

Goals, requirements and stuff

WARNING: verbs are not in third person singular form

Goals

1. The passengers must be able to:
 1. Transmit its position and the desired destination to the system, thus initiating the request of a taxi
 2. Receive the code and the ETA of the incoming taxi
 3. Reserve a taxi for a certain time
 4. Request a shared ride
 5. Receive the fee amount he need to pay in case of a shared ride
2. The taxi driver must be able to:
 1. Answer a passenger request
 2. Render him/herself available to the scheduler
 3. Render him/herself unavailable to the scheduler
 4. Receive informations about the fees of the passengers in case of shared ride
3. The system must to:
 1. Offer a programmatic interface to enable the development of additional services

Requirements

1. The system forward passengers request to the first taxi in the passengers zone queue
2. If a taxi refuses a call request, the system must forward the call to the second taxi in queue, and move the first taxi at the end of the queue
3. The system appends free taxis on the queue corresponding to his zone location
4. The system sends taxi ID and ETA to the passenger requester
5. The system must allocate a taxi, for a reservation, 10 minutes before the meeting time with the passenger
6. The system must arranges the shared rides :
 1. Aggregates passengers in the same taxi-zone

2. Arranges the route for the taxi driver
3. Defines the fee for all persons that are sharing the taxi, and informs the passengers and the taxi driver
7. The system accept only reservation that occur at least two hours before the ride
8. A vehicle ID can't belong to two different account
9. Every taxi driver must create an account to access the service, adding: Name, Surname, SSN, vehicle ID, License ID, phone number badge
10. The taxi drivers must login to start using the service
11. Upon logout of a driver, the system must remove the corresponding taxi from the queue

Assumptions

1. Taxi locations are acquired by GPS
2. The system append free taxis on the queue corresponding to his zone location
3. The system must keep a database of all the taxi drivers, with each drivers' ID
4. The system must keep track of the different zone
5. Passenger should be able to access the system from both a in-browser and a mobile application

Constraints

1. Passengers can access to the service through mobile or web application
2. Taxi driver can use the system only with mobile application
3. Taxi driver must have a GPS to share his location with the system
4. Both Passengers and Taxi driver must be connected to the network to access the service (too obvious?)
5. Each taxi driver is in charge of exactly one taxi vehicle
- 6.

Further observation

1. G5 “Receive the fee amount he need to pay in case of a shared ride” is actually a requirement
2. Modify G4: a shared ride must be available even without having reserved it first (aka Sharing on demand)

Measures to harden the system in case of misuse

1. Add reporting system to enforce the users’ nice behaviour
 - Both driver-side and passenger-side
 - This required every user to be tracked with a personal account, in scenarios I, II and III
 - Decide how much should the system’s intervention be automatic (i.e. timed ban) VS non-automatic (forward the report for scrutiny by the authorities)