

Title: SRS for Online Car Parking System

Authors: Vishal Gadekar, Ashish Ingole, Hrushikesh Rokde

Introduction:

This document is the SRS report for an Online Car Parking System.

This system has the following two main components:

1. Implement the different types of user – Administrator, Customer and Security Staff.
2. Parking Slot vacancy tracking, new car allotment and billing on the parking time basis.

Purpose:

The purposes of this web application are to create a functional website for people to provide hassle-free car parking system.

Users of this website will need to register himself with car details which help in order to track check-in and check-out time of the car.

Scope:

This system will allow Secure registration and profile management facilities for customers.

System will create full flex database containing customer details, car check-in, check-out time, and billing details.

Overview:

Online Car Parking System helps the anyone to find vacant parking slots.

Functional Requirement:

This section provides requirement overview of the system. Various functional modules that can be implemented by the system will be-

1. Customer Authentication and Registration:

- This system will allow to create customer profile by providing customer registration functionality.
- Customer can create his account with car information.
- System will also authenticate user credentials if customer is already registered.

2. Parking Slot Management:

- System will provide three QR codes: entrance gate, exit gate & parking slot to track car parking time & slot confirmation.
- On scanning entry gate QR code, system will provide vacant parking slots.
- Once customer scans parking slot QR code, that parking slot will be removed from vacant slots.
- On scanning exit gate QR code, parking slot which was acquired by exiting car will be added to vacant slots.

3. Payment:

- Cash Payment before Checkout

4. Check-out Process

- Payment status will be verified by security staff before customer exits with the vehicle.
- System will allow customer to exit the vehicle only if payment is received from customer.

Hardware Interface:

Since the application is internet based, customer, security staff should have internet connection on their device.

Software Interface:

1. Frontend and backend will be implemented by Spring Boot MVC technology

2. System will require capable Database like MySQL.

1. Security:

In Online mode security is a core issue that must be considered. Security can be provided by encryption, firewall and secure Socket layers.

Only system admins can change or update the data in the application and no access will be given to unauthorized person.

2. Usability:

System will be efficient to use, easy to use.

Information about vacant parking slots will be given to customers.

System will provide correct messages so that user can use system easily.

3. Reliability:

Backup is useful in recovering your data in the case of an electronic disaster like hardware failure or server crashes. System will maintain a failover server with the replica of all data, so that data can be restore at disaster situation.

4. Extensibility:

System can easily extend the functionality can be flexibly added functional modules.

5. Availability:

The System will be available all the time except at downtime.

Downtime will be on every Friday at 1:00 am to 1:30 am.

Alternate page should be displayed to user at time of downtime.

6. Maintainability:

System will not be shut down for more than once in 2 hours of period for maintenance.

7. Portability:

This system can be used on Windows or Linux OS.

System is easy to port on any other server.

8. Performance:

The online shopping system has adequate performance requirements.
It does not take more than 10 seconds to load new pages.

9. Integrity:

Whenever the changes are made related to customer data, it shall be reflected in database as well.

System Interactions:

1. Customer Interaction:

Customer will be able to find vacant parking slots through the website. System will allow parking entrance to the customer only if he/she is registered.

2. Administrator:

System Admin will be able to keep the track of security related to customer registration, daily records, server backup and maintenance.

3. Security Staff:

Security staff will be able to check payment status before customers checkout their vehicle & can update status on collecting cash.