UMP VEHICLE ENTRY SYSTEM USING QR CODE

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I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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ABSTRAK

Dalam kehidupan harian di Universiti Malaysia Pahang ini, keselamatan dan kesejahteraan adalah di utamakan samada dari kalangan pelajar mahupun dari kalangan pegawai Universiti. Kebelakangan ini terdapat masalah kecurian kenderaan seperti kes kecurian motorsikal dan juga kereta. Untuk memastikan keselamatan kenderaan didalam Universiti ini terkawal, pihak Bahagian Keselamat Universiti memerlukan sebuah sistem untuk merekodkan maklumat pelajar dan maklumat kenderaan yang mereka gunapakai di dalam Universiti Malaysia Pahang. Oleh yang demikain, sistem keluar masuk Universiti dibangunkan bagi menapis dan menyimpan data semua kenderaan yang berada didalam Universiti. Objektif projek ini adalah untuk bagi mengimbas kenderaan yang berada didalam universiti melalui imbasan kod QR ketika masuk dan keluar dari universiti, penguna hanya perlu mengimbas kod QR yang dipaparkan pada skrin di bahagian pos pengawal. Aplikasi ini dijangka dapat membantu pihak Bahagian Keselamatan universiti dalam mengesan jika belakunya kecurian. Metodologi berulang dipilih bagi perlaksanaan projek ini, terdapat enam peringgkat didalam metodologi ini iaitu, peringgkat perancangan, analisis keperluan, rekabentuk, perlaksanaan, ujian, dan juga penyebaran. Setelah selesai kesemua peringgkat, satu ujian kebolehgunaan akan dijalan kan untuk mendapat riaksi pengguna aplikasi ini supaya boleh berlakunya pembaikpulihan system. Proses ini dijalankan untuk memastikan objektif.

ABSTRACT

In daily life of the University Malaysia Pahang area, safety and well-being is the priority of both students and staff among University society. Lately there are vehicle theft problems like motorcycle theft and car theft. To ensure the safety of vehicles in the University is controlled, the University Safety Division requires a system to record student information and vehicle information they use in University Malaysia Pahang. By referring to the problem, the University Vehicle Entry system is developed to filter and store data on all vehicles inside this area. The objective of this project is to develop an application to scan vehicles are located in the University via a QR code scan. When entering to the University users should only scan the QR code displayed on the screen at the guard post. The application is expected to assist the University's Security Division in detecting if thefts were happened. Repeated methodology was selected for the implementation of this project, there are six departments in this methodology, planning, design, requirements, design, implementation, testing, and dissemination. Upon completion of all appointments, a usability test will be conducted to get the app user's reactions so that the system can be restored. This process is carried out to ensure the objective of this system is achieved.

TABLE OF CONTENT

DECLARATION

TITLE PAGE

ACKNOWLEDGEMENTS **ii**

ABSTRAK **iii**

ABSTRACT **iv**

TABLE OF CONTENT **v**

LIST OF TABLES **ix**

LIST OF FIGURES **x**

CHAPTER 1 INTRODUCTION **1**

1.1 INTRODUCTION 1

1.2 Problem Statement 2

1.3 Objective 2

1.4 Scope 3

1.5 Summary 3

CHAPTER 2 LITERITURE REVIEW **4**

2.1 Overview of QR Code 5

2.1.1 Research of QR Code 5

2.1.2 Advantage of using the QR Code 7

2.1.3 Disadvantage of using the QR Code 8

2.2 Overview of existing system 9

2.2.1 Existing system 1: M-Ticketing System using QR Codes for Mumbai Local 10

2.2.2 Existing system 2: Evaluation and implementation of QR Code Identity Tag system for Healthcare in Turkey 11

2.2.3 Existing system 3: QR Code for Attendance Tracking 12

2.2.4 Comparison between three existing system 13

2.2.5 Evaluation Interface base on 10 Heuristic by Jacob Nielson 16

2.3 Summary 20

CHAPTER 3 METHODOLOGY 21

3.1 Introduction 21

3.2 Software Development Plan 21

3.2.1 Method Specification 22

3.3 PLANNING 23

3.4 ANALYSIS 24

3.5 DESIGN 24

3.5.1 Context Diagram 26

3.5.2 Data flow diagram (DFD) 27

3.5.3 Use case diagram 28

3.5.4 Interface Design 29

3.5.5 Flow chart diagram 33

3.5.6 ERD (Entity-Relation Diagram) diagram 35

3.5.7 Dialog Diagram 36

3.6 IMPLEMENTATION 37

3.6.1 Software and Hardware Requirement. 37

3.6.2 Software Specification 38

3.6.3 Hardware Specification 39

3.7 TESTING 39

CHAPTER 4 IMPLEMENTATION AND TESTING **40**

4.1 INTRODUCTION 40

4.2 IMPLEMENTATION REQUIREMENTS 40

4.2.1 Hardware implementation 41

4.2.2 Software Implementation 42

4.3 DEVELOPMENT 43

4.3.1 Main page 43

4.3.2 Login page 45

4.3.3 Update Admin profile 47

4.3.4 View user in directory 48

4.3.5 Add user into database 49

4.3.6 Generating QR code 50

4.3.7 Print Result on Google sheet 51

4.3.8 Login page on android studio 53

4.3.9 Forget Password page 56

4.3.10 Camera For scanning QR Code 58

4.4 TESTING AND RESULT 61

4.4.1 User Acceptance Test 62

CHAPTER 5 CONCLUSION **71**

5.1 INTRODUCTION 71

5.2 RESEARCH CONSTRAINTS 71

5.3 FUTURE WORK 72

REFERENCES **73**

APPENDIX A **74**

Gantt chart 74

APPENDIX B **75**

User Acceptance Test 75

LIST OF TABLES

Table 2.1	Comparison with Existing System	13
Table 2.2	Comparison design by Jacob Nielson principle	17
Table 3.1	Vehicle Entry System description on software	38
Table 3.2	Vehicle Entry System description on hardware	39
Table 5.1	User Acceptance Test for UMP VES Using QR Code	62

LIST OF FIGURES

Figure 2.1	M-Ticket Successful Scanning on QR Code	10
Figure 2.2	Application Healthcare system	11
Figure 2.3	QR Code attandance system	12
Figure 3.1	Waterfall model structure	22
Figure 3.2	Vehicle Entry System logical Design	25
Figure 3.3	Context diagram structure for Vehicle Entry System	26
Figure 3.4	UMP Vehicle Entry System (VES) data flow diagram	287
Figure 3.5	Vehicle Entry System use case diagram for database	298
Figure 3.6	Vehicle Entry System login page for User (Android) and Admin on (PHP)	29
Figure 3.7	Vehicle Entry System community/home page interface design	310
Figure 3.8	Vehicle Entry System QR Code scanner for user interface design and QR code generator for Admin interface design	321
Figure 3.9	Vehicle Entry System Admin view result and print report	332
Figure 3.10	Vehicle Entry System flowchart diagram for Admin	353
Figure 3.11	VES flowchart diagram for UMP User Community	34
Figure 3.12	Vehicle Entry System ERD Diagram for database	35
Figure 3.13	Vehicle Entry System Dialog Diagram	36
Figure 4.1	PC and smart phone with complete install the software needs.	41

Figure 4.2	Main Page of the admin system	43
Figure 4.3	Coding php and cript for main Page of the admin system	44
Figure 4.4	login page for admin system	45
Figure 4.5	source code for login page on admin system	46
Figure 4.6	update profile on admin system	47
Figure 4.7	source code for update profile on admin system	47
Figure 4.8	view database user on admin system	48
Figure 4.9	source code for view database user on admin system	48
Figure 4.10	interface for adding new user on admin system	49
Figure 4.11	source code of adding new user on admin system	49
Figure 4.12	QR code generator on admin system	50
Figure 4.13	source code for QR code generator on admin system	50
Figure 4.14	Interface for click link to Google Sheet	51
Figure 4.15	Source code for link php to Google Sheet	52
Figure 4.16	Interface for user login page in mobile apps	53
Figure 4.17	source code for user login page in mobile apps	55
Figure 4.18	interface for forget password for user in mobile apps	56
Figure 4.19	source code for forget password in mobile apps	57
Figure 4.20	scanned camera on QR code in mobile apps	58
Figure 4.21	source code scanned camera on QR code in mobile apps	61
Figure 4.22	User acceptance test question 1	65
Figure 4.23	User acceptance test question 2	66
Figure 4.24	User acceptance test question 3	66
Figure 4.25	User acceptance test question 4	67
Figure 4.26	User acceptance test question 5	68
Figure 4.27	User acceptance test question 6	68
Figure 4.28	User acceptance test question 7	69
Figure 4.29	User acceptance test question 8	69

Figure 4.30 User acceptance test question 9 70
Figure 4.31 User acceptance test question 10 70

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

In generally, QR code is stand for quick respond code which is 2-D matrix code that designed to keep two point under consideration, there is some cell on the code and it is arranged in particular pattern that can be recognized and deciphered when the symbol is read by the devices. In contrast it is quite different with bar code which is the code is not encode their information as function of parallel lines like barcode compare to 1-D matrix code, it has to be decode at high speed by using device like phone and computer.

By providing high data storage capacity and fast scanning it also provide error-detection, by having this feature the QR code can read damage code as it is still possible to read by the system. The QR code applied in different application stream relate to market, security and education. Nowadays this kind of technology is extremely popular and growth rapidly among the people because they have getting the attention and awareness about the technology of world wide.

QR code technology will be used in implementing project of entry system for ump vehicle, this is because it is very useful for security management to recognize either the vehicle entered are registered or not with UMP and can help University Safety Division to detect thief activities in UMP.

1.2 Problem Statement

There is a lot of car that enter to UMP every day, most of them are student and staff of UMP, but some of them are not. Depending on the case, security guards cannot identify either the vehicle has registered with UMP or not. So everybody from outside can get into UMP without having to be checked by the security.

Other than that, UMP security at main gate is not up to date and not performs well, everyday there are a lot of people entering into UMP and make security division cannot identify them whether they are UMP students or staffs. In this case, people who are not related with UMP can enter freely without any administration permission. This is dangerous as we cannot differentiate which vehicle is the outsider.

Another problem is some people have made duplicate their stickers so that they can have full access to UMP without the security bothering them. They can enter UMP any time without registering with the system in UMP. This is hard to detect that duplicated sticker and sometimes might confuse the security in terms of not checking with their database.

Therefore, the developer implement this project to make sure this project can help much UMP security division to ease vehicle entries every day and can make sure the problem to be solved immediately to prevent any unwanted problems from arising and hence making life in UMP not safe.

1.3 Objective

a. To study the advantages of using QR code for entry system at UMP

b. To develop and design a prototype for UMP entry system using QR Code for all community of UMP in web base and android version.

c. To test the functionality of the application

1.4 Scope

a. The system support services that allow user to scan the QR code that provide by administration at the main gate of UMP.

b. The systems is developed in web base and android version to make user and admin easy to use the system

c. The system is for UMP community only

1.5 Summary

Chapter 1 will discuss about introduction of the entry system using QR code in UMP. This chapter will explain the problem with the current application QR Code using smart phone. The research objectives is to filter and trace car inside UMP area. The scope of the proposed system is the user around UMP

Chapter 2 is Literature review, in this content will describes briefly the literature review of the existing project that have done by another company. This chapter will also analyse the technic that used in the technology that related to the system.

.Chapter 3 will discuss about the methodology used in the design of the system. This chapter will discuss about hardware and software that will be used in the design phase. Timeline of the project can refer to the Gantt chart

Chapter 4 will discuss about the implementation process of the application QR Codes, the testing of the project also the result discussion about the proposed system.

Chapter 5 discuss about the conclusion of the research where constraint of the project and the project and the future work will be discussed there.

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