Project 2

# Design

Semaphores:

Waiting = 10 //determine if there is space in the room  
workerReady = 3;// determine if there are workers read  
workerStartList = [1, 1, 1]; //determine which worker can start dealing with customers  
workerFreeList = [0, 0 , 0]; //determine which worker is currently free  
workerGate = 1 //block off either list from changing form underneath checking which worker is free  
scales = 1; //make sure only one worker is using the scale  
Finished = 50; //determine when the customers are all finished

Void customer()

{

Wait(waiting);  
wait(workerReady);  
wait(workerGate);  
wait(workerFreeList[freeWorker]);  
signal(workerGate);  
signal(workerStartlist[freeWorker]);  
wait(workerFreeList[freeWorker]);  
signal(workerStartList[job]);  
wait(workerFreeList[job]);  
signal(workerFreeList[job])  
signal(workerReady);  
signal(waiting);  
wait(finished);

}

# Summary

The simulation works mostly however there is a slight issue that I cannot seem to find where the index is -1 from what it should be. Some difficulties I encountered was I did a bit of an oopsie when I first

Void Worker()

{

While(true)

{  
 wait(workerStartList[thisWorker]);  
 signal(workerFreeList[thisWorker]);  
 wait(workerStartList[thisWorker]);  
 if(job == scale)  
 wait(scale);  
 signal(scale):  
 signal(workerFreeList[thisWorker]);

}

}