

**STIWK3014 REAL TIME PROGRAMMING**  
**Tutorial / Exercise 4 : Modify ThreadSleep.java**

**Instruction**

1. Modify TestSleep.java to display the output as below:

```
ONE  
TWO  
THREE  
XXXXXXXXXX  
ONE  
TWO  
THREE  
XXXXXXXXXX  
ONE  
TWO  
THREE  
XXXXXXXXXX
```

2. Add to the thread number to 20 threads to print the output as shown in above.
3. Add the function to print the output according to the thread number.

## Coding

```
public class TestSleep {
    public static void main(String[] args) {
        for (int i = 0; i < 20; i++) {
            Thread t = new MyThread(i);
            t.start();

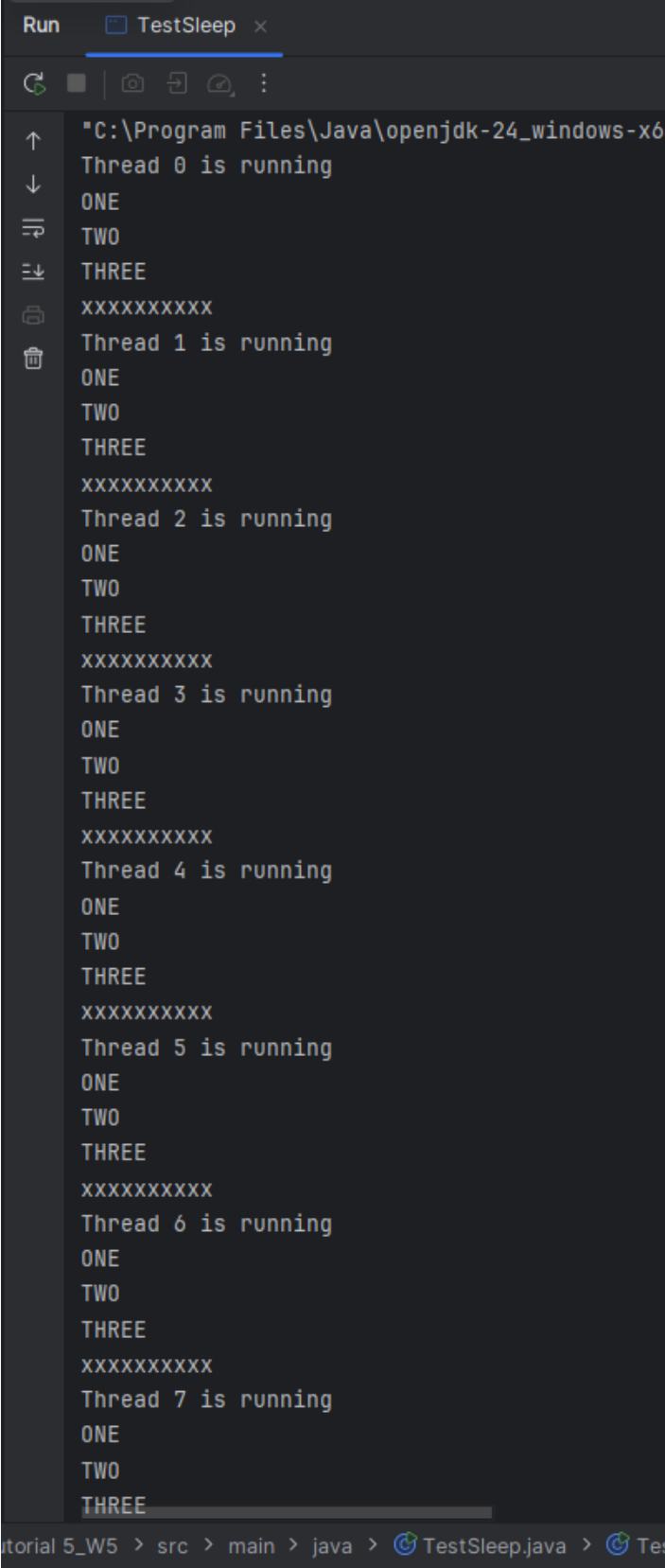
            try{
                Thread.sleep(100);
            }
            catch (InterruptedException e){
                e.printStackTrace();
            }
        }
    }
}

class MyThread extends Thread {
    int threadNumber;
    public MyThread(int threadNumber) {
        this.threadNumber = threadNumber;
    }

    public void run() {
        System.out.println("Thread " + threadNumber + " is running");
        System.out.println("ONE");
        System.out.println("TWO");
        System.out.println("THREE");
        System.out.println("xxxxxxxxxx");
    }
}
```

```
1  public class TestSleep {
2      public static void main(String[] args) {
3          for (int i = 0; i < 20; i++) {
4              Thread t = new MyThread(i);
5              t.start();
6
7              try{
8                  Thread.sleep(100);
9              }
10             catch(InterruptedException e){
11                 e.printStackTrace();
12             }
13         }
14     }
15 }
16
17 class MyThread extends Thread { 1 usage
18     int threadNumber; 2 usages
19     public MyThread(int threadNumber) { 1 usage
20         this.threadNumber = threadNumber;
21     }
22
23     public void run() {
24         System.out.println("Thread " + threadNumber + " is running");
25         System.out.println("ONE");
26         System.out.println("TWO");
27         System.out.println("THREE");
28         System.out.println("XXXXXXXXXX");
29     }
30 }
31
```

## Output



```
Run TestSleep x
"C:\Program Files\Java\openjdk-24_windows-x64\bin\java.exe"
Thread 0 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 1 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 2 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 3 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 4 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 5 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 6 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 7 is running
ONE
TWO
THREE
```

utorial 5\_W5 > src > main > java > TestSleep.java > TestSleep

```
Run TestSleep x
Thread 8 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 9 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 10 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 11 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 12 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 13 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 14 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 15 is running
ONE
TWO
THREE
XXXXXXXXXX
torial 5_W5 > src > main > java > TestSleep.java > TestSleep > main
```

```
Thread 16 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 17 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 18 is running
ONE
TWO
THREE
XXXXXXXXXX
Thread 19 is running
ONE
TWO
THREE
XXXXXXXXXX

Process finished with exit code 0
```

### **Plagiarism**

No mark will be given for plagiarism activities.

### **Submission:**

Platform: 1. Online Learning - Sample Coding & Output in PdF form  
2. GitHub – Upload the file

Date: 23 April 2025 (Wednesday, before 12.30 noon)