Group 19

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Parking System

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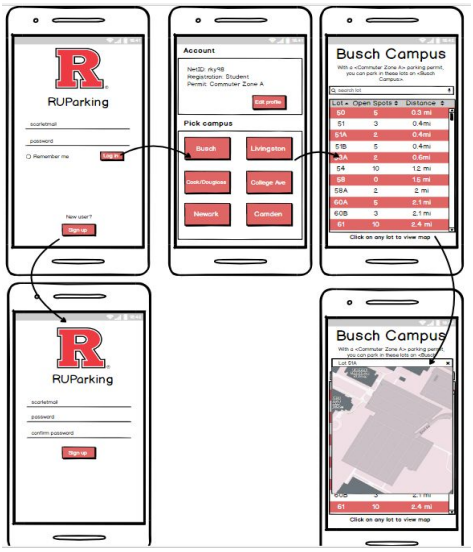
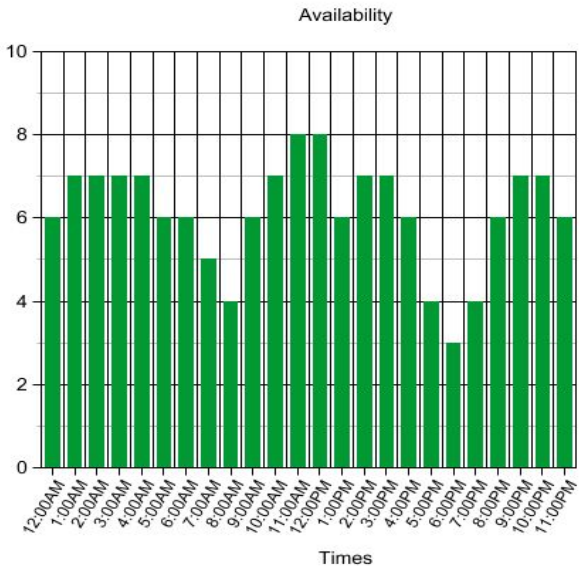
System Introduction

The system entails the creation of an efficient parking system with a simple easy to use application with minimal user headache. Focusing on Rutgers parking, the current system lacks structure creating confusion, wasted time, as well as an unpredictable environment as nothing is tracked.





Attributes

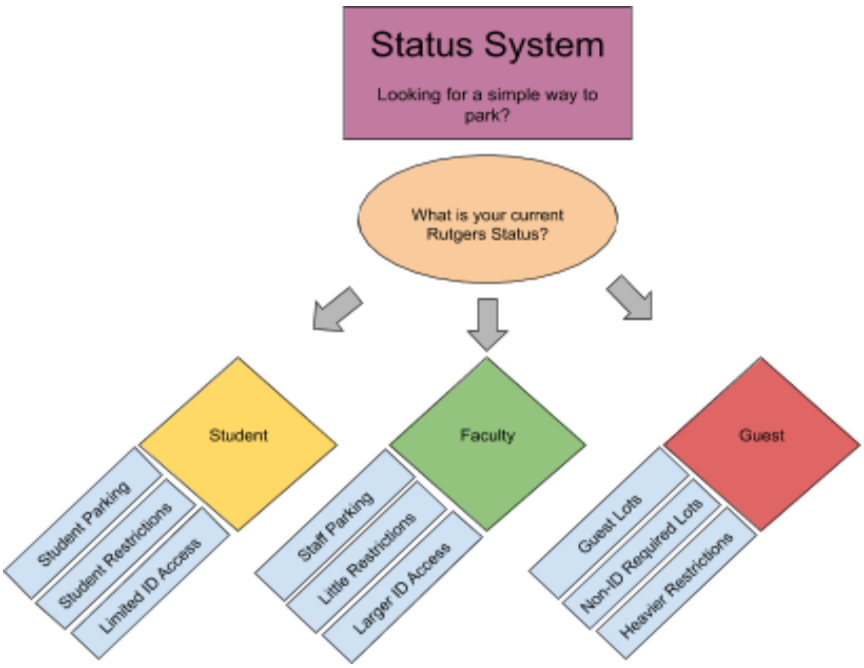
Parking Reservation - With the ability to select the location users can reserve the desired parking spot. The system will limit selectable locations based on that lot's rules and regulations in comparison with the user's status eliminating user concern. Status is chosen in a few major forms mainly student, professor, or guest. Each selection during account creation will automatically limit the parking lots without user action.

Map/Availability Graphs - A map will be included to aid user experience in determining the locations of the parking lots. This aids in visualization of the available spaces while graphs will aid in knowledge of parking lot use at certain times of day

Verification - The verification process will be done with scanners placed at the entrance of parking lots to enter and exit.

Application - The UI will be simple in order to ensure an easy reservation experience. It will also allow for users to create or change their account and view previous parking lot selections. By utilizing the user's phone rather than just a website, the user will have more options for ease of use.

Figure 2(Example Percentage Full by Time 1=10%)



Basic Procedure

The user will be given the option to login or create an account. If creating an account, the user will enter a not previously used email and select a password and the account status type. After logging in the user will be able to select “Reserve”, “Map”, “Account”, or “Logout”. Under the account section it will allow user to modify their account or view its history. The status system ensures user is given appropriate restriction-free parking without user worry.

Requirements

A few requirements precede importance all others in order for the system’s purpose to be met. First of all, as user satisfaction is a priority, the system must handle all aspects of rules and regulations as well as parking data in order to determine availability. The user must only be able to select locations or times that are available to them in order to maintain structure. In order to accommodate this, the user must select account type when creating an account between student, faculty and guest, each label having their own restrictions. Alongside this, the app must give user options to attain more information on parking spaces. Having an interactable map will aid the user in attaining information on their desired location. The users will also receive notifications detailing their reservations as a reminder, part of the greater focus on ease of use.

System Value

By tracking user information on reservation, structure is created in the Rutgers parking space. Not only does this aid users with worry free parking, but this information provides help for event schedulers, Public Safety, and the Department of Transportation since the current system is undocumented. Tracked information with the automated system also helps the user in selecting proper locations removing the need for added human security parking lot checks. By creating a system of reservations, traffic congestion around and in parking locations is also reduced compared to current users wasting time wandering the lot without any guarantees. In summation, creating parking structure will provide users with assured parking solutions.

Project Site: https://sites.google.com/a/scarletmail.rutgers.edu/parking-garage-se/