**LAB # 4**

**Introduction to Concurrency**

**OBJECTIVE:**

Understanding and implementing the concept of concurrency through different mechanisms of multithreading.

**LAB TASK:**

1. Implement the following program on eclipse IDE and answer the following questions:
   * How many threads are running?

3

* + How many tasks are running?

1

* + If more tasks are added than what will be the impact on number of threads?

They will execute preemptively which means priorities will be assigned and managed from backend.

* + Explain the flow of program:

**class** Main **extends** Thread{

**public void** run(){ System.***out***.println("task one");

}

**public static void** main(String args[]){ Main t1=**new** Main();

Main t2=**new** Main(); Main t3=**new** Main(); t1.start();

t2.start();

t3.start();

}

}

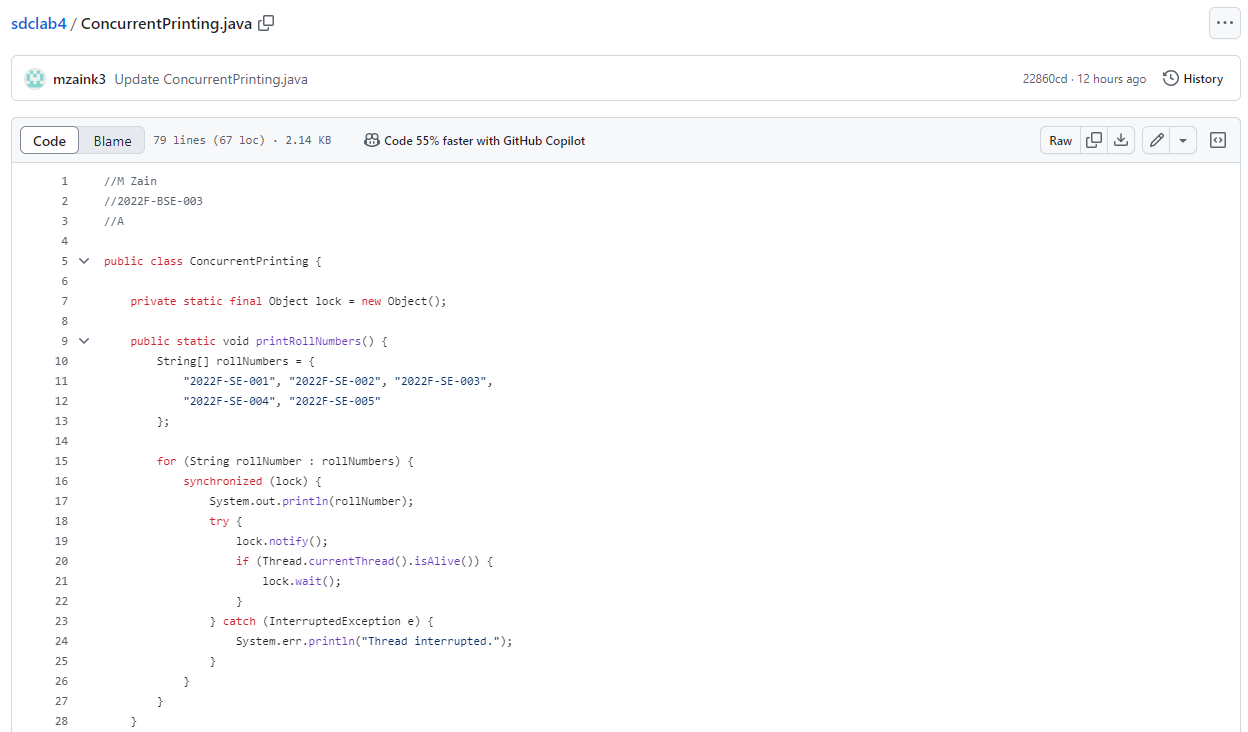
Steps:

1. Created a child class which extends Thread class.
2. Created a method “run()” which is recognized by Thread and performed a task in it.
3. Created 3 instances of “Main” class.
4. Then simultaneously, call a method “start()” which will create a thread and assigned it’s name and priority in backend.

Flow of program will be that after calling start() method it will create a thread and execute operation coded in run() method.

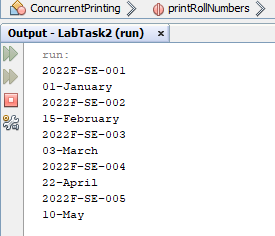
1. With the help of threading print two tables concurrently, print one table number of student roll number e.g. 2019-SE-092 and second number should be date of birth e.g. 05-April.

**SOL:**

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