



# **ELECTRONIC DEVICES MANAGEMENT INFORMATION SYSTEM**

## **Requirements Analysis & Design (RAD)**

**By Students:**

- 1. 520H0011 : Chu Tran Gia Bao**
- 2. 520H0516 : Tran Le Gia Bao**

**Reference:** Team\_21\_RAD\_Requirements\_Modelling\_v0.1

**Audience:** Mr. Pham Thai Ky Trung **Document Version:** May, 2023

**Outcome:** Electronic devices management information system

**Abstract:** This document provides an in-depth analysis of a proposed video rental system with the requirements modeled utilizing the UML framework. The document is a collaboration between the members of Team 21.

**Intellectual Property**

***Copyright 2023 Team 21.***

The following documentation, the content therein and/or the presentation of its information is proprietary to and embodies the confidential processes, designs, technologies and otherwise of Team 21. All copyright, trademarks, trade names, patents, industrial designs, and other intellectual property rights contained herein are, unless otherwise specified, the exclusive property of Team 21.

The ideas, concepts and/or their application, embodied within this documentation remain and constitute items of intellectual property which nevertheless belong to Team 21.

The information (including, but by no means limited to, data, drawings, specification, documentation, software listings, source and/or object code) shall not be disclosed, manipulated, disseminated or otherwise in any manner inconsistent with the nature and/or conditions under which this documentation has been issued.

The information contained herein is believed to be accurate and reliable. Team 21 accepts no responsibility for its use in any way whatsoever. Team 21 shall not be liable for any expenses, damages and/or related costs which may result from the use of the information contained herein.

The information contained herein is subject to change without notice.

All Rights Reserved. Copyright herein is expressly protected at common law, statute and under various International and Multi-National Treatises (including, but by no means limited to, the Berne Convention for the Protection of Literary and Artistic Works).

## Table of Contents

Intellectual Property .....	3
Table of Contents .....	4
Table of Figures .....	5
Executive Summary .....	6
I. Business Requirements .....	7
1.1 Organization Chart .....	7
1.2 Business Modelling / Requirements .....	7
1.3 Business Processes / Flowchart of Requirements .....	9
1.4 Activity Diagram .....	10
1.5 List of Requirements .....	11
II. System Requirements Analysis .....	12
2.1 Translate from Business Use Case .....	12
2.1.1. System Narrative .....	12
2.1.2. Users and their goals .....	12
2.1.3. List of Events .....	12
2.1.4. List of Actors .....	13
2.1.5. List of Use Cases .....	13
2.1.6. Use case diagrams .....	14
2.1.7. Domain Class Model Diagram .....	17
2.2 Use Case description .....	18
2.2.1. Use Case: View stock report .....	18
2.2.2. Use Case: Create Goods Received Note .....	21
2.2.3. Use Case: Place an order .....	23
2.2.4. Use Case: Create Goods Delivery Note .....	25
2.3.1. Verifying uses cases: Customer .....	28
2.3.2. Verifying uses cases for Warehouse staff .....	28
2.3.3. Verifying uses cases for Accountant .....	28
2.3.4. Verifying uses cases for Actor 4 .....	28
III. System Requirements Design (3.0 points) .....	29
3.1 Design Class for View report .....	29
3.2.1. Design Classes in Detailed Design .....	29
3.2.2. Design Class Diagram .....	30
i. Design Class .....	30
OOD with Communication .....	30
3.2.3. OOD with Sequence Diagram .....	31
3.2.4. Final Design Class Diagram .....	31
3.2 Design Class for Create Goods Received Note .....	32
3.2.1. Design Classes in Detailed Design .....	32
3.2.2. Design Class Diagram .....	32
i. Domain Design Class .....	32
3.2.3. OOD with Communication .....	33
3.2.4. OOD with Sequence Diagram .....	33
3.2.5. Final Design Class Diagram .....	33
IV. System Requirements Implementation .....	34
4.1 Design Class for Sub System .....	34
4.3.1. UI design .....	34
4.3.2. SQL Code .....	35
4.3.3. Software Classes Method Code .....	37
Source code: Link Github .....	37
V. SYSTEM TESTING, DEPLOYMENT AND DEMONSTRATION (1.5 pts) .....	38
5.1 Testing: Test plan & Test case .....	38
Source code: Link Github .....	38
6.2. Traceability of test cases to use cases: .....	38
5.2 Deployment .....	39
5.3 Demonstration .....	41
References .....	45
Source code: Link Github .....	45
Appendix .....	45

## Table of Figures

Figure 1: Organization Chart .....	7
Figure 2: Business model use case .....	8
Figure 3: Business process .....	9
Figure 4: Activity diagram of Create Develivery Note subsystem .....	10
Figure 5: List of Requirements .....	11
Figure 6: User goal table .....	12
Figure 7: List of events .....	12
Figure 8: Use case 1 .....	14
Figure 9: Use case 2 .....	14
Figure 10: Use case 3 .....	15
Figure 11: Use case 4 .....	15
Figure 12: Use case 5 .....	16
Figure 13: Domain class model of Import Management .....	17
Figure 14: Domain class model of Order Management subsystem .....	17
Figure 15: Use case description for View stock report .....	18
Figure 16: Activity diagram for View stock report .....	19
Figure 17: SSD for View stock report .....	20
Figure 18: Use case description for Create Goods Received note .....	21
Figure 19: Activity diagram for Create Goods Received note .....	22
Figure 20: SSD for Create Goods Received note .....	23
Figure 21: Use case description for Place an order .....	23
Figure 22: SSD for Place an order .....	24
Figure 23: Use case description for Create Goods Delivery Note .....	25
Figure 24: Activity diagram for Create Goods Delivery Note .....	26
Figure 25: SSD for Create Goods Delivery Note .....	27
Verifying use cases for Actor .....	28
Figure 26: Domain design class .....	29
Figure 27: Design class .....	30
Figure: OOD with Communication .....	30
Figure 28: OOD with SSD .....	31
Figure 29: Final design class diagram .....	31
Figure 30: Design class in detailed .....	32
Figure 31: Design class .....	32
Figure 32: OOD with Communication .....	33
Figure 32: OOD with SD .....	33
Figure 33: Final design class .....	33
Figure 34: System design class .....	34
Figure 35: UI Design of Create Good Received Note .....	34
Figure 36: Testing case .....	38
Figure 37: Testing result .....	39
Figure: Set up project .....	39
Figure: File after Generate EXE File from C# .....	39
Figure: Click file .exe and Extract File .....	40
Figure: Screen .....	40
Figure: Inteface of project .....	40
Figure: Git/SVN .....	41
Figure 38: UI interface .....	41
Figure 39: Welcome window .....	41
Figure 40: Good received note window .....	42
Figure 41: Good received note window .....	42
Figure 42: Good received note window .....	43
Figure 42: Create a new Good received note .....	43
Figure 43: Create a new order .....	44
Figure 44: List product .....	44

## Executive Summary

The purpose of this document is to provide an overview of the proposed system by a distributor selling electronics devices products to authorized reseller / agents. In this document, team 21 will demonstrate the analysis phase's works with visualized diagrams and charts.

Here are the main parts of this report:

- Business requirements
- System requirements analysis
- System requirements design
- System requirements implementation
- System testing, deployment and demonstration

Also, in phase 1 of the project, our team has generated 2 slides for Planning and Initial Analysis works. Which we will use as a preferences and develop details diagrams and charts from the phase 1 works.

In phase 2, we aim to focus on those goals:

- Discovery and understand the details of the system processes as it boundaries to referred issues stated in the slide Analysis.
- Design system components
- Build, test and integrate system components
- Complete testing and deployment

# I. Business Requirements

## 1.1 Organization Chart

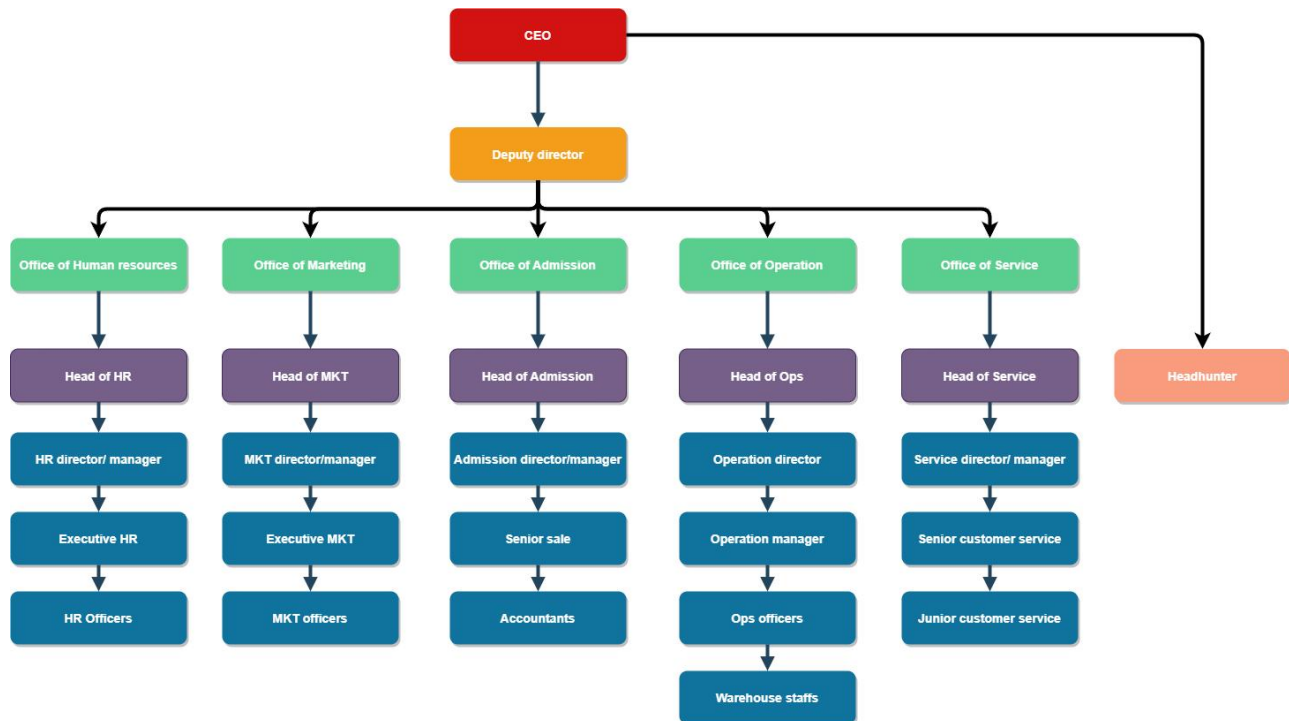


Figure 1: Organization Chart

## 1.2 Business Modelling / Requirements

### Business Narrative:

Our customer is a distributor of electronics devices products to authorized reseller/agents. The company requires an information system that can manage their daily operations, including receiving and warehousing goods, processing orders from resellers/agents, and delivering goods to customers.

There are three main stakeholder within the organization, Accountants, Reseller (Agent) and Warehouse staffs. The accountants are responsible for the inbound logistic of the goods, which including creating Goods Received notes when the distributor imports goods. Warehouse staff will then scan bar codes, QR codes, and RFID tags to perform the goods warehousing process. The system should track inventory levels and update stock levels in real-time.

Resellers/agents will have the ability to place orders through the online system and choose their preferred payment method, whether it be cash, bank transfer, or mobile money. The system should allow resellers/agents to track the status of their orders and make online payments.

The system should allow accounting staff to create Goods Delivery Notes based on previously placed orders and update the status of orders as they are being transferred. The system should also allow warehouse staff to scan bar codes, QR codes, and RFID tags to record the stock out process.

The system should provide accounting staff with the ability to generate incoming/outgoing stock reports, inventory movement reports, and monthly revenue reports. This information will help the company make informed decisions and identify areas where they can improve their operations.

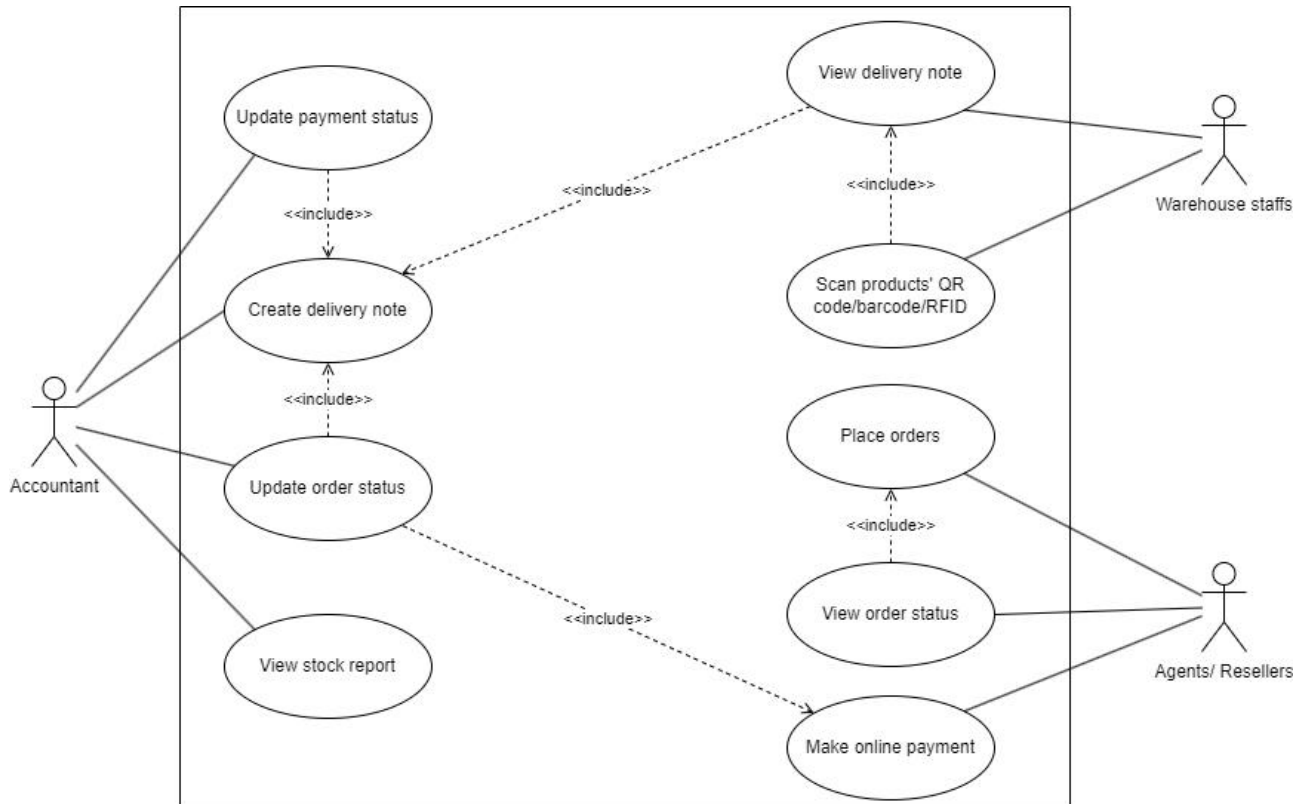
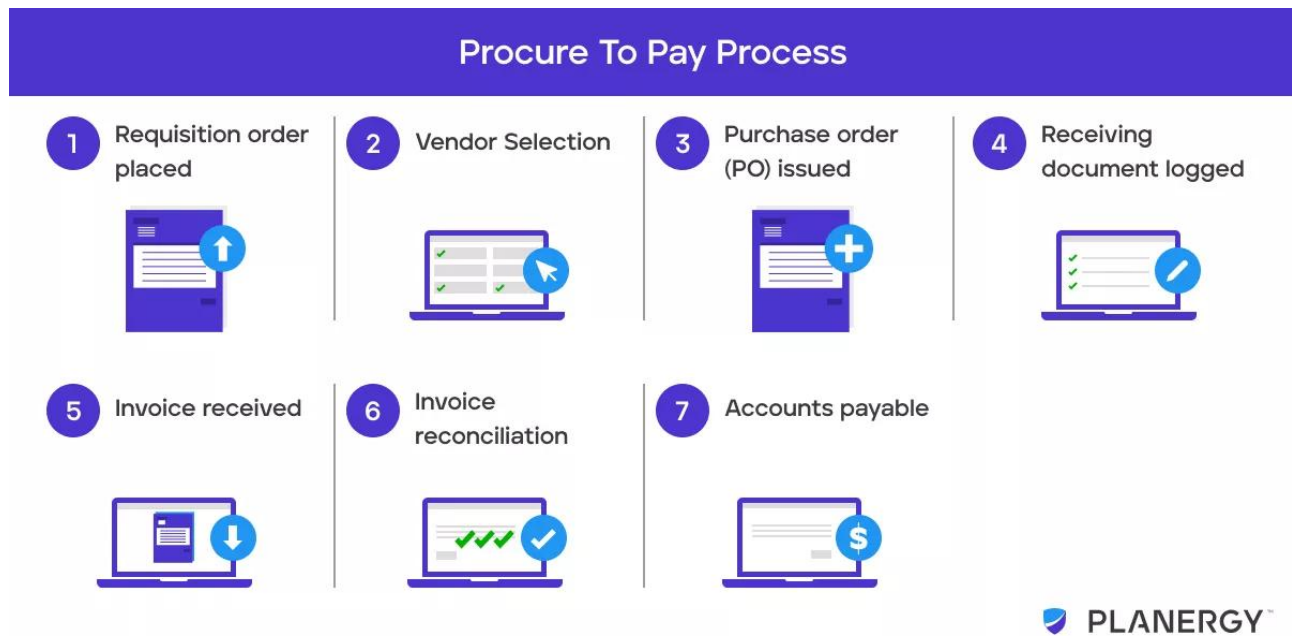


Figure 2: Business model use case



### 1.3 Business Processes / Flowchart of Requirements

In this system, we prefer Purchase to Pay process for Order management. Here is our demonstration



**Figure 3: Business process**

## 1.4 Activity Diagram

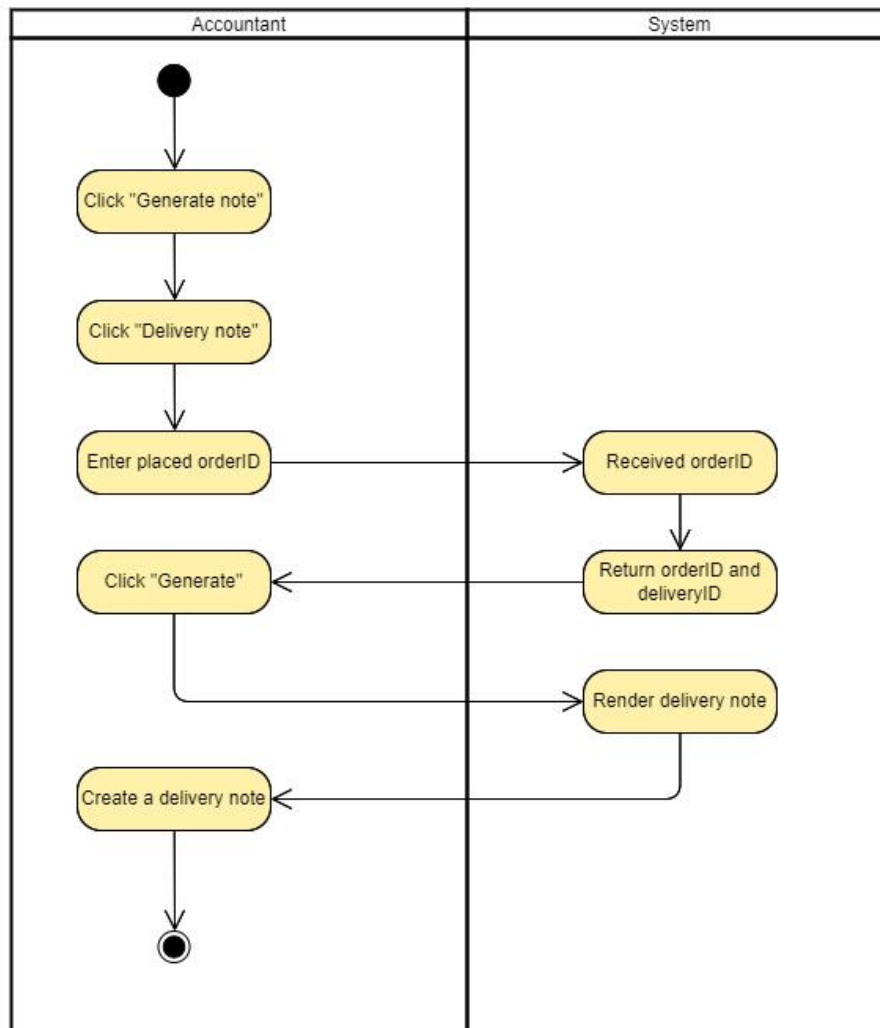


Figure 4: Activity diagram of Create Delivery Note subsystem

## 1.5 List of Requirements

Requirements	Functional	Non-functional
The system allows accountants to create Goods Received note	X	
The system allows agents/ resellers to place an order of items by themselves	X	
The system allows agents/ resellers have an ability to choose a online payment method (Cash, bank transfer, MOMO e-wallet,...) and view the status of their orders	X	
The system allows accountants to create Goods Received note	X	
The system allows warehouse staffs to the ability to scan barcode/QR Code/RFIDs to perform the goods warehousing process.	X	
The system allows accountants to print delivery slips, update the status of orders as being transferred, and update the payment status of agents.	X	
The system shall allow warehouse staff to use barcode/QR Code/RFID for stock out	X	
The system shall allow accounting staff to view incoming/outgoing stock reports (inventory movement), best-selling products, and revenue reports monthly.	X	
The system shall provide a user-friendly interface to facilitate ease of use for all users.		X
The system shall be mobile-responsive, allowing users to access the system from any device with an internet connection.		X

Figure 5: List of Requirements

## II. System Requirements Analysis

### 2.1 Translate from Business Use Case

#### 2.1.1. System Narrative

Business operation of electronic device management IS:

- An accountant create a Delivery Goods Note when importing goods, Warehouse staffs will check the QRcode for warehousing process.
- Reseller/Agent can place an order and make online payment on this system, no need further offline procedure.
- Accountants can generate and view the monthly report, revenue, e.t.c.

#### 2.1.2. Users and their goals

Actors	User goal
Accountants	- Create Goods Received and Goods Delivery Notes. - View incoming/outgoing stock reports, best-selling products, and revenue reports
Warehouse staffs	- Scan barcode/QR Code/RFIDs to perform goods warehousing process. - Update stock levels and perform stock out
Reseller/ Agent	- Place orders for items - Choose a payment method (Cash, bank transfer, Momo...) - Make online payments. - View status of their orders

Figure 6: User goal table

#### 2.1.3. List of Events

List of events and its use case

EVENT	TRIGGER	SOURCE	USE CASE	RESPONSE	DESTINATION
Place an order	Resellers/Agents placing an order	Resellers/Agents	Place Order	Resellers/Agents place orders and choose payment method	System (Order Management)
Make payment	Resellers/Agents making payment	Resellers/Agents	Payment Management	Resellers/Agents make online payments	System (Payment Gateway)
Receive goods	Delivery of products to the distributor	Distributor	Create Goods Received	Accountant creates a Goods Received document to track received items	Warehouse staff
Prepare delivery	Approval of an order by accountants	Accountant	Create Goods Delivery Note	Accounting staff creates a Goods Delivery Note to deliver goods to agents	Warehouse staff
Inventory management	Regularly or upon request	Accountant	View report	Accounting staff view incoming/outgoing stock reports, best-selling products, and revenue reports monthly	Accountant

Figure 7: List of events

#### **2.1.4. List of Actors**

- Resellers/Agents: the customers of the distributor who place orders and make payments for the products.
- Accounting staff: responsible for creating and managing Goods Received and Goods Delivery documents, managing payments, and generating reports.
- Warehouse staff: responsible for receiving and warehousing goods, managing inventory, and fulfilling orders.

#### **2.1.5. List of Use Cases**

- Place order: Place an order for electronics devices products. The Reseller/Agent selects the desired products, specifies the quantity, and chooses a payment method (Cash, bank transfer, Momo, etc.).
- View order status: Selects the order they want to view, and the system displays the status of that order.
- Create Goods Delivery Note: Create a Goods Delivery Note based on previously placed orders. Warehouse Staff uses barcode/QR Code or RFID scanning to perform the goods delivery process and update the payment status of agents.
- Create Goods Received Note: Create Goods Received Note when the distributor imports goods.
- View stock report: View incoming/outgoing stock report, inventory movement, best-selling products, and revenue report monthly.
- Revenue report: View revenue reports for the selected month, which include information on the total revenue generated, the revenue generated from each product category, and the revenue generated from each reseller/agent.
- Scan product QR code: Scan the QR code of the product to perform goods warehousing process when receiving goods at the warehouse.

### 2.1.6. Use case diagrams

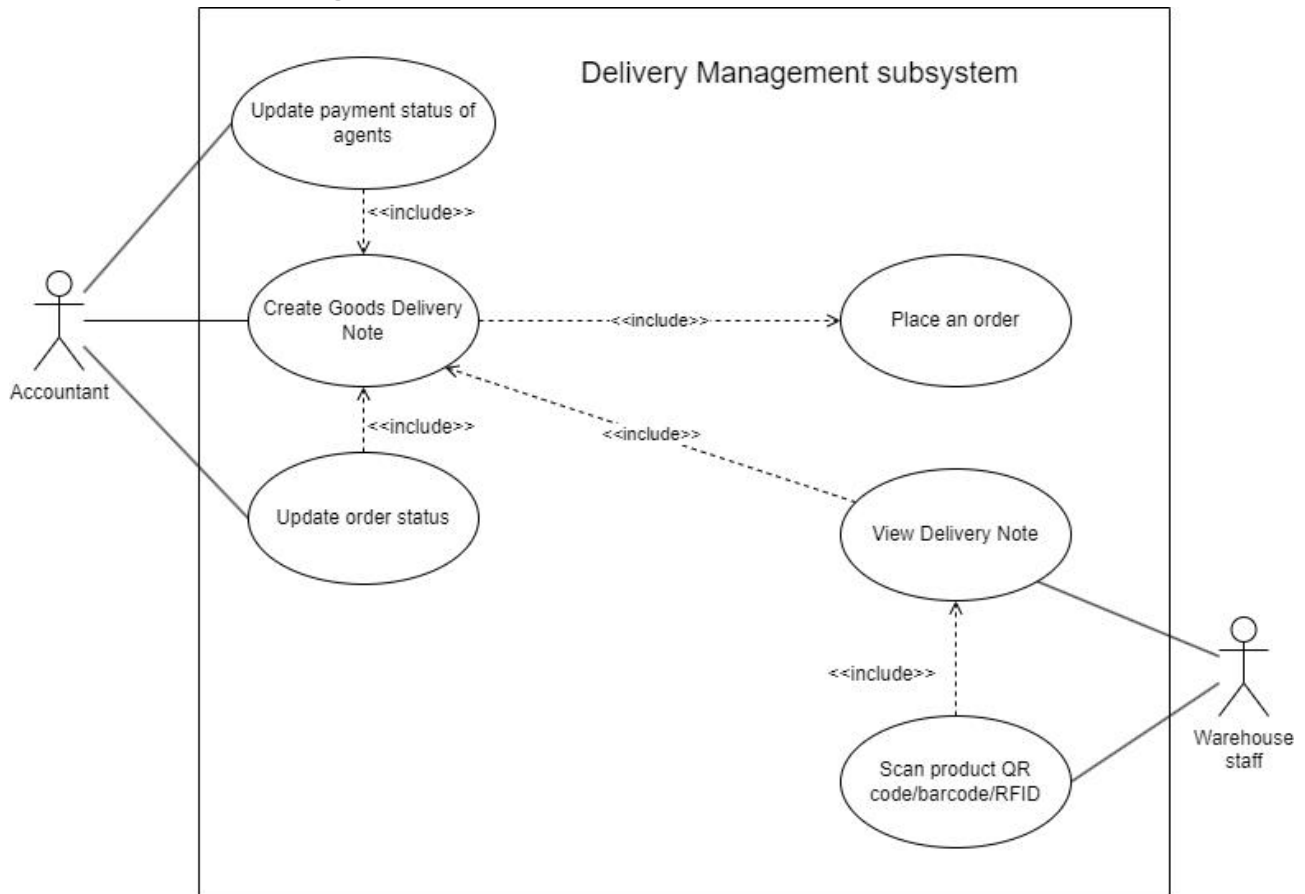


Figure 8: Use case 1

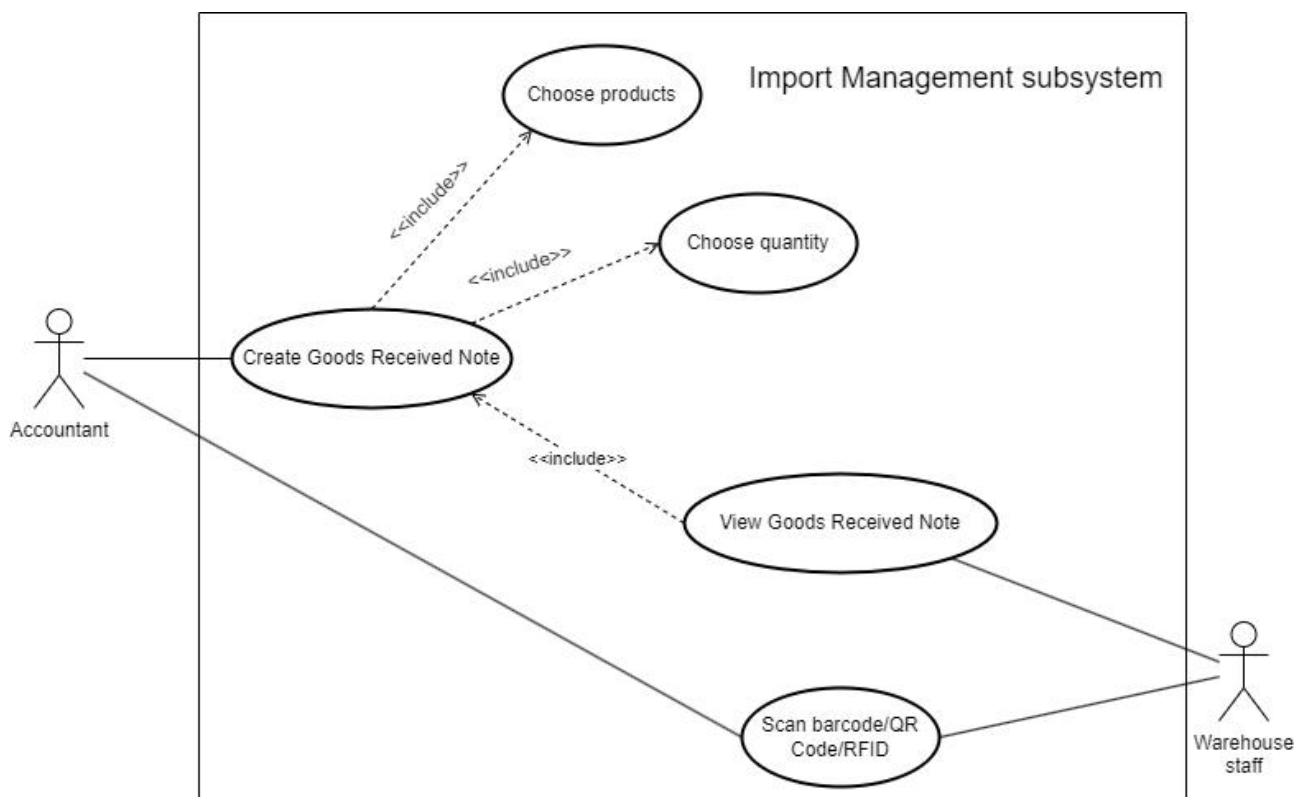


Figure 9: Use case 2

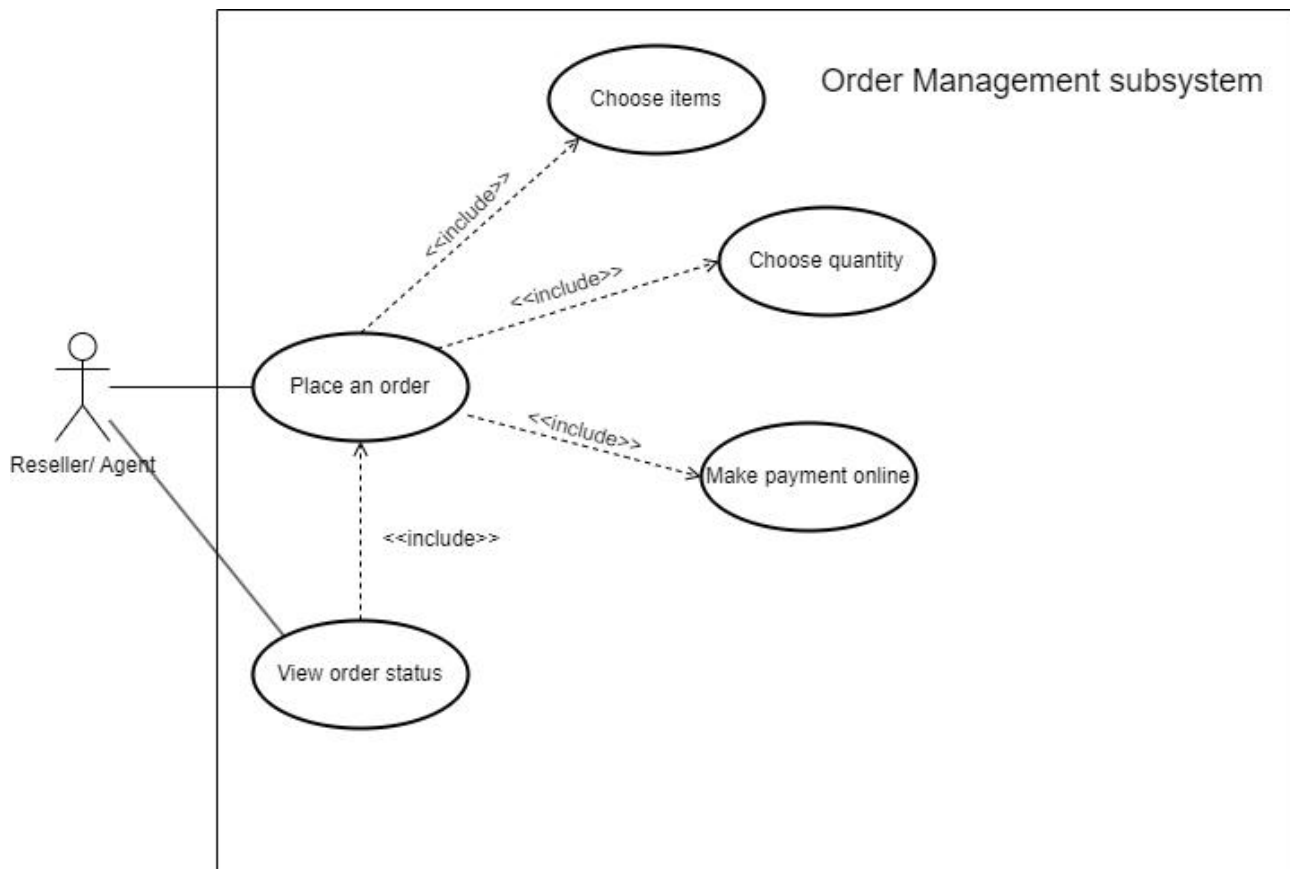


Figure 10: Use case 3

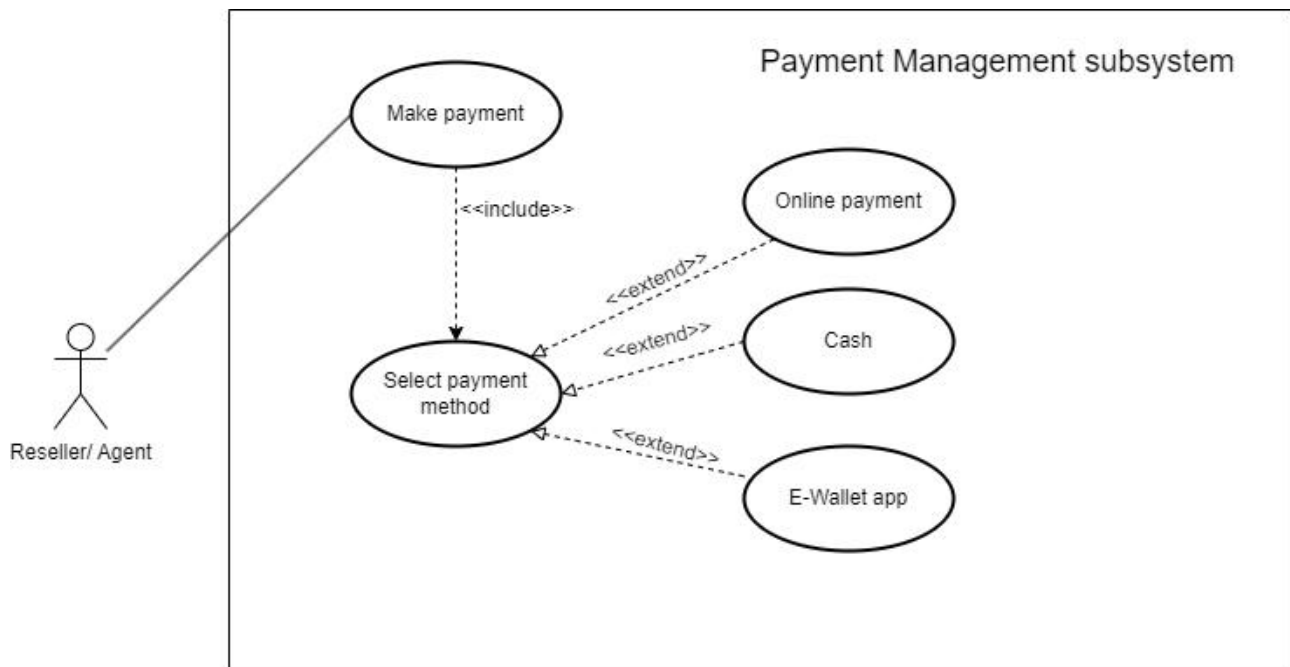


Figure 11: Use case 4

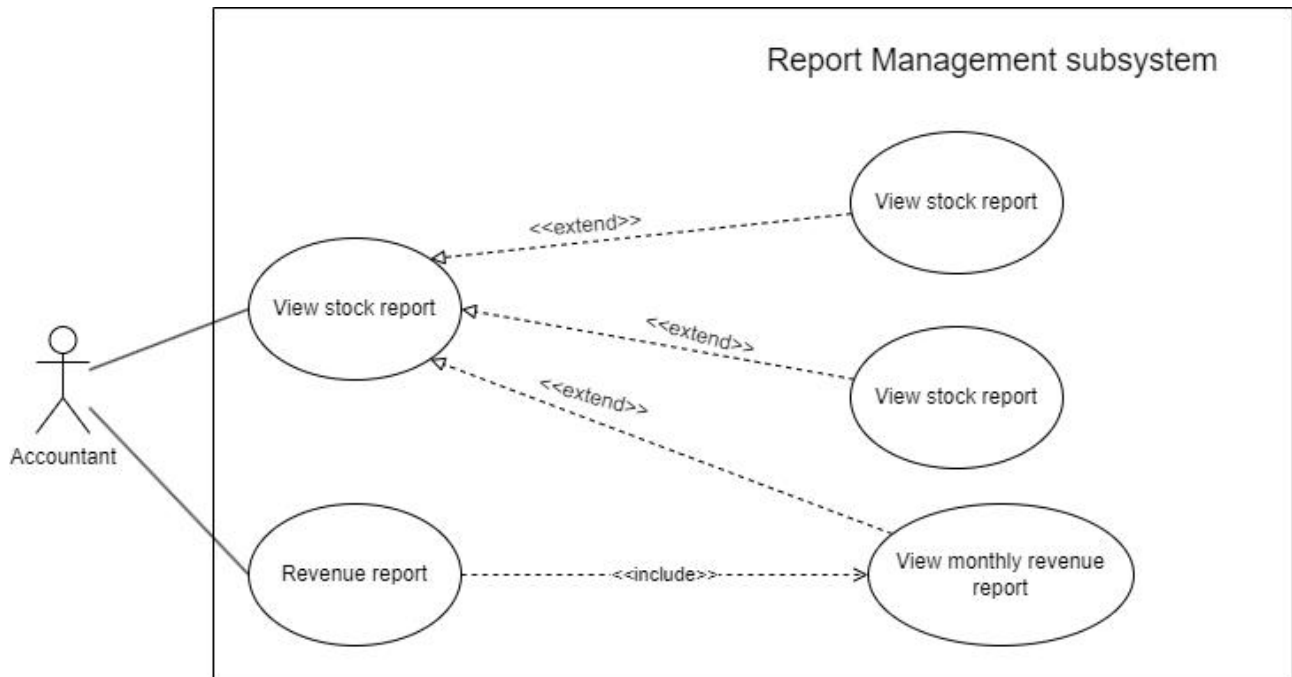


Figure 12: Use case 5



### 2.1.7. Domain Class Model Diagram

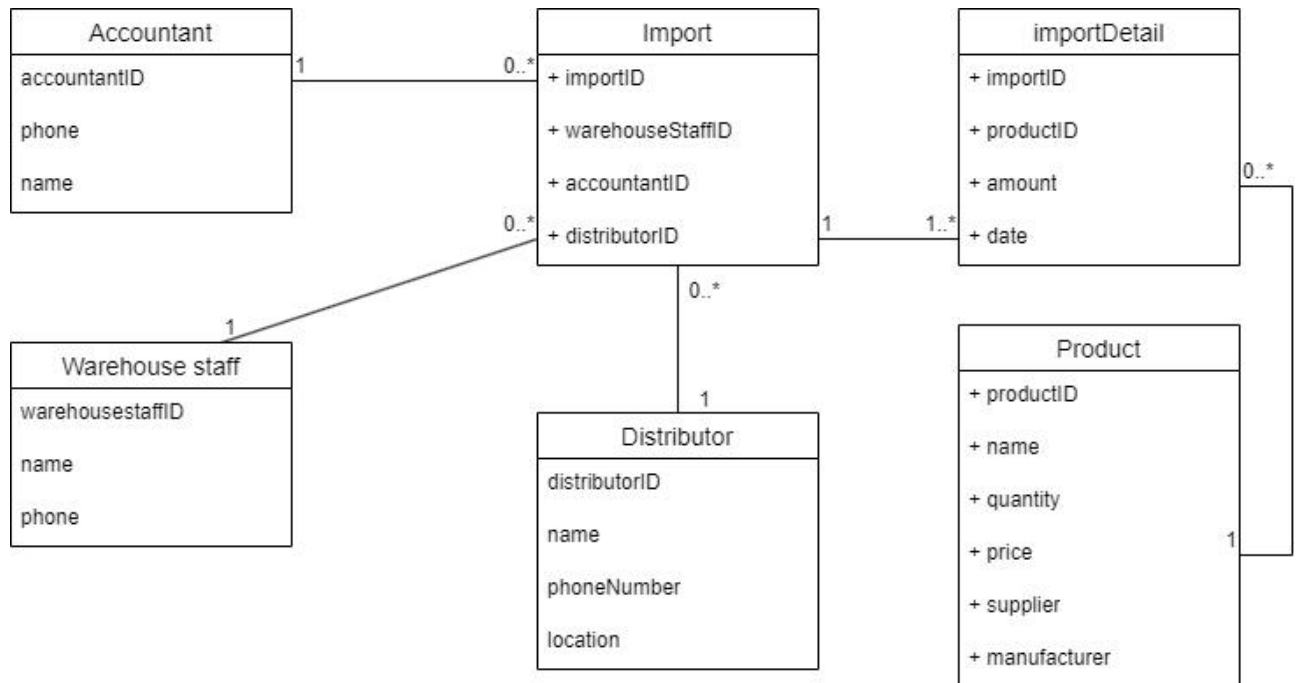


Figure 13: Domain class model of Import Management

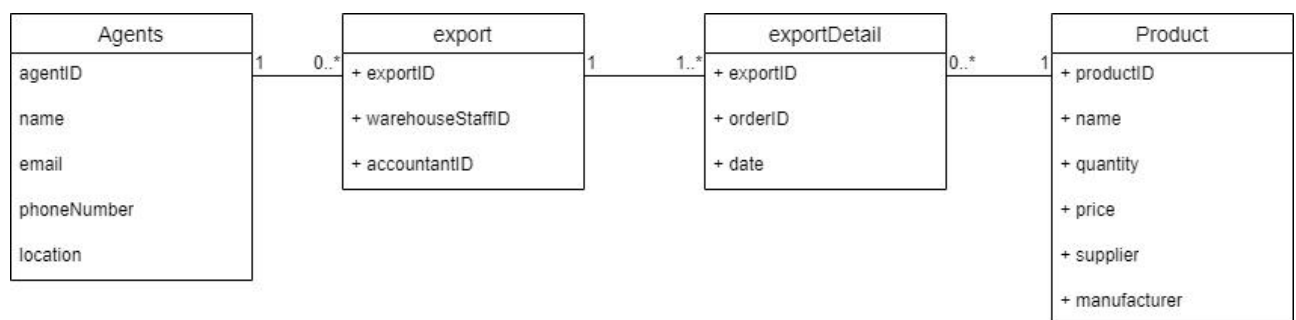


Figure 14: Domain class model of Order Management subsystem

## 2.2 Use Case description

### 2.2.1 Use Case: View stock report

- i. Use case : Accountant is able to view stock report in the system.

Figure 15: Use case description for View stock report

<b>Use case name</b>	View Stock Report	
<b>Triggering event</b>	The accountants want to view a report to obtain information about inventory movement, best-selling products, or revenue.	
<b>Brief description</b>	This use case describes the process of an Accountant viewing the stock report for the distributor's electronics devices products.	
<b>Primary Actor:</b>	Accountant	
<b>Preconditions:</b>	The accountant must be logged in to the system.	
<b>Postconditions:</b>	The accountant has viewed the selected stock report. The accountant can use the data from the report to forecast about the distributor's electronics devices products trend.	
<b>Flow of activity</b>	<p>Actor elects the "View Report" option from the system menu. Selects a specific report option (e.g. View income revenue) Reviews the report and makes note of any relevant information. Closes the report and returns to the system menu.</p>	<p>System Displays a list of available report options (e.g. by product, by warehouse location, by date range). 2.1. Generates the selected report. 2.2. Displays the report to the accountant.</p>
<b>Exception conditions</b>	<p>Invalid report option selected: The system displays an error message and prompts the accountant to select a valid option.</p> <p>System error during report generation: The system displays an error message and prompts the accountant to try again later or contact technical support.</p>	

## ii. Activity diagram for Use Case: View stock report

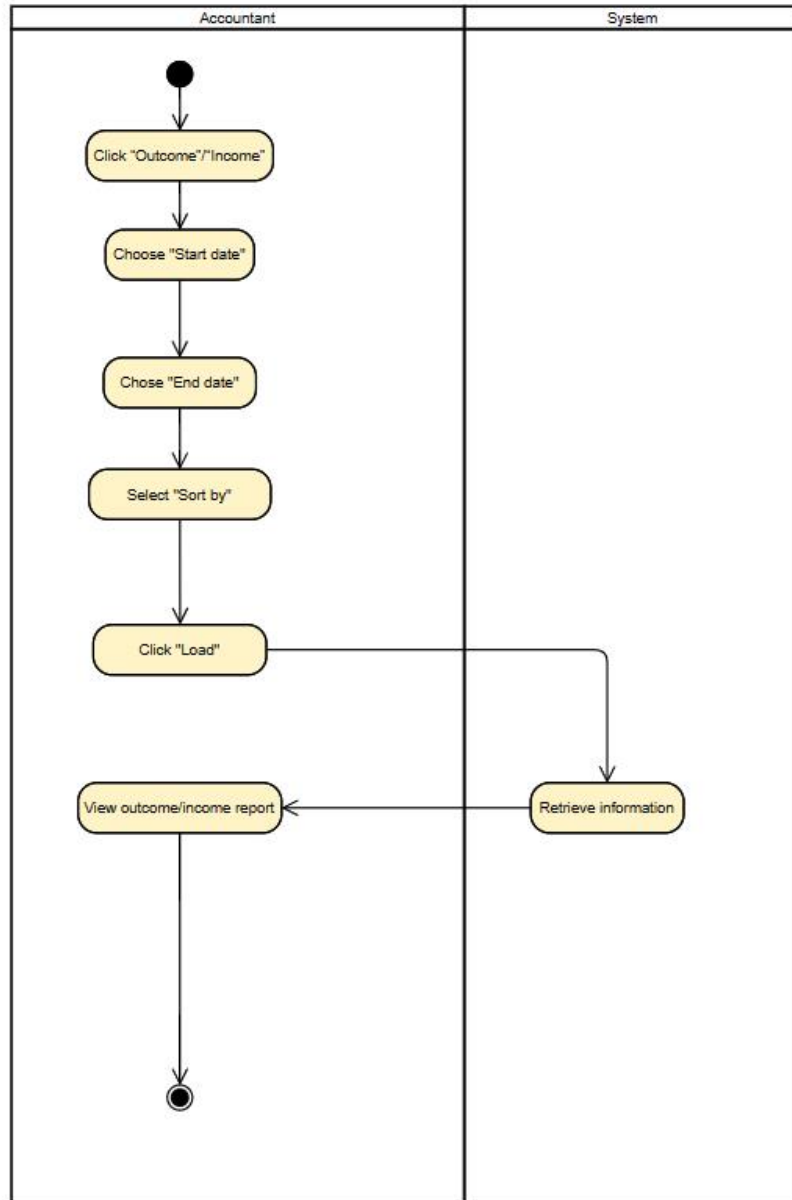


Figure 16: Activity diagram for View stock report

iii. System sequence diagram for Use Case: View stock report

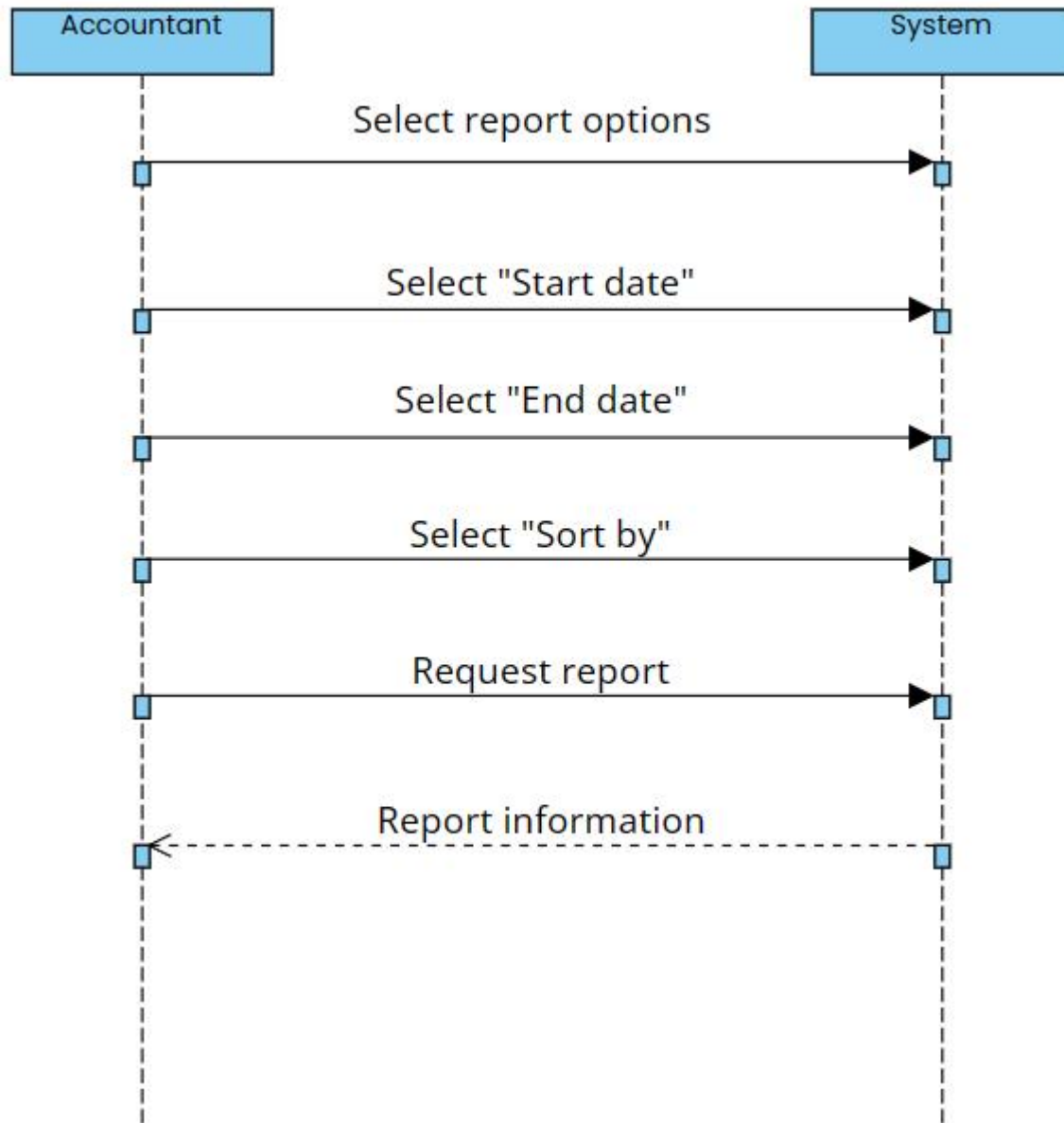


Figure 17: SSD for View stock report

### 2.2.2. Use Case: Create Goods Received Note

- i. Use case : Create Goods Received Note fully description

**Figure 18: Use case description for Create Goods Received note**

<b>Use case name</b>	Create Goods Received	
<b>Triggering event</b>	The distributor imports new electronics devices products.	
<b>Brief description</b>	This use case describes the process of an accountant creating a Goods Received record in the system when the distributor imports new electronics devices products.	
<b>Primary Actor:</b>	Accountant, Warehouse Staff	
<b>Stakeholders</b>	Manager	
<b>Preconditions:</b>	The accountant must be logged in to the system.	
<b>Postconditions:</b>	A Goods Received record has been created in the system. The Warehouse Staff has verified the received items and updated their status in the system. The inventory records for the received items have been updated to reflect the new stock levels.	
<b>Flow of activity</b>	<b>Actor</b>	<b>System</b>
	1 Accountant selects the "Create Goods Received" option from the system menu.  2 Accountant enters the required information.  3 Warehouse Staff scan barcode/QR Code or RFID to verify the received items against the Goods Received record.  4 Warehouse Staff updates the status of the received items as "Received".	1.1 Prompt to enter details about the new import (e.g. supplier, shipment date, import date, invoice number, ...)  2.1 Creates a Goods Received record in the system and assigns a unique identification number.        4.1 The system updates the inventory records for the received items to reflect the new stock levels.
<b>Exception conditions</b>	If the accountant enters invalid information in step 3, the system displays an error message and prompts the accountant to correct the information.	

## ii. Activity diagram for Use Case: Create Goods Received Note

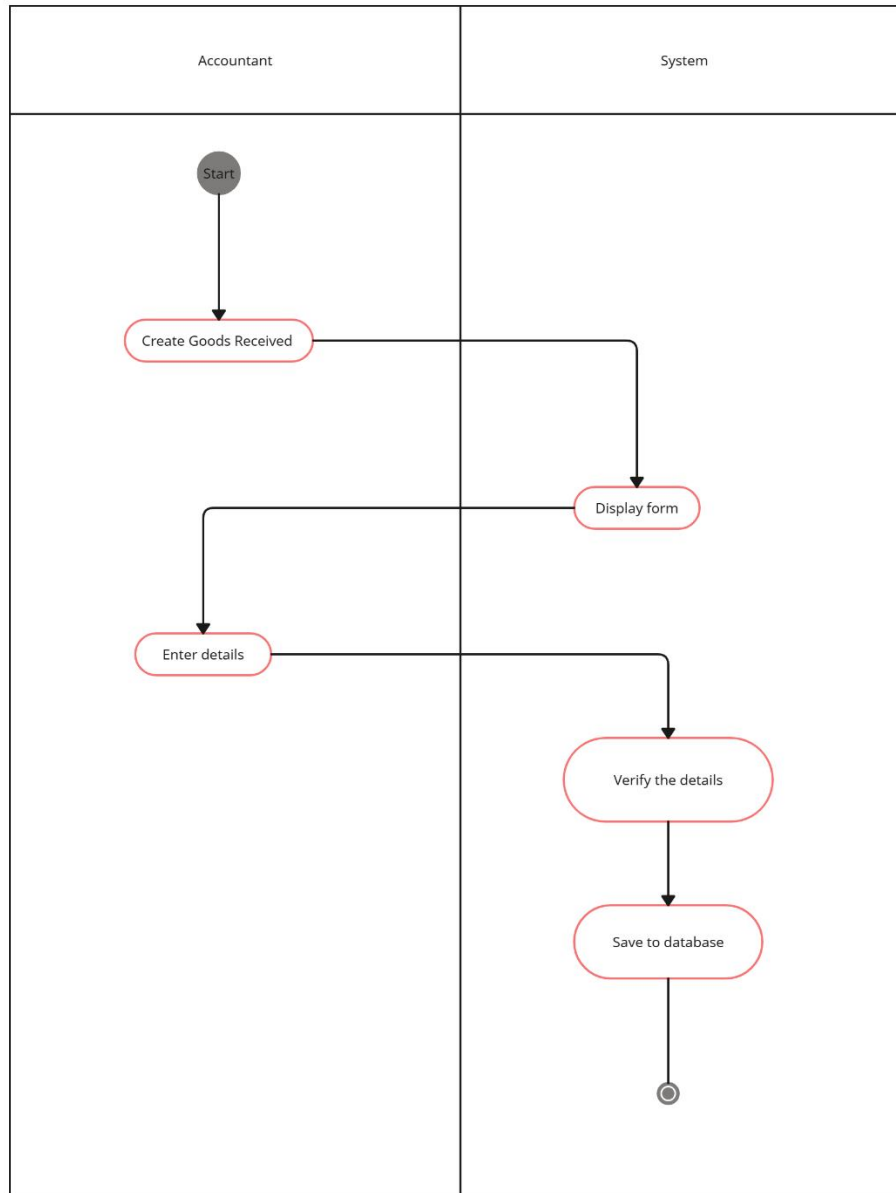


Figure 19: Activity diagram for Create Goods Received note

## iii. System sequence diagram for Use Case: Create Goods Received Note

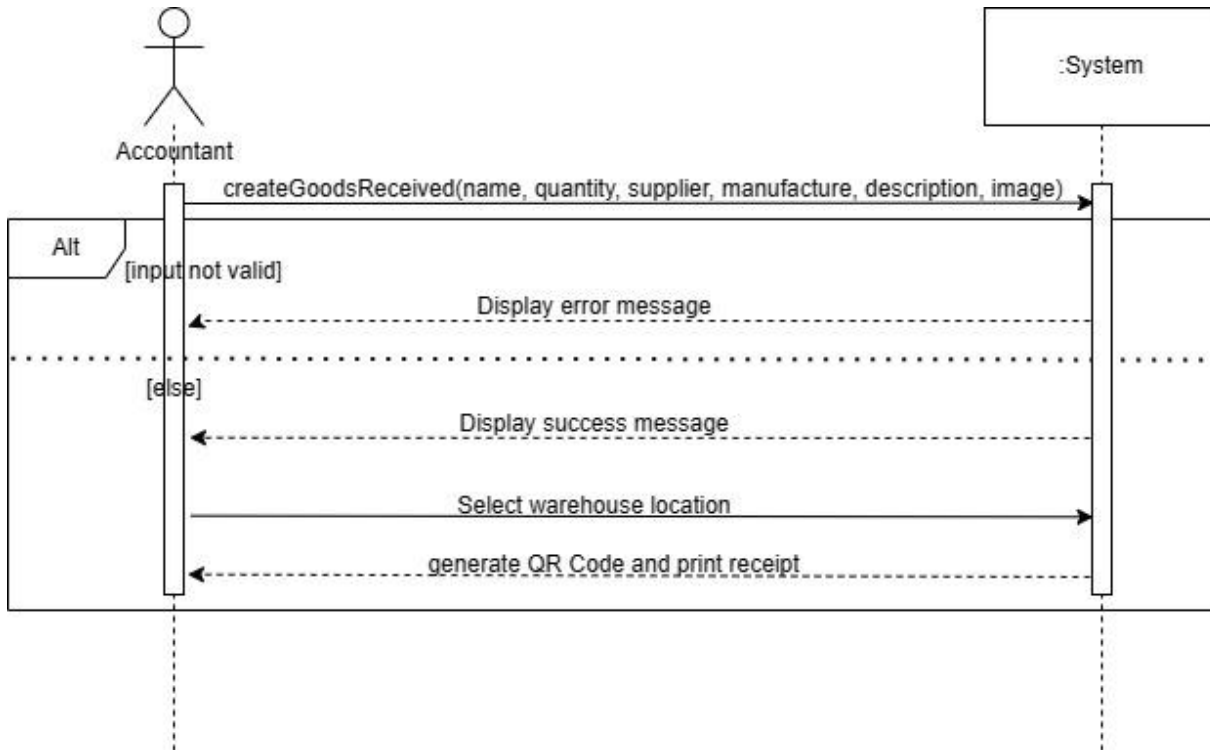


Figure 20: SSD for Create Goods Received note

**2.2.3. Use Case: Place an order**

- i. Use case : Reseller/ Agent place an order on the system

Figure 21: Use case description for Place an order

Use case name	Place an order	
Triggering event	Reseller/ Agent place an order on the system and make online payment	
Brief description	When an agent wants to purchase any products, he/she will go to the website of the company, choose the product that the agent is looking for. Then the agent clicks to choose the payment method. This process will finish after successful payment.	
Primary Actor:	Reseller/ Agent, Accountant	
Stakeholders	Bank stakeholders	
Preconditions:	The reseller/agent stakeholder must be logged in to the system.	
Postconditions:	A Goods ordered record has been created in the system. The Warehouse Staff has verified the received items and updated their status in the system. The inventory records for the received items have been updated to reflect the new stock levels.	
Flow of activity	Actor	System

	<p>1 Accountant selects the "Pick item(s)" option from the system menu.</p> <p>2 Reseller enters the required information.</p> <p>3 The system will display the order detail</p> <p>4 Reseller choose payment method and check out</p>	
--	--	--

ii. System sequence diagram for Use Case: Place an order

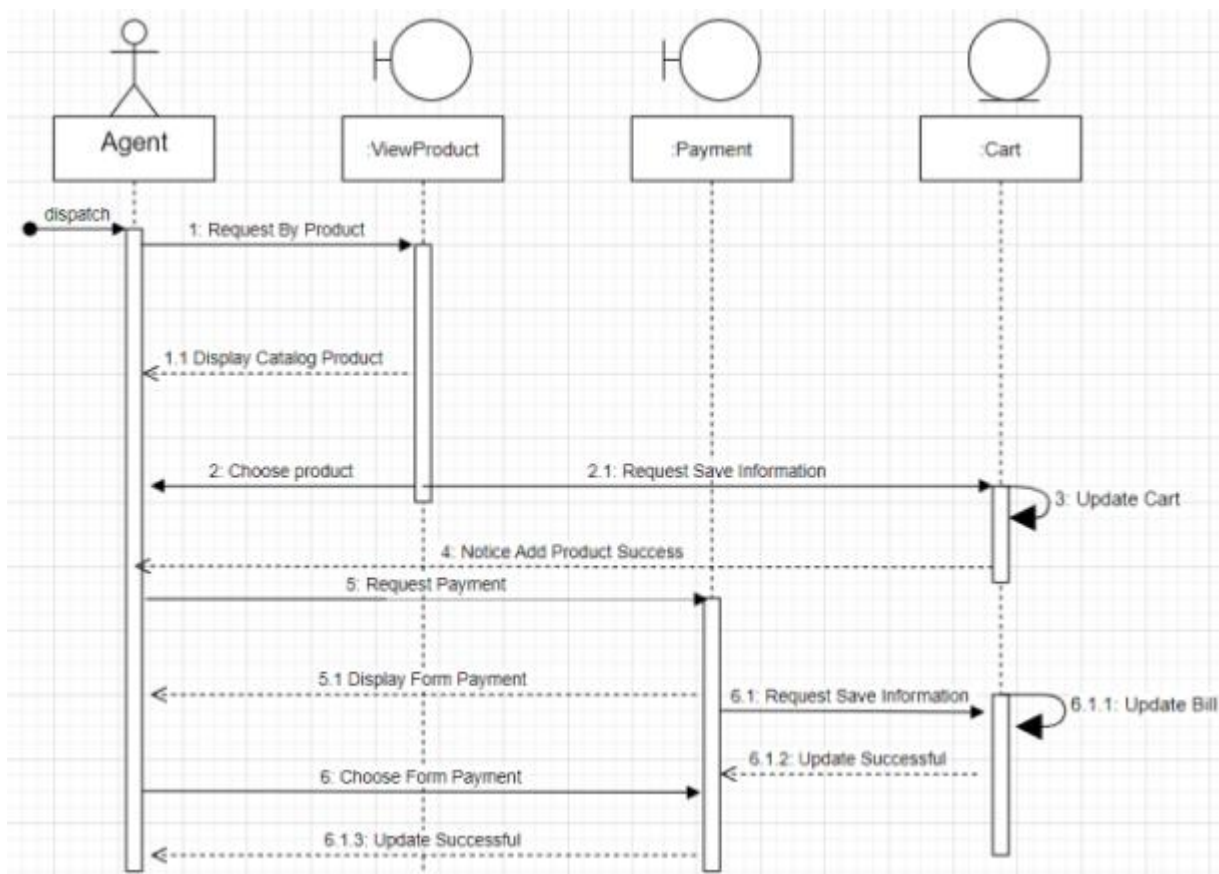


Figure 22: SSD for Place an order



## 2.2.4. Use Case: Create Goods Delivery Note

- i. Use case : Accountants Create Goods Delivery Note

**Figure 23: Use case description for Create Goods Delivery Note**

<b>Use case name</b>	Create Goods Delivery Note	
<b>Triggering event</b>	Accountant create a new Delivery note in the system	
<b>Brief description</b>	<p>- When a company wants to deliver goods to agents, an Accountant will interact with software in order to create a Delivery Goods Note.</p> <p>- The result of this action is that the software will return a Delivery Goods Note which has full information such as delivery note id, time, products' details,, quantity, price, agent's detail, payment status, delivery status, ...</p>	
<b>Primary Actor:</b>	Accountant	
<b>Preconditions:</b>	The accountant must be logged in to the system.	
<b>Postconditions:</b>	Outcoming products' details will be added in database in order for Accountant to view stock report	
<b>Flow of activity</b>	<b>Actor</b>	<b>System</b>
	1 Accountant selects the "Export" option from the system menu.  2.Accountant choose "Delivery note"  3.Accountant enter placed Order ID.  4 Click "Generate".	1.1 Prompt to enter details about the new request  2.1 Received orderID  4.1 Redner Delivery note
<b>Exception conditions</b>	If the Accountant doesn't add any product, he/ she cannot click on the Delivery Button to Create Goods Delivery Note.	

## ii. Activity diagram for Use Case: Create Goods Delivery Note

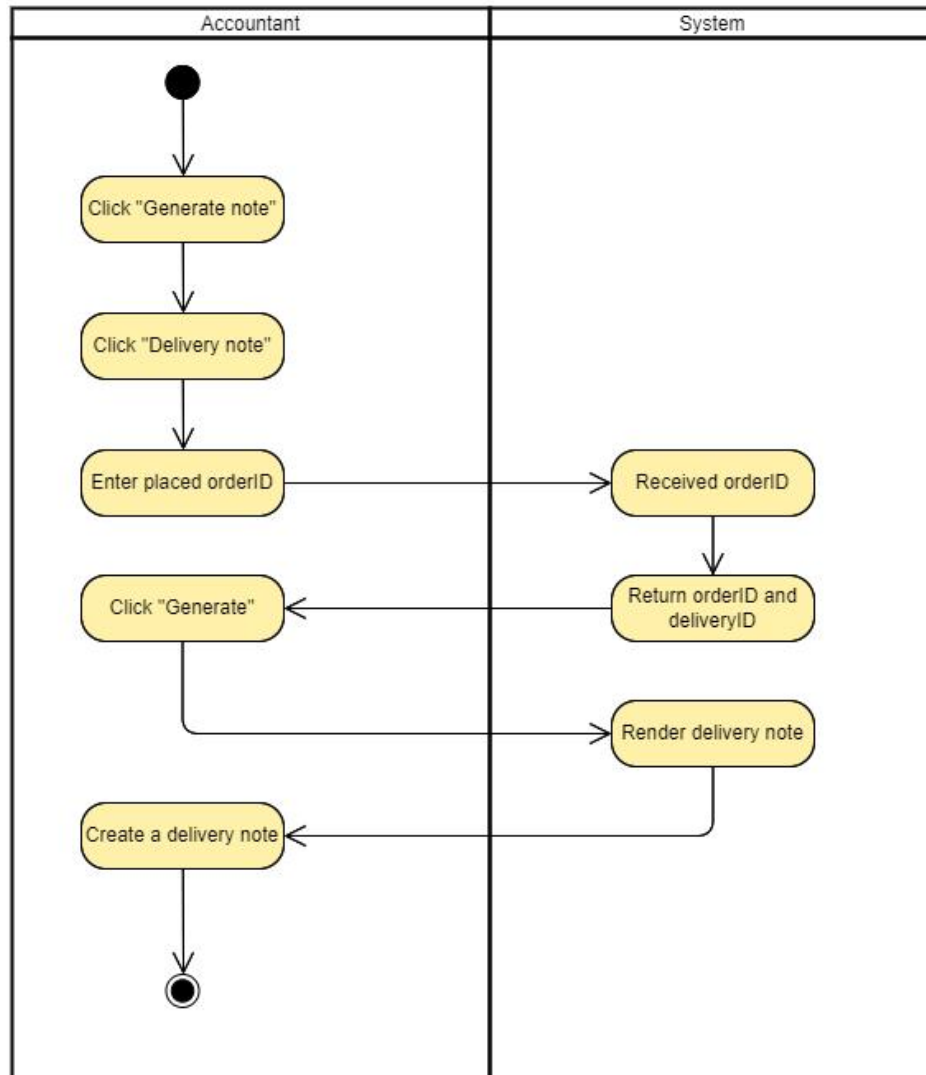


Figure 24: Activity diagram for Create Goods Delivery Note

## iii. System sequence diagram for Use Case: Create Goods Delivery Note

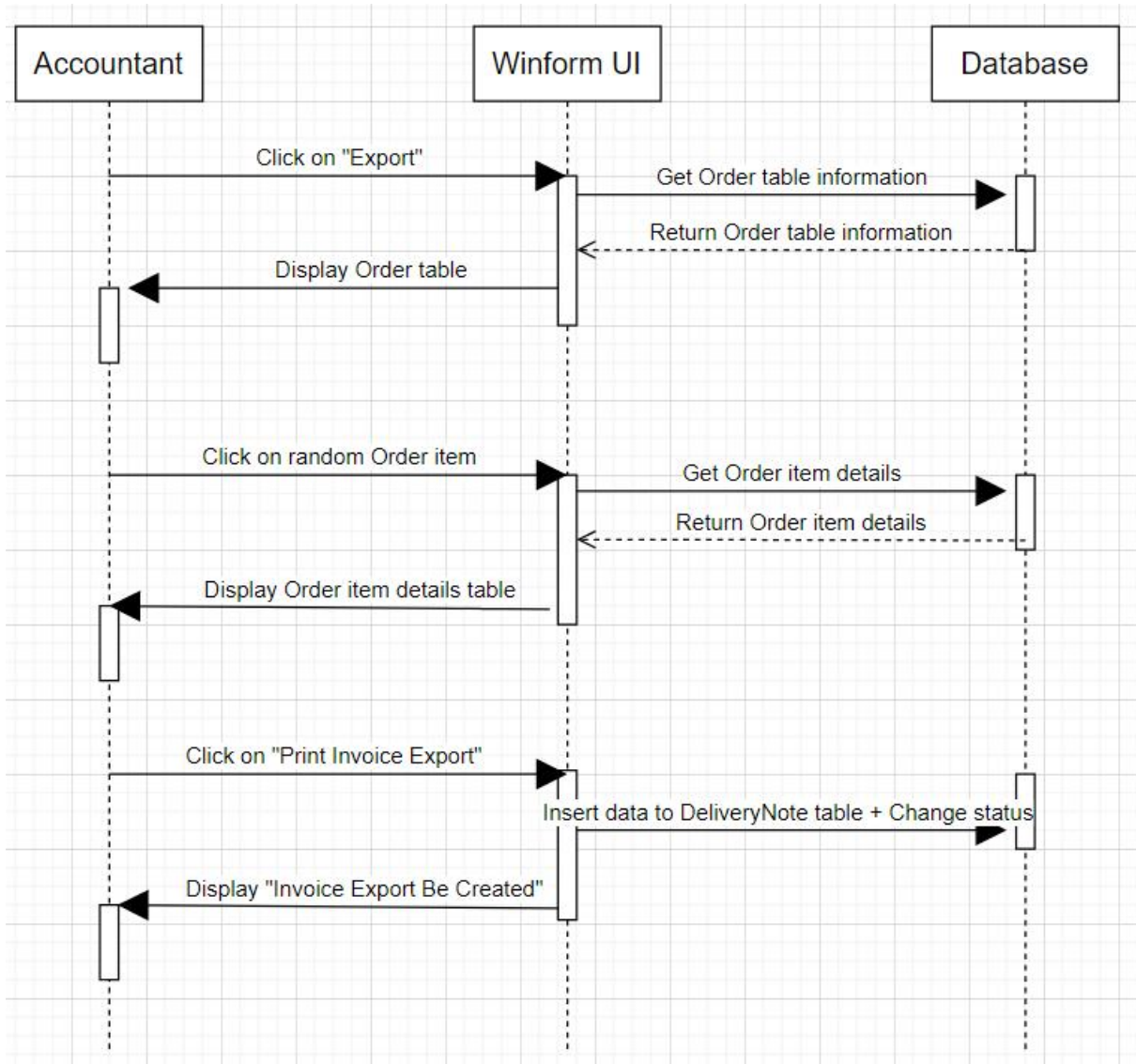


Figure 25: SSD for Create Goods Delivery Note

## Verifying use cases for Actor

### 2.3.1. Verifying uses cases: Customer

Data entity/domain class	C R U D	Verified use case
Customer	Create	Create customer account
	Read/report	Look up customer Produce customer usage report
	Update	Process account adjustment Update customer account
	Delete	Update customer account (to archive)

### 2.3.2. Verifying uses cases for Warehouse staff

Data entity/domain class	C R U D	Verified use case
	Create	
	Read/report	View Incoming/Outgoing Stock Report
	Update	Update stockout Update Goods warehousing status
	Delete	

### 2.3.3. Verifying uses cases for Accountant

Data entity/domain class	C R U D	Verified use case
	Create	Create Goods Received Create Goods Delivery Note
	Read/report	View Incoming/Outgoing Stock Report View Best-Selling Products View Revenue Report
	Update	Update Goods Delivery Note Update Payment Status
	Delete	

### 2.3.4. Verifying uses cases for Actor 4

Data entity/domain class	C R U D	Verified use case
	Create	Place Order
	Read/report	View Order Status
	Update	Update Payment Status
	Delete	

### III. System Requirements Design (3.0 points)

This part is to conduct from Analysis to Design:

For this part, you should complete Design Models Diagram as above.

#### 3.1 Design Class for View report

##### 3.2.1. Design Classes in Detailed Design

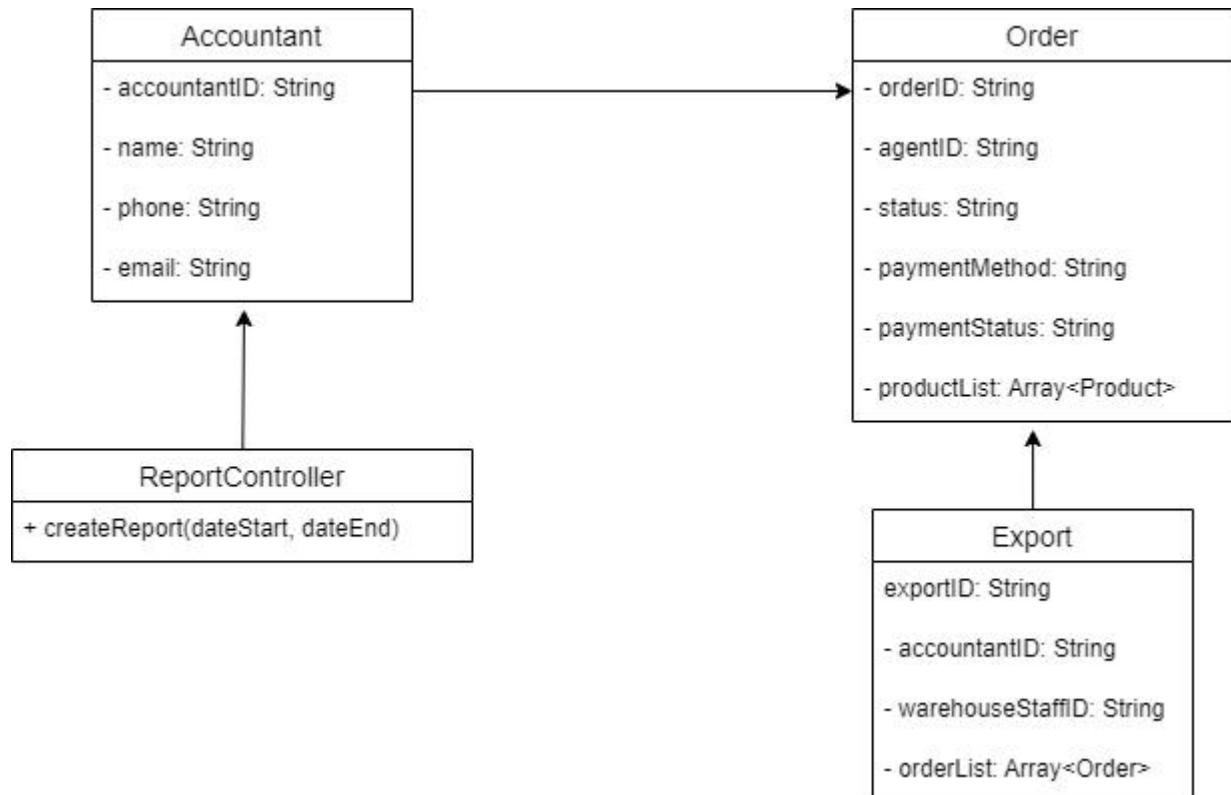


Figure 26: Domain design class

### 3.2.2. Design Class Diagram

#### i. Design Class

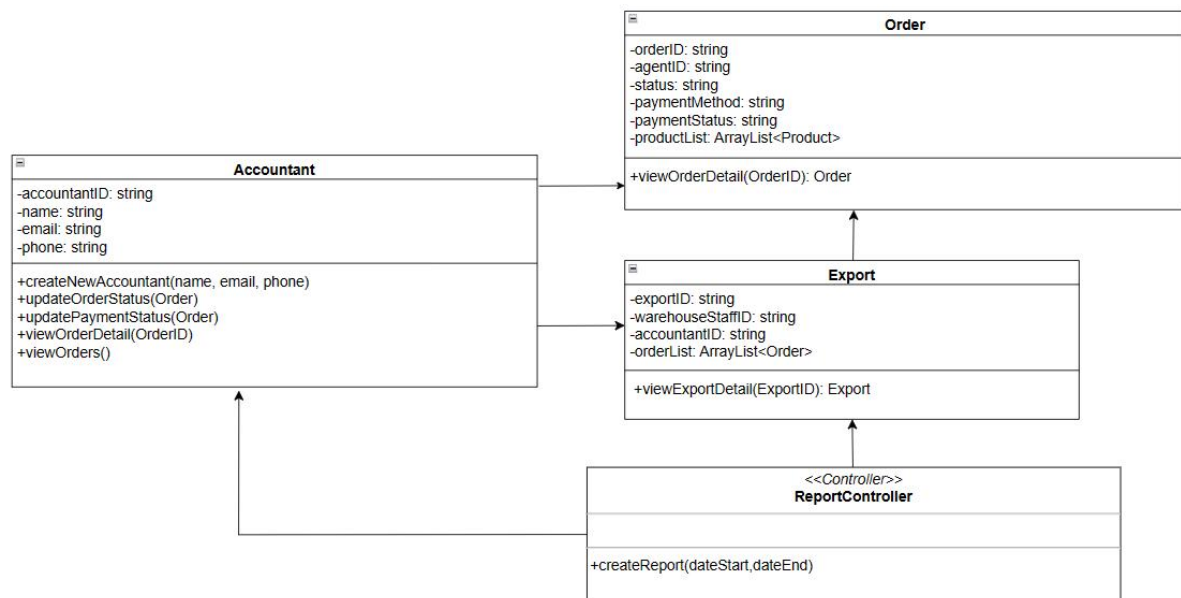


Figure 27: Design class

#### OOD with Communication

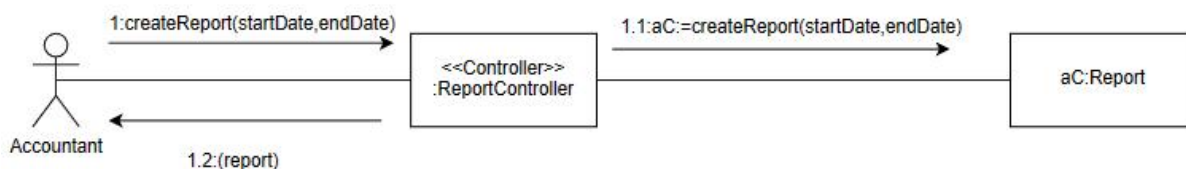


Figure: OOD with Communication

### 3.2.3. OOD with Sequence Diagram

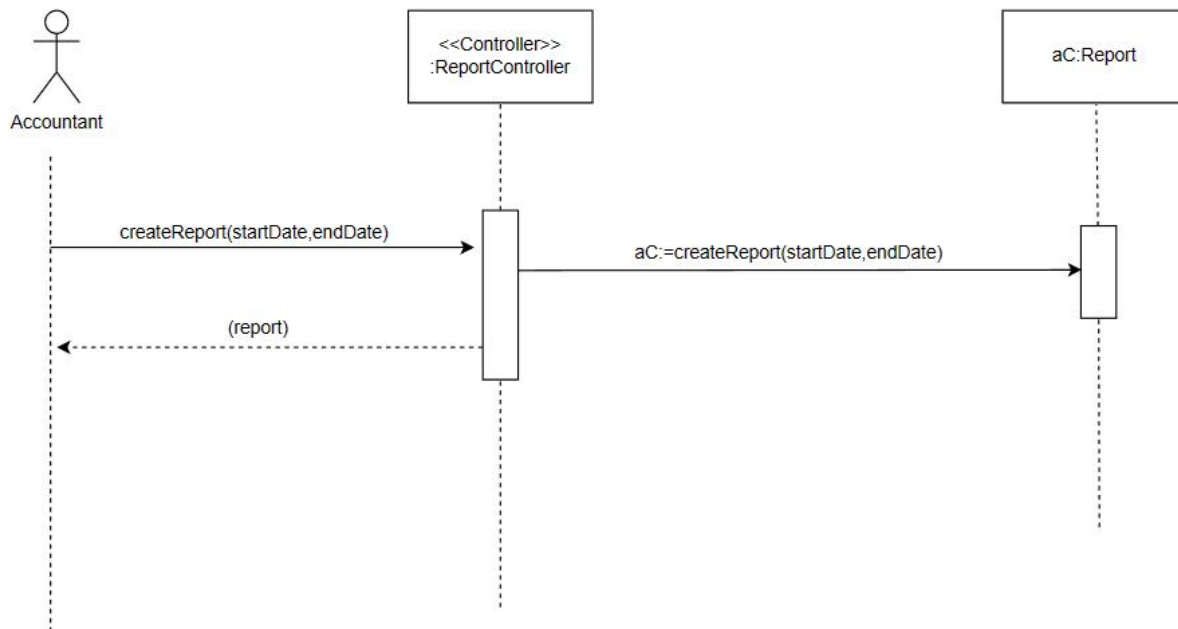


Figure 28: OOD with SSD

### 3.2.4. Final Design Class Diagram

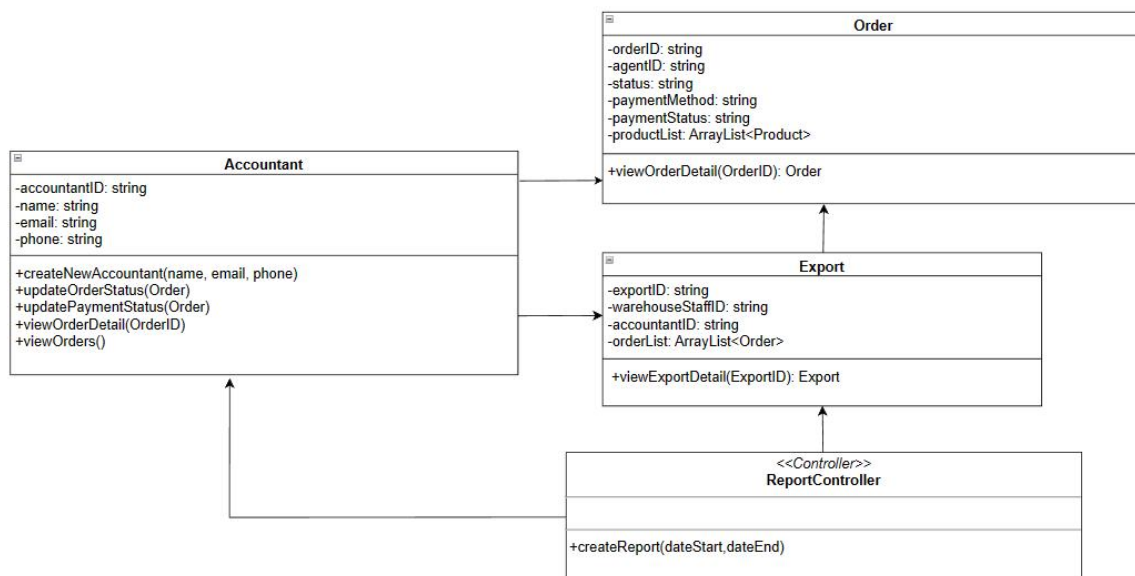


Figure 29: Final design class diagram

## 3.2 Design Class for Create Goods Received Note

### 3.2.1. Design Classes in Detailed Design

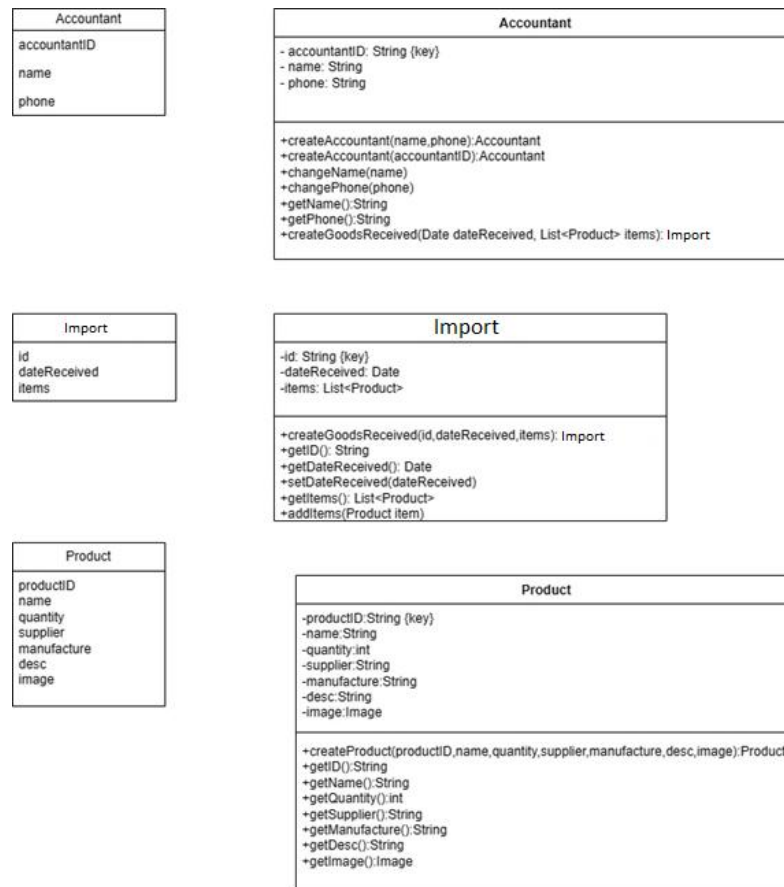


Figure 30: Design class in detailed

### 3.2.2. Design Class Diagram

#### i. Domain Design Class

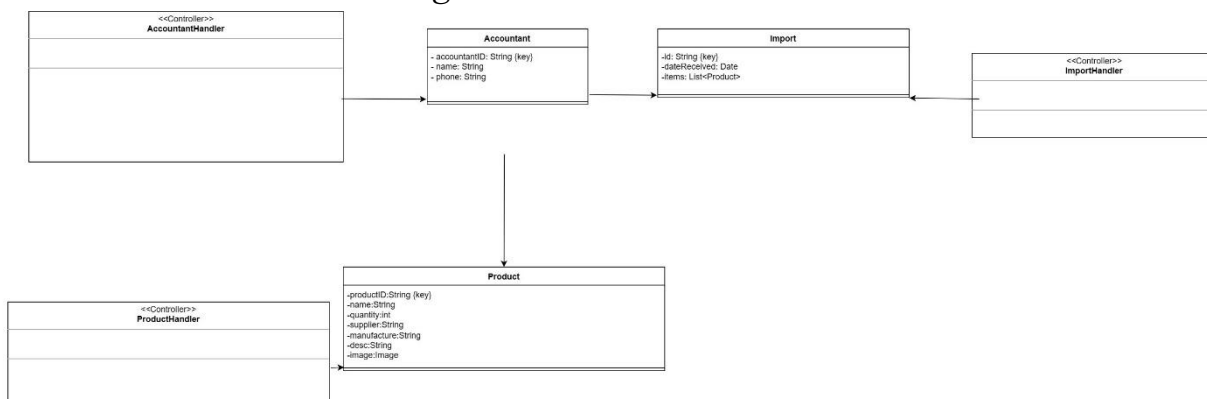


Figure 31: Design class



### 3.2.3. OOD with Communication

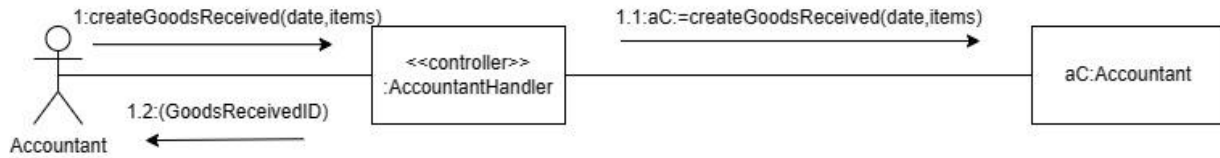


Figure 32: OOD with Communication

### 3.2.4. OOD with Sequence Diagram

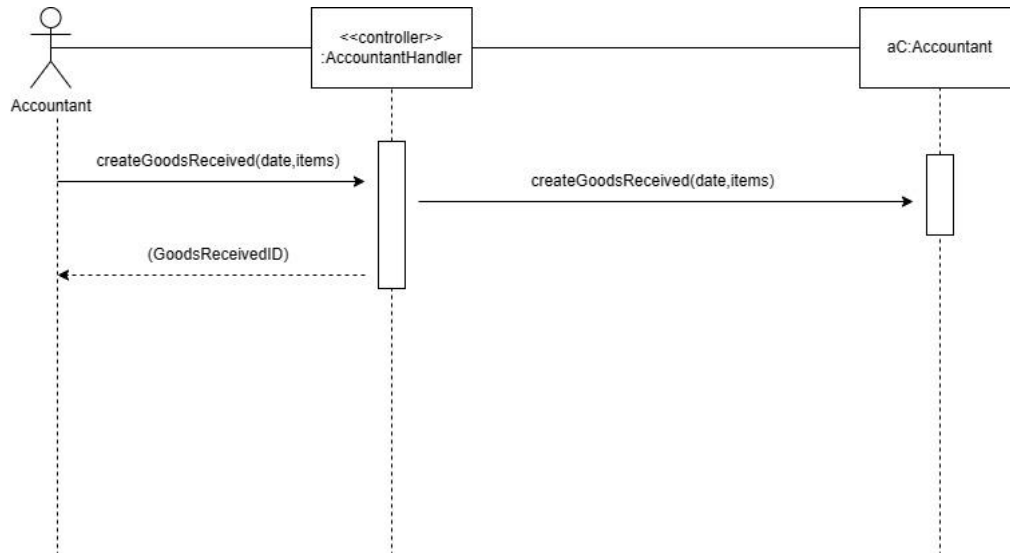


Figure 32: OOD with SD

### 3.2.5. Final Design Class Diagram

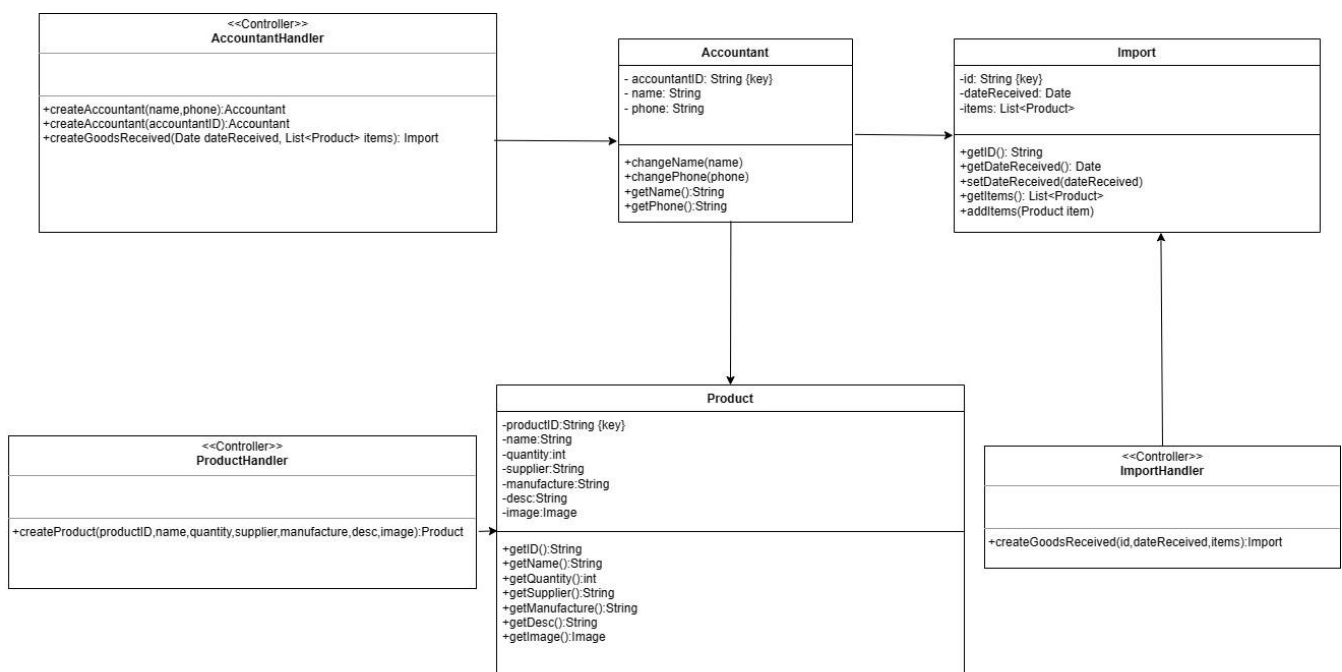


Figure 33: Final design class

## IV. System Requirements Implementation

### 4.1 Design Class for Sub System

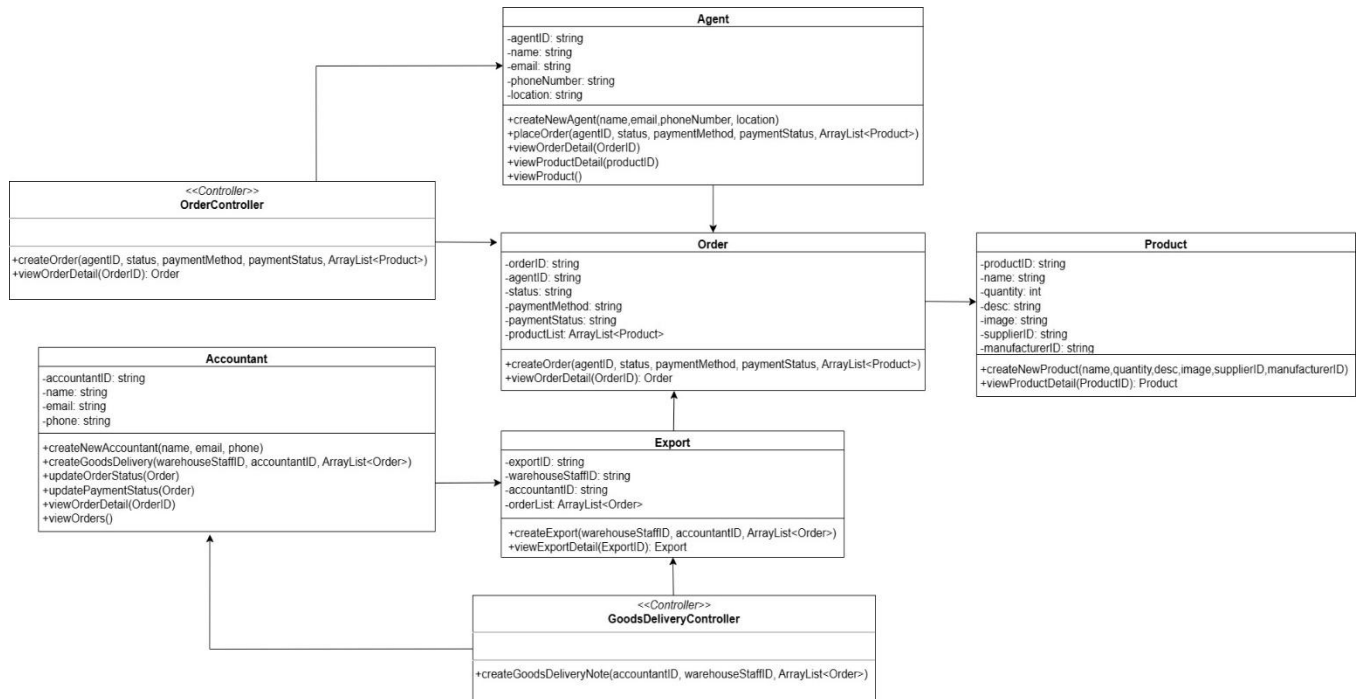


Figure 34: System design class

### 4.3.1. UI design

**Good Received Note**

Code: NH001

Name\_Employee: Lê Văn Đạt

Date\_In: 11/10/2021

**Delete Note**

ID Product	Name Product	Amount	Price	Total Money
SP1	Innisfree Pore Blur Pact	200	579000	115800000

**LogOut**

Figure 35: UI Design of Create Good Received Note

### 4.3.2. SQL Code

i. Create Database

```
CREATE DATABASE MANAGEMENT  
USE MANAGEMENT
```

ii. Create Table

```
CREATE TABLE loginTable  
(  
    id int NOT NULL IDENTITY(1,1) primary key,  
    username varchar(100) not null,  
    pass varchar(100) not null  
)
```

```
CREATE TABLE Good_Received_Note
```

```
(  
    Number_Product int identity NOT NULL,  
    Code nvarchar(50) NULL,  
    Name_Employee nvarchar(255) NULL,  
    Date_In date NULL,  
    ID_Product nvarchar(50) NULL,  
    Name_Product nvarchar(255) NULL,  
    Amount int NULL,  
    Price int NULL,  
    Total_Money int NULL,  
    primary key (Number_Product)  
)
```

```
CREATE TABLE GOOD_DELIVERY_NOTE
```

```
(  
    Number_Product int identity NOT NULL,  
    Code1 nvarchar(50) NULL,  
    Customer nvarchar(255) NULL,  
    Phone nvarchar(50) NULL,  
    Address nvarchar(50) NULL,  
    Date_out date NULL,  
    ID_Product nvarchar(50) NULL,  
    Name_Product nvarchar(255) NULL,  
    Amount int NULL,  
    Price int NULL,  
    Total_Money int NULL,  
    Pay nvarchar(255) NULL,  
    Ship nvarchar(255) NULL,  
    primary key (Number_Product)  
)
```

```
create table Purchase_Order
```

```
(  
    Code2 nvarchar(50) not null,  
    Name_City nvarchar(255) null,  
    Address nvarchar(255) null,  
    Phone nvarchar(255) null,  
)
```

```

Pay nvarchar(255) null,
Date_Order date null,
Id_Product nvarchar(50) null,
Name_Product nvarchar(255) null,
Amount int null,
Price int null,
Total_Money int null,
primary key (Code2)
)
DROP TABLE Good_Delivery_Note
DROP TABLE Purchase_Order
DROP TABLE Good_Received_Note
INSERT INTO loginTable (username,pass) values ('admin','Admin123');
INSERT INTO loginTable (username,pass) values ('giabao','giabao1912');
INSERT INTO loginTable (username,pass) values ('dieuquynh','dieuquynh1912');
select * from loginTable
select * from Good_Received_Note
insert into Good_Received_Note
values (N'NH1', N'Gia Bảo', '2021-12-12' , 'SP1', N'Innisfree Pore Blur Pact', 500,
579000, 289500000),
(N'NH1', N'Phi Nguyễn', '2021-12-12' , 'SP2', N'Innisfree Green Tea
Facial Moisturizers', 200, 385000, 77000000),
(N'NH2', N'Phong Pham', '2021-12-20' , 'SP3', N'Innisfree Orchid Facial
Moisturizers', 300, 230000, 69000000),
(N'NH3', N'Trần Quốc Anh', '2021-12-25' , 'SP1', N'Innisfree Pore Blur
Pact', 400, 579000, 289500000),
(N'NH001', N'Lê Văn Đạt', '2021-11-10' , 'SP1', N'Innisfree Pore Blur
Pact', 200, 579000, 115800000),
(N'NH18', N'Cao Đăng Khoa', '2021-12-29' , 'SP8', N'Innisfree Orchid
Youth Enriched Toner Hyaluronic Acid Face Treatment', 500, 550000,
275000000),
(N'NH18', N'Phạm Đăng Khôi', '2021-12-29' , 'SP9', N'Limited Edition
Daily UV Defense Sunscreen', 300, 419000, 125700000),
(N'NH4', N'Lê Vi', '2021-12-29' , 'SP4', N'Innisfree Skinny Eye
Mascara - Long Lash Makeup', 500, 470000, 235000000),
(N'NH5', N'Quý Lê', '2021-12-29' , 'SP5', N'Innisfree Matte Mineral
Setting Powder Duo)', 300, 350000, 105000000),
(N'NH6', N'John', '2021-12-29' , 'SP6', N'Green Tea Hydration Heroes
Set ', 500, 350000, 175000000),
(N'NH7', N'Jenny', '2021-12-29' , 'SP7', N'Clear Pores Ahead ', 500,
75000, 37500000)
insert into GOOD_DELIVERY_NOTE
values ('P01', N'Trần Lê Văn ', N'03256789', N'Quận 1, TPHCM', '2022-01-03',
'SP1', N'Innisfree Pore Blur Pact, 0.44 Ounce (Pack of 1)', 1, 600000, 600000,
N'Unpaid', N'Delivery in progress'),
('P02', N'Trần Văn Lê', N'03256789', N'Quận 2, TPHCM', '2022-01-03',
'SP1', N'Innisfree Pore Blur Pact, 0.44 Ounce (Pack of 1)', 1, 600000, 600000,
N'Paid', N'Successful delivery'),

```

( 'P03', N'Lê Vi', N'03256789', N'Quận 3, TPHCM', '2022-01-03', 'SP1',  
 N'Innisfree Pore Blur Pact, 0.44 Ounce (Pack of 1)', 2, 600000, 1200000,  
 N'Unpaid', N'Delivery in progress'),  
 ( 'P04', N'Lê Văn Đạt', N'03256789', N'Quận 4, TPHCM', '2022-01-03',  
 'SP1', N'Innisfree Pore Blur Pact, 0.44 Ounce (Pack of 1)', 2, 600000, 1200000,  
 N'Unpaid', N'Delivery in progress'),  
 ( 'P05', N'Henry', N'03256789', N'Quận 5, TPHCM', '2022-01-03', 'SP5',  
 N'Innisfree Matte Mineral Setting Powder Duo, 0.17 Ounce (Pack of 2)', 1,  
 400000, 400000, N'Unpaid', N'Delivery in progress'),  
 ( 'P06', N'Trần Văn B', N'01234785', N'Quận 6, TPHCM', '2021-12-15',  
 'SP1', N'Innisfree Pore Blur Pact, 0.44 Ounce (Pack of 1)', 5, 600000, 3000000,  
 N'Unpaid', N'Delivery in progress'),  
 ( 'P07', N'Trần Văn D', N'03256789', N'Quận 7, TPHCM', '2022-01-04',  
 'SP4', N'Innisfree Skinny Eye Mascara - Long Lash Makeup', 10, 500000,  
 5000000, N'Unpaid', N'Delivery in progress'),  
 ( 'P08', N'Trần Văn E', N'03256789', N'Quận 8, TPHCM', '2022-01-04',  
 'SP6', N'Green Tea Hydration Heroes Set (\$50 Value)', 5, 400000, 2000000,  
 N'Unpaid', N'Delivery in progress')

**insert into Purchase\_Order**

**values** ( 'M01', N'Trần Văn E', N'Quận 1, TPHCM', '1234', N'InternetBanking',  
 '2022-06-03', 'SP1', 'Innisfree Pore Blur Pact', 1, 600000, 600000),  
 ( 'M02', N'Trần Văn B', N'Quận 1, TPHCM', '12345', N'Payment in  
 Case', '2022-01-04', 'SP4', 'Innisfree Skinny Eye Mascara - Long Lash Makeup', 1,  
 500000, 500000),  
 ( 'M03', N'Trần Văn A', N'Quận 1, TPHCM', '1234132',  
 N'InternetBanking', '2022-01-04', 'SP4', 'Innisfree Skinny Eye Mascara - Long  
 Lash Makeup', 1, 500000, 500000),  
 ( 'M04', N'Trần Văn C', N'Quận 1, TPHCM', '12312311',  
 N'InternetBanking', '2022-01-04', 'SP1', 'Innisfree Pore Blur Pact', 1, 600000,  
 600000),  
 ( 'M05', N'Trần Văn D', N'Quận 1, TPHCM', '23232424', N'Payment in Case', '2022-01-04', 'SP5',  
 'Innisfree Matte Mineral Setting Powder Duo)', 1, 400000, 400000)

### 4.3.3. Software Classes Method Code

Source code: [Link Github](#)

## V. SYSTEM TESTING, DEPLOYMENT AND DEMONSTRATION (1.5 pts)

### 5.1 Testing: Test plan & Test case

Source code: [Link Github](#)

	Testcase description	Testcase procedure	Expected Result	Test Result
1	Test testInput_Received_Note()	Test 2 string input Amount & Price. If they are decimal number, it will return false.	Result is true.	Pass
2	Test testInput_Delivery_Note t()	Test 2 string input Amount & Price. If they are decimal number, it will return false.	Result is true.	Pass
3	Test KiemTraSoPhieuXuat()	Test if string input is valid decimal number, return true.	Result is true.	Pass
4	Test KiemTraSoPhieuNhap()	Test if string input is valid decimal number, return true.	Result is true.	Pass

Figure 36: Testing case

### 6.2. Traceability of test cases to use cases:

- Source traceability refers to the connections between the requirements and the stakeholders who offer them.

## 5.2 Deployment

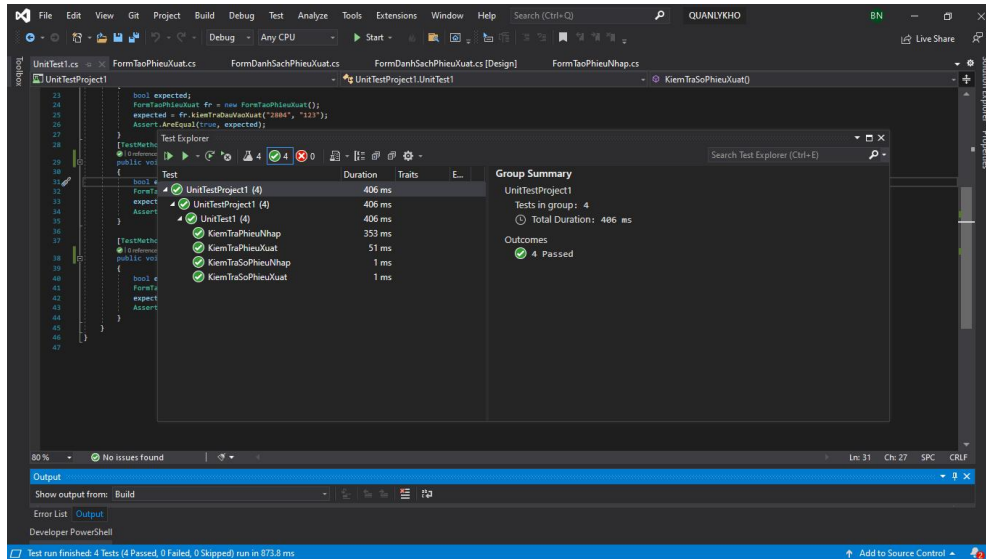


Figure 37: Testing result

### Generate EXE File from C# Project

- Set up Project

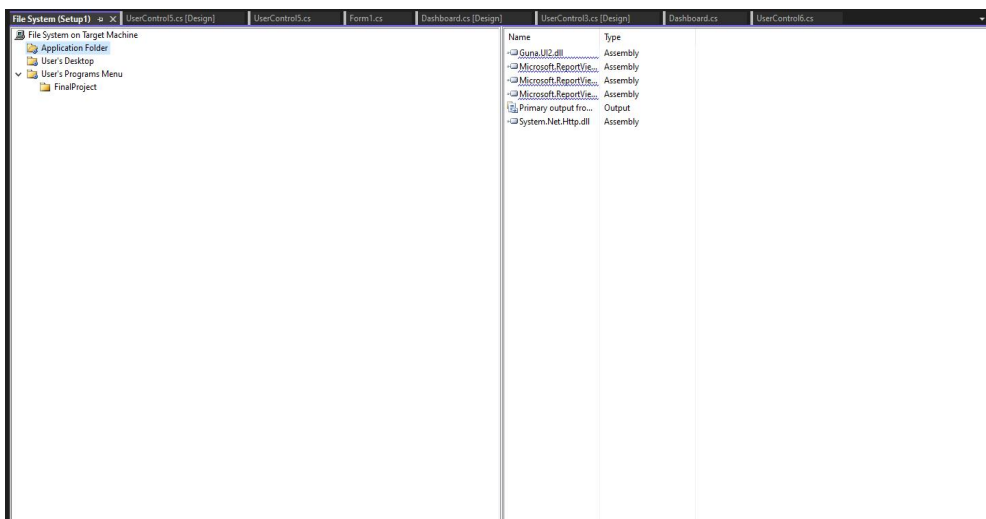


Figure: Set up project

- File after Generate EXE File from C#

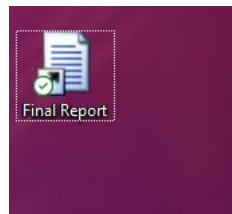
Debug	12/12/2022 10:13 PM	File folder	
Release	12/12/2022 10:18 PM	File folder	
Setup1.vdproj	12/12/2022 10:12 PM	VDPROJ File	39 KB

Figure: File after Generate EXE File from C#

- Click file .exe and Extract File

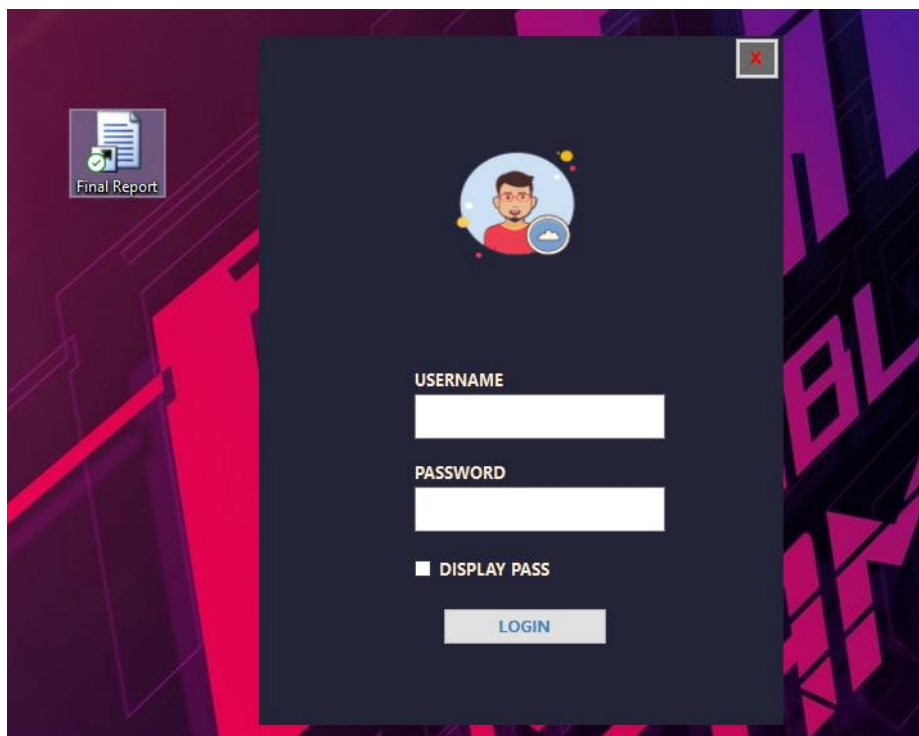
setup.exe	12/12/2022 10:18 PM	Application	547 KB
Setup1.msi	12/12/2022 10:18 PM	Windows Installer ...	4,720 KB

**Figure: Click file .exe and Extract File**



**Figure: Screen**

- We can see in the screen.



**Figure: Interface of project**



Click Final Report, we can see this form – equal to project C# in Winform

- Git/SVN

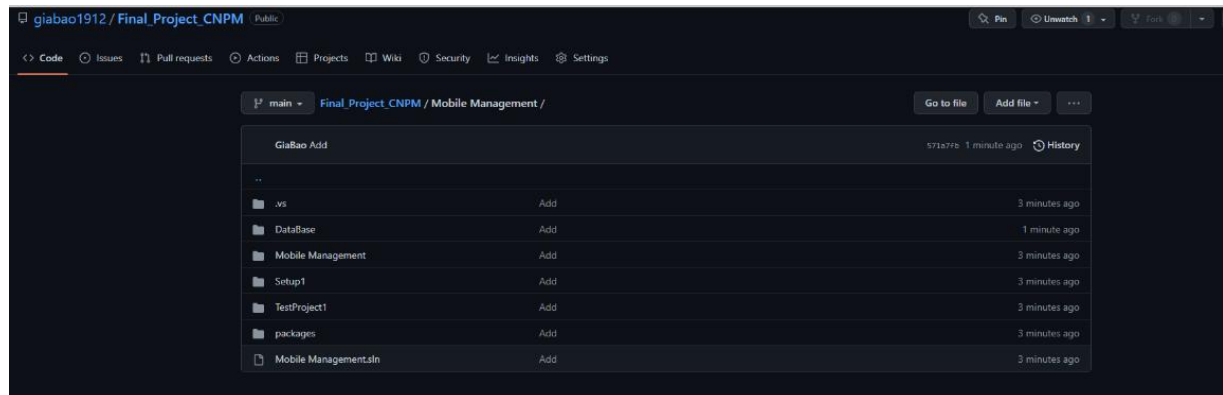


Figure: Git/SVN

### 5.3 Demonstration

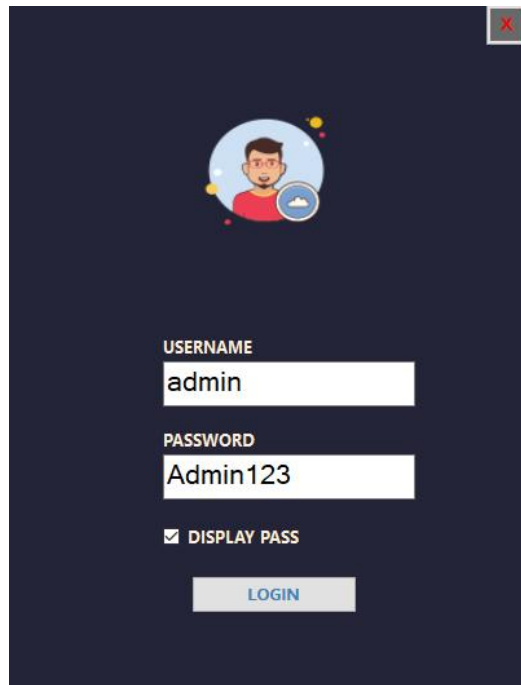


Figure 38: UI interface



Figure 39: Welcome window

-Received Goods Note and list of them. We can delete a note.

ID Product	Name Product	Amount	Price	Total Money
SP1	Innisfree Pore Blur Pact	200	579000	115800000

**Figure 40: Good received note window**

- Delivery Goods Note and list of them. We can print note and delete note in this form.

Name Product	ID Product	Amount	Price	Total Money
Innisfree Pore Blur ...	SP1	1	600000	600000

**Figure 41: Good received note window**

- We can create new Received Goods Note.

**Create Good Received Note**

Code

Customer

Date\_In

**Confirm**

ID Product	Name Product	Amount	Price	Total Money

**Figure 42: Good received note window**

- We can create new Delivery Goods Note.

**CREATE GOOD DELIVERY NOTE**

Code1

Customer

Phone

Address

Date Out

Delivery State

Payment

**Confirm**

Name Product	ID Product	Amount	Price	Total Money

**Figure 42: Create a new Good received note**

- Create Order

**Purchase Order**

Code2:  Date Order:

Name City:  Address:

Phone:  Pay:

Id Product	Name Product	Amount	Price	Total Money
SP4	Innisfree Skinny Eye M...	1	500000	500000

[LogOut](#)

[Create Good Delivery Note](#)

Figure 43: Create a new order

- List Product Statistics

**Product Statistics**

Monthly Statistics:  [View](#) [Print](#)

Id Product	Name Product	Amount
Total Money		

Id Product	Name Product	Amount
Total Money		

[LogOut](#)

Figure 44: List product

## Conclusions/ Recommendations (0.25 point)

This system is just a functional process without complicated process so far. The identified actors play an important role to the full functioning of the business,... Even though there are many frauds may cause during the testing phase. But to some extend, we believe this system will demonstrate the notion of how electronic gadgets is managed during warehousing process and how optimal it is to customer's hand.

## References

Source code: [Link Github](#)

## Appendix

Please see next page





