UTM

UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING
SESSION 2019-2020
SEMESTER-I

COURSE NAME: DATABASE
COURSE CODE: SCSD 2523
SECTION: 05 (TEAM-6)

PROJECT PART : RCar System

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DATE OF SUBMISSION

27 November 2019

INTRODUCTION

The current system used by Ikram Motors Enterprise for their car rental system is using paper-based system where all the information and data of the customer, car and business are stored in files where the company is located. The business also use the applications like WhatsApp and Instagram to communicate with their customer as to enhance the way they deal with their customers. The lack of use of any sort of database will cause a lot of problems to the company, customer and the system itself. One of the problems is that the company will have trouble on tracking any customer data or detail when their paper-based system fails or their storage cannot manage the data anymore because paper-based system required a big storage. The words fail means that the company lost customer data and they have no backup. Next, the company will have a problem with the security of the data. This is because the third party will easily can steal or take customer data or detail from the company because it only use paper-based system. In order to help Ikram Motor Enterprise, we suggest to develop a web-based system for the car rental that will have more advantages than the current system.

DATABASE PLANNING

Project Overview.

RCar system is a web-based system that is designed to make the user experience a fast, convenient and safe environment when they wanted to rent a car. The main reason RCar system developed is to upgrade the existing system and make it more user friendly. The existing system which still using the paper-based system can only manage a small amount of data. In order to solve this kind of problem, RCar system aims to create a system that can store all of the company and user data on a digital database that have unlimited storage. The management of the data by the company will become more efficient and make the more usable and tracked for future use. The user should not worry about losing their data because RCar system will have a separate database system that act as a backup if something goes wrong with the main system.

Next, increase the data security is the biggest concern for RCar system. This is because the user's personal data or information are important to be kept safe because it can bring harm to the user and also the company if its fall into the hands of the wrong person. In order to create a safer system than the previous paper-based system, RCar system will have a more strong security and authentication so that the user's personal information can be protected.

Finally, RCar system is a system that will have a more user friendly interface design rather than the paper-based system that the user can only know about the car they wanted to rent if they message the company on WhatsApp and Instagram. To make a better system, RCar system will have a page that allow users to choose and read all of the car information that available to rent. In this way, the user can save their time from asking one by one about the car information from the company.

The purpose :

The RCar system main purpose to develop a more user friendly system that allow user's and company data to be stored more efficiently and easier to be accessed in the future. It also makes the user's personal data or information to be stored safely with an advanced security to make sure that the data do not fall into the wrong hands. The system also allows the company members to access the record of any customer registered and the car that has been rented at the particular moments to make the rental process became more fast and efficient.

The objective :

This project aims to develop a digital system RCar System for Ikram Motors Enterprise. The users are able to enter the company's website for searching or booking the cars easily through the internet and it can be accessed anywhere and anytime.Hence, the company is able to improve their customer satisfaction level,increasing efficiency the system by providing better services to the customer. Besides that, the system aims to make the user feel safe and secure about their personal data or information.

Specific Objectives:

1. To store the data of the company efficiently and easy to access
2. To smother the overall process of car renting(user friendly)
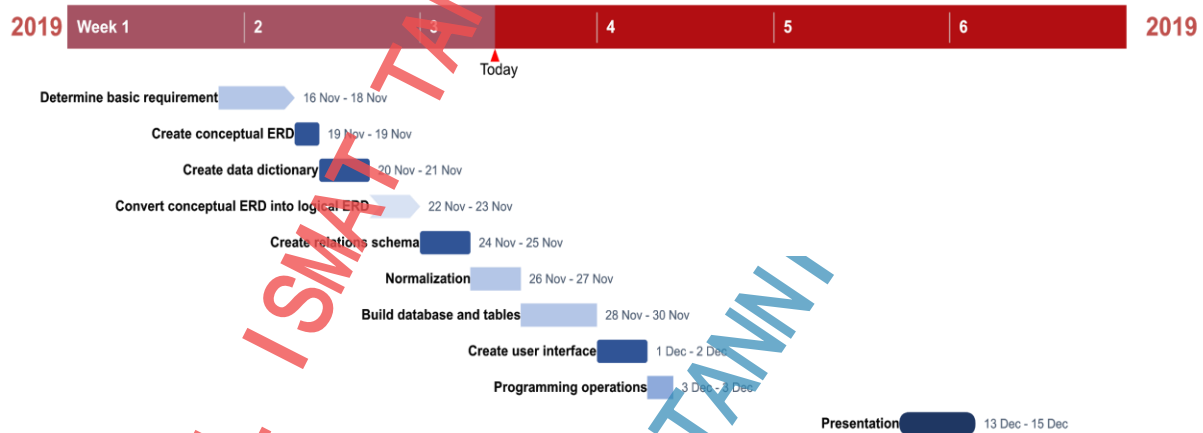3. To increase the security for the database system.

System Boundaries: The system includes all the entities inside the black line. The focus of the project is to create a database for the car renting system
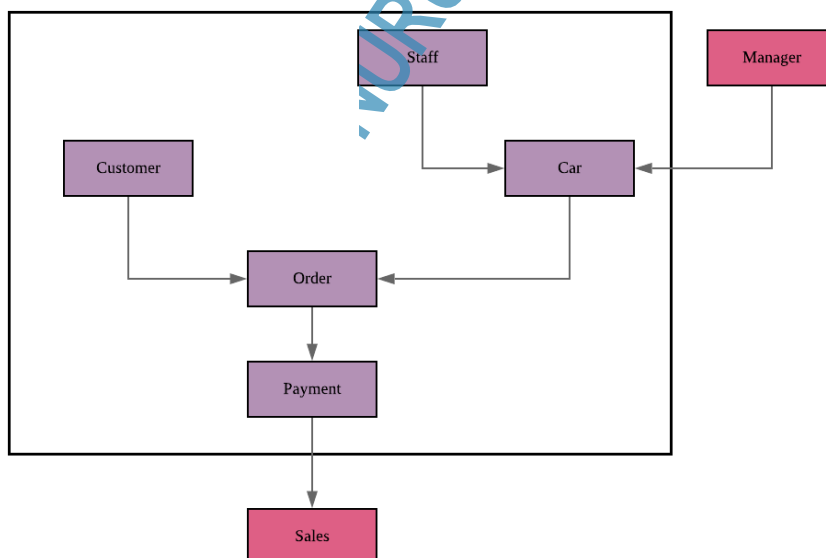
Major User Views:

Entity	Access Type	Customer	Manager	Staff
Customer	Data Entry	x		
	Data update/delete	x		
	Data queries		x	x
Staff	Data Entry			x
	Data update/delete		x	x
	Data queries		x	
Car	Data Entry		x	
	Data update/delete		x	x
	Data queries		x	
Payment	Data Entry	x		
	Data update/delete		x	
	Data queries		x	x
Order	Data Entry	x		
	Data update/delete	x		x
	Data queries		x	

gantt chart

P2: USER REQUIREMENT

2.1 Data requirement

Entity	Data Store	Requirement Data
Customer	1.Name 2.Customer Id 3.No IC/no passport 4.Age 5. License 6.No Matric Card 7.No Phone	❖ [3.] No IC, a copy of no IC needed. ❖ [3.] No Passport, a copy of no passport if you a foreigner ❖ [5.] License, a copy of license needed. ❖ [6.] No matric Card, a copy of matric card needed if you are a student.
Staff	1.Name 2.Staff Id 3.No IC 4.No Phone	❖ [2] Staff Id, to ensure that you are staff at the company

Car	1.Car Id
	2.Name of cars
	3.Type of Car
	  i)Colour
	  ii)Brand of the Cars
	  iii)No Plate of the Cars
	4.Availability of the cars
	5.Price
		❖ [3] Type of car, you can decide the type of car that they want to rent.
		❖ [5]Price, based on the cars and the duration they want to rent.

Payment	1.Payment Id
	  i) Cash
	  ii) Bank-in
	2.Date of Payment
	3.Payment Method
	4.Payment Status
		❖ [1]Payment Method, a copy of receipt if you pay through bank in.

Order	1.Order Id(PK)
	2.Duration
	  i) Hour
	  ii) Day
	  iii) Month
	3.Destination
		❖ [2] Duration,there has a minimum time for customer to rent

2.2 Transaction requirement

Entity	Data entry	Data update/delete	Data queries
Customer	Enter personal information by customer	Update/delete personal information by customer	Query on customer data by Manager/Staff
Staff	Enter personal information by manager/staff	Update/delete personal information by manager	Query the number of staff in the company
Car	Enter car details by manager/staff Enter car availability by manager/staff	Update/delete car details by manager Update car availability by manager/staff	Search for car by Manager/Staff, Customer
Payment	Enter payment details by customer	Update payment status by customer	Query the payment details by Manager/Staff
Order	Enter order details by customer	Update/delete order details by customer	Query the number of order by Manager/Staff

2.3 CROSS-REFERENCE ANALYSIS

	Manager	Staff	Customer
Customer	✔		✔
Staff	✔	✔	
Car	✔	✔	
Payment			✔
Order		✔	✔