

## **User Requirements:**

- User registration and login
  - Each user is prompted by a login page that asks for the user username and password
  - If not, there is a registration button that leads to the registration page.
  - They will put in their name, email, password, and studentID
- The home page shows the parking deck list of GSU, space availability for each deck, and selection buttons for each deck. The selection button takes the user to the parking deck parking layout page
- Parking layout page shows available spots of each space that is color coordinated and tapping on a “green space”.
  - Tapping a confirm button pops up the directions for that space
  - Confirmation button after being directed to the space
- Checkout button lasting until the user presses it while leaving, or a specific time of the day (timeout)

## **System Requirements:**

- User database to store user information and know each person's car and parking spot
- Parking Deck availability counter to correctly update the available spaces for each garage
- The direction system using GPS to each parking spot once a user selects the parking space that they want. The GPS system must track the user's location in the parking deck.
- Parking Deck database to store the parking availability information for each garage like the counter information for each deck

## **Risk Analysis:**

- Forgetting to check out their parking spot, so we must add a system where people would either reminder users to checkout of their parking space, or a timeout
- GPS signal is lost while en route to the parking spot, so a gps catch will be implemented to prevent losing any progress and not be lost finding the parking space
- Capacity shown is inconsistent to the actual available spots in person, because either the users not checkout of their space or the code correctly calculate the counter for each garage
- Securing user information while using the application, so that each user's information or our information is not shown inside the application. In which, there is no way to hack through the application to get into our databases

- Streaming information as efficiently as possible, so that the users will get the most recent information as fast as possible and not be misinformed or misdirected into a filled parking spot. Also, to prevent multiple users from accidentally selecting the same space around the same time, and causing errors in the system or application