HOPE CHILD CARE MANAGEMENT SYSTEM

SIM YEE YEE

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

© Universiti Teknikal Malaysia Melaka

BORANG PENGESAHAN STATUS TESIS

JUDUL: HOPE CHILD CARE MANAGEMENT SYSTEM

SESI PENGAJIAN: 2015

Saya SIM YEE YEE

mengaku membenarkan 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 pengajian 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 yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)
_____TIDAK TERHAD	

_____	_____
(TANDATANGAN PENULIS)	(TANDATANGAN PENYELIA)
Alamat tetap: P.O Box, 227, 90702 Sandakan, Sabah.	Nama Penyelia: Prof. Madya Norhaziah Bt Md Salleh
Tarikh: 12 Aug 2015	Tarikh:

CATATAN: * Tesis dimaksudkan sebagai Laporan Akhir Projek Sarjana Muda (PSM)
** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.

© Universiti Teknikal Malaysia Melaka

HOPE CHILD CARE MANAGEMENT SYSTEM

SIM YEE YEE

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
2015

© Universiti Teknikal Malaysia Melaka

DECLARATION

I hereby declare that this project report entitled

HOPE CHILD CARE MANAGEMENT SYSTEM

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

STUDENT : _____ Date: _____

(SIM YEE YEE)

SUPERVISOR : _____ Date: _____

(PROF. MADYA NORHAZIAH BT MD SALLEH)

© Universiti Teknikal Malaysia Melaka

DEDICATION

A special thanks to my supervisor, Assoc. Prof. Norhaziah Md. Salleh who has mentally and physically supported me to complete this project. Not forget to thank to all my friends who lend their hands to me whenever I face any problem in this project. Lastly, I wish to thank to my family that always supporting me all the time until I complete this project.

© Universiti Teknikal Malaysia Melaka

ACKNOWLEDGEMENTS

Firstly, I would like to express my acknowledgement to my helpful supervisor Assoc. Prof. Norhaziah Md. Salleh from the Faculty of Information and Communication Technology, Universiti Teknikal Malaysia Melaka (UTeM), for her excellent supervision and encouragement on me to complete this final year project.

Secondly, I would like to thank other lecturers who willing to spend their time to guide me in implementing the system. Their advices are very important in completing this project.

Lastly, I would like to thank my colleagues who have worked with me and provide guidance.

© Universiti Teknikal Malaysia Melaka

ABSTRACT

Hope Child Care Management System (HCCMS) is a web-based system which is used to replace the existing system that still records the information on paper. This system benefits to both parents and staff. The existence of HCCMS allows parents to keep track their children status in the center and they are allowed to reserve a meal for their children. For staff, they are allowed to manage all the information through this system instead of recording it on paper which might cause the data loss. Therefore, hopefully this system is able to help the staff to reduce human mistakes in the daily tasks.

© Universiti Teknikal Malaysia Melaka

ABSTRAK

Pengurusan Sistem Penjagaan Kanak-kanak Harapan (HCCMS) meruapakan sebuah sistem yang berasakan web dan digunakan untuk menggantikan sistem penjagaan kanak-kanak yang sedia ada yang masih merekodkan maklumat pada kertas. Sistem ini membawa banyak faedah kepada pengguna yang utama iaitu ibu-bapa dan kakitangan. Kewujudan HCCMS membenarkan ibu-bapa untuk memantau status anak-anak mereka di pusat itu dan mereka juga dibenarkan untuk menempah hidangan untuk anak-anak mereka. Untuk kakitangan, mereka dibenarkan untuk mengurus sebarang maklumat melalui sistem ini. Oleh itu, diharapkan sistem ini dapat membantu kakitangan untuk mengurangkan kesilapan dalam menjalankan tugas harian.

© Universiti Teknikal Malaysia Melaka

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	DECLARATION	**i**
	DEDICATION	**ii**
	ACKNOWLEDGEMENT	**iii**
	ABSTRACT	**iv**
	ABSTRAK	**v**
	TABLE OF CONTENTS	**vi**
	LIST OF TABLES	**ix**
	LIST OF FIGURES	**xi**
	LIST OF APPENDIXES	**xiii**
CHAPTER I	**INTRODUCTION**	
	1.1 Project Background	1
	1.2 Problem Statements	2
	1.3 Objectives	3
	1.4 Scope	3
	1.5 Project Significance	4
	1.6 Expected Output	5
	1.7 Conclusion	5
CHAPTER II	**PROJECT METHODOLOGY AND PLANNING**	

© Universiti Teknikal Malaysia Melaka

	2.1	Introduction	6
	2.2	Project Methodology	7
	2.3	Project Schedule and Milestones	9
	2.4	Conclusion	11
CHAPTER III	**ANALYSIS**		
	3.1	Introduction	12
	3.2	Problem Analysis	13
	3.3	The Proposed Improvements/Solutions	14
	3.4	Requirement Analysis of the to-be-system	15
		3.4.1 Functional Requirement	15
		3.4.2 Non-Functional Requirement	17
		3.4.3 Other Requirement	18
	3.5	Conclusion	20
CHAPTER IV	**DESIGN**		
	4.1	Introduction	22
	4.2	System Architecture Design	23
		4.2.1 Conceptual Design	25
		4.2.2 Logical Design	26
		4.2.3 Physical Design	38
	4.3	Graphical User Interface (GUI) Design	54
	4.4	Conclusion	57
CHAPTER V	**IMPLEMENTATION**		
	5.1	Introduction	58
	5.2	Software Development Environment Setup	59
	5.3	Database Implementation	72
	5.4	Conclusion	80

© Universiti Teknikal Malaysia Melaka

CHAPTER VI TESTING

6.1 Introduction 81
6.2 Test Plan 82
6.2.1 Test Organization 82
6.2.2 Test Environment 83
6.2.3 Test Schedule 84
6.3 Test Strategy 85
6.3.1 Classes of Tests 85
6.4 Test Design 86
6.4.1 Test Description 87
6.4.2 Test Data 94
6.5 Test Result and Analysis 95
6.6 Conclusion 97

CHAPTER VII PROJECT CONCLUSION

7.1 Introduction 98
7.2 Observation on Weakness and Strengths 98
7.3 Propositions for Improvement 100
7.4 Contribution 100
7.5 Conclusion 101

REFERENCES 102
APPENDIX 103

© Universiti Teknikal Malaysia Melaka

LIST OF TABLES

TABLE	TITLE	PAGE
2.1	**Description of methodology used**	7
3.1	**List of non-functional requirements**	18
3.2	**List of software used**	19
3.3	**List of hardware used**	20
3.4	**List of network requirements**	20
5.1	**Software and hardware requirements**	72
5.2	**Before insert trigger statement**	72
5.3	**Before insert or update trigger statement**	73
5.4	**After insert trigger statement**	73
5.5	**Insert procedure statement**	75
5.6	**Update procedure statement**	75
5.7	**Select procedure statement**	76
5.8	**The group by clause for the procedure statement**	77
5.9	**The order by clause for the procedure statement**	77
5.10	**Working directory and its purpose**	78
5.11	**Implementation status for each module**	79
6.1	**Roles and responsibilities of user invited in testing**	82
6.2	**Hardware and software requirements**	83
6.3	**HCCMS testing test schedule**	84
6.4	**Login test description**	87
6.5	**User registration test description**	88

© Universiti Teknikal Malaysia Melaka

6.6	**User update test description**	88
6.7	**Staff update package test description**	89
6.8	**Staff update meal test description**	89
6.9	**View package test description**	90
6.10	**View meal test description**	90
6.11	**Staff add meal test description**	91
6.12	**View bill test description**	92
6.13	**Staff add bill test description**	92
6.14	**View payment test description**	93
6.15	**Staff add payment test description**	93
6.16	**Report generate test description**	94
6.17	**Test result**	94

© Universiti Teknikal Malaysia Melaka

LIST OF FIGURES

FIGURES	TITLE	PAGE
2.1	**Waterfall Model Methodology**	7
3.1	**Process flow of choose package in current system**	13
3.2	**The flow of payment process in current system**	14
3.3	**Data Flow Diagram (Context Diagram)**	15
3.4	**Data Flow Diagram (Level 1)**	16
3.5	**Data Flow Diagram (Level 2)**	17
4.1	**Architecture View of HCCMS**	24
4.2	**Entity Relationship Diagram of HCCMS**	25
5.1	**Software Architecture of HCCMS**	71

© Universiti Teknikal Malaysia Melaka

LIST OF APPENDIXES

APPENDIX	TITLE	PAGE
APPENDIX 1	GANTT CHART	104
APPENDIX 2	USER MANUAL	106

© Universiti Teknikal Malaysia Melaka

CHAPTER I

INTRODUCTION

1.1 Introduction

Child Care Centre is established to take care of the children due to their parents need to involve themselves in work force. Therefore, child care centre act as an important role to parents and children as well. As observed from the existing system, most of them still running their daily tasks on paper such as recording information, it is not a systematic way to record information and in this 21st century, paper should not exist in recording activity, it is not efficient and systematic because paper might loss easily, moreover, record data manually might lead to human mistakes, it can cause staff get the wrong information.

© Universiti Teknikal Malaysia Melaka

A system is proposed to replace the current system and help the child care centre to have a better way in managing their data. Based on the current system, if parent need to know their child condition in the centre, they need to ask the authorized staff who take care their child. It is hard for parent to get the information if the in-charged staffs are not in the centre. Therefore, in the new system, parents are allowed to access to the system with the unique id and password, this enable them to get their child status information at anytime, anywhere. This status can be updated by all the staff. Besides, the system also provides a list of meal for parents to choose the meal for the child.

Since the current system still using paper to record all the information, thus, it might lead to occurrence of data loss. By using the proposed system, staff can store the information systematically and they can perform backup services provided in the system. Therefore, if the data loss occurs, they can recover back the data in a short time.

1.2 Problem statements

1. Data might not complete or store in a systematic way due to the current system running their daily tasks on paper.
2. Parents hard to get their children information if the staff that takes care of the children is not in the centre.
3. Staff is not able to get back the data if it is loss due to the current system lack of backup and recovery services.

© Universiti Teknikal Malaysia Melaka

1.3 Objectives

1. To provide a systematically system for the staff to manage the data in efficient way.

2. To allow parent access to the system to get their children information and choose the meal for their children.

3. To provide backup and recovery service so that data can be recovered if the data loss.

1.4 Scope

1.4.1 Users

1. Staff

    a) Manage children's record.
    b) Track the meal chosen by parents for every day.

2. Parent

    a) Login to the system and check their children information.
    b) Choose the meal of the day for their children.

© Universiti Teknikal Malaysia Melaka

1.4.2 Modules

1. Meal module

    a) Parent can choose meal for their children.

2. Human Resource module

    a) List of parents with their full information and the staff information who handles for the each transaction.
    b) Register new child
    c) View the child information and the meal selected by their parents.

3. Payment module

    a) Parent can pay the fee with the preferred method.

1.5 Project significance

Child care center can use this proposed system to replace their current system which has poor database system. By using this system, child care center is able to manage the data and retrieve data quickly and efficiently. Besides, a lot of problems can be eliminated such as data redundant. Child care center do not to worry about the data being stole by hacker or unauthorized person, because this system will strengthen the security aspect to access the system. In addition, with the provided backup services, data can be recovered back in a short time.

© Universiti Teknikal Malaysia Melaka

1.6 Expected output

There are few expected outputs from this proposed system which are admin or staff can monitor the number of children in the center. They also can keep track the information updated by the parents such as the meal of the day since the system allowed parents to decide meal for their children. Moreover, parents can always keep track their children information in the center through the system, this can help them save a lot of time and more convenient to them because they don't need to ask the staff how is their children performance in the center.

1.7 Conclusion

In a nutshell, hopefully this system will function well and efficiently to help the staff manage children's information, even there is a lot of data or information of each child. Besides, backup and recovery system provided in the proposed system also can the child care center enhance their database.

© Universiti Teknikal Malaysia Melaka

CHAPTER II

PROJECT METHODOLOGY AND PLANNING

2.1 Introduction

Methodology is a process where it includes the project-specific methods, rules, guidelines and other features to build a quality system that is manageable and deliver value to the organizations. Methodology can be used for many times for all kinds of project or developing a system. The methodology that used for the proposed system is waterfall. The main reason applied it in the system is because it is very easy to use and understand it. In waterfall, it is proceeding by phase to phase, whereby the first phase must be completed before move to the next phase. Besides, at the end of each phase, a review is made to determine if the project is on the right path and make decision whether the system should proceed or terminate. There are five stages in this methodology, which are analysis, design, implementation, testing and maintenance.

© Universiti Teknikal Malaysia Melaka

2.2 Project Methodology

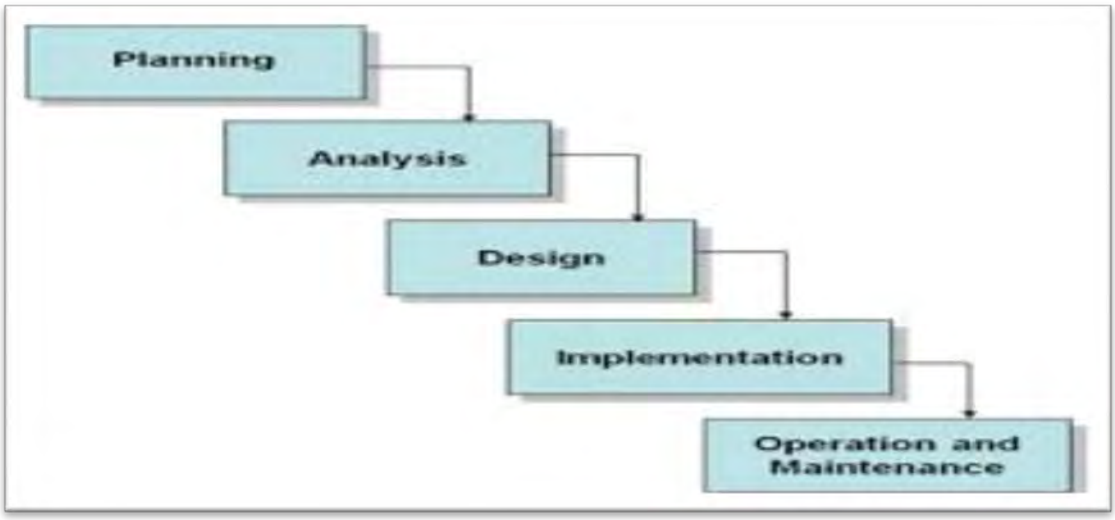

Figure 2.1: Waterfall Model Methodology

The figure above shows the phases involved in waterfall model methodology. Every phase of this methodology have different function and tasks to be carried out. The Table 2.1 below shows and describes how each phase works:

Table 2.1: Description of methodology used

Phase	**Explanation**	**Task(s)**
Planning	Early and the first stage in waterfall. Planning is conducted for the proposed system.	-Identify the needs of clients -Gather information from outside party about the

© Universiti Teknikal Malaysia Melaka

		current and proposed system
Analysis	Perform analysis on the information collected during the planning phase.	-Analyze the information collected -Define the weakness of the current system -List out the possible functions can added to the new system
Design	Design the system interface according to the requirements and use the hardware and software needed for the entire phase.	-Design ERD and DFD -Design interface -Design coding
Implementation	Installed the production system and train the users.	-Install the new system -Provide training and guides for the users to use the new system -Post-implementation review summary -Distribute the user documentation
Maintenance	Maintain the new system after implementation phase is completed.	-Maintain the new system -Fix the bugs immediately after detected

© Universiti Teknikal Malaysia Melaka

		-Monitor the new system for possible improvements in future

2.3 Project Schedule and Milestones

No	Month/ Week / Task Name	March			April					May				Jun		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Decide proposal title with supervisor															
2	Prepare and submit the proposal															
3	Prepare Methodology and Database System Planning Report															
4	Prepare Database															

© Universiti Teknikal Malaysia Melaka