Functional requirements

* Each zone will have an allotted queue of taxis ready to answer requests for service and taxi queues will be fairly managed by the system;
* Passengers will be registered and remembered by the system;
  + The system must provide a sign up function
  + The system must store all users information
* Passengers will be able to log in to their personal account;
  + The system has to provide a log in function to access all passenger features
* Passengers will be able to request a taxi at their current position or at a position of their choice;
  + The system must provide a function that allow logged passengers to require a taxi
  + The system must provide a form in which the logged passenger will be able to add trip information (starting point, destination point, number of passengers)
  + The system must retrieve GPS information from the logged passenger’s mobile phone
  + The system must analyse the request and send a confirmation with the estimated waiting time if the request can be fulfilled
* Passengers will be able to reserve a taxi in advance;
  + The system must provide a reservation function
  + The system must provide a form in which the logged passenger will be able to add trip information (starting point, destination point, number of passengers, leaving time)
  + The system must analyse the request and send a confirmation if the reservation can be fulfilled
* Passengers will be able to access their reservation history;
  + Reservation history must be stored by the system
  + The system must provide a function which shows reservation history
* Passengers will be able to modify or delete elements from their reservation history;
  + The system must provide a function to allow logged passengers to modify a reservation
  + The system must provide a function to allow logged passengers to delete a reservation
* Passengers will be notified if their request for service is accepted and the ETA of the incoming vehicle;
  + The system must analyse the request and send a confirmation with the estimated waiting time if the request can be fulfilled
  + The system must analyse the reservation request and send a confirmation if the reservation can be fulfilled
* Passengers will be notified if their request for service cannot be met for whatever reason;
  + The system must notify passenger if his reservation cannot be met
  + The system must delete the request in reservation history
* Taxi drivers will be registered and remembered by the system;
  + The system must provide a sign up function
  + The system must store all users information
* Taxi drivers will be able to log in to their personal account;
  + The system has to provide a log in function to access all taxi drivers features
* Taxi drivers will be able to inform the system of their availability;
  + The system must provide a function to allow logged taxi drivers to inform of their availability
* Available taxi drivers will be notified when they are called to answer a request for service;
  + The system must notify taxi drivers of an incoming request
  + The system must provide all request information to taxi drivers
* Taxi drivers will be able to confirm that they are going to take care of the assigned request for service;
  + The system must provide a function to allow taxi drivers to confirm the taking care of the assigned request
* Available taxi drivers will be notified by the system that they need to move to a different city zone to ensure a total coverage of possible passenger request;
  + The system must analyse taxis location and calculate the best cars distribution
  + The system must choose which taxi drivers need to be moved to ensure a total coverage
  + The system must notify taxi driver in which city zone he has to move

Performance requirements

* The system must support XXX terminals for taxi drivers
* The system must support an XXX number terminals for passengers
* The system must support the simultaneous use of 50% of the registered passengers
* The system must support the simultaneous use of 100% of the registered taxi drivers
* Taxi drivers notifications must be received in less than 10 s

Software system attributes

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