

BORANG PENGESAHAN STATUS TESIS^

JUDUL: PENANG GOVERNMENT QUARTERS DATABASE MANAGEMENT SYSTEM

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Penang government quarters database management
system (PQDBMS) / Mohamad Hamzi Salleh.

**PENANG GOVERNMENT QUARTERS DATABASE MANAGEMENT SYSTEM
(PQDBMS)**

MOHAMAD HAMZI BIN SALLEH

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

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

2006

DECLARATION

I hereby declare that this project report entitled
**“PENANG GOVERNMENT QUARTERS DATABASE MANAGEMENT
SYSTEM”**

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

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DEDICATION

To my beloved parents, sisters, brothers and friends...

ACKNOWLEDGEMENT

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

First and foremost, I would like to thank ALLAH s.w.t “Alhamdu Lillah” who said “*ALLAH will exalt in degree those of you who believe and those who have been granted knowledge*”, for giving me the strength, patience, courage and determination in compiling this report. Our prophet Muhammad s.a.w said “*and wherever selects a path towards gaining knowledge, ALLAH will make it a path guiding to paradise*” and said *who don't thank people, don't thanks ALLAH*'. So I acknowledge and thank everyone who has helped me to achieve this work.

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ABSTRACT

The purpose of this report is to propose Penang Government Quarters Database Management System (PQDBMS) for Setiausaha Kerajaan Pulau Pinang(SUK). The main function of this project is to manage quarter's applicant information. All Government staff qualify to apply a quarters. This system follows the SUK procedures seem like the existing system. The applicants apply quarters by fulfilling the form then staff key in into the PQDBMS based on information given by the applicant. The result will be process by PQDBMS and result from the system will bringing SUK meeting and then the applicant will be offer the quarters and stored information through database. Besides, this system also has management functions report. The methodology that has been choosing to use in this project is Waterfall Methodology .This project has been developed by VB 6.0 as interface of the system and SQL Server 7.0 as the database. A conclusion, this project will upgrade and enhances existing system functions.

ABSTRAK

Tujuan laporan ini adalah untuk mengusulkan Penang Government Quarters Database Management(PQDBMS) sistem kepada Setiausaha Kerajaan Pulau Pinang(SUK). Fungsi utama sistem ini adalah untuk mengurus maklumat pemohon kuarters . Semua kakitangan kerajaan layak memohon kuarters. Sistem ini mengikut prosedur bantuan seperti sistem semasa. Pemohon memohon kuarters dengan mengisi borang kemudian staff akan memasukkan maklumat pemohon kedalam PQDBMS berdasarkan maklumat yang diberi oleh pemohon. Keputusan akan di proses PQDBMS dan dibawa ke mesyuarat SUK kemudian pemohon akan ditawarkan kuarters dan maklumat akan dimasukkan dan disimpan secara terus ke pengkalan data. Selain itu, sistem ini juga mempunyai fungsi pengurusan seperti laporan. Metodologi yang telah dipilih untuk membangunkan sistem ini adalah *Waterfall Methodology*. Projek ini dibangunkan menggunakan VB 6.0 sebagai antaramuka dan SQL Server 7.0 sebagai pengkalan data. Sebagai kesimpulan, sistem ini akan dibangunkan untuk meningkatkan dan menambah fungsi sistem semasa.

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CHAPTER I

INTRODUCTION

1.1 Project Background

Setiausaha Kerajaan Pulau Pinang (SUKPP) has been made in 1960 by the Yang Amat Berhormat Pulau Pinang chief Minister to set up a Setiausaha Kerajaan Pulau Pinang (SUKPP). SUKPP is to be implemented to service the need of the Government State. SUKPP as one organization that create the State Civil Administration are responsible to control all activities such as planning and development, Dewan Undangan Negeri Management, Majlis Mesyuarat Negeri Kerajaan Management and office management. SUKPP have are several department. There are Human Resources Department, Computer state center, PEGIS center, Housing and Government State and DUN and Protocol.

SUKPP wants develop a new system for Quarters system. The purpose of a new system is to upgraded the current system to a new system using SQL Server as database and interface using a Visual Studio .NET entitled “Penang Government Quarters Database Management System(PQDBMS)” . Currently, quarters system using is an implementation on Microsoft Access 2000. Access 2000 not stability and does not guarantee that all changes performed within a transaction boundary are committed or rolled back.

SUKPP responsible to handle all data regarding of all government staffs working at thirteen (13) State Department and thirty two (32) Federal Department and qualify to apply a Government Quarters. Quarters System needs a large storage capacity and to manage the all quarters applicant information PQDBMS is made. Otherwise, current system just process application quarters not include quarters record, inventory record, quarter maintenance record and all the process using a file system management. This project PQBDMS responsible to manage applicant record, quarters record, inventory record, and quarter maintenance record to all information.

The benefit from this project is that it can record all the information when the user uses this system. It is important because the SUK have a lot of data that need to organize with a good way. This can ensure the system does not face any problem in their process.

1.2 Problems Statement

There are several problems identified in the current system.

These include:

1.2.1 Current database can not support large amount of data

Current database is using a Microsoft Access as Database Management System (DBMS) and can not support large data to process in this system because Access reduce performance to access and process to four module in this system incomplete to process. PSUKPP needs a large storage capacity to manage the all applicant quarters information.

1.2.2 Data redundancy

Data redundancy problems exist in the current system because database was not design properly. When user want to catch any data the old system use a number id as unique key. Number id is an auto generates number from system, it makes difficult for the user to remember the id number.

1.2.3 Inefficient and burden the work

The database management was no design properly that SUK has much volume of data to record many data of applicant quarters. This error can give more effect and seriously problem to the SUK to manage their data or record when the staff are incorrectly add the data, lost the record, or the data do not save completely. Otherwise, current system had certain process still using a file system management such as quarters record, inventory record, quarter maintenance record. It is burden of work to access or record many data using a file system.

1.2.4 Weakness Performance

An old database or systems are not up to standard so that the system has a poor performance.

1.2.5 Applicant Selection

Administrator officer (user) want Applicant Selection generate automatic points when the system running but the current system can be done once per month.

1.3 Objective

There have three objectives that to be accomplished in this project.

These include:

1.3.1 Overcome redundancy of data

PQDBMS will use specific unique id and can help the SUK to manage entire applicant record, quarters record, inventory record, quarter maintenance record and it is easier to access the record in database with faster and correctly.

1.3.2 Better data management and accessibility

Easier to access records in variety way. It is high beneficial that can record all information and history of data when the user of system easier with this system, it is mean we have successful in our implementation of a system.

Current system had certain process still using a file system management such as quarters record, inventory record, quarter maintenance record. It is important because the SUK have a lot of data that need to organize with a good way. This can make sure the SUK does not have a problem in their applicants especially.

1.3.3 Provide bigger storage capacity

Using Microsoft SQL Server 7.0 that our system is more stability and accuracy to reduce. Manage our database according to fulfill PSUKPP information needs.

1.4 Scope Project

The scopes of the project are to develop the PQDBMS includes:

1.4.1 User

This project is developed for Setiausaha Kerajaan Pulau Pinang (SUK) office in order to manage government quarters. PQDBMS monitor by administration officer and two clerks.

1.4.2 Implementation

This project will be implemented by **Pejabat Setiausaha Kerajaan Pulau Pinang**. SUK responsible to manage government quarters management and maintenance for all Penang government staffs.

1.4.3 Volume of Data

SUK responsible to handle all data regarding to application of all government staffs working at thirteen (13) State Department and thirty two (32) Federal Department. All government departments qualify to apply government quarters. PQDBMS needs large storage to process all applicant quarters.

1.4.4 Function / modules

This project has several modules includes four (4) modules there are Registration module, Record module, Maintenance module, and Report module.

1.4.4.1 Registration module

Registration modules have a several sub menu it is a new registration, record registration and quarters information.

- To store all information about government staff for new registration to for quarters information.
- To update quarters application information.

1.4.4.2 Record module

Record module information about title of job, grading of job, and quarters information.

- Store all information about title of job, grading of job, and quarters id. Only the administration officer can update the information inside this module.

1.4.4.3 Maintenance module

Maintenance modules include inventory in the quarters and cost renovation quarters.

- Quarters maintenance will be store inventory and expenses renovation quarters.

1.4.4.4 Applicant Selection

Application Selection a qualification quarters based on applicant points. Points system will calculation using applicant information. Criteria for calculate are Marital Status, Number of child, Date of applies quarters, and Applicant Salary.

Formula for points included table below:

Table 1.1: Points Application Selection

Criteria	Points
Child	One child = 5
	Two child = 10
	Three child = 15
	More than 4 child = 20
Marital status	Single = 0
	Married = 5
Applicant Salary	2 points for every RM 100

- Qualification quarters based on applicant points and each applicant will be evaluating within the group of their job grade.

1.4.4.5 Report module

Report module divided to job grading for each Applicant Selection. Quarters maintenance to generate report renovation and expense and Department report for information to every chief department that their staffs get a government quarters. Pension report for reminder when staff reach their pension. Staff needs to clear up from government quarters.

1.5 Project Significant

Database management quarter system is comfortable to develop for quarter system. There are several benefits once the project is complete.

These include:

- **Database management**

With the good database structure, the SUK can improve their government quarter management with systematically and effectively.

- **Enhance the quality and ensure smother business process flow.**

Staffs easier manage the business process flow process because four modules include in one system. For examples Staff can access information about inventory in quarter and cost renovation, this system not focus on applicant information.

- **Ensure no data duplication**

Use applicant identity card for unique key to search information and update a applicant data is more efficiency.

- **Volume of data**

SUK can manage all information about government quarters management with large data storage capacities and times to search desired record.