ONLINEBOOKS MANAGEMENT SYSTEM

LEE CARMENT

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

© Universiti Teknikal Malaysia Melaka

BORANG PENGESAHAN STATUS TESIS

JUDUL: ONLINEBOOKS MANAGEMENT SYSTEM

SESI PENGAJIAN: 2014

SAYA LEE CARMENT

(HURUF BESAR)

Mengakui membernarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis dan projek adalah hakmilik Universiti Teknikal Malaysia Melaka.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi perngajian tinggi.
4. ** Sila tandakan(/)

_____ SULIT	(Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)
_____ TERHAD	(Mengandungi maklumat TERHAD yang telah diaturkan oleh organisasi/badan di mana penyelidikan dijalankan)
_____ TIDAK TERHAD	

_____	_____
(TANDATANGAN PENULIS)	(TANDATANGAN PENYELIA)
Alamat tetap: 4 Lorong Machang Bubok 6 ,	Sir Yahya Bin Ibrahim
Taman Machang Bubok ,	
14020 Bukit Mertajam .	
Tarikh_____	Tarikh:_____

CATATAN: * Tesis dimaksudkan sebagai Laporan Akhir Projeck Sarjana Muda (PSM)

** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa

© Universiti Teknikal Malaysia Melaka

ONLINEBOOKS MANAGEMENT SYSTEM

LEE CARMENT

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Database Management)

FACULTY OF INFORMATION AND COMMUNICATION TEKNOLOGY
UNIVERITY TEKNIKAL MALAYSIA MELAKA
2014

© Universiti Teknikal Malaysia Melaka

DECLARATION

I hereby declare that this project report entitled

ONLINEBOOKS MANAGEMENT SYSTEM

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : _____ Date: _____

(LEE CARMENT)

SUPERVISOR : _____ Date: _____

(SIR YAHYA BIN IBRAHIM)

© Universiti Teknikal Malaysia Melaka

DEDICATION

To my beloved parents and family, thank you for providing a variety of support in terms of financial moral.

To my supervisor, Sir Yahya Bin Ibrahim, thank you for guidance and encouragement during project implementation.

To my evaluator, Dr. Norashikin Binti Ahmad, thank you for providing advice during presentation and evaluating my Final Year Project.

To my friends who always give me support and together we can pursue a broad knowledge.

© Universiti Teknikal Malaysia Melaka

ACKNOWLEDGEMENTS

This Final Year Project is the end of my journey in pursuing my degree in Universiti Teknikal Malaysia Melaka. This project has been completed on time with the support of numerous people including my supervisor, my friends and my family. At the end of my Final Year Project, I would like to take this opportunity to say thank you for all those people who are willing to lend their hands for me. Without them, this Final Year Project would not be finished on time.

First and foremost, I would like to express the deepest gratitude to my supervisor, Sir Yahya Bin Ibrahim, who has supported and guidance me throughout the progress of Final Year Project with her patient and knowledge. Without him, this report and product would not have been completed on time.

Next, I would like to thanks my parents who have always supported and encouraged me when I encountered bottleneck during the progress of Final Year Project. Without their support, I would not have the motivation to continue it.

Last but not least, I would like to thanks my friends as well. Thanks you for listening, offering me advice and supporting me throughout this entire semester. Thanks again for not stingy on sharing their knowledge and lending their hands for me.

© Universiti Teknikal Malaysia Melaka

ABSTRACT

OnlineBooks Management System (OBMS) is a system that provides service for all kind of booking service. It is a unification of multiple booking systems into one huge system. This system is believed to bring several advantages to the consumer. For those companies who are willing to subscribe this system for their business, it will help them to save money and also manpower. In fact, this system automatically will help to manage the booking system in a more structured way without the help of staff. For customers who are using this system to book, it will help to save time, energy and money. This system is amazingly easy to use anytime and anywhere they want. “Book all in one” as tagline shows that this system is capable to handle any type of booking service.

© Universiti Teknikal Malaysia Melaka

ABSTRAK

Sistem Pengurusan OnlineBooks (OBMS) merupakan sistem yang menyediakan perkhidmatan untuk semua jenis perkhidmatan tempahan. Ia adalah penggabungan pelbagai sistem tempahan kepada satu sistem yang besar. Sistem ini dipercayai bahawa akan membawa banyak kelebihan kepada pengguna. Bagi syarikat-syarikat yang bersedia untuk mengunakan sistem ini untuk perniagaan mereka akan membantu mereka untuk menjimatkan wang dan juga tenaga kerja. Malah, sistem ini akan secara automatik menguruskan sistem tempahan dengan cara yang lebih tersusun. Kepada pelanggan yang menggunakan sistem ini untuk menempah, ia akan membantu mereka untuk menjimatkan masa, tenaga dan wang. Sistem ini adalah mudah untuk digunakan tanpa mengira masa dan tempat. “Book all in one” sebagai slogan menunjukkan bahawa sistem ini mampu untuk mengendalikan apa-apa jenis perkhidmatan tempahan.

© Universiti Teknikal Malaysia Melaka

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	DECLARATION	**ii**
	DEDICATION	**iii**
	ACKNOWLEDGEMENT	**iv**
	ABSTRACT	**v**
	ABSTRAK	**vi**
	TABLE OF CONTENTS	**vii**
	LIST OF TABLES	**xii**
	LIST OF FIGURES	**xiv**
	LIST OF ABBREVIATIONS	**xvi**
	LIST OF APPENDIXES	**xvii**
CHAPTER I	**INTRODUCTION**	
	1.1 Project Background	1
	1.2 Problem Statement	2
	1.3 Objectives	3
	1.4 Scope	3
	1.5 Project Significance	4

© Universiti Teknikal Malaysia Melaka

1.6 Expected Output 4
1.7 Conclusion 5

CHAPTER II LITERARTURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction 6
2.2 Facts and Findings 7
2.2.1 Domain 7
2.2.2 Existing System 7
2.2.2.1 Case Study 1: GROUPON 8
2.2.3 Technique 11
2.3 Project Methodology 11
2.4 Project Requirements 13
2.4.1 Software Requirement 13
2.4.2 Hardware Requirement 14
2.5 Project Schedule and Milestones 14
2.6 Conclusion 14

CHAPTER III ANALYSIS

3.1 Introduction 16
3.2 Project Analysis 16
3.3 Requirement Analysis 17
3.3.1 Data Requirement 17
3.3.2 Functional Requirement 19
3.3.2.1 Mandatory Requirement 19
3.3.2.2 Value-added Requirement 20
3.3.2.3 OBMS Functional Requirement 20
3.3.2.4 Context Diagram and 22

© Universiti Teknikal Malaysia Melaka

		Data Flow Diagram	
	3.3.3	Non-functional Requirement	25
	3.3.4	Other Requirement	26
		3.3.4.1 Software Requirement Justification	26
		3.3.4.2 Hardware Requirement Justification	27
	3.4	Conclusion	28
CHAPTER IV	**DESIGN**		
	4.1	Introduction	29
	4.2	High-Level Design	29
	4.2.1	System Architecture	29
	4.2.2	User Interface Design	30
		4.2.2.1 Navigation Design	30
		4.2.2.2 Input Design	33
		4.2.2.3 Output Design	36
	4.2.3	Conceptual and Logical Database Design	38
		4.2.3.1 Conceptual Database Design	38
		4.2.3.2 Logical Database Design	40
		4.2.3.3 DBMS Selection	43
	4.3	System Architecture	43
	4.3.1	Physical Database Design (schema level – DDL/DCL)	43
	4.4	Conclusion	46
CHAPTER V	**IMPLEMENTATION**		
	5.1	Introduction	48

© Universiti Teknikal Malaysia Melaka

	5.2	Software Development Environment Setup	48
		5.2.1 Software and Hardware for Environment Setup	49
	5.3	Database Implementation	50
	5.4	Software Configuration Management	54
		5.4.1 Configuration Environment Setup	54
		5.4.2 Version Control Procedure	54
	5.5	Implementation Status	55
	5.6	Conclusion	56
CHAPTER VI	**TESTING**		
	6.1	Introduction	57
	6.2	Test Plan	57
		6.2.1 Test Organization	58
		6.2.2 Test Environment	58
		6.2.3 Test Schedule	59
	6.3	Test Strategy	61
		6.3.1 Classes of Tests	62
	6.4	Test Design	63
		6.4.1 Test Description	63
		6.4.2 Test Data	73
	6.5	Test Result and Analysis	78
	6.6	Conclusion	81
CHAPTER VII	**PROJECT CONCLUSION**		
	7.1	Observation on Weakness and Strengths	82
		7.1.1 Strengths	82
		7.1.2 Weaknesses	83
	7.2	Propositions for Improvement	83
	7.3	Contribution	83

© Universiti Teknikal Malaysia Melaka

7.4 Conclusion 84

REFERENCES 85

APPENDIX 86

© Universiti Teknikal Malaysia Melaka

LIST OF TABLES

TABLE	TITLE	PAGE
3.1	Components Details	17
3.2	Mandatory Requirements	19
3.3	Functional Requirement	20
3.4	Software Requirement Justification	27
3.5	Hardware Requirement Justification	28
4.1	Input Design for Customer Registration	33
4.2	Input Design for Login	34
4.3	Input Design for Update Profile Company	35
4.4	Input Design for Add New Item	36
4.5	Logical Database Design	40
4.6	Create Table	44
5.1	Software and Hardware for Environment Setup	49
5.2	Procedure and Control Source Code Version of OBMS	54
5.3	Implementation Status	55
6.1	Responsibilities for Tester in Testing Plan	58
6.2	User Personal Computer Configuration	59

© Universiti Teknikal Malaysia Melaka

6.3	**Test Schedule**	**59**
6.4	**Test Design for Company Part of System**	**63**
6.5	**Test Design for Customer Part of System**	**67**
6.6	**Test Design for Administrator Part of System**	**71**
6.7	**Test Design for Integration Testing**	**73**
6.8	**Test Data for Company Registration**	**73**
6.9	**Test Data for Customer Registration**	**74**
6.10	**Test Data for Company System Login**	**75**
6.11	**Test Data for Customer System Login**	**75**
6.12	**Test Data for Company Add Item**	**76**
6.13	**Test Data for Company Report**	**76**
6.14	**Test Data for Customer Reservation**	**77**
6.15	**Test Data for Customer Payment**	**78**
6.16	**Test Result for Unit Testing**	**78**
6.17	**Test Result for Integration Testing**	**81**

© Universiti Teknikal Malaysia Melaka

LIST OF FIGURES

DIAGRAM	TITLE	PAGE
2.1	Interface of GROUPON	8
2.2	Interface of Registration	9
2.3	Interface after login	10
2.4	Waterfall Model based on Development Life Cycle (DBLC)	11
3.1	Context Diagram of To-be System (OBMS)	23
3.2	Data Flow Diagram of To-be System (OBMS) - Company Part	24
3.3	Data Flow Diagram of To-be System (OBMS) - Customer Part	25
4.1	System Architecture	30
4.2	Navigation Design for OBMS	32
4.3	Interface for Customer Registration	33
4.4	Interface for Login	34
4.5	Interface for Update Profile Company	34
4.6	Interface for Add New Item	35
4.7	Daily Report Interface	36

© Universiti Teknikal Malaysia Melaka

4.8	**Monthly Report Interface**	**37**
4.9	**Yearly Report Interface**	**37**
4.10	**Start End Date Report Interface**	**38**
4.11	**Entity Relationship Diagram (ERD)**	**39**
5.1	**Web-based and Client-Server Architecture**	**49**
5.2	**Login as USER-PC**	**50**
5.3	**Interface create database**	**51**
5.4	**SELECT Query**	**52**
5.5	**Result Before Update**	**52**
5.6	**UPDATE Query**	**52**
5.7	**Result After Updated**	**52**
5.8	**JOIN Query**	**53**
5.9	**AGGREGATE FUNCTION Query**	**53**
6.1	**Test Plan**	**57**

© Universiti Teknikal Malaysia Melaka

LIST OF ABBREVIATIONS

OBMS	**-**	**OnlineBooks Management System**
SQL	**-**	**Structured Query Language**
DBLC	**-**	**Development Life Cycle**
ERD	**-**	**Entity Relationship Diagram**
DFD	**-**	**Data Flow Diagram**
PK	**-**	**Primary Key**
FK	**-**	**Foreign Key**
DBMS	**-**	**Database Management System**
DDL	**-**	**Data Definition Language**

© Universiti Teknikal Malaysia Melaka

LIST OF APPENDIXES

APPENDIX	TITLE	PAGE
APPENDIX A	GANTT CHART	87
APPENDIX B	TRIGGER AND PROCEDURE	92
APPENDIX C	OBMS USER MANUAL	111

© Universiti Teknikal Malaysia Melaka

CHAPTER I

INTRODUCTION

1.1 Project Background

OnlineBooks Management System(OBMS) is a booking system which helps the traveler and tourism industry support reservation through the Internet. It allow users to make any reservation such as a reservation in restaurant, hair-saloon, book flights or even book hotels through online. This is a much needed application for the aviation industry as it has become one of the fastest growing sales channels.

For now, people likely choose computerized system more than manual system. Computerized system can make any production planning or manufacturing company to manage their production planning efficiency. Moreover, the usage of computerized system has increased the efficiency of executing daily task or routine and helps in minimizing the error.

By introducing this OBMS, it simply increase the efficiency in providing quick and accurate confirmation to the user. Other than that, there is no more waiting time.This system can also eliminate the problems of time-difference and minimize the human errors by giving wrong information to the user.

© Universiti Teknikal Malaysia Melaka

With the existence of this system, users can save time, so that users only need to make a reservation online. Users only need to fill out the following form to make a reservation by selecting the desired category. Payment method used is by cutting the existing credit. The system will be called “OnlineBooks Management System”.

1.2 Problem Statement

Before this, when someone needs to book something they need to go some procedure and protocol just to make sure there are no mistakes and error. End users especially the one who use reservation system must need their own reservation at certain stores. Users need to oblige the type of reservation for the store that they want to use the reservation system.

Like any other deal made need some confirmation, reservations also are not an exception. For those who make one or more reservation need to make some confirmation. All the confirmation may be early in the morning, at noon or late night. But the real issue is most of the reservations calls made by customers during office hours missed.

Lastly, most of reservation system made by all type of category is not integrate with other companies. This make user especially customer encounter some difficulties when trying to reserve one or more type of different services or items.

© Universiti Teknikal Malaysia Melaka

1.3 Objective

i. To saves valuable time and cut costs by booking the reservation through online. By making all the operation computerized and online, company that register to our system can easily maintain and update the data anytime and anywhere.

ii. To provide the ability to book anytime, from anywhere with internet access. When all the data was classified to different category and depend on the company are recorded systematically, it will provide easy searching for the user.

iii. To enhance and upgrade the existing system by increasing its efficiency and effectiveness. The system improves the working methods by replacing the existing manual system with the computer-based system.

1.4 Project Scope

This project is primarily designed for company owners that want to sell their product through online and customer that want to use online to make reservation. There are 3 types of users that will benefits this project.

First user is administrator and the scope of in this system is can block and unblock the users that using the system and view the history of customers booking date and time. In this system administrator also can view the ranking between all the companies by day, month and year that already registered to the system and the ranking of item that belong to the company selected.

Second user is the company owners. The main scope of the company owner is to selling their product or services through this system. After company owner published their product or services then customer can make the reservations by using our system.

© Universiti Teknikal Malaysia Melaka

After that, company owner can view the report by using this system. From the report, company owner can know how much they earn using this system by setting the duration of date and view the ranking product or services selling. Company owner also can print out the report for easy to make business decision.

Last user is the customer. Main scope for the customer is to make the reservations from the system. Customer books the product or services by choosing category, company and area they needs. Customer also can make the payment from this system.

1.5 Project Significance

The targeted users (company owner and customer) will save valuable time and cut costs by booking the reservation through online. With the ability to book anytime, from anywhere with internet access, customer can make reservation and company can easily maintain and update the data. System will provide easy searching for the user because all the data (product or services) was classified to different category and depend on the company.

1.6 Expected Output

The expected output of this project is in Web-based with the name OBMS by using Microsoft Visual Studio 2013 with the database Microsoft SQL Server and the language that use to create this system is Asp.net with C#.

When user using this system, they have to register to the system. After user registered, for company, they need to publish their product or services for customer to make reservation to the system; for customer, they need to choose the item they want and make reservation. Lastly, company will earn the profit by selling their product through this system and customer can apply booking item needs that belongs to the company selected through this system.

© Universiti Teknikal Malaysia Melaka

1.7 Conclusion

In a nutshell, this project aims to develop a system which names OBMS, which helps to solve the problem faces by company when company want to create a booking system and customer when they want to make reservation through online. This system will facilitate customer and be much useful for them as they can make reservation at anywhere and anytime. Besides that, this can help company reduce cost due to improve efficiency through a centralized database of booking system. Furthermore, with the report provided in the system will helps company to make better decision making. Therefore, this is a system and help users to solve the problem faced when make reservation.

For the next chapter is about literature review and project methodology. The literature review will discusses published information in a particular area that being applied on other business booking system. While the project methodology is the process that involved project-specific method, best practices, rules, guidelines, checklists and other features for building quality systems that are manageable and deliver value to the organization. Project schedule and milestones of this project will provide and explain in the next chapter in order to ensure the progress of this project is step by step and in time that planned.

© Universiti Teknikal Malaysia Melaka