

**SOFTWARE REQUIREMENTS SPECIFICATION (SRS)**

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1. **Introduction**

**1.1 Purpose**

The purpose of this project is to provide an organized, straightforward online car rental service through which users can easily get car rentals and also earn passive income by putting up their free cars for rent. We have selected this project because it has a lot of amazing features by which we can implement the concepts of Software Engineering very easily and perfectly.

**1.2 Document Convention**

The list of convention utilized in this documentation are as following:

**Font:** Times new roman

**Headings:** 14 font size

**Body:** 12 font size

**Line spacing:** 1.5 line spacing

This document is organized according to the software requirements specification.

* 1. **Intended Audience and Reading Suggestions**

The audiences of this project are all the people who have any interaction with the car rental industry, they include car rental companies, businesses, tourists and any individuals who want to rent a car.

The rest of the SRS document contains the interface requirements which include both the software requirements and the hardware requirements. Then all the features are discussed in the document and lastly all of the Non – Functional Requirements are discussed in detail. The SRS is divided into different sections, in order to make it easier for the readers to read.

In order to completely understand the project it is essential for the intended audience to read the documentation starting from the very top as it will give you all the details necessary to understand this project, special emphasis should be given to project scope and project features.

* 1. **Product Scope**

The project has lots of interesting features and it targets the issues faced by the customers during the car rental process. There are mainly two essential features on the website, the first one is, “Add Car”, which allows the users who want to give their car on rent to upload their car details and add the car on to list of cars for rent on the website, this allows them to earn passive income by renting out their free cars. The second is, “Book Car”, which allows the users who want to get a car rental. Apart from these features, there are many more features that contribute to making it a complete car rental platform.

1. **Overall Description**

**2.1 Product Perspective**



**2.2 Product Functions**

List all the requirements here in bullet form:

* Log in
* Logout
* Add Car
* Book Car
* Admin
* Users
* Profile page of the users
* Car request status

**2.3 User Classes and Characteristics**

**Car Owner**

* Car owner will be able to login
* Will be able to check status of their car
* Will be able to add and remove their car

**Administrator**

* Will be able to login
* Will be able to accept or reject cars
* Will be able to update information
* Will be able to accept or remove users

**2.4 Operating Environment:**

The operating system we will be using for our project is **Microsoft Windows (Windows 10)** and its hardware configuration is,

**Processor:** Intel® Core™ i7-106G7 CPU @ 1.30 GHz 1.50 GHz

**System Type:** 64-bit Operating System, x64-based processor

**RAM:** 8.00 GB

**Hard disk space:** 292 GB

**Graphics card:** NVIDIA GeForce MX230

**2.5** **Design and Implementation Constraints**

We are not limited to use any specific software or hardware and there are no constraints. It is solely up to us to use whatever we want as per our comfort and requirements of the project. HTML, CSS and JavaScript were used for creating this project.

**2.6** **User Documentation**

This software comes with types of documents which are necessary for the users to go through in order to completely understand the features of this website. The documents are Software Requirements Specification (SRS) this document will give all the details regarding the features and functionalities of this website. Then the next document is Software Design Specification (SDS) this document tells about everything related to the design of the project.

**2.7 Assumptions and Dependencies**

* All users have computer knowledge of how-to login and make use of the functionalities in a website for any purpose.
* All users should have CNIC numbers with them in order to make an account or to book a car.
* The System should have a stable internet connection to properly get login into the website and use its functionality.

1. **External Interface Requirements**
   1. **User Interfaces**

We will utilize windows style GUI as the GUI will be easy to use for all the individuals and appropriately enter, get or change understanding data, for example from more youthful to more established middle age users, the GUI is easy for them to work with.

* 1. **Hardware Interfaces**

A User can interact with the website by both the computer and a mobile phone in whatever they are comfortable with.

* If users are using a computer to interact with the website, they should just require a mouse and a keyboard to access it.
* If users are using mobile phone to interact with the website, they should only be using the touch of his mobile phone to access it.
  1. **Software Interfaces**

Our project runs on HTML, CSS and JavaScript. The project also used a few APIs such as fetch, libraries such as ant design. This project also uses some libraries and web services such as databases and other deployment related services to manage the data it has.

* 1. **Communications Interfaces**

Valuable data such as text, images, and other multimedia files can easily be shared using HTTP. Hypertext Transfer Protocol Secure (HTTPS) is used for securing the data so that no one else gets access to the data provided by a specific person and no one gets the access to the information of the users. Transfer Control Protocol (TCP) is also used for communicating over a network and makes sure a connection is established.

**5. Other Nonfunctional Requirements**

**5.1 Performance Requirements**

There will be a significant increase in the website’s performance if the code behind it is efficient. The code needs to be properly written so that the website does not crash when the user clicks an option. The website should also run on a fast system so that the users can access everything quickly. Clicking on an option, such as “Book Car” and then displaying information regarding it should not take more than 7 seconds. When the user searches for something, such as searching for a car, it should display the results in less than 5 seconds. If the user fills out a form and wants to submit it, such as the Contact Form, the form should be submitted in less than 3 seconds without any delay.

* 1. **Safety Requirements**

To ensure that no one of Rent a cars users loses any data while using the website (due to a crash or a bug of some kind) we make sure that all of the user’s data are kept safe in our database. If the users face any kind of problems at the website then they can always contact us to get support.

* 1. **Security Requirements**
* If any record has been inserted, deleted or updated in the database, the database has to be synchronized according to that.
* The user of the system has to be assigned a unique login ID and set a secure password so that no one can access the information.
* Only the authorized admins will be able to view and edit the data.
* The system should not take the user back to the login session upon pressing the back option after the user has logged out.
* The data should be hidden from outside sources so that information does not get leaked.
  1. **Software Quality Attributes**
* **Usability requirement**

The system will be easy to use by the audience and it will also require less time for them to get started on the platform. There will be no difficulties while finding an option because the user interface is user-friendly, and all the options are easy to find. For example, the “Add Car” option is on top of the website and users can click on it easily.

* **Delivery requirement:**

The data provided to the user will have the following information: the model, name and price of the car. The users can also access different types of reading materials which will be available on the website and the materials will consist of relevant information about the topic. For example, if the user clicks on “car status”, the user will get information according to that topic.

* **Legal requirement**

The system has its own logo so that no one can publish stuff by their name; otherwise it will create issues. The car list generated by the Rent A Car will only be published under the Company name and logo.

* **Flexibility requirement**

The system is flexible because there will be an option for adding and removing. For example, if the user has entered wrong car, they can easily enter the updated car because of the flexibility.

* **Reliability**

Proper coding, organization, database management and antivirus software should be present in a the system to make it free of any type of viruses, bugs or errors so that it cannot be a reason of the failure and inaccurateness of system. For Example if a user books a car and its information is not added to a database of the system due to some problem by the system side, it will be an issue for both the admin and the user because admin cannot be able to find the name of the user in their system and because of which user will not be able to add or book car.

* 1. **Business Rules**

We have a few business rules for our project which are:

1. For logging in, correct username and password should be entered otherwise it will keep on giving an error. If a Username is entered incorrect then it will display a message of “Invalid Username!” if password is entered wrong then it will display a message of “Invalid Password!” and if both the username and password is entered incorrect, then it will give the same error as it gives in the case of incorrect username.
2. The price of the car should not exceed Rs10,000.
3. All the fields on the form should be filled in properly such as CNIC etc. otherwise user will not be able to submit form.
4. User must be logged in, in order to use the features of the website.