CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This chapter is written on the background of Inventory Management System (IMS), problem statement, objectives to be achieved and scope of research of “Development of a computerized Inventory Management System (IMS) software for industrial application”.

1.2 BACKGROUND

To keep business running at a good pace, a good management is required to constantly maintains a good balanced between the items keep in storage and the items going in and out. In order to achieve a good management, inventory management system as the tool to monitor the inventory level and items status is used.

Before the era of technology, Inventory Management System was a system involving paperwork to record down all the item status. It was widely used by companies to manage their storage. However as the company grow bigger and the storage increase in size where sometimes the storage has to be divided to a few location, thus the Inventory Management System would use up a lot of spaces and money to keep track of the item as it used more paper to keep track of the item and at the same time the papers need more spaces to stored. It will become less efficiency as longer time is needed to arrange the information from all the storage and find the information about a certain item within that huge pile of papers.
To overcome this, computerized Inventory Management System has been introduced to increase the efficiency despite having a large storage and making possible to search the information or a specific item in a short time. Nowadays, the computerized Inventory System has been further improved by the technology we have today and even real time item monitoring is possible for the user can make modify or view the storage status and item status with a few clicks by their fingertips.

Computerized Inventory Management System involved a computer loaded with a software capable of interacting with user using Graphical User Interface and capable of registering new items, deleting items, modifying items details, generate a label for each item, categorizing each item accordingly and store the data in a database and display it in the Graphical User Interface for the user to view or modify it. The labels are later on being used to label the items and a scanner is used to scan the labels to identify the item and view its detail on the Graphical User Interface.

There are many type of methods that can be used to label and identify an item. One of the oldest methods is barcode system. By generating unique barcode through the computer after registering a new item and its details and label the item with the generated barcode, user will be able to identify all the status of the specific item and search the item more efficiently at the computer by simply scanning the barcode using a barcode scanner. Besides that, QR code system is also one of the favourite systems used to identify the item status and it works similarly to the barcode system which require user to input the data to generate a code unique to a specific item and scan the code to obtain the item information.

This project aims to develop and validate an user-friendly Inventory Management System (IMS) software capable of storing large amount of data on items for usage in biomedical field, Small-Medium-Entrepreneurs companies and any other organization or company with a low cost.
1.3 PROBLEM STATEMENT

Inventory management has been practiced by many companies to increase efficiency of item flow. Nowadays, Small and Medium Entrepreneurs (SMEs) still practice inventory management using traditional method such as spreadsheet and order list although they are in the era of technology. Hence, Inventory Management System can be computerized to further increase the efficiency of item flow and easier to manage.

1.4 OBJECTIVES

I. To identify the most suitable software development tool to design Inventory Management System (IMS).

II. To design and develop a low cost Inventory Management System (IMS) software.

III. To validate and verify the Inventory Management System (IMS) software.

1.5 SCOPE OF RESEARCH

I. The software will be used in field of biomedical to organize the storage.

II. The software will be used by SMEs companies to organize their storage.

III. The software can be used by University Malaysia Pahang to organize university property.

IV. The software can be used by the laboratory in Faculty of Manufacturing Engineering, University Malaysia Pahang.