

BORANG PENGESAHAN STATUS TESIS

JUDUL: CEMETERY SALES AND MANAGEMENT SYSTEM

SESI PENGAJIAN: 2009/2010

Saya LIEW YEOW HWA 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 TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)

 / TIDAK TERHAD



(TANDATANGAN PENULIS)

(TANDATANGAN PENYELIA)

Alamat tetap: Lot 2956-11, KG SRI PAYA,

81030, KELAPA SAWIT, KULAI,

JOHOR.

Tarikh: 10/06/2010

Tarikh: 10/06/2010

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

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

CEMETERY SALES AND MANAGEMENT SYSTEM

LIEW YEW HWA

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

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

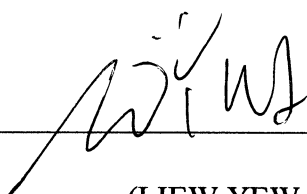
2010

DECLARATION

I hereby declare that this project report entitled
CEMETERY SALES AND MANAGEMENT SYSTEM

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

STUDENT :



Date :

18/06/2010

(LIEW YEW HWA)

SUPERVISOR :

Date :

(PM. NORHAZIAH BT. MD SALLEH)

DEDICATION

To my beloved parents, your moral support is my greatest divine inspiration. To my friends, your encouragement is the essence of my determination. To PM. NORHAZIAH BT. MD SALLEH, my supervisor, your dedication and effort has truly been my core of strength in the quest of completing this application.

ACKNOWLEDGEMENTS

I would like to express my gratitude to all those gave me the possibility to complete this thesis. I am deeply indebted lecturers of UTeM, especially those in FTMK, and to my supervisor PM. Norhaziah BT. MD Salleh whose help, stimulating suggestions and encouragement helped me in all the time of project for and writing of this thesis.

My colleagues from the BITD course supported me in my project work. I want to thank them for all their help, support, interest and valuable hints.

Especially, I will like to give my special thanks to my parents whose patient love enabled me to complete this work. Without their blessings, I would never have this chance to complete my thesis.

ABSTRACT

The problems in the current cemetery sales and management system is that the manual activities arousing multiple problems, such as lot sales, employee privileges and payment process, the purpose of this thesis is to solve the problems that current system facing. The proposed system is hopefully capable to solve the problems, by transferring the manual process into computerized system.

ABSTRAK

Masalah-masalah dalam jualan pemakaman dan sistem pengurusan dengan kegiatan manual membangkitkan pelbagai masalah, seperti kubur jualan, hak pekerja dan proses pembayaran, tujuan tesis ini adalah untuk menyelesaikan masalah yang dihadapi sistem saat ini. Sistem yang dicadangkan diharapkan mampu mengatasi masalah, dengan memindahkan proses manual ke dalam sistem komputerisasi.

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	DECLARATION	i
	DEDICATION	ii
	ACKNOWLEDGEMENTS	iii
	ABSTRACT	iv
	ABSTRAK	v
	TABLE OF CONTENTS	vi
	LIST OF TABLES	ix
	LIST OF FIGURES	x
	LIST OF ABBREVIATIONS	xii
	LIST OF ATTACHMENTS	xiii
CHAPTER I	INTRODUCTION	
	1.1 Project Background	1
	1.2 Problem Statements	2
	1.3 Objective	3
	1.4 Scope	3
	1.5 Project Significance	4
	1.6 Expected Output	4
	1.7 Conclusion	5
CHAPTER II	LITERATURE REVIEW AND PROJECT METHODOLOGY	
	2.1 Introduction	7
	2.2 Facts and Findings	7
	2.2.1 Domain	7

2.2.2	Existing System	8
2.2.3	Technique	12
2.3	Project Methodology	12
2.4	Project Requirements	20
2.4.1	Software Requirement	20
2.4.2	Hardware Requirement	21
2.4.3	Other Requirements	21
2.5	Project Schedule and Milestones	21
2.6	Conclusion	21
CHAPTER III	ANALYSIS	
3.1	Introduction	23
3.2	Problem Analysis	24
3.3	Requirement Analysis	26
3.3.1	Data Requirement	26
3.3.2	Functional Requirement	26
3.3.3	Non-functional Requirement	28
3.3.4	Others Requirement	28
3.4	Conclusion	31
CHAPTER IV	DESIGN	
4.1	Introduction	32
4.2	High-Level Design	32
4.2.1	System Architecture	33
4.2.2	User Interface Design	34
4.2.2.1	Navigation Design	33
4.2.2.2	Input Design	33
4.2.2.3	Output Design	33
4.2.3	Conceptual and Logical Design	34
4.3	Detailed Design	36
4.3.1	Software Design	36
4.3.2	Physical Database Design	38
4.4	Conclusion	46
CHAPTER V	IMPLEMENTATION	
5.1	Introduction	47
5.2	Software Development Environment Setup	48
5.3	Database Implementation	49
5.4	Software Configuration Management	50
5.5	Implementation Status	52
5.6	Conclusion	55

CHAPTER VI	TESTING	
6.1	Introduction	56
6.2	Test Plan	56
6.2.1	Test Organization	57
6.2.2	Test Environment	57
6.2.3	Test Schedule	58
6.3	Test Strategy	59
6.3.1	Classes of tests	60
6.4	Test Design	61
6.5	Conclusion	63
CHAPTER VII	PROJECT CONCLUSION	
7.1	Observation and Weaknesses and Strengths	64
7.2	Propositions for Improvement	64
7.3	Contribution	65
7.4	Conclusion	65
REFERENCES		66
BIBLIOGRAPHY		67

LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Software Requirement	20
3.1	Hardware Requirements	30
5.1	Environment Setup	49
5.2	Server Configuration	49
5.3	Database Environment Setup	49
5.4	Implementation Status\	53
6.1	Test Organization	57
6.2	Test Environment	58
6.3	Test Schedule	59
6.4	Test Data for Corpse Registration Module	62

LIST OF FIGURES

DIAGRAM	TITLE	PAGE
2.1	Company Management System	8
2.2	inFlow Inventory Management System	10
2.3	Database Life Cycle (DBLC)	13
2.4	Waterfall model	17
3.1	Flow Chart of Current System	25
3.2	Context Diagram of the Cemetery Sales and Management System	27
4.1	Two Tier Architecture	33
4.2	Navigation Design	34
4.3	Create Table Employee	40
4.4	Create Table Customer	41
4.5	Create Table Corpse	41
4.6	Create Table Lot	42
4.7	Create Table Sells_Payment	43
4.8	Create Table Payment_Detail	43
4.9	Create Index on Table Employee	44
4.10	Create User	44
4.11	Grant Role	44

4.12	Create Sequence	44
4.13	Create Trigger	45
5.1	Environment Architecture for Cemetery Sales and Management System	48
5.2	Restricting	50
5.3	Join	50
5.4	Aggregate Function	50
5.5	Tracking of Form Module by Window	52

LIST OF ABBREVIATIONS

DBMS	Database Management System
DFD	Data Flow Diagram
DBLC	Database Life Cycle
ERD	Entity Relationship Diagram
PSM	Projek Sarjana Muda
AJK	Ahli Jawatan Kuasa
OS	Operating System
PK	Primary Key
FK	Foreign Key
RDBMS	Relational Database Management System
SQL	Structured Query Language
DDL	Data Definition Language
DML	Data Manipulation Language
DBA	Database Administrator
DCL	Data Control Language

LIST OF ATTACHMENTS

ATTACHMENT	TITLE	PAGE
A	Gantt Chart	68
B	Data Requirement	70
C	Input Design	73
D	Output Design	76
E	Entity Relationship Diagram(ERD)	81
F	Data Dictionary	83
G	Software Design	87
H	Testing	102
I	Proposal	116

CHAPTER I

INTRODUCTION

1.1 Project Background

Cemetery sells and management services are one of the new services which are currently not found in the market, especially in Malaysia. Even if there has, it only provided few features and functions.

Since this is a new business area, many functions have been added to this system. This system provides an easier way to let staff, even a manager to handle the customer information. Examples of the new functions are including selling lot using map and generate report functions. Besides that, in order to make this system in more secure way for store data purpose, backup and recovery features are added to let the manager has an easier way to control and manage the customer information and daily transaction. For the purpose to manage staff in a perfect order, manager can state that every staff has its own position. This mean that staff only has limited privileges on its own field and cannot over cross to do the job that are not in their field. Therefore, this can enhance the data security.

Current system operates with only two functions, which are payment and storing customer information functions. However, current system has a serious problem on managing their daily activities, such as product management, staff privileges controlling,

and the most critical among all is order receiving and payment process. There will have a big problem if the database crashes down.

These problems are emerging because these processes are done manually. Hence, this thesis is to propose a system namely Cemetery Sells and Management System to automate and simplify these manual processes.

1.2 Problem Statements

The problem of lot selling process become very messy and trouble because current system still using paper method to record the availability of lot. If the manager or staff wants to find out which lot still got empty space, they need to open the file and see one by one. It is very wasting time if there got many customer want to check the availability of the lot. Besides that, the price list of the lot also needs to update according to the market required. This is a burden if they have to change the price time by time.

The problem of storing data into the database is the main challenge to one company because all the information no matter customer information or the payment amount need to store into the database. Therefore, manager or staff needs to handle the customer information and daily transaction with optimal level. This is very trouble if the company database suddenly crash with unknown reason or someone wants to steal the customer information by hack into the database.

Current system does not provided security and privileges function. This means that employee can see all the customer information even that customer is not under him. This can make the database abnormal when somebody wants to change the customer detail with no authentication.

Hence, the system that will solve these problems is critically required to sustain the business process of the company.

1.3 Objectives

The objectives for this system are:

- To develop a sells and management system that can automate the manual process and hence reduce the problems to the minimum level.
- To enhance the current system with more secure way to protect the huge database from being crash down or malfunction.
- To model the business flow of current management and analyze the strengths and weaknesses of current flow.
- To set the privileges to each staff so that each staff only can view and work on their own field to maintain data security.

1.4 Scope

For Login Module, the purpose is to authenticate the identity of the user so that only authorized user is allowed to access the system. After the user success login to that system, they only can view and handle on their own field of work.

For Payment Module, this module manages the payment by calculating the total amount that will be spent by the customer for buying the product and lot. Then the total amount will be saved into the database.

For Lot module, each lot has its own ID code. This module will look like a map form. The purpose to do it in the map form is to let the staff can check which lot still got empty space and which lot already selling out.

For Report module, manager can view all the information of the tables in the database by generate the report in the Tabular or the Matrix form. All the data will arrange in the perfect way to let the manager do analysis and data mining easily.

For Registration Staff module, each staff will have a default password. This means that after that person register as a staff, he will be force to change the default password to protect the privileges of that staff.

Backup and Recovery Module is one of the new added module. This module enable the system to backup the database automatically in physical side and logical side. The database can do the recovery if there has any crash or failure happens. Therefore, data is protected from being damage or data loss.

1.5 Project Significance

Since the system is developed specially for Cemetery Company, this system will provide solution for them and thus sustain the business process of the company. This system will largely used by the manager of the company along with the staff working on the company. This system automates the manual processes that are currently leading to various problems.

1.6 Expected Output

The system is expected to deliver the necessary output to solve the problems currently cemetery company facing. These outputs are in the form of report of company activities. The report can be categorized into daily report, weekly report, monthly report and annual report. The report may come in the form of printed or digital output.

The output of this project will also come in form of documentation. This documentation will describe the system thoroughly in order to provide full understanding of the proposed system.

1.7 Conclusion

The cemetery sells and management system is a system that is developed on purpose to automate these manual management systems. This system will have some modules to automate the current manual processes, which are to manage customer information, to manage payment, to generate the report and these modules will have their own sub modules. The system will be used by the cemetery manager and staff.

The aim of this system is to reduce the complexities of service management, to model the business flow and analyze the flow, and to develop a management system that can automate the manual processes.

In order for the system solves these problems, a methodological approach must be well established, and necessary information must be obtained. The next chapter will describe the methodology used and the information gathered from all available resources.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

Literature review is used to review the significant points of existing comprehension on a management system, especially company management system. The literature review provides references and supporting facts to develop the proposed system. This is purposely done to be synchronized with existing literature on company management system which will be a foundation to develop cemetery sells and management system, for example to serve as justification for future research on company management system.

From the literature review, the appropriate methodology is acquired to develop the proposed system, which is purposely used to enhance the development process and to help the developer to develop high-quality software faster and low-cost.

Hence, multiple methodologies are exist and inevitable, grown directly from the facts of reason to select a methodology and the underlying principles of a methodology. Projects are different based on its size, composition, priorities, and criticality. People involved on a project have personal bias toward the project, depends on their experiences, principles, and preferences. These issues are intertwined, hence quality and optimality are differs between projects.

2.2 Facts and Findings

2.2.1 Domain

Management system is a documented and tested step-by-step method aimed at smooth functioning through standard practices. Used primarily in franchising industry, management systems generally include detailed information on topics such as (1) organizing an enterprise, (2) setting and implementing corporate policies, (3) establishing accounting, monitoring, and quality control procedures, (4) choosing and training employees, (5) choosing suppliers and getting best value from them, and (6) marketing and distribution. (BusinessDictionary.com 2009)

Cemetery sells and management system specializing in not only selling the lot and handle customer information, but also software development house that facing serious problems on managing their daily activities. These problems are emerging because these processes are almost done manually. The domains of this system are concentrating on manager and the staff of the company. The system is expected to able to solve the problems currently those company facing.

2.2.2 Existing System

Currently, cemetery company still using manual system to support their daily activities, hence the existing systems that will be used as a basis to develop the system are acquired from commercialized company management system.

2.2.2.1 Company Management System

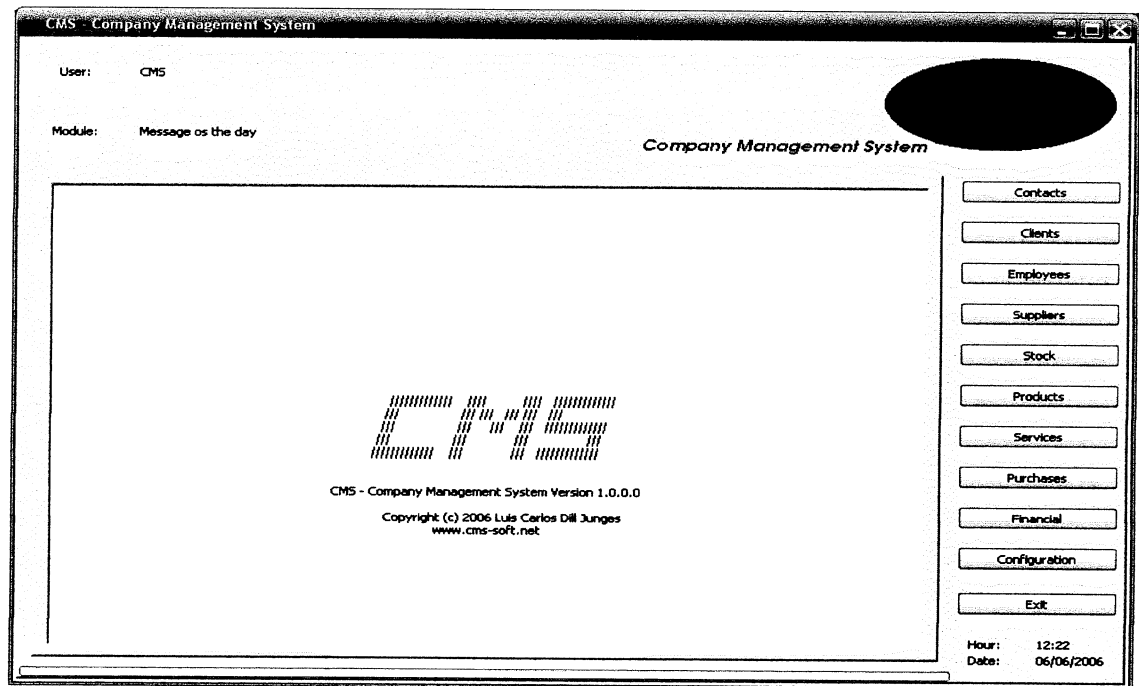


Figure 2.1: Company Management System

Company Management System is a management system developed by Gepok Software Solution. This system is developed to allow small and medium sized companies to manage their internal business processes. Since this system is a commercial and public system, hence it's functionally is common and generic, without having to consider the business type of the user. (Luis Carlos Dill Junges, 2006)

The basic characteristics of the modules are some simple operations like include, exclude, alter and print registries from database. With the main objective to help the user, CMS software has a status bar located on the below part of screen. Such bar will be updated every time that some operation which use database query is performed. This mean that if in one insert operation nothing happen, certainly the database was not used; in this care, warning and other messages will appear informing the user about what kind of error has to solved in order to complete the user request. Some common problems are

incomplete or invalid fields and connection problems with the server. (Luis Carlos Dill Junges, 2006)

In all modules where registries list is performed, it is possible remove or prints many entries pushing CTRL key and selecting the desired fields. In case of print operation, one specific window for the current module will appear; in this window the user have the option to choose which fields are going to be printed. (Luis Carlos Dill Junges, 2006)

The Company Management System has these features:

- **Contact**
 - Include/Exclude/Alter/Visualize contacts information
 - Include contact information
 - Supplier
 - Clients
 - Employees
 - Others
- **Client**
 - Include/Exclude/Alter/Visualize clients information
- **Employees**
 - Include/Exclude/Alter/Visualize employees information
- **Supplier**
 - Include/Exclude/Alter/Visualize suppliers information
 - Visualize purchases that has been made with the supplier
 - Visualize deliveries that has been made by the supplier
- **Stock**
 - Include/Exclude/Alter/Visualize entries/exits of stock
 - Relate stock motion to one employee
 - Relate stock motion to one product
 - Relate stock motion to one supplier
- **Products**
 - Include/Exclude/Alter/Visualize products information