**Advanced Java: Multi-threading Part 9 - A Worked Example Using Low-Level Synchronization**

https://www.youtube.com/watch?v=wm1O8EE0X8k&index=9&list=PLBB24CFB073F1048E

**2nd class – secondclass.java:**

**import** java.util.LinkedList;

**import** java.util.Random;

**public** **class** secondclass{

**private** LinkedList<Integer>list = **new** LinkedList<Integer>();

**private** **final** **int** LIMIT = 10;

**private** Object lock = **new** Object();

**public** **void** produce() **throws** InterruptedException{

**int** value = 0;

**while**(**true**){

**synchronized**(lock){

**while**(list.size()==LIMIT){

lock.wait();

}

list.add(value++);

lock.notify();

}

}

}

**public** **void** consume() **throws** InterruptedException{

Random random = **new** Random();

**while**(**true**){

**synchronized**(lock){

**while**(list.size()==0){

lock.wait();

}

System.*out*.print("List size is: "+list.size());

**int** value=list.removeFirst();

System.*out*.println("; value is: "+value);

lock.notify();

}

Thread.*sleep*(random.nextInt(5000));

}

}

}

**1st class – apples.java(not the main focus in this tutorial):**

**public** **class** apples {

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

**final** secondclass processor = **new** secondclass();

Thread t1 = **new** Thread(**new** Runnable(){

**public** **void** run(){

**try** {

processor.produce();

} **catch** (InterruptedException e) {

e.printStackTrace();

}

}

});

Thread t2 = **new** Thread(**new** Runnable(){

**public** **void** run(){

**try** {

processor.consume();

} **catch** (InterruptedException e) {

e.printStackTrace();

}

}

});

t1.start();

t2.start();

t1.join();

t2.join();

}

}

**Result:**

List size is: 10; value is: 0

List size is: 10; value is: 1

List size is: 10; value is: 2

List size is: 10; value is: 3

List size is: 10; value is: 4

List size is: 10; value is: 5

List size is: 10; value is: 6

List size is: 10; value is: 7

List size is: 10; value is: 8

List size is: 10; value is: 9

List size is: 10; value is: 10

List size is: 10; value is: 11