

My solution to project 2 is fair. The maxten semaphore will only allow 10 visitors per guide. This is because it starts at 0, and the guide calls up 10 times. This means 10 visitors can call down and enter the museum. No deadlocks occur because the if statements utilize deadlock avoidance. Certain conditions must be met for a deadlock to be possible, and if they are true, exit the process to avoid the deadlock. My design is also starvation free because if a tour guide is sleeping, visitors will make progress, and if all visitors are sleeping, another tour guide must arrive and make progress and free the visitors. Another tour guide must arrive in this case because the visitors would not sleep if no tour guides will arrive, due to the deadlock avoidance utilized.