Final

Due Date: August 22, 2018



Special Project - Atlantic Industrial Electric Supply Company Ltd

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company name

# Introduction of the project

Inventory Management is the process of efficiently overseeing the constant flow of units into and out of an existing inventory. This system is created to perform four main functions. These are:

* **Quality Management** procedures are established to allow procurement personnel to identify and track various issues that can occur such as delayed shipments, damaged packages… etc. This will however provide guidance through analytics regarding the factors which impacts quality.

# Company overview

Atlantic Industrial Electric Supply Company limited provides electrical items for sale from light bulbs and fixtures, wires, wiring devices, conduits to Variable Frequency Drives (VFDs), Transient Voltage Surge Suppressors (TVSS) and Motor Control Centers to name a few, for the Industrial, Commercial and Residential markets. The company is located at 138D Maxfield Avenue, Kingston 10. There is a customer service area where point of sales transactions are done. The company has a warehouse on location with a wide variety of varied items found in the “Electrical Industry”. To peak customer’s interest and promote items that customers may not be aware of, a display area is mounted throughout the customer service area as well as some items are displayed on the premises of the company. The company provides free conditional island wide deliveries.

# Problem statement

In this ever increasing technological era of today’s society, more companies are required to have a dominant presents online. Atlantic Industrial Electrical Supply Company Limited (AIE) has very limited visibility and minimal online presence. In today’s society more persons are shopping the Ecommerce way and AIE is lacking in this department.

## Main Features of the Existing System:

The current software being used by the company is designed for wholesale and manufacturing. This provide limited point of sale features necessary to efficiently manage point of sale transactions. However, it does a great job in the management of the wholesale and manufacturing department. The problem is, the company does very limited manufacturing. The current systems however allows for some key report to be auto generated like daily activity reports, inventory stock sheets, quantity on hand levels, reorder point, reorder quantity. Other main features are:-

* Estimate form
* Credit memo form
* Cash Sale form
* Purchase order Form

# Proposed solution

The project being undertaken is to development a software, where customers will be able to find the company online through their improved platform. This platform provides a fully functional website accompanied by a web platform which allows for Ecommerce shopping through a portal specifically designed for registered customers of the company. The software will also provide a desktop application with point of sales capabilities to handle day to day transactions from the physical location of the company.

# Anticipated benefits

The project to create the Inventory Management System includes:

* Creating distinct product user based on their roles and permissions.
* Authenticate users at their login.
* Provide the list of stock available.
* Facility to add, update and delete stock items.
* Facility to purchase stock items.
* Facility to generate invoices.
* Facility to generate estimates and credit memo.
* Facility to cancel or return stock items.
* Facility to generate and print orders.
* An interface to view and edit user profile including password changing.
* Mechanism to reset the password in case a user forgets it.

The objectives of developing this system are:

**Improvements in control and performance**

The system is developed to cope up with the current issues and problems of the inventory. The system can add user, validate user and is also bug free.

**Save costs**

After computerized system is implemented less human force will be required to maintain the inventory thus reducing the overall cost.

**Save time**

The Procurement Officer is able to search records by using a few mouse clicks and few search keywords thus saving valuable time.

# Preliminary investigation

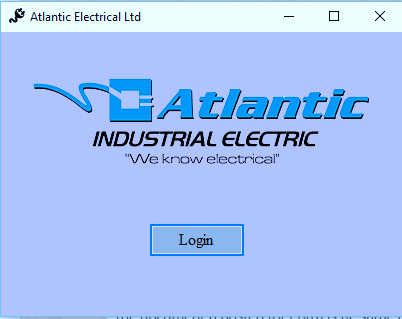
## Feasibility study

## Data gathering techniques

# Detailed Analysis

## Functional requirements

### Welcome Page



Description of feature:

This feature allows user to determine if they wish to enter the system before access is granted. If the user does not wish to log into the system, they will be prompted to either continue the login process or exit.

Functional Requirements:

* User will click login button.
* User will then be directed to “Login” screen.
* The user is able to logout after they have finished using system.

### User Login



Description of feature:

This feature provides for a User to login before being granted access to a defined section of the system based on their level of privilege(s). They are required to enter username and password information before they are allowed to enter the system. If user credentials provided do not match what is stored in the database then access to system is denied.

Functional requirements:

* User defines ID information and Password when being registered.
* Using data validation processes, users will only be granted access to the system if all login fields match what was stored in the database at registration.
* Based on a user type (Admin, Teacher), they will be granted entry to the system
* The user is able to logout after they have finished using system.

### Add User

Description of feature:

This feature can be performed by the Procurement Officer or Administrator to register new users by creating a new account.

Functional requirements:

* The system is capable of entering details for new users.
* System must be able to verify information.
* The system is capable of clearing registration form.
* System must be able to delete information if information is wrong.
* The user is able to logout after they have finished using system.

### Reset Password

Description of features:

This feature allows the user to reset their password if they have forgotten what was created before.

Functional Requirements:

* The system is able to accept old password from the user.
* The system is able to accept new password created by the user.
* System must be able to verify if new password corresponds with confirm password feature.
* The system must be able to update the database with the new password created by the user.
* The user is able to close the form once they have finished making the updates.

### Inventory List

Definition of feature:

This feature allows for the addition of a new stock items to the Inventory Management System. The system must be able to store:

* Item (stock)
* Description of item

Functional requirements:

* This form will allow for new stock items to be added and stored in the database.
* The system is capable of clearing the form to facilitate new entry.

### Manage User

Description of feature:

This feature allow for an administrator to manage the users of the system.

Functional requirements:

* Administrator will be able to disable a user if required.
* Administrators will be able to delete a user when it’s deemed necessary.
* Administrators will be able to search the database for any specific user by typing the keyword in the search field
* If an Administrator changes their mind about managing a user, they are able to cancel return to the previous table.

### Manage Inventory

Description of feature:

This feature allows for stock items to be added to the database in detail for efficient rotation through the library.

Functional requirements:

* The user will be able to update and delete stock items from the database.
* The user will be able to close the form after they are finished.

### Orders

Description of feature:

Functional requirement:

### Invoice

Description of feature:

Functional requirements:

Credit Memo

Description of feature:

Functional requirements:

### Purchase order

Description of Features:

Functional Requirements:

### Return form

Description of Features:

Functional Requirements:

### Estimate Form

Description of Features:

Functional Requirements:

## Functional Requirements – Web Application

### Home page

Description of Features:

Functional Requirements:

### User login

Description of Features:

Functional Requirements:

### Register new user

Description of Features:

Functional Requirements:

## Nonfunctional requirements

* Product Requirements

### Usability Requirement

The system is designed for a user-friendly environment which allows easy navigation between various screens in an efficient manner that allows for greater success level in achieving the desired results.

### Efficiency Requirement

This Inventory Management System will allow users to quickly access information relating to stock items in inventory. This will provide for much faster transactional turnaround time as searching becomes very simple in identifying the location and availability of stock items.

### Reliability Requirements

The system should store data accurately for users to access credible resource information.

### Implementation Requirements

This software would require installation on the computer system at the warehouse with a maximum of 4 hour training for Procurement Personnel.

### Resources Requirement

Computer system comprising of Monitor, Keyboard, mouse and a system unit.

### Maintainability Requirement

Easily maintained by system administrator.

### Availability Requirement

The system is available 100% for the user and is used 24 hours a day and 365 days a year. The system shall be operational 24 hours a day and 7 days a week.

### Delivery Requirements

The scope of work outlined is scheduled to be delivered on August 31, 2018.

## Process modeling – DFD (For websites, also include Website structure, Storyboard)

## Data modeling – Entity relationship diagram

# Describe HW & SW Requirements

|  |  |
| --- | --- |
| Processor | Minimum 2.5Ghz Processor |
| Operating System | Windows Vista ,Windows 10 |
| Memory | 4GB Ram or more |
| Hard Disk space | Minimum 500 GB For Database Usage |
| Database | Microsoft SQL Server 2014 |
| Internet Connectivity | 25MB or faster |
| Internet Browser | Google Chrome, Mozilla Firefox or Microsoft Edge |

# Design

## Database Design (Data Dictionary)

## I/O Design

## Program Design (Pseudocode or Flowchart)

# Project Closure

# User Manual

# Technical manual