Computer Programming
Project Report

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PROJECT: Car Rental Management System.

Linkedin Video link:

https://www.linkedin.com/posts/haris-nayyab-185bb3321_i-certify-that-this-project-is-based-on-my-activity-7233429030429937664-_uSW?utm_source=share&utm_medium=member_desktop

Github link:

https://github.com/HarisNayyab/Car-Rental-Management-System/blob/main/README.md

Declaration Report: -

I hereby certify that the project report is based on my own work completed throughout our study period. I assert that the assertions I've made and the conclusions I've reached are the result of my research.

Abstract:

This project report outlines the development of an online car rental system designed to streamline and enhance the car rental process. The system allows customers to view available cars, check car specifications, register cars, provide necessary information for the rental process, confirm their rental, and receive a rental slip—all online. The primary objective of the system is to provide a convenient, efficient, and reliable platform for both customers and the car rental company. It reduces manual work, enhances data accuracy, and offers 24/7 availability, making the car rental process more accessible and user-friendly. This report details the problem statement, scope, objectives, functional requirements, and benefits of the system, along with a detailed description of how the system works.

1.1 Introduction: -

This project is designed so as to be used by Car Rental Company specializing in renting cars to customers. It is an online system through which customers can: -   View available cars.

- View car specification.
- Register car.
- Provide information for process.
- Confirm Car rent.   • Receive rental slip.

1.2 Problem Statement: -

Transport facility is a matter of headache for those people who do not have any personal Transport. On occasions like:

- Wedding
- Vacation
- house shifting
- tour outside 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 an application for availing transport whenever possible, then it will be beneficial for both renter and transport provider. 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. The advancement in Information Technology and internet penetration has greatly enhanced various business processes and communication between companies

(services provider) and their customers of which car rental industry is not left out.

Scope: -

- This includes study on how the car rental business is being done, process involved and opportunity that exist for improvement.

- This project has the potential to be easier, comfortable and reliable choice for the customer.

- User first has to just login into the system then view detail of car and freely select a car. Then provide the necessary information and payment, then he will receive a rental slip with car and renter detail.   • General customers as well as the company's staff will be able to use the system effectively.
- The system will be available for access 24/7.

2 BODY:

In this project following techniques are used:

- ⊙ Login Function: this function is used for customer to login in the system.
- ⊙ Car choice function: this function enables the customer to choice from different variety.

- ⊙ Car characteristics: this function helps the customer to know the car specification.

- ⊙ Personal information: this function will receive the customer information and make a rental slip.

2.1 Aims and Objectives

✝ The main objective of the rental car system is to reduce manual work which was time consuming and get the details of car, payment and customer personal information. This program will make work efficiently without loss risk (either personal detail or rental money) of either company or customer.

✝ This system will make ease customer task whenever they need to rent a car. ✝ Using this program, the company will effectively run and manage their car rental business.

2.2 How car rental service work: -

A car rental is a vehicle that can be used temporarily for a period of time with a fee. Renting a car assists people to get around even when they do not have access to their own personal vehicle or don't own a vehicle at all. The individual who wants to rent a car must first contact the car rental company for the desire vehicle. This can be done online. At this point, this person has to supply some information such as; dates of rental, and type of car. After these details are worked out, the individual renting the car must present a valid Identification Card.

2.3 Benefits of car rental service: -

• This car rental solution is fully functional and flexible.

- It is very easy to use.

- This online car rental system helps in back-office administration by streamlining and standardizing the procedures.

- It saves a lot of time, money and labor.

- Eco-friendly: The monitoring of the vehicle activity and the overall business becomes easy and includes the least of paperwork.

- The software acts as an office that is 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.

2.4 Functional Requirements: -

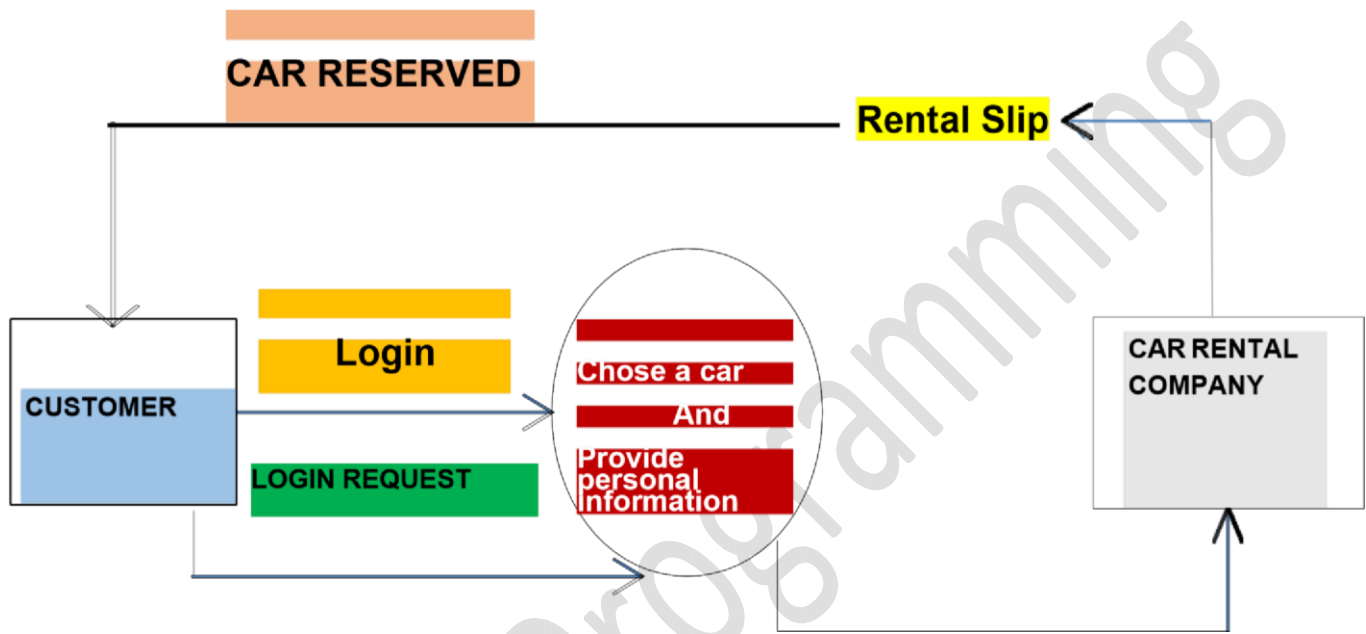Following are the functional requirements of program:

- Login Function.
- Car choice function.
- Car characteristics.
- Personal information.
- Rental slip.

3 Actors:-

	Actor	Use case
1.	Customer	Login to account'
		Rent a car.
		Return the car.
2.	Staff	Rental Process.
		Interact with customers.
3.	Admin	View report

3.1 DATA FLOW DIAGRAMS: -

A Data Flow Diagram (DFD) is a graphical representation that depicts the information flow and the transforms that are applied as data moves from input to output.

<u>Conclusion: -</u>

To conclude our project report, I believe that this project was really important for us as it polished and enhanced our abilities. Car rental business has emerged with a new goody compared to the past experience where every activity concerning car rental business is limited to a physical location only. Even though the physical location has not been totally eradicated; the nature of functions and how these functions are achieved has been reshaped by the power of internet. Nowadays, customers can

reserve cars online, rent car online, and have the car brought to their door step once the customer is a registered member or go to the office to pick the car.

I was really glad to successfully create this project and I believe it will certainly help us in our near future.

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