



Sri Lanka Institute of Information Technology

# Textile Management System

## Project Report

Information Technology Project 2020

Project ID: **ITP2020\_S2\_05\_G7**

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2020/10/23

## **Declaration**

We declare that this project report or part of it was not a copy of a document done by any organization, university any other institute or a previous student project group at SLIIT and was not copied from the Internet or other sources.

### **Project Details**

Project Title	Textile Management System for Dhammadika Tex.
Project ID	ITP2020_S2_05_G7

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## **Abstract**

Dammika Tex is unisex clothing store. They use bookkeeping method for record their all information. As a result of businesses growing it hard to use book for keep recording.

Introduce fully automated system with functions includes sale management, employee management, stock management, supplier management, item management, finance management, order management, payroll management.

This system covers all scope of their business with new futures. Includes printing bills, print & issue voucher and user can generate & print reports for each function.

This system helps them to manage their business well & with this system their day to day task become easier.

## **Acknowledgement**

First, we would like to convey heartiest gratitude to our ITP lectures in the university for the guidance given from the beginning to the end of this project.

Especially we must be thankful for our panel consultant Ms. Uthpala Samarakoon. Her guidance was remarkable in this journey. In addition, we appreciate our client Mr. Dhammadika (owner of the Dhammadika text) and her employees for giving us the fullest support to get our requirements.

I must thank each group member for their contribution to the project and their cooperation as a team despite of the difficult situation.

This acknowledgement will be incomplete unless mentioning our parents and family members who supported us immensely to complete the task successfully.

Thank you very much for the everyone who contributed in every aspect to achieve the final goal.

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## List of Acronyms and Abbreviations

UML - Unified Modeling Language

ER – Entity Relationship

UI- User Interface

PDF- portable document format

# **1. Introduction**

## **1.1 Problem Statement**

Dammika textile is one of the largest unisex clothing stores located in mirigama area. This company is responsible for buying and selling items/products as per customer need in that area. They have more than 300 suppliers and to make their customers comfortable and happy inside the shop they have a staff with 60 workers.

They must handle all the employees, suppliers, orders, stock, items, users, and financial details of their company to manage their business properly and profitable.

Nowadays, they recorded their information manually. They had to maintain several files such as an employee details file, stock details file, order details file, file for utility bills, and many more files. The owner had to face more difficulties because of using this manual file-base system.

The records of supplier like supplier name, cloth type, and quantity are in order file. They have more than 200 suppliers. So that the owner had to record supplier names and details for all the orders. Otherwise, the owner cannot find the order Which the supplier supplied. If 100 orders are received in one day then the owner should mark that as “Received”, so he must find the order number, supplier, to mark that. That is a waste of time and sometimes it can be incorrect. And they maintain files for employees, utility bills and more. So, they maintain more than 500 records manually.

They issue bills to their customers using bill book, but now they have many customers per day and a customer buy many cloths/products. So, it is difficult to write bill manually. And to collect so many bills for financial calculations.

when they needed to find some information, they had to spend plenty of time on turning books and recording transactions. As a Result, there was some difficulty in the day to day activities.

## **1.2 Product Scope**

After Analyzing requirement & problem, introduce desktop applications with 8 function to manage their business.

This System covers:

1. Sales Management.
2. Item Management.
3. Stock Management.
4. Suppliers Management.
5. Order Management.
6. Employees Management.
7. Payroll Management.
8. Finance Management.

With this function this system makes the day to day operations easier and faster and then business easier to manage.

## **1.3 Project Report Structure**

*Chapter 1:* Details about problem statement, solutions & product scope includes in this chapter.

*Chapter 2:* UML Diagrams use for requirements analysis, ER Diagram, Class Diagram, User Interfaces, Implementation Details, Testing methods Includes in this chapter.

*Chapter 3:* This chapter includes Discuss realization of the original objectives/goals and weaknesses/limitations of proposed techniques and suggest solution.

## 2. Methodology

### 2.1 Requirements and Analysis

#### 2.1.1 Use Case Diagrams

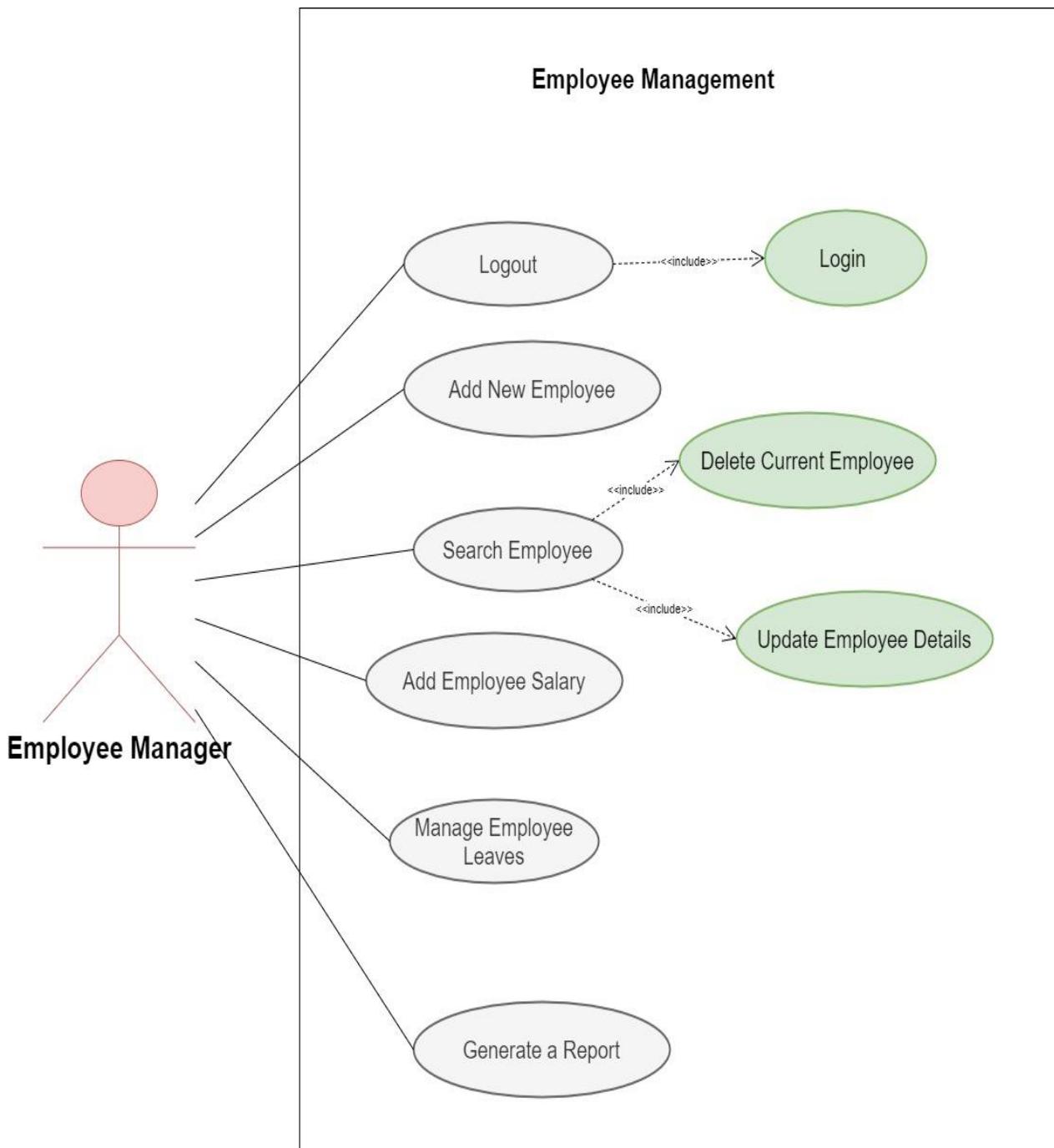


Figure 2.1: Use Case Diagram- Employee Management

## Sale Management

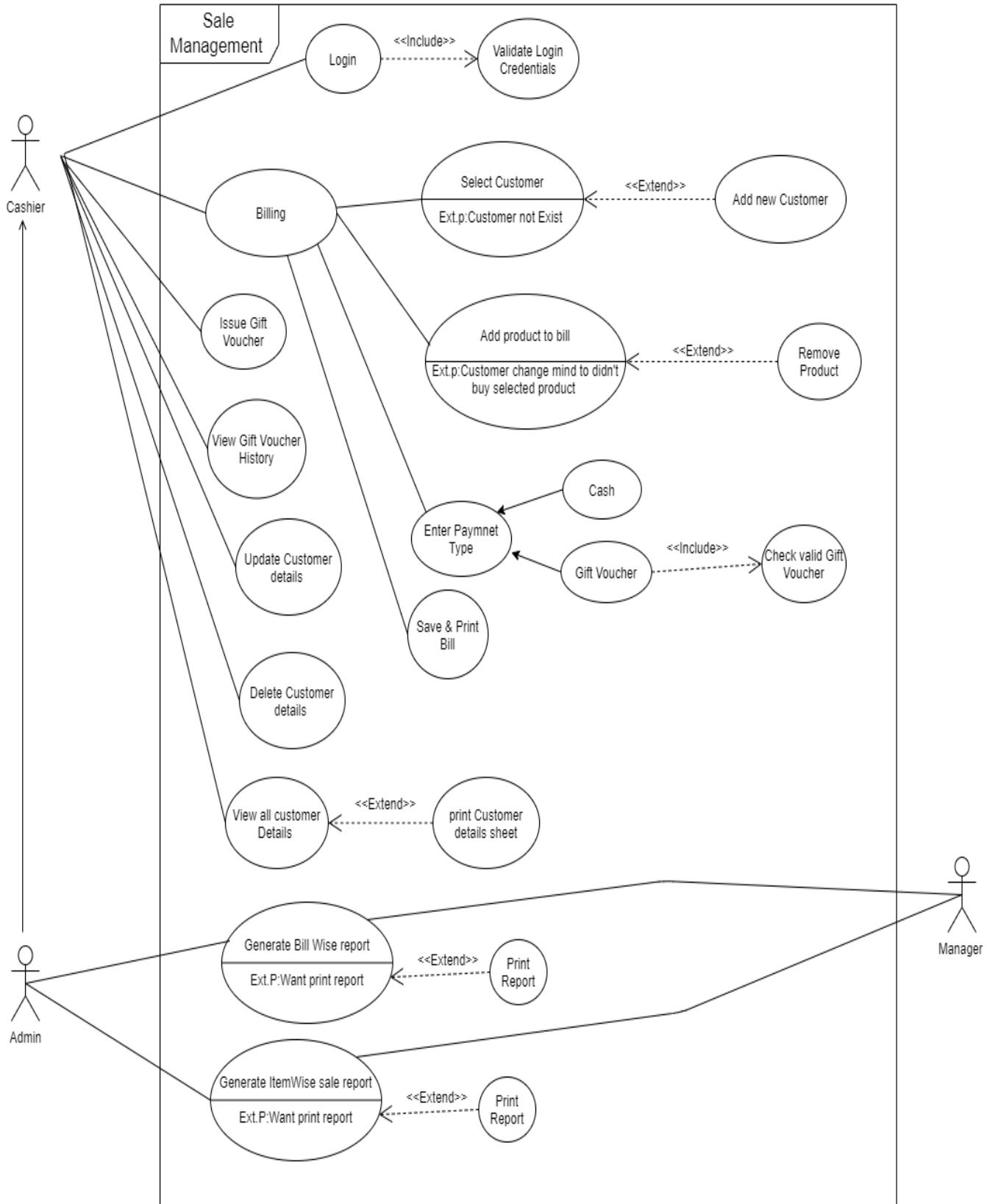
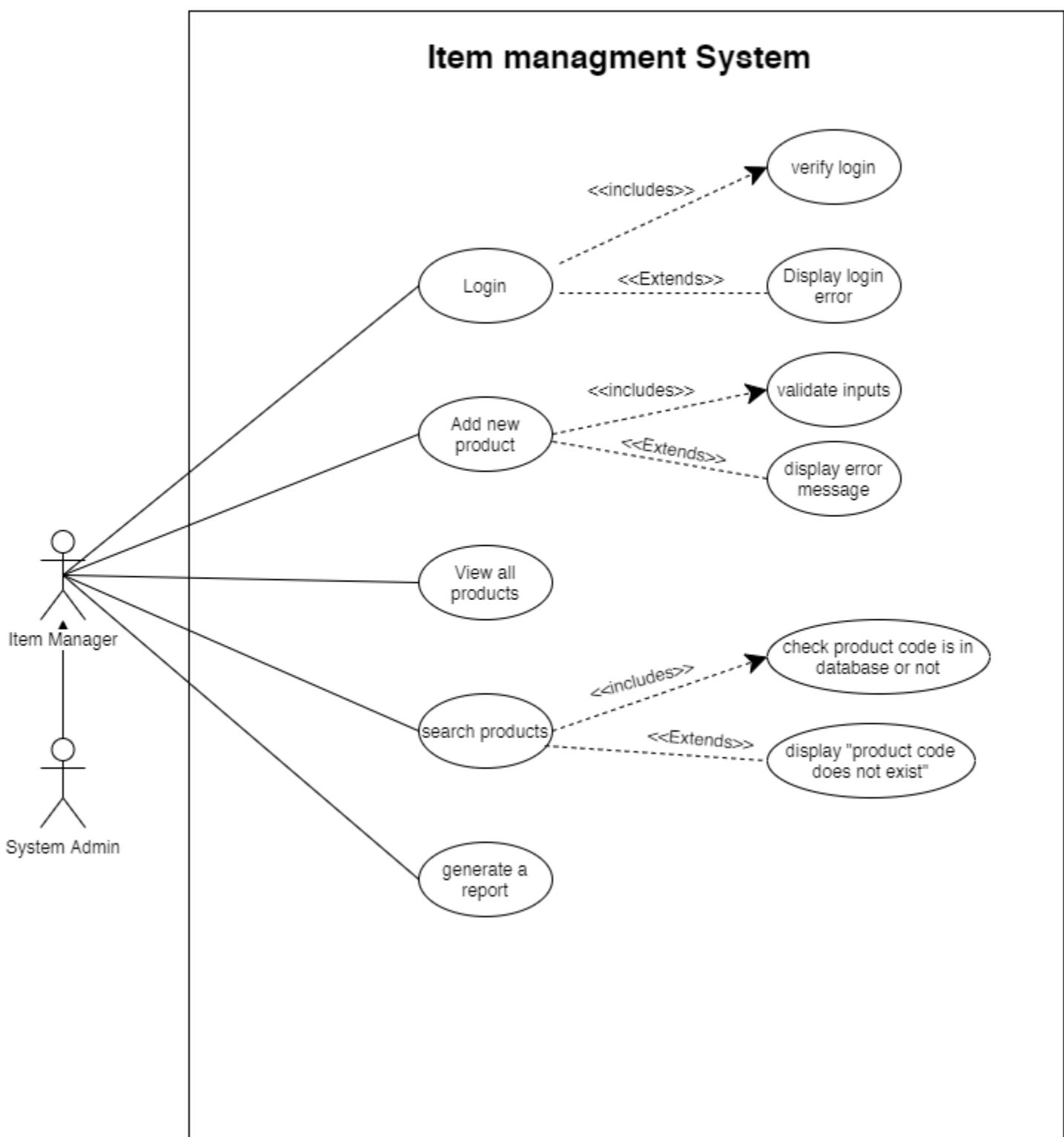
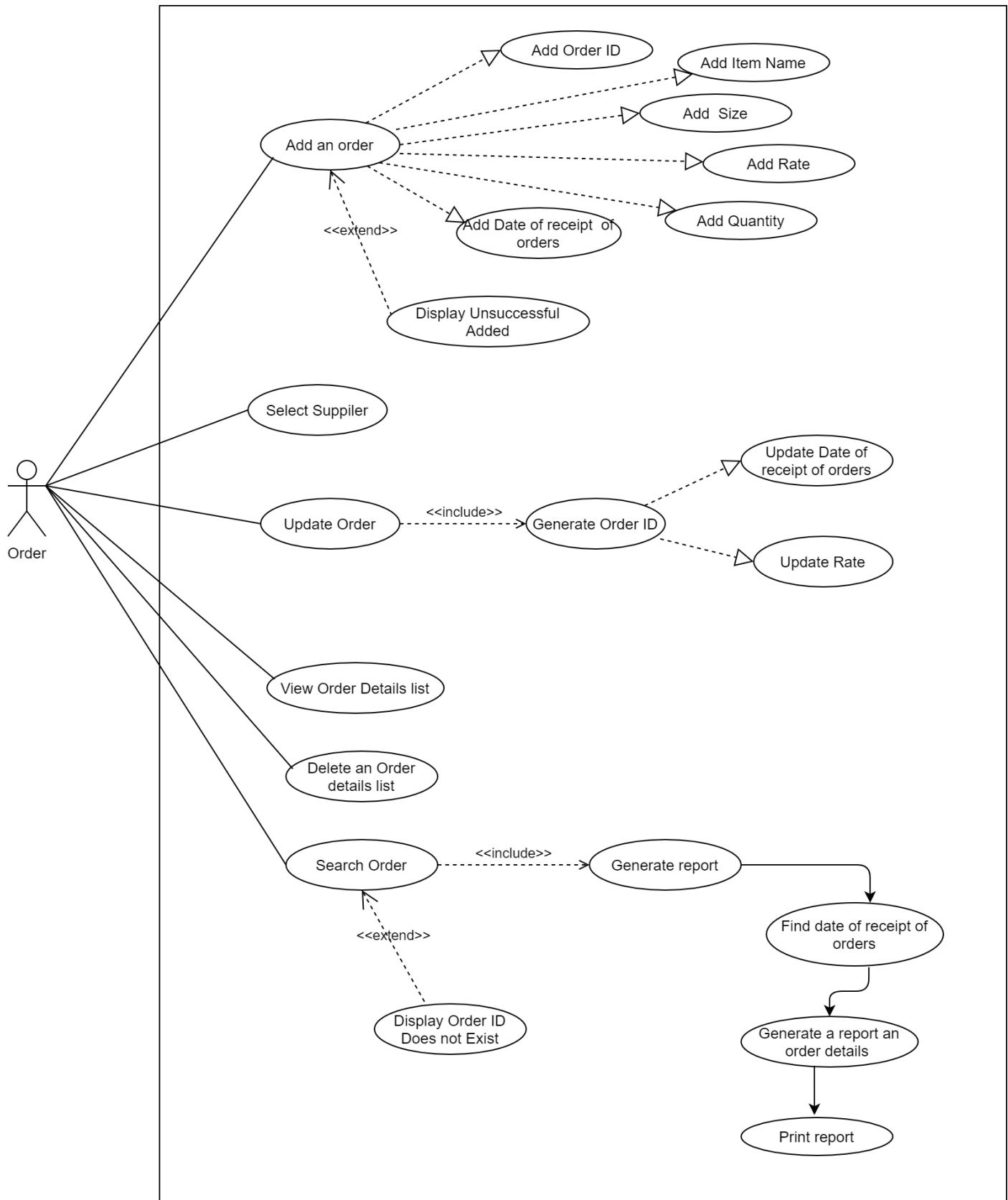


Figure 2.2: Use Case Diagram - Sale Management



**Figure 2.3: Use Case Diagram - Item Management**

## Order Management



**Figure 2.4: Use Case Diagram - Order Management**

## User & Payroll Management

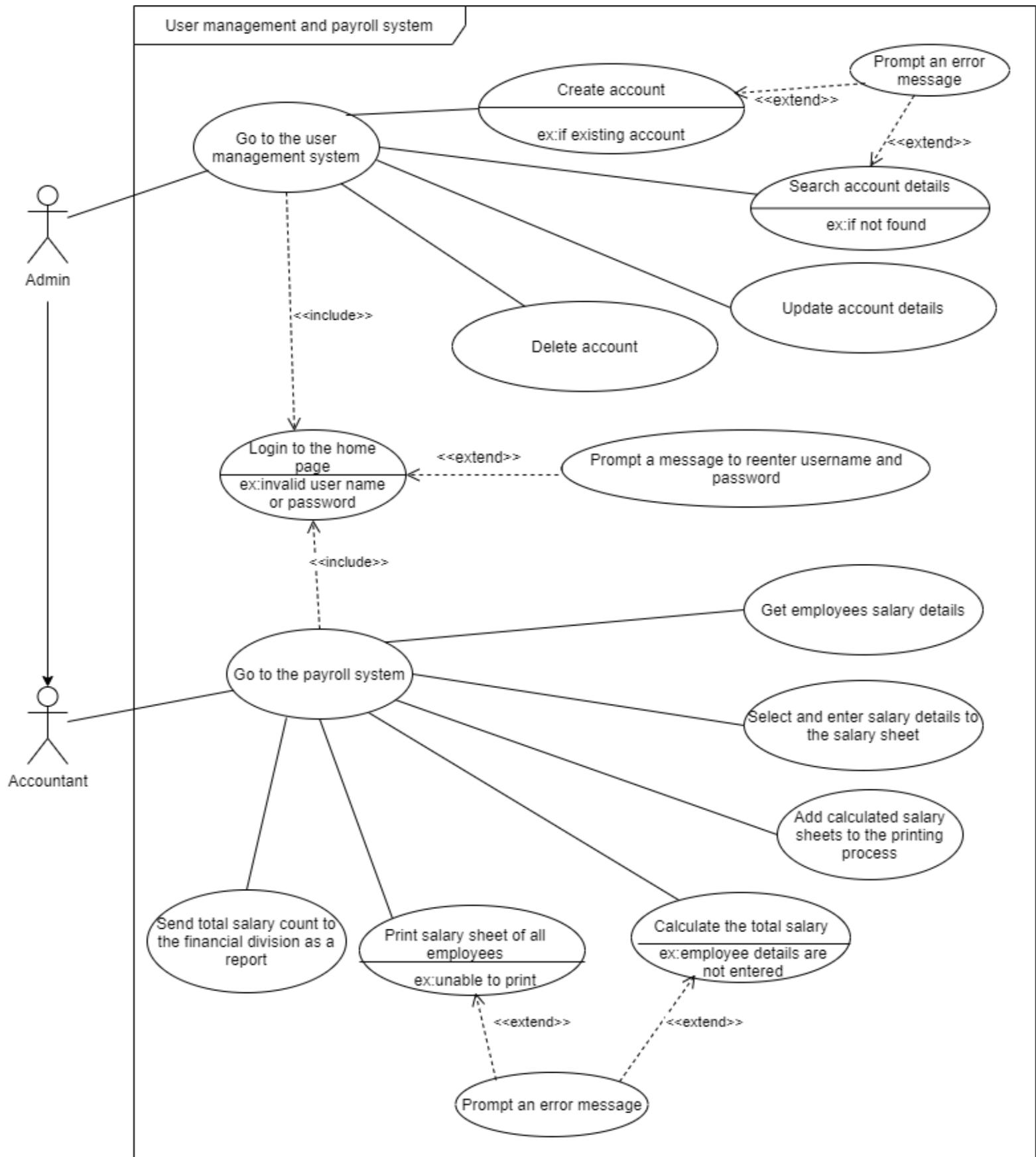


Figure 2.5: Use Case Diagram - User & payroll Management

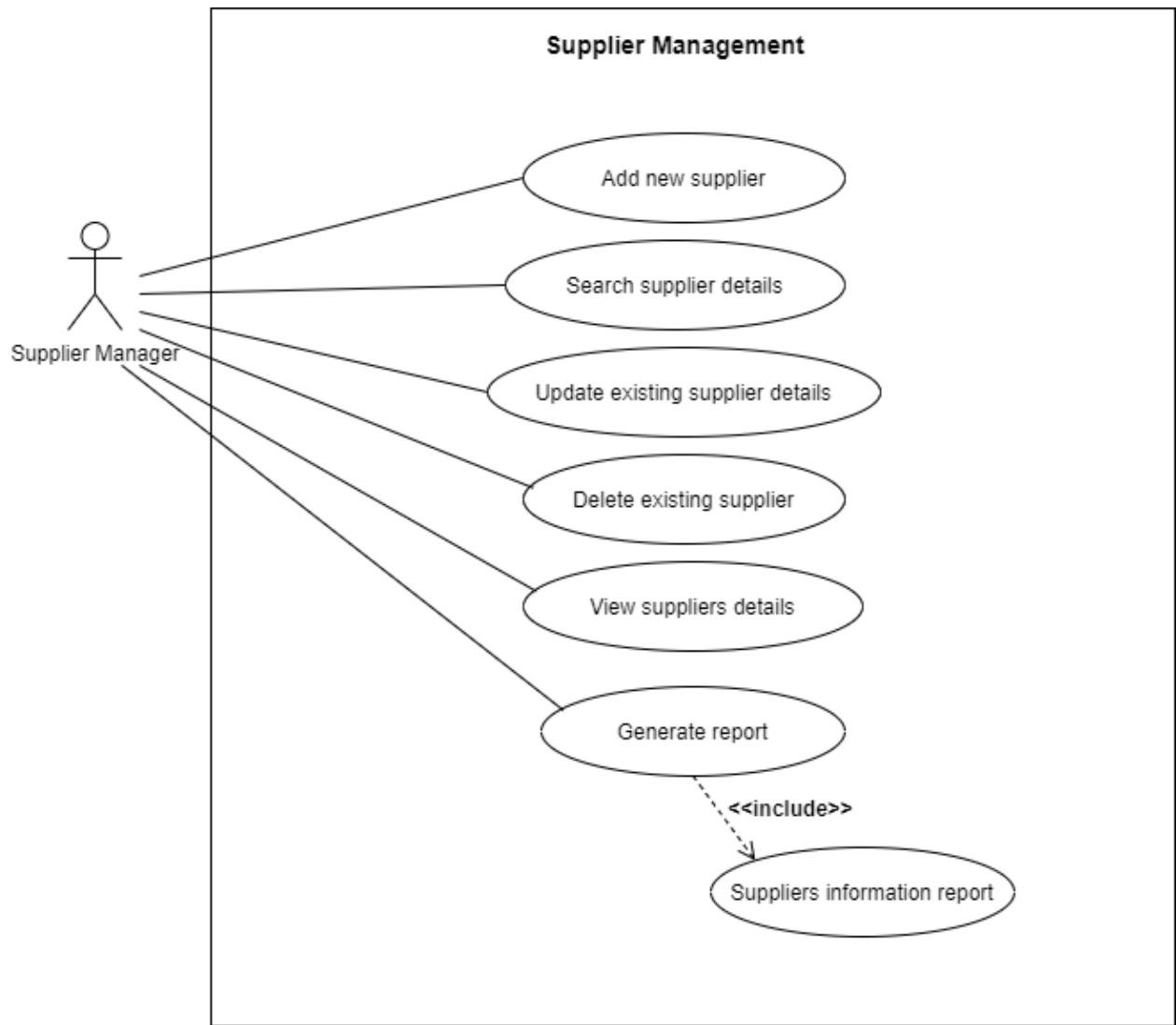
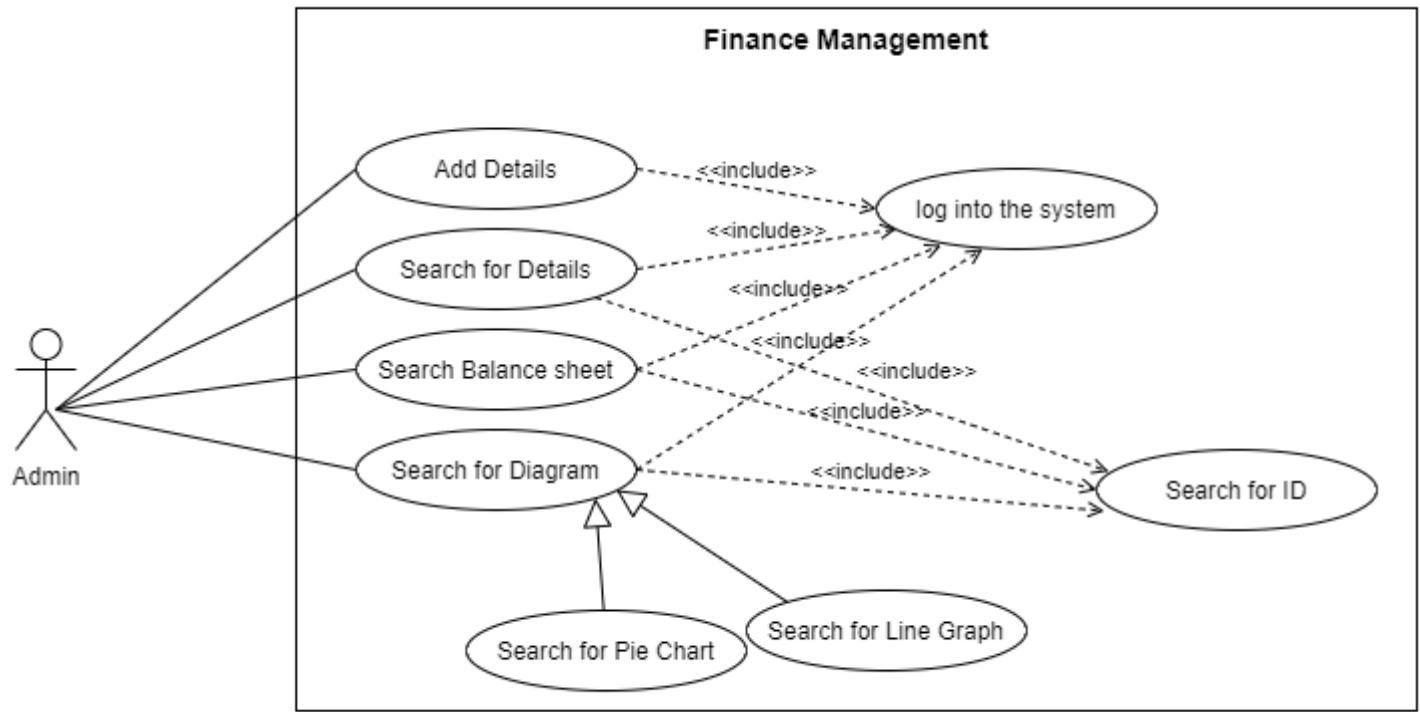


Figure 2.6: Use Case Diagram - Supplier Management



**Figure 2.7: Use Case Diagram - Finances Management**

## Stock Management

### STOCK USE CASE DIAGRAM

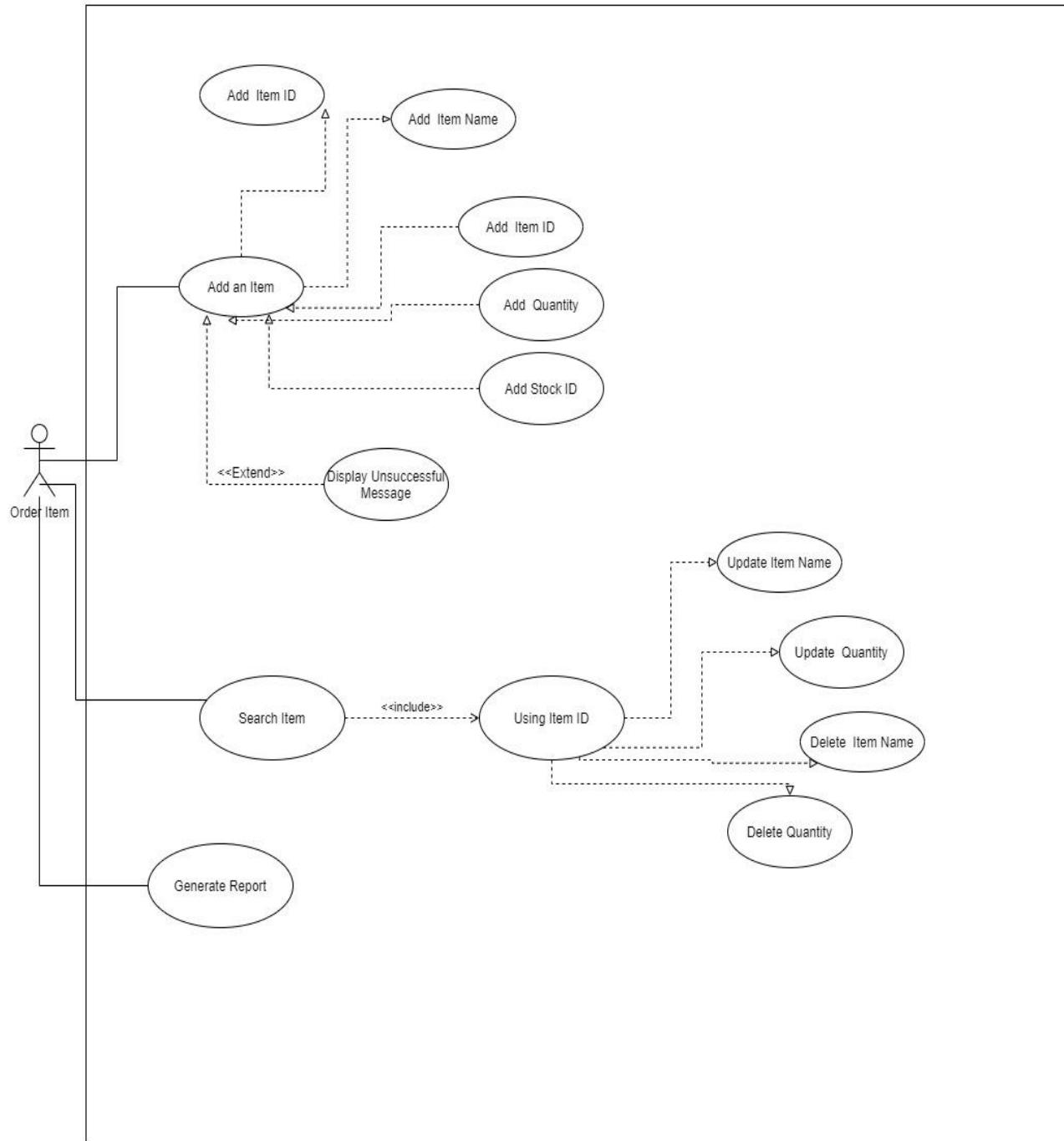


Figure 2.8: Use Case Diagram - Stock Management

### 2.1.2 Activity Diagram

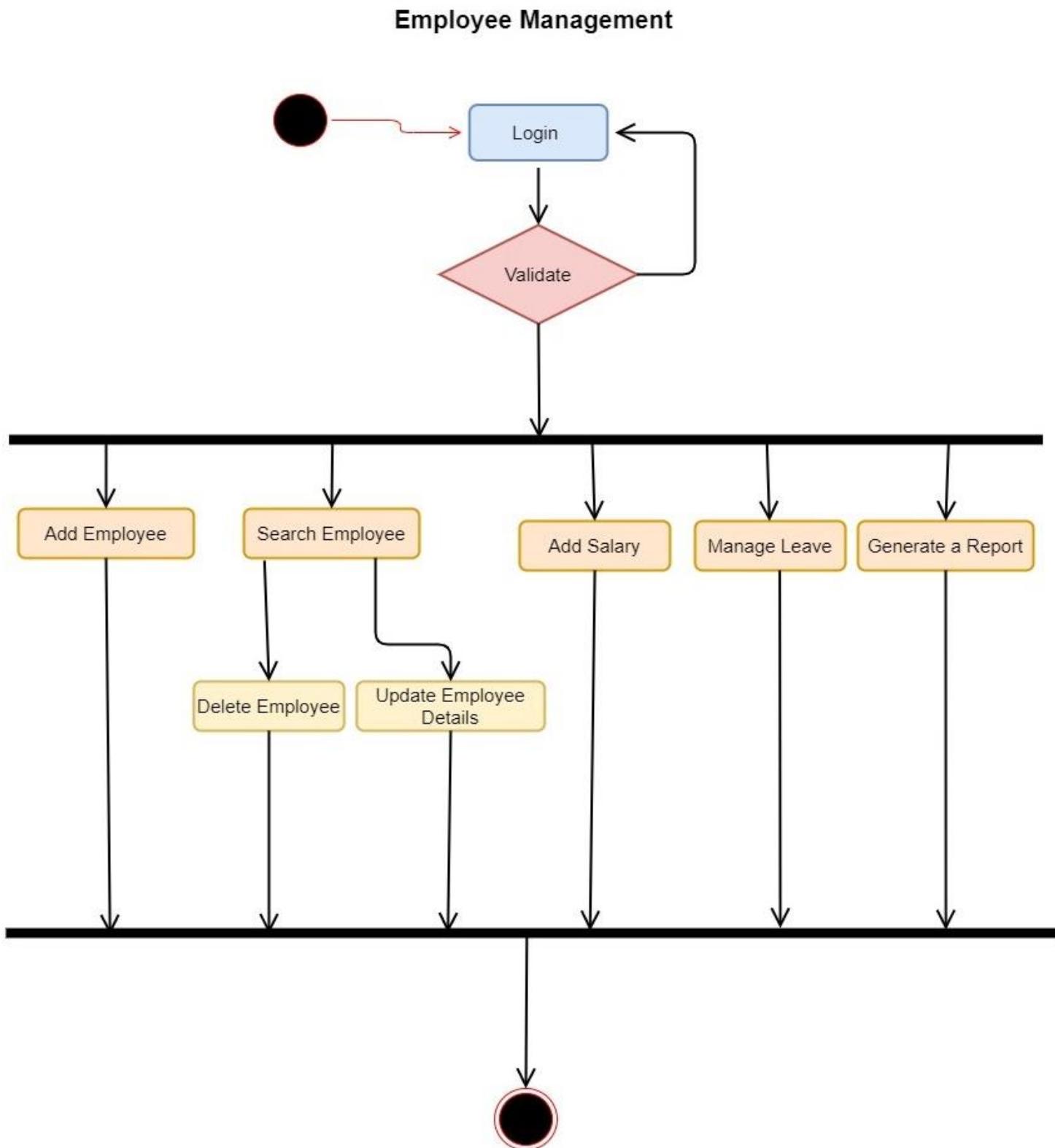


Figure 2.9: Activity Diagram - Employees Management

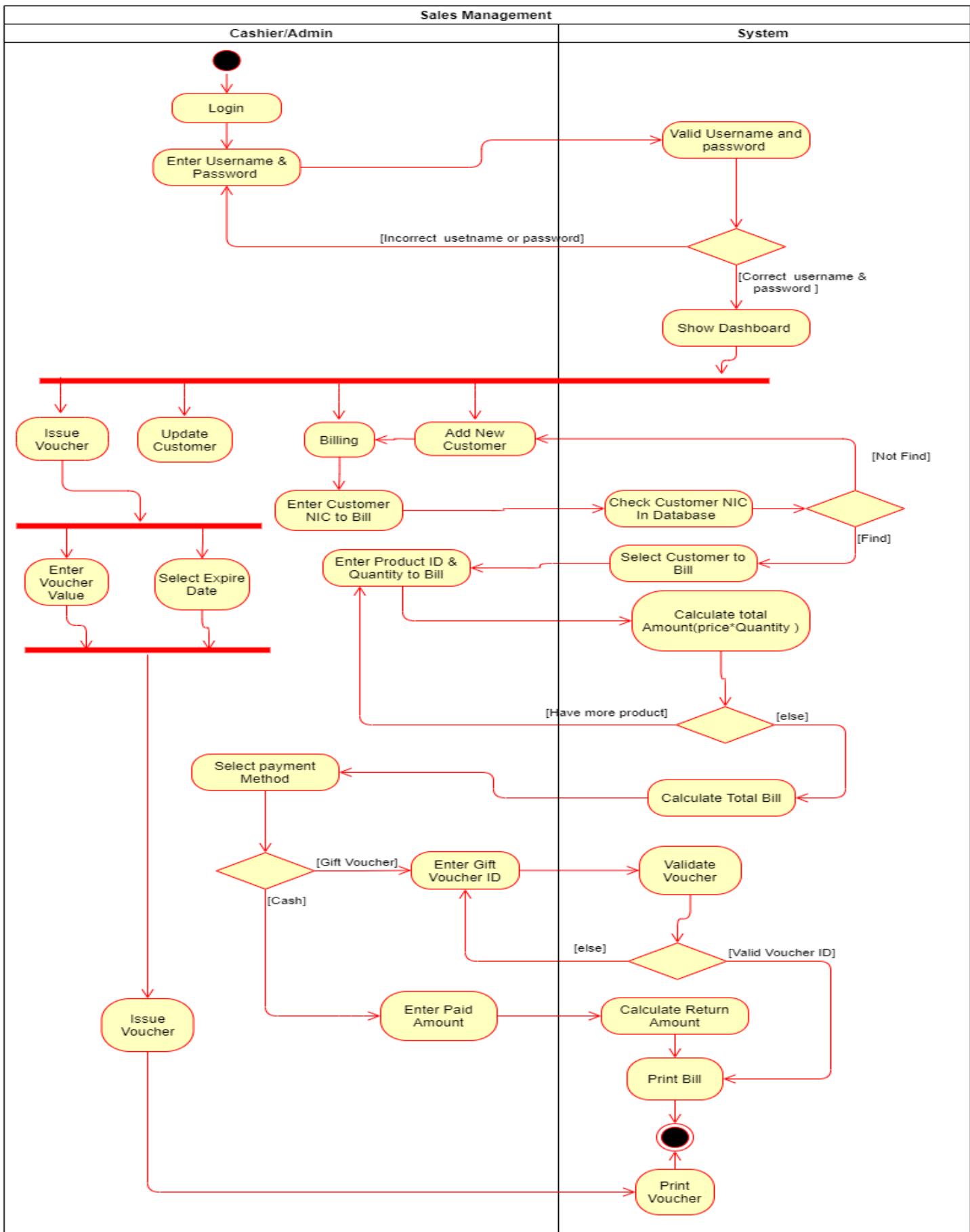
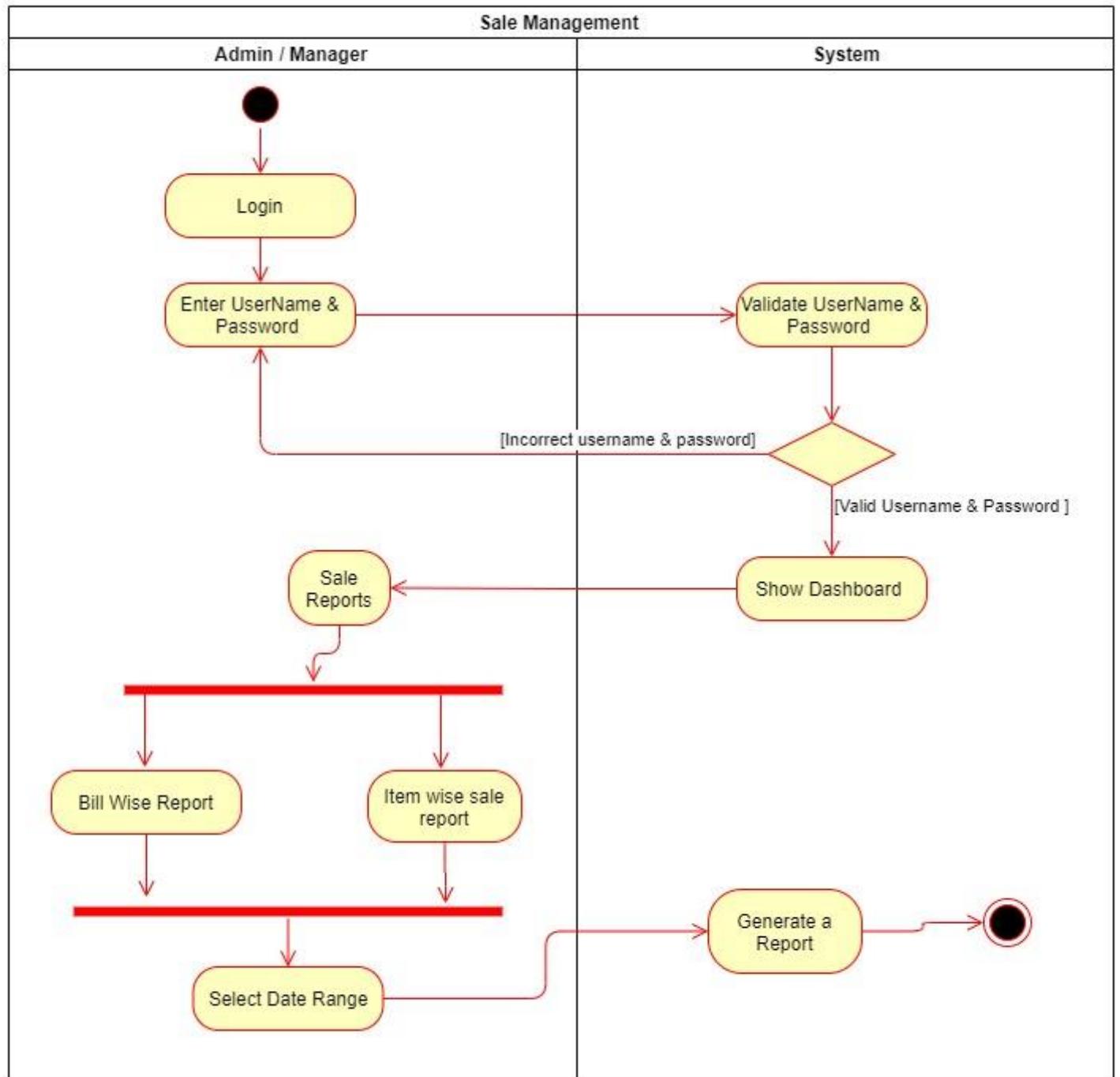
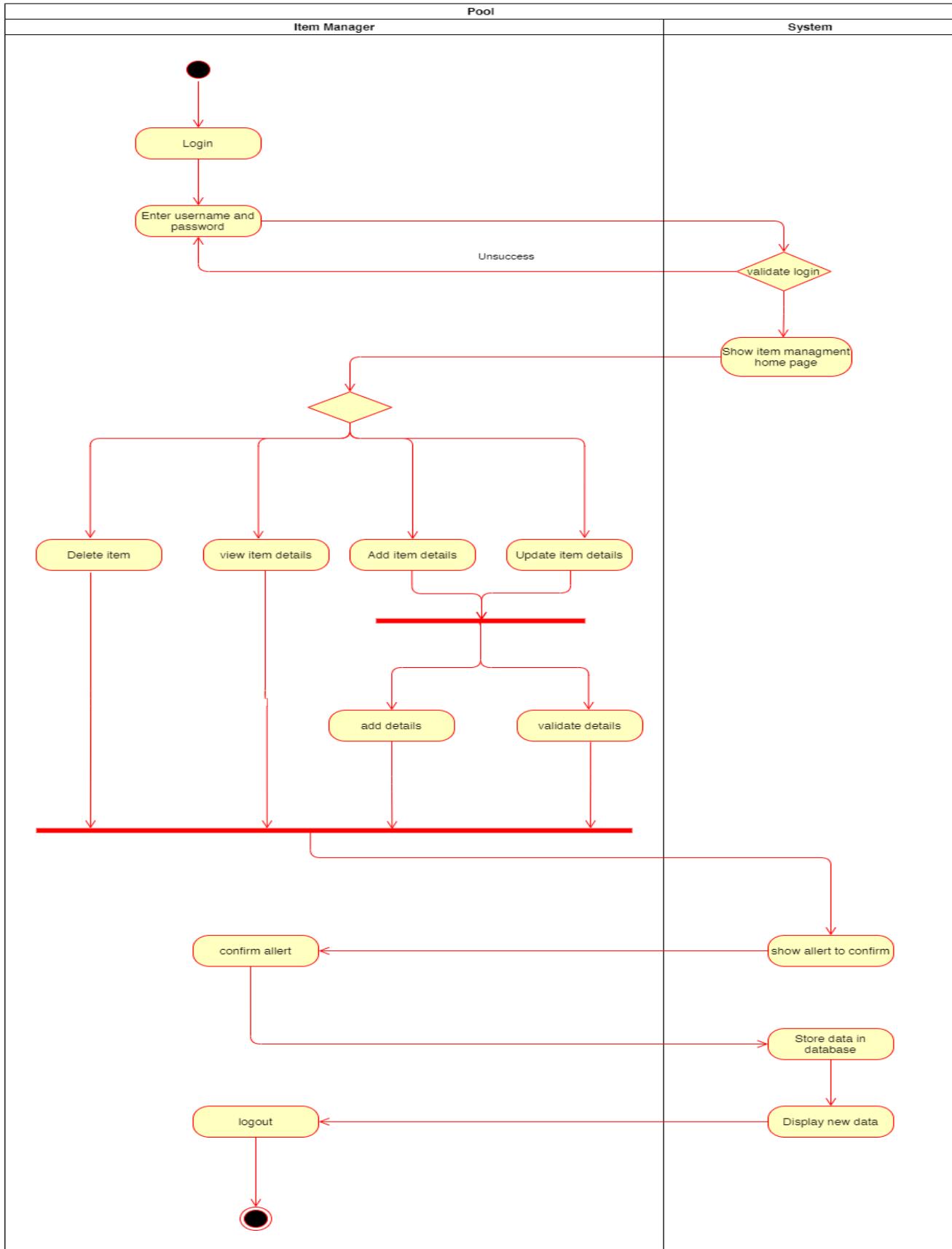


Figure 2.10: Activity Diagram - Sales Management (Admin/Cashier)



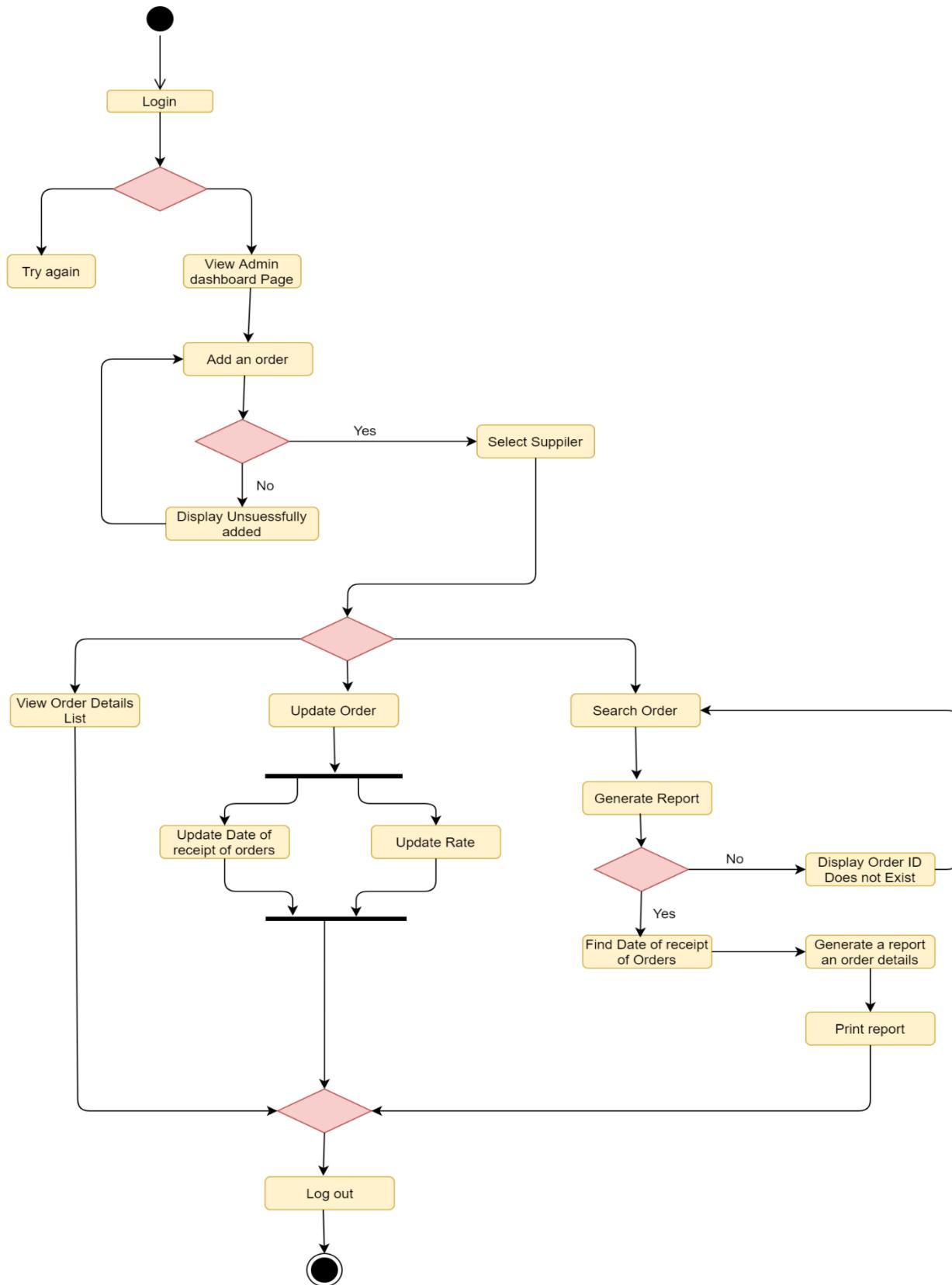
**Figure 2.11: Activity Diagram - Sales Management (Admin/Manager)**

## Item Management

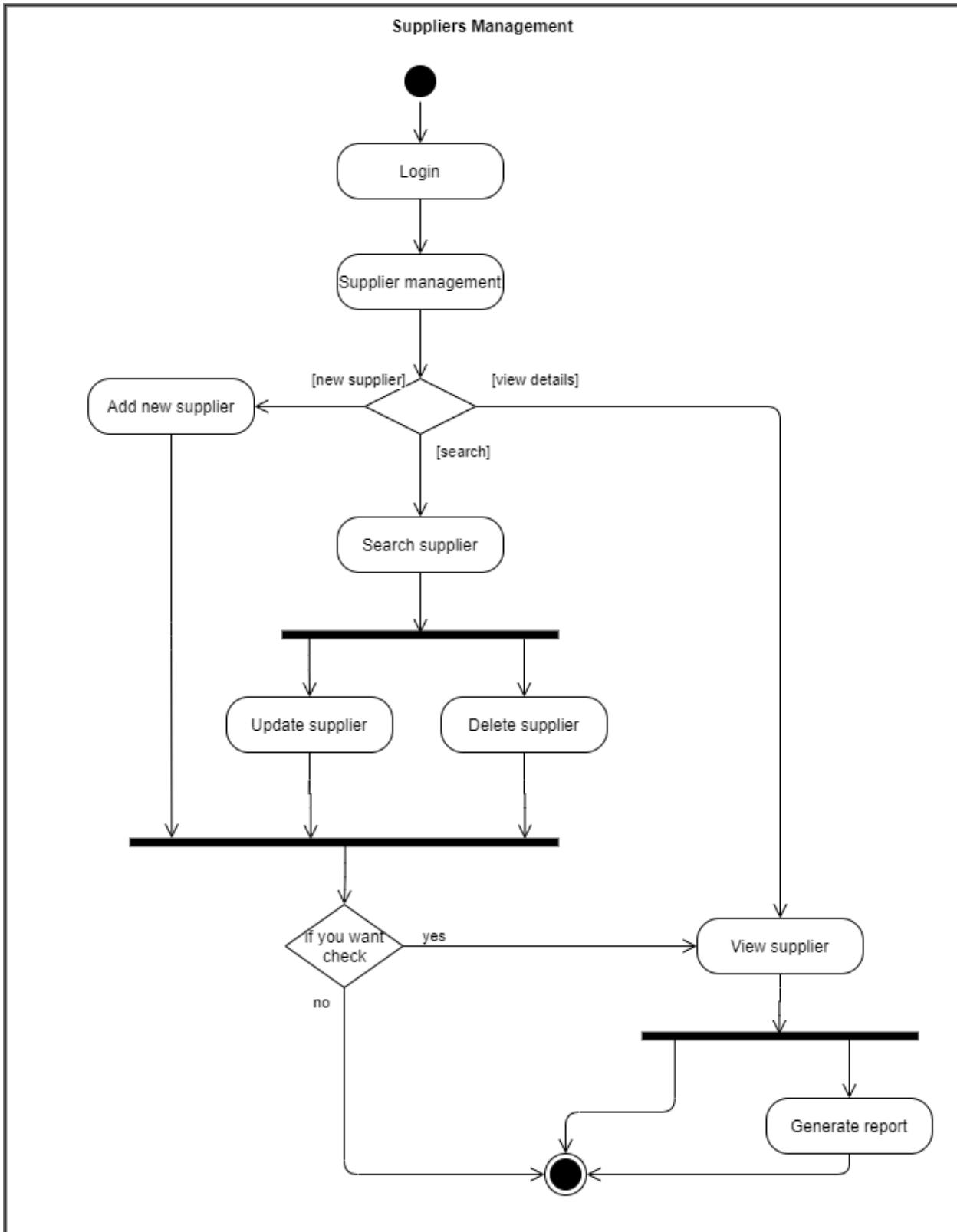


**Figure 2.12: Activity Diagram - Item Management**

## Order Management



**Figure 2.13: Activity Diagram - Order Management**



**Figure 2.14: Activity Diagram - Supplier Management**

## User & Payroll Management

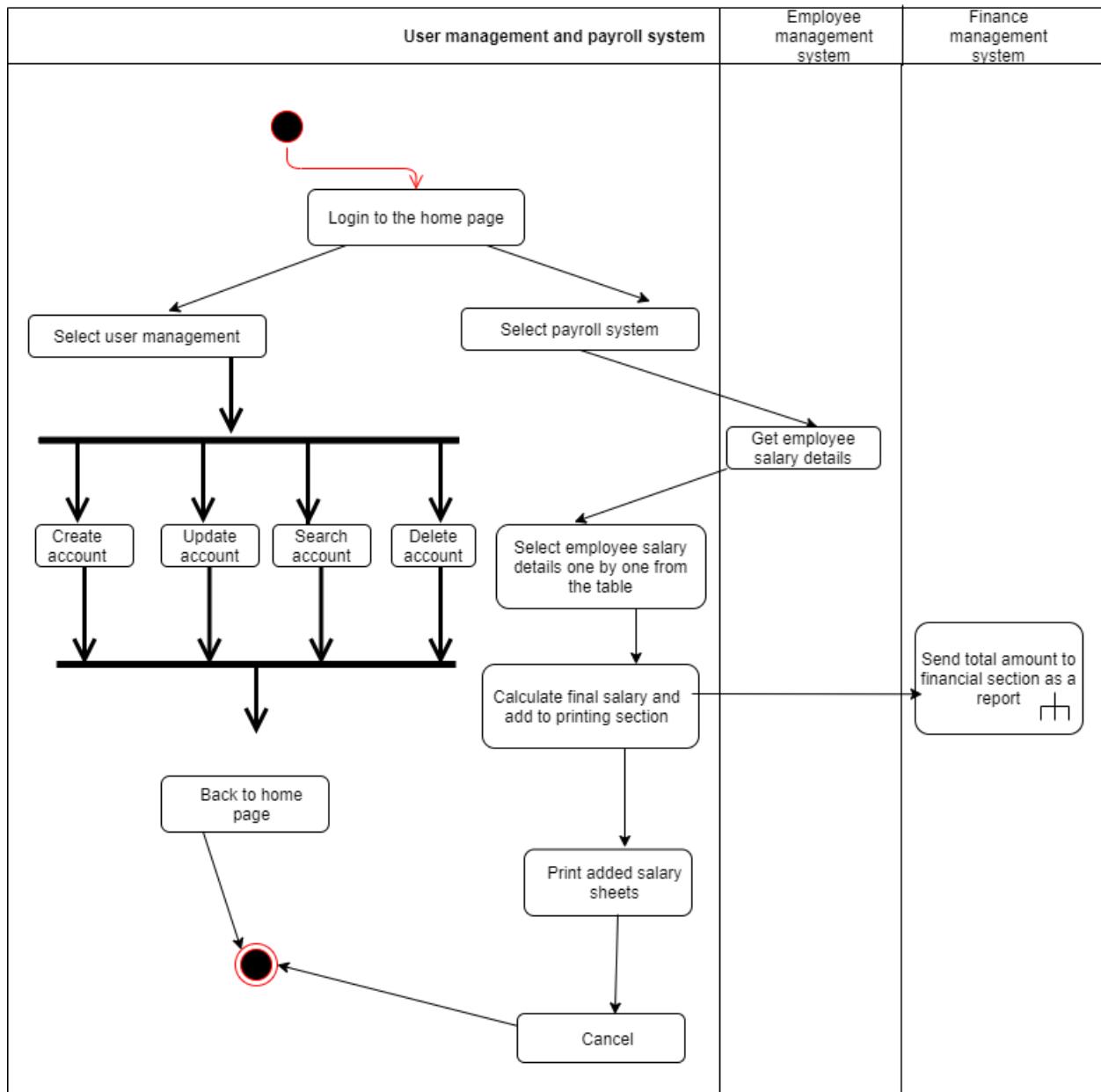


Figure 2.15: Activity Diagram - User & Payroll Management

## Finance Management

Finance Management - Activity Diagram

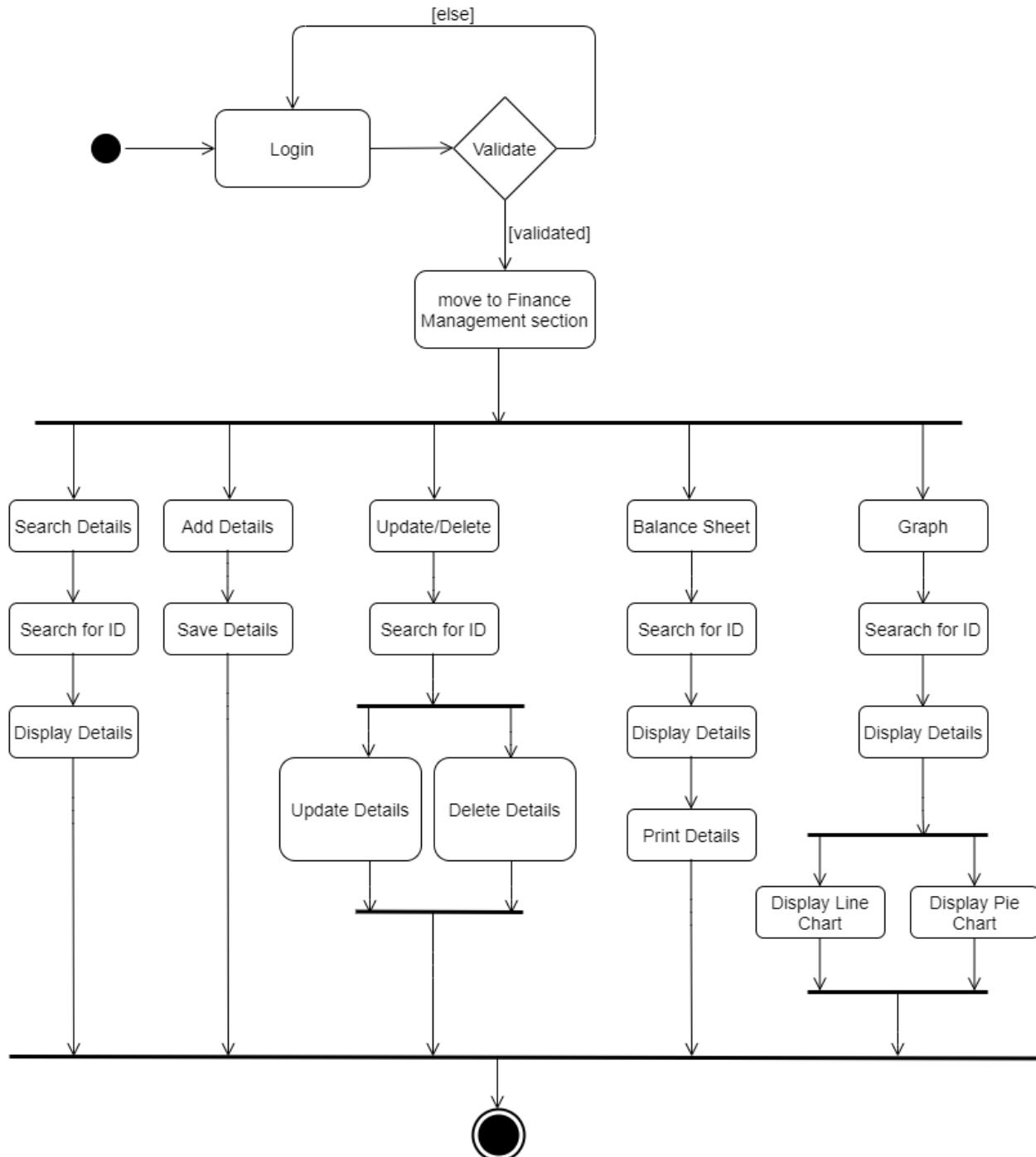
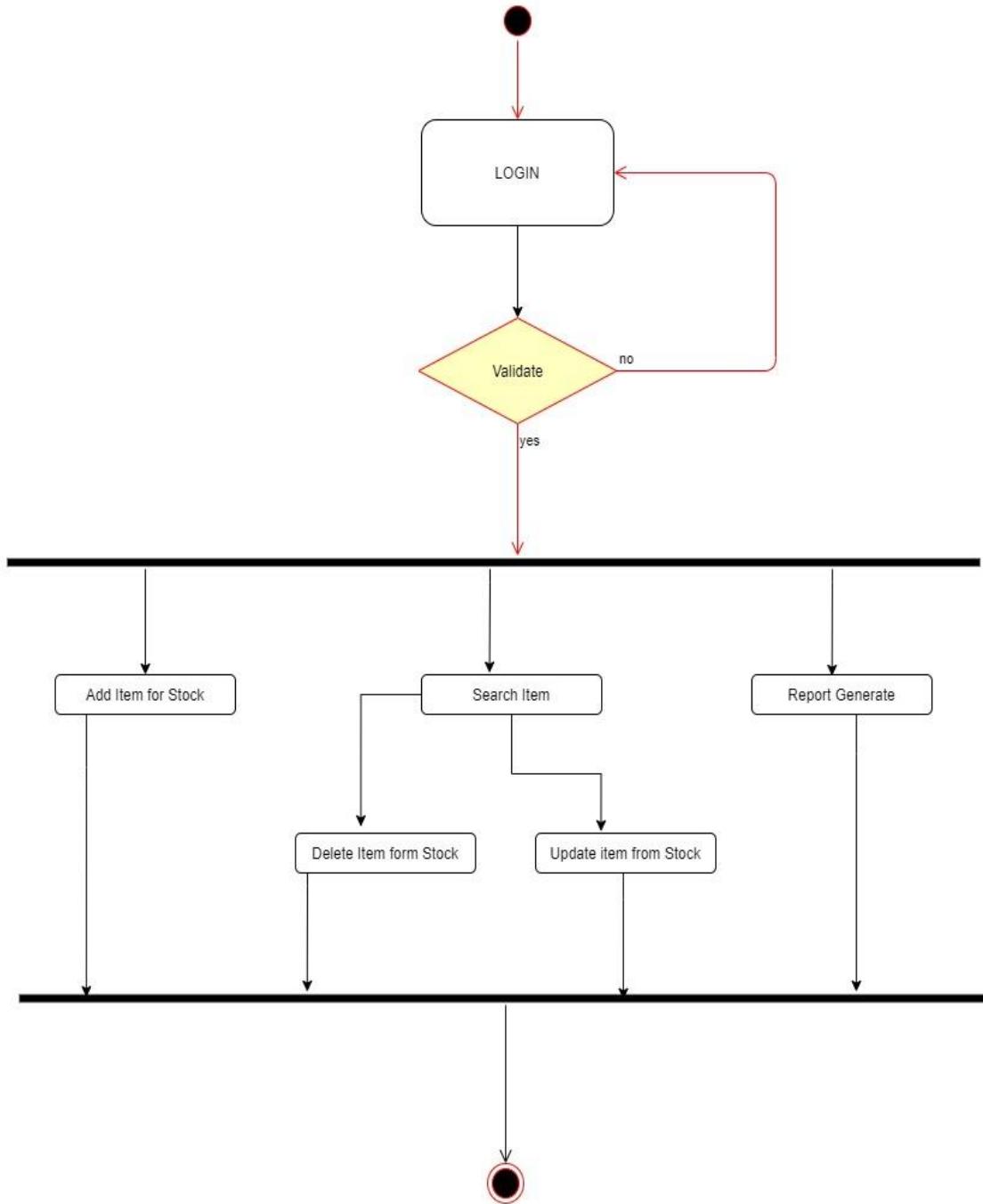


Figure 2.16: Activity Diagram - Finance Management

### **Stock Management Activity Diagram**



**Figure 2.17: Activity Diagram - Stock Management**

## 2.2 Design

### 2.2.1 High level Architecture Diagram

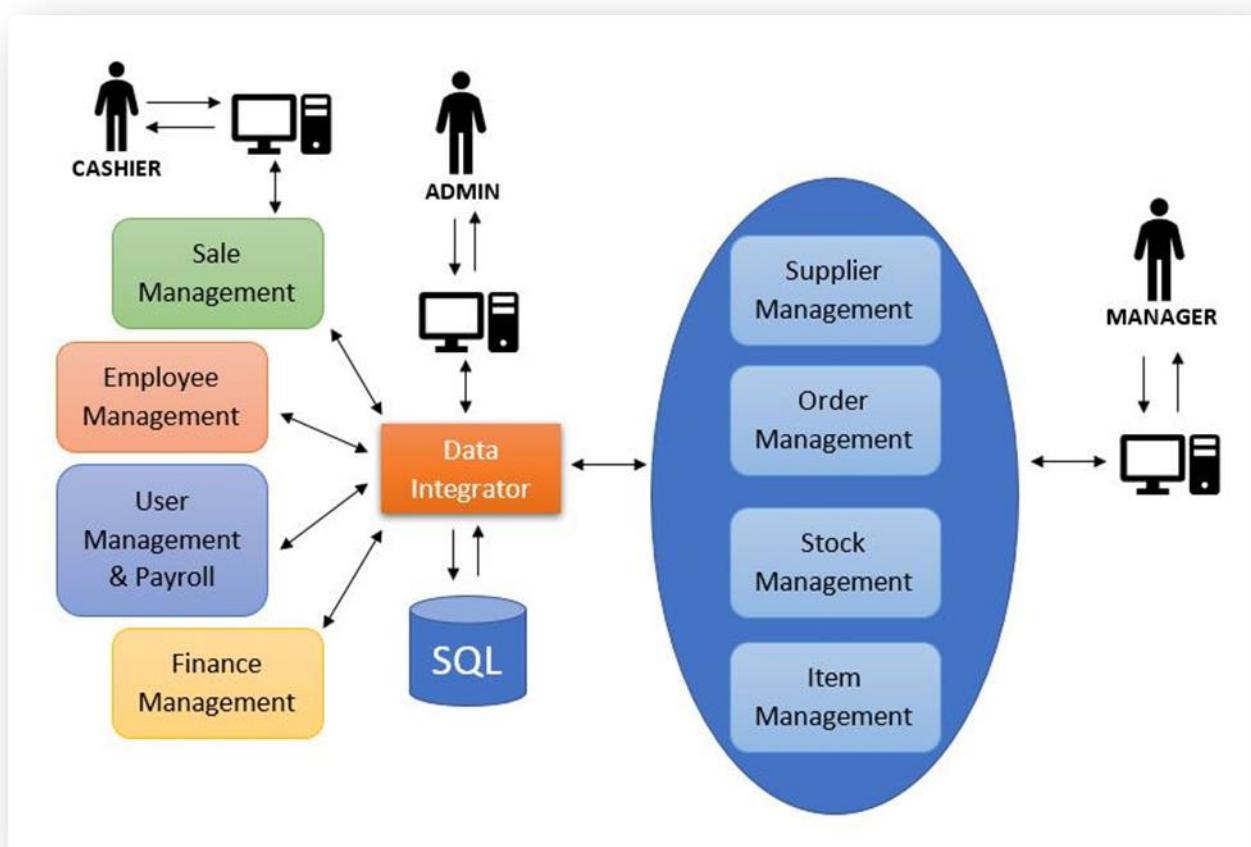


Figure 2.18: High Level Architecture Diagram

## 2.2.2 Entity Relationship Diagram

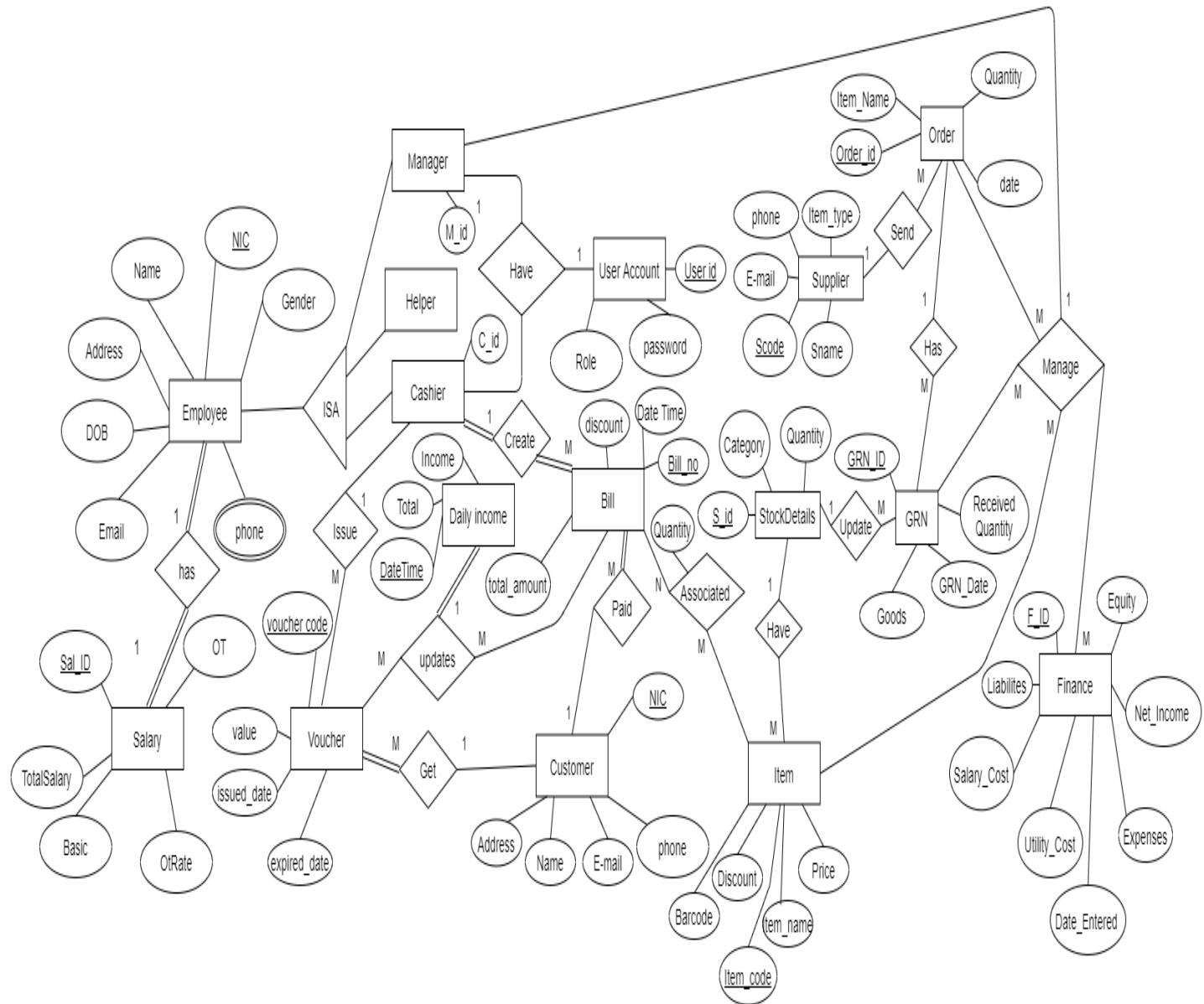


Figure 2.19: ER Diagram

### 2.2.3 Classes Diagram

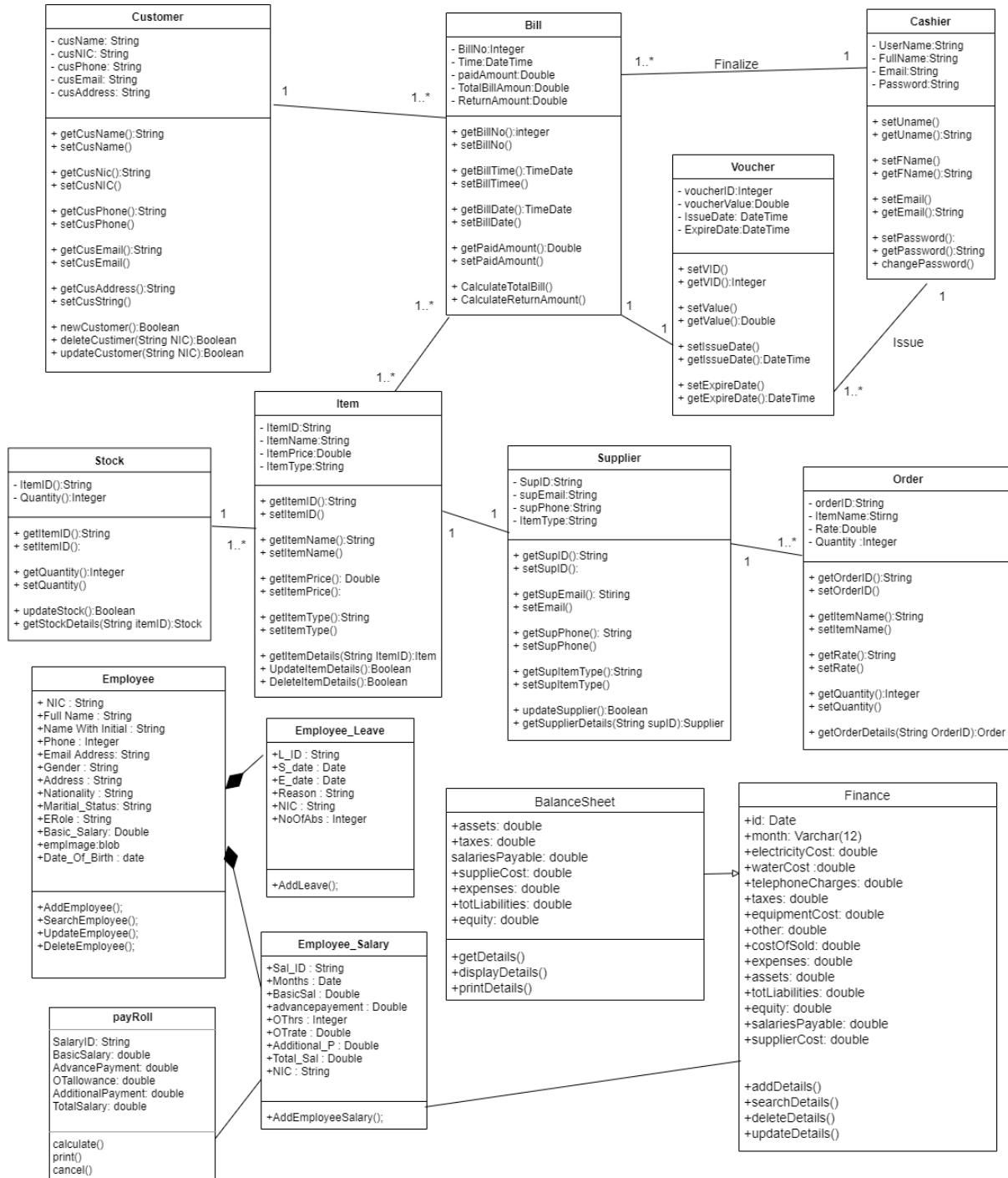


Figure 2.20: Class Diagram

## 2.2.4 Sequence Diagram

### Sale Management

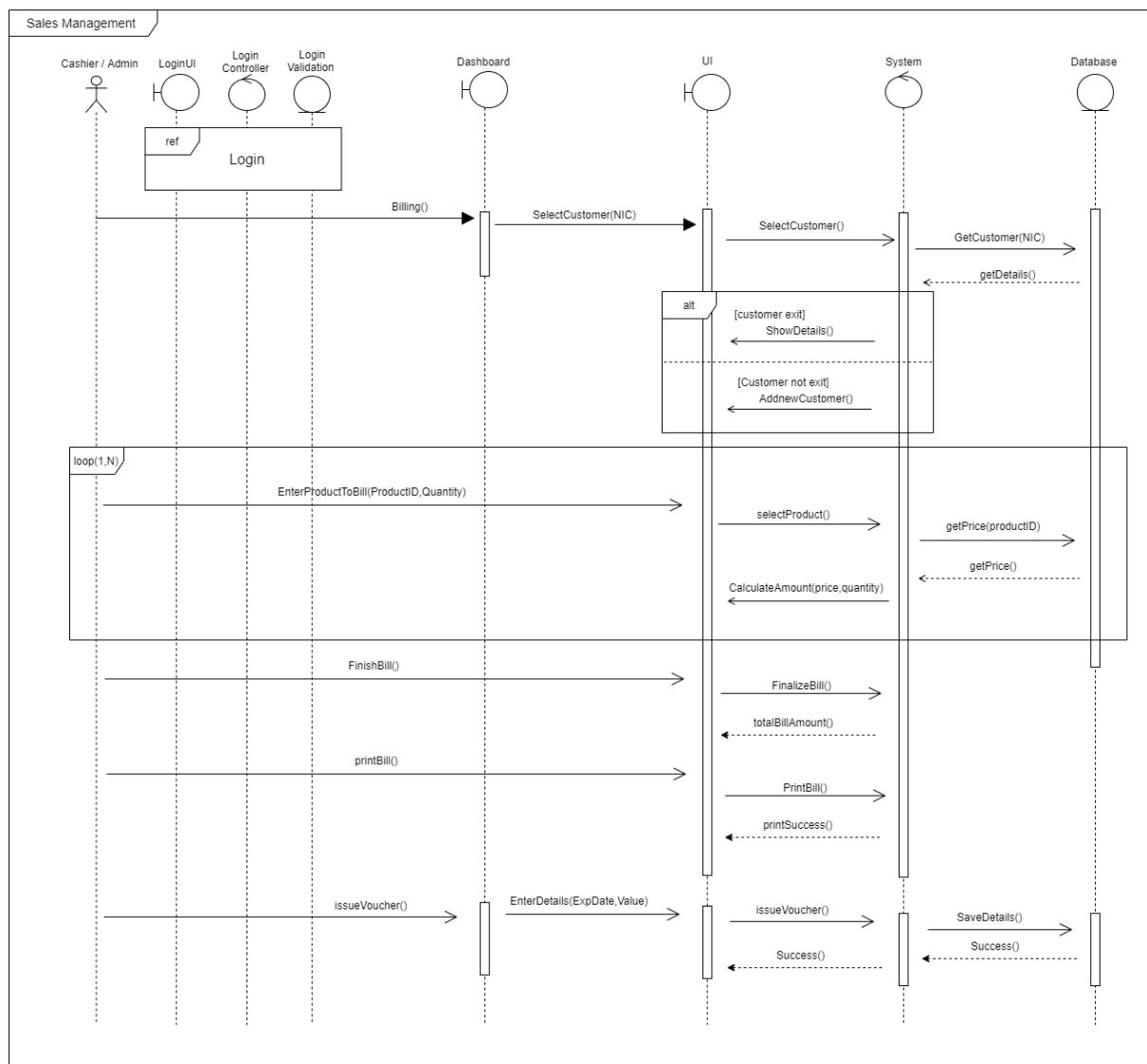
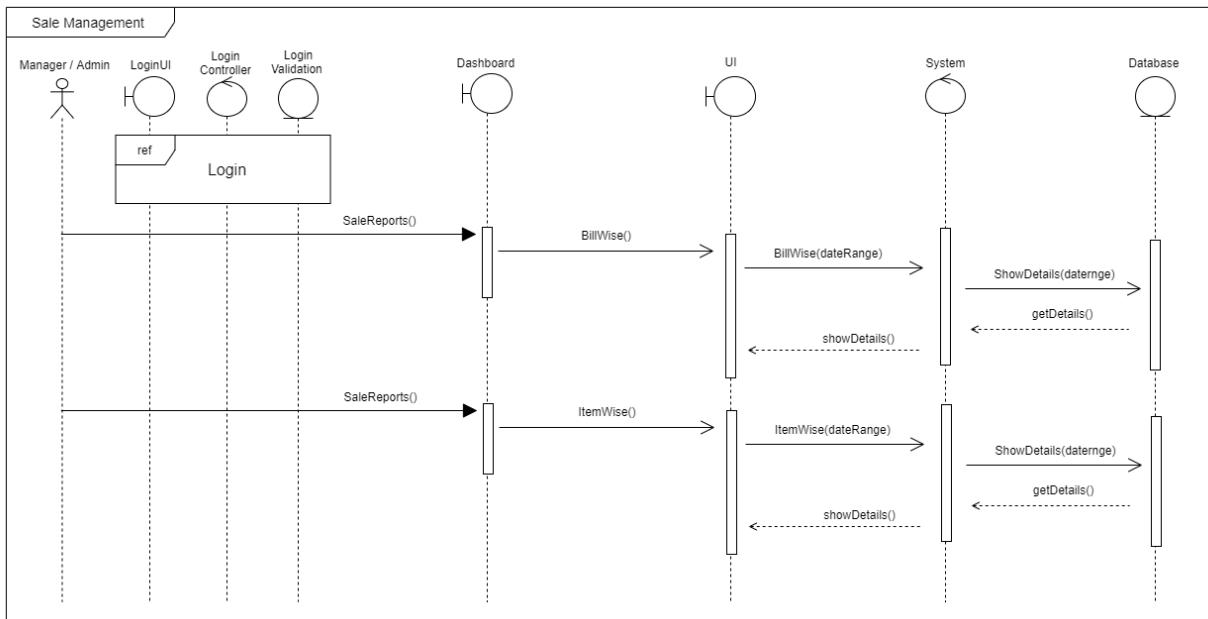
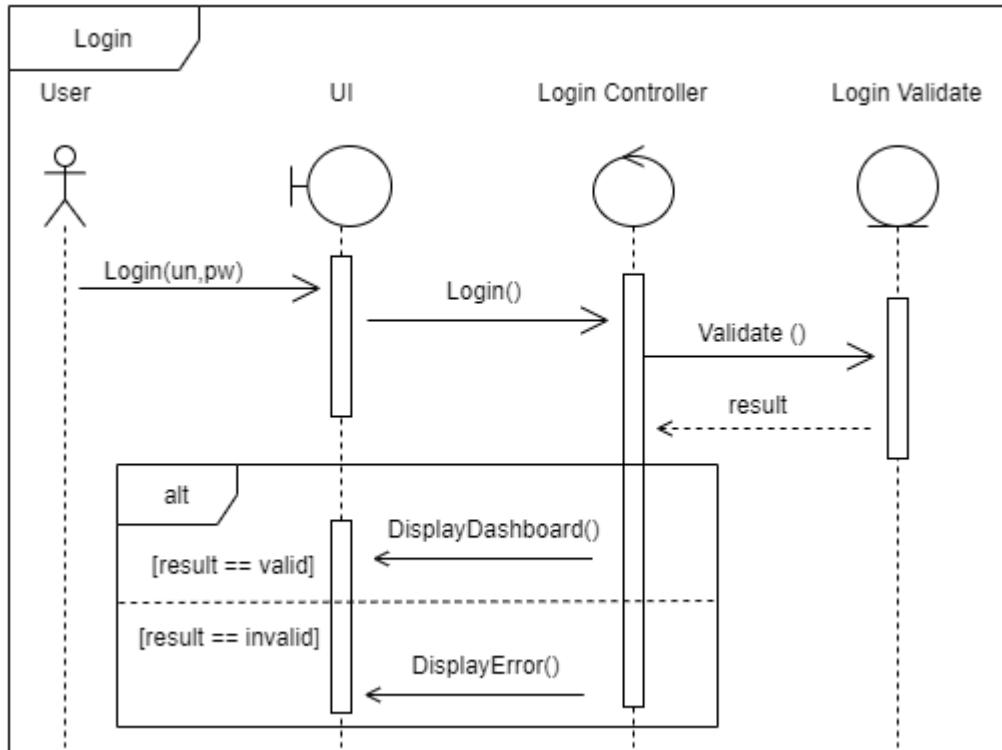


Figure 2.21: Sequence Diagram - Sale Management(Cashier/Admin)



**Figure 2.22: Sequence Diagram - Sale Management(Admin/Manager)**



**Figure 2.23: Sequence Diagram - Login (ref)**

## Order Management

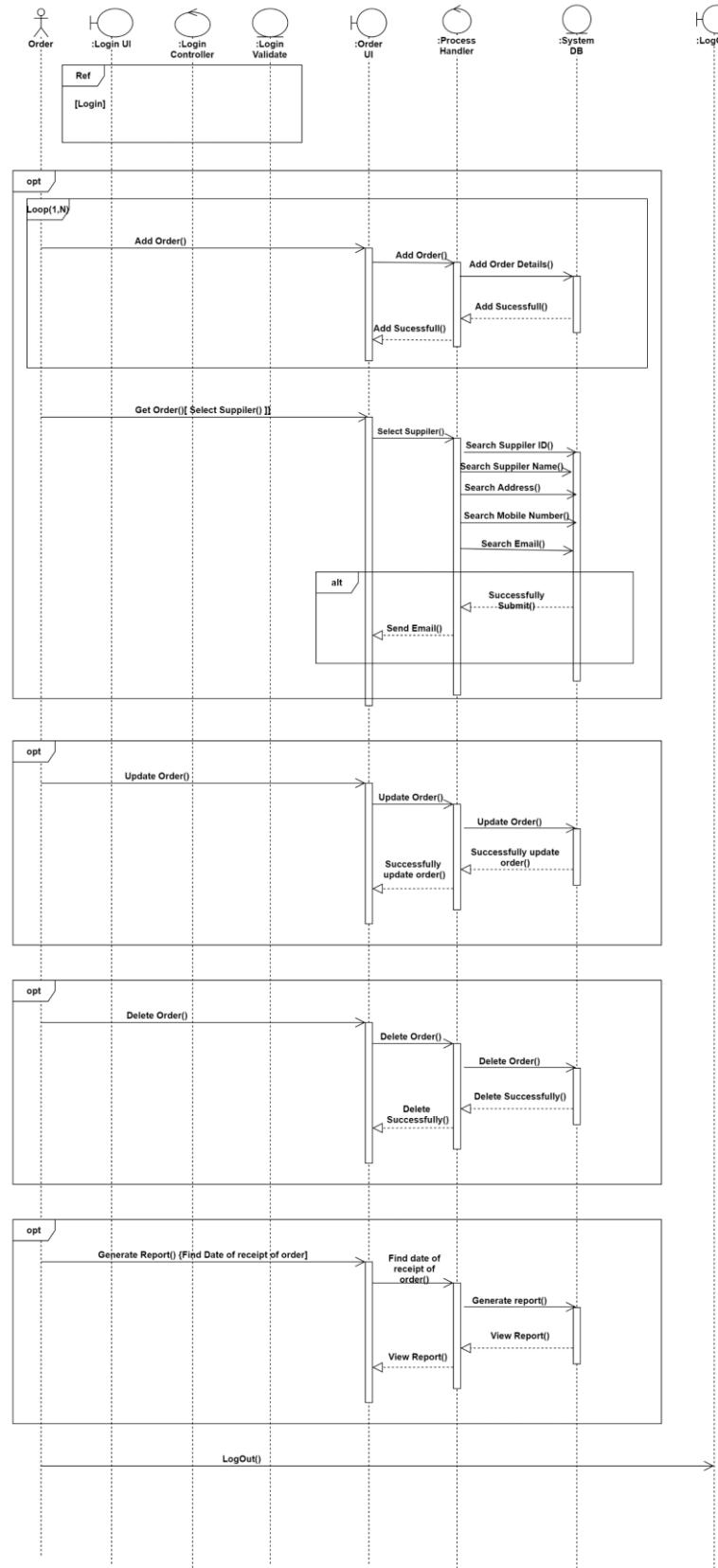


Figure 2.24: Sequence Diagram - Order Management

## Supplier Management

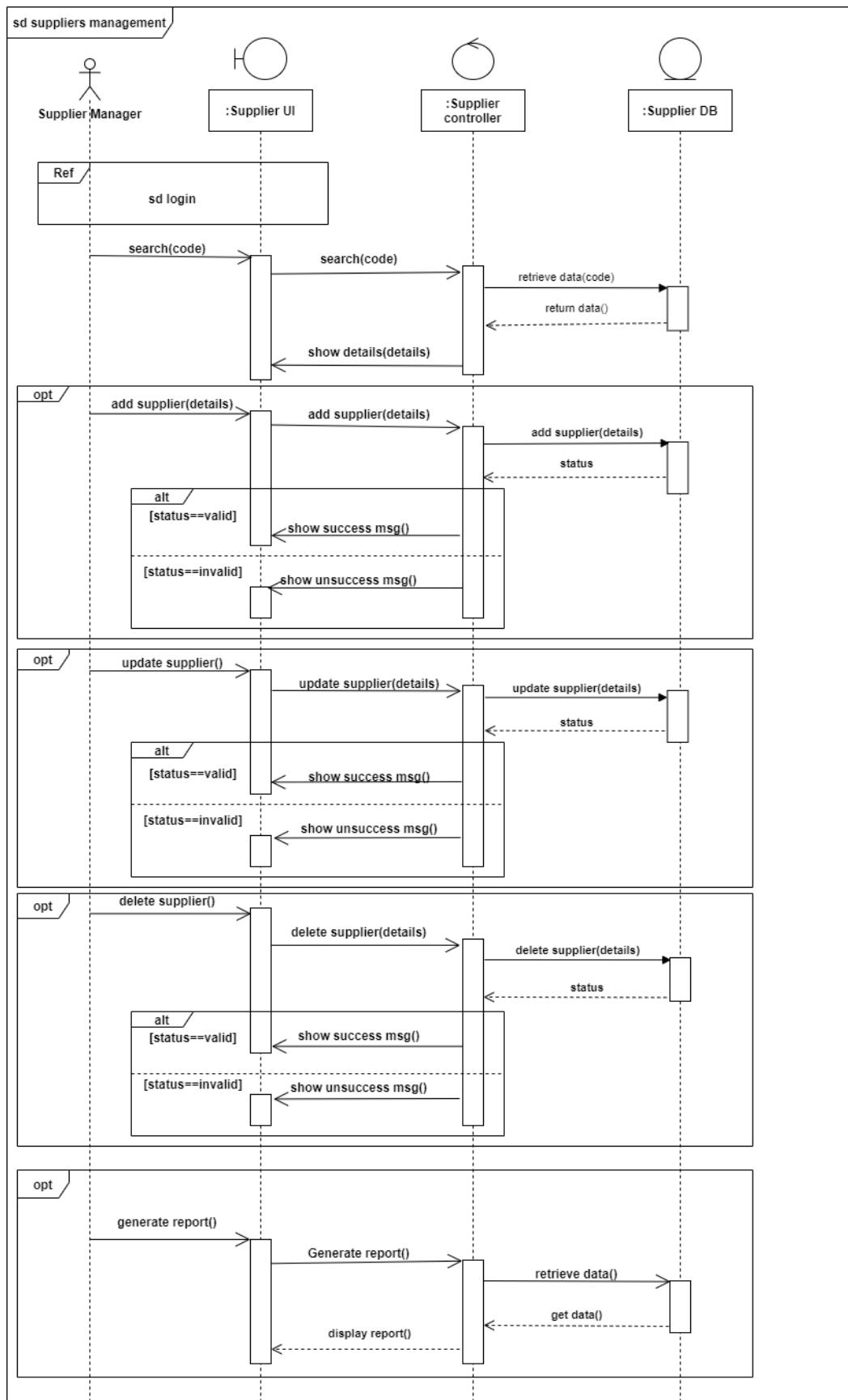
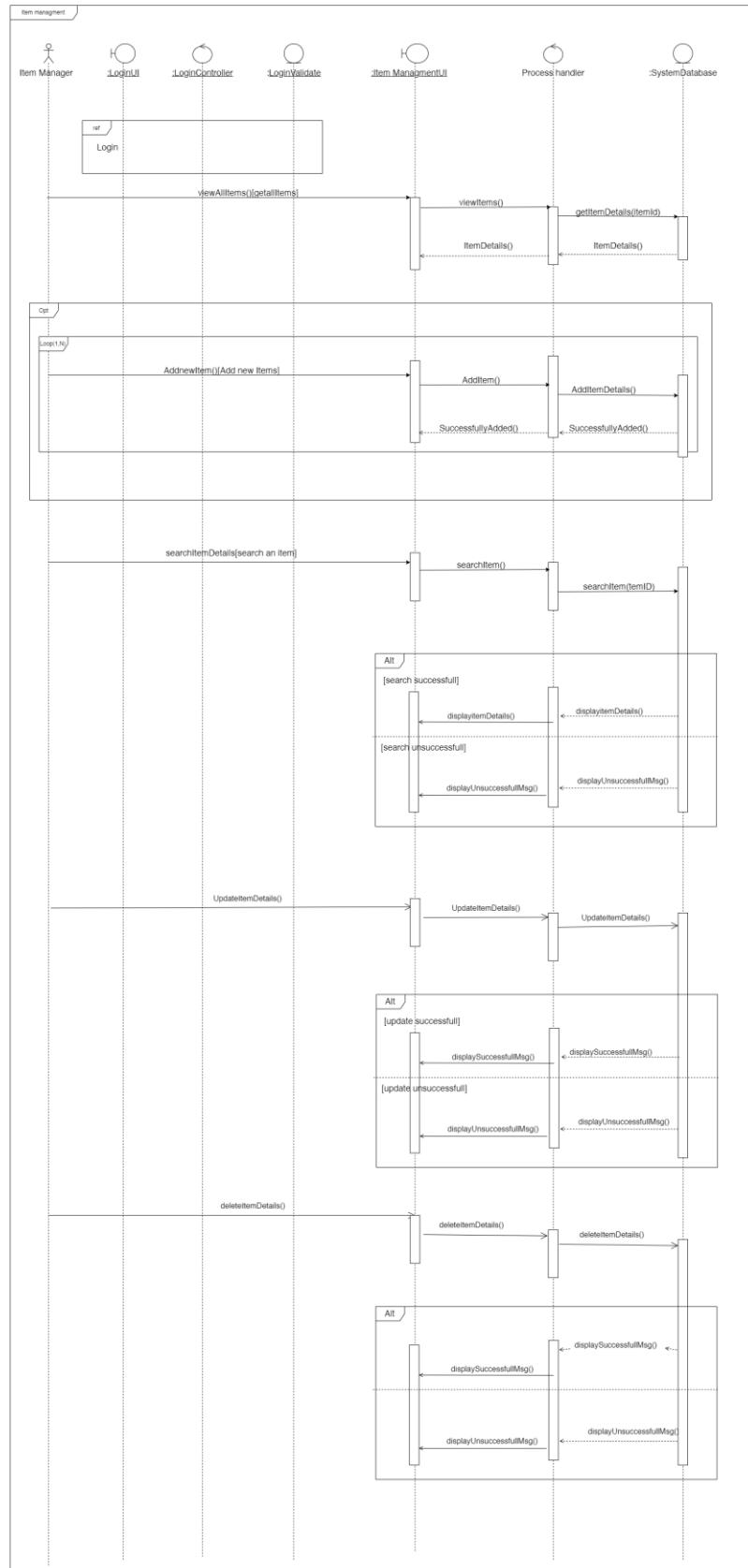


Figure 2.25: Sequence Diagram - Supplier Management

## Item Management



**Figure 2.26: Sequence Diagram - Item Management**

## User & Payroll Management

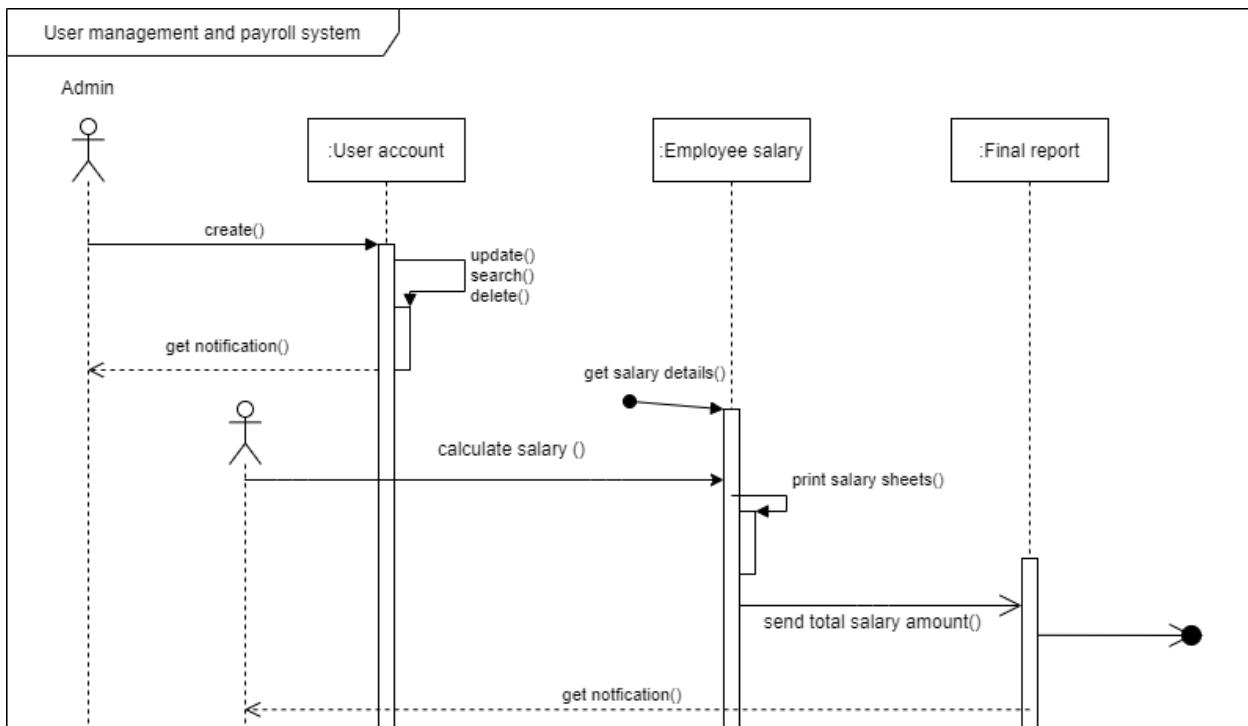


Figure 2.27: Sequence Diagram - User & payroll Management

Finance management - Sequence diagram

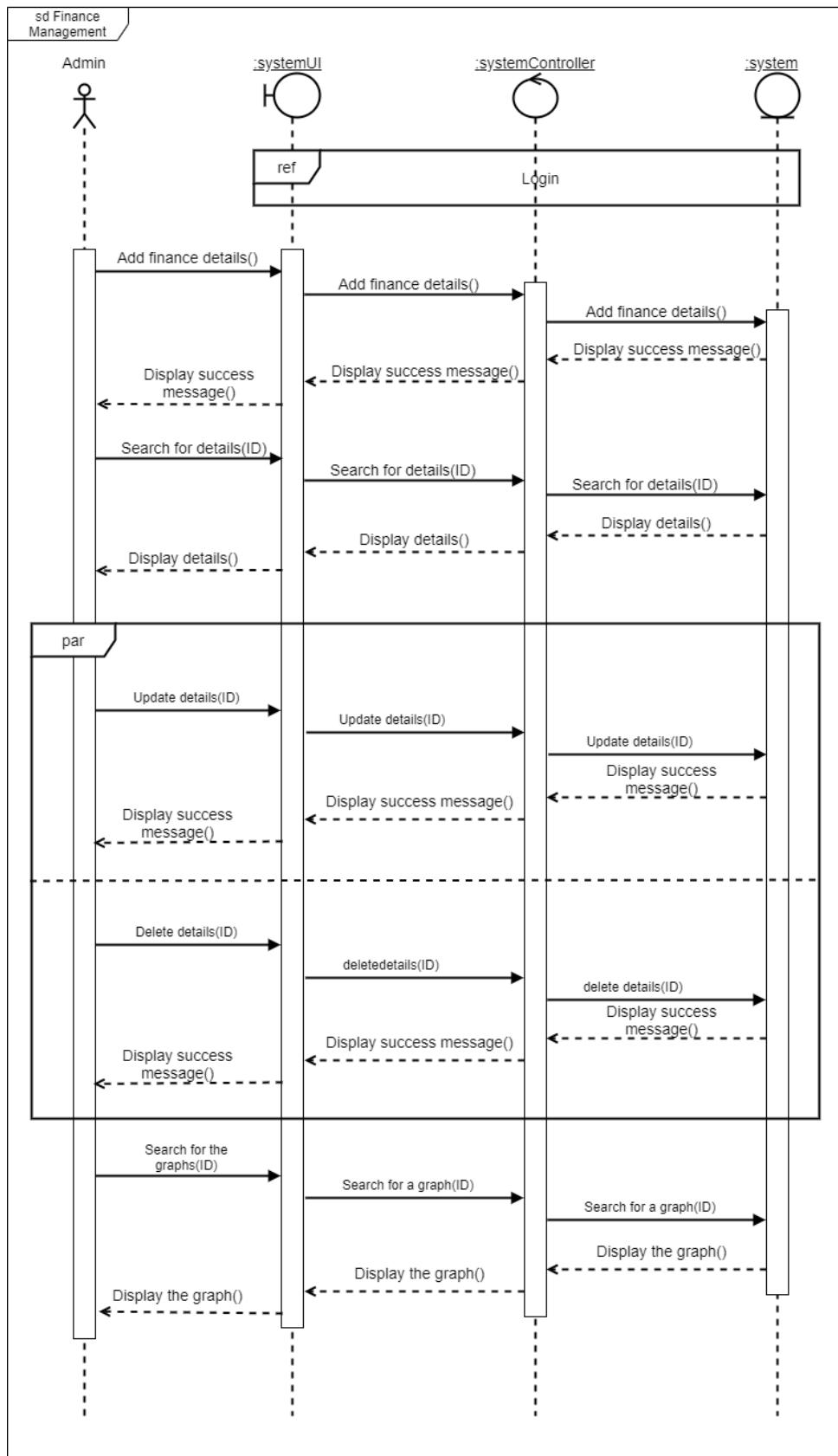


Figure 2.28: Sequence Diagram - Finance Management

## Stock Management

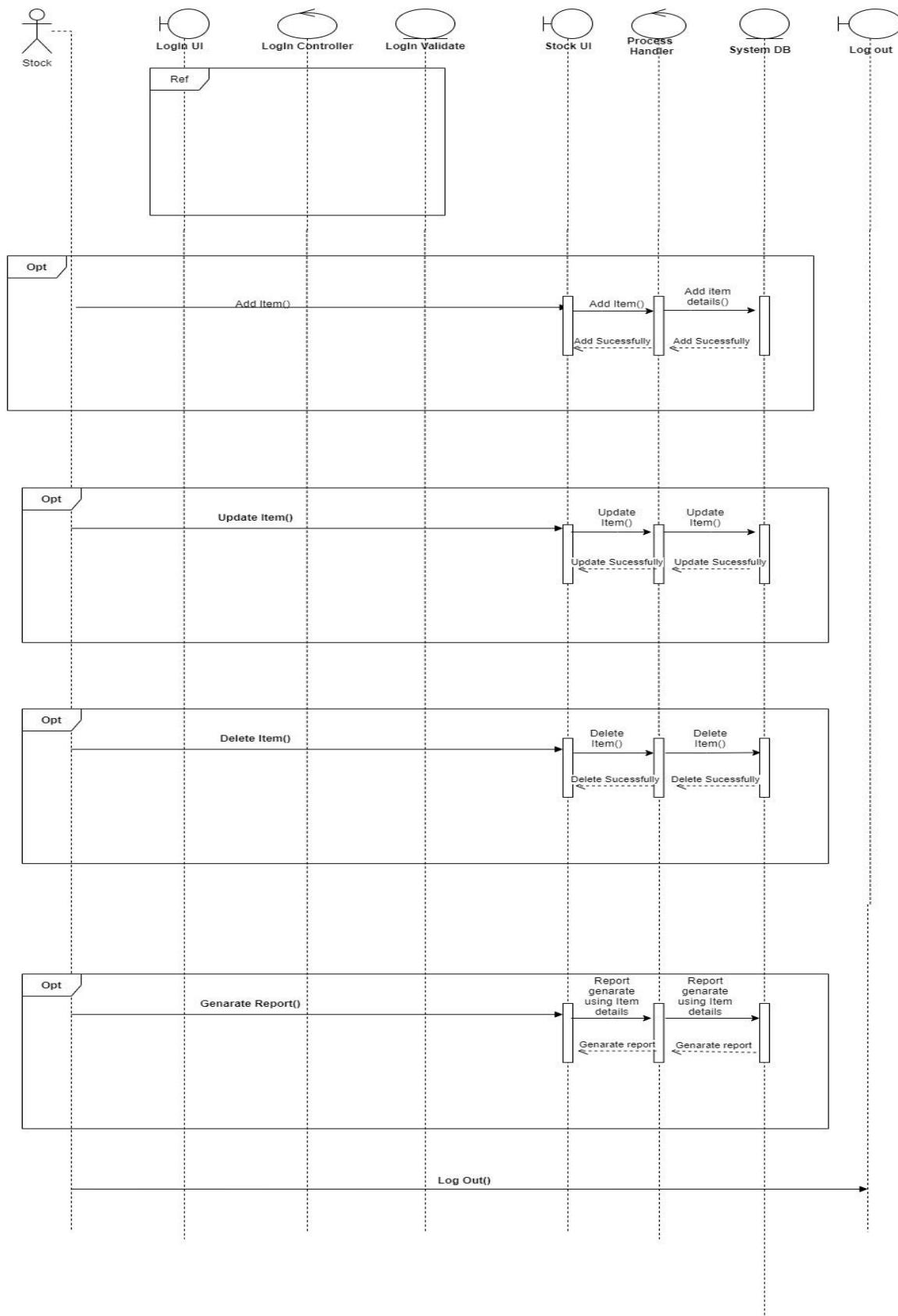
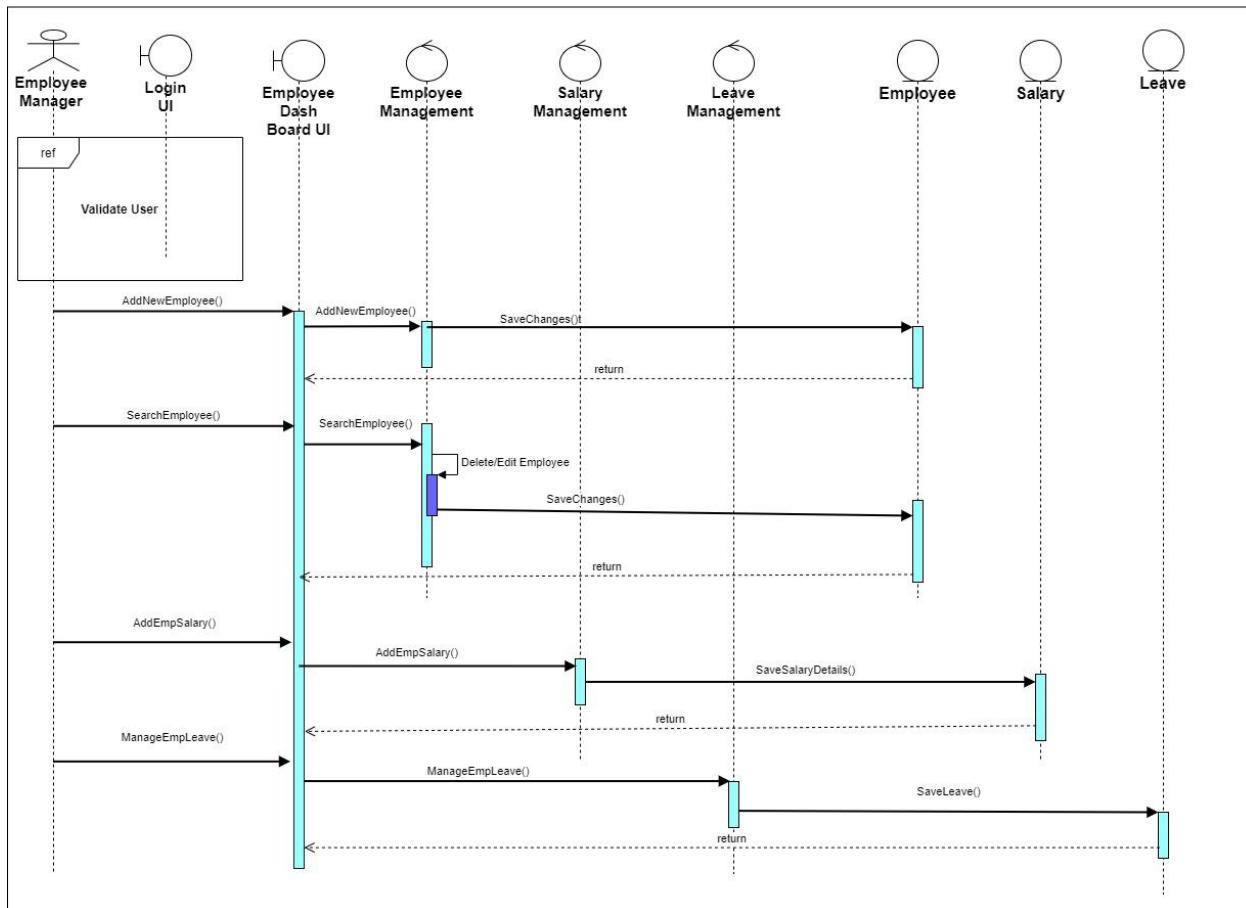


Figure 2.29: Sequence Diagram - Stock Management

## Employee Management



**Figure 2.30: Sequence Diagram - Employee Management**

## 2.2.5 User Interfaces

### Common Interfaces



Figure 2.31: UI - Login

A screenshot of an admin dashboard with an orange background. At the top left is the title "Admin Dashboard". To the right are the system date and time: "Date: 2020/10/22" and "Time: 17:22:14". Below the title, the user is identified as "User : Admin". There are four main management sections arranged in a grid: "Sale Manegment" (calculator icon), "Employee Manegment" (people icon), "Item Manegment" (t-shirt icon), and "Finance Manegment" (dollar bag icon). In the second row, there are four more management sections: "Stock Manegment" (hourglass icon), "Supplier Manegment" (person with box icon), "Payroll Manegment" (hand holding dollar sign icon), and "Order Manegment" (shopping cart icon). At the bottom, there are three additional icons: "User Accounts" (user profile icon), "Logout" (arrow pointing right icon), and "Exit" (red circle with white X icon).

Figure 2.32: UI - Admin Dashboard

# Manager Dashboard

Date: 2020/10/22

Time: 17:22:56

User : Prabasha



Sale Manegment



Employee Manegment



Item Manegment



Finance Manegment



Stock Manegment



Supplier Manegment



Payroll Manegment



Order Manegment



User Accounts



Logout



Exit

Figure 2.33: UI - Manager Dashboard

## Sale Management Interfaces

The dashboard features a top navigation bar with icons for New Customer, Customer Details, Update Customer, Billing, Issue Voucher, Voucher History, SALES Report, and LogOut. Below the bar is a large blue circular icon containing a stack of documents, symbolizing sales or vouchers. At the bottom center, the text "User: Dinuja Pinto" is displayed.

Figure 2.34: UI - Sale Management : Cashier Dashboard

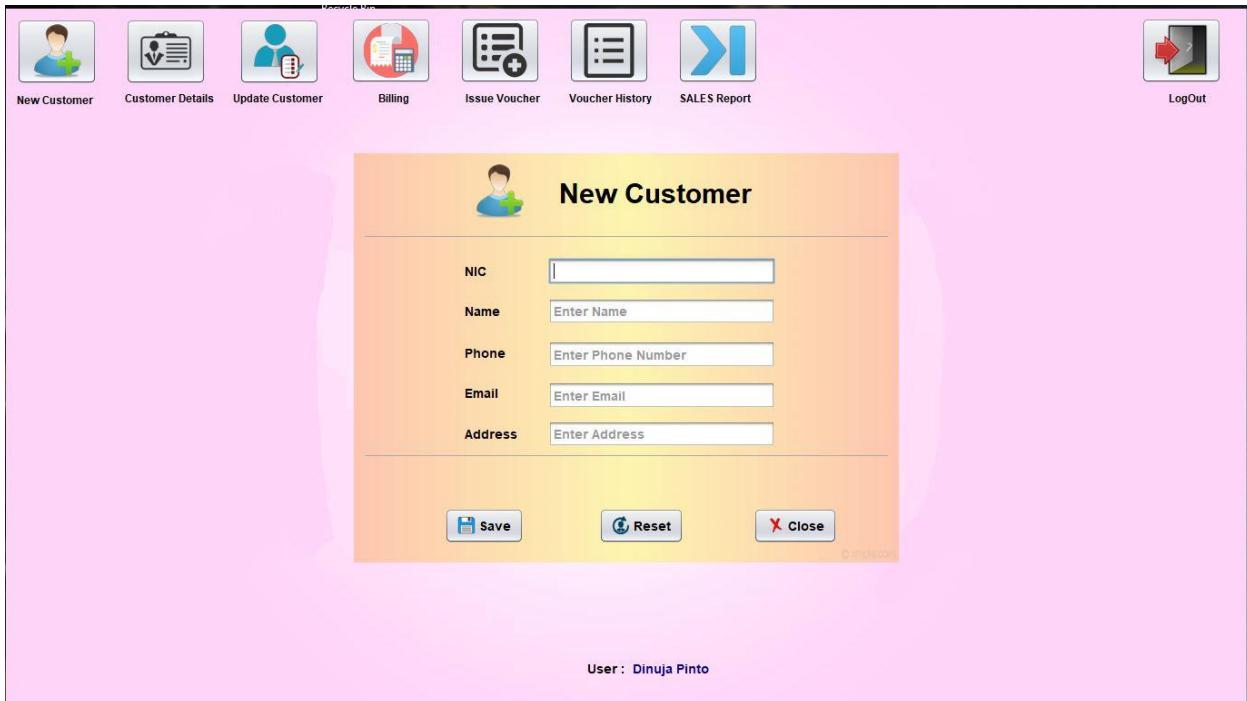


Figure 2.35: UI - Sale Management - Add new Customer

New Customer    Customer Details    Update Customer    Billing    Issue Voucher    Voucher History    SALES Report    LogOut

**Customer Details**

nic	name	phone	email	address
203748594v	Rusira Liyanage	0710630663	rusira@yahoo.com	Kirillawala,Kadawatha
602359845v	Nimal Jayampathi	0715698542	Nimal@yahoo.com	pasyala,gampaha
913568564v	Charitha Dissanayake	0779856452	Charitha@gmail.com	Minuwangoda,Gampaha
956845236v	Kanishka Samarakoon	0769856452	kanishka@gmail.com	Minuwangoda,gampaha
971643188v	Lahiru Sandaruwan	0718991994	lahiru@gmail.com	Gonagamuwa,Tissamaharama
973154109v	Dinuja Pinto	0775698563	pinto@gmail.com	malabe,colombo

**Print** **Delete** **Close**

User : Dinuja Pinto

Figure 2.36: UI - Sale Management - All Customer Details

User: Dinuja Pinto

Figure 2.37: UI - Sale Management - Update Customer Details

Date : 2020/10/22  
Time : 17:28:44

Customer Details :

NIC	973154109v	Name	Dinuja Pinto	Phone	0775698563	Email	pinto@gmail.com
-----	------------	------	--------------	-------	------------	-------	-----------------

Product Details :

Product code	Product Name	Price	Qty	Discount	Amount
10001	shirt 01	2300.0	1	20.0	2280.0
10002	denim	5600.5	1	26.0	5574.5

Calculation Details :

Total	7854.50
Paid Amount	10000
Return Amount	2145.50

User: Dinuja Pinto

Figure 2.38: UI - Sale Management - Billing

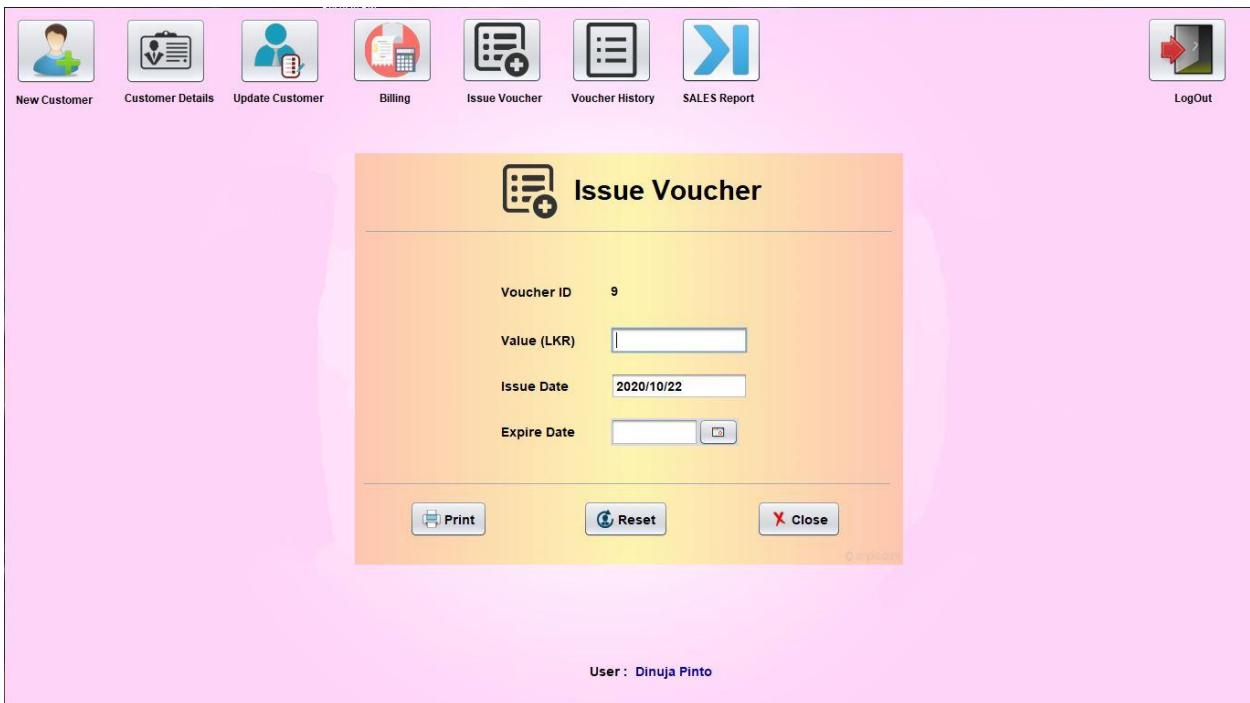


Figure 2.39: UI - Sale Management - Issue Voucher

A screenshot of the same web-based application interface. The central modal window is now titled "Issued Voucher History" and displays a table of issued vouchers. The table has columns: voucher\_ID, value, issue\_Date, Expire\_Date, and Status. The data in the table is as follows:

voucher_ID	value	issue_Date	Expire_Date	Status
1	5000.0	2020/10/13	2020/10/23	Used
2	5000.0	2020/10/14	2020/11/12	Used
3	1000.0	2020/10/15	2020/10/29	Used
4	1000.0	2020/10/15	2020/10/23	not use
5	4500.0	2020/10/15	2020/11/03	not use
6	2600.0	2020/10/16	2020/12/22	not use
7	4500.0	2020/10/15	2020/10/22	not use
8	4500.0	2020/10/15	2020/10/30	Used

X Close

User : Dinuja Pinto

Figure 2.40: UI - Sale Management - Issued Voucher History

**Bill Wise Report**

Date From: 2020/10/08 To: 2020/10/23 View Result

Bill_No	Date	Time	Customer_NIC	Customer_Phone	Cashier_Name	Amount
1	2020/10/15	13:08:49	602359845v	0715698542	Admin	11304.5
2	2020/10/15	13:18:51	975684253v	0778956452	Admin	7554.5
3	2020/10/15	13:20:06	971643188v	0718991994	Admin	350.0
4	2020/10/15	13:22:32	913568564v	0779856452	Admin	10424.5
5	2020/10/15	13:23:27	203748594v	0710630663	Admin	2950.0
6	2020/10/15	14:30:17	973154109v	0779716788	Dinuja Pinto	5550.0
7	2020/10/15	14:34:32	913568564v	0779856452	Dinuja Pinto	21343.5
8	2020/10/15	15:14:44	973154109v	0775698563	Dinuja Pinto	13429.0
9	2020/10/15	15:16:51	913568564v	0779856452	Dinuja Pinto	10134.5

TOTAL AMOUNT 83040.5

**Print** Total Amount **Close**

User : Dinuja Pinto

Figure 2.41: UI - Sale Management - Bill wise Report

**Item Wise Sale Report**

Date From: 2020/10/01 To: 2020/10/28 View Result

No	Bill_No	Date	Product_Code	Product_Name	Qty
1	1	2020/10/07	123	denim	1
2	2	2020/10/07	123	denim	2
3	2	2020/10/07	564	sampredd	1
4	3	2020/10/13	123	denim	1
5	4	2020/10/13	123	denim	3
6	5	2020/10/14	123	denim	1
7	5	2020/10/14	564	sampredd	3
8	5	2020/10/14	123	denim	1
9	6	2020/10/14	123	denim	1
10	6	2020/10/14	564	sampredd	1
11	7	2020/10/14	123	denim	5
12	1	2020/10/15	10001	shirt 01	2
13	1	2020/10/15	10002	denim	1
14	1	2020/10/15	10003	hat	1
15	2	2020/10/15	10005	red dotted skirt	2
16	2	2020/10/15	10002	denim	1
17	3	2020/10/15	10004	teddy bear	1
18	4	2020/10/15	10003	hat	3

**Print** **Close**

User : Dinuja Pinto

Figure 2.42: UI - Sale Management - Item Wise sale Report

## Employee Management Interfaces



Figure 2.43: UI - Employee Management :Home page

The screenshot shows the "Add New Employee" form. It has fields for "Full Name", "Name With Initials", "NIC", "Phone", "E-mail", "Date of Birth", "Gender" (Male/Female), "Address", "Nationality", "Marital Status" (Single/Married), "Position" (Helper/Cashier/Manager), and "Basic Salary". There is also a "Choose Image" button with a camera icon and a file input field. At the bottom are "Reset" and "Add" buttons.

Figure 2.44: UI - Employees Management - Add new Employee

The screenshot shows the "Employee Details" form. It lists fields for "NIC", "Name With Initial", "Phone", "Address", "E-Mail", "Position", "Gender", and "Basic Salary". To the right of the fields is a placeholder image of a person's face with a magnifying glass over it. At the bottom right are "Delete" and "Edit" buttons.

Figure 2.45: UI - Employees Management - Employee Details

**Update Employee Details**

NIC:

Name with Initials:

Phone:

E-mail:

Address:

Marital Status:  Single  Married

Position:  Cashier  Manager  Helper

Basic Salary:

**Update**

Figure 2.46: UI - Employees Management - Update Employee

**Salary**

**Basic Information**

NIC:

Name with Initials:

Position:

Basic Salary:

**Salary Details**

Salary ID:

Month:

Advance Payment:

OT Hours:

OT Rate:

Bounce:

**Save** **Reset**

Figure 2.47: UI - Employees Management - Salary Details

**Employee Leave Form**

NIC:   No of Absence:

Leave ID:

Name:

Position:

Reason for Absence Request:

Dates of absence: from  to  Days:

**Add Leave**

Figure 2.48: UI - Employees Management - Employee Leave Form

## Finance Management Interfaces



Figure 2.49: UI - Finance Management - Home

Enter monthly Financial details below	
ID	2020-10-22
Month	<input type="text"/> <input type="button" value="..."/>
Electricity Charges	Enter electricity cost
Water Charges	Enter water charges
Telephone Charges	Enter telephone charges
Taxes Payable	Enter tax cost
Equipment Cost	Enter equipment cost
Other cost	Enter other costs
<input type="button" value="SAVE"/>	

Figure 2.50: UI - Finance Management - Enter Monthly finances details

search id		SEARCH	
Month	<input type="text"/>	Taxes Payable	<input type="text"/>
Electricity Charges	<input type="text"/>	Salaries payable	<input type="text"/>
Water Charges	<input type="text"/>	Cost of Goods Sold	<input type="text"/>
Telephone Charges	<input type="text"/>	Equipment Cost	<input type="text"/>
Suppliers Costs	<input type="text"/>	Other Costs	<input type="text"/>
Assets	<input type="text"/>		

Figure 2.51: UI - Finance Management - search finance Details

search id  SEARCH

Month	<input type="text"/>
Assets	<input type="text"/>
Electricity charges	<input type="text"/>
Water charges	<input type="text"/>
Telephone charges	<input type="text"/>
Taxes	<input type="text"/>
Equipment cost	<input type="text"/>
Other costs	<input type="text"/>

UPDATE  DELETE

Figure 2.52: UI - Finance Management - Update/Delete Finance Details

search id  SEARCH

### BALANCE SHEET

<b>ASSETS</b>	
Assets	<input type="text"/>
Total Assets	<input type="text"/>
<b>LIABILITIES</b>	
Taxes Payable	<input type="text"/>
Salaries Payable	<input type="text"/>
Supplier Cost	<input type="text"/>
Expenses	<input type="text"/>
Total Liabilities	<input type="text"/>
<b>EQUITY</b>	
Total Equity	<input type="text"/>

Print

Figure 2.53: UI - Finance Management - Balance sheet



Figure 2.54: UI - Finance Management - Expenses for the Month

## Item Management Interfaces

**Add New Product**

Product Code	10007
Product Name	
product price	
Supplier ID	s123
Product Type	none
Discount price	
Description	

**Save**   **Reset**   **Close**

Figure 2.55: UI - Item Management - Add new Item

**View Item Details**

Product Code	Item Name	Item Price	SupplierId	Item Type	Discount	Description
10001	shirt 01	2300.0	123	clothes	20.0	hand made
10002	short	2000.5	124	clothes	20.0	short made d...
10003	hat	1200.0	125	clothes	30.0	branded hat spe...
10004	teddy bear	350.0	127	toys	0.0	made for kids.
10005	jasmine perfume	725.0	124	accessories	10.0	f2.0 indian perfume
10006	red dotted skirt	990.0	100	clothes	0.0	made with soft an...

**Print**   **Delete**   **Close**

Figure 2.56: UI - Item Management - View all Item Details

**Search / Update Item Details**

Item Code	10001	<b>Search</b>
Item Name	shirt 01	Description
Item Price	2300.0	hand made
Item Type	clothes	
Supplier ID	123	
Discount	20.0	

**Update**   **Close**

Figure 2.57: UI - Item Management - Update Item Details

## Supplier Management Interfaces

### Supplier Information

[Close](#)

**Code :**  [Search](#)

**Supplier Name :**

**Supplier Email :**

**Supplier Phone :**

**Item Type :**  [▼](#)

**Supplier Payment :**

[Save](#) [Update](#) [Delete](#)

[View Supplier Details](#)

Figure 2.58: UI - Supplier Management - Add new supplier

### Supplier Information

code	SupplierName	SupplierEmail	SupplierPhone	ItemType	SupplierPayment
s123	suresh	suresh@gmail.com	0112838383	Toys	10000
s124	Nimanthi	nimanthigar@gmail.c...	0778945857	Clothes	30000
s125	Ruwan Fernando	ruass@gmail.com	0768514675	Accessories	17500
s126	Winson Ranchnayaka	rathnayaka68@gmail...	0777831154	Clothes	84700
s127	Kalhari Jayawardhana	kalhari89@yahoo.com	0112493776	Toys	10600

[Print](#) [Close](#)

Figure 2.59: UI - Supplier Management - view Suppliers Information

## Payroll & User Management Interfaces

**Pay Roll System**

S_ID	Emp_name	NIC	Basic	Advance	OT hrs	OTRate	Additional ...
20APR	amal	783456780V	35000	3000	9	100	3000
20AUG	kumari	883456780V	30000	2000	5	100	2000
20FEB	namal	773456780V	20000	2000	5	100	2000
20JAN	kamal	783456780V	30000	2000	5	100	2000
20JUN	kamani	883456780V	25000	8000	10	100	8000
20MAR	kumari	883456780V	30000	2000	5	100	2000
20MAY	nimali	773456780V	27000	6000	20	100	6000
20OCT	kamal	783456780V	30000	2000	5	100	2000

[Back](#)

Figure 2.60: UI - payroll & user Management - payroll system

Salary Sheet	
S_ID:	20FEB
Employee Name:	namal
NIC:	773456780V
Basic Salary:	20000
Advance Payment:	2000
OT Hours:	5
OT Rate:	100
Additional Payment:	2000
Total Salary:	0.00

[Calculate](#)   [Print](#)   [Add](#)   [Back](#)

Figure 2.61: UI - payroll & user Management - Employee salary calculator

Job Title	User Name	Name	Email	Phone	Password
admin	admin	Admin	nimal@gmail.com	07545321...	admin
cashier	c10	nimalR	nimal@gmail.com	07545321...	90673489N
cashier	c4	anil	anil@gmail.com	07756543...	89785645...
cashier	c5	qwerty	rtyuioitr	07790675...	67897654...
cashier	c6	suranika	surani@gmail.com	07867564...	89786745...
cashier	dinuja.s	Dinuja P.	dinuja@gmail.com	07797458...	cashi123
manager	m1	surani	surani@gmail.com	07234789...	88786745...
manager	m10	amal	amal@gmail.com	07689453...	19895624...
manager	m3	sfgdfh	fedry	08776677	89786543V
manager	m4	saman	saman@gmail.com	07234678...	89674532...
manager	m9	sunil	sunil@gmail.com	07256789...	89056789V
manager	pinto	Prabasha	sample@gmail.com	07722277...	m123

[Search](#)   [Create](#)   [Update](#)   [Delete](#)   [Back](#)

Figure 2.62: UI - payroll & user Management - user accounts handling

## Order Management Interfaces

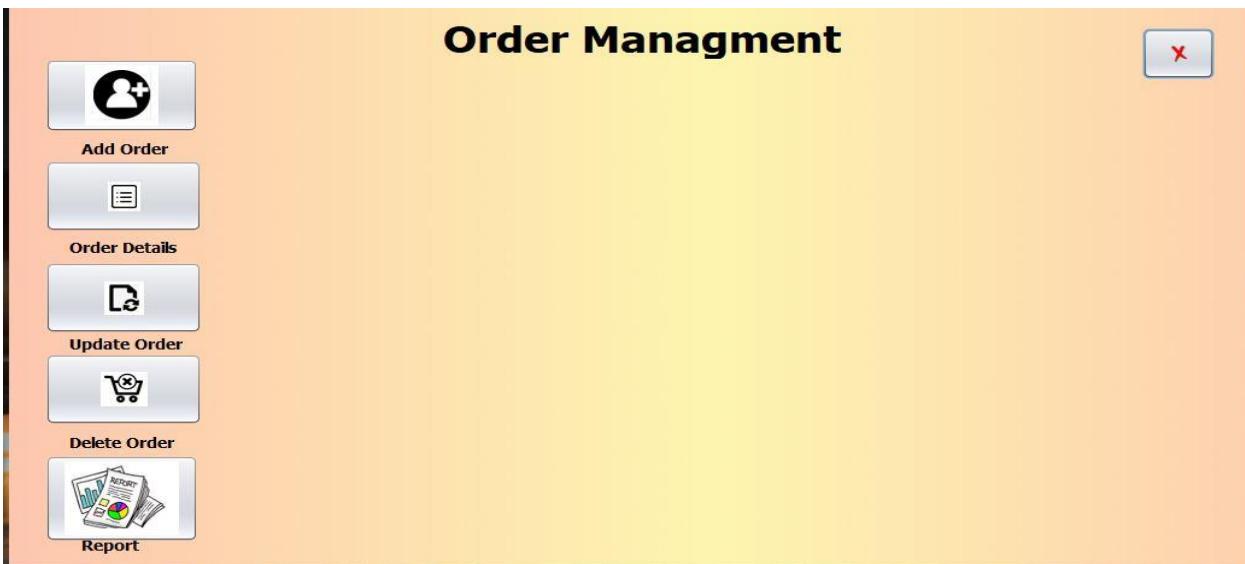


Figure 2.63: UI - Order Management - Home

This screenshot shows the 'Add Order' form. It includes fields for 'Order ID', 'Item Name', 'Size' (with a dropdown menu), 'Rate', 'Quantity', and 'Date Of receipt Of Orders'. Below these fields are 'Add' and 'Reset' buttons, and a large orange 'Order' button with a shopping cart icon. A 'Select Supplier' link is also present. The sidebar on the left is identical to Figure 2.63.

Figure 2.64: UI - Order Management - new Order

This screenshot shows the 'Order Details' page. It displays a table of order information with columns: orderId, ItemName, size, rate, quantity, and date. The data is as follows:

orderId	ItemName	size	rate	quantity	date
1	Tshirt	M	50	2000	2020/11/02
2	shirt	XL	150	1280	2020/10/31
10	shirt	M	1000	1400	2020/10/28
15	Frock	-	10	1750	2020/11/06
20	Campus Tshirt	XL	500	1200	2020/11/14
21	White Tshirt	XS	250	1300	2020/10/09
22	blue saree	-	100	1900	2020/10/21
51	Tshirt	L	50	990	2020/10/27
53	campus Tshirt	L	1500	1300	2020/11/01
54	School Shirt	M	2000	980	2020/11/10
59	White Saree	-	100	2000	2020/11/21
70	Tshirt	M	1000	900	2020/11/05
71	Pink Saree	-	12	1200	2020/11/04

At the bottom of the table, there are 'Print' and 'Close' buttons. The sidebar on the left is identical to Figure 2.63.

Figure 2.65: UI - Order Management - Order Details

**Delete Order**

Order ID:  Search:

Order ID:   
Item Name:   
Size:   
Rate:   
Quantity:   
Date Of receipt Of Orders:

Figure 2.66: UI - Order Management - Delete Order

**Order Managment**

**Update Order**

Order ID:  Search:

Order ID:   
Item Name:   
Size:   
Rate:   
Quantity:   
Date Of receipt Of Orders:

Figure 2.67: UI - Order Management - Update Order

**Report**

Date : 22-10-2020

Date of receipt Orders:  Search:

orderId	ItemName	size	rate	quantity	date
1	Tshirt	M	50	2000	2020/11/02
2	shirt	XL	150	1280	2020/10/31
10	shirt	M	1000	1400	2020/10/28
15	Frock	-	10	1750	2020/11/06
20	Campus Tshirt	XL	500	1200	2020/11/14
21	White Tshirt	XS	250	1300	2020/10/09
22	blue saree	-	100	1900	2020/10/21
51	Tshirt	L	50	990	2020/10/27
53	campus Tshirt	L	1500	1300	2020/11/01
54	School Shirt	M	2000	980	2020/11/10
59	White Saree	-	100	2000	2020/11/21
70	Tshirt	M	1000	900	2020/11/05
71	Pink Saree	-	12	1200	2020/11/04
72	Campus Tshirt	XL	1200	1500	2020/10/16

Figure 2.68: UI - Order Management - Order Report

## Stock Management Interfaces

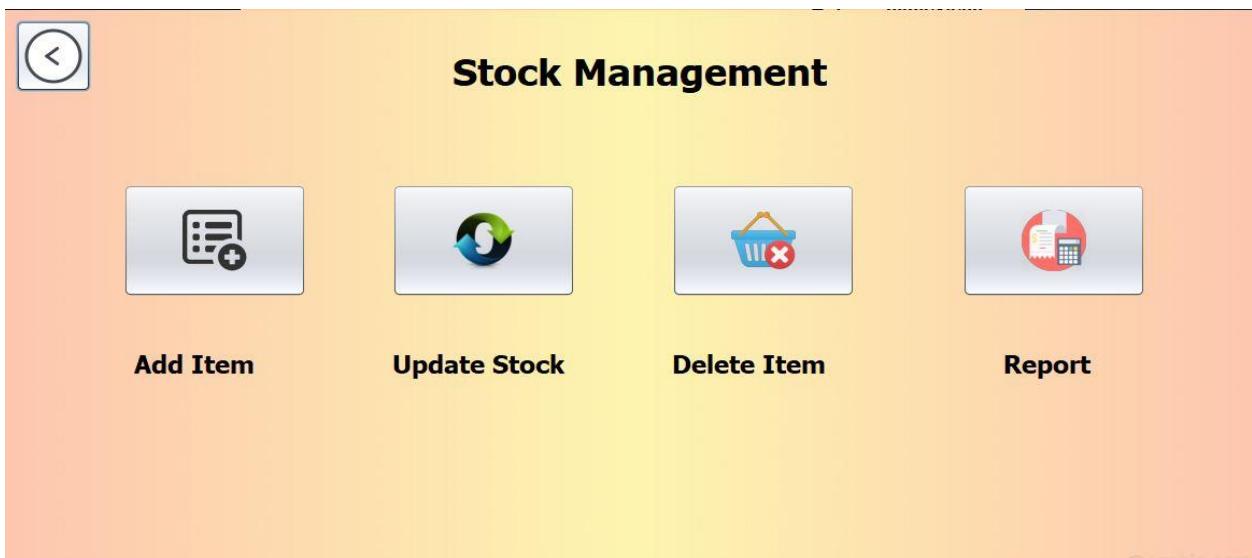


Figure 2.69: UI - Stock Management - Home

**Add Item to the Stock**

Stock ID:

Item ID :  Enter ID

Item Name :  Enter name

Quantity:  Enter Quantity

**Action Buttons:** + Add Item Reset Cancel

Figure 2.70: UI - Stock Management - add new item to stock

**Update Stock Details**

Item ID:  Find

Name:

Quantity:

**Action Buttons:** Update Cancel

Figure 2.71: UI - Stock Management - update Stock details

**Remove Item**

Input the Item Code:  Find

Name:

Quantity:

**Action Buttons:** Remove Reset Cancel

Figure 2.72: UI - Stock Management - Remove Item

**Report Of Stock**

Stock_ID	Item_ID	Item_name	Quantity
S001	10001	shirt 01	100
S002	10002	denim	100
S003	10003	hat	90
S004	10004	teddy bear	97
S005	10005	jasmine perfume	98
S006	10006	red dotted skirt	96

Print Cancel

Figure 2.73: UI - Stock Management - Stock report

## 2.3 Implementation

This is desktop application. Java swing technology used for developing interfaces and this application implementation done using Java Language.  
Java Library files use for generates reports, print reports.  
MySQL chooses as Data Base Management System.

### Software & Technologies

Java Swing Technology with NetBeans IDE 8.2  
MySQL workbench 8.0 CE

## 2.4 Testing

### Stock Management

Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/fail)	Comments
1	<b>Stock details</b> <ul style="list-style-type: none"><li>• Stock ID</li><li>• Item ID</li><li>• Item Name</li><li>• Quantity</li></ul>	A new Item should be added for stock	Details of all Stock item must be successfully entered into the database. Clicking on the "Add" button above will display the "Add Successful" message on the screen. Existing order details and new additions can be found on the "Stock Details" page.	pass	Successfully activated collection of details of new Item. Data has been successfully entered into the database.
2	Update Quantity of items	Update quantity of stock from database.	Item details are updated and stored in the database. Details of existing items and details of newly updated Quantity can be looked on the "Stock Details" page.	Pass	Item details update function successfully executed.

Table 2.4-a: Test Cases - Stock Management

## Sales Management

Test ID	Test Input	Expected Output	Actual Output	Result	Description
1	NIC:985164098	Show "Invalid"	Show "Invalid"	Pass	Show "Invalid" status near textbox until enter correct NIC number.
2	NIC:985164096V	Enable save button	Save button enabled	Pass	Save button enable after entering correct NIC no
3	Phone Number:0715896452	Not show "Invalid" status	"Invalid" status not shown	Pass	Show "invalid" statement until enter 10 numbers
4	Product ID:10001 Quantity: 2  Product ID:10002 Quantity:1	Total = Rs.10134.00	Total = Rs.10134.00	Pass	Get total amount of bill after add product to the bill
5	Paid Amount:10500.00	Return Amount: 366.00	Return Amount: 366.00	Pass	When customer paid cash for bill, calculate return amount
6	Date From: 2020/10/15 To: 2020/10/21	Show Bill summary in given date range	Bill summary shown in given Date range	Pass	Showing bill summary in selected date range

**Table 2.4-b: Test Cases - Sale Management**

## Order Management

Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/fail)	Comments
1	<u>Order details</u> <ul style="list-style-type: none"> <li>• Order ID</li> <li>• Item Name</li> <li>• Size</li> <li>• Rate</li> <li>• Quantity</li> <li>• Date of receipt of orders</li> </ul>	A new Order should be added.	Details of all orders must be successfully entered into the database. Clicking on the "Add" button above will display the "Add Successful" message on the screen. Existing order details and new additions can be found on the "Order Details" page.	pass	Successfully activated collection of details of new orders. Data has been successfully entered into the database.
2	Supplier ID Name Address Mobile Number Email	Once the supplier is selected, click the "Submit and Send Email" button and send the email to the appropriate supplier.	Providers are selected for the database. Visit the View Supplier page to view those selected providers.	Pass	The selection of suppliers was properly implemented.
3	Update date of receipt of orders and Rate	Details of relevant orders will be updated.	Order details are updated and stored in the database. Details of existing orders and details of newly updated orders can be looked on the "Order Details" page.	Pass	Order detail update function successfully executed.
4	Owner Clicking the "Delete" button in the description of the order required to delete an additional order from the system will display a message saying, "Do you want to delete". Click the "Yes" button for that message.	The order will be removed from the order details	Expected outputs	Pass	Deleting an order from the order function will work properly.

Table 2.4-c: Test Cases - Order Management

## Payroll & User Management

Test Case ID	Test Scenario	Description	Test Inputs	Expected Results	Actual Results	Pass/Fail
U001	Create user account with valid phone number	Phone number must have 10 characters	Phone number = 0765678905	Create account successfully	Account created successfully	Pass
U002	Enter valid password to create the user account	Password must have digits with capital or simple 'v'	Password = 895623578V	Create account successfully	Prompt a successful message	pass

Table 2.4-d: Test Cases - Payroll & User Management

## Supplier Management

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)	Description
1	Supplier phone number= 0775484617	Store details in database	Successfully store in database	Pass	Phone number should have only 10 numbers. In more or less inclusion, system display red color field.
2	Supplier name, email, address, phone number, item type, payment	Edited details update and store in database	Database updated	Pass	Update operation worked properly.

Table 2.4-e: Test Cases - Supplier Management

## Item Management

Description	Test Input	Expected Output	Actual Output	Result(Pass/Fail)
Search item which not in database (not added)	Item code : 1000125	Display “Does not exit” message	Display “Does not exit” message	pass
Try to get report	Go to view item page and click on print button	Export pdf with items details .	Open generated pdf report	pass
Add item with wrong price with letters	Item price : 100k.0L	Display “Unsuccessful please check your prices ” message	Display “Unsuccessful please check your prices ” message	pass
Try to add item with empty item name	Input data to other fields .	Display error message and disable save button	Display error message and disable save button	pass
Delete an item	Select item and click on delete button	Display confirm or cancel message for Delete	Display confirm or cancel message for Delete	pass

**Table 2.4-f: Test Cases - Item Management**

## Finances Management

Test Case ID	Test case Description	Test Input	Expected output	Actual output	Result (Pass/ Fail)
1	Search for finance Detail ID	Enter Finance Details ID	Display all the details related to that ID	Display all the details related to that ID	Pass
2	Entering Characters in text field	Abc/ ab/ @	Do not display any characters when entering and getting the text field red color	Do not display any characters when entering and getting the text field red color	Pass
3	Save Details	Click on “SAVE” button	Display a success message	Display “Successfully Saved”	Pass
4	Update Details	Click on “UPDATE” button	Display a success message	Display “Successfully Updated”	Pass
5	Delete Details	Click on “DELETE” button	Display a success message	Display “Successfully Deleted”	Pass

**Table 2.4-g: Test Cases - Finance Management**

## Employee Management

Test Case ID	Test case Description	Test Input	Expected output	Actual output	Result (Pass/Fail)
1	Search Employee Details	NIC = 976990803V	Show Related Employee Details	Show related employee details	Pass
2	Enter Phone Number	07646212699	when telephone number less than 10 digits or greater than 10 digits then input filed become a red color	input field become red color	Pass
3	Numbers in name filed	gaya1	when enter number in name input fields then number dose not typed	the Number did not type	Pass

Table 2.4-h: Test Cases - Employee Management

### **3. Conclusion**

Dammika Tex is unisex clothing store. They had no automated system. So, introduce system that help them to manage their sales, employee details, order details, item details, Finance, Supplier details, stock details and payroll details. Admin, Manager, cashier are users of this system. Owner of the shop assign as Admin. Only admin can create new account for system users with selecting their job role. When logging system check user job roll and navigate to relevant dashboard. Cashier have only access to sales management part it includes add new customer, billing part, issue voucher. Only manager and admin have sale reports access permissions. Also, manager has no access to billing, issue voucher part. Like that other function has some access controls for manager. All entering data store in database after proper validation.

Admin and manager have access to generate report for analyzing their business data and progress. This all report generated and show in the system UI if user want print out of report or something, user can generate PDF file of that report and get print out or other thing such as keep weekly sale summary as document.

Also, this system print Bill for customers and keep bill data store in database. And if employee want printed salary sheet user can print it through the system. Manager or admin can generate pie charts or bar chart in finance management, that help owner and managers to get quick idea about financial details.

Through this system Dammika tex owner, manager would save lot of time and their day to day task become easier. And cashier does not want to struggle with Writing bills, finalize bill amount by doing calculations one by one because system doing all calculation part for cashier. Also, employees' salaries calculations done by system.

Finally developing team implemented good system for Dammika tex.

### **4. References**

- ❖ YouTube: <https://www.youtube.com>
- ❖ Stack Overflow: <https://www.stackoverflow.com>
- ❖ Designing a Swing GUI in NetBeans IDE: <https://netbeans.org/kb/docs/java/quickstart-gui.html>
- ❖ Tutorials Point- java tutorials: <https://www.tutorialspoint.com/java/index.htm>

## Appendix B: Test Results



Dhammika Tex  
No 15, CIRCLE ROAD  
MIRIGAMA  
FACEBOOK PAGE-DHAMMIKA TEX  
TEL : +94700000000  
Bill No : 8

Item Name/		PRICE	QTY	DIS	AMOUNT
shirt 01					
2300.0		1	20.0	2280.0	
denim					
5600.5		2	26.0	11149.0	
Total amount:					13429.0
Cash :					15000
Balance :					1571.0
*****					
THANK YOU COME AGAIN					
*****					
SOFTWARE BY:Dinuja Pinto					

Figure 0.1:Test - Bill Printing



Dhammika Tex  
No 15, CIRCLE ROAD  
MIRIGAMA  
FACEBOOK PAGE-DHAMMIKA TEX  
TEL : +94700000000

Voucher ID : V8  
Value (LKR) : 4500/=  
Expire Date : 2020/10/30  
Issue Date : 2020/10/15

\*\*\*\*\*  
THANK YOU COME AGAIN  
\*\*\*\*\*  
SOFTWARE BY:Dinuja Pinto

Figure 0.2:Test - Voucher Printing

## Appendix C: Selected Code Listings

```
double Pprice = Double.parseDouble(price);
double Pdisc = Double.parseDouble(disc);
int Pqty = Integer.parseInt(qty.getText());

amt = (Pprice - Pdisc) * Pqty;

DefaultTableModel model = (DefaultTableModel) billTable.getModel();
model.addRow(new Object[]{code, prname, price, qty.getText(), disc, amt});

finalTot = finalTot + amt;

String FT = String.valueOf(finalTot);

Finaltotal.setText(FT);
```

Figure 0.3:Selected Code Listings - Calculate Total Bill Amount

```
if ("V".equals(le) || "V".equals(le)) {

    try {
        Connection con = Connectionget.getConnection();
        PreparedStatement pstm = con.prepareStatement("select * from voucher where voucher_ID ='"+ vnum + "'");
        ResultSet rs = pstm.executeQuery();

        if (rs.next()) {
            String sts = rs.getString("Status");
            if ("Used".equals(sts)) {
                ReAmt.setText("Used Voucher");
                ReAmt.setForeground(new Color(243, 0, 0, 255));
            } else {
                ReAmt.setText("Gift Voucher");
                ReAmt.setForeground(new Color(28, 147, 47, 255));
            }

            try {

                Statement st = con.createStatement();
                st.executeUpdate("update voucher set Status='Used' where voucher_ID ='"+ vnum + "' ");
                printSave.setEnabled(true);
                System.out.println("OK");
            } catch (HeadlessException | SQLException e) {
                System.out.println("No baby");
            }
        }
    } else {
        // JOptionPane.showMessageDialog(null, "Customer does not exist");
        ReAmt.setText("Not Exit");
        ReAmt.setForeground(new Color(243, 0, 0, 255));
    }
}
```

Figure 0.4:Selected Code Listings - check payment method Voucher or Not