Kishan Mishra
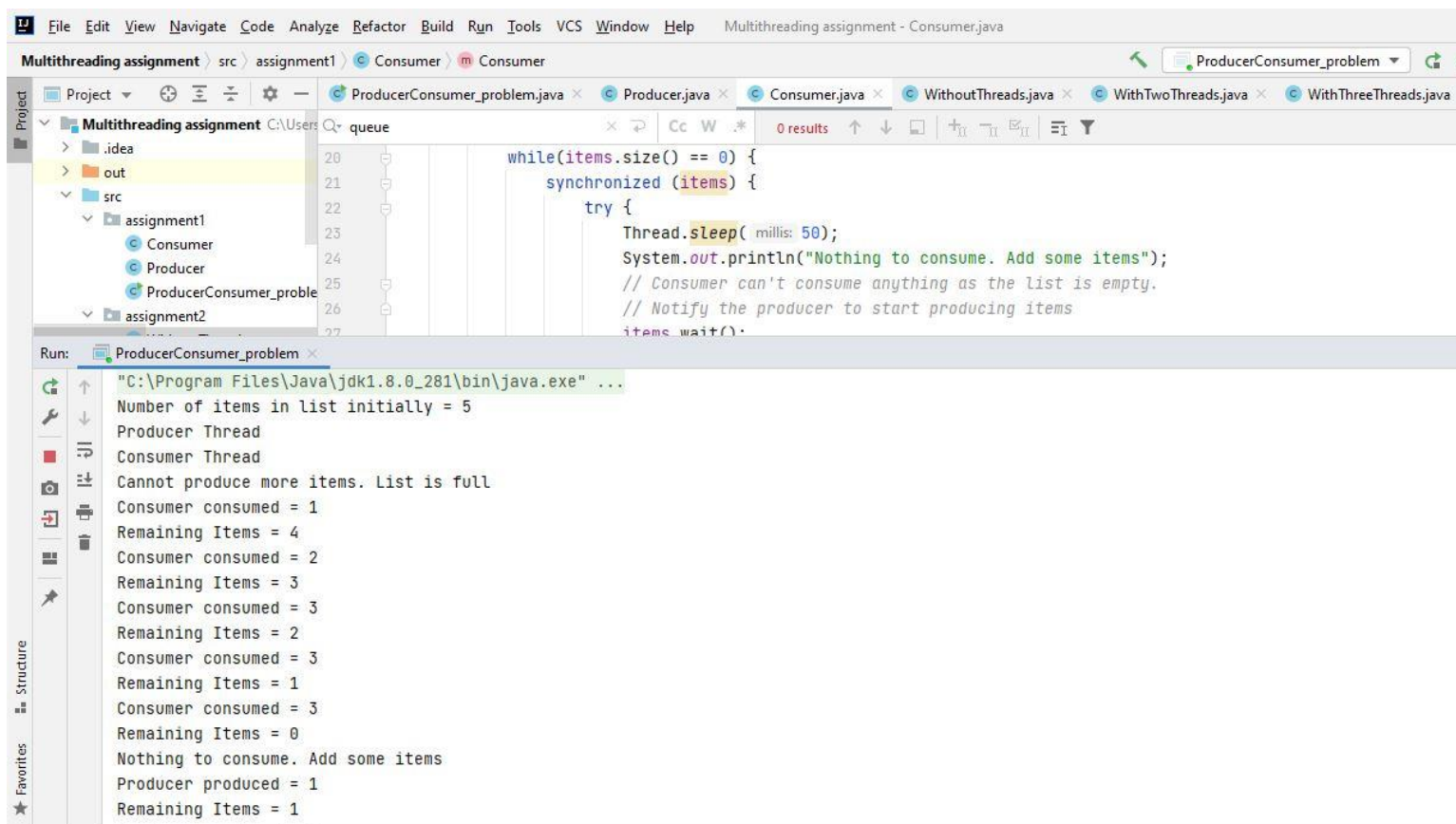
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SAU 2021: Multi-Threading Assignment

1: Producer Consumer problem:

2: Count number of words in a string:

a) **Without Threads:** Time taken to execute = 73ms

Without threads

b) Using 2 threads : Time taken to execute : 29ms

With two threads

c) Using 4 threads : Time taken to execute : 7ms

Multithreading assignment › src › assignment2 › © WithFourThreads.java › © WithFourThreads › m main   WithFourThreads ▾   ► ☰ □ ⊡ Q

Project ▾   © WithoutThreads.java ×   © WithFourThreads.java ×   © WithTwoThreads.java ×   © WordCounter.java ×

```
105          "a rectangular area measuring 23 by 25 miles (37 by 40 km), of restricted airspace. The area is conr  ⚠6 ✗11 ∧ ∨
106    String str3 = str1;
107    String str4 = str2;
108    thread1 fthread = new thread1(str1);
109    thread2 sthread = new thread2(str2);
110    third_thread trd3 = new third_thread(str3);
111    fourth_thread trd4 = new fourth_thread(str4);
112    fthread.start();
113    sthread.start();
114    trd3.start();
115    trd4.start();
116    long finalTime = System.currentTimeMillis();
117    long diff = finalTime-initialTime;
118    System.out.println("Time taken to count words with 4 threads = " + diff + "ms");
119
120    }
121  }
122
```

Project tree:
- Multithreading assignment C:\Users
  - .idea
  - out
  - src
    - assignment1
      - © Consumer
      - © Producer
      - © ProducerConsumer_proble
    - assignment2
      - © WithFourThreads.java
      - © WithoutThreads
      - © WithTwoThreads.java
      - © WordCounter
    - Multithreading assignment.iml
  - External Libraries
  - Scratches and Consoles

Run: WithFourThreads ×

```
Time taken to count words with 4 threads = 7ms
No of words = 389
No of words = 356
No of words = 389
No of words = 356

Process finished with exit code 0
```

Q Find   ► Run   ≣ TODO   ❶ Problems   ▣ Terminal   ⚒ Build   ◯ Event Log

☐ All files are up-to-date (moments ago)   118:61