Software Specifications for ApniGaadi

Version 1.0.0

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Introduction

1.1 Purpose

The purpose of this document is to provide a brief description of the requirements and functionalities of the Car Renting Portal. It is a web-based application that can be accessed by users to rent different cars according to their desire. As of now the user penetration in the Car Rental industry is 3.4% which is expected to hit 5.4% by 2025 and expected to grow by 15.46% by 2025. In the Car Rentals segment, 71% of total revenue will be generated through online sales by 2025. This is a functional description of the features required to address the current problem of renting out cars to users.

1.2 Document Conventions

The document covers conventions as described by the IEEE SRS template. The template standards are published in "IEEE Standard Collections".

1.3 Intended Audience and Reading Suggestions

The primary objective is to have a dedicated website for users where they can rent cars according to their interests and liking. This can be implemented under the guidance of a college professor. This project is useful for the Car Rental System. It can be used by users to rent cars.

1.4 Scope

This project is a prototype for the Car Renting Portal System, and it is currently restricted within the college premises. However, it can be scaled worldwide over the Internet and across various domains so that different kinds of cars are available to the user.

Overall Description

2.1 Product Perspective

ApniGaadi is meant to serve as a common platform where users can rent cars as quickly and easily as possible. Our goal is to develop a system that can make it easy for users to rent cars at good and cheap rates.

2.2 Product Functions

The major functions that ApniGaadi will provide are as under:

- Admin
    - Add Cars
    - Add the various specifications about the car
    - Set Prices
- User
    - Register to the website
    - Login
    - Rent a Car
    - Provide Feedback on their experience

2.3 User Classes and Characteristics

Users: They are the primary consumers of the Car Rental Portal. The role of the user involves renting the cars

2.4 Operating Environment

The system will work on the Internet thus making it accessible from any platform either mobile or stationary. A web browser is needed to access the Internet which in turn will allow the user to access the website.

2.5 Design and Implementation Constraints

2.5.1 Design Constraints

1. The Car Rental Portal layout will be produced with HTML5 and CSS3.
2. The backend will be written in PHP.
3. The user interface should be simple, easy to use, and intuitive. A user familiar with basic browser navigation skills should be able to understand all functionality provided by the system.
4. The source code must follow the coding conventions of PHP.

2.5.2 Implementation Constraints

1. The system should work on most home desktop and laptop computers which support JavaScript and HTML5.
2. The system will be intended to run on Firefox 4 and above, Google Chrome 10 and above, and Internet Explorer 8 and above.
3. The output must be compatible with W3C XHTML 1.0.

4. The website will be deployed on a server, the processing power of the server will act as a constraint on the number of simultaneous hits that the website can take.

2.6 User Documentation

The system will be simple and just as easy to browse as any other website. However, there will be a feedback form integrated into the website which users can use to provide positive or negative feedback as well as suggestions.

2.7 Assumptions and Dependencies

The is based on the following assumptions

- The user must be able to use the Internet.
- Users must have connected to the Internet to use the system.
- The computer must be Windows 95 or later version platform.
- The accuracy of the information of the user is the responsibility of the user itself.

External Interface Requirements

3.1 User Interfaces

The Car Rental Portal will have the following user-friendly features.

Login: Only authorized users will be able to log in to the system through their email ID and password.

Registration: This page will provide the user to register themselves so they can access the privileged functionalities.

Browsing Cars: This page will provide the users with the ability to browse through the different cars available for them to rent.

Booking Checkout page: This is the booking confirmation page.

Password Change: This screen allows users to change their passwords.

Feedback: Users can give feedback on their experience on this page.

COVID-19 information page: This page gives information regarding the various safety protocols that are maintained by ApniGaadi.

3.2 Hardware Interfaces

ApniGaadi is a website that can be accessed from any device be it a computer desktop, laptop, tablet, phones, or any other device having a NIC (Network Interface Card).

3.3 Software Interfaces

It does not require any particular operating system to execute. All it needs is just a modern web browser like Safari, Firefox, and Google Chrome, etc.

3.4 Communications Interfaces

The HTTP or HTTPS protocols will be used to facilitate communications between the client and server.

System Features

4.1 Login

Users login into the system using their valid email ID and password.

4.2 Registration

Users should be able to register themselves so they can access further functionalities and tasks.

4.3 Password Changing

Users will be able to change their passwords.

4.4 Browse and View Cars

Users will be able to browse through the collection of cars available to select a car of their choice and liking.

4.5 Book a Car

Users will be able to select a car to book it by entering their address, pickup date, and the number of days they want to rent the car.

4.6 Provide Feedback on the experience

Users will be able to give their feedback using a dedicated integrated feedback form on the website.

4.7 Logout

Users shall be able to log out of the system as per their desire.

Other Non-functional Requirements

5.1 Performance Requirements

Reliability: Auxiliary storage devices must be available for backing up the data. The system response time should be less than 10 seconds.

Availability: The website shall be available, up and running 24*7 throughout the year except due to routine maintenance activities.

5.2 Safety Requirements

There are no specific safety requirements associated with the proposed system. The portal executes on well-known and commonly used hardware which does not cause any safety hazards.

5.3 Security Requirements

1. The password details that are stored in the database should be in an encrypted format so that the data cannot be read directly.
2. Only a registered user should be able to access the account and perform various tasks such as updating the password, renting cars, etc.
3. PHP functions should be used to prevent the user from entering malicious queries into the database.

5.4 Software Quality Attributes

Reliability: The portal should provide reliability to the user that the website will run stably with all the features mentioned above available and executing perfectly. The server on which the website will be deployed in production must be able to handle many hits on the website.

Resources: The system should be designed in such a way that the query of the user can be fulfilled with a minimum number of accesses to the database thus improving speed.

Other Requirements

6.1 Technological Requirements

This project makes use of the following technologies:

- **APACHE:** It acts as the local server for testing the website during the development phase.
- **HTML/CSS/JAVASCRIPT:** These languages will be used to develop the frontend i.e., the UI of the website. AJAX might also be used to improve the user experience while browsing the website.
- **PHP:** It will act as the language for server-side scripting. All the interactions with the server will be done using the code written in PHP.
- **Database:** RDBMS will be used in the system. PHP MySQL connectivity functions will be used to link the database to the website.

Appendix

7.1 Glossary

UI: User Interface

CSS: Cascading Style Sheet

HTML: HyperText Markup Language

PHP: Hypertext Processor

AJAX: Asynchronous JavaScript and XML