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COMPANY MANAGEMENT SYSTEM

BEH BEE PING

This report is submitted in partial fulfilment of the requiremetns for the
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(Software Development)

FACULTY OF INFORMATION TECHNOLOGY AND COMMUNICATION
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2004

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DEDICATION

To my beloved parents and family

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Here, I would like to send my immense gratitude to my mum and brothers who given their fully support and encouragement to me during the inception of the PSM. Besides that, special thanks and sincere apologies to my supervisor Ms. Choo Yun Huoy, who have supervised me with useful advices and giving out her valuable time in helping me to complete my PSM. On the other hand, I would like to thank all my nieces and nephews who always give me big smiles every time I feel tired, mental block or about to give up. Special thanks to my roommates who had lent a hand when I was facing technical difficulties. Thanks for their psychological supports, transportation support and cheerfulness during the whole PSM period. Thanks to my housemates too of their kindness, guidance, help and accompany whenever I worked till mid-night. Finally I would like to thanks KUTKM for providing all the facilities and reference books which are the essential sources for me to complete my project.

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ABSTRACT

The main purpose of CMS is to solve some problems facing by the staff in work area such as leave application standardization, project assignation adjustment, staff self calendaring system and etc which has been listed under objectives part. Currently, most of the companies are using manual system to handle daily tasks highlighted above, where all the processes need to be handled manually by human and lots of time has been wasted. Besides that, if the human resource staffs want to retrieve back the particular record, longer time is needed to search for the document and more space is needed to keep all the records. With CMS, task like leave application and project assignation will be done electronically where all the staffs accessing the same system and all the data will be stored in the same database. Time to retrieve the data will be greatly reduced in particular condition like what has been written in the scope of this document. Waterfall concept has been used for CMS project. On the other hand, object-oriented approach has been applied and all the planning and designing has been done with unified modeling language (UML) using Rational Rose 2000 Enterprise Edition. Finally, CMS will make sure the process for leave application and project assignation will be easier and simpler to carry out. In future, enhancement for the system and some additional modules can be added to make CMS more flexible.

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ABSTRAK

Tujuan utama CMS ialah untuk menyelesaikan masalah yang dihadapi oleh semua pekerja di tempat kerjanya seperti memohon cuti, pembahagian projek, kalendar pekerja dan lain-lain seperti yang telah disenaraikan dalam bahagian objektif. Kini, kebanyakan syarikat masih menggunakan manual system untuk menguruskan kerja-kerja yang telah dinyatakan sebelum ini, di mana proses kerja memerlukan tenaga pekerja dan masa yang panjang diperlukan untuk melakukannya. Selain itu, jika pekerja bahagian sumber manusia ingin mendapatkan semula sesuatu rekod, masa yang lebih panjang diperlukan dalam proses mencari kertas cuti tersebut dan tempat yang besar diperlukan untuk menyimpan rekod tersebut. Dengan CMS, kerja seperti memohon cuti dan pembahagian projek boleh dilakukan dalam cara elektronik dimana semua pekerja hanya perlu melayari sistem yang sama dan semua data akan disimpan di dalam pangkalan data yang sama. Masa yang diperlukan untuk mendapatkan data dapat dijimatkan dalam keadaan tertentu seperti yang telah dinyatakan dalam skop. Model air terjun telah digunakan untuk CMS projek. Sementara itu, cara berorientasikan objek telah digunakan dan kerja perancangan dan rekaan dilakukan dengan UML dengan Rational Rose 2000 Edisi Enterprise. Akhirnya, CMS memastikan semua proses untuk permohonan cuti and pembahagian projek dapat dilakukan dengan mudah dan cepat. Cadangan masa depan ialah pertambahan modul baru boleh dilakukan untuk meningkatkan fleksibiliti CMS.

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LIST OF ABBREVATION

ATP	-	Acceptance Test Procedure
BGO	-	Buying Guide Online Sdn. Bhd.
CMS	-	Company Management System
LAN	-	Local Area Network
MMU	-	Multimedia University
OO	-	Object-Oriented
OOA	-	Object-Oriented Analysis
OOD	-	Object-Oriented Design
PBCS	-	Project Based Calendaring System
RFP	-	Request for Proposal
SRS	-	Software Requirement Specification
UML	-	Unified Modeling Language
UW	-	University Washington
UT	-	Unit Test
IT	-	Integration Test

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CHAPTER I

INTRODUCTION

1.1 Overview

Currently, most of the company still using paper based manual management system in daily work such as staff leaves applications, project assignation, technical support feedback and etc. All this processes consume a lot of time and manpower. [*"The effectiveness of manual system in completing the Project given is rather low. (Gail Honness, 1998)"*]. Furthermore, inconvenient and communication break down have occurred frequently in these manual systems.

A prototype for Company Management System (CMS) is specially proposed to increase the efficiency on leave application and management including project assignation in a company to provide a calendaring-based display for staffs' references. The system is suitable for small and medium companies and able to solve all the problems stated above. The project is focusing on four modules namely leave application module, project assigning module, calendaring module and administration module.

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1.2 Problem Statement

Most of the local companies still using manual system in internal management work. Although there are some companies which have their own intranet system but they do not work as expected and in other word the system fail. With manual system, all the tasks need to be done manually, tasks referred here are leave application, leave approval by superior, project assignation and etc. Yuan Yu Sdn. Bhd. been selected in discussion about the flow of the existing manual system. For this company, a staff who want to apply leave need to grab a leave form from the human resource department. Then the staff needs to fill in the form and get superior approval before the form was passing to human resource department for checking or recording. The whole flow works manually and the staff needs to calculate the number of leave manually too. This is causing a lot of problems such as miscalculate and inconvenience because the staff need to deduct the public holiday and weekend manually by referring on calendar.

Besides that, the project manager will always assigned the project by mistake to those who is on leave or not available. A lot of work and time has been wasted by passing the form around for approval, validation and checking. Conflict among the staff occurs when the process involve staffs from different departments.

Company Management System (CMS) is a system specially developed to solve and minimize the problems stated above. In CMS, there are a total four modules included. These modules are leave modules, project module, calendar module and lastly administration module. These modules have been selected according to the high-risk problems which have been briefly stated before. This CMS is an individual initiative system which is able solves the problems faced by most of the companies.

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1.3 Objective

There are a few objectives for CMS system. The objectives have been listed as below.

1.3.1 To Provide Calendar-based interface display for superior or subordinates leave applications.

A calendar-based interface to display all the subordinate's leaves applications status for employees once he/she access the system. Beside that, while superior access into the system, a table display for the superior's and his/her subordinates leave applications will be shown. From this display, superior will be able to view his own subordinates leave applications status and choose to prove or reject the application.

1.3.2 To provide a project assignation function for superior usage.

Superior can assign the project with the provided function. The available staffs name list will be provided under the project assignation process. Staffs that are under leave during that particular project period will be shown in another list. The superior can choose to reject the leave and assign a project to the staff.

1.3.3 To reduces time for data retrieval to below 5 seconds.

Time for data retrieval can be reduced. A better and more manageable database collection will be provided where time for data retrieval takes times below 5 seconds.

But there are some constraint condition where the time for data retrieving maybe more than 5 seconds. The conditions are:

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i. Network connection problems causing the client side machine unable to access to the server database and the time for data retrieving will be infinity.

ii. Database has been locked by admin and this will be causing all the client side users cannot access to the server and having some accessing problems.

1.3.4 To provides an automatic leave calculation.

More accuracy calculation is given either in leave application project completion date. Deduction for stated public holiday, country holiday and weekend will be done automatically.

1.4 Scopes

Only four modules are included in the Company Management System and they are leave application module, calendaring module and Project assigning module. The project scopes are:

1.4.1 Leave application module

Leave application module allows staff to apply leave, calculate and check the number of leave day applied. Some deduction will be done on the total days of leave application for weekend, public holiday, state holiday, company holiday and etc. It allow superior to respond on the application such as approve, reject, re-approve or re-reject the leave application. On the other hand the user can also cancel his/her own leave which has been approved, thus superior can re-reject or re-approve the cancellation of the leave application. Besides that, the system is able to reject the leave application automatically if falls in critical period for example when a staff applies leaves on the period he/she undergoes a project. Finally, current month leave application status for a particular staffs and so do his/her subordinates leave

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applications will be displayed. This module also allowed user to view the previous month or the following month's leave application status.

1.4.2 Calendaring module

This module displays for all projects assignation and the leave status of a staff. Every staff will have their own calendar and superior are allowed to view his/her subordinate's calendar.

1.4.3 Project assignation module

Project assigning module allows superior to assign project to his/her subordinates. Besides that, superior has the authority to change or extend the due date of the assigned project. The system is able to recognize the staff who is available for a particular period.

1.4.4 Administration module

This module enables the administrator to archive the unused leave list or project list. Besides that, this module also provides a page for administrator to add or edit user to the system.

1.5 Contribution

CMS is an intranet system for internal management usage. Directly, all the staffs in the company will gain the benefits from the system. CMS eases the work of the staffs in assigning projects and leave application. General Manager (GM) is the first person who enjoys this benefit. Through the calendaring module, the GM can view and check his/her subordinates' daily activities. Besides that, the system can

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