GEBZE TECHNICAL UNIVERSITY
COMPUTER ENGINEERING

SYSTEM PROGRAMMING LECTURE

HOMEWORK 3

REPORT 3

AHMET FURKAN KURBAN

1801042674

MAY 1

Design Decisions and Problem Solved Part

File is running without the \n ' at the end.

Wholesaler:

First, I initialized the semephores and created the shared memories. Then I created 6 chefs and 4 pushers with a fork. 1 pusher for each ingredient. Then I post the values I read from the file. Thus, the appropriate pushers waiting in sem_wait are activated. I continued like this until the file was finished. When the file was finished reading, I notified the chefs with SIGUSR1 that the ingredients were gone. After waiting for the chefs to finish their work and finish all their desserts, I returned how many desserts the chefs made with return value and printed it on the screen.

When sigint came, I gracefully closed the files. I deleted the dynamic memories. I made the semephores close and unlinked them. I unlinked the shared memories.

Chefs:

The chefs took action on the sem_post from the pushers. The ingredients were processed through the shared memory. Then the appropriate values were printed on the screen. Desserts were delivered, then the waiting continued. After the ingredients read from the file were finished, the chefs received the signal. They returned the desserts they had made so far , then debuted. In case of a possible sigint, it did the same and exited.

Pushers:

After the pushers were created, he waited for the wholesaler to increase their semephores. As a result of the values read from the file, the values of the semephores of the appropriate pushers increased by one, and he made the transaction. I followed the ingredients on the table via shared memory. When the condition was met, I increased the semephore of the appropriate chief and let the chief do his job.

In terms of code between Named and Unnamed semephores, I sent the semephores to the chief and pushers over shared memory in unnamed. And of course, the initialize operations are also different.

Which requirements I achieved:

Unnamed and Named semephores are working. The system is working, wholesalers, chefs, and pushers are working synchronously through semephores. If the program ends with a plain or SIGINT, the correct number of desserts is printed on the screen with returned values. Shared Memory was used appropriately.

Which requirements I failed:

I followed the requirements in the pdf one by one and I think that I am not missing anything.