***Functional Requirements***

* **For user:**

1. User will be able to Register for the service and enter personal and vehicle details

2. The system will allow the user to be able to find a parking area from the list of areas, registered by parking admins.

3.The system will allow the user to be able to reserve an obtainable parking space and specify the duration of the reservation.

4. User will be able to view the details of a selected parking area such as the name, worth per minute, number of total available blocks.

5. **The parking** operator device will provide a code for the user in it the number of the block and the time for parking and the price.

6. The system will alert the user about the remaining parking time.

7. The system will provide a waiting list to customers for park in rush days.

* **For manager:**

1. The system must be able to Auto-cancel reservation if the user didn’t come within 30 minutes to pay in case of manual payment.

2. The system must be able to accept reservation of parking lots based on availability.

3. The system must make the payment done through cash or card.

4. An authentication process must be implemented to verify a user through the code.

5. The system must provide a report about all the operations done daily.

6. The system must show different types of interfaces and displays for users to define the status of block.

***Nonfunctional Requirement***

**1. Operational**

1.1 The system will run on Android and IOS mobile devices.

1.2 In case of a failure during scanning QR code, the customer will be able to rescan.

1.3 The system will connect to sensors wirelessly.

**2. Performance**

2.1 The system will be available for use 24 hours per day, 365 days per year.

2.2 The system will complete the user process for booking within five seconds and for scanning within two seconds.

2.3 The system will be updated with showing the available blocks for parking every 30 minutes.

2.4 The system will afford above million users in the same time without performance deterioration.

**3. Security**

3.1 Customer information will be secured.

3.2 Payment information will be encrypted and secured.

3.3 Unauthorized person who cannot access the parking lot.

3.4 Customer’s car will be secured.

**4. Cultural and Political**

4.1 Company policy is to buy laptops from Dell and Mac.

4.2 Personal information is protected in compliance with the Data Protection Act.

4.3 Company policy is to buy sensors from Amazon.