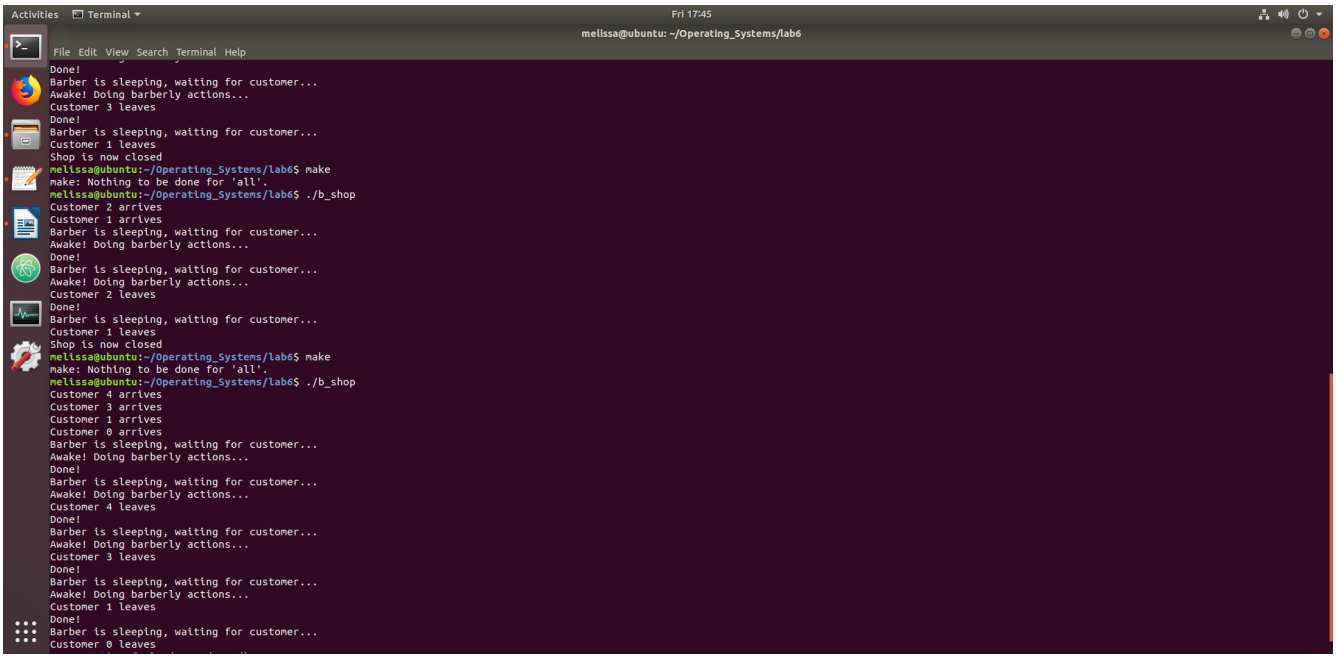
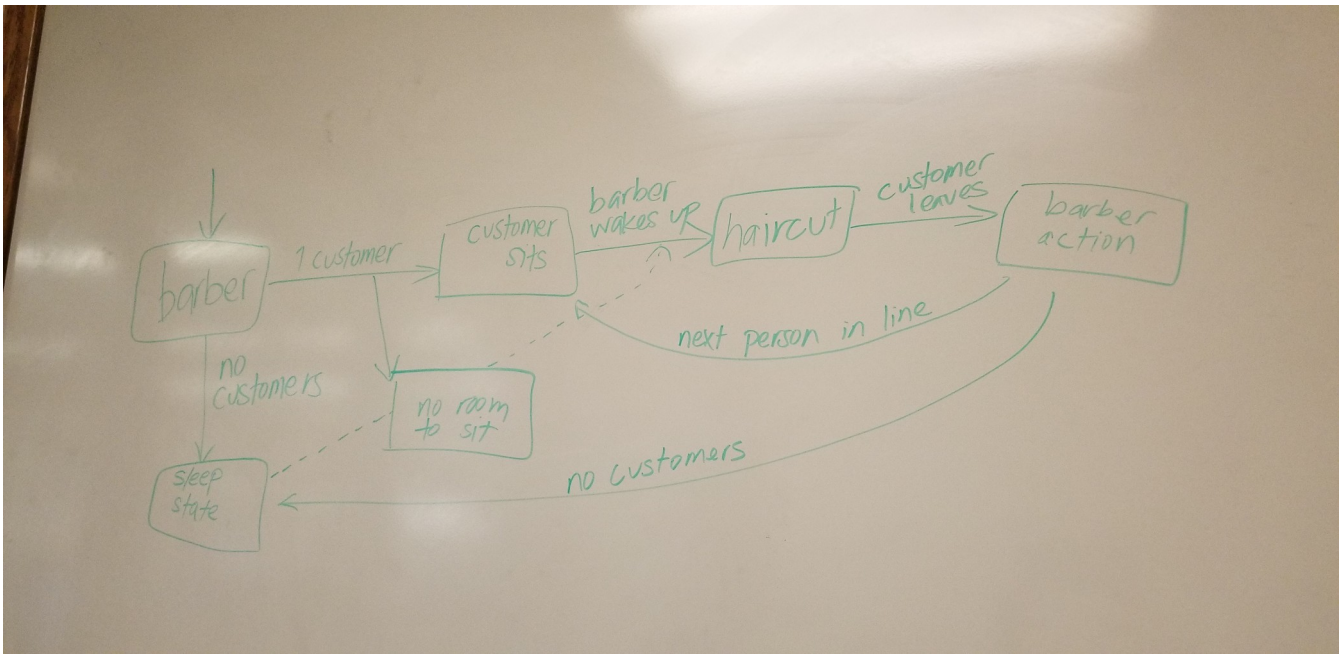
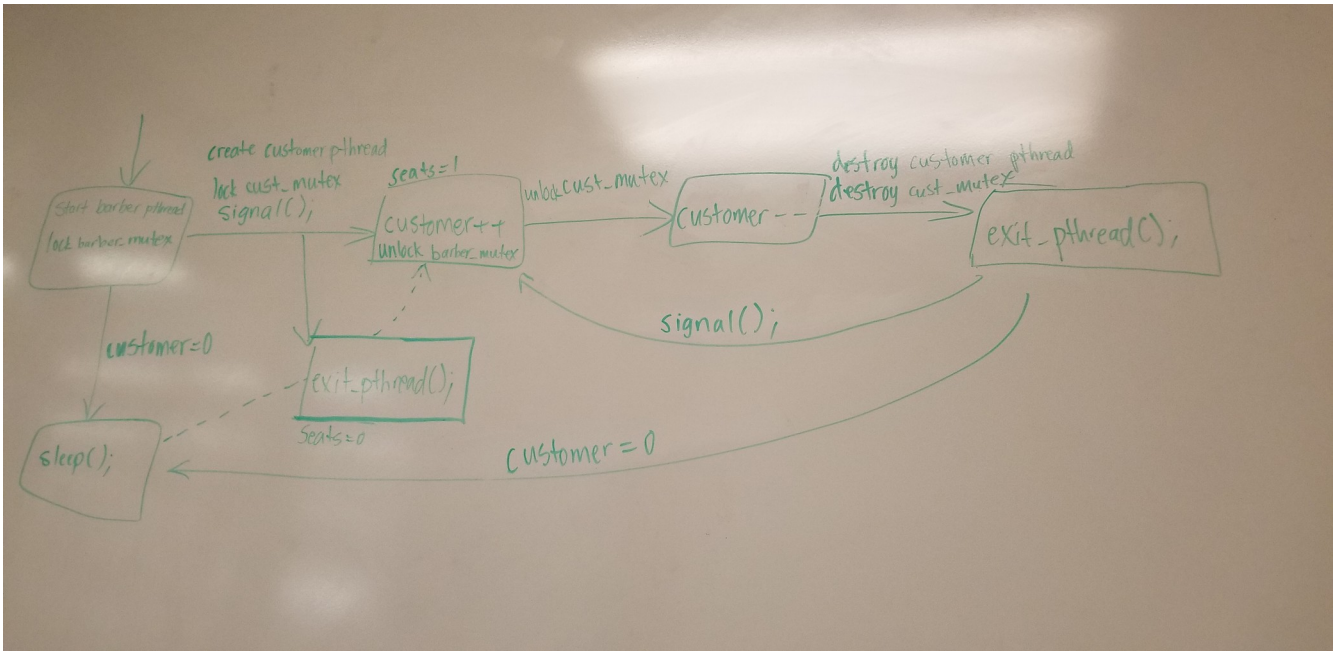
Lab 6 – Sleeping Barber Problem



^screenshot of running program



^logic of the program



^diagram of inter-process communication in the program using pthread functions

In order to run my program, you must first run “make” to compile the program if edits were made. Then run “./b_shop” to execute the program. This should first start with creating the barber pthread, then randomly deciding whether or not a customer comes in with a random number. The customers then wait in line until a seat is open (when seat is occupied, mutex is locked). When the barber is done cutting the customer’s hair, then the seat opens up (mutex is unlocked) and barber goes to sleep while waiting for next customer. When there is an incoming customer, they wake up the barber, who then proceeds to cut their hair and so on and so forth until all customers in line are serviced. Once the “open time” ends or all customers in line are serviced so that there are no more customers, the barber wakes up and “closes” the shop (program exits).