README FILE QUESTION 1

In the following question, the deadlock for the Dining Philosophers problem has been resolved by :

Part a)

Main Idea- Allowing one philosopher to pick first the chopstick to his right, then the left one, and allowing every other philosopher to pick the other way around.

i) Mutex Locks

Functions used: - pthread_mutex_init(), pthread_mutex_lock() , pthread_mutex_unlock() , pthread_create() , pthread_join() , pthread_mutex_destroy().

ii) Semaphores

Functions used:- sem_init(),sem_open() ,sem_wait() , sem_post().

Part b)

Main Idea-

Now there are two additional bowls with the given chopsticks. Additional Functions used:- sem_getvalue() to get and print the value of bowl semaphores.

One possible solution to this problem is would be to prevent a thread from immidiately again after it has finishes eating so we can use sleep(1) to stop the execution for 1 second. This would be sufficient time to switch the bowls between threads.