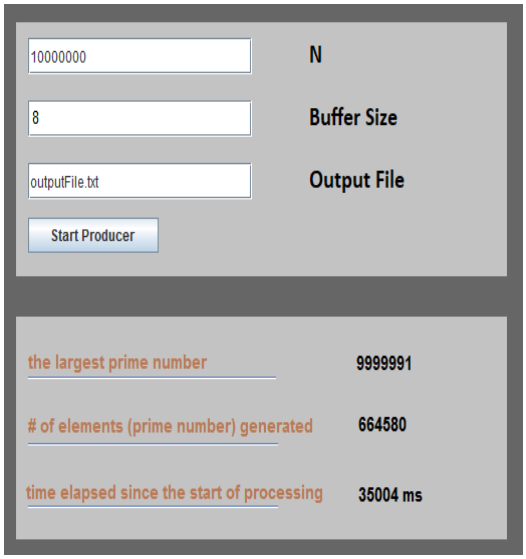
Faculty of computers and artificial intelligence
Cairo University
Operating System Course

Assignment # 1

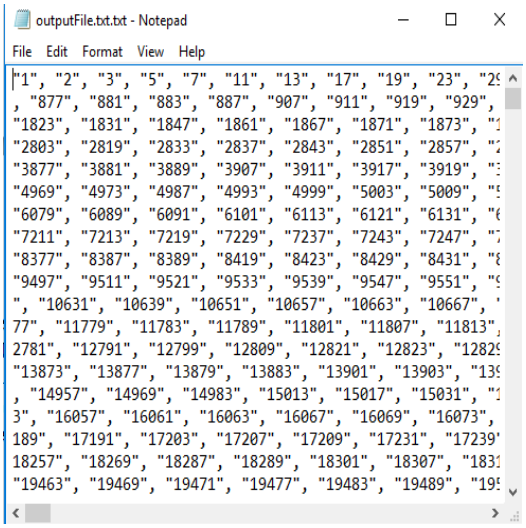
Description

Given *N numbers and one file, our system simulates a real-life of how buffering is run where a user will decide N to get the prime numbers from 0 to N. Somehow, the producer schedules the primes in a queue and consumer will use this queue to write them in the file, so do an application using multiple threads to do multiple actions simultaneously which will reduce the time elapsed.*

Note: The *Consumer* thread will hold a lock when it start and release it when the ready queue is Empty and must notify all other threads.



Output File



Submission instructions:

1. **Submission deadline 18/11.**
2. **The assignment is submitted in group of minimum 3 and maximum 4 persons.**
3. **Don't use Built-in Semaphore**

Grading Criteria

class producer	1
class consumer	1
Test cases	1
Handling Queue Is Empty	0.5
Save to file	0.5
Calculate prime number	0.5
Using synchronization	0.5
GUI (**real time update of this GUI**)	1