**U19EC046 | OS | LAB 8**

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**//semaphore.java**

**package OS.lab8;**

**import java.util.concurrent.\*;**

**class MyThread extends Thread {**

**Semaphore s, t;**

**String threadName;**

**public MyThread(Semaphore s, Semaphore t, String threadName) {**

**super(threadName);**

**this.s = s;**

**this.t = t;**

**this.threadName = threadName;**

**}**

**@Override**

**public void run() {**

***// Process P***

**if (this.getName().equals("P")) {**

**try {**

**for (int i = 0; i < 50; i++) {**

**s.acquire(); *// P(S)***

**System.out.print("00\n");**

**t.release(); *// V(T)***

**}**

**} catch (InterruptedException exc) {**

**}**

**}**

***// Process Q***

**else {**

**try {**

**Thread.sleep(1000);**

**for (int i = 0; i < 50; i++) {**

**t.acquire(); *// P(T)***

**System.out.print("11\n");**

**s.release(); *// V(S)***

**}**

**} catch (InterruptedException exc) {**

**}**

**}**

**}**

**}**

***// Driver class***

**public class semaphore {**

**public static void main(String args[]) throws InterruptedException {**

**Semaphore s = new Semaphore(1);**

**Semaphore t = new Semaphore(0);**

**MyThread P = new MyThread(s, t, "P");**

**MyThread Q = new MyThread(s, t, "Q");**

**P.start();**

**Q.start();**

**}**

**}**

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**OUTPUT**

