**Requirements**

**App Summary:**

A psu parking app which gives users an option on different amounts of parking lots around PennState. The user login in, so the details such as Name, Car details, Address, Phone and email. The user will select a parking lot and a parking spot with a list of cars that the user is driving, and will also let them set a time limit for their spot. Then once the user clicks reserve, it will reserve the spot. Incase, a user finds that their spot is taken by someone else, they will have a Report option which will ask them to take a picture of the car that is currently being parked there. Once the report is submitted a staff can view all the reports and send Warning mails according to that. Moving on, if the user parks the car more than the allotted time, an email or text will be sent to them to extend their time. If the user chooses to extend their time, it will be updated in the database. If not they will be given an hour or so to move their vehicle unless they extend it. Once the user decides to leave they will get an option to release the spot. Incase a user leaves their spot early and forget to press the release button, then they will be notified once their time runs out to extend their time, already left, or leaving now. As usual once they process Already left, then the spot will be open immediately, but if they press Extend, then they will be given an option to extend their time limit. If the user presses Leaving now, their time limit will be extended to an hour or so to move their vehicles after that the spot will be automatically released.

**User Interfaces**

* **User Side Functionalities**
  + Create User account
  + User login
  + Browse maps of parking lots
  + Browse available spaces
  + Reserve space
  + Checkout of space
  + Ability to report other users occupying their spot
* **Admin Side Functionalities**
  + Browse maps
  + Add new parking lot
  + Remove parking lot
  + Update an existing parking lot
  + Remove user
  + Reserve/Leave Spot
  + Send Emails

**High Level Requirements**

1. The App shall have a login Screen which will save user data such as Name, email, phone, and Car details.
2. The App must have a Reset Password button which helps users in changing passwords.
3. The App must give parking lot options once the user signs in.
4. The App shall give Users a reserve button which will enable the user to reserve a parking spot.
5. The App must give Users a Report button which the user can use incase there is a wrong car in their spot.
6. The App shall have A Exit/Leave button which will enable other users to park to the available spot.
7. The App must release the Spot once the Leave button is Pressed.
8. The App shall give users an option to reset password.
9. The App must have an Admin Portal which can enable Add and Deletion of Staff Members.
10. The App must have a Staff Portal which enables the staff to have access to User Reports for wrong parking, Reservations and User detail and can modify them as necessary.
11. The App must give staff an option to add parking spots and remove them.
12. The App must give the user an option to snap a picture when reporting which will allow the staff to take necessary actions.
13. The App must let User select a time limit for their spot.
14. The App must send a Message to the User once the time limit has been Reached.
15. The App must give users an Extend Timit Option & Already Left & Leaving option now in the message.
16. The App must update Time when a user selects Extend time limit.
17. The App must give the user an hour when the selected Leaving now Option.
18. The App must release the parking spot once the Already left option is chosen.
19. The App must send a Warning message if the user parks in the wrong spots.