

## BORANG PENGESAHAN STATUS TESIS

JUDUL: PESTICIDE INVENTORY MANAGEMENT SYSTEM IN PPKPG

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**PESTICIDE INVENTORY MANAGEMENT SYSTEM IN  
PERTUBUHAN PELADANG KAWASAN PENGERANG (PPKPG)**

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**This report is submitted in partial fulfillment of the requirements for the  
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## **DEDICATION**

To my beloved parents mom and daddy

To my beloved brother and sisters

To my dedicated lecturers

To my lovely and supportive friends

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## ABSTRACT

Pesticide Inventory Management System will be developed and used by Pertubuhan Peladang Kawasan Pengerang (PPKPG) as their pesticide inventory management system. In developing this project, Visual Basic 6.0 and SQL Server 2000 will be used as system development and database management software. The development of this project is to overcome problems in PPKPG relating with pesticide inventory management such as stock counting and report producing. In order to overcome those problems, several processes have been determine such as stock control, stock delivery control, data record, data security and produce report systematically. An interview session has been conducted with PPKPG Business and Marketing Manager. Methodologies used in this project are Database Life Cycle (DBLC) and System Development Life Cycle (SDLC). Both methodologies comprise six phases that helps in project development. 3-tier architecture also has been used in system design phase where it has three layers and represented by user interface, system process and system database. Testing phase for this project has been done with PPKPG staff and they have to complete questionnaire after finished the test. Project conclusion described weaknesses and strengths of the project and contribution made by developing it.

## ABSTRAK

*Pesticide Inventory Management System* merupakan sistem pengurusan stok racun yang akan dibangunkan untuk kegunaan Pertubuhan Peladang Kawasan Pengerang (PPKPG) bagi projek sarjana muda satu. Projek ini menggunakan perisian Visual Basic 6.0 bagi pembangunan sistem dan SQL Server 2000 sebagai pangkalan data. Projek ini dibangunkan untuk mengatasi masalah pengurusan stok racun di PPKPG, dimana mereka mengalami masalah dalam pengiraan stok, dan mengambil masa yang lama untuk menghasilkan laporan yang berkaitan dengan stok racun, keuntungan, dan jual beli racun. Projek ini menyediakan beberapa proses untuk mengatasi masalah-masalah berikut seperti proses kawalan stok, kawalan penghantaran pesanan racun untuk pelanggan, simpanan maklumat dalam pangkalan data, keselamatan data dan pengeluaran laporan yang sistematik. Sesi temuduga telah dijalankan bagi mengenalpasti masalah yang dihadapi serta mendapatkan maklumat berkaitan dengan pengurusan stok racun di PPKPG. Metodologi yang digunakan dalam projek ini adalah *Database Life Cycle* (DBLC) dan *System Development Life Cycle* (SDLC). Kedua-dua metodologi ini mengandungi enam fasa yang membantu dalam pembangunan sistem. Rekabentuk *3-tier* telah digunakan dalam fasa rekabentuk sistem dimana ianya mengandungi tiga lapisan yang diwakili oleh antaramuka pengguna, proses sistem dan pangkalan data sistem. Fasa pengujian bagi sistem ini telah dilakukan oleh staf-staf PPKPG dan mereka dikehendaki mengisi borang kaji selidik setelah melalui proses pengujian tersebut. Kesimpulannya, sistem ini mempunyai beberapa kelebihan dan kelemahan serta sumbangannya telah dinyatakan di dalam bab kesimpulan projek.



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## LIST OF ABBREVIATIONS

<b>ABBREVIATION</b>	<b>DESCRIPTION</b>
PPKPG	Pertubuhan Peladang Kawasan Pengerang
ICT	Information and Communication Technology
DBLC	Database Life Cycle
SDLC	System Development Life Cycle
DFD	Data Flow Diagram
ERD	Entity Relationship Diagram
EERD	Extended Entity Relationship Diagram
RDBMS	Relational Database Management System
SQL	Structured Query Language
GUI	Graphic User Interface
PK	Primary Key
1NF	Normal Form
2NF	Second Normal Form
3NF	Third Normal Form
TPC-C	Transaction Processing Performance Council
DDL	Data Description Language
DBA	Database administrator
DCL	Data Control Language

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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1 Project Background**

Pertubuhan Peladang Kawasan Pengerang (PPKPG) is a farmer's organization that provides services and facilities relating with agriculture industries. They deal with farmers and supply agricultural utilities such as pesticide, insecticide, fertilizer, machine and many more. In order to increase their performance, they need to apply Information and Communication Technology (ICT) in their daily work. Therefore, they interested to develop a system that will lighten their work relating with pesticide inventory management.

Pesticide Inventory Management System is a stand-alone system that will be facilitating management of pesticide inventory in PPKPG. The system will solve problem that involves process counting pesticide inventory, store data, update data, search data and delete data, produce report and many more. It also will be develop to achieve the industries target that needs them to apply ICT knowledge in their organization management.

Till now PPKPG still use manual system for managing their pesticide inventory. They used Microsoft Excel to store large amount of data. So there isn't any system with database available. From this system, the data management can be systematic and well organized.

## **1.2 Problem Statement**

Several problems arise such as PPKPG's staffs have to spend a lot of time to count the pesticide stock. Sometimes they did not get exact amount of total profit as they have to count the stock manually and the possibilities of data redundancies among those stocks are higher. Besides that, pesticide data arrangement is not systematic, difficulties in finding data and no security for data. Furthermore, they take times to produce a pesticide inventory management report.

## **1.3 Objective**

The objectives of developing Pesticide Inventory Management System in PPKPG are:-

- To help PPKPG staffs manage pesticide inventory management more systematic and accurate.
- To avoid data redundancies among pesticide stocks.
- To facilitate PPKPG staff in producing report relating with pesticide inventory.
- To develop a system for PPKPG Pesticide Inventory Management as they never have any system and database relate with it.
- To develop a system that has user friendly interfaces.

## 1.4 Scope

The scope is contains target user, specific platform and modules of this system:-

- PPKPG Pesticide Inventory System is a windows based system that will be used by PPKPG staff who manage pesticide inventory.
- The system focus on the data of pesticide inventory management.
- The system can be supported by desktop and laptop that have certain specification such as Intel Pentium/Celeron processor and above, minimum of 256 MB RAM and 10 MB free space with Microsoft Windows XP platform and above.
- Modules that will be included in this system are Stock control, Stock delivery, Stock counting, Record data and Report and explanation of these modules shown in table 1.1.

**Table 1.1: Pesticide inventory management modules**

<b>MODULE</b>	<b>EXPLAINATION</b>
Login	User authentication.
Stock control	Module to alert that the pesticide quantity is enough and need to order again.
Stock delivery	Module to alert that pesticide order delivery to customer on the date
Stock counting	Counting the stock to get profit and quantity of pesticide stock
Record data	Manage and input all documents that related with pesticide inventory into database.
Report	Generate report to know pesticide information, and stock information



## **1.5 Project Significance**

Pesticide Inventory Management System will be used by Business and Marketing Manager in PPKPG. With this system, it is easier for him to organize data relating with pesticide inventory management. From this system, data management would be systematic and well organized. For example, the staffs just input the data, and the system can count the pesticide stock and produce a report for staff's reference. The system also helps staff to find record easily and avoid data redundancies among pesticide stock.

## **1.6 Expected Output**

Expectation output from Pesticide Inventory Management System that it will be functioned successfully. This system will help PPKPG solve problem relating with pesticide inventory management. It is easier to count pesticide stock and get exact amount total profit. Furthermore, the data will be more manageable and report production will be more effective.

## **1.7 Conclusion**

Pesticide Inventory Management System is a stand-alone system that will focus on database for pesticide inventory management in PPKPG. This project will replace the current system (manual system) which they still use Microsoft Excel to store large amount of data.

The main process of this project is to count and estimate pesticide stock for the next purchase. Besides, it will help them add, search and update data relating with pesticide inventory management. Hopefully this project will achieve its objectives and scopes. Besides that, it also will help PKKPG staff to manage their important data related to the pesticide inventory management.

For the next chapter, it will explain about literature review of several journal related with Pesticide Inventory Management System and methodology that will be use to develop the project.



## **CHAPTER II**

### **LITERATURE REVIEW AND PROJECT METHODOLOGY**

#### **2.1 Introduction**

This chapter contains literature review of several journals related with Pesticide Inventory Management System and methodology that will be used to develop the project.

For literature review its will explain about researches that have been done on journals relating with the project. Through those researches a lot of information and technique that has been use on existing system that can be apply to the project. Based on the review, hopefully it can help to develop the project.

Methodology is defined as the analysis of principle of methods, rules and postulates employed by a discipline or development of method to be applied within the discipline.

## **2.2 Facts and Findings**

To get a clear view about inventory management, several researches have been made through journals, books and other resources.

### **2.2.1 Domain**

Pesticide Inventory Management System is categorized under ICT in agriculture domain. This is because the project related with computer management in pesticide inventory. As we know PPKPG is one of the farmer's organizations that provide agriculture utilities to their members. So this project will act as a device that can store, analyze and manage large amount of data. Figure 2.1 shows the flow of farm management system (Saadan, 1980).