**PROJECT 2: WRITE-UP**

1. **SUMMARY**

This project uses Semaphores to open a sandwich shop and regulates the 100 customers and 5 workers without deadlock. Each customer waits in line, a worker is available, orders a sandwich from a worker, then exits the shop. After all 100 customers leave the shop closes.

1. **IMPLEMENTATION**

The project is implemented using Java. There is an extension of a Customer and Worker class inside the program. All is needed to run program is a javac compile on SandwichShop.java class. It takes no inputs and outputs to command prompt.

**III. EXPERIENCE**

There were major issues at figuring out how to use semaphores and I still didn’t get it working exactly right. The shop seems to close a little too early and just a couple times too many. Some of the customers leave at the wrong time as well.

I think if I had just a little more time to work on it, I could figure the problems out. I believe they have to do with where I am putting my print.out statements, but unsure. I am proud of what I accomplished though, never having done any program like this, I learned a lot. By far the most challenging thing is to understand exactly what all the customers and workers are doing while other customers and workers are doing something else. Having to avoid deadlock is very complicated and it is challenging to know and keep track of everything going on once the program starts. It gets very cloudy in the algorithms also.

As opposed to my first project in this class (didn’t even work) I feel I’m progressing and sometimes, like this project, the challenge can be fun.