Team project

Problem statement

Design and prototype. Your application will allow users to make an online parking reservation with contracted parking lot management. The application uses credit card and car plate number for making a reservation.

Customer can be members where they get guaranteed parking spot for the requested hours of the day and pay monthly membership. Nonmember can make online reservation if selected parking is full they alternative parking will be provided and user can make a selection and a one-time reservation will be made. Customer can also drive in a parking, if space is available, gets a parking spot. Once a parking spot is reserved, the available parking space are updated. The application shall be able to compute the available parking based on online reservation and drive in parking. If customer is parked in the wrong spot it is communicated with the main office and the customer is asked to remove the car. Members have a car plate number on file. However, they can add a temporary plate for a day that gets automatically removed the next day. You should be able to track monthly revenue, parking usage, percentage of customer in each of the three category (members, online reservation and walk in).

* The application must be provably:
  + Of Use – both valuable and usable
  + Robust, portable, scalable, evolvable, etc.
  + Secure – maintain privacy and integrity
* Improvement opportunities
  + Ability to search to closest available parking when location is provided
  + Ability to extend purchased time
  + Etc.

Deliverable

* Analysis report (due 2/15, 3 pts)
  + User Analysis and Requirements Spec

Assessment report (1 pt) (due 2/22)

* Test Plan (due 2/29, 3 pts)
  + Assessment of “partner” team’s analysis
  + Testing strategy and test cases

Assessment report (1 pt) (due 3/07)

* Design report (due 3/15, 5 pts)
  + High-level Design (System and Data Models, etc.)
  + UI screen prototypes and pseudocode of key features
* Team presentation of “working prototype” (4/27or 4/29, 5.5 pts)
* Individual project assessment (5/3, 1.5 pts)

Working prototype

* Demonstrate the capabilities of your system
  + Present a “walkthrough” of your system
  + Demonstrate engineering and value
  + Show “fitness” with respect to test plan
  + Platform, language, etc. are up to you
  + It is expected that it will not be a “finished product”, so it is OK if elements are incomplete