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COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGY (COICT)

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PROJECT REPORT

PROJECT TITLE: CAR DRIVING SCHOOL MANAGEMENT SYSTEM

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DATE: DEC 15, 2019

DECLARATION

I, Msikamo Faraji, declare that the project report entitled “**CAR DRIVING SCHOOL MANAGEMENT SYSTEM (CDSMS)**” is my own work, with any contributions from others expressly acknowledged or cited. submitted to the **UNIVERSITY OF DARES SALAAM** in partial fulfilment of the requirements for the award of the degree of **BACHELOR OF SCIENCE WITH COMPUTER SCIENCE**

I declare that the work in this project report was carried out in accordance with the Regulations of the **UNIVERSITY OF DAR-ES-SALAAM** and has not been presented to any other University for examination.

Signature:

Date: DEC 15, 2019

ACKNOWLEDGEMENT

First and foremost, praises and thanks to the God, the Almighty, for His showers of blessings throughout my project work.

I would like to express my deep and sincere gratitude to my project supervisor, Mr. BERNARD MUSSA and UNIVERSITY OF DAR ES SALAAM for giving me the opportunity to do project and providing invaluable guidance throughout this project.

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ABSTRACT

Car Driving School Management System (CDSMS) is a web based online system for any driving school. This system has several approaches. The first one is specific to driving school staff. This driving school staff needs to handle many students at one time. This will give problem in term of communicating with student for their driving class schedule or exam. Looking at this scenario, driving school have problem in communicating with their student if the number of students more than the available Instructors. Besides that, they also need to handle the instructor in term of notification and appointment. This system will help the instructor to access student information and their driving lesson record. Others than that, the instructor also can get any important information regarding appointment or memo about their schedule from this system. And the last one is to students. Students can access their own data. Only registered student can have access to the database. The only method is through the official website that included in the system.

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LIST OF ACRONYM/ABBREVIATIONS

CDMS-Car Driving School Management System

PSV-special training for passenger vehicles

SMS-Short Message Service

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CHAPTER 1

1.1 INTRODUCTION

Mission Vijana Driving School is one kind of such schools located in Dar es salaam in Kijichi ward close opposite the Mgeni Nani Market. It has 10 members of staff. It provides more than five types of driving lessons for all kinds of motor vehicles. Students come all over the region to be trained at this school due to or because of its well known record for less failure. Because of this more and more students are coming to join this school, as a need of a good system is to be developed to manage this number of students that daily registers at this school.

The school has a day facility which accumulates and provides efficient time for students. The school also has one computer which is used specifically for installing information summaries using Excel spreadsheet. The computer is used to perform:

- student registration
- student lessons registration
- finance activity,
- it is used to manually record the vehicle fleet control as well as
- generating reports using Excel spreadsheet and word document

Students at the school come to register directly at the office. During the registration process students are asked a kind of training they want. Students are trained in the following classes:

- Class A is training for a motorbike
- Class B is training for a small car
- Class C 1 is training for heavy goods
- Class C or PSV special training for passenger vehicles.

Once a student has been registered in class, they will be asked the mode of how they want the selected or chooses training to be rendered which are fulltime time day or Up hourly training.

The students also are allowed to pay their fees in 3 varying Instalments mode of payment but the first instalment will be paid a fifty percent of the whole fees of the whole training and the other next instalments follows anyhow but usually at the end of the training the rest of the fees must be paid fully

before a student leaving the school.

School also has a couple of branches in which currently are operated separated as every branches has they are own staff, different scheduling of classes but share the vehicles used for training which depend with the number of student available at specific branch and sometime if the number of student exceed in one the branches they move student to other branch because some branches are well known than other in which cause a large of student to register in single branch.

1.2 PROBLEM STATEMENT

- At present time the school runs all of its operation and services manually as already stated earlier which is time consuming, it requires too much attention and carefully planning. The school administration has no means to operate outside the office even in case of emergency all student record will be lost in case of fire or any other natural disaster.
- A school still use physical books to allocate student or schedule classes and keeps all records. All of this method is outdated also unreliable and not readily accessible and most of the time or sometime it is inaccurate.
- Problem Communicating with numbers of students at one time. The schools handle many students every year and at one time which face problem communicating with all student for their schedule of driving class or exam. From a scenario like this, school will have bigger problem in communicating with their student if one day the number of students exceed the normal size compare to the available instructors.
- Tracking a student progress. A process of tracking progress of all student takes some times when staff handling many students at a time. Much worse, staff can't easily handle to remember each student progress. The school has no proper system to handle records of all student progress due to everything is done manual.
- Problem Managing daily information. Managing school daily data is a basis of a system. Daily records of a driving school involve some of government procedures, policies and laws. Staff from this driving school cannot neglect any single file or data.

1.3 PROJECT OBJECTIVES

This project has a main objective and couple of specific objectives which produced from this main objective

1.3.1 MAIN OBJECTIVE

The main objective of this project is to design and develop a complete driving school management system that will handles information and almost all tasks done daily by these driving schools

1.3.2 SPECIFIC OBJECTIVES

Some specific objectively which expected at the end of the project the system is expected to achieve are the following:

- To facilitate proper management system that provide a proper access mechanism to all users.
- To implement a driving school notification system which implement web-based system and
- Short Message Service (SMS) technology used to display related information and a reminder.
- To provide a very secure management system in terms of information retrieval.
- To provide a systematic recording stored system.
- To facilitate the basic and important backup of the system and data.
- To configure a web-based system and setting up the system to be more practical
- To integrate between mobile device and the web-based systems through a logical link that will enable communication among these two components.

1.4 SIGNIFICANCE OF THE PROJECT

- Scheduling-Class scheduling in driving school or any other school is an important part of every operation. Car driving school management system will allow schools to able to create class schedules and monitor those schedules. This feature helps to prevents a double booking of course time slots and also has a beautiful calendar used to display all classes. Much more an SMS will be sent to students every time they are booked in for a specific class.
- Student Management-the student management will keep all the student records in a specific way that can be accessed them from anywhere. Staff can search through student records easily and be able to look all the details of all student or a specific student.
- Notes and attachments-the car driving school management system will have the function to create and upload notes and attachment on a student's profile, instructor or staff.

- Instructors-as for Instructors of courses also will have accounts which they can use to login and check their class schedule.
- Branches-and this is very important as most of driving schools have more than one branches and that also is covered on car driving school management system. In this system you will be able create as many branches as you can of the driving school and manage those branches easily.
- A Stunning dashboard-car driving school management system will come with a stunning dashboard which purpose is to shows you the important school statistics.
- Finance or invoice management-When the student account is generated and they can sign up for a specific course. An automatic invoice is generated and sent to them. The system will be able to keep track of all invoices and pending balances. Those invoices are download, editable and it can add payments to invoices as well
- Student payments-the system keep record of all the student payments received for future use or reference as well as automatically update of the invoice.
- Payment reminders-a special reminder of all late payments and also reminders of all upcoming classes to students also keep record of fleet for simple assignment and to check it's schedule

1.5 SCOPE

For this Car Driving School Management System (CDSMS), I categories it into three categories of user:

1.5.1 STUDENT

All driving school student, can access specific and only their own data. Only student registered to school can have access to the database and the only method used to access is through the school website.

1.5.2 STAFF

The Driving school staff, can only access all data related to the students, also instructor and all vehicle information. This driving school staff also have special privileges to the management system because they allowed to do whatever they should do like delete, add, or copy or edit.

1.5.3 INSTRUCTOR

The driving school instructor have accounts where they can login and check their schedule also any other allowed access to the student's lesson record, to know the number of students attending the class.

CHAPTER 2

2.1 LITERATURE REVIEW

2.1.1 INTRODUCTION

This chapter will discuss about article review of my proposed project. Literature review refer to the summary of some article that sourced from reliable article. This reliable article reviews the important because it will be used to help the system developer to build the system, so that the developer will get some of knowledge of the strengths and limitation of the system being developed. All of this review will help the developer to choose ways which are the best to develop the best system. In order to build a good system, researches and analysis of an existing system or the current system have to be done. The best system always will come after an increase or improvement in quality, extent or value of existing system. For this project to work, literature review serves most of the purpose of gathering data (information) related to the development of the driving school management system. The review will be interested on the current existing system. The review result will serve to better preparation for the developer with relevant or essential knowledge in the design and planning phase of the system. The reviews also will be used to discuss the best approach that will be used for development of this project and related information researched about the approach, tools and methodology that will be used for the development of this project.

Besides all of that, literature review also serves the purpose of information gathering related to the development of Car Driving School Management System (CDSMS). This review will more focus on the method of how the system will operate by implementing some new technologies.

2.1.2 FACTS AND FINDING

The main purpose of this information or study from the reviews is to identify the most problems and the feature the render the less acceptance of current system. Apart from that identification, this study carried out to examine the problems that occurred from the current driving school system to come out with the better solutions which will overcome the regarding problems. Then, it is my intentionally to study and analyze all the management process and also activities in order to identify the required requirements of the future system.

2.1.3 EXISTING OF OTHER DRIVING SCHOOL ONLINE SYSTEM

This chapter will discuss about existing of the other online system of driving school around the world.

2.1.3.1 Metro Driving Academy

The first online system is from Metro Driving Academy. Refer to figure below

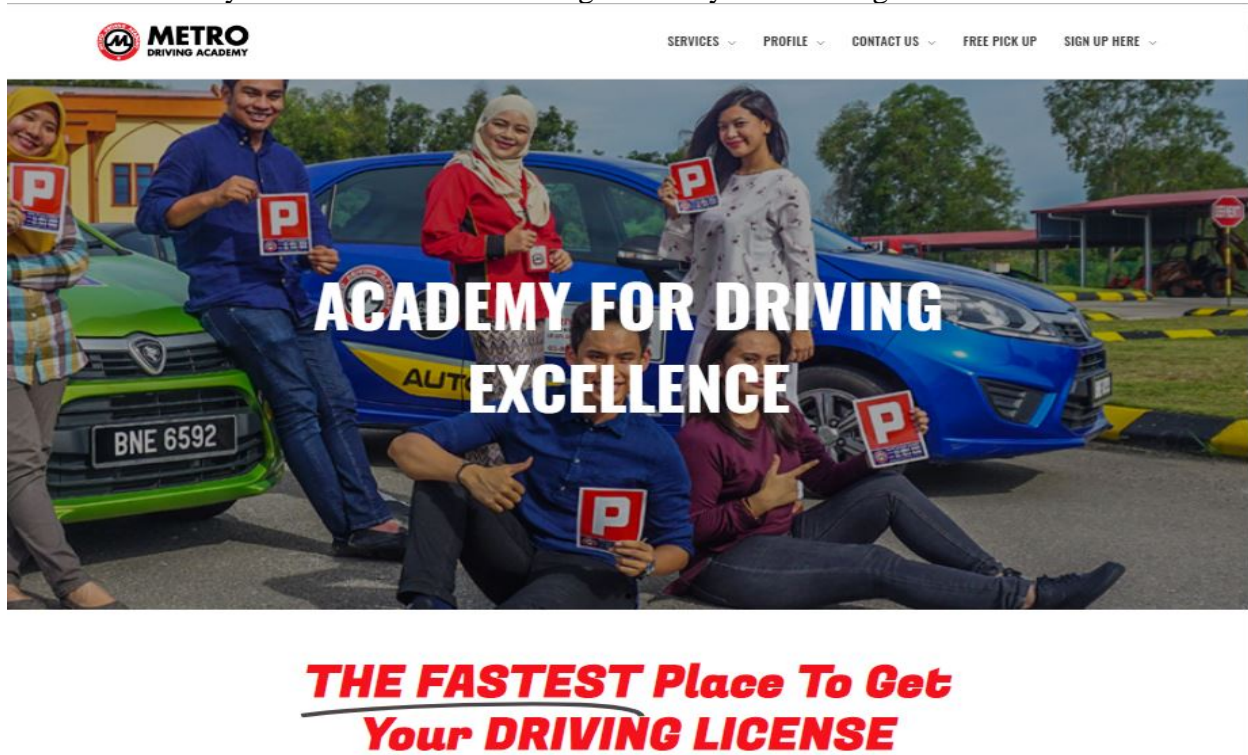


Figure 1-Metro Driving Academy

Their online system also like normal online system that used by other driving school. They were using five menus. The first menu is for their service. Here they listed all of their service like driving license program, advance training program, driving refresher course, road safety education program, special service and consultancy service. Next menu is for their general information and facilities information. The next menu is information about their location. They list all of their frequently asked question and branch here, all of it located around kuala lumpur, Malaysia. Beside of this menu is their map location and special package they provide.

This online system that using by Metro Driving Academy. also, not too much different than SKEM Driving Academy. online system. The different only their website can used by potential student to register if they interested to join their driving license program. This potential student just needs to fill in their information like name, email, identity card number and phone number. Then they can choose to register, pay at counter or enquiry. (ISHAK, JUNE, 2012)

2.1.3.2 Api-Api Driving Center

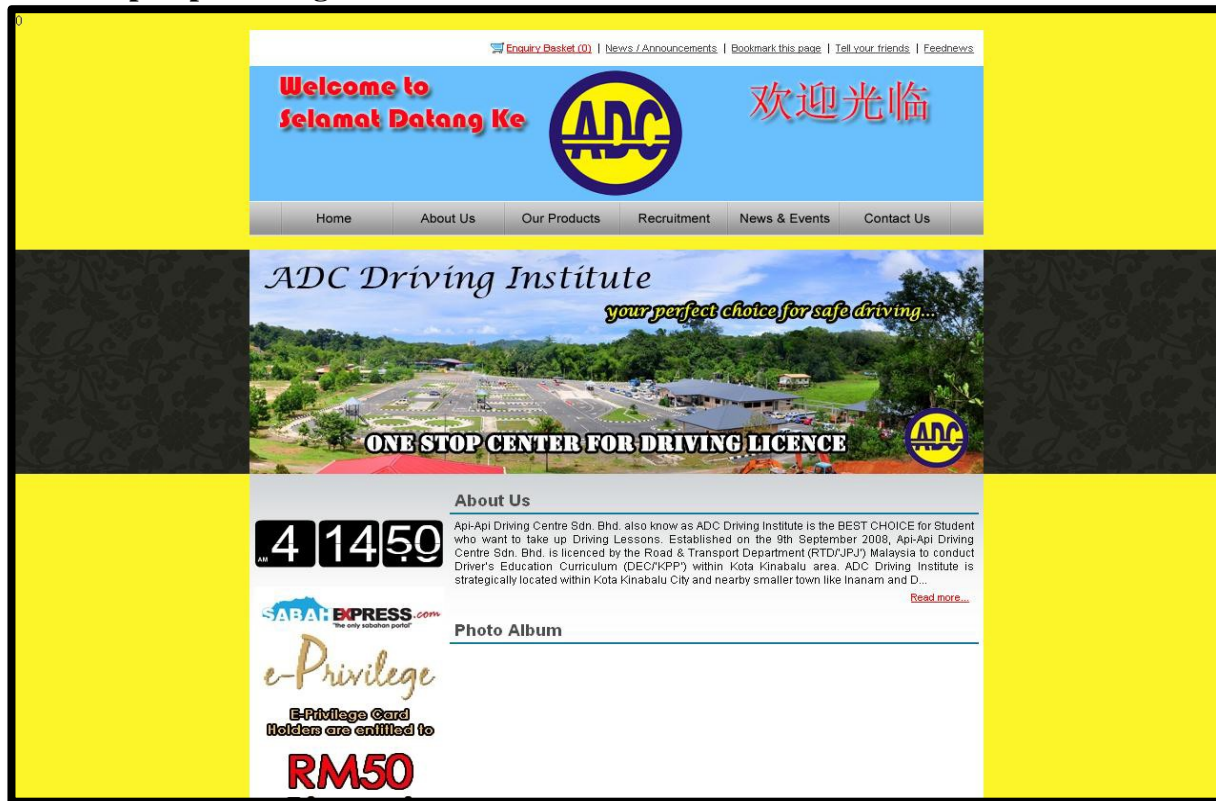


Figure 2-Api-Api Driving Center

Second online system for driving school reviewed is Api-Api Driving Centre Sdn. Bhd. This driving school before had only six menus even if now changed to three. Refer to figure 3 for detail view. First menu is for homepage. Here they show briefly information about their driving school, show some pictures about activities at their driving school and news. There is no login function for students or instructor. Next is menu where they stated information about their driving school with more details. After that is menu where they listed all types of license that student can register. For registration, the student needs to go directly to the driving school, not like Metro Driving Academy where anyone that interested to join just fill in the online form. Next is recruitment menu. Here is information about job vacancy of this driving school. Again, anyone interested to get job ad instructor at this driving school, need go directly to the driving school. Beside recruitment menu, it is news and event menu. Here they listed all current news and event about this driving school. The last is menu for their information details. This online system that used by Api-Api Driving Center also like others online system reviewed before this. The main purpose is just to give information about their driving school to potential students. There are nothing unique about this online system. (ISHAK, JUNE, 2012)

2.2 DISCUSSION

As mention earlier, there are two examples of driving school online system. First is Metro Driving Academy and Api-Api Driving Center. All of this online system used to give detail information about their driving school. It is considered as informative online driving school system to public. The system provides information about driving practical, laws and policies, also process to gain the driving license and also the current issues on driving matter. This website is very informative but the problem is there is no communication between driving school instructor, staff and student.

Although all two of the online system look similar, but there are some of the online system have unique function integrated. For example, there SKEM Driving Academy, which they have function for instructor or staff to access email and memo. But it is used to registered staff or instructor, it is not accessible to anyone that are not registered. For the Metro Driving academy, they do have the online form for the potential students to register to the system if they interested to be a student. But for the Api-Api Driving Center, there is nothing unique.

Nowadays, most online system should be complete with functions. So, it is convenient for the user of the system. The best online system should allow user to access to the system anywhere without to install a specific software to a specific desktop computer. In my opinion, it is a good solution for Car Driving School Management System (CDSMS) to be built as an online system.

CHAPTER 3

3.1 METHODOLOGY

3.1.1 Software Development Model

With the system on our hand, Prototyping methodology chosen as the best or appropriate methodology for the development of this systems. In this chosen methodology, I will first collect or get the user requirements through the critical analysis as the analysis required for any system development methodology.

The designed system been developing will then be according to the requirements from the user.

My proposed system prototype will be developed based on the design of the system or may differ to the system design but with the same requirement and functionality. The prepared prototype will be submitted to the users in order for the testing to check system if there are any improvements or corrections which are need to be done or made. If there are corrections or any improvements or the new requirements have emerged for the system, the user will submit direct for the new development of the system. As a development i will then implement required changes and prepare another prototype which is also will be tested by the users. If the user requirements still not been met, all the process above is repeated (iteration).

If there are no new corrections to the prototype to be made, the prototype will be finalized and may be submitted for use to the users.

3.1.2 Reasons for Choosing Prototyping

- Prototyping always facilitates a quick capturing of system requirements; so, it will not take me a lot of time to correct all the user requirements
- Users will be given a chance or the opportunity to know and to work with part of the entire system while the system still under development (and user will be able to identify and take note of errors in advance).

- By Prototyping, I assured that my final system will be able to meet most of the user's requirements, and since all the errors and improvements are pointed out also corrected during the development through the repetition or iterative process of developing the prototypes.
- The cost of using prototype as the methodology of my system development will be relatively less, because some errors in this methodology are easily detected and corrected early before the full system is implemented compared to finding all those the errors after the final system is implemented in which it proves to be expensive.

As the users will be involved in every step or from initial development and spend a lot of time with the system during the system development (through the most time use of prototypes), they will easily take the ownership of the system as they will have better understanding of the system.

REFERENCES

<http://vocational4u.com/Default.aspx?code=SA107>

<https://metrodriving.com.my/en/about-us/>

<https://www.guru99.com/software-engineering-prototyping-model.html>