

# Android Based Car Rental Management System

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**Abstract:** 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. To produce a web-based system that allow customer to register and reserve car online and for the company to effectively manage their car rental business. To ease customer's task whenever they need to rent a car.

**Keywords :** Vehicle, Web-based, Rental, Register

## I. INTRODUCTION

A car rental or car hire agency is a company that rents automobiles for short period of time for a fee whether in a few hours or a few days or week. It is an elaborate form of a rental shop, often organized with numerous local branches (which allow a user to return a vehicle to a different location), and primarily 'located near airports or busy city areas and often complemented by a website allowing online reservations.

Car rental agencies primarily serve people who have a car that is temporarily out of reach or out of service, for example travelers who are out of town or owners of damaged or destroyed vehicles who are awaiting repair or insurance compensation. Because of the variety of sizes of their vehicles, car rental agencies may also serve the self-moving industry needs, by renting vans or trucks, and in certain markets other types of vehicles such as motorcycles or scooters may also be offered.

In campus, the situation had a bit different from the outsider agencies organize the car rental services. The availability of car rental is unpredictable and can't be sure by customer where the customer is student or staff in this campus. The situation here just like non-systematic process of renting car. For those who need to rent a car, like usual they must search whether in memo at campus portal or if there some published information about car rent or car hire in nowadays social network; facebook. They need to search the rental car in campus

by using their own credit by texting the owner and also they need to waste their time to check on facebook's rental car group but there were unsuitable and unprofessional way to someone who love their precious time.

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. This E-Car Rental System is developed to provide the following services:

- Enhance Business Processes: To be able to use internet technology to project the rental company to the global world instead of limiting their services to their local domain alone, thus increase their return on investment (ROI).
- Online Vehicle Reservation: A tools through which customers can reserve available cars online prior to their expected pick-up date or time.
- Customer's registration: A registration portal to hold customer's details, monitor their transaction and used same to offer better and improve services to them.
- Group bookings: Allows the customer to book space for a group in the case of weddings or corporate meetings (Event management)

## II. SYSTEM MODEL

System is to be:

- i. Provide convenient to user to do the car rental process.
- ii. Customer can make vehicle rental anytime without relying to certain rules such as office hour.

## MODULE SPECIFICATION

1. Admin Information

User can register, login, view and update client information.

2. Customer Information

There are two users that are admin and staff. Admin can add, view, update and delete staff information, while staff only can view and update staff information.

3. Car Information

Admin and staff can add, view, update and delete car information.

4. View Available Cars

It is a system design specially for large, premium and small car rental business.

The user can view Available cars and user can book for that car.

5. Booking Car

The user can view Available cars and user can book for that car.

6. Easily Get the Car on rent

The Customer can easily get the car whenever they need to on the rent with use of this system..

7. Enquiry

The inquiry can easily done by user.

8. Add Car

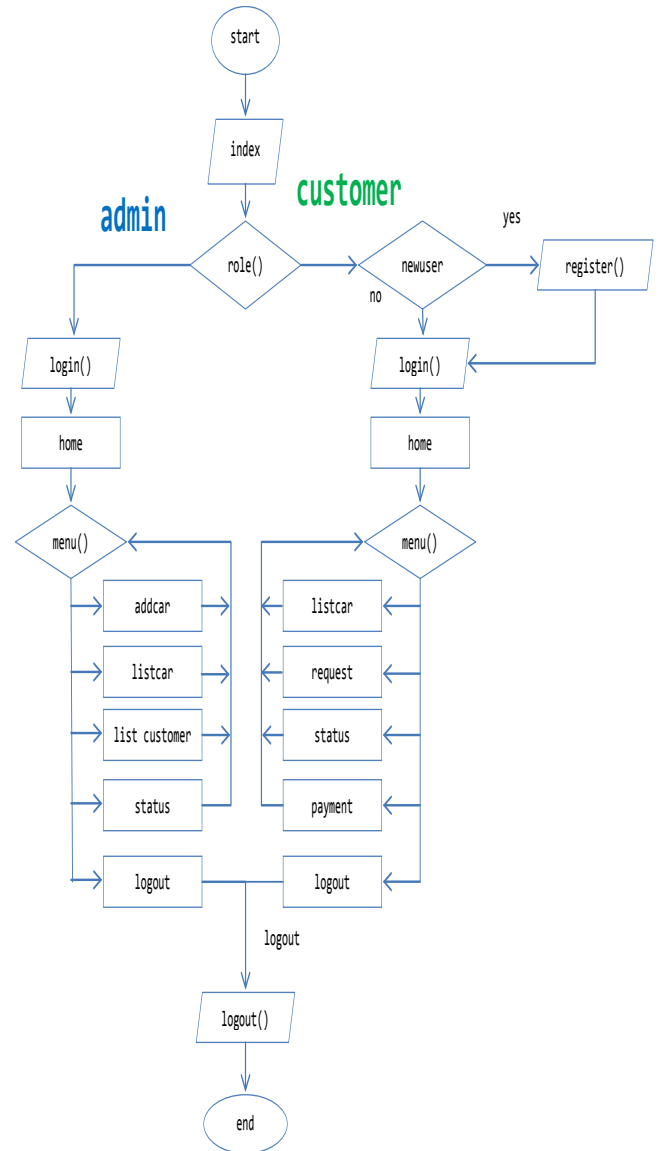
The Admin can add the car so that The user can see the available cars and book the car.

9. Manage Rent

The Admin can manage the rent so that The user can see the rent and book the car.**2.**

III. IMPLEMENTATION

The proposed work implemented using JQuery, JavaScripts, Tomcat 8.0, MYSQL 6.3 freeware



Activity Diagram

An activity diagram shows the sequence of steps that make up a complex process, such as an algorithm or workflow. An activity diagram shows flow of control, similar to a sequence diagram but focuses on operations rather than an object. The steps in an activity diagram are operations, activities from the state model. The purpose of an activity diagram is to show the steps within a complex process and the sequencing constraints among them

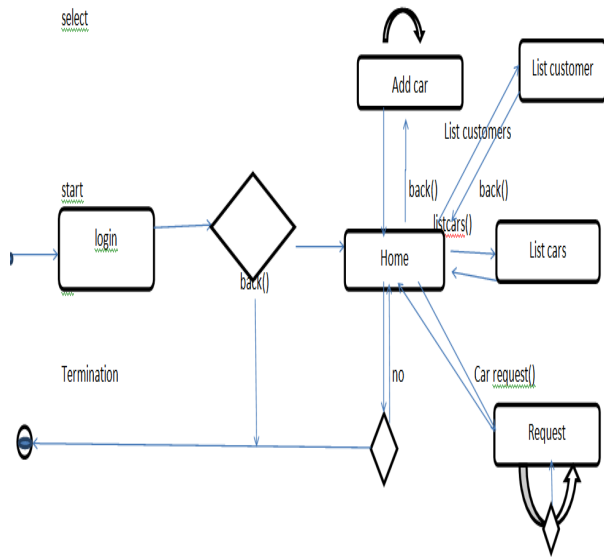


Figure 2.1 Admin Activity Diagram

Admin:

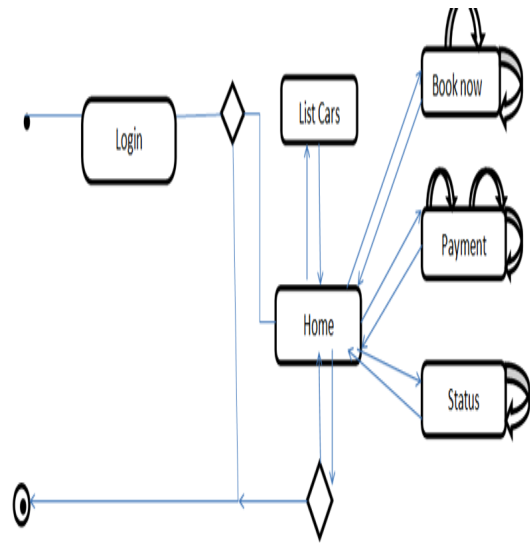


Figure 2.2 Customer Activity Diagram

#### IV. RESULTS AND DISCUSSION

The android application gives good result car rental system. The following result shown in Fig 4.1 to 4.8

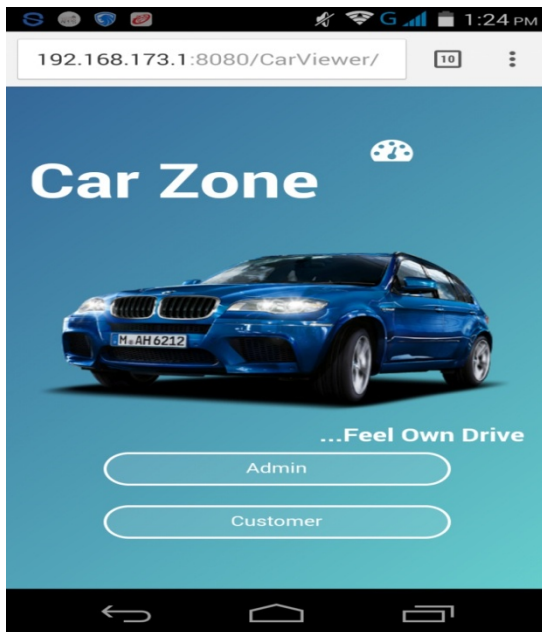


Figure 4.1 Index Page

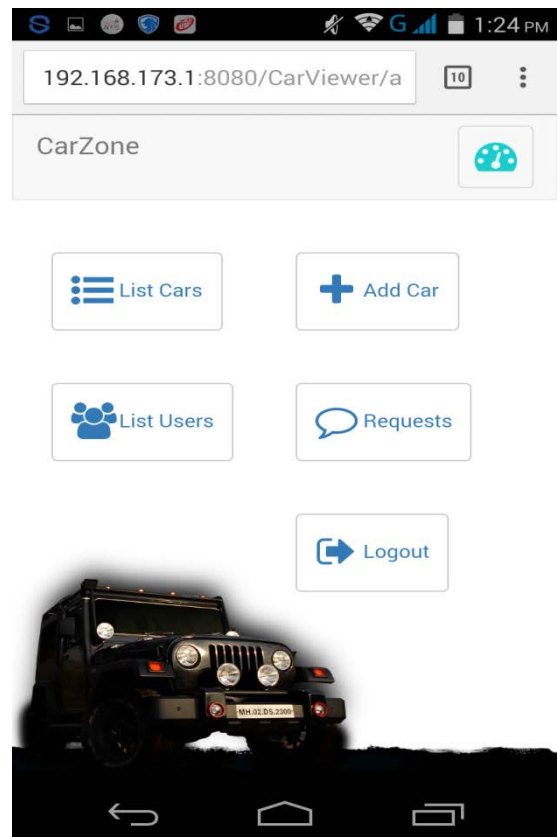


Figure 4.2 Categories of a application

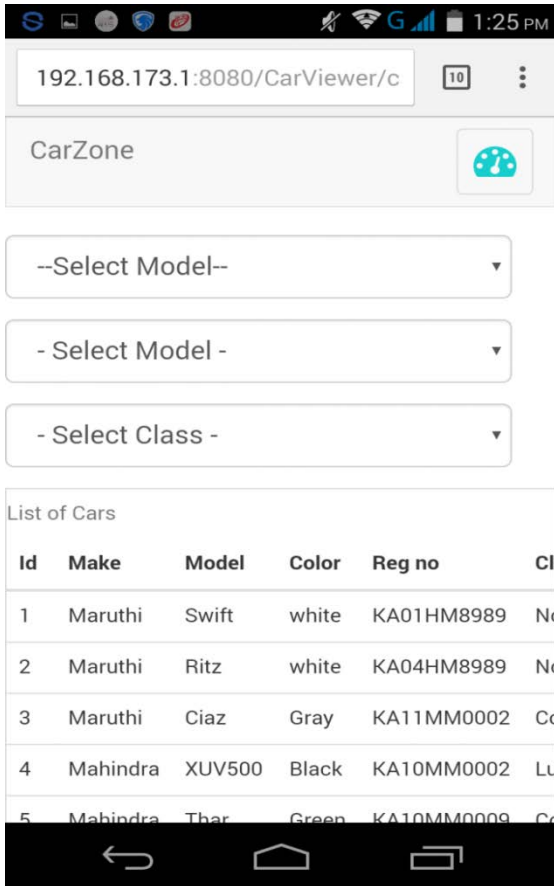


Figure 4.3 Entry Page

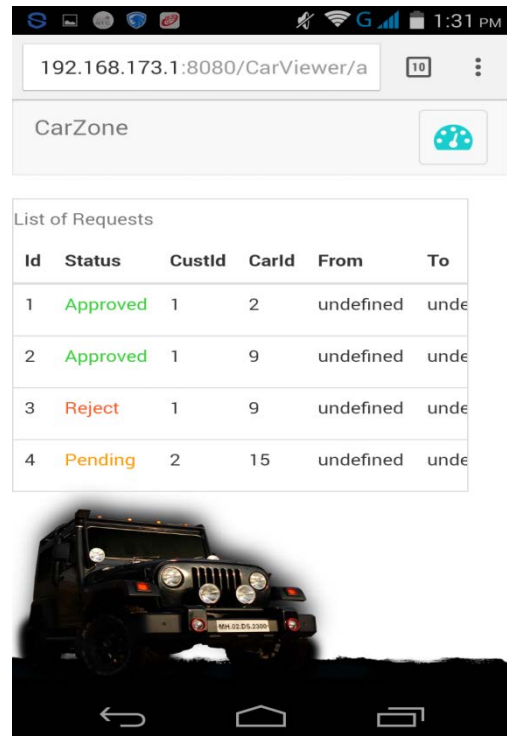


Figure 4.5 Approved option

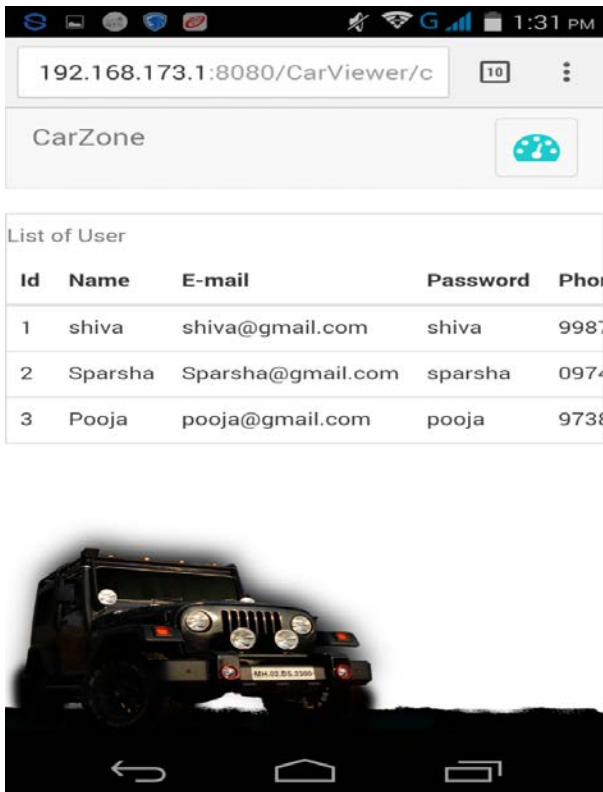


Figure 4.4 Selection Option

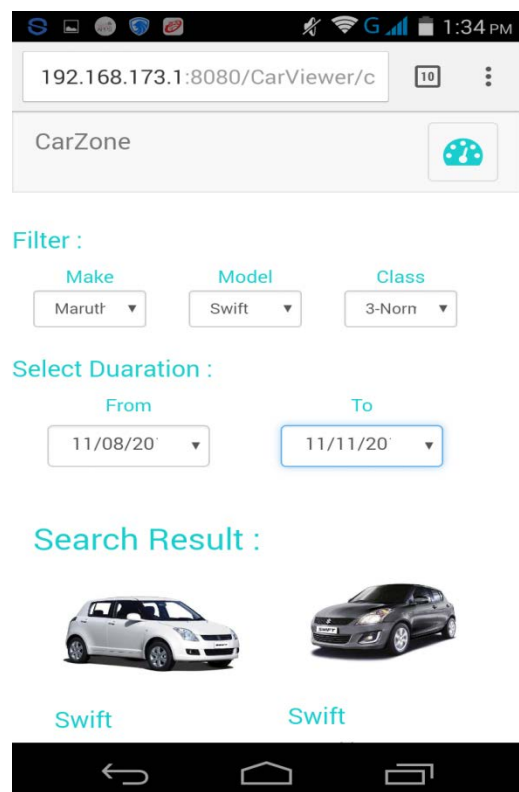


Figure 4.6 Categories of a application

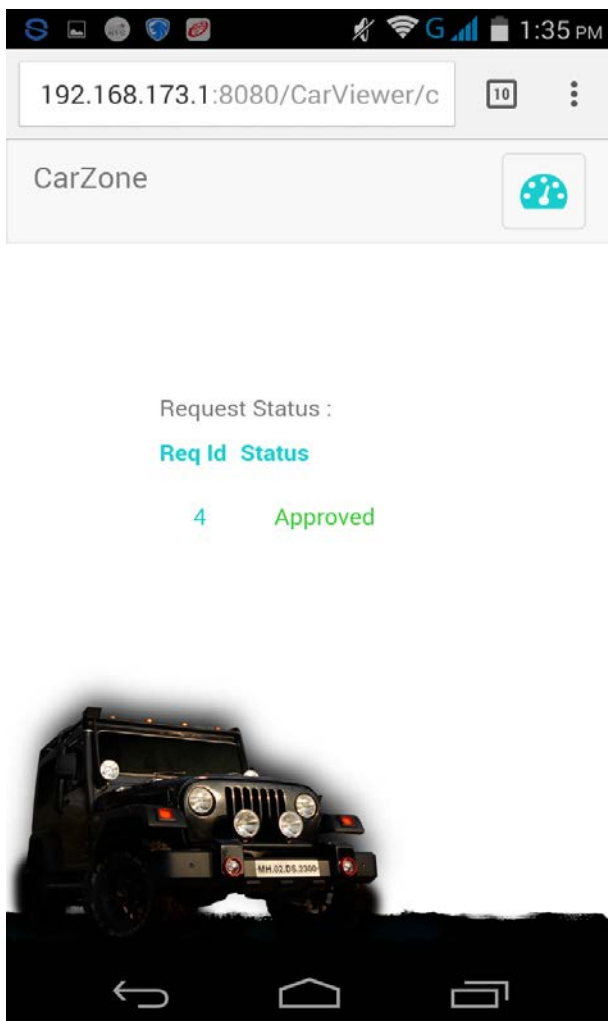


Figure 4.7 Requested Result

## V. CONCLUSION

Car rental business has emerged with a new goodies 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.

The web based car rental system has offered an advantage to both customers as well as Car Rental Company to efficiently and effectively manage the business and satisfies customers' need at the click of a button.



Figure 4.9 Payment Result

## VI. FUTURE ENHANCEMENT

Enhancement in platform technology which supports for major smart platform like Android, IOS, BlackBerry, Symbian. Concentrate on Design compatible with 4',5',tab versions and all other mobile first designs. In project features we plane to get GPS position of customer mobile and instance messaging or alerts. And alerts of car conditions to both customer and admin modules. Emergency alert for admin and customer mobiles through App and enhancement of live messaging between admin and customer regards business. More transparence between communication between modules .Maintain profiles for customer, able to edit profile, forgot password, registration via SMS, change password, reset password via email. For Admin module able to get picture via mobile Cam ,delete options, trace user via GPS, contact user via instance messages, And provide App as Versions and payment

related levels. And categorize customer via there payment as premium, gold, platinum customer and assign features as well.

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