MYKAD DETECTOR FOR ALCOHOL VENDING MACHINE

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This Report Is Submitted In Partial Fulfilment Of Requirements For The Bachelor Degree of Electronic Engineering (Computer Engineering)

Fakulti Kejuruteraan Elektronik Dan Kejuruteraan Komputer
Universiti Teknikal Malaysia Melaka

June 2013

UNIVERSTI TEKNIKAL MALAYSIA MELAKA

FAKULTI KEJURUTERAAN ELEKTRONIK DAN KEJURUTERAAN KOMPUTER

BORANG PENGESAHAN STATUS LAPORAN

PROJEK SARJANA MUDA II

Tajuk Projek	:	MYKAD DETECTOR FOR ALCOHOL VENDING MACHINE
Sesi Pengajian	:	2012/2013

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Specially dedicate to my beloved parent and also to my siblings and friends who give encouragement and support for me to complete this thesis. For my supervisor Cik Siti Aisah Binti Mat Junos @ Yunus who gave me lot of guidance and advices throughout this project until successfully. Thank you very much to all of you.

ACKNOWLEDGMENT

First of all grateful to ALLAH S.W.T the Almighty for helping me to get the idea and gave me the strength to overcome all the difficulties and allow me to solve the problems that arise when building this project to be completed successfully. In order to have this final year project, there are some people who really helped me a lot, from the beginning to the end of my PSM I and PSM II. Without help, their support and contribution to this project, I believe this thesis would not be completed properly.

Here also I would like to thank my supervisor, Miss Siti Aishah Binti Mat Junos @ Yunus because she has given me a lot of guidance and advice throughout the project, he gave me the awareness to continue to find solutions to my problems. With his kindness and tolerance inspire me. and further appreciation also goes to my friend and the other staff who helped me by answering my queries related to problems. Lastly I would like to thank to my parents for their contributions in terms of money and morale to support me.

ABSTRACT

This project is to build a water vending machine that also provides alcohol in the menu. This machine develop in a prototype to describe a machine that can track the status of religion and age of users, the detection process is implemented by a MyKad reader that will interact with visual basic 6.0 in the PC and also PIC ATmega 128 are in the machine. The existence of this machine will be able to restrict the involvement of the youth and Muslims with alcohol.

ABSTRAK

Projek ini ialah untuk membina sebuah mesin air layan diri yang juga menyediakan alkohol didalam menunya. Mesin ini dibina secara prototaip untuk menggambarkan sebuah mesin yang boleh mengesan status agama dan umur pengguna, proses pengesanan dilaksanakan oleh pembaca MyKad yang akan berinteraksi dengan Visual Basic 6.0 yang terapat dalam PC dan juga PIC ATmega 128 berada dalam mesin. Kewujudan mesin ini akan dapat menyekat penglibatan belia dan umat Islam dengan alkohol.

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CHAPTER I

INTRODUCTION

This chapter discusses about the project background consists of problem statement, and objectives of the project, project scope, the significance of the project and research methodology will be highlighted to become this project working clearly.

1.1 BACKGROUND

A MyKad detector for the alcohol vending machine is a highly effective machine that was invented to prevent the Muslim and teenagers under age from buying an alcohol. It can detect the religion status and age of customer that want to buy an alcohol. With this user friendly machine it easy to use by using MyKad reader and visual basic as interface to communicate with the user. User needs to insert MyKad into MyKad reader to proceed buying an alcohol. This machine can be widely used in grocery stores, convenience store, hotel and others suitable place. Besides that, this machine not only provide an alcohol, it also provides a halal beverage for Muslim and teenagers under age.

Figure 1.1 The current method of alcohol sale.

For this alcohol vending machine, the system uses Mykad reader to track the status of mykad chips before the user is eligible to continue purchasing alcohol.

Figure 1.2 Smart vending machine.

1.2 PROBLEM STATEMENT

Nowadays, governments have a problem in terms of the sale of alcohol to non-Muslims as well as the government also wants to prevent the Muslims and teenagers under age from buying an alcohol. Due to open sales method, Muslim could be involved without restriction in purchasing of alcohol and drinking alcohol. Refer to the prophet Muhammad s.a.w Hadith: -" (Riwayat Tarmizi and Ibnu Majah):

"Rasulullah S.A.W curse on alcohol, ten people : the one who drinks it, the one who pours it for others, the one who sells it, the one who buys it, the one who makes it, the one who it is made for, the one who carries it, the one whom it is carried to and the one who consumes the money from its sale."

As an employee in department stores or hotel workers, for example, they do not intend to collaborate with the sale and serving an alcohol but they are involved indirectly because their premises provide an open sale of alcohol.

1.3 OBJECTIVES

- To develop a vending machine that requires to scan a mykad user for buying alcohol.
- Tto develop a vending machine interface system by using visual basic that can detect the status of religion and age from the MyKad.

1.4 SCOPE OF PROJECT

Accordingly, the objectives of the present report are to review and summarize the contemporary literature and other documented evidence on to develop a vending machine system that requires to scan a MyKad user for buying an alcohol. This system can detect religion status and age of customer before allowed them to proceed buying an alcohol drink.

The first point of these machines created is to provide a vending machine that can detect religion status and age of customer by MyKad. We choose to detect MyKad because of all the citizens in Malaysia is using MyKad as identity card that save the information data of citizens. And then we are using a visual basic 6.0 as an interface between the user and the machine to make easier for users to use, it is because visual basic have the multifunction to be added and can communicate with the MyKad reader SDK.

1.4.1 Target User

The target user is the general public user, convenience stores, grocery stores, hotel and other suitable place.

1.4.2 Specific Platform

This vending machine system is using a visual basic as a platform to create an interface.

1.5 PROJECT SIGNIFICANT

To prevent open sales of alcoholic in Malaysia where are Malaysia as the number 10 Users Liquor World's Largest. There are no restrictions in the alcohol sale will cause teenagers under age and Muslim freely to buy alcohol almost caused crime and road accidents increased. This machine can be commercialized because never been invented yet in Malaysia and also can solve the problem such as found in the Utusan article title “Di mana penyelesaian isu arak?” dated June 14, 2011.

CHAPTER II

LITERATURE REVIEW

This chapter contains the literature review of the study relates to the scope of the study. It covers the definition of work process, work measurement and especially focusing on the study how to detect the religion status and age. Sources of information were obtained from articles, journals, and some books related to the study. Each source was selected based on the similarity with the scope of the study. At the end of this chapter, the elements will be narrowed down to the assessment method used for the study. From the scope of this project, MyKad reader SDK, and visual basic 6.0 is used as the method to detect the religion status and age, to build a vending machine prototype and build an interface. And then the literature found based on this scope is the reviewed.

2.1 MYKAD READER

The contactless MIFARE, 1 S50 smart card IC has been specially tailored to meet the requirements of a payment card which can be used for ticketing systems in public transport and comparable applications. MIFARE, 1 S50 IC is a true multi-application smart card IC with the functionality of a processor realized with hardwired logic. Special emphasis has been placed on user convenience, speed, reliability, security against fraud and cost effectiveness.

2.1.1 Packages Include

- 1 x Cybermouse - PC/SC contact smart card reader/writer (USB interface)
- DLL, Active-X version (. NET environment) and PHP (Internet environment)
- Demo programs and its source codes are included, very user friendly, no smart card knowledge needed.
- This SDK is royalty free, no registration needed
- It also comes with a standard data capturing application to capture all the MyKAD data and store them in database format, including photos. This data capture application and its source codes

2.1.2 Information Reads From Mykad Reader

- Name, Gender, D.O.B., Old and New IC#
- Full Address (include POSTCODE)
- Birth Place
- Race and Religion
- Photo

Figure 2.1 Mykad Reader SDK

2.1.3 User Convenience And Speed

A transaction between the card (card IC) and the reader defined by the system Integrator or the service provider takes place when the card holder approximates the card to the reader. The permissible distance between antenna (target) and card is up to 100 mm free air. On the one hand, this enables users to carry out the transaction fast and conveniently. On the other, card holders decide in a distinct action, whether they want a transaction to happen or not. Philips has developed a high speed RF communication interface with a 106 baud data rate for MIFARE®. Due to this high speed a complete ticketing transaction can be handled in less than 0.1 seconds. Thus, the MIFARE, card user needs not to stop at the reader target (antenna) leading to a high throughput at the gates and reduced boarding times onto busses. Additional user comfort is added, since MIFARE, cards typically have the size of a credit card and do not have to be taken out of the wallet during the transaction, even if there are coins in the wallet.