# ABC’s Inventory Management System

## Project Vision

To be a leading digital retail Company for men’s clothing in New South Wales through the utilization of the appropriate technology in inventory management.

## Introduction

ABC is a retail Company that deals with men’s clothing in the New South Wales. Due to the increasing demand in managing inventory, there is a need for the ABC’s management to adopt an appropriate technology that would make this task easier. This can be achieved by employing a digital system that would enable the movement, monitoring, and distribution of stock across all the stores.

## Positioning

## Problem Statement

The problem affecting the ABC Company is the management of its inventory due to increasing stock that makes it difficult for the employees to monitor its movement and distribution.

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| The problem of | Tracking the movement of the products.  Stock theft.  Finding the current products based on the products’ information such as product code, location of the product, product image, etc.  Check the quantity of the product.  Re-viewing the records of the stock’s transfer. |
| affects | Store staff  Ware house staff  Customer  Supplier  Company’s owner |
| the impact of which is | Could not track the movement of the products.  Lack of detailed information about the movement of the stock and stock theft.  Finding the current products based on the products’ information such as product code, location of the product, product image, etc. is time-consuming.  Hard to check the quantity of each product.  Hard to re-viewing the records of the stock’s transfer |
| a successful solution would be | Company will get detailed and precise information about the stock movement and stock theft.  Employees could look up current stock contents of the warehouse and each store and then request stock as required.  Employees will be able to send stock digitally i.e. automatically make an update to the database when stock is sent.  Distribution of stock would also be much easier for the warehouse staff as they will know the quantity of each stock for each store.  Implementing a digitized inventory management system that would ensure easy management, monitoring, movement and distribution of stock thus saving time and cost. |

## Product Position Statement

The product intends to meet the demand for men’s clothing in the marketplace. The implementation of the digital technology would facilitate easy movement of the product to the market.

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| --- | --- |
| For | men |
| Who | to meet the increasing customer demand |
| The (product name) | Men’s clothing |
| That | ere of high quality  keep the product always available for selling  quickly serve the customer  track the quantity of each product |

## Stakeholder Descriptions

## Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| ABC owner | This is a person who is in charge of the Company. | * Coordinate and oversees all the activities of the Company. |
| Financial Manager | This is a person who is in charge of financial activities. | * Ensures that the revenue generated is well utilized, keeps financial records, updates financial records. |
| Store Staff | Are the individuals who work in the stores. | * Search the products/ Scan the products’ barcode * Check the products’ information * Send the request to warehouse staffs to get the products * Check the records. |
| Warehouse Staff | Are the individuals who work in the warehouse and act as admin | * Receive the request from store staff * Send the products * Check the products’ information * Add new products, update products’ information * Delete products * Check the records * Add new staff account. |
| Project Manager | This is a person who is in charge of project activities. | * Actively Planning * Making Schedules and dividing task * Making sure everyone is working in accordance with the schedule * Conducting Meetings * Making sure the overall work of the team is of high standard * Leading the team * Reviewing final version of products and posting it to the submission document * Documentation * Programming (includes debugging and testing) |
| Developer | This is a person who is in charge of coding activities. | * Making sure codes are of appropriate standard * Making sure each team member is on schedule with their coding task * Reviewing code * Make sure there is proper collaboration of codes * Make sure the product is of high standard * Documentation * Programming (includes debugging and testing) |
| Documentation and Marketing | This is a person who is in charge of documenting and marketing activities. | * Making sure all the documentations are of appropriate standard * Preparing reports for each iteration * Preparing reports for meetings with the Sponsor * Making sure team members are on schedule with their documentation tasks * Reviewing documentations if required * Documentation * Programming (includes debugging and testing) |
| Business Analyst | This is a person who is in charge of analyzing the business activities. | * Assisting with the business case * Planning and monitoring * Eliciting requirements * Translating and simplifying requirements. * Requirements analysis |
| Subject Matter Expert | This is a person who define the business processes, the business policies and the application requirements. | * Validate the requirements and deliverables that describe the product or service that project will produce * Provide input for design and construction of test cases and scenarios and may also validate executed test results. * Provide input into and create and execute user documentation and training material |
| Database Administrator | This is a person who is in charge of database management. | * Monitor performance and manage parameters in order to provide fast responses to front-end users. * Map out the conceptual design for a planned database. * Develop, manage and test back-up and recovery plans. * Consider both back-end organization of data and front-end accessibility for end-users. |
| Designer | This is a person who is in charge of designing the user interface of the application. | * Develop intuitive, usable, and engaging interactions and visual designs for system. * Break any design problem done into viable actionable chunks and solve them with clarity and precision. * Collaborate with cross-functional teams throughout the design process. |
| System Analyst | This is a person who is in charge of solving problems related to computer technology. | * Defines application problem by conferring with clients; evaluating procedures and processes. * Develops solution by preparing and evaluating alternative workflow solutions. * Ensures operation by training client personnel; providing support. |
| Tester | This is a person who is in charge of testing the bugs or issues of the system. | * Monitoring applications and software systems. * Writing and executing test scripts. * Running manual and automated tests. * Writing bug reports. * Reviewing documentation. * Designing test to mitigate risk. |

## User Environment

The working environment of the target user will be a Windows Software where every activity and transaction is entered into the system. The employees can access to the Windows Software by the store’s CPU or warehouse’s CPU. Thus, the target user would conduct his/her duties in an effective manner. However, all the stakeholders would be involved in the implementation of the new digital system, hence, the number of individuals involved in the implementation of the task is bound to change. Each task cycle can take approximately one week but this is also bound to change. The environmental constraint that can limit the implementation of this project is periodic licensing of the system by the producer. The mobile Apps are commonly in use current and can be integrated with this new system to ensure easier accessibility of the Company’s products.

## Development Environments

The following are the development environments for the system:

* JDK 9 and JRE 9 installed on the respective platforms.
* IntelliJ IDEA Ultimate version. (This can be downloaded using your respective CSU student ID)
* JDBC Library added to the project within the IDE. The library can be downloaded through the following link:

<http://www.java2s.com/Code/Jar/j/Downloadjdbcjar.htm>

* MySQL Workbench Installed on the respective platforms.
* Design documents using draw.io which is to be saved on a separate location to the repository. Finalized drawings to be then screenshotted and posted on the repository.
* Project Libre calendar set to 7-day work week. Working time set from 8 am to 5 pm. However, actual working time can be different to this.

## Product Overview

## Needs and Features

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| --- | --- | --- | --- |
| **Need** | **Priority** | **Features** | **Planned Release** |
| Limit the people access system. | 8 | Users enter their assigned username and password to get access inside the system. Users are able to operate the system for their task after successful log in. |  |
| Find the product’s information through product code | 7 | Users enters product keyword or product code searching for the desired product of the store inside the system. |  |
| Need to add product, update product’s information, delete the product from system | 8 | Products that are needed to be added to the system and product with no stock available in the warehouse are managed by the actor authorized. |  |
| Request multiple products, check the products which are requesting. | 9 | Users selects the items from the list of products which get saved in cart list. The cart list can be reviewed by the actor. The items listed in the cart can be modified, deleted and even add additional item. |  |
| Send the information of the request to warehouse side | 8 | After the confirmation of the order, the request is sent to the warehouse notifying them with all details including shipments details. |  |
| Send the stocks as the request from store. | 7 | The product item enlisted in the cart are properly organised to be shipped. The stocks are double checked and sent to the requested store. |  |
| The warehouse staffs want to add the new store staff account | 6 | Warehouse staff reviews the new applicant’s information and decides whether to hire a new staff or not. |  |
| Check the record of all requests. | 8 | From all the collection of archive, database, sales information, etc. a report is created, the reports are properly checked by the stakeholders once every month. |  |

## Other Product Requirements

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| --- | --- | --- |
| **Requirement** | **Priority** | **Planned Release** |
| User manuals | For guidance | Before operation |
| Labeling | Identification | During packaging |
| Online help | Efficiency | During placing of orders |
| Installation | Security & efficiency | During implementation |
| Reasonable response time | Performance | During testing |
| Login requirements for the users | Security | During implementation |
| Warehouse staff have more functionalities than store staff | Security | During implementation |
| The system should be available 24/7 | Availability | After deployment |
| The system can have at most 100 hours of downtime per year | Reliability | After deployment |
| The system must have a white or gray background while buttons and links should have black font color so that these elements are very clear | Usability | After system worked perfectly |
| The system must be able to handle 1000s of requests per hour | Capacity | During testing |