Users’ Stories

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| Use Case | User Story | Acceptance Criteria |
| Follow  Returned  Location | As a student/employee, I want to follow the navigation to empty slot on my phone screen | 1. APP should be installed, required rights should be given. 2. 4G Internet is required. 3. GPS chips in phone is needed. 4. Maps of the parking lot is high accurate. 5. Customer account information and car plate should be stored on database. 6. Two state of slot “occupied” “empty” should be dynamic real-time updated on database. |
| Add Payment | As a student/employee, I want to add payment automatically. | 1. Customer account information and car plate should be stored on database. 2. Gate camera should scan plate and identify customer. 3. Check time and cut money from prepayment account automatically. |
| Add Feedback | As a student/employee, I want to add feedback or make emergency call. | 1. Words or pieces of voice can be recorded in APP for feedback. 2. Emergency call can be made by mobile or through interphones which are installed at every gate of the parking lot. |
| Receive Feedback | As a parking manager, I want to receive feedback in APP | 1. Feedback can be list in database service. |
| Provide  Customer  Service | As a parking manager, I want to answer customer’s emergency call and provide customer service. | 1. Customer’s current location should be displayed to manager as soon as emergency call is connected. |
| Make Payment | As a visitor, I want to make payment in payment machine. | 1. Visitor has own parking area. 2. The state of slot in visitor area is not controlled by database system. 3. Visitor parking area provides payment machine and accessing card. 4. Figure out parking time by inserted accessing card picked up when entering. |

**Background:**

Wayne is one of the students in Centennial College. Recently he is very happy because he made a lot of money by himself. His car dream comes true finally.

He bought a TOYOTA Corolla and applied a plate for it. Then he went to the college website, opened a parking account, linked his license plate to his account and charged 200 dollars in it.

Finally, he downloaded our application and gave it required rights in his newest iPhone.

**Processes:**

Monday morning, Wayne drove his new car to school in happy mood. When closed to the school parking lot, he started the APP by “HI SIRI”.

Until now the APP got the right to read current car location through GPS chips in mobile and communicated with our servers by 4G Internet. The current car location was sent to servers and empty parking slot was sent back.

The nearest parking slot was displayed on iPhone screen immediately and the automatic navigation between current location and the slot was shown after 3 seconds. Also, User can select different empty slots and decide where to park.

Wayne drove into school. When he stayed in front the parking gate for a second, the automated parking system scanned plate of the car, checking numbers with plate database in servers, identified customer information. The parking time started from now.

The state of parking account was transmitted between servers and mobile APP continuously. It includes the time, parking place and cost.

Wayne followed navigation, drove to the nearest parking slot. To make it easier, slot’s ID number was displayed on mobile screen and it is also marked on the slot ground. Sign boards of slot number also be placed at different Connor around the whole parking lot.

After stopping, Wayne touched “DONE” button on the mobile screen. The location was recorded and would not be changed with people’s movement. And this parking slot was marked as “occupied” in our automated parking system.

Afternoon, Wayne finished his last class, went back to his car and left. He can choose any gate to leave. When stayed in front of the gate, camera scanned his plate again, matched his account, stopped parking time, figure out cost and cut money from account. The system also set his previous slot state into “empty” for next parking car.

When leaving, there is no need to start the APP. Nevertheless, customer is able to start APP at any time to see the state of car parking (in case forget parking slot, customer can see which place his/her car is parking at), get receipt, charge money and check balance.

The APP also provides feedback function. If customers meet any problem or have any suggestions, they can write it done in APP or upload pieces of voice record. The emergency customer servers’ phone number is also in the APP.

There are two ways of emergency call. One is by mobile, the location of customer is sent to parking managers immediately and if they must come, they will go straight to your car. Two is through interphones which are installed at every gate of the parking lot. Once connected, you can talk with it. If managers have to come, they will come to the place of talking interphone.