

Project Name: Retailer Inventory Management System

Branch E-DAC SEP-2020

Documentation On

**“**Retailer Inventory Management System**”**

E-DAC SEP 2020

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1. **Introduction:**
   1. **Document Purpose:**

This document explains the system requirements and scope for developing

Retailer Inventory Management System. Inventory management is the backbone

of any business operations. Every organization constantly strives to

maintain optimum inventory to be able to meet its requirements and avoid over or under

inventory that can impact the financial figures.

## Project Background:

Retailer Inventory Management System could divide the Three main parts, Retailer

part, Wholesaler part, Admin part.

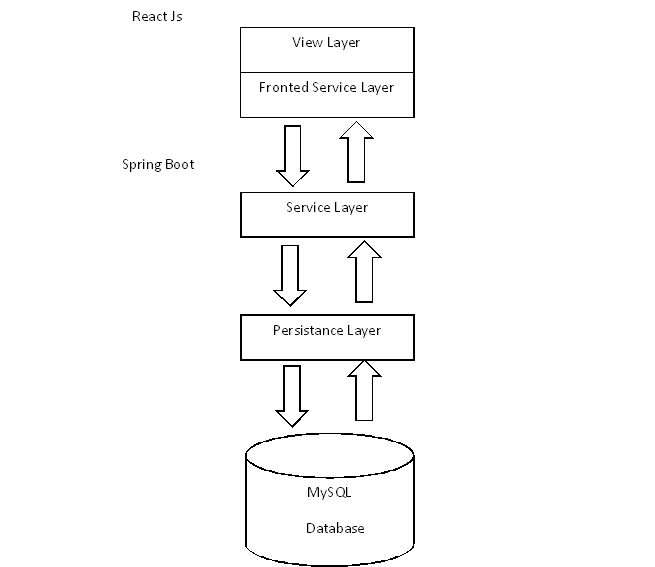
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## Aim & Objectives:

Application use to maintain all the information Retailer Inventory Management System. Retailer can view the product of required online. Save time of managing all the tasks for searching product. Reduce the time consumption required for visiting different places. Inventory is always dynamic. Inventory management requires constant and careful evaluation of external and internal factors and control through planning and review.

# Architecture Design:

Following diagram shows the details of the Retailer Inventory Management System architecture.



This System consist of three tiers as listed below,

* First tier
* Second tier
* Third tier

## First Tier:

Reacts helps build interactive and dynamic single page applications (SPAs) with its compelling features including template, two-way binding, modularization, RESTful API handling, dependency injection, and AJAX handling. Designers can use HTML as template language and even extend HTML syntax to easily convey the components of the application.

We don’t need to rely on third-party libraries to build dynamic applications with React.

## Second Tier:

**Spring Boot**

1. The major advantage of spring-boot is **auto- configuration feature**. Based on dependency available in pom.xml file it will create beans automatically during application startup.
2. In spring boot **Tomcat** (Web server) is embedded by default to make our application run.
3. In spring boot every dependencies version will be automatically added by spring boot parent project. Parent project will do the auto-versioning stuff for us.
4. In spring boot we do not need to configure configuration in web.xml. As there is **no web.xml** file all will be automatically identified with the help of annotations and spring boot internal configuration feature.
5. **Externalized Configuration** is also a key feature in spring boot. That means centralizing or moving all properties required for us to spring cloud

config server so that multiple services will talk to config server to fetch the properties file.

1. Spring boot support **Yaml file configuration** which was very light and will reduce typo errors at compile time based on your editor.

## Third Tier:

Third tier consist of a Persistence Layer and the back end i.e. the database of Hospital Appointment System.

## Persistence Layer:

The persistence layer deals with persisting (storing and retrieving) data from a data store (such as a database, for example).

Persistence in spring in normally done through a DAO (Data Access Object) layer. The Spring DAO layer is meant to encapsulate the persistence mechanism, so the same application data access API would be given no matter if JDBC, JPA or a native API were used.

## Java Database Connectivity (JDBC):

JDBC is used to provide database connectivity from java to database. Using Java database connectivity we can update/retrieve data to/from database with java programs. The main advantage of using JDBC is we can execute database queries by the program so that we can utilize the functionality provided by the database (with the queries). Moreover we can use triggers too. JDBC provides much other functionality (like the functions provided by CallableStatemtent class) to manage the data. Additionally, loading the driver will be different to different databases

1. **Business Requirements Overview:**

* Retailer Inventory Management System is the public web application.
* Retailer Inventory Management System will be available globally.
* There are mainly three types of user. Admin, Retailer, And Wholesaler the Admin which manages the system.
* Admin can add/edit/delete product.
* Retailer can add/edit/delete product own access.
* Inventory management grows more and more complicated with increase in sales volume.
* Retailer Inventory Management System can be maintained by Administrator.

# Functional Requirements Overview:

The Account part of Retailer Inventory Management system has three modules.

* + - Retailer Module
    - Wholesaler Module
    - Admin Module

## Retailer Module:

* + - Retailer can create his account and request for registration.

Retailer can add or delete Whole sellers.

Retailer can update the stock Information.

On the basis Products availability, Retailers can purchase from the Whole seller

Retailers can generate detailed inventory reports about Products.

## Wholesaler Module:

* + - Wholesaler can register his account.
    - Wholesaler can add/edit/delete his/her details.

When Wholesaler creates new account, the function demands following information

## Admin Module:

* + - Admin can approve or reject the request from Retailer and Wholesaler
    - Admin can activate or block accounts if required.

1. **Non-Functional Requirement:**

* The website should use professional design, look and feel and color scheme.
* The system should be designed in such a manner that user will be able to complete tasks in minimum number of steps.
* Being a public website, the site must follow general usability guidelines for menus, navigation, colors, links and other actions provided on the screens.
* Users will have no limitations for accessing the application through Internet. The portal being an internet application, it is difficult specify exact number of visitor or users. Hence we will target the system to support number of users.

## 5.Use-Case Diagram

**5.1 Admin:**

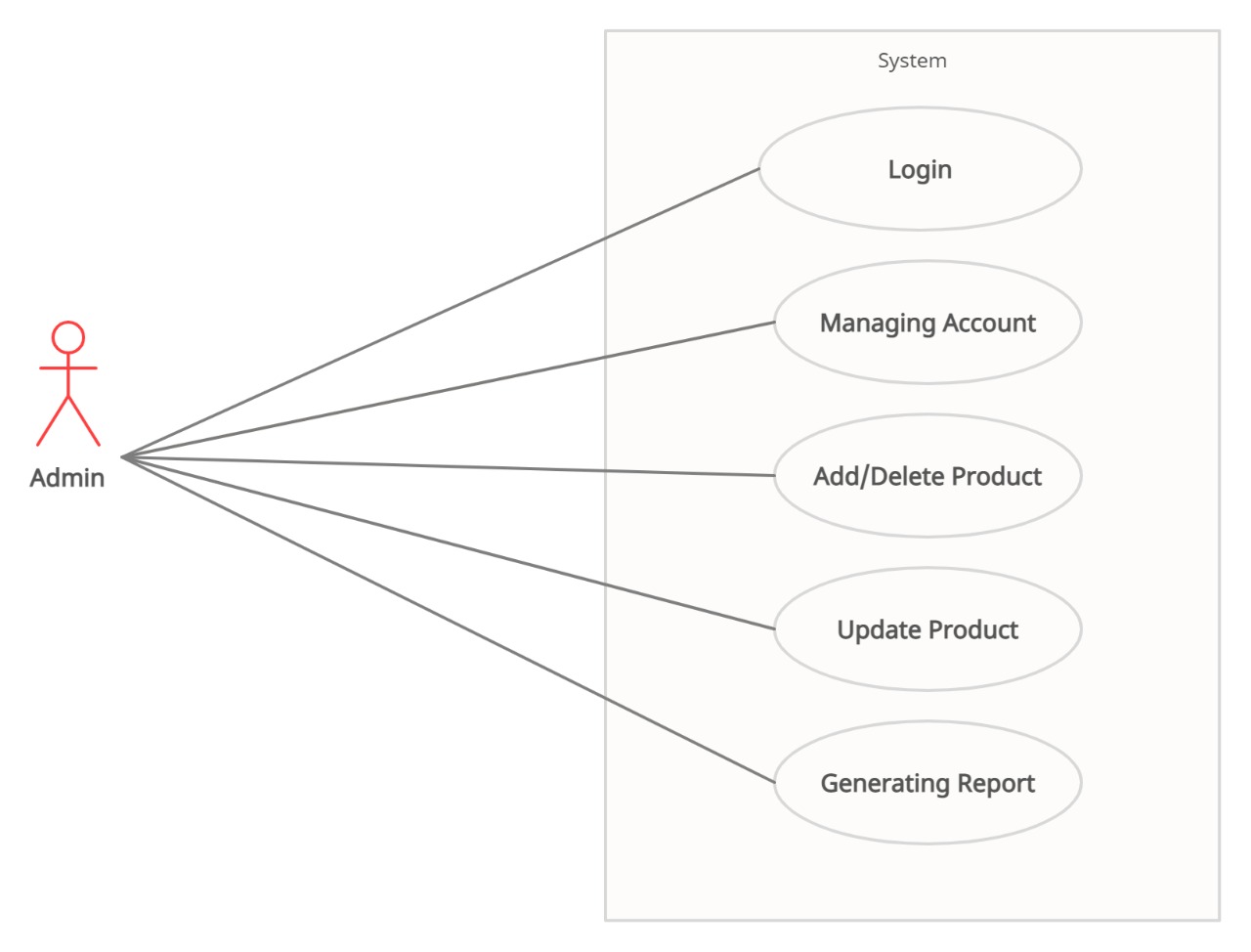
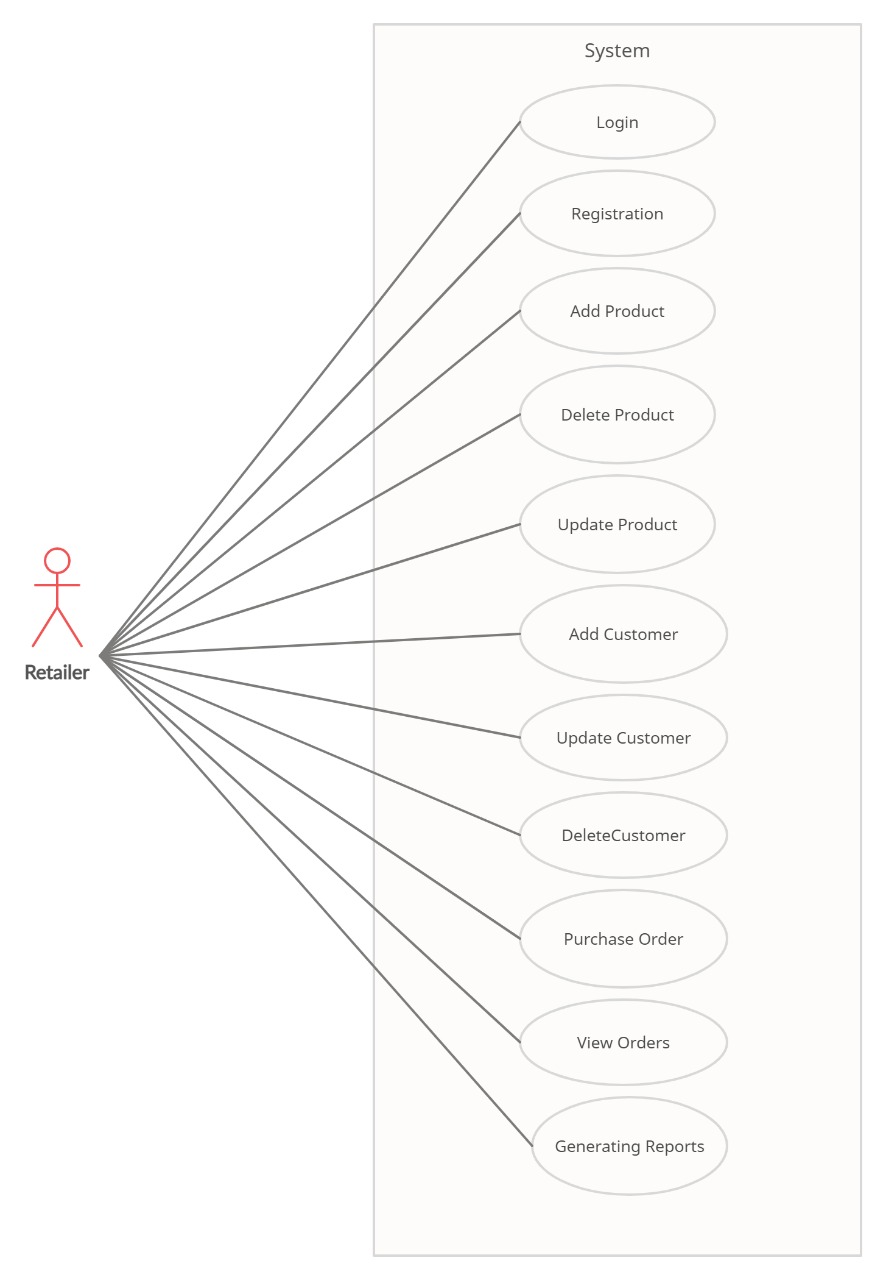
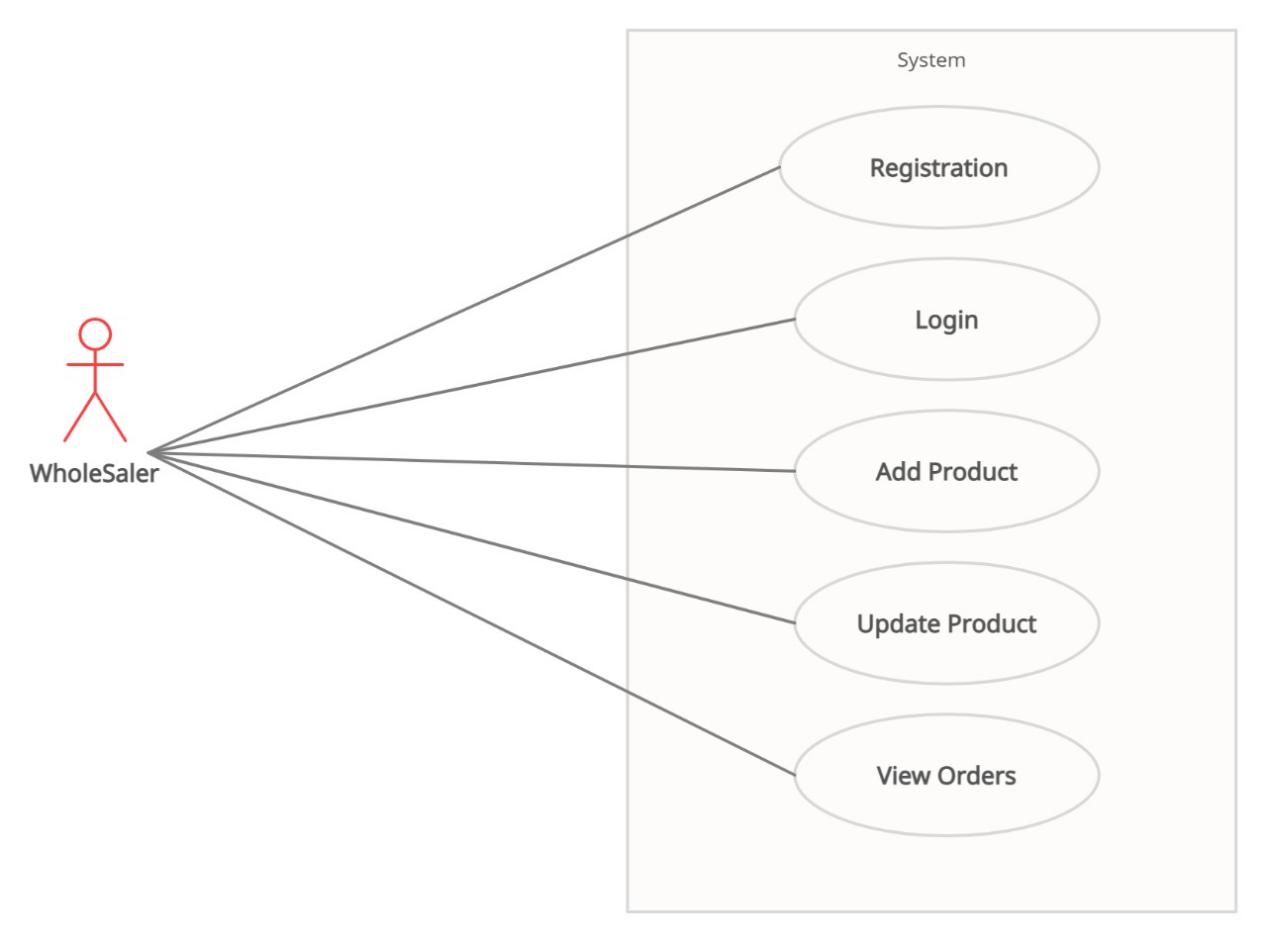
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Fig. Use-Case Diagram for Admin

## 5.2 Retailer:

****

**5.3 Wholesaler:**



**6. Database Design:**

**1] Tbl\_User**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Key** | **Default** | **Description** |
| U\_id | Integer | No | Primary key |  | User ID |
| Fname | Varchar(45) | No |  |  | First Name |
| Lname | Varchar(45) | No |  |  | Last Name |
| Email | Varchar(45) | No |  |  | Email ID Of Wholesaler |
| Password | Varchar(15) | No |  |  | Account Password |
| ContactNo | Integer | No |  |  | Contact No. Of Wholesaler |
| Address | Varchar(100) | No |  |  | Permanent Address |
| Gender | Varchar(10) | No |  |  | Gender Information |
| GST\_no | Integer | Yes |  | Null | Gst no. Information |
| Business\_name | Varchar(45) | Yes |  | Null | Business name Information |
| Type | varchar(15) | No |  |  |  |

**2] Tbl\_Product**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Key** | **Default** | **Description** |
| p\_id | Integer | No | Primary key |  | Product ID |
| Pname | Varchar(45) | No |  |  | Product Name |
| Categoryid | Varchar(45) | No | Foreign key |  | From Category table |
| Price | Double | No |  |  | Product Price |
| Image | Blob | Yes |  | Null | Product Image |
| Unit | integer | No |  |  | Product Unit |
| Unit description | Varchar(45) | No |  |  | Unit Description |
| c\_id | integer | No | Foreign key |  | cid from company table |

**3] Tbl\_PurchaseOrder**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Key** | **Default** | **Description** |
| po\_no | Integer | No | Primary key |  | Product Number |
| U\_id | Integer | No | Foreign key |  | User id from user Table |
| Date | Date | No |  |  | Date Information |
| Ship\_Add | Varchar(45) | No |  | l | Shipping Address |

**4] Tbl\_Purchase**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Key** | **Default** | **Description** |
| po\_no | Integer | No | Foreign key | Null | po\_no and p\_id are composite key |
| P\_id | Integer | No | Foreign key | Null |
| Quantity | Double | No |  | Null | Product Quantity |

**5] Tbl\_ReorderLevel**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Key** | **Default** | **Description** |
| p\_id | Integer | No | Primary key |  | Product ID |
| re\_order | Integer | No |  |  | Reorder level |

**6] Tbl\_Stock**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Key** | **Default** | **Description** |
| s\_id | Integer | No | Primary key |  | stock id |
| p\_id | Integer | No | Foreign key |  | p\_id from Product Table |
| edate | Date | No |  |  | Expiry Date |
| mdate | Date | No |  |  | Manufacturing Date |
| date | Date | No |  |  | Entry Date |
| qty | Integer | No |  |  | Quantity Information |
| price | Double | No |  |  | Price of Product |

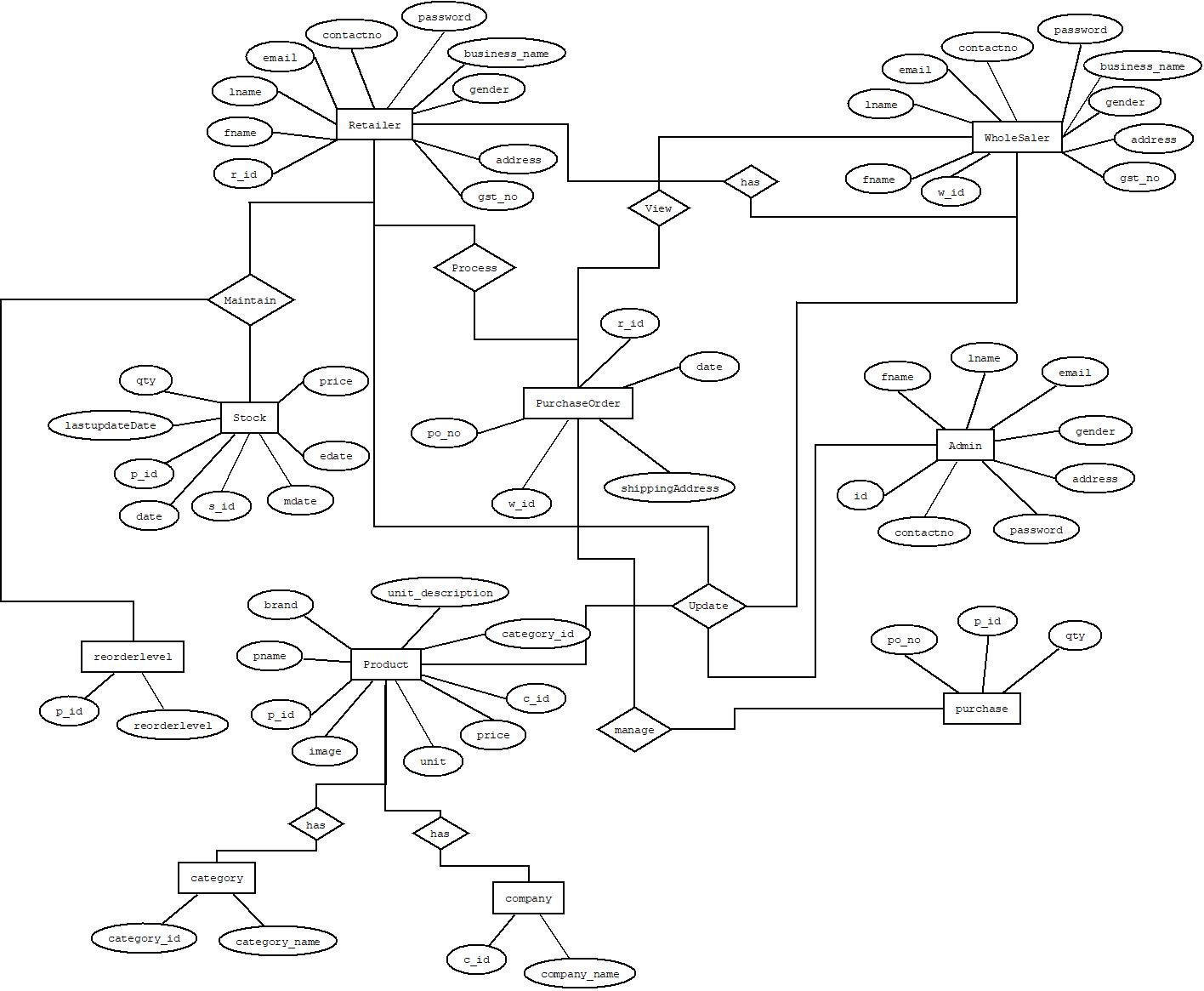
**7] Tbl\_Category**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Key** | **Default** | **Description** |
| category\_id | Integer | No | Primary key |  | Category Id |
| category\_name | Varchar(45) | No |  |  | Category Name |

**8] Tbl\_Company**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Key** | **Default** | **Description** |
| c\_id | Integer | No | Primary key |  | Company id |
| company\_name | Varchar(45) | No |  |  | Company Name |

## 7. ER-Diagram:

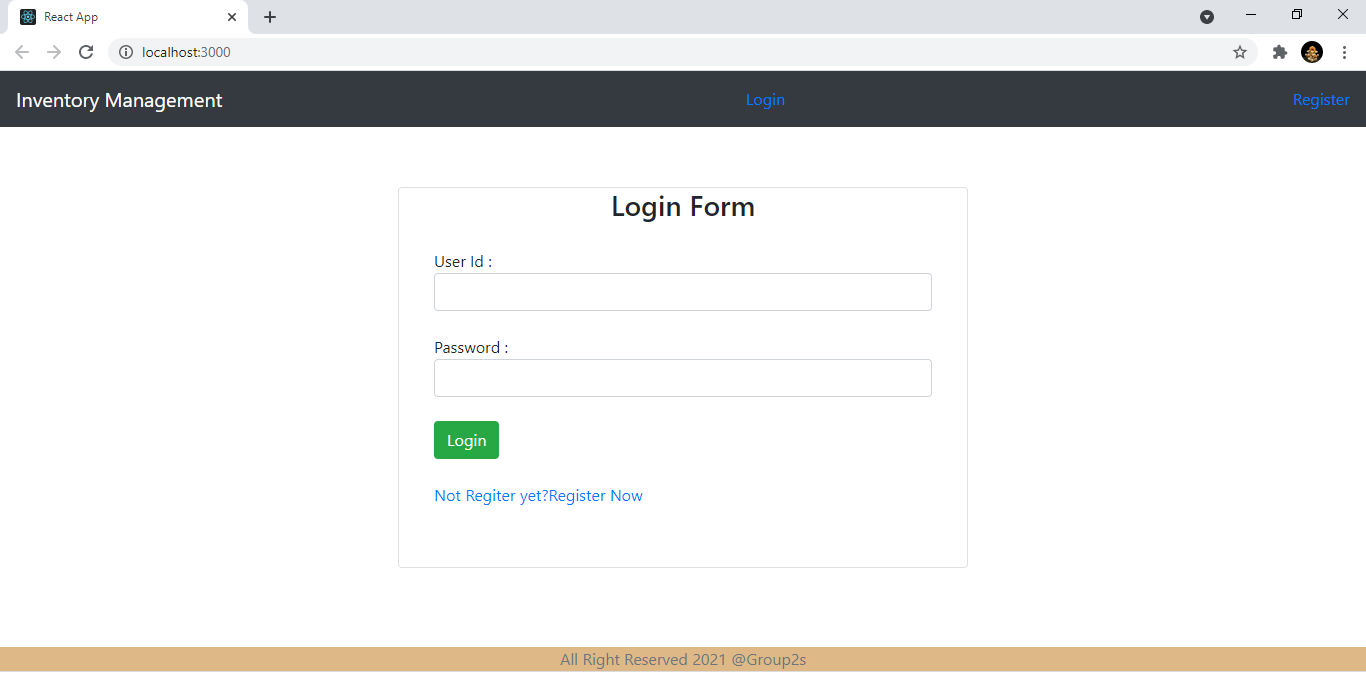


**E-R diagram shows database of Retailer Inventory Management System**

**8.Snapshots:**

**8.1 Home Page:**

Following snapshot shows the home page for **of** Retailer Inventory Management System

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This page contains following controls

* Login Button
* Who Admin
* Home

## Login Button

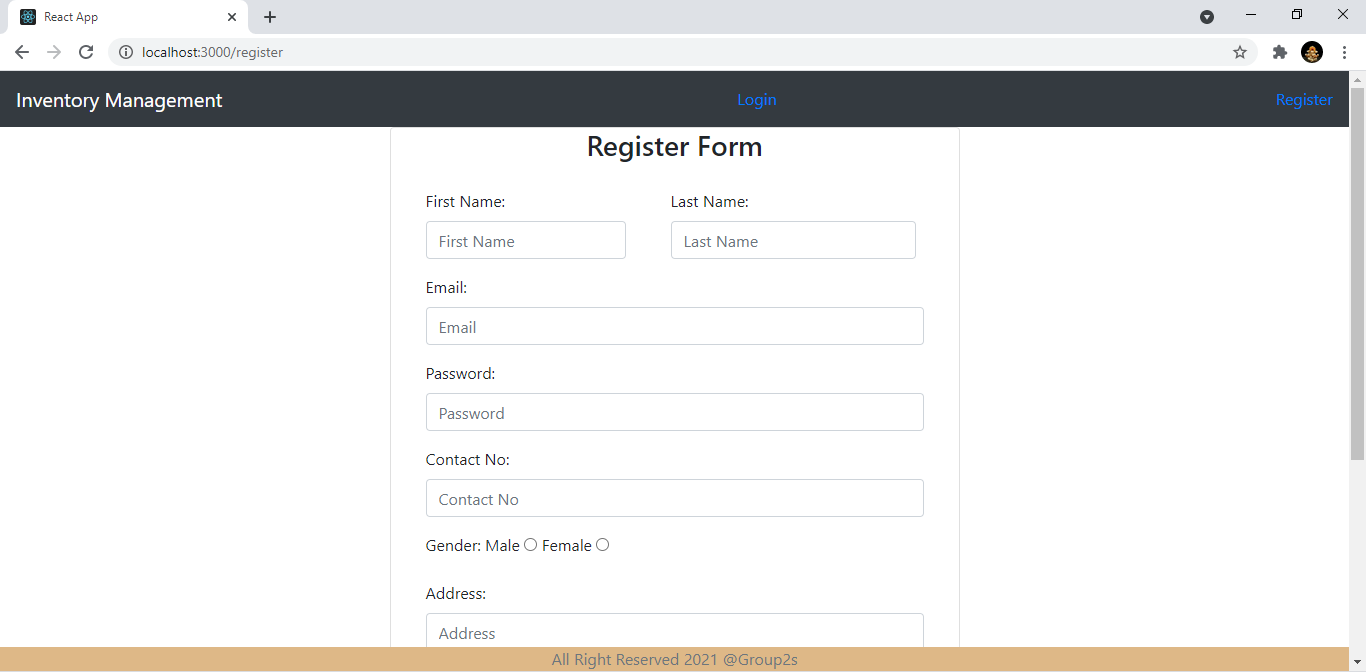
when user fill the login user-id and password and click login button then if the information is valid then he will be redirected to respective home page , else error message will be shown to user.

## Registration link;

When user click on registration link then he will be redirect to registration page.

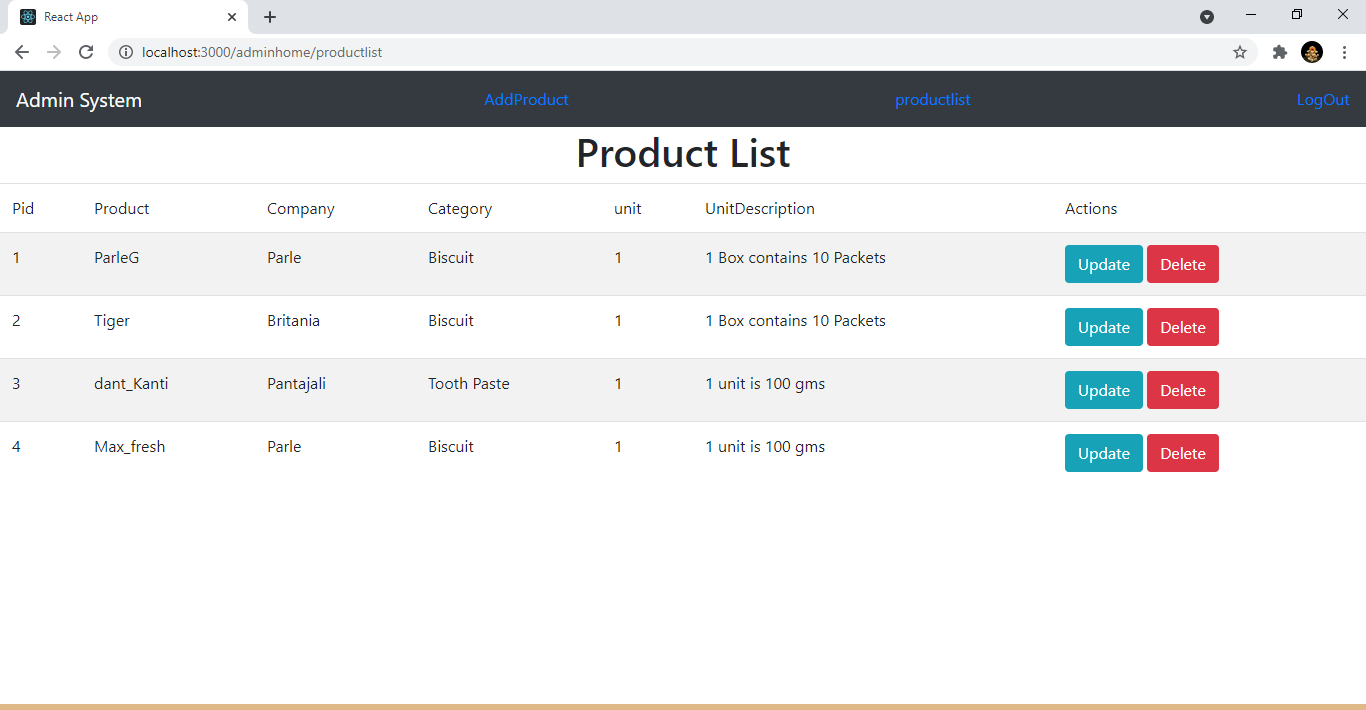
**8.2 User Registration**

Following snapshot shows the registration page for of Retailer Inventory Management System



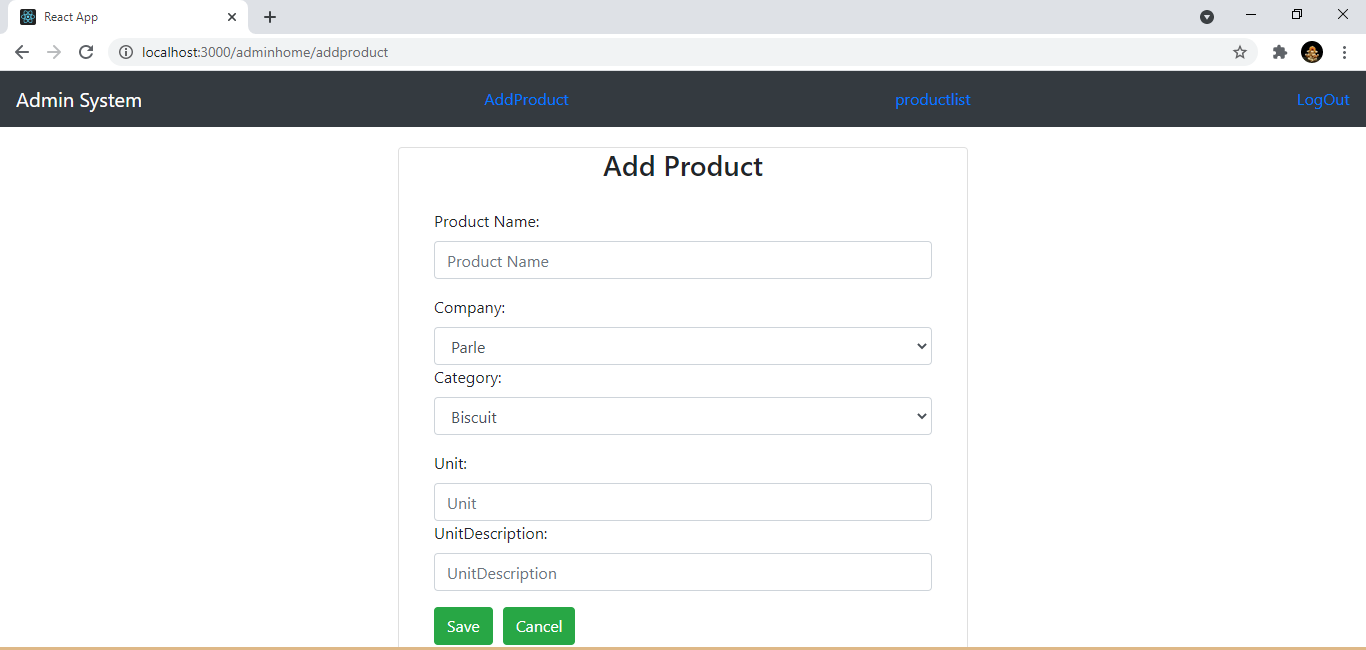
**8.4 Product List**

Following snapshot shows the Product List page for Inventory Management System



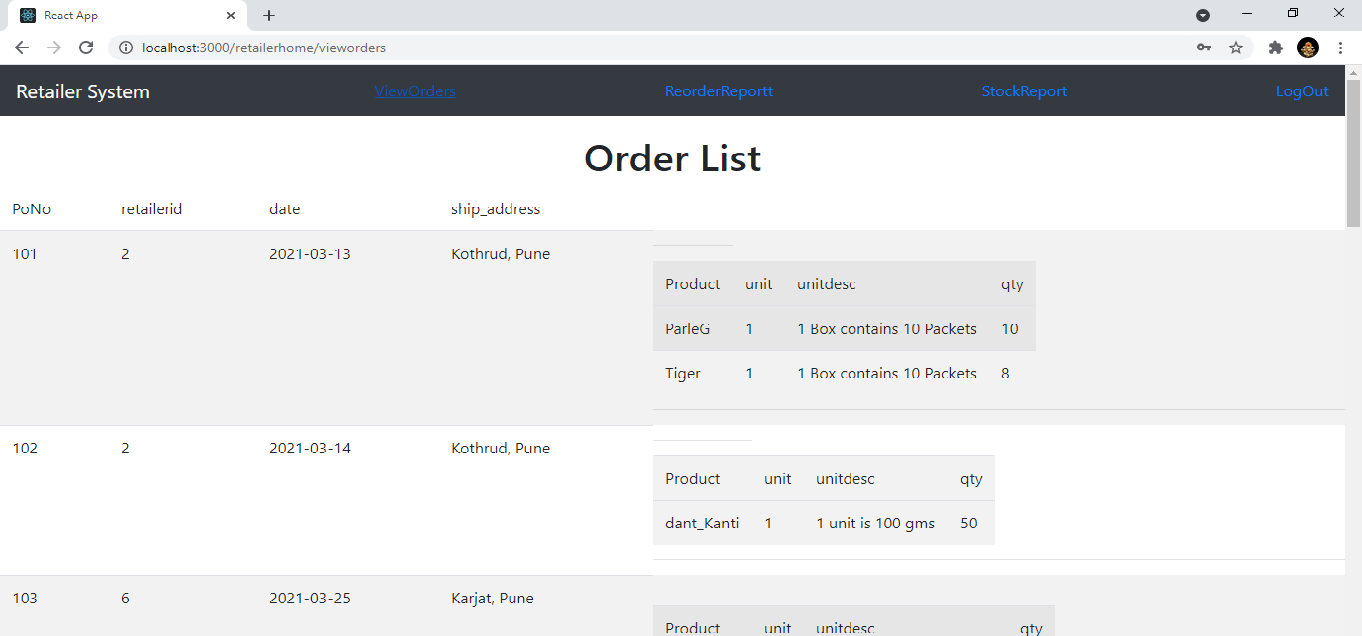
**8.5 Admin Add Product**

Following snapshot shows the Add Product page for Inventory Management System



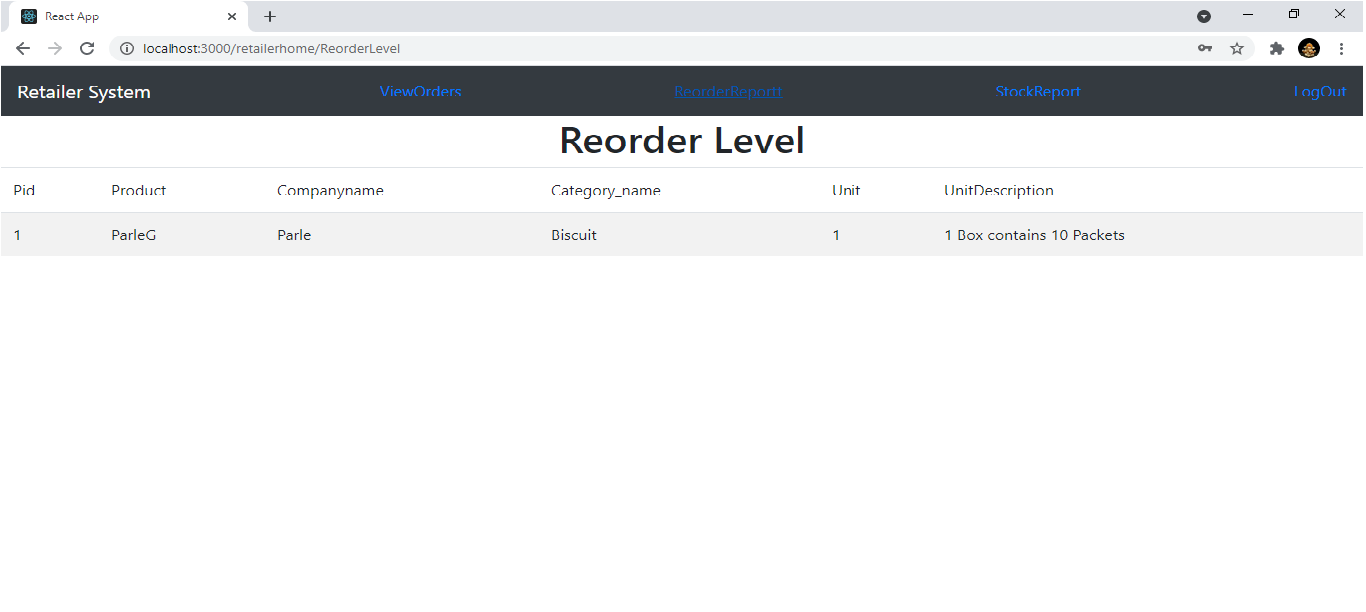
**8. Retailer Order list**

Following snapshot shows the order order List page for Inventory Management System



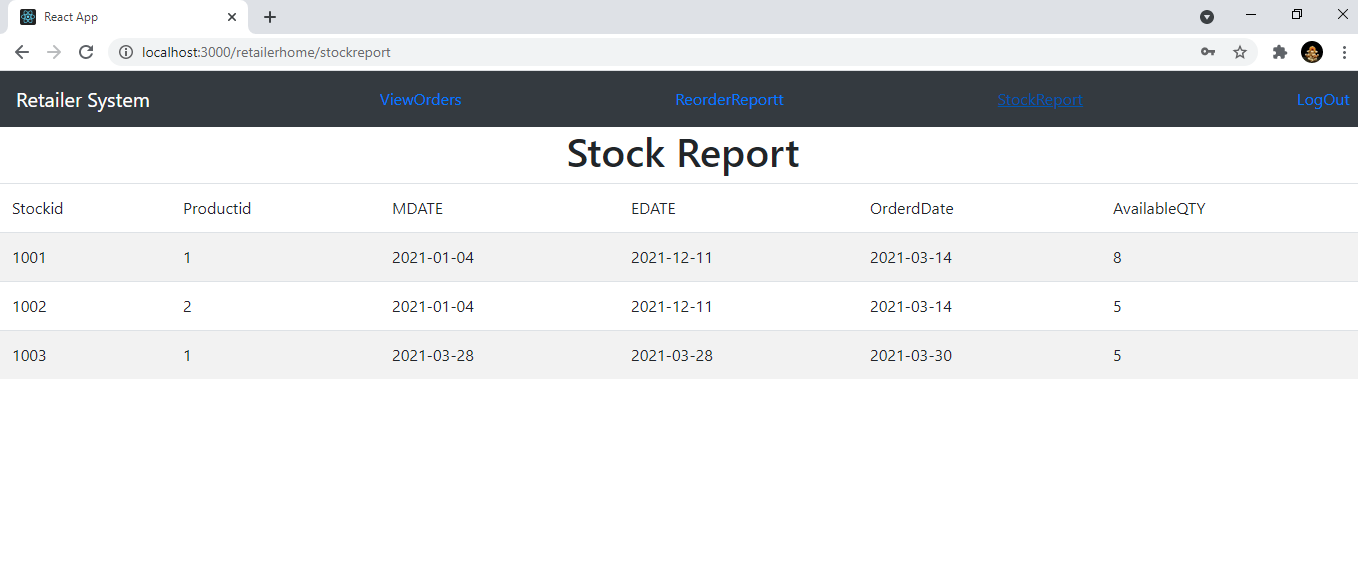
**8. Reorder List**

Following snapshot shows the reorder List page for Inventory Management System



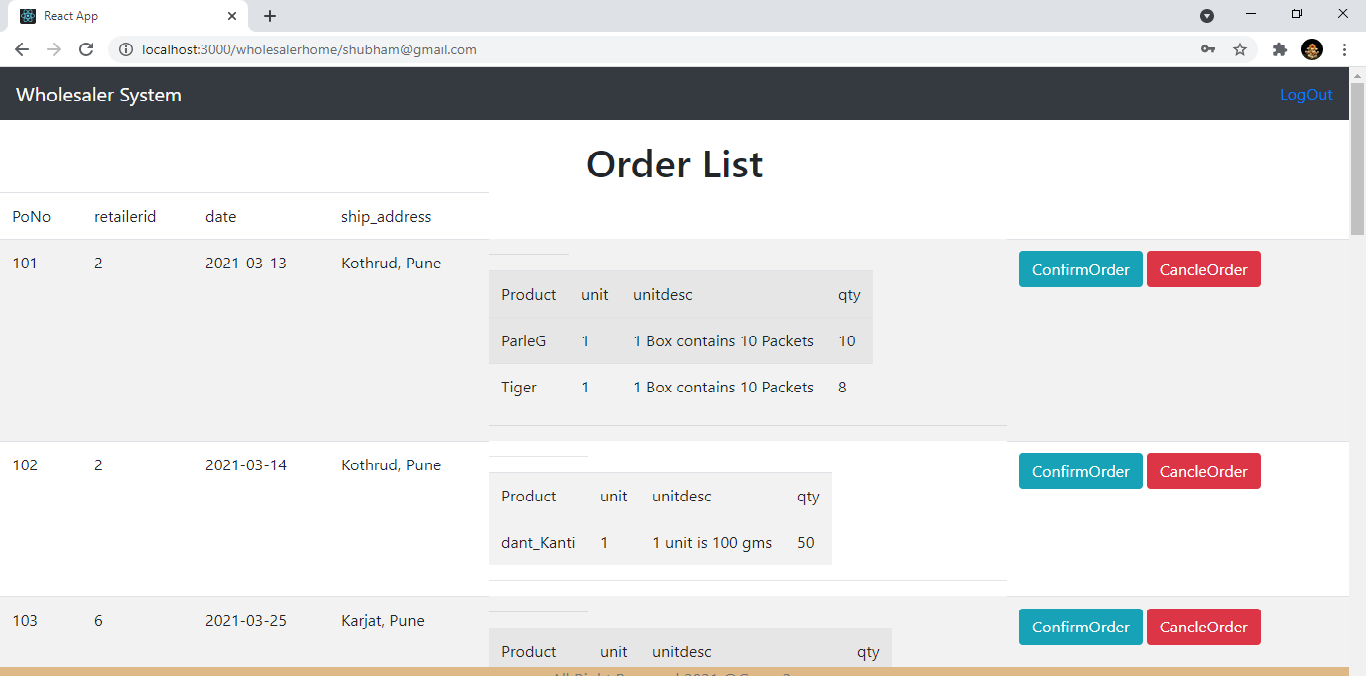
**8. Stock Report**

Following snapshot shows the Stock Report List page for Inventory Management System



**8. Wholesaler**

Following snapshot shows the Wholesaler order Report List page for Inventory Management System



1. **CONCLUSION AND FUTURE SCOPE**

* Inventory Management System provides a platform to get connected with each other easily Inventory Management.
* Our System provides a very user-friendly platform registration system where user can easily create account and manage inventory system for business.