CAR RENTAL SYSTEM

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Abstract - Our Aim is to design and create a data management System for a car rental company. This enables admin can rent a vehicle that can be used by a customer . 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. 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/ shecan book the available cars and can book this car .This system will helpful to the admin as well as to the customer also.

1. INTRODUCTION

CAR RENTAL SYSTEM (CRS) is a web based system for a company that rents out cars. This system enables the company to make their services available to the public through the internet and also keep records about their services.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 cars exist back in the previous years, were people rent cars 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 Car renting is very helpful.Many people became interested in the Car rental business and hence got involved. Car renting became more popular as years pass by. Today Car renting services is found all over the world, especially in the developed and developing countries. To make this service more popular and accessible to the public it has been transform into a web base system and connected to the internet were everyone can be able to have access to it.

2. PROBLEM STATEMENT: -

The Manual car rental system provides services only during office hours. So; customers have limited time to make any transactions or reservation of the cars. The existence of the online car rental systems nowadays has overcome the limitation of the business operation hour. There are some customers who faced a problem in choosing car to be rented which suitable with some of the important requirements. ,
To rent a car a prospective renter must first go to the nearest office to register as a client.
Cars that provide difficulties to rent out are normally advertised in local or national newspaper.
It involves a lot of paper work and consumes time ,
Details are stored in papers , Maintenance is a huge problem v. Updations, changes in details is

a tadious task , Performance is not achieved up to the requirements.

3. JUSTIFICATION: -

The proposed system can reduce travel expenses to the company's car rental center. Customers can install the application on their mobile phones and create an account with a company that provides car rental services. Therefore, when creating an account, you only need to enter the details once. After creating an account, you can comfortably book a car using your phone, cancel the transaction, confirm the transaction and receive an invoice. They have a central database where they can receive car rental applications and can book cars upon customer request. The system automatically generates a report on the number of cars available for lease in a given period, reports how much funds have been raised in a given period, and reports the total cost of the company during that period. The system can provide reports to analyze ,how much each customer contributes to the company's annual revenue and predict how many customers will join the company each year. System users must provide authentication details. Access to various menu items is restricted, especially for employees. Therefore, each employee can only access permitted content, and each employee is responsible for the transactions they conduct.

4. RELATED WORK: -

D. Kesrarat, S. Songcharoenkit, P. Nanthapornpisut has developed good Matching for rent-a-car in2017. the aim of writing is to develop applications that permit users to decide on the vehicle consistent with their desires and to process the rental of vehicles each motorbike and cars. the event methodology used is that the water method that consists of communication, planning, modelling, construction, deployment. The results are evaluated with eight golden rules of interface style and also the results of the form show that the appliance may be utilized by users and suppliers to create the method of rental and renting a vehicle. it absolutely was concluded that this application may be used well and might perform the method of rental and renting vehicles for cars and motorbikes.

Jia-Ning Luo, Ming-Hour rule, Ming-Chien Yang has developed anonymous you-drive protocol supported NFC technology in 2013. Our main contributions include: (1) Anonymity. Users offer their personal info to a trusty third party (TTP) only. The car rent suppliers will not get users' real identity. (2) Unlink ability. you-drive corporations are unable to determine any link between users' rental records and users' identity just by analyzing the rental history. (3) Trace ability. If there are client disputes or accidents, the rental company can request that TTP reveal users' identity. (4) Flexibility. Users are liberal to select their most well-liked vehicle. A client must register his identity with a TTP via his NFC phone. He ought to request a short lived anonymous license from TTP and sends it to the rental company. If the license is valid, the corporate problems a price tag for a particular vehicle to the user over the air. The vehicle authenticates the ticket through the user' NFC phone.

5. Functional Requirements: -

Requirement analysis could be a package engineering technique that's composed of the assorted tasks that confirm the wants or conditions that are to be met for a brand new or

altered product, taking into thought the attainable conflicting requirements of the various users. useful requirements are those requirements that are accustomed illustrate the inner operating nature of the system, the outline of the system, and rationalization of every subsystem. It consists of what task the system ought to perform, the processes involved, that knowledge should the system holds and also the interfaces with the user. The functional requirements known are:

- Customer's registration: the appliance ought to permit new users to register on-line and generate membership card.
- on-line reservation of cars: Customers should be able to use the application to form booking and online reservation.
- Automatic update to info once reservation is created or new client registered: Whenever there's new reservation or new registration, the system should be in a position update the database with none extra efforts from the admin.
- Feedbacks to customers: It should give means that for patrons to go away feedback.

6. Non-Functional Requirements: -

- Security: The system should provide a high level of security and integrity of the information control by the system, solely licensed personnel of the corporate will gain access to the company's secured page on the system; and only users with valid watchword and username can login to look at user's page.
- Performance and Response time: the applying should have high performance rate once capital punishment user's input and will be able to provide feedback or response among a brief time span sometimes fifty seconds for highly sophisticated task And

20 to twenty five seconds for fewer complicated task.

- Error handling: Error should be significantly reduced and an applicable error message that guides the user to pass though miscalculation should be provided. Validation of user's input is very essential. conjointly the quality time taken to recover from an error should be fifteen to twenty seconds.
- Availability: This application must always be obtainable for access at twenty four hours, seven days a week. conjointly n the incidence of any major system malfunctioning, the system should be available in 1 to a pair of operating days, in order that the business method isn't severely affected.
- easy use: thought-about the extent of information possessed by the users of this system, a straightforward however quality computer program ought to be developed to form it easy to know and needed less training.

7. SYSTEM DESIGN: -

Design are more specific statements about what ORAC will be able to do after completion of the system.

The first objective is to reduce cost of the system by centralising all the data which requires less staff under a more controlled environment.

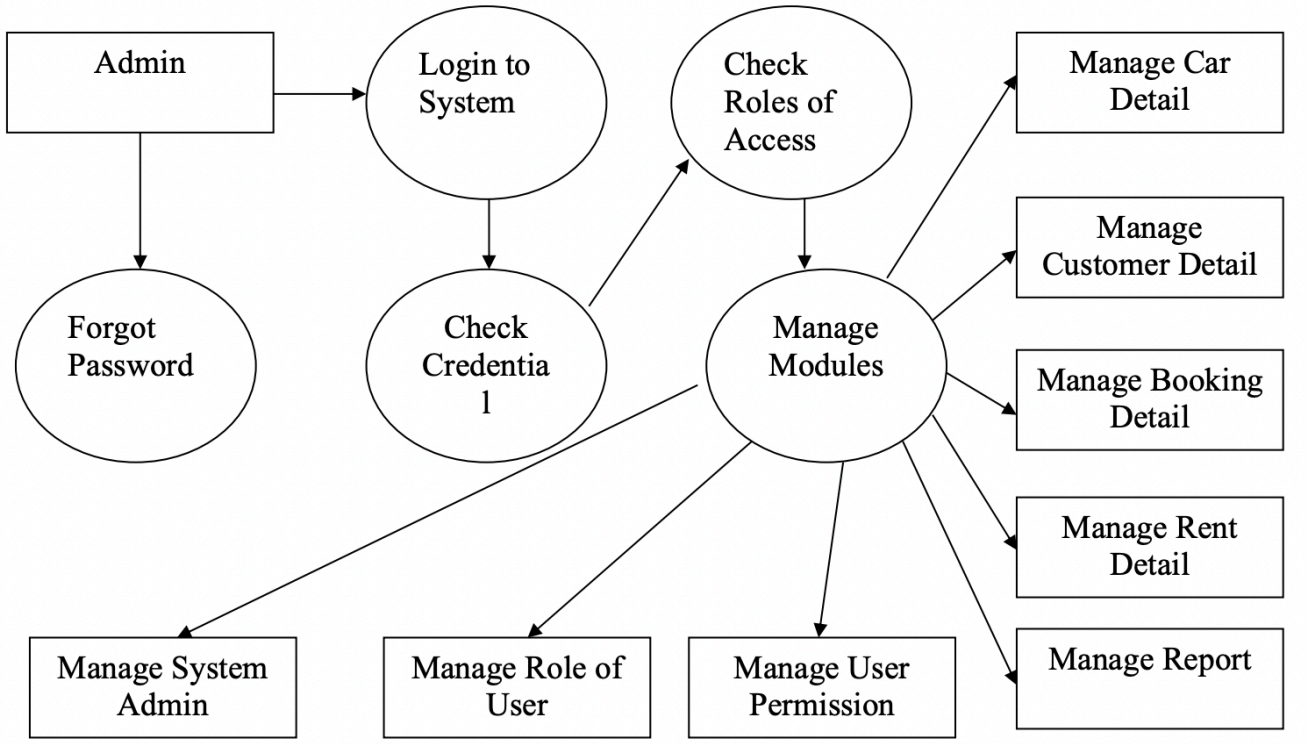
Secondly, ORAC should reduce the risk of fraud occurring as it uses document upload feature for verification of license and IC/Passport purposes, making a system complying with Rules and Regulations of Malaysia.

Together with a safe website, ORAC is meant to provide security and guarantee of user data integrity and confidentiality, thus reassuring users that their personal details are in safe hands, by using a secure Instant Payment Notification system, called Paypal Sandbox Configuration.

ORAC has to be a time saving website as it uses a Real Time Notification System where a notification is issued to the staff to verify and authenticate users on the spot.

Another objective of ORAC is to prevent spams from registering by using features called Email Verification links and SMS Verification Codes to verify authenticity of users.

Last but not least, having a simple interface with minimum data to fill up to encourage more people to use the system for booking is very necessary.



9. 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 Booking 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.

Future Enhancement

In near future, we are planning to hire cars daily bases. So that clients can give their car to the

customer on daily bases. We are planning to add new feature i.e. pay after the trip. We are working to increase automation in the system to increase user experience great

10. CONCLUSION: -

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