OS Project 1

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Project 1 Documentation and Report
producer-consumer

Documentation:

This code was made to create a producer that would generate some items into a table. Next, in the other part of this project the consumer will pick up the items that are read from them. The created table can only hold two items at the same time. The producer is then told to wait once the table is full. The consumer is also told to wait but when there are no items on the table. Semaphores are used to mesh to two files of the producer and consumer. Mutual exclusion is considered so that no two processes can be in the critical section at the same time.

We expect to use these two programs (producer and consumer) like this:

```
$ gcc producer.cpp -pthread -lrt -o producer
$ gcc consumer.cpp -pthread -lrt -o consumer
$ ./producer & ./consumer &
```

Report:

This project was a huge learning curve for me. The basics of it were a little foggy for me so it required me to do some research and note taking before I started so that I could fully grasp the concept. Once I understood the assignment and what it was asking of me I started writing out the steps of what each file should look like. Those parts were relatively easy for me as they are something I do for most projects before I start on them. Once I got to the actual coding I started having some difficulties. After a lot of trial and error, and research I was able to complete one of the files. The second file came a little easier to me because it looked a lot like the first one. I struggled a lot with this assignment because it's a concept that we've never worked with in this major. It looks like a lot of testing and writing out for it all to finally click with me. This was overall really difficult of me but really help me understand the concept and use of semaphores.