

General Inventory Management System

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Executive Summary

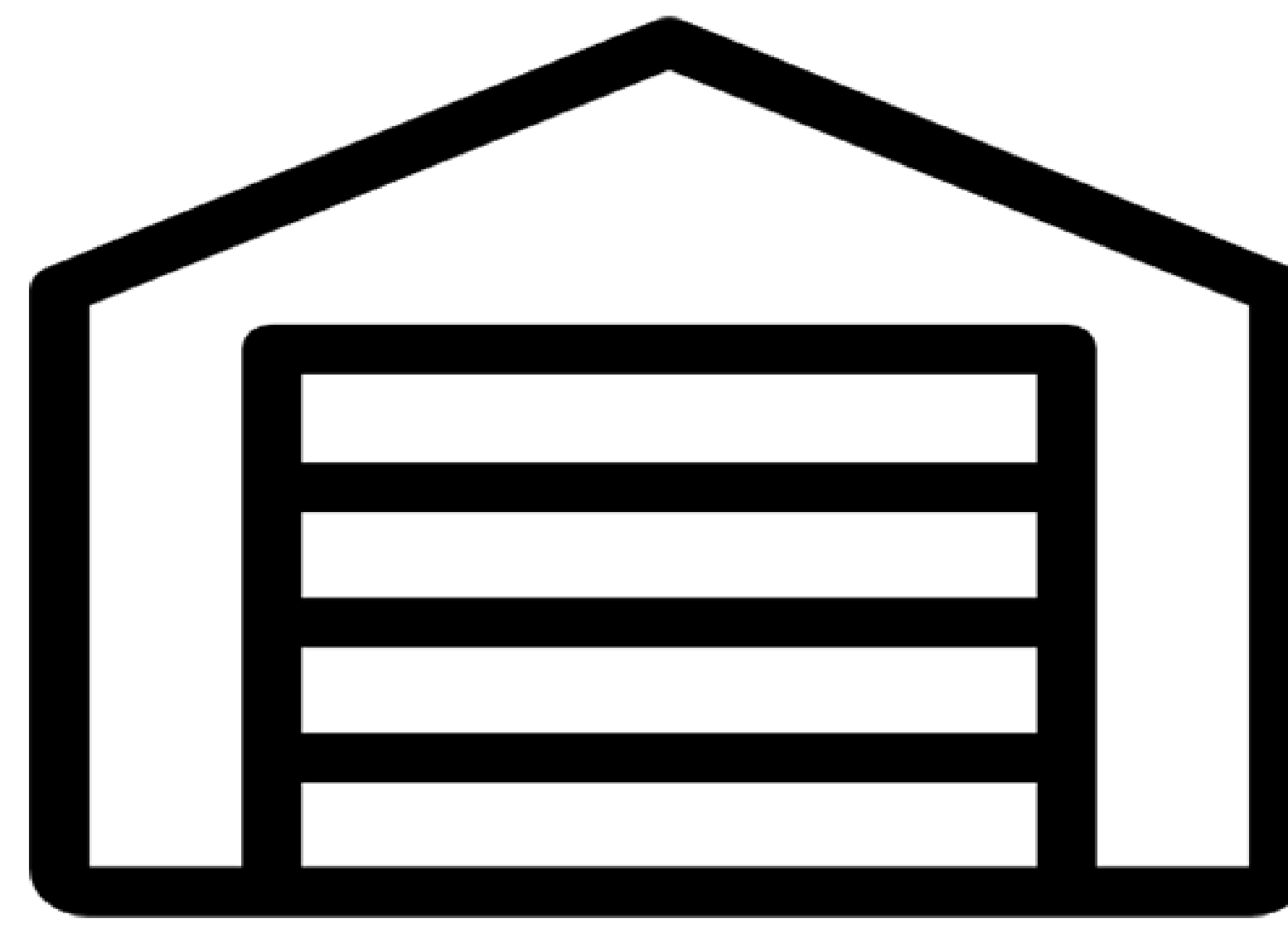
Inventory management systems are a vital aspect of retail stores as well as e-commerce owners and operators. They are used for tracking inventory to maintain an accurate count of the current stock of items that are on hand and possibly running low. These systems can also be quite expensive to the end user. Also, they can have a lot of extra features that aren't always needed. The idea behind this project is to have basic and easy-to-understand functionality while maintaining a low cost for the customers. Our system is built so that a homeowner could use it for their own valuables in the event of fire or theft.

Background

Our team is tasked with creating a web-based inventory management application. The database we chose to hold our customers data is Mongo DB. Mongo DB is a NoSQL database. Mongo DB can be used at low or even no cost. Encryption of the data can be easily accomplished using the object data modeling library mongoose. The back-end of the application was implemented using TypeScript. TypeScript is free and open sourced. It is a typed language that is built on JavaScript. The front-end of the application is built with the JavaScript library React Native. React is an open-sourced language that was developed by Meta (formerly Facebook). To host the website, we used a Digital Ocean Droplet.

Conceptual Design Phase

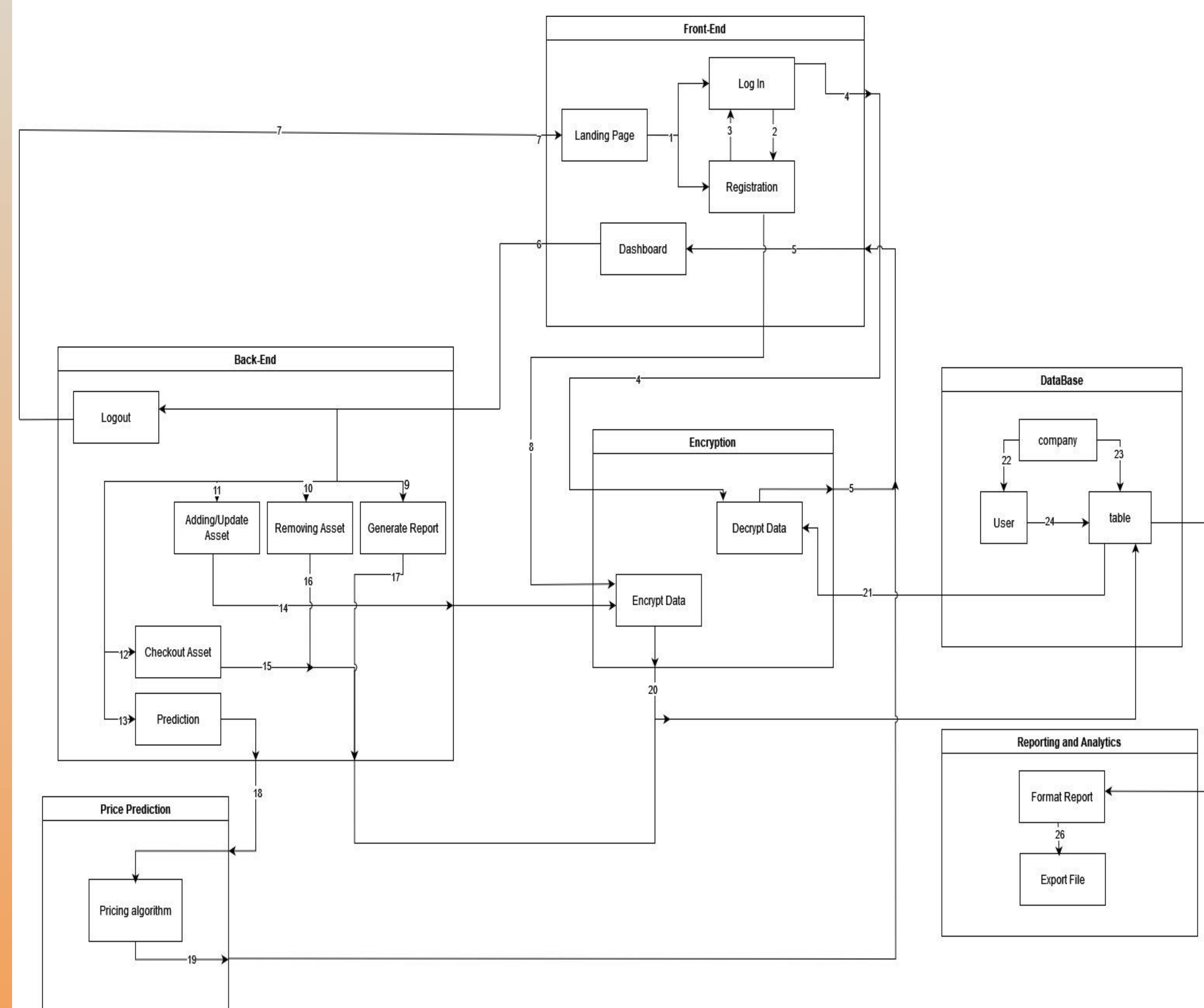
Our system is designed to be simple yet effective. Encrypting the customers data on the system to keep it confidential was among the highest priority. The system was also designed to generate various types of reports for the customer based on the items current status. The price prediction is meant to help the customer get an idea of the current market value of the items currently in their inventory.



Key Features

- Each entry can have multiple pictures of the asset if desired.
- A report can be generated based on if an asset or assets are stolen, checked out, in stock, or on all assets.
- The user can include custom categories i.e., power tools, laptops, computer monitors, etc.
- Data entries for item description, images, and serial numbers is encrypted.
- The user can search for assets based on the category.
- The application can be accessed via computer, tablet, or cell phone.
- The user can modify the custom category.
- The user can modify entries as needed.

Detailed Design Phase



Future Features

- Hand scanners will be integrated to scan asset tags with barcodes to add the asset to the inventory
- A price prediction algorithm will be implemented to estimate the current market value of the assets in the inventory
- Allow the user to make entries offline and automatically update the database when an internet connection is established
- Allow each account to have multiple users.
- Send a confirmation email to the user to ensure they are using a valid email address

References

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