

Car Rental Portal

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Abstract--Our Aim is to design web based car rental system and create a data management for a car rental company. This enables user can rent a vehicle. This system increases customer retention and simplify vehicle and staff Management in an efficient way.

This software car Rental System has a very user friendly interface. Thus the users will feel very easy to work on it. By using this system admin can manage customer confirm and cancel booking request, customer Testimonials, customer issues. We can also add email/SMS alert/notification to user when he/she books the car. The car information can be added to the system. Or existed car information can be edited or deleted too by Administrator. There is no delay in the availability of any car information, whenever needed, car information can be captured very quickly and easily. The customers can also use the system to get car rent. The customer should create a new account before logging in or he / she can log into the System with his/her created account. Then he/she can book the available cars and can book this car .This system will helpful to the admin as well as to the customer also.

Keywords—Portal, SMS alert, Email alert, Database, PHP, HTML, Javascript, CSS

I. INTRODUCTION

Car rental portal is a web based system that rents out car. This system enables the company to make their services available to the public through the internet which can be accessed globally. The world has become a place where there is a lot of technological development; where every single thing done physically has been transformed into computerized form. Nowadays, people's activities have been transformed into work done by computerized systems. One of which is the main target of this project which is about Car Rental System. The system of renting car exist back in the previous years, were people rent car for their personal reasons. Car renting is essential to many peoples' plan to travel or move from one place to another for business purposes, tour, and visit or holidays, for these reasons Vehicle renting is very helpful.

A new up and coming vehicle rental service is wishing to have a user interface that will allow their customers to view the models, descriptions and prices of different vehicle available. Also portal allows user to select self driven car or with driver. The user has the ability to register and log in to the web and track their rental plan. The App will be responsive, allowing for the customer to view it on their device.

II. Litratue Survey

The car rental and leasing industry is one of the fastest-growing segments in the transportation industry of India.

More importantly, the organized car rental and leasing market are still miniature as compared to the rest of the car rental market in India, which constitutes only 4-5% of the market in terms of an absolute number of vehicles. The rest of the market is acquired by independent market players who own fleets of 2-50 cars and typically have a presence in 1 or 2 cities. Further, growth in the number of foreign and domestic travellers in the country and rising consumer base for the car rental industry owing to rapid urbanization has significantly strengthened the growth of the car rental industry. Moreover, the poor public transport system in the country with widespread smartphone usage offers great potential for the development of car rental services in India. However, the lower cost of public transport as compared to taxi rental is one of the major factors restraining market growth.

These days, it has become convenient for people to book or rent a car from anywhere via technology-enabled online car rental services that can be accessed with just a touch or tap of a button.

Today, everyone owns a smartphone and accessing such services seem as easy as pie. There are just three steps: Pick, check availability, book the car, and it's done. Amidst the use of technology tools in one's car rental business, the rental service option is holding rich potential for expanding services and improving access for many users all-round.

However, such online platforms have managed to speed up the growth of the Indian car rental industry and have also enabled several offline service providers to upgrade their business model and more importantly by following the digital route.

Key players in India are as follows:

- Uber cars
- Ola
- Avis Budget Group,
- Zoom Car
- Meru Cabs,
- Savaari,
- Easy Cabs.
- Hertz Global Holdings

The self-drive car rental market in India is heavily concentrated in tier-1 cities like Delhi NCR, Bangalore, Mumbai and Hyderabad.

The rental charges typically range from 1,400INR per day for small cars to 12,000 per day for bigger SUVs and

luxury cars, with 15-20% variation between weekdays and weekends.

We believe, the self-drive car rental market in India, estimated at < \$100 Million in 2019, is massively under-penetrated and there is a very strong growth potential.

The self-drive car rental market size in India is estimated at \$XX Million in 2019 and will grow to \$YY Million by 2025.

There have been many new entrants in self-drive car rental market in India but the market structure has remained more or less the same. The older entrants like Zoomcar, Drivezy and Revv have consolidated their position, broadened their fleet size and expanded to many cities.

Ola, the market leader in ride hailing market in India has announced that it will enter the self-drive car rental market but only in the luxury and corporate leasing segment.

Almost all operators, started operations from 5-6 metro cities and are constantly looking to expand their services to smaller cities and even internationally to attract new set of consumers.

Most of the operators Ex Zoomcar, Myles have now adopted an asset light business model i.e. they source cars from taxi operators, private owners and institutions to improve their profits. The cars sourced from private owners via leased program now makes up for 10-13% of total fleet size.

All these facts and inputs confirm the optimism around the car rental industry in India along with its growth parameters make it a very lucrative industry to invest in. Also, the user penetration rate was just 0.8% in 2017 which shows that there is a lot of potential for all the players in the business to grow. A vast population is still oblivious to the concept of renting cars for self-drive purpose and that's where these companies can jump in to create awareness among the people for this concept and thus can rapidly expand their user base. If all the numbers and projections are considered with then the car rental space is surely the place to be for the investors and new businesses.

III. EXPERIMENTAL SETUP

For this project, we will be using

Javascript, CSS, HTML and PHP. For the database we will be using MySQL to store user details and item information. For hosting the website we will be using Apache web server. Their short information is noted below:

➤ **HTML:**

HTML stands for HyperText Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. A markup language is used to define the text document within tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most markup languages (e.g. HTML) are

human-readable. The language uses tags to define what manipulation has to be done on the text.

➤ **Javascript:**

JavaScript is a lightweight, cross-platform, and interpreted scripting language. It is well-known for the development of web pages, many non-browser environments also use it. JavaScript can be used for **Client-side** developments as well as **Server-side** developments. JavaScript contains a standard library of objects, like **Array**, **Date**, and **Math**, and a core set of language elements like **operators**, **control structures**, and **statements**.

➤ **CSS (Cascading Style Sheets) :**

CSS is a stylesheet language used to design the webpage to make it attractive. The reason for using this is to simplify the process of making web pages presentable. It allows you to apply styles to web pages. More importantly, it enables you to do this independent of the HTML that makes up each web page.

➤ **PHP:**

The term PHP is an acronym for *PHP: Hypertext Preprocessor*. PHP is a server-side scripting language designed specifically for web development. It is open-source which means it is free to download and use. It is very simple to learn and use. The files have the extension “.php”. It can be integrated with many databases such as Oracle, Microsoft SQL Server, MySQL, PostgreSQL, Sybase, Informix. It is powerful to hold a content management system like WordPress and can be used to control user access.

➤ **MySQL:**

MySQL server is an open-source relational database management system which is a major support for web based applications. Databases and related tables are the main component of many websites and applications as the data is stored and exchanged over the web. Even all social networking websites mainly Facebook, Twitter, and Google depends on MySQL data which are designed and optimized for such purpose. For all these reasons, MySQL server becomes the default choice for web applications. MySQL server is used for data operations like querying, sorting, filtering, grouping, modifying and joining the tables. Before learning the commonly used queries, let us look into some of the advantages of MySQL.

➤ **Apache Web Server:**

Apache HTTP Server is a free and open-source web server that delivers web content through the internet. It is commonly referred to as Apache and after development, it quickly became the most popular

HTTP client on the web. It's widely thought that Apache gets its name from its development history and process of improvement through applied patches and modules but that was corrected back in 2000. It was revealed that the name originated from the respect of the Native American tribe for its resiliency and durability. Now, before we get too in depth on Apache, we should first go over what a web application is and the standard architecture usually found in web apps.

IV. Project Procedure and Flow

At the very beginning, the required number of modules will be discussed with group members and with their opinion the best among the inputs will be selected.

- Design of the front end of each module will be designed. The designed GUI will be shared among the project group members and feedback on each designed module will be taken.
- Modification in modules will be done depending upon the requirement.
- Within each module the required fields will be added.
- Once all modules are finalized, a backend database (DB) will be designed. Depending upon each module, separate table will be designed. Each table in the DB will be optimized by adding key to get the quick and efficient result output.
- After optimizing the DB, connectivity between front and backend will be done.
- For testing, each module will be considered separately and test cases will be prepared accordingly.
- Testing will be carried as per test case designed and the result will be noted.
- Final project will be presented to the users.

V. What is PHP?

PHP started out as a small open source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994.

- PHP is a recursive acronym for "PHP: Hypertext Preprocessor".
- PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites.
- It is integrated with a number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.
- PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time.
- PHP supports a large number of major protocols such as POP3, IMAP, and LDAP. PHP4 added support for Java and distributed object

architectures (COM and CORBA), making n-tier development a possibility for the first time.

- PHP is forgiving: PHP language tries to be as forgiving as possible.

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- Hypertext defines the link between the web pages.
- A markup language is used to define the text document within tag which defines the structure of web pages.
- This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly.
- Most markup languages (e.g. HTML) are human-readable. The language uses tags to define what manipulation has to be done on the text.
- HTML is a markup language used by the browser to manipulate text, images, and other content, in order to display it in the required format.
- HTML was created by Tim Berners-Lee in 1991.
- The first-ever version of HTML was HTML 1.0, but the first standard version was HTML 2.0, published in 1999.

VII. What is CSS?

- **Cascading Style Sheets**, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.
- CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.
- CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

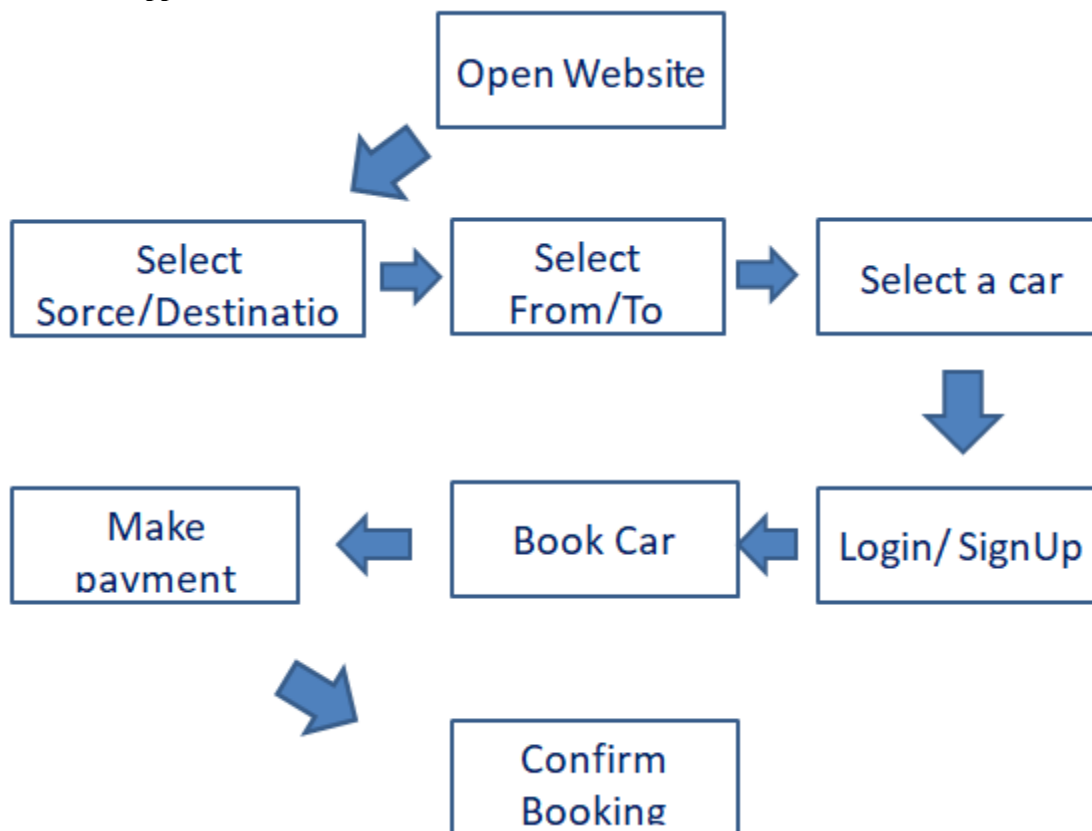
VIII. What is Javascript?

- JavaScript is a dynamic computer programming language.
- It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages.
- It is an interpreted programming language with object-oriented capabilities.
- JavaScript was first known as **LiveScript**, but Netscape changed its name to JavaScript, possibly because of the excitement being generated by Java.

- JavaScript made its first appearance in Netscape 2.0 in 1995 with the name **LiveScript**.

- The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers.

IX. Basic flow of application



X. Conclusion

- In comparison to previous experiences, when every activity related to the vehicle rental business was restricted to a physical place alone, the car rental industry has emerged with new delicacies
- Even if the physical location has not been completely eliminated, the internet's power has altered the nature of functions and how these tasks are accomplished. Customers may now book vehicles online, rent automobiles online, and have the car delivered to their home if they are a registered member, or they can travel to the office to pick up the car.
- From web based portal, we can say that car rental portal can be more helpful and saves lot of time with more some advantages:
 - Fully funtional and flexible
 - Can book a car with/without driver.
 - Local booking or outstation booking.
 - With insurance or without insurance.
 - It saves lot of time,money and labour.
 - Can operate 24x7.
 - Use of least paper work.

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