

BORANG PENGESAHAN STATUS TESIS*

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VALVE INFORMATION SYSTEM

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**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**

2009

DECLARATION

I hereby declare that this project report entitled

VALVE INFORMATION SYSTEM

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

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DEDICATION

Thank you very much

to my husband, beloved parents and family.

Thanks to my supervisor and friends who give full

support to finish my PSM.

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In the name of Allah,
Most Gracious, Most Merciful

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ABSTRACT

The Valve Information System (VIS) is developed especially for Alif Diamond Sdn Bhd, which is located at Bangi, Selangor. This application is developed to manage the valve information, image and provide database maintenance for management of information in the company. It is an online system which can only be access within three main users; there are manager, database administrator and staffs. Only authorized user can login into the system and view the VIS application. The manager's job is to manage product, customer, and orders. Besides that, the database administrator maintains the backup and recovery, transaction logging, and new user creation for the database of the system. Furthermore, the staffs' job is to manage querying valve price based on customer requirement and manage customer detail. On the other hand, this VIS application is focused more on database management; backup and recovery, transaction logging and new user creation for the records in the database. The methodology of this system is Structured Systems Analysis and Design Method, SSADM and Spiral Model. An analysis study has been done based on the current manual system and all the problems statements and requirements have been identified. Moreover, VIS is three tier architecture systems which involve client tier, application tier or business tier and database management tier. The interfaces for VIS have been designed according to the company requirement. This Valve Information System, (VIS) will help to improve the performance of current situation and overcome the problems that arise nowadays.

ABSTRAK

Valve Information System (VIS) telah dibangunkan khasnya untuk Alif Diamond Sdn Bhd di Bangi. Sistem ini dibangunkan untuk menguruskan maklumat injap industri, lukisan injap, dan pengurusan pangkalan data di dalam syarikat tersebut. Sistem ini boleh diakses melalui internet dan hanya boleh digunakan untuk tiga pengguna iaitu pengurus, pentadbir pangkalan data dan pekerja. Hanya pengguna yang sah sahaja boleh mengakses data melalui aplikasi VIS. Pengurus bertugas untuk menguruskan rekod produk, pelanggan, pengilang, maklumat spesifikasi injap industri. Selain itu, pentadbir pangkalan data bertanggungjawab mengawal *backup and recovery*, *transaction logging* dan *mencipta akaun baru untuk perkerja baru* untuk aplikasi VIS. Tambahan lagi, tugas pekerja adalah untuk menguruskan carian harga injap industri berdasarkan permintaan pelanggan dan menguruskan maklumat pelanggan. Dengan kata lain, aplikasi VIS lebih tertumpu kepada pengurusan pangkalan data untuk semua rekod dalam pangkalan data. Metodologi sistem ini ialah *Structured Systems Analysis and Design Method*, *SSADM* and *Spiral Model*. Kajian telah dibuat berdasarkan sistem semasa yang manual dan semua kenyataan masalah dan keperluan sistem telah dikenal pasti. Tambahan lagi, VIS ialah tiga bahagian sistem senibina yang melibatkan bahagian pengguna, bahagian aplikasi atau bahagian perniagaan dan bahagian pangkalan data. Ruang antara-muka untuk VIS telah dilakar berdasarkan keperluan syarikat. VIS akan cuba membantu memperbaiki kebolehan dari situasi semasa dan mengatasi masalah yang dihadapi pada masa kini.

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LIST OF ABBREVIATIONS

VIS	Valve Information System
EXP	Export utility
IMP	Import utility
DDL	Data Definition Language
DCL	Data Control Language
SQL	Structured Query Language
PL/SQL	Programming Language/ Structured Query Language
VPN	Virtual Private Network
PC	Personal Computer
GUI	Graphical User Interface
DES	Database Environment Setup
IT	Information Technology
ICT	Information Communication Technology
DBA	Database Administrator
CLOB	Character Large Object
BLOB	Binary Large Object
LOB	Large Object
BFILE	Binary File
DFD	Data Flow Diagram
ERD	Entity Relationship Diagram
RAM	Random Access Memory
SSADM	Structured Systems Analysis and Design Method

ASP	Active Server Pages
PDF	Portable Document Format
ISBN/ISSN	International Standard Serial Number/ International Standard Book Number
PSM	Projek Sarjana Muda

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CHAPTER I

INTRODUCTION

1.1. Project Background

The project that will be developed is a Valve Information System for Alif Diamond (M) Sdn Bhd which is a company that dealing with valves equipment for PETRONAS projects.

The company is using the filing system since it is established on 2004 until now for document storage and manual business process. The filing system may cause data duplication, inconsistency data, high risk of data lost, unorganized data when the records is increased and lack of security. When the stated problem is occurred, the company management is effected and customers gave bad impressions to the company performance. The problem usually faced by the company are difficulty to retrieve information especially when to fulfill the customers' requirement in short time duration, because the staffs are using catalog that contain valves information to get valve's code and checked its price in price list from the suppliers which located in different file. Then

the quotation is typed to send to the customers. Usually, the retrieval information only is done by manager. Other staffs faced the problem when both of the directors are left for outstation because they needed to know the valve's code based on customer requirement to search the valve's price. Besides, the company may lose the customers and cause loss income.

The project that will be developed is a system to ease the staffs and administrator in information and database management. The project will automated the manual system used now and will be developed in three-tier architecture. Three-tier architecture is client-server model is a network architecture that involves user interfaces, application login and database. User interface is known as presentation layer which displays the interface of the system. It communicates with other tiers by outputting results to the browser or client tier in the network. Application tier is known as logic tier is pulled out from the presentation tier as its own layer; it controls an application's functionality by performing detailed processing. The third tier is database storage which is the platform to store and retrieve information. This tier keeps data neutral and independent from application servers or logic tier. Giving data its own tier also improves scalability and performance.

Through developing this project several skills will be applied such as management skill, software development and database skill, and soft skill to ensure the development of the system smoothly.

1.2. Problem Statements

The current system is used by the company may cause several problems to company management because it caused data duplication which the same repeated over and over since the staffs find it hard to keep track of the documents, information, and transactions.

Besides, current system is lack of security. Since data is stored in filing system, it will enable the unauthorized person to manipulate the data and used it wrong way.

The current system also faced in slow retrieval of data when the staffs wanted to do searching of valve information on valve specification received from customers. The company disabled to handle too many valve searching information in a time which each of them needed the fastest respond.

1.3. Objective

The objectives of the project are:

1. To avoid data redundancy because this system can help the staffs to organize all the information and images that related to company business process.
2. To ease searching capability for retrieval of data especially the valve price and drawing retrieval from database.
3. To develop database maintenance capability for backup database and recovery database for VIS.

1.4. Scope

1. The users of the system is the staffs of Alif Diamond (M) Sdn Bhd company; executive director, managing director, and associated staffs.

2. The function to be developed in system:
 - i. Storing the data and images.
 - ii. Manipulate the data.
 - iii. Access the data.
 - iv. **Backup and recovery the data.**
 - v. Integrity of the data.
 - vi. Security of the data.

1.5. Project Significance

The computerized system enables the staffs to overcome data redundant, inconsistency data, human mistake when inserting data because the system will provide the error handling to reduce human mistake and lack of security either both authorization or authentication. In addition, the staffs also can keep track the order details since the company establishment because the system will provided an indexing for the information to ease retrieval data process.

The staffs of Alif Diamond (M) Sdn Bhd can access the database as long as the computer is connected with computer server to keep track all the information needed from computer server for business process management.

The project can overcome slow retrieval of data for casting valves and minimize time for searching information because all information can be gained from the centralized database. Besides, the company may avoid bad impression from customers especially who is new in dealing business transactions with them.

1.6. Expected Output

The expected output from valve specification module has function of insert, delete and update is succeed to enable the valve query module to display valve's

characteristics, price, and preliminary drawing of the valve from valve search engine then can print the expected result. In order module, the system will calculate the total price for each customer.

In database maintenance, there are three sub modules which is backup recovery, transaction logging, and create new account module. In backup process, there two way to imply the process, full backup process and selected table backup process. In transaction logging module the DBA can supervise the staffs' activity on customer detail table maintain the data integrity and staffs' performance. The DBA also can create new account for new staff or reset the password for those who forgot their password by deleting the account and create the new account for the staff.

1.7. Conclusion

As the conclusion, the system that will be developed has three main modules which are valve price query, valve specification, orders, and database maintenance. In each module, there are several functions that listed in scope will be developed. This system will as possible to overcome the entire problems stated before. However there are some weaknesses but advantage of the system is more valuable to the company for the development in the future.

In the next chapter, literature review and project methodology will be written to ensure the system has better functionality after made the comparison with existed system and using the appropriate methodology to complete this project.