Java Week 6: Q4

Due on 2020-03-12, 23:59 IST

Execution of two or more threads occurs in a random order. The keyword 'synchronized' in Java is used to control the execution of thread in a strict sequence. In the following, the program is expected to print some numbers. Do the necessary use of 'synchronized' keyword, so that, the program prints the output in the following order:

--------------OUTPUT--------------
5             
10            
15            
20            
25            
100           
200           
300           
400           
500           

-----------------------------

Sample Test Cases

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>NPTEL</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Test Case 1</td>
<td>Test Case 2</td>
</tr>
<tr>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
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<td>200</td>
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<td>300</td>
<td>300</td>
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<tr>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.
Sample solutions (Provided by instructor)

```java
class Execute{
    // Just add 'synchronized' in the method
    synchronized void print(int n){
        for(int i=1;i<=5;i++){
            System.out.println(n*i);
            try{
                Thread.sleep(400);
            }catch(Exception e){
                System.out.println(e);
            }
        }
    }
}
```

```java
class Thread1 extends Thread{
    Execute t;
    Thread1(Execute t){
        this.t=t;
    }
    public void run(){
        t.print(5);
    }
}
```

```java
class Thread2 extends Thread{
    Execute t;
    Thread2(Execute t){
        this.t=t;
    }
    public void run(){
        t.print(100);
    }
}
```

```java
public class Question64{
    public static void main(String args[]){
        Execute ob = new Execute();//only one object
        Thread1 t1=new Thread1(ob);
        Thread2 t2=new Thread2(ob);
        t1.start();
    }
}
```
```java
42        t2.start();
43    }
44 }
45
```