Inventory Management System

System Requirements

1. Introduction
   1. **Definitions**

*Scanner*: A device used to scan barcodes on objects.

*Client*: The software that will be running on a user’s machine.

*Server*: The hardware used to serve an API and expose its actions to the Internet.

*Server code*: The API that will receive input from the client and perform an operation on the input data.

*Firm*: A company using the inventory software system.

*Product*: A persisted piece of information that represents a firm’s consumer offerings in the real world.

*Item*: A consumer offering that is not yet in the inventory system.

* 1. **Acronyms**

*IMS*: Inventory Management System

1. Overall Description
   1. **User Characteristics (Roles)**

*Admin*: A user of the system that has full access to the inventory and elevated permission levels for all management features of the IMS.

*Manager*: A user of the system that has full access to the inventory and elevated permission levels for all management features of the IMS, besides creating a new user with the role of *Admin* or *Manager*.

*Supervisor*: A user of the system the that has limited access to the inventory, the user cannot add new suppliers, cannot deactivate items, cannot audit the inventory, but can access all other inventory features. This user can only create new users with the role of *Standard*.

*Standard*: A user of the system who can only view item details, can “sell” items, restock item inventory. This user cannot create new users.

* 1. **Constraints**

Client: An installable executable program that will run under Windows 10 environment.

Server: A managed runtime container with a Linux operating system underneath.

1. Specific Requirements
   1. **Functional Requirements**

* Must be able to view a summary of the current inventory of the firm’s products.
* Must be able to register new items to the inventory by scanning the barcode of the item.
* Must be able to restock items in the inventory by scanning the barcode of the item.
* Must be able to edit a product’s metadata, including size, categories, and variations of the product.
* Must be able to delete (deactivate) an item from the inventory, but maintain the item data.
* Must be able to view deactivated products.
* Must be able to register a new firm.
* Must be able to register a new user.
* An admin must be able to delete an existing user.
* An admin must be able to start a new order sheet.
* An admin must be able to add items an existing order sheet.
* Might be able to send notifications via email when the inventory count of a product drops below 5.
  1. **Non-functional Requirements**
* Client application must run on Windows 10.
* Client application executable must be less than 25 megabytes.
* Client application should not require significant time and effort in training.
* Client application expects an Internet connection.
* The client scanner must have a wireless range of at least 100 feet.
* The application must use a client-server model architecture.
* The client-side code must be written in the C# programing language.
* The server-side code must be written in the Go programming language.
* The application must utilize a PostgreSQL database for persistent data storage.