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Project Description

The Parking Buddy App will provide information to students at SUNY Oswego about available commuter parking spots, namely in the parking lots by Shineman and Sheldon Hall. Parking for commuter students can be very difficult and time consuming, as there is limited parking. Students tend to spend large amounts of time circling the parking lots looking for an open space. This causes many students to be late to class. It can sometimes be difficult to predict when there will be the most number of open parking spots as well.

The idea is to create an app for Android -- possibly for IOS eventually as well -- that will allow students to plan ahead for their parking. The app will allow students to check in and out of parking spots. The parking lot information will be provided by an overhead view of the lot, similar to Google Maps, so that the layout is accurate. A red icon in a parking spot will indicate that it is currently being used, and a green icon will indicate that the spot is available to be parked in. Users will have to find their parking spot on the map and check in and out of it. They will also be able to provide information on how long they plan on staying in the spot. Other users will be able to see about how long it will be until various parking spots will become open.

Additionally, the app will collect information on times that students are checking in and out of parking spots. There will be a section in the app dedicated to providing intel to users about popular times for parking throughout the day, in the form of a graph.

System Requirements

Identifier	Priority	Requirement
REQ1	5	The information on parking spots maintained by the system, should be available to all instances of the app
REQ2	2	The system allows users to mark a spot as "obstructed" if unavailable for a reason other than the spot being taken (snow, construction, etc.).
REQ3	5	The app has a GUI that provides an overhead view of the Shineman and Sheldon parking lots.
REQ4	5	The app allows users to "check out" parking spots and be able to mark them as "available" or "taken".
REQ5	2	The system allows the user to set a timer for how long they plan on being parked, after which the spot becomes available again.
REQ6	3	The system takes analytics for how long a spot is occupied and when it is most often open. These analytics will be available for viewing in a separate part of the app.

User Stories

Identifier	User Story	Size
ST-1	I want other users to be able to view any other user's parking updates in real time.	9
ST-2	I want to be able to provide information to other users about potential problems with parking in certain spots.	2
ST-3	I want an accurate map of the parking lot to be used to view parking locations.	10
ST-4	I want to be able to check my car in and out of a parking spot as needed.	4
ST-5	I want to be able to provide information to other users about how long I am planning on staying parked in a spot.	6
ST-6	I want to be able to view common times that a parking lot is most heavily used.	5