Hello,
In my program, there 2 thread functions name "rideShare" and "checkBuffer" other than the main. I used 4 POSIX barriers to manage multitudes of threads and used a semaphore named "mutex" to make sure critical sections were done without any problem. I added fans/threads to a buffer together with their team attribute represented by a character 'A' or 'B'.I advanced the phase level of fans/threads when they came in proper 2-2 or 4-0 configurations but when they weren't in expected configuration I made them loop again and add themselves back again to the cleared out buffer without saying "I'm looking for a car.". In this case, because I head multiple threads always waiting to get into the barrier whenever there was any empty place made it possible to mix old and new threads whenever my configurations didn't work. Inbetween 1. and 2. barriers, I added the fans to the buffer. Inbetween 2. and 3. barriers, I checked if the buffer was looking good with checkBuffer and advanced the proper buffers using a global variables called "goodjob" and looped the improper buffer threads. Inbetween 3. and 4. barrier, I made the committed threads say "I have found a spot in a car.". After the 4th barrier, I picked a thread who had an ID number that was a multiple of 4 and made it the chaffeur. In the checkBuffer function which I have used inbetween all this, I used the histogram of the letters representing the teams in the buffers to determine if my buffer was proper. I made sure main thread didn't finish before the children by using pthread_join and I destroyed the barries using pthread_barrier_destroy.