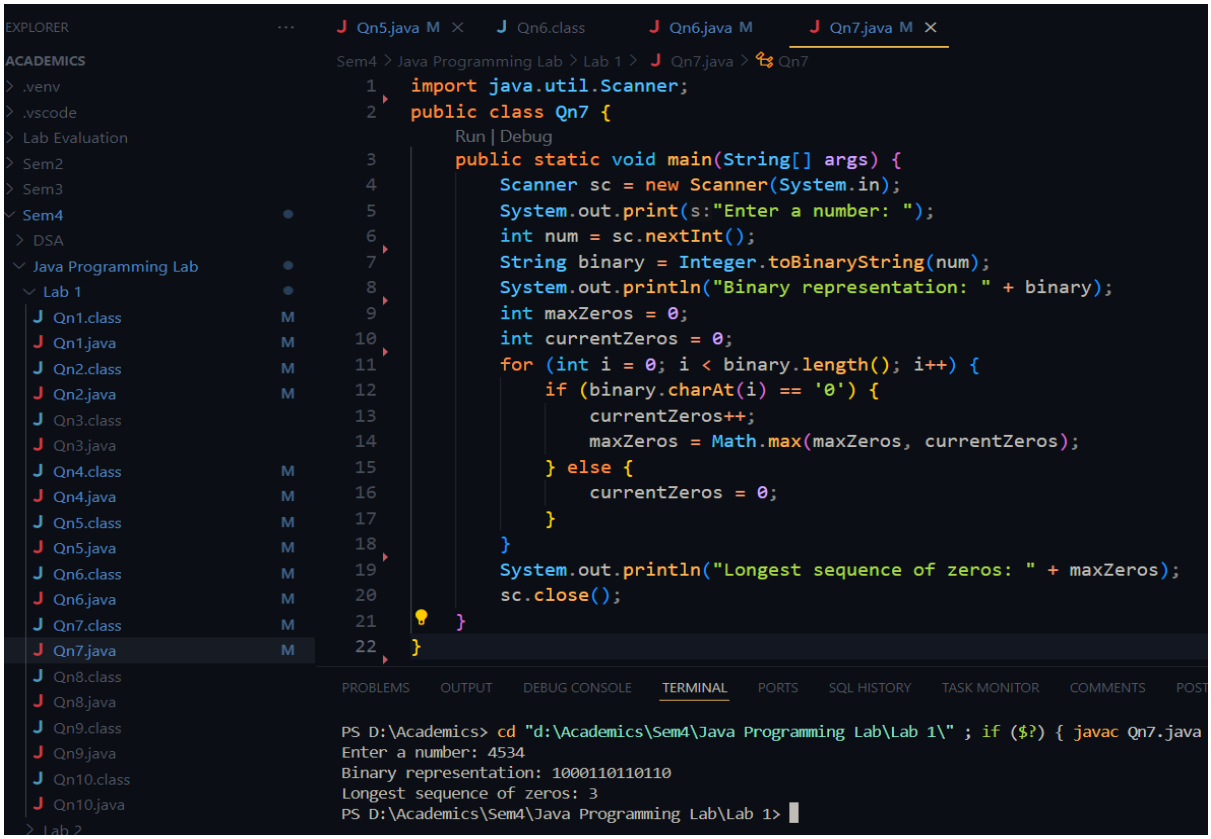
Code& Output :

Qn6,

Code&Output:

Qn7,

Code & Output:



```
import java.util.Scanner;
public class Qn7 {
    Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print(s:"Enter a number: ");
        int num = sc.nextInt();
        String binary = Integer.toBinaryString(num);
        System.out.println("Binary representation: " + binary);
        int maxZeros = 0;
        int currentZeros = 0;
        for (int i = 0; i < binary.length(); i++) {
            if (binary.charAt(i) == '0') {
                currentZeros++;
                maxZeros = Math.max(maxZeros, currentZeros);
            } else {
                currentZeros = 0;
            }
        }
        System.out.println("Longest sequence of zeros: " + maxZeros);
        sc.close();
    }
}
```

```
PS D:\Academics> cd "d:\Academics\Sem4\Java Programming Lab\Lab 1\" ; if ($?) { javac Qn7.java
Enter a number: 4534
Binary representation: 1000110110110
Longest sequence of zeros: 3
PS D:\Academics\Sem4\Java Programming Lab\Lab 1>
```

Qn8,

Code & Output:

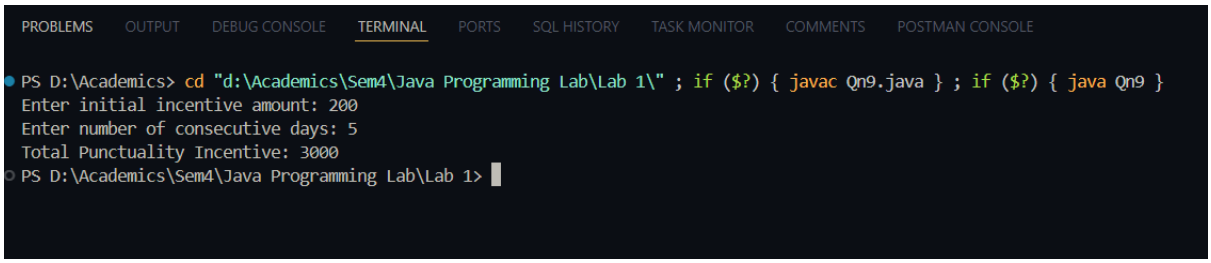
```
import java.util.Scanner;
public class Qn8{
    Run | Debug
    public static void main(String[] args) {
        System.out.print(s:"Enter teh Number: ");
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        double sum = 0;
        for(int i = 1; i <= n; i++) {
            sum += i/factorial(i);
        }
        System.out.println(sum);
        sc.close();
    }
    public static double factorial(int n) {
        double fact = 1;
        for(int i = 1; i <= n; i++) {
            fact *= i;
        }
        return fact;
    }
}
```

```
PS D:\Academics> cd "d:\Academics\Sem4\Java Programming Lab\Lab 1\" ; if ($?) { javac Qn8.java } ; if ($?) { java Qn8 }
Enter teh Number: 10
2.7182815255731922
PS D:\Academics\Sem4\Java Programming Lab\Lab 1>
```

Qn 9,

Code:

Output:



Qn10,

Code:

Output: