Inventory Management System

Final Project Contract

Mentor

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Group Members

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Executive Summary

The goal of our project is to create both an inventory management system (IMS), and a mobile application that will allow users to easily interface with our system. First, we will build a system which stores information about items and allows users to easily search, retrieve, and modify the information it contains. Secondly, we will design and build a mobile application that can be used with the IMS. The application will allow a user to easily add new items to the system, by storing information about the object and by uploading photos of important information on the object, such as the serial number. Together the application and the IMS will form a robust system.

Problem Statement

The goal of our project is to create a system that will make it easy for groups, both widespread and local, to keep track of a large amount of inventory of different objects. We also intend to automate the process of exporting information from our system and uploading it to popular eCommerce sites. This would make it exceptionally simple for a business to manage an online store.

The primary difference between our project and other existing systems is our application. Other inventory management systems make it easy for businesses that deal with more traditional inventory, e.g. orders that are easily tracked and documented, such as an order for pens. In contrast, our system aims to make it easier for businesses that deal with more non-traditional inventory, such as a junkyard which has many unique items that don't already have something like a UPC code. When new items come into the junkyard, a worker can snap a picture of the item, record its serial number, fill in some relevant information, and add the object to the IMS. Now the object can be searched, it is identifiable, and can easily be added to an eCommerce site.

Expected Outcomes

We expect to create an inventory management system that can create, modify, delete, and export items. This system will be cloud based, and allow users to update the system from anywhere as long as they have the necessary credentials to do so. The end application will be an Android app developed with Google material design, which can seamlessly integrate into any preexisting environment. The application will have the option to utilize NFC technology built into all modern phones in order to create tags which can be placed on items for easier tracking. The application will allow for entering, removing, editing, and searching for items within the database. Everything will be automatically uploaded to an online server where there will be an additional interface for greater control over inventory. All of this will be verifiable through simply testing the life-cycle of any item coming into inventory, being searched, purchased, processed, and shipped out. At all steps the database should maintain the appropriate item records and be accessible.

Assumptions

The primary assumption made with this project is that the user would have access to an Android smartphone as well as the hardware necessary to implement their choice of tagging features. For purposes of demonstration we will also work with the assumption that the user wants to use this in conjunction with an eCommerce website such to sell the items being added to inventory. However, we aim to make the final product as generally applicable as possible, and not require the website.