
Chapter 3

Technical Background

In this chapter we discuss about the technology that we are about to use and the explanation for all those technical development for the proposed system.

3.1 Technologies used for the Proposed System

This study was conducted to help PAG-ASA S. Mart Store inventory management to be more useful by adding inventory management system to help the management know if the company is doing well and the operation is going smoothly. The exact purpose of inventory management is to give the management easy access to the inventories and can form documents immediately.

Inventory management software is a computer-based system for tracking inventory levels, orders, sales and deliveries. It can also be used in the manufacturing industry to create a work order, bill of materials and other production-related documents. Companies use inventory management software to avoid product overstock and outages. It is a tool for organizing inventory data that before was generally stored in hard-copy form or in spreadsheets.

The Universal Product Code (UPC) was adopted by the grocery industry in April 1973 as the standard barcode for all grocers, though it was not introduced at retailing locations until 1974. This helped drive down costs for inventory management because retailers in the United States and Canada didn't have to purchase multiple barcode readers to scan competing barcodes. There was now one primary barcode for grocers and other retailers to buy one type of reader for.

In the early 1980s, personal computers began to be popular. This further pushed down the cost of barcodes and readers. It also allowed the first versions of inventory management software to be put into place. One of the biggest hurdles in selling readers and barcodes to retailers was the fact that they didn't have a place to store the information they scanned. As computers became more common and affordable, this hurdle was overcome. Once barcodes and inventory management programs started

spreading through grocery stores, inventory management by hand became less practical. Writing inventory data by hand on paper was replaced by scanning products and inputting information into a computer by hand.

Starting in the early 2000s, inventory management software progressed to the point where businesspeople no longer needed to input data by hand but could instantly update their database with barcode readers. Also, the existence of cloud based business software and their increasing adoption by businesses mark a new era for inventory management software. Now they usually allow integrations with other business backend processes, like accounting and online sales.

Companies often use inventory management software to reduce their carrying costs. The software is used to track products and parts as they are transported from a vendor to a warehouse, between warehouses, and finally to a retail location or directly to a customer.

Inventory management software is used for a variety of purposes, including; Maintaining a balance between too much and too little inventory, tracking inventory as it is transported between locations, receiving items into a warehouse or other location. Picking, packing and [shipping](#) items from a warehouse, keeping track of product sales and inventory levels, cutting down on product [obsolescence](#) and spoilage and avoiding missing out on sales due to out-of-stock situations.

3.1.1 Software

The required software needed by the system are excel using visual basic and macro for the inventory management system.

3.1.2. Hardware

The mandatory need of the system is the Desktop with a Monitor Screen (Minimum 1024 by 768 pixels), mouse, keyboard, and modem to have an internet connection for the computer.

3.1.3. Peopleware

The required people needed by the system are the management, Pag-asa S. Mart Store, a system developer that will in charge in the technical part of the system, and the client that will be the end-user of the system.

3.2 Project Technical Description

The inventory management is a new system made and planned by the team. The following is the content of the system according to the step-by-step procedure.

3.2.1 Company Profile

This button contains the background of the company. It will be an important component of the system to give the user the knowledge on what kind of system is made to fulfill the needs of the company. The following information is provided:

- Company Summary
- Company Ownership
- Company Location and Facilities
- Mission
- Vision
- Objectives

3.2.2 Supplier Info

This button will help the user of the database to have information to their suppliers. Here, the following information is provided:

- Control Number of each Supplier
- Name of the Company(Supplier)
- Description of the Company
- Contact Name
- Address
- City
- State
- ZIP Code
- Phone Number
- Email

- Fax

3.2.2 Order

This button will help the user of the database to list down all of the items/goods that needs to re-order for the company to have sufficient stocks. The following are the content of the button:

- Product Number
- Description
- Invoice Number
- Item Number
- Quantity
- Unit Price
- Discount (if any)
- Total Amount
- Quantity Stock
- Date of order

3.2.2 Invoice

This button will help the user of the database to have information about the orders of items/goods to a specific supplier. Here, the following information is provided:

Name of the Supplier, Address of the Company, Phone Number, Fax Number, Email of the Company, Invoice Number, Invoice Date.

- Item Number
- Description of the Product
- Quantity
- Unit Price
- Discount
- Price
- Invoice Subtotal
- Tax Rate
- Sales Tax
- Deposit Given
- Total Amount (Balance)

3.2.2 Products

This button will help the user of the database to have information about the items/goods/ products the company is selling. Here, the following information is provided:

- Product Number
- Product Description
- Unit Price
- Quantity in Stock
- Re-order Level
- Re-order time in Days
- Quantity in Re-order
- Discontinued or Continued Product

3.2.2 Inventory

This button will help the user of the database to have information about everything in inventory management system. Every button is link in this button. Therefore every detail of the inventory can be found here. The following information is provided in this button:

- Product Number
- Product Description
- Issued
- Received
- Unit Price
- Quantity in Stock
- Inventory Value
- Re-order Level
- Re-order time in Days
- Quantity in Re-order
- Discontinued or Continued Product

Recommendation:

Company:

We recommend that they hire an inventory manager and some support staffs that has a lot of knowledge with Excel so they can manage their inventory very well.

System:

For the system we will recommend that they use our system because the system is designed solely for managing inventories especially if you have a lot of supplier.

Store Management:

We recommend that they hire an inventory manager and some support staffs that has a lot of knowledge with Excel so they can manage their inventory very well.

System:

For the system we will recommend that they use our system because the system is designed solely for managing inventories especially if you have a lot of supplier.

Recommended System Functions

- **Login Screen**
- **Inventory Summary (Quantity, Stocks Remaining, Unit Price and etc.)**
- **Supplier Details**
- **Delivery Details**
- **Customer Details**
- **Receipts**
- **Calculator**
- **Product Description**
- **And others.**

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