CS3305 - Team Software Project

Deliverable 1

Project Brief

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Table of Contents

Introduction

The aim of our project is to create a warehouse/factory inventory management software, which will allow for easy monitoring and processing of stock and orders centrally throughout the company. Stock will be able to be managed from the point of arrival to the warehouse/factory to the final point of delivery to the customer, keeping an audit trail along the way, for example: ensuring correct storage requirements at all times. This software will greatly improve the reputability of a company, along with making processes within the factory/warehouse more straightforward and manageable. Stock loss due to mishandling and incorrect storage is a big problem for companies, especially those dealing with fresh foods for example, and our software will help decrease this loss.

What the product is:

- This is a stock management system for keeping track of stock location and information about the stock, like the expiry date, time of acceptance into the building and by whom, time of movement, storage conditions and movement duration.
- It will allow managers to see where certain boxes/ pallets of product are located. For example, in what building, in what room within the building and upon what shelf in the room the product is located. All of this will be able to be configured by the company using the product and can be made company-specific for example cold or ambient conditions.
- The product should be easily scalable, making it easy for companies to add new buildings, rooms and shelves which are all easily identifiable and manageable.

What the product does:

- It will allow employees to scan in items when they are being received, dispatched, handled, moved and offers an appropriate level of an audit trail.
- The system will have a web interface for checking information about each item, such as its location and any comments made by employees about the product, for example.
- This product will be able to send notifications to managers when certain events occur. For example, if an item has expired but is still in storage, a manager will be notified to authorise its removal or should an item need to be moved within the storage area, a manager will be able to alert an employee to carry out the task.
- From the web application, the team will be able to generate PDFs containing information about the product. For example, an employee working in dispatch would be able to print a PDF containing the QR code, delivery address and comments made about the product e.g “Fragile” or “Must be stored below 5°C”.
- From the web application, the user will be able to generate a spreadsheet containing all information about the current stock. This would be mainly be used for stock takes etc.

What problems does the product solve:

- As it stands, Stock management within a warehouse/factory can be time-consuming and error-prone. Employees are required to write logs of where items are stored and being moved to. If they make a typo or mistake this can lead to not being able to find the item, incorrect storage conditions, or incorrect handling. Scanning a QR code, for example, is a lot faster and easier, along with being more accurate and efficient.
- Being able to keep track of stock online in real-time and view information about individual products as well as being able to automate actions such as reordering stock. For example, if the number of pallets within a building drops below a certain threshold then an order could be placed with the appropriate supplier
- It would be able to alert the employee and/or manager when goods are moved to an invalid/wrong location. For example, if a pallet of goods is moved from the freezer to a non-chilled room. This would prevent the potential loss of goods and revenue.
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What other solutions are “out there”:

What other solutions are "out there" (in the market):

- Currently, solutions existing require staff and management to keep manual logs of storage conditions, storage locations and comments etc… This can be very error-prone due to the factor of human error, and information can often be interpreted or mislaid, along with allowing alteration to occur.

Further Features that could be added:

More features we could add if we have time:

- Add the ability to add photos of the product.
- Be able to see a heat “map” of where products are constantly being stored. This would allow users to see what space is not being fully utilized.
- Mobile Optimisation

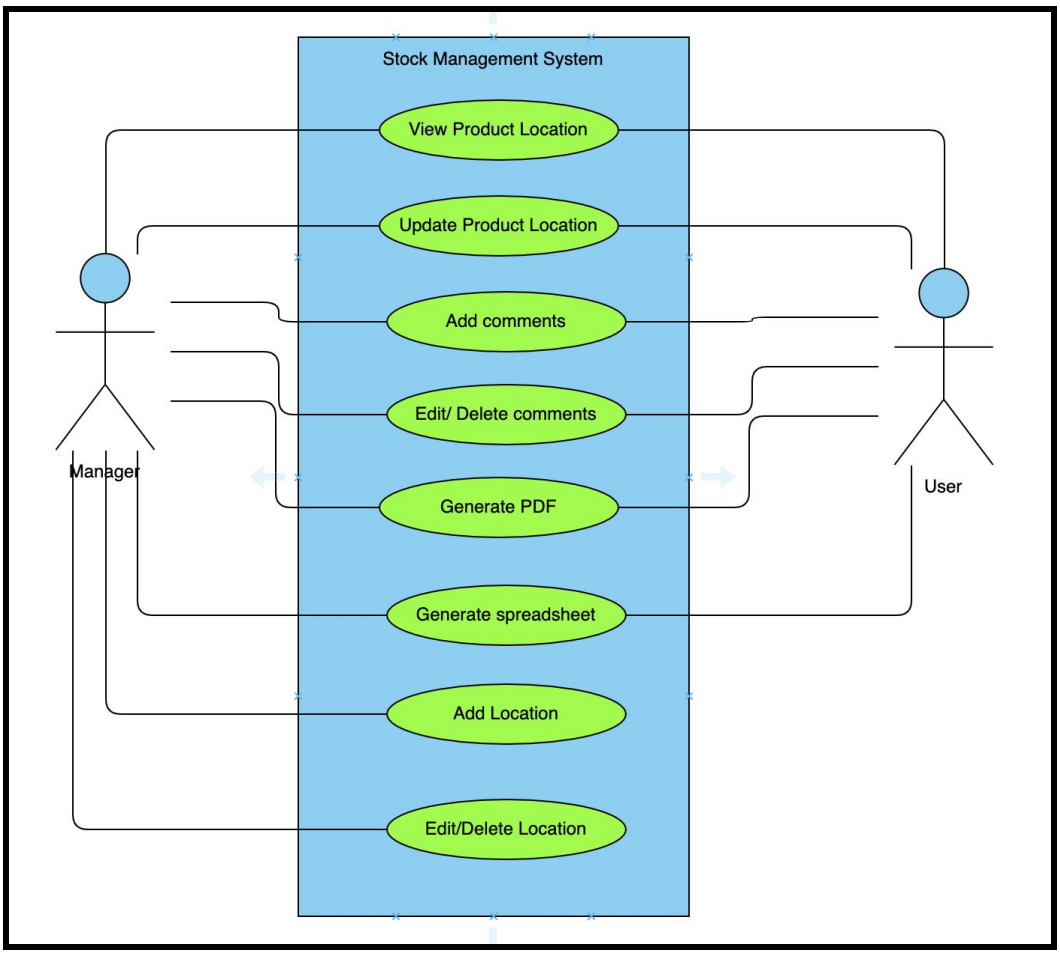

Figure 1.0. Sample Use-Case Diagram