

CMPE 261 - Large Scale Programming

Worksheet(Week-08B)

Part I

Write a multi-thread (multiple users) program that buys a list of item. By default all user want to buy all item starting from the first one. When the program is executed, the following output message may be generated.

Suppose the list of items are:

```
//String [ ]items={"BMW","BENZ","Fiat","Honda","Sony","Toyota"}  
// The output is ( your output is may be differnt)
```

```
Bilgi able to get: BMW  
Itu able to get: BMW  
Bilgi able to get: BENZ  
Itu able to get: BENZ  
Bilgi able to get: Fiat  
Itu able to get: Honda  
Itu able to get: Sony  
Bilgi able to get: Sony  
Itu able to get: Toyota
```

Part II

Now modify Part I, that a user allowed to buy one item only. If you look at the Part I, both of Bilgi and Itu have bought, **Benz** and **BMW** at the same time. Please solve this problem using the **ReentrantLock** class. The following output message may be generated.

```
Itu able to get: BMW  
Bilgi able to get: BENZ  
Itu able to get: Fiat  
Bilgi able to get: Honda  
Itu able to get: Sony
```

Bilgi able to get: Toyota

Part III

Do part II, using the **synchronized** methods instead of the ReentrantLock class