

Supply Chain Management System

Introduction:

A supply chain involves the process of supplying products starting from manufacturing to distribution to dealers. Sometimes it also involves distributing to retailers and customers.

Description:

The supply chain management system we are going to develop will only contain the flow of distributing from the company's **inventory** to **dealers**. The dealer will be registered by filling up the dealer registration form, but will be approved by a dealer approver inside the company's side. For registration, the dealer will have to provide the dealer's NID scanned copy, TIN certificate scanned copy as the mandatory documents including his other information. The **dealer approver** will cross match his NID and TIN Certificates scanned copies in the database. After the approver approves, the dealer will be able to create a requisition/order to the company's **inventory manager**. While creating the requisition, he will provide the transaction ID, payment method name, account number and initially paid amount as mandatory field. If he has due, he will have to pay the due before the next requisition. The inventory manager will then forward the transaction ID and initially pay the amount to the **Accounts manager**. Once the accounts manager confirms the amount received, the inventory manager will be able to send the product to that dealer. To provide the due, the dealer will have to fill up the **due payment form** with the transaction ID, payment method name, account number and payment amount, which will be directly submitted to the accounts manager. Then the **inventory manager** permits for delivery the **delivery manager**.

Scope:

The scope of the project will be limited to communication activities in the distribution of goods from inventory to dealer. This project is for those who are searching for dealers to sell the product and who are interested in becoming a dealer of a company.

Overview of the System:

In this section, we will describe the features and use cases of the system we will develop named “**Therap Supply Chain Management System**”.

Users and their roles:

There will be four types of users in the system with different responsibilities and restrictions. They are:

- **Anonymous user:** All the users, without having an account or not logging in, will be treated as anonymous users. An anonymous user can **search** or **view** products with specific criteria provided by himself.
- **Registered User / Dealer: Registered Users**, those who are registered in the system to create order/ requisition. Registered users can maintain their **profile** and can **create criteria** to find the information of products.
- **Delivery Manager: Delivery Manager** is a System side sub Admin who delivers products.
- **Dealer Approver: Dealer Approver** is a System side sub Admin who appoint, pause and dismiss dealers.
- **Inventory Manager: Inventory Manager** is a System side sub Admin who can add a new product and he controls the whole stock.
- **Account Manager: Account Manager** is a System side sub Admin who controls the account section.
- **Managing Director: The Managing Director** is the super Admin of this **System**. He can appoint, pause and dismiss a **Dealer Approver, Inventory Manager, Account Manager, Delivery Man**.

Use Cases of the system:

1. **Registration:** An **anonymous user** and the **system** are the actors of the use case. An user filling the registration form. Then, if the **Dealer Approver** approves his form, he is a registered dealer of the system.
2. **Adding new Requisition:** Only A **registered Dealer** and the **system** are the actors of this use case. A **registered Dealer** selects his product, then he submits Requisition/order clicking the submit button.
3. **Tracking Order:** Only A **registered Dealer** and the **system** are the actors of this use case. After submitting an order, the Dealer can track his order. When, the order goes to inventory, account, delivery section.
4. **Adding new Product:** A **Inventory Manager** can add a new product and he controls the whole stock clicking the add button.
5. **Money Transaction:** Only A **registered Dealer** and the **System (Account Manager)** are the actors of this use case. After fulfilling the inventory process, the Dealer transacts money with the **Account Manager**.
6. **Delivery Process:** After making the money transaction, the inventory manager gives all the requisitions / orders of goods to the delivery man for delivery and gives him a delivery sheet. The **system** sent his opt for delivery validation, the delivery manager checked it and took signatures from him then delivered the order. Here, Finished the peocess.

Technology:

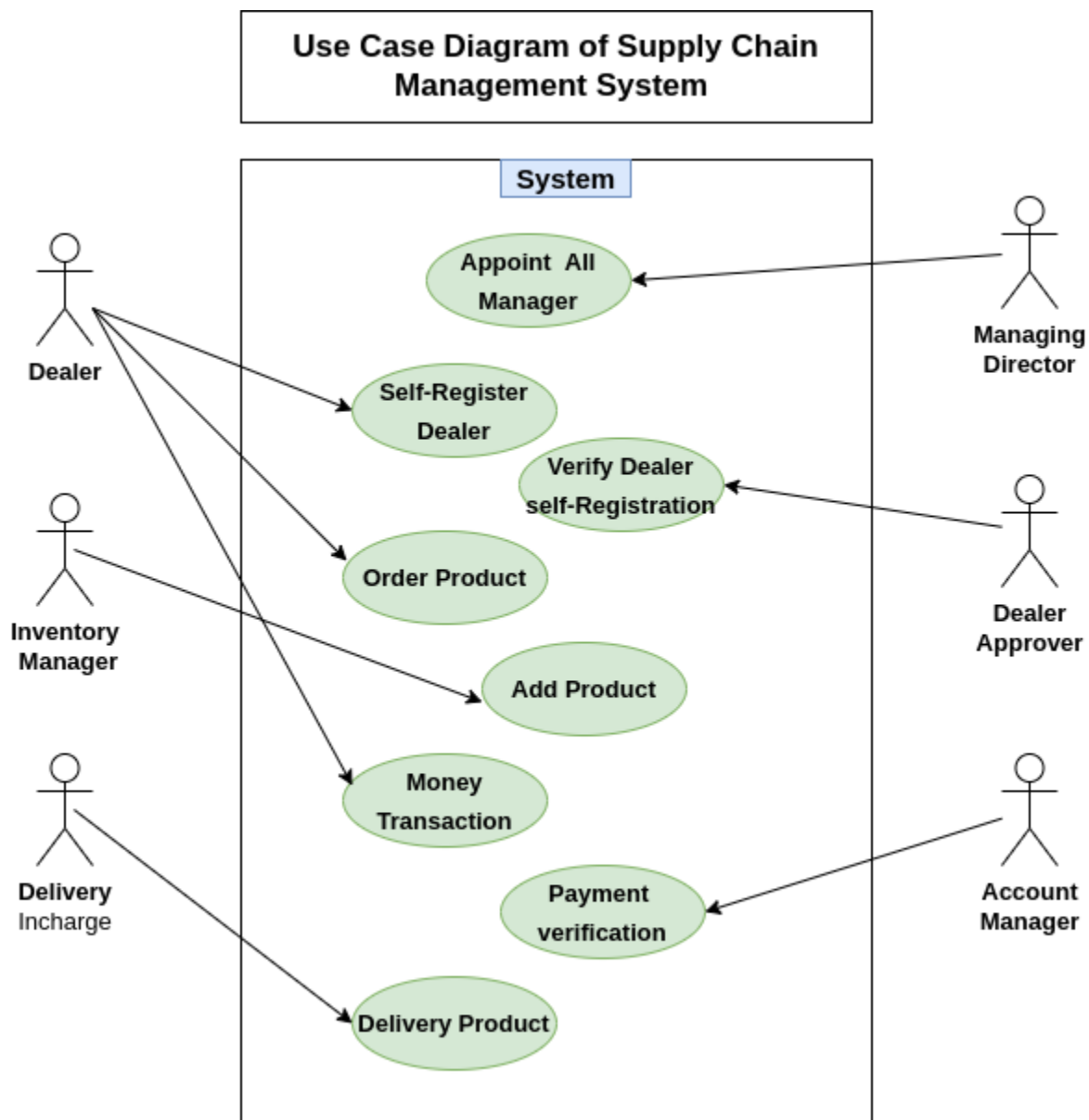
- Java
- Spring Boot
- JPA
- Hibernate
- JSP / Thymeleaf

Build Tools:

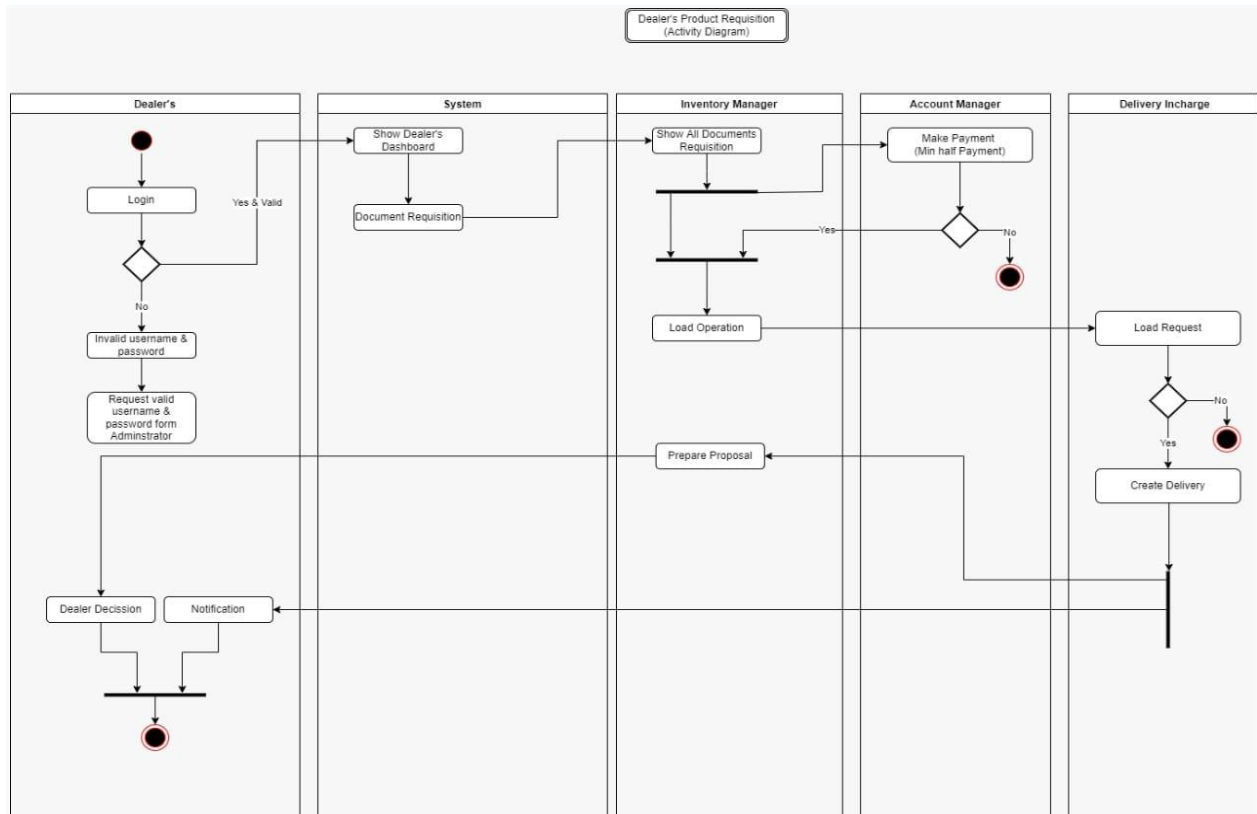
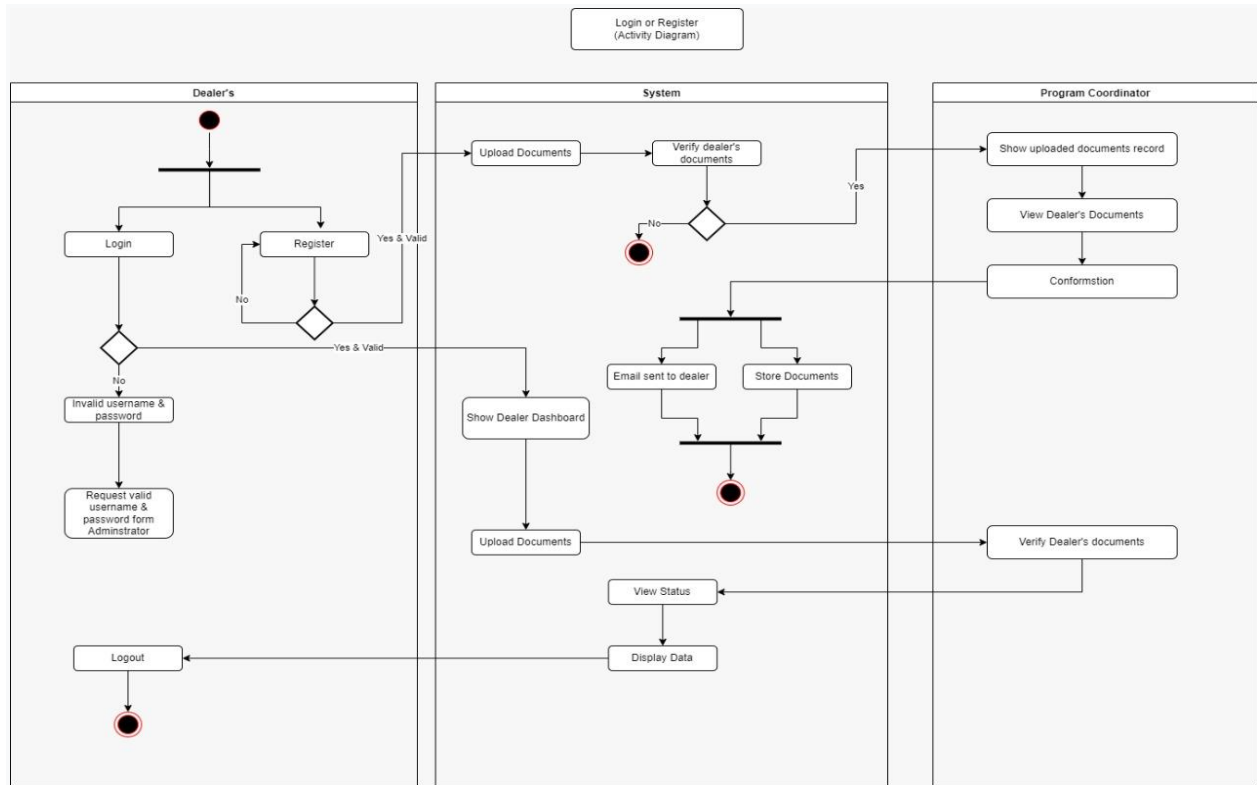
- Maven / Gradle

DataBase:

- PostgreSQL



Activity Diagram of Supply Chain Management System



N.B.

- Here, We use blogs / notice for advice, Complaint to improve the service.
- Our next plan is possible image processing for matching **NID**, **TIN** certificates.

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