CS 3337 Software Engineering

Group # 7 - <Brian Andrade, Gabriel Galindo, Haonan Ma, Chiemela Eziechile Nwoke, Anthony Sanchez, Angel Trujillo, Braedon Edison,John Lopez>

**Project Proposal Name: Parking Registration System**

**Presenter: Brian**

**Situation:** Parking at Cal State LA can be complicated and difficult to keep track of. We want mostly only students, guests, and staff to be able to park at our parking spaces using a permit. Any other person without a permit will receive a ticket. Being able to track who has a permit, who doesn’t, and when it expires can be difficult, considering the number of people there is. Not with this system, though.

(background, customer description, problem)

**Customer:(John)** Our Customers who are coming to California State University Los Angeles (CSULA) are University Students, Faculty Staff, Visitors, or any other business/ organization that would want to purchase a Parking Permit. They will do so by accessing the website/application.

Students:

* Seeking easy access to parking permits with different pass options such as daily, monthly, or semester.

Staff Members:

* Seeking long term parking permits with the ability to renew permits in a seamless experience.

Visitor:

* Seeking for a one day or short term parking parking pass. We are also expecting a seamless payment method while also providing clear instructions on the parking payment method.

Common:

* Staying up to date on their permit lifetime expiration time and managing tickets.

**Target:(Brandon)** Being able to purchase a permit whenever possible and keep track of people’s permit expiration. Possibility: having an option to pay or appeal a ticket

Individuals who wish to purchase a parking pass, pay a ticket, or do any other related activities regarding parking their vehicles.

(customer objective)

**Option 1:** (Haonan Ma)

Build a website that allows users to purchase parking permits between desired dates, including options for single-day or season passes. Users can select the permit duration, input parking information, and receive a receipt upon purchase. The system automatically whitelists them into the database, granting them access to parking on the premises. Users can receive email and SMS notifications to remind them of pay or appeal tickets and expiring per mits.

**Proponents:** Accessible and register parking permit from any computer, laptop, or smartphone through browser without app installation.

**Contradictions:** Push notifications are browser-based, they will not be as the app’s notification system’s immediate or convenient. So it will not have direct phone notifications, only email and message notifications through other application intermediaries.

**Option 2:** (Gabriel)

Construct a mobile application in which the user will be able to purchase a seasonal parking pass, one-day parking pass, or a one-month parking pass, pay for any standing parking tickets, and register their vehicles.

When purchasing a permit, the user will be able to select one of the listed time frames, and then select whichever vehicle they have on file, whether it be 2 or 4 wheels, purchase the pass in the application, and activate it.

For vehicle input and management, the user will be able to add their 4 or 2-wheeled vehicle information and even edit such at a later date if the need arises.

For ticketing purposes, the user will be able to easily look up any withstanding tickets they may have with a simple search of their license plate or VIN to see any tied to them.

**Pros:**  (Anthony)

* Easily accessible smartphone access.
* Notifications are easily available via widgets.
* Able to view locally stored information without internet access.

**Cons:**

* Unable to search for it on the web.
* Unable to use on desktops.
* Needs Installation, which requires storage.
* Slower to iterate than a website.

**Proposal (Chiemela):** Option 1. We want to build something that is accessible everywhere. Although there won’t be an app for smartphones, theoretically, they can just use a search engine to access the website on their phone. Not only that, if they want phone notifications on their phone instead of email they can enable text message notifications. Websites don’t require any kind of storage on a user's device. Also, websites now offer automatic input of credentials if the user wants to get through the process faster. Overall, we believe a website is more accessible and efficient to make first before an app.

**Product Name:** CSULA No Ticket For Me

**Presenter: Angel Trujillo**

**Platform:** Website

**Database Content:** License plate number, Vehicle Description, Parking permit ID number, Permit expiration date and validity, and Owner's name.

**System Integrations:** Payment gateway integration, SMS Gateway integration, Government Database integration, Email Service integration, Authentication integration, and Cloud Database Service.