Software Requirement Specification
for

“Car Rental System”

Submitted In partial fulfillment of requirement

For the award of the Certificate of

Diploma in Advance Computing

C-DAC

Institute for Advanced Computing & Software Development, Pune.

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PROBLEM STATEMENT: -

This project is being considered in order to reduce and totally eliminate loss of customer to competitors and save the company from folding up.

The current system is manual and it is time consuming it is also cost ineffective, space and average return is low and diminishing. Currently, customers can call or walk-in order to rent or reserve a vehicle. The staff of company will check their file to see which vehicle is available for rentals.

The current system is error prone and customers are dissatisfied. The goal of this project is to automate vehicle rental and reservation so that customer do not need to walk-in or call-in order to reserve a vehicle.

There is huge amount of paper work involved in the process

The system makes a general report about the rented vehicles once at the end of the month and generates a report.

He/She is accepted to go to the organization to make reservation.

During renting a vehicle the customer personal information, payment status and rent agreements are filled in the car rent agreement form, in order to hold legal contract between the customer and the vendor for renting the vehicle.

INTRODUCTION: -

Transport facility is a matter of headache for those people who do not have any personal transport in their city. On occasions like Wedding, Vacation, house shifting, and tour outside city and on many other situations they feel the necessity of a vehicle to sort out the problems. So, if it is possible to design or develop a web-based application for availing transport whenever and wherever possible, then it will be beneficial for both renter and transport provider. Now a days, by some clicks only, we can get whatever you want at home. We already know about the online shopping, e-banking etc. Similarly, The Car Rental System is the online facility to book cars online within few clicks only, some people cannot afford to have a car, for those people this system becomes very helpful. This system includes various cars as per the customer order and comfort, it place the order and deliver the car as per the location within the area. For travelling a long distance, booking can be done via internet service only.

PURPOSE: -

This software requirements specification provides complete description of all function and specification of "Car Rental System".

A Car Rental is a vehicle that can be used temporarily for a fee during a specified period. Getting a rental car helps people get around despite the fact they do not have access to their own personal vehicle or don't own a vehicle at all. The individual who needs a car must contact a rental car company and contract out for a vehicle. This System increases customer retention and simplify vehicle and staff management.

PROJECT SCOPE: -

This project traverses a lot of areas ranging from business concept to computing field, and required to perform several researches to be able to achieve the project objectives. The area covers include:

- Car rental industry: this includes study on how the car rental business is being done, process involved and opportunity that exist for improvement.
- Java technology used for the development of the application.
- General customers as well as the company's staff will be able to use the system efficiently.
- Web platform means that the system will be available for access 24/7 except when there is a temporary server issue which is expected to be minimal.
- Ecofriendly: The monitoring of the vehicle activity and the overall business becomes easy and includes the least of paperwork.
- The software acts as an office i.e., open 24/7.
- It increases the efficiency of the management at offering quality services to the customers.
- It provides custom features development and support with the software.

OVERALL DESCRIPTION: -

Product Perspective:

Car rental system will automate the manual car reservation process. It will be easy to admin for handling customer registration present the car details, handling reservation. The new system will consist as a business system. The system will handle all the functionality related to the renting company. It will be able to undergo evolution in a much simple way and will be more adaptable to changing system. The upcoming changes in the future will be predicted and the system will be designed in a way to adapt to the change that will occur over the year.

Product Functions:

Supported functions:

Car Rental management:

It provides car reservation facility online customers can visit the website and check for various cars. If they are feasible with requirement with requirement, then booking can be done.

Checking for availability:
Employee can check for the availability of the car. He/she maintains the database of car If no car is available, it is the responsibility of employee to provide alternate option.

Payment System:
Administrator/owner of the application responsible for payment to the employee. Order cancellation order finalize all activities are done by the administrator of the application.

Maintenance Manager:
If any car require maintenance like repair or replacement of any parts, then maintenance manager maintain the data about that. Payment of maintenance are done by the administrator of the application.

USER CHARACTERISTICS: -

1.Admin:

- Admin can login to the systems
- Verify the car information database
- Generate price strategy
- Handle the payment system
- Finalize the order
- Cancel the order

No.	Admin Action	System Response
1	Admin enters his/her user id and password to get in to the system	The system checks user authorization and lets the admin in to the system

2	Admin request the system to retrieve the collection of vehicles available	System retrieves collection of vehicles
3	Admin requests the system to add, edit detail or remove vehicles (or make any other necessary changes to the list of vehicles available)	The system makes necessary changes to the list of vehicles as per the admin's request

2.Customer:

- Customer can login to System
- Visit the Website
- Place the Order
- Cancel the Order

No.	User Action	System Response
1	The customer selects the category of the vehicle he wants to Rent	The system displays the vehicles that the customer selects
2	The customer is able to see and select vehicle he wants to Rent	The System checks availability and calculates the fee of the vehicle price per day and provide the customer to enter his details
3	The customer gives all his details and submit	The system validates all the info given by the customer
4	The customer closes the system	The system reserves the car from being rent out by other customers

3.Employee:

- It updates the Database
- Give Information to the customer about the car
- Give Information to the Admin
- Maintain Contacts

FUNCTIONAL REQUIREMENT:-

These are statement of service the system should provide how the system should react to particular input and how the system should behave in particular situation. It specifies the application functionality that the developers must build into the produce to enable users to accomplish their task.

1.Reservation:

1. The system must allow the customers to register for reservation.
2. The system shall allow the customer to view details descriptive of particular car.
3. The system must notify on selection of unavailable cars while reservation.
4. The system shall present an option for advanced search to limit the car search to specific categories of car search.
5. The system must allow the customers to select specific car using different search category while reservation.
6. The system must view list available car during reservation.
7. The system shall allow the customers the customers to cancel reservation using reservation confirmation number.
8. The system shall allow the employee to update reservation information.
9. The system shall allow the employee to view reservation made by customers.
10. The system shall present information on protection products and their daily costs, and request the customers to accept on decline regulation terms during reservation.
11. The System must be able to provide a unique reservation conformation number for all successfully committed reservation.
12. The system must be able to display reservation summary for successfully committed reservation.

Login:

1. The system should allow manager login to the system using their username and password.
2. The system should allow employee to login to the system using their username and password.
3. The system shall allow the manager to create new user account.
4. The system shall allow manager to change account password.

Car:

1. The system should allow staff to register new cars.
2. The system shall allow staff to select cars in the list.
3. The system shall allow staff to search cars by specific record.

4. The system shall allow customers staff to search car by specific record.
5. The system shall allow staff to update information of the car in need of modification.
6. The system shall allow staff to display all available cars.
7. The System shall allow customers to display all available car.

Rent:

1. The system shall allow staff to register customers into rental list.
2. The system shall allow staff to update about customer rent record details in the rental list.
3. The system shall be able to save all changes made on the customer rent list.
4. The system shall be able to save all changes made on the customers rent list.
5. The system shall allow staff to select customers rent record by specific search category.
6. The system shall allow staff to display customers, who rent car.
7. The system shall staff to display all customers rent record.
8. The system must provide printable summary for successful committed rent.

Payments:

In this system we will provide various payment checkout options to the customers like Cash on Delivery, Debit Card, Net Banking etc.

Logout:

After ordering or surfing for the products customer has to logout.

NON-FUNCTIONAL REQUIREMENTS: -

Following non-functional requirements explained below:

1. Security: This system is completely secured, as each user will require an authenticated user id and password.

2. Reliability: This Systems reliability is the probability of failure-free operation of a computer program for a specified period in a specified environment.

3. Maintainability: This system is designed in such a way that more features can be easily added without interfering with the base product.

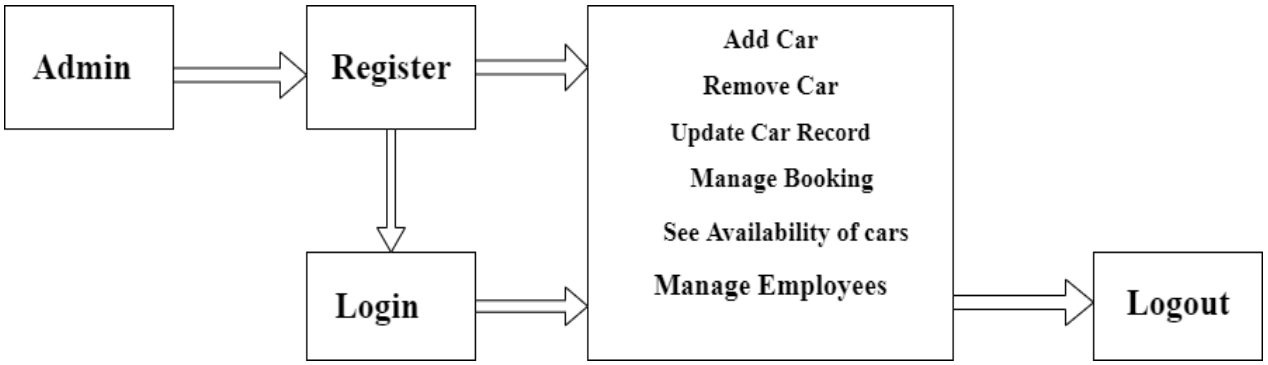
4. Portability: PDA: Portable Device Application. System will provide portable User Interface (HTML, CSS, JS) through users will be able to access online Car Rental System. Software can be deployed to single server, multi-server, to any OS, Cloud (Azure or AWS or GCP)

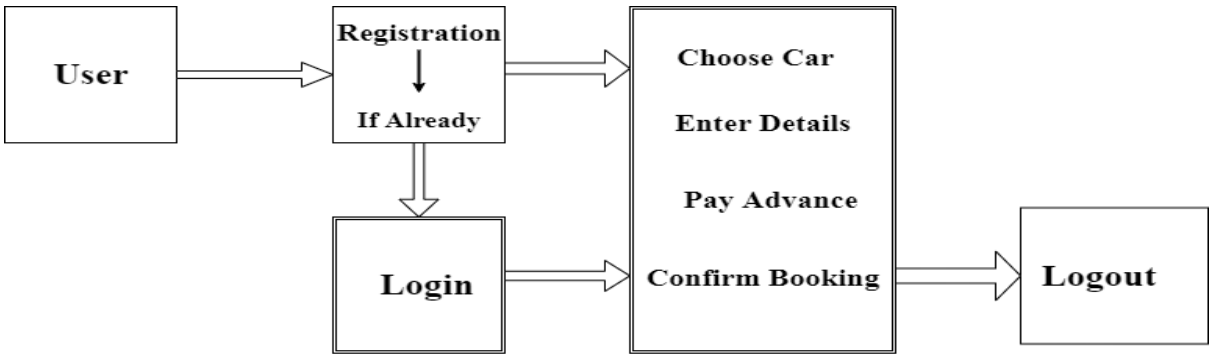
5. Reusability: Reusability is important especially in Web application development because Web applications tend to be rapidly developed and frequently modified.

6. Compatibility: Compatibility is the capacity for two systems to work together without having to be altered to do so.

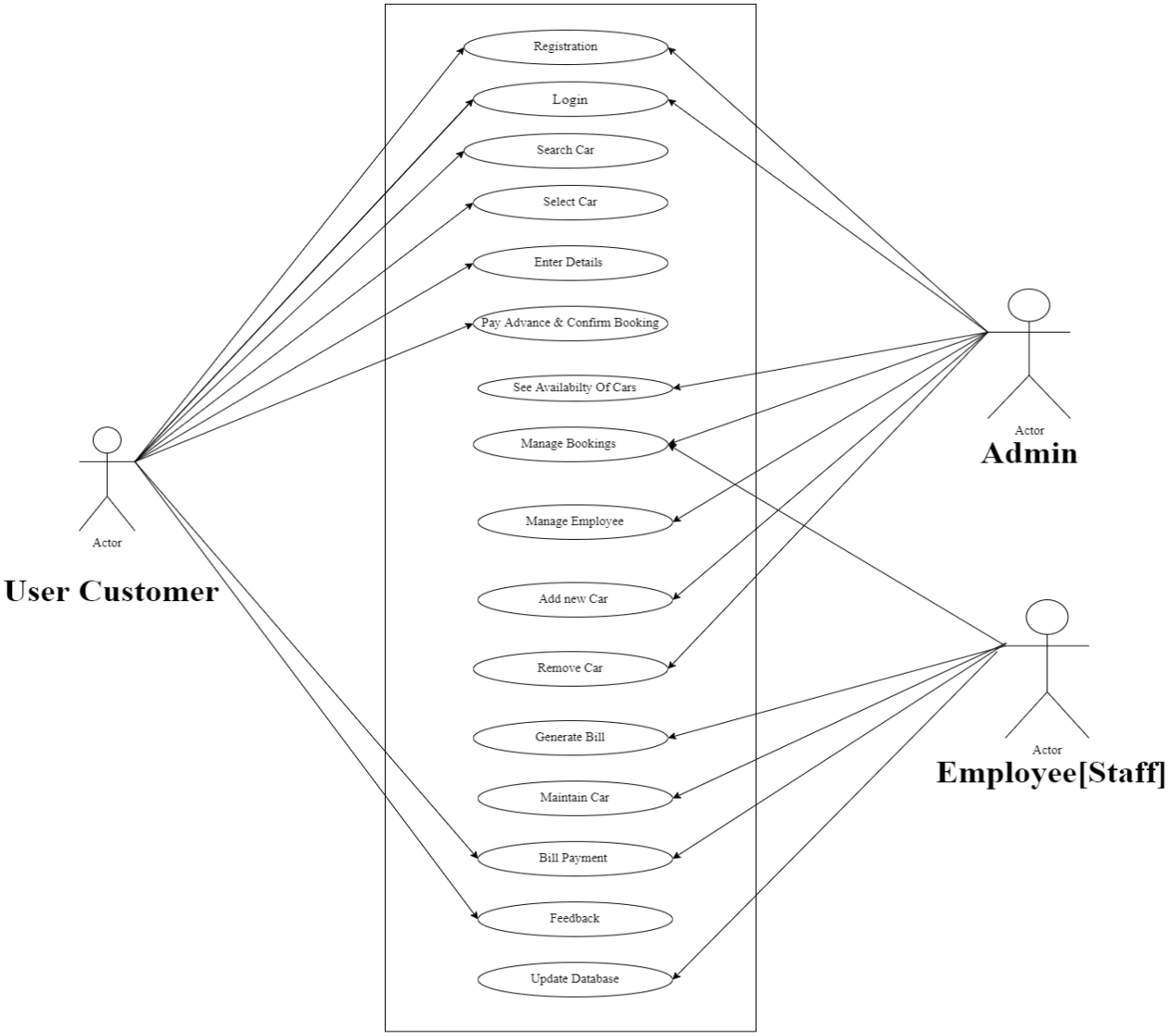
7. Scalability: A website that is able to handle an increase in users and load, whether in terms of a gradual or abrupt surge, without disrupting end-users' activities.

SYSTEM FEATURES: -





PROJCT FEATURES: -



Use Case Diagram

EXTERNAL INTERFACE REQUIREMENT: -

User Interfaces:

- The user interface is designed in React.JS.
- User Friendly.

Software Interface:

- Operating System: Windows 10 which supports networking.
- JAVA development tool kit.
- MySQL 8.0
- HTML, CSS, React.JS, Spring Boot.
- Any Browser.

Hardware Interface:

The system should have these hardware requirements:

- Processor: i3
- RAM: 4GB

Hard Disk: 512G