# Inventory Management System

## Deliverable -1

## Code Crafters

## Group List

1. Sameera Ellanki
2. Varsha Jampala
3. Nikhil Kuchipudi
4. Naga Shivani Pinnamaraju
5. Jaswanth Sai Donepudi
6. Manogna Reddy Anugu
7. Atluri Varun Chowdary
8. Naga Bindu Kondaveeti

# Project description

For the retail shops those who wants a better management software experience for streamlining their supply chain along with their storage in warehouse, the inventory management system will provide a smooth experience. In this competitive environment of businesses, the management of stock plays an important role to be effective in the business compared to others.

Unlike other management software’s those who only provide either of the stock management at the shop or at the warehouse, our inventory management system with warehouse support not only makes better organizations for the stock in shop but also the stock in warehouse. In addition to the that this also provides support for bin locations for ease of stock retrieval and stock management. The key modules that are going to be in the software are the sales order to manage and raise the invoices, purchase orders to create bills for ourselves and make a history of what stocks are purchased in the past. Items, customers, vendors, warehoused and bin locations are the rest of the modules. All the modules are interconnected to prove the best experience for the user.

In conclusion, our inventory management software is a good solution for the retail shops looking to organize their stock and flow of items.

## Hardware Requirements

* Intel i5 10th generation processor to run the development build or Intel i3 8th generation processor to run the production build on a computer is required at minimum any less than that will may lead to lag in the software.
* A storage of over 100 gigabytes should be enough to smoothly run an windows operating system and run the project and its assets along with the supporting software’s.
* Total RAM of 4 gigabytes is good enough to run the project with out running out of memory for both the operating system and the project itself.
* No dedicated graphics card required for this project because nothing of the complicated rendering is done in this project.
* A good wi-fi with a bandwidth over 200 mbps is required for the connectivity of online sources and git transfers.

## Software Requirements

* The operating system that this project is going to be build on is windows 11. This is chosen because, most of our team is flexible to work in windows and everyone has easy access to it.
* Programming Languages and libraries
  + JavaScript (React / Redux / React Router / Axios / Express)
  + HTML5
  + CSS (SCSS preprocessor)
  + SQLite (Database Engine)
* Server Environment: Node
  + Node is used here because we have a flexibility of executing JavaScript on the server side because node natively supports JavaScript. We use express js to write API calls to access the SQLite database using node.
* Development Environment:
  + Version Control: GIT
  + IDE: VS code: Chosen for its simple look and its support for many extensions.
    - Extensions used:
      * ESLint
      * React snippets
      * Prettier

# Project Timeline (Gannt chart)

A diagram with several rectangular boxes

Description automatically generated with medium confidence

# Risk management

### Risk 1: Data security and privacy concerns:

* The software may store very sensitive information about the customer or his company, so we must be very careful regarding the security of the data.
* To reduce the risk of data breaches we must be very careful about the cyber security aspect of the product.
* **Monitoring:** One wrong move towards the security aspect may lead to data breaches and may also cause legal issues that can be filed by the customer.
* **Re-evaluation:** The measures towards this may include encrypting the data and restrict the data access as much as possible to the people and conducting security checks regularly.
* **Contingency Plan:** Adding authentication can help in this situation to the product and session management to reduce the risk of data being compromised on the end of the customers end.

### Risk 2: Integration Challenges with other inventory softwares:

* If the customer already has another inventory management software but he wants to switch to our product he may face some problems such as difficulty in migrating all his orders and items.
* Not only that we might also have to deal with incompatible information that the old software may have, and we don’t have.
* **Monitoring:** If a critical information is required but when migration, we found out that the previous product don’t store or can’t generate it.
* Some entire modules may not have the migration support.
* **Re-evaluation:** Since we are introducing a new feature and may need additional information than the original software can provide.
* **Contingency Plan:** Running migration on a large scale of customers may need a exceptional amount of computing power and human resources.

### Risk 3: User Onboarding and training of the product:

* Sine the product is new even though we might have user manuals that might not be enough to satisfy some customers, so we might need a work force to actively train the customers on our product.
* If the user onboarding is not done properly the user might not end up liking the product and end up switching to another product and this may result in loss to the product team.
* **Monitoring:** Conducting training sessions before and after the migration will help the end user to get to know the product usage quickly.
* **Re-evaluation:** We should allow a group training session where multiple people will attend and ask doubts about the product usage, to make it quick for a batch of the customers.
* **Contingency Plan:** The support team should work their utmost to provide everyone with appropriate answers to the user questions, to achieve this, we need an additional team who know every nook of the project.

# Team Roles

1. Sameera - Project Management; and demo and presentation lead
2. Varsha - Implementation for backend and System Administrator lead
3. Nikhil - Requirements lead and helps in system administration
4. Shivani - Implementation lead for front end
5. Jaswanth - Configuration management lead and helps in design of the project
6. Manogna – Documentation lead and helps in testing of our project model
7. Varun – Testing lead and helps in documentation
8. Bindu – Design lead and helps in configuration management

# Member Contribution Table

|  |  |  |
| --- | --- | --- |
| Member Name | Contribution description | Overall Contribution (%) |
| Sameera | Worked on project description and Risk one | 12.5% |
| Varsha | Worked on project timeline and project description | 12.5% |
| Nikhil | Contributed to risk two and Gannt chart | 12.5% |
| Jaswanth | Calculated Hardware requirements | 12.5% |
| Varun | Worked on risk analysis both one and three | 12.5% |
| Shivani | Structured software requirements | 12.5% |
| Bindu | Worked on risk three and contributed to Gannt chart | 12.5% |
| Manogna | Formatted the document and helped with project timeline | 12.5% |