UTA Parking App Inception

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Overview:

It is estimated that drivers spend 17 hours a year trying to find a parking spot(Inrix). However, Dallas drivers are expected to spend 48 hours each year finding a parking spot, which is high above the 17 hour average (Inrix). By using the UTA parking app, It is expected that the time to find a parking spot will decrease significantly. By using the Google Maps API and Firebase database, the app will keep track of and log the amount parking spots on UTA campus. When a user downloads the app, they can immediately choose from several parking maps and see the available spots in each lot. When a user finds a parking spot they can “check in” to the spot and the map immediately updates letting other users know that the space is no longer available. A simple notification system will also be implemented to let users and parking spot seekers know when a spot is likely to become available.

Competitors:

- ParkMobile: A pay-by-phone parking app that lets users find parking spots in urban areas that require a fee to park in a designated spot. The app allows the user to enter their license plate number to register their vehicle and select a timer to choose how long the user wishes to reserve their parking spot. A map with available parking spots are also displayed to the user. It also offers filtering options to select spaces that offer parking options such as covered, gated, valet, and much more. The app also offers a “pro” service that allows the user, for a certain fee, to get discounts on car rentals, parking, and car washes.

- SpotHero: Another parking reservation service, SpotHero lets users reserve parking spots on a monthly basis. SpotHero offers in-depth information on each parking spot area with pictures and a description detailing the parking regulations and the amenities offered in a selected area. The company also offers lower prices on spots in parking garages through the app versus the parking garage’s prices. They also offer a referral program to draw in more users by giving discounts off of parking spots. Unlike ParkMobile, SpotHero offers parking in more cities and in most major airports.

- ParkWhiz: ParkWhiz is a smaller service that offers features similar to the other parking apps listed above. It allows users to purchase spots ahead of time and electronic parking passes are given on their devices before arriving at their spots. ParkWhiz offers many discounts on music and sports parking events. They also let users reserve spots on a web client as well.

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- What UTA Parking App Does Differently:
    - The UTA Parking App will not be a parking reservation service but instead, offer a service that allows users to check-in to spots and dynamically list the parking spaces available in each lot. The app will help users find spots before arriving on UTA campus and save time.

Features:

- Phase 1 (September 30th):
    - User Database: Create a database which will store the user information for future login
    - Start User Interface(Logging in, Scheduler): Create user interface for sign-in/sign-up. Try to match the designs of both system iOS/Android.
    - Maps Integrated: Integrate a view of a map (google/AppMap) for using to view their location and parking lots on the map.
- Phase 2 (October 21st):
    - Begin Parking Database: Create a parking database that will contain information about the parking and a specific slot.
    - Simple but Complete User Interface: Create the interface for the case when the user is able to log in. The view will contain the lists of parking and slots of specific parking.
    - GPS tracking beginning: Create the option to get direction to the selected parking lot.
- Phase 3 (November 11th):
    - Polished User Interface: Finish the user interface, add assets and try to match the designs iOS/Android
    - User Notifications: Users will get notifications on parking lot status during busy hours.
    - Finish up Parking Database: In this phase, we will connect the database to the app and also update the database on user interaction with the app.
    - GPS Tracking Finish: finish the direction option.
- Phase 4 (December 2nd):
    - Complete Integration of Parking, GPS Tracking integration and notification center: The app should be complete by 90% in this phase.

Risk:

1. Knowledge Gap:
    a. It is predicted this has a 50% chance of occurring due to knowledge gap being wide among the developers and a predicted impact of 10.
    b. If risk is exposed, this will result in 5 hours of extra work among the development team.

   c. This risk will be mitigated by learning the appropriate skills and getting help when necessary and reassessing parts of the features when necessary.
2. Short Deadlines:
   a. It is predicted this has a 60% chance of occuring due to the nature of the deadlines for this project and has predicted impact of 8 if exposed.
   b. If risk is exposed, this will result in 4.8 hours of extra work among the development team.
   c. This will be mitigated by reassessing what features will be expected for each phase and pushing back features if deemed to a later phase if necessary.
3. Scheduling:
   a. It is predicted this has a 50% chance of occuring due to the developers on this team being full time students with various work loads and this risk has a predicted impact of 6 if exposed.
   b. If this risk is exposed, this will result in 3 hours of extra work among the development team
   c. This will be mitigated by having multiple development meetings each week and taking advantage of online communication tools when scheduling problems occur.
4. Under Estimation of Risk:
   a. It is predicted this has a 30% chance of occuring due to too optimistic expectations of risk and has a predicted impact of 9.
   b. If this risk is exposed, this will result in 2.7 hours of extra work among the development team.
   c. This will be mitigated by assessing risks throughout the project and as they come up.
5. User Data Leak:
   a. It is predicted this has a 20% chance of occuring due to rushed coding practices and has predicted impact of 10.
   b. If this risk is exposed, this will result in 2 hours of extra work among the development team.
   c. This will be mitigated by safe code practices and checking to see if code has been rushed to unsafe levels of security

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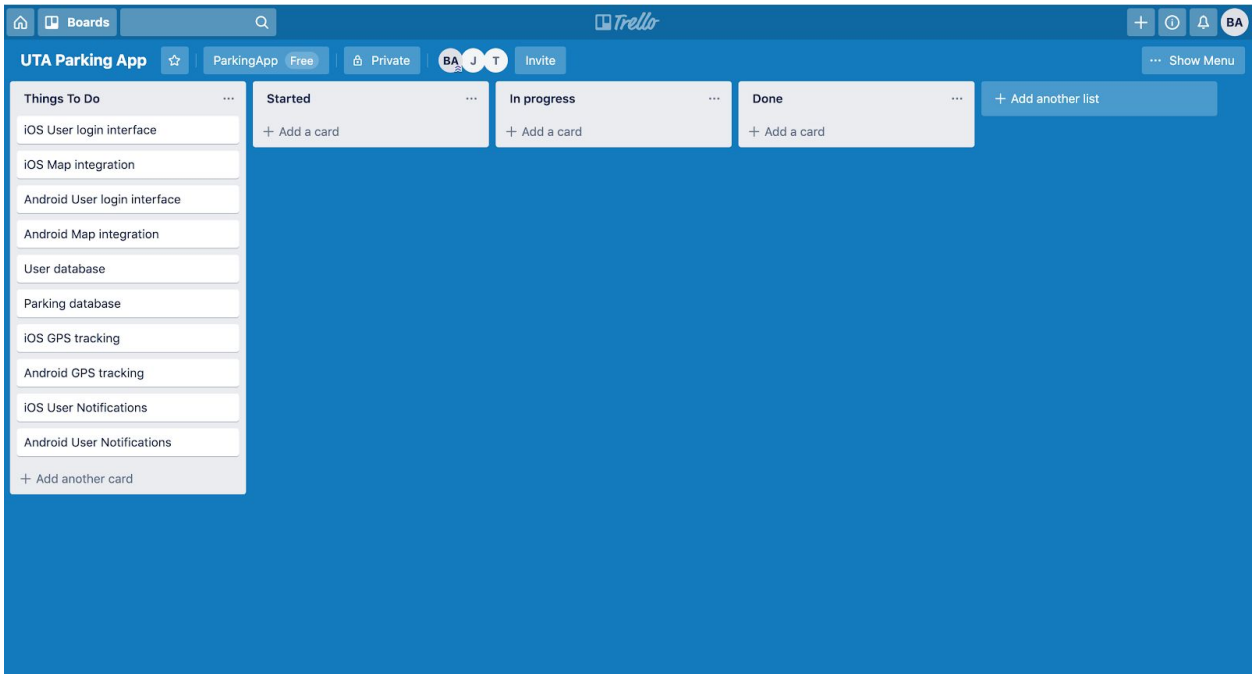
Project Status:

GitHub Repo:https://github.com/J-ctrl/UTAParkingApp

Trello: https://trello.com/invite/b/06hzlqBh/f88426bb7554d2f778b0fb40f36aac8c/uta-parking-app



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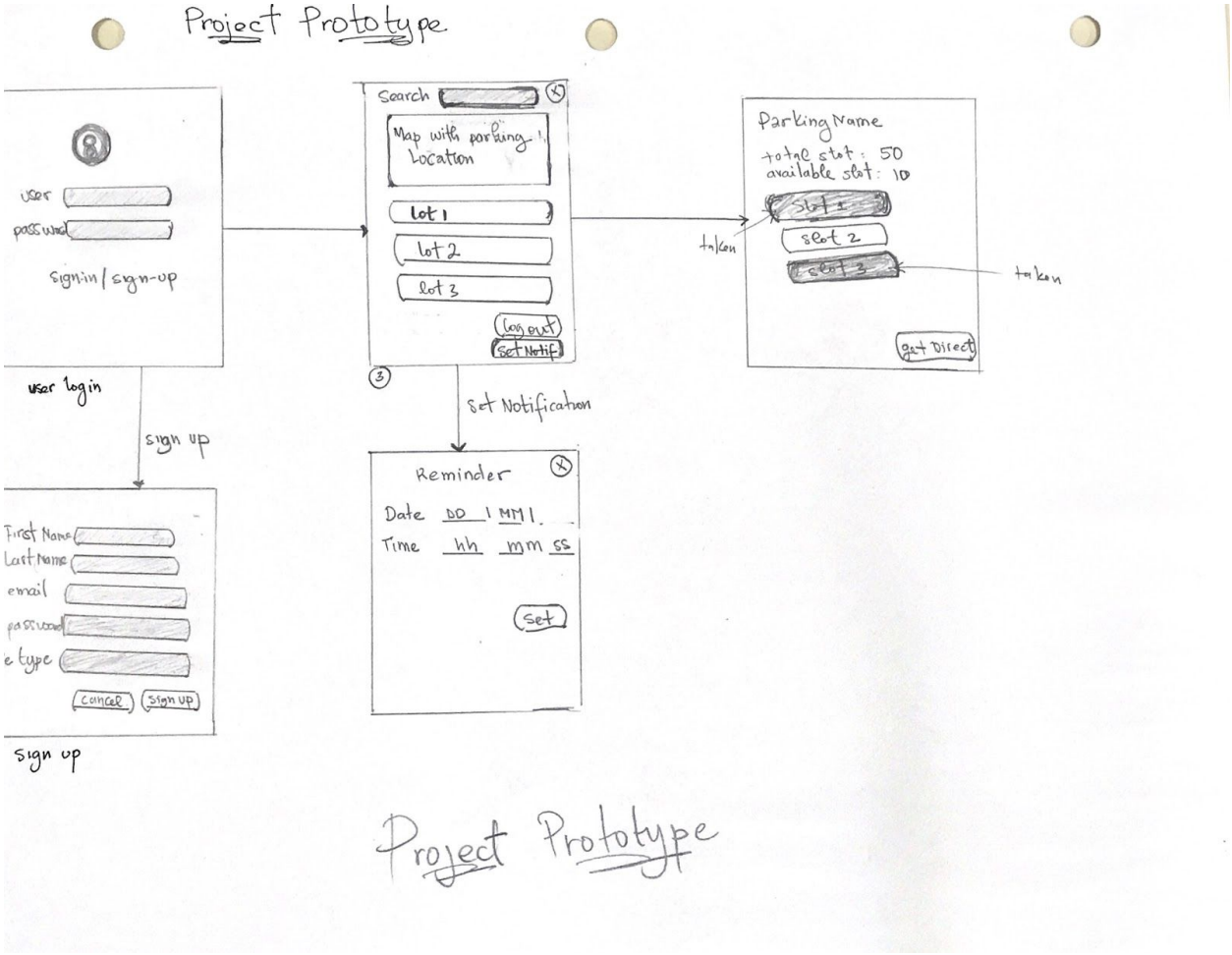
Project Prototype:



Works Cited

Inrix. (n.d.). Searching for Parking Costs Americans $73 Billion a Year. Retrieved from http://inrix.com/press-releases/parking-pain-us/