

Software Requirements Specification for PARKO

1) Introduction

1.1 Purpose: - The purpose of this document is to provide a detailed description of the requirements for a parking management app that will allow users to find and reserve parking spots, view parking availability in real-time, and make payments for parking.

1.2 Scope: - The scope of this project includes the development of a mobile app for iOS and Android, as well as a web-based administration portal for parking operators. The app will allow users to search for and reserve parking spots, view real-time parking availability, and make payments for parking. The administration portal will allow parking operators to manage parking spots, view usage statistics, and process payments.

1.3 Stakeholders: - The stakeholders for this project include:

- End users: Individuals who will use the app to find and reserve parking spots.
- Parking operators: Companies or organizations that own and operate parking facilities.
- Developers: The team responsible for designing, developing, and testing the app.
- Project manager: The person responsible for managing the project and ensuring that it is completed on time and within budget.

2) User Requirements

2.1 User Roles and Responsibilities

- End users: Will use the app to find and reserve parking spots, view parking availability in real-time, and make payments for parking.
- Parking operators: Will use the administration portal to manage parking spots, view usage statistics, and process payments.

2.2 User Characteristics

- Users will need to have a smartphone with internet access to use the app.
- Users will need to create an account to access the app's features.
- Users will need to have a valid method of payment to make payments for parking.

2.3 User Requirements

- End users:
 - Must be able to search for parking spots by location, price, and availability.
 - Must be able to view parking availability in real-time.
 - Must be able to reserve a parking spot for a specific time period.
 - Must be able to make payments for parking using a credit card or other electronic payment methods.
 - Must be able to view and manage their parking reservations.
- Parking operators:
 - Must be able to manage parking spots (add, remove, edit)
 - Must be able to view usage statistics (number of reservations, revenue, etc.)
 - Must be able to process payments.

3) Functional Requirements

3.1 User registration and login

- Users will need to create an account to use the app's features.
- Users will be able to log in using their email address and password.
- Users will be able to reset their password if they forget it.

3.2 Search

- Users must be able to search for parking spots by location, price, and availability.
- Users must be able to view parking availability in real-time.

- Users must be able to filter search results by various criteria, such as distance, price, and amenities.

3.3 Reservation

- Users must be able to reserve a parking spot for a specific time period.
- Users must be able to view and manage their parking reservations.
- Users must be able to cancel a reservation before the start time.
- Users must be able to extend the reservation time if the parking spot is available.

3.3 Payment processing

- Users will be able to make payments for parking using a valid method of payment.
- Users will receive a receipt for their payment.
- Users must be able to view their payment history.

3.4 Administration Portal

- Parking operators must be able to manage parking spots (add, remove, edit)
- Parking operators must be able to view usage statistics (number of reservations, revenue, etc.)
- Parking operators must be able to process payments.

4) Non-functional Requirements

4.1 Performance

- The app's response time for all features should not exceed 5 seconds.
- The app should be able to handle at least 100 concurrent users.

4.2 Security

- User information will be stored securely.
- Payments will be processed using a secure payment gateway.

4.3 Usability

- The app's interface will be easy to navigate.
- The app will provide clear instructions for all features.

5) Constraints and Assumptions:

5.1 Constraints

- The app will only be available for iOS and Android devices.
- The app will only be accessible to registered users.

5.2 Assumptions

- Users will have a smartphone with internet access.
- Users will have a valid method of payment to make payments for parking.

6) Appendices:

6.1 Wireframes

- Wireframes for the app's main screens are included in the appendix.

6.2 Mockups

- Mockups for the app's main screens are included in the appendix.

ER DIAGRAM

