



Sri Lanka Institute of Information Technology

Online Supermarket Management System for the Weerasiri Grocery Mart

Project Report

Information Technology Project 2020

Project ID: ITP2020_S2_09_G15

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Date of Submission: 2020.10.23

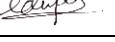
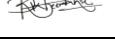
Declaration

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Project Details

Project Title	Online Supermarket Management System for the Weerasiri Grocery Mart
Project ID	ITP2020_S2_09_G15

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Abstract

This Weerasiri Grocery Mart general store administration framework has realized the transmission and control of expansive goods, so as to encourage the administration and choice of deals and decrease an enormous burden for supermarkets and grocery store directors. It too can offer assistance to move forward the work productivity of supermarket. Its prerequisites is to supply the essential data support work of employees, participations and items so that directors can through the work to include, erase, and modify the essential information of representatives and the workers can through it to add, alter and delete the essential data of memberships and products. General store administration framework is exceptionally convenient for oversee, input, yield, and discover the information so as to form the muddled grocery store information to specific, visualizations, and rationalization. In the aspect of system, the supermarket management system using PHP and SQL as the background database.

Acknowledgement

The success and outcome of this project required a lot of guidance and assistance from many people. Whatever we have done is only due to such guidance and assistance and we would not forget to thank them. We are really grateful because we managed to complete our ITP project within the time given by our lecturer in charge Ms. Janani Tharmaseelana.

We are also grateful to '*Weerasiri Grocery Mart*' for giving us the opportunity to work with them and providing us the necessary resources for this project.

This project could not have been accomplished without the support of my group members of ITP2020_S2_09_G15, Srinidee, Dewmini, Isira, Pasindu, Gavin, Shalitha and Udeepa. We also sincerely thank our lecturer of ITP module Ms. Uthpala Samarakon, for the guidance and encouragement in finishing this project and for teaching us in this module.

Last but not least, we would like to thank for our friends who helped and spent some valuable time with us to solve problems. We thank all the people for their help directly and indirectly to complete our project.

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List of Acronyms and Abbreviations

Abbreviation	Description
UML	Unified Modelling Language
ER	Entity Relationship
HTML	Hyper Text Markup Language
CSS	Cascading Style Sheets
SQL	Structured Query Language

1. Introduction

Weerasiri Grocery Mart is a private property established in Yakkala town, Gampaha district. This is in an easily accessible location in the town and they offer their products to the customers at very reasonable prices. There you can buy grocery products, dairy products, beverages, frozen food, stationary, household, as well as their freshly prepared bakery products. It has been serving its customers for over 70 years and they are having a strong market in the town. Nevertheless, they have started a delivery service so far. But due to the prevailing situation in the country, it has become very difficult for customers to go and buy their needs. Therefore, client's request is a solution to this problem, as well as expanding their business with new technology instead of manual methods. Their expectation is to deliver an exceptional service to your doorstep by offering the best service, best price, quality and freshest products

1.1 Problem Statement

- The main problem is client doing all the work by manual methods. (Traditional bookkeeping method).
- Another problem is that all middle-income local market area residents used to reach to the actual stores rather than getting used to an online system.
- Due to above facts they face difficulties like time consuming, data misplacing, data inconsistence and duplication of data.
- There is no reliable way to issue printed invoices after doing transactions.
- There is no convenient method to manage inventory, supplier, delivery, employee and vehicle management

1.2 Product Scope

With the current situation in the country, almost everyone is tempted to order essential items online. As a result, many businesses have made it possible for customers to place orders online, over the phone, as well as through the Facebook. Therefore, by considering client's issues and

analyzing their requirements, we decided to give them a better Online Supermarket Management System which including all,

- User Profile Management
- Cart Management
- Customer Reviews Management
- Employee Management
- Inventory Management
- Supplier Management
- Delivery Management
- Vehicle Management

functionalities. By the collection of above functionalities system provides user friendly interfaces and efficient performance.

1.3 Project Report Structure

Section 1

This section consists of the detailed descriptions of the client's problem which was directed to development of the system and system scope and the explanation about the system as a solution.

Section 2

This section consists of Methodology which includes detailed explanations of Requirement Analysis, System Design, Implementation and System Testing. Requirements Analysis is focused on main requirements, functional requirements, non-functional requirements, performance requirements and security requirements. Also, along with use case diagrams and activity diagrams. System Design section covered using high level architecture diagram, class diagram, ER diagram and user interfaces. Implementation covered with implementation languages, used tools and technologies. System Testing section includes testing methods, test cases and test results.

Section 3

This section sums up the whole project and discusses the realization of the original objectives and goals and how the work can be taken further. Also, highlights weaknesses and limitations of suggested solution.

Section 4

This section includes the references that used for the creation of the solution.

1.4 Individual Scope

Registration No	Name with Initials	Brief Description of the Function
IT19076362	Thiwanka K.A.T	<u>Customer Profile Management</u> <ul style="list-style-type: none">○ Login & registration○ Update, delete user details○ Generate customer details report○ Search for customer Name○ Reset Password
IT19086958	I.U.Wickramasuriya	<u>Cart Management</u> <ul style="list-style-type: none">○ Add, update, delete cart items○ Generate bill○ Show all orders○ Search for orders
IT18161298	Srinidee Methmal H.M	<u>Customer Reviews Management</u> <ul style="list-style-type: none">○ Add, update, delete customer reviews○ Generate review history○ Display all reviews○ Search user reviews

IT18125580	P.M.Herath	<u>Employee Management</u> <ul style="list-style-type: none"> ○ Add, update, delete employee details ○ Generate employee salary report ○ Search for employees
IT19081076	D.G.G.N.Gunapala	<u>Inventory Management</u> <ul style="list-style-type: none"> ○ Add, update, delete items ○ Generate expenses report ○ Display all items ○ Search for items
IT19002484	Ginigaddare G.D.U.D	<u>Supplier Management</u> <ul style="list-style-type: none"> ○ Add, update, delete supplier details ○ Generate supplier details report ○ Search for supplier
IT19118000	Weerabahu A.A.D.K	<u>Delivery Management</u> <ul style="list-style-type: none"> ○ Assign drivers ○ Display orders ○ Update details ○ Generate income report ○ Search for orders ○ Send email to customer about order status
IT19161884	B.S.L.Fernando	<u>Vehicle Management</u> <ul style="list-style-type: none"> ○ Add, update, delete vehicle details ○ Generate vehicle expenses history report ○ Search for vehicle

Table 1.4 - 1 – Individual Scope

2. Methodology

2.1 Requirements and Analysis

2.1.1 Main Requirements

Main requirements of the online shopping store are listed.

- Registration – System should capture and retain user information when sign up.
- Login – Customers should be able to login to the system using credentials they set while signing up.
- Search – The customer should be able to browse through the product list and should be able to apply filters.
- Cart – The customer should be able to add products to the cart

2.1.2 Functional Requirements

- Manage staff – HR Manager should be able to add, delete and update staff to the system.
- Manage Deliveries – The staff should be able to confirm, update deliveries.
- Manage Products – Product Manager should be able to manage products.
- Password Reset – Customer should be able to reset their password via email.
- Generate Reports – All the managers should be able to generate a report based on different criteria.
- Product Availability – The System should only display items which are available for sale.

2.1.3 Non-Functional Requirements

- Security – The system should have a reliable authentication system to login the user.
- Availability – The system should be available 24/7.
- Compatibility – The online store should be able to run on any smart device/computer with internet browsing capability and should replicate same content on every device.
- Bandwidth usage – The online store should be optimized including its content so as it uses low bandwidth for displaying data.

2.1.4 Performance Requirements

- The system should respond to user queries within seconds.
- The login authentication should not take more than seconds.
- The database should be optimized, and a server cache should be kept for quicker consecutive query requests.
- Database and website should be hosted in a server having reliable performance.
- Photos of the server should be optimized for size for high speed rendering.

2.1.5 Security Requirements

- Root database credentials should be of enough strength.
- User passwords should be encrypted.
- Profile pages should not be accessible without login.

2.1.6 Use Case Diagrams

- User Profile Management (IT19076362)

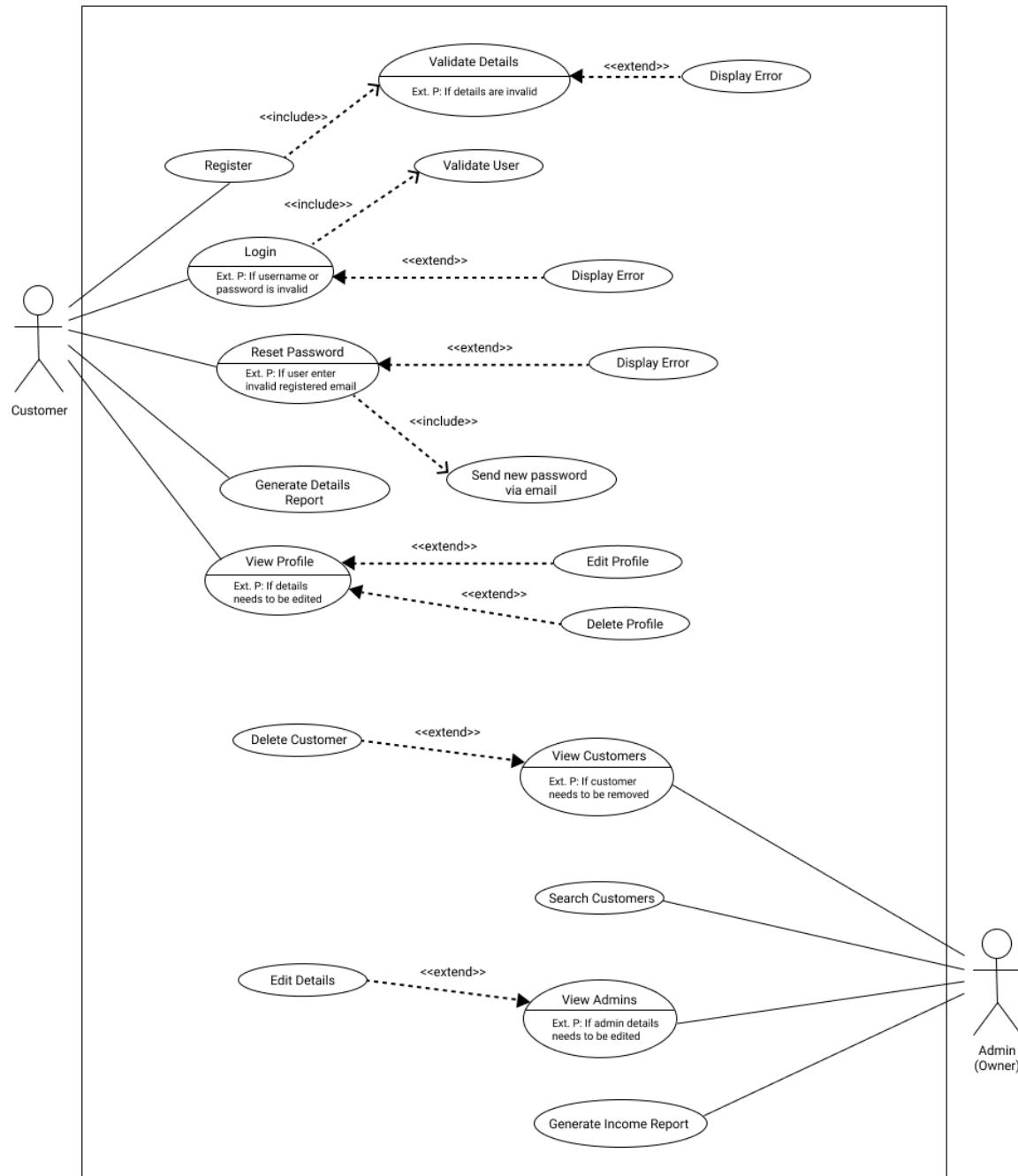


Figure 2.1.6 - 1 – Use Case Diagram – User Profile Management

- Cart Management (IT19086958)

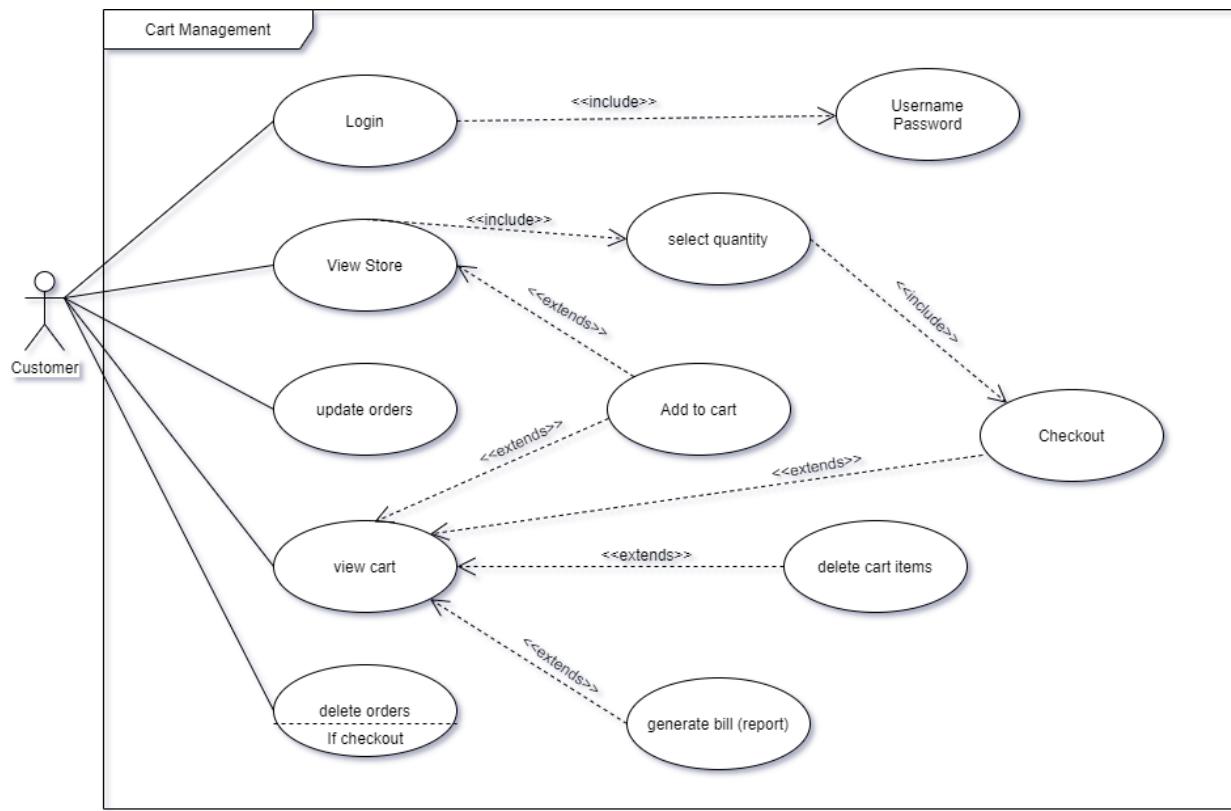


Figure 2.1.6 - 2 – Use Case Diagram – Cart Management

- Feedback and Reviews Management (IT18161298)

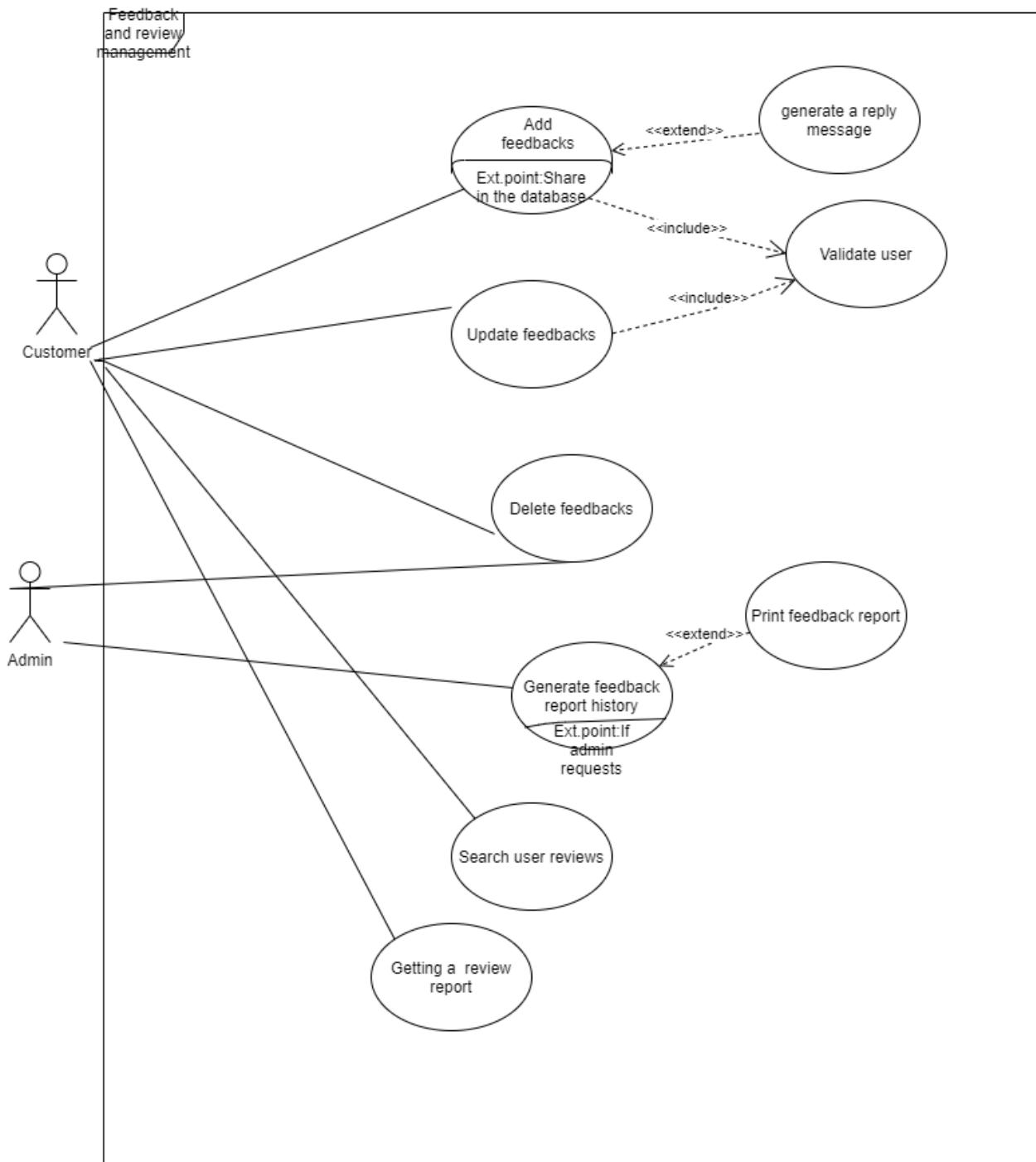


Figure 2.1.6 - 3 – Use Case Diagram – Feedback and Reviews Management

- Employee Management (IT18125580)

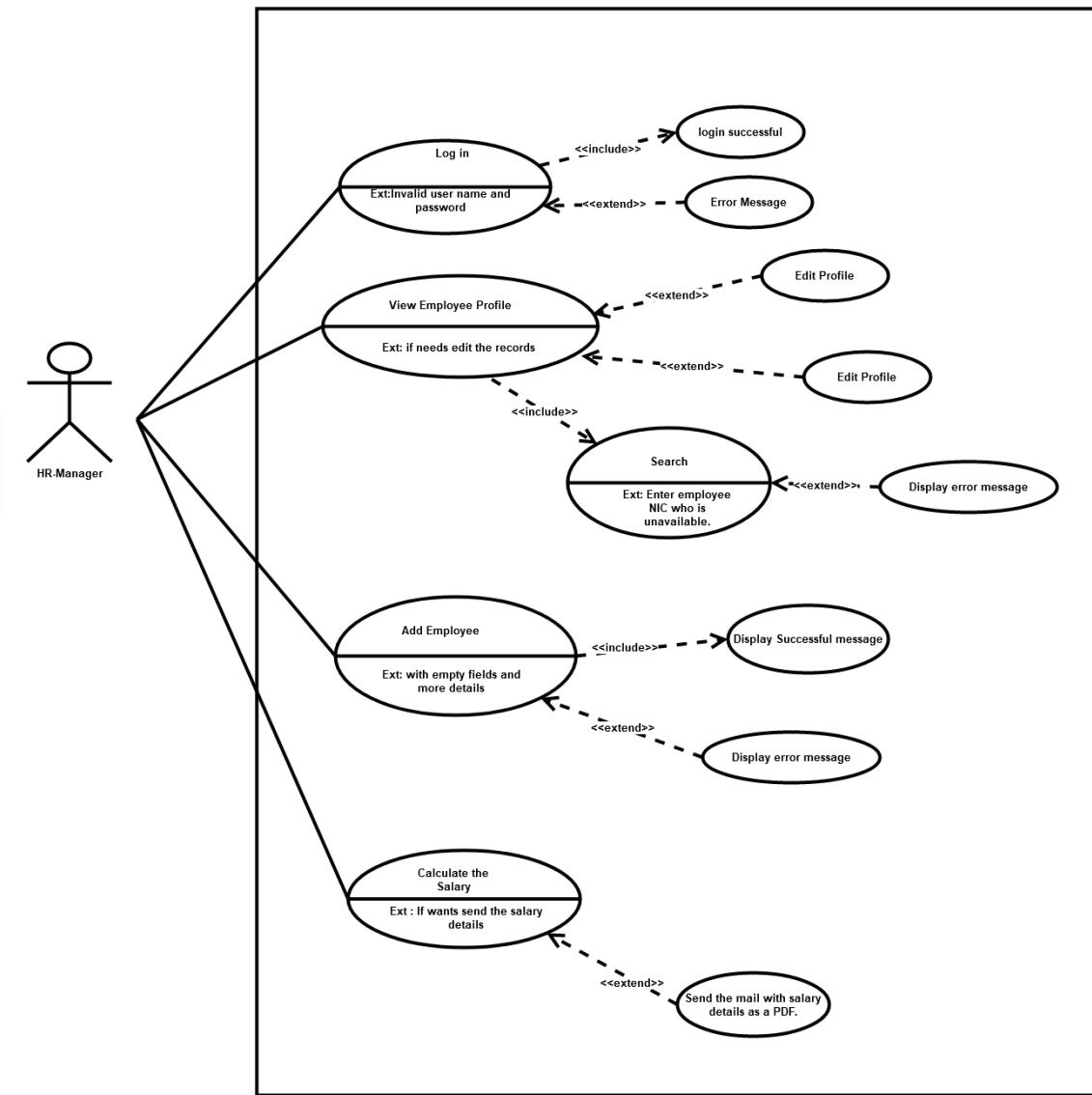


Figure 2.1.6 - 4 – Use Case Diagram – Employee Management

- Inventory Management (IT19081076)

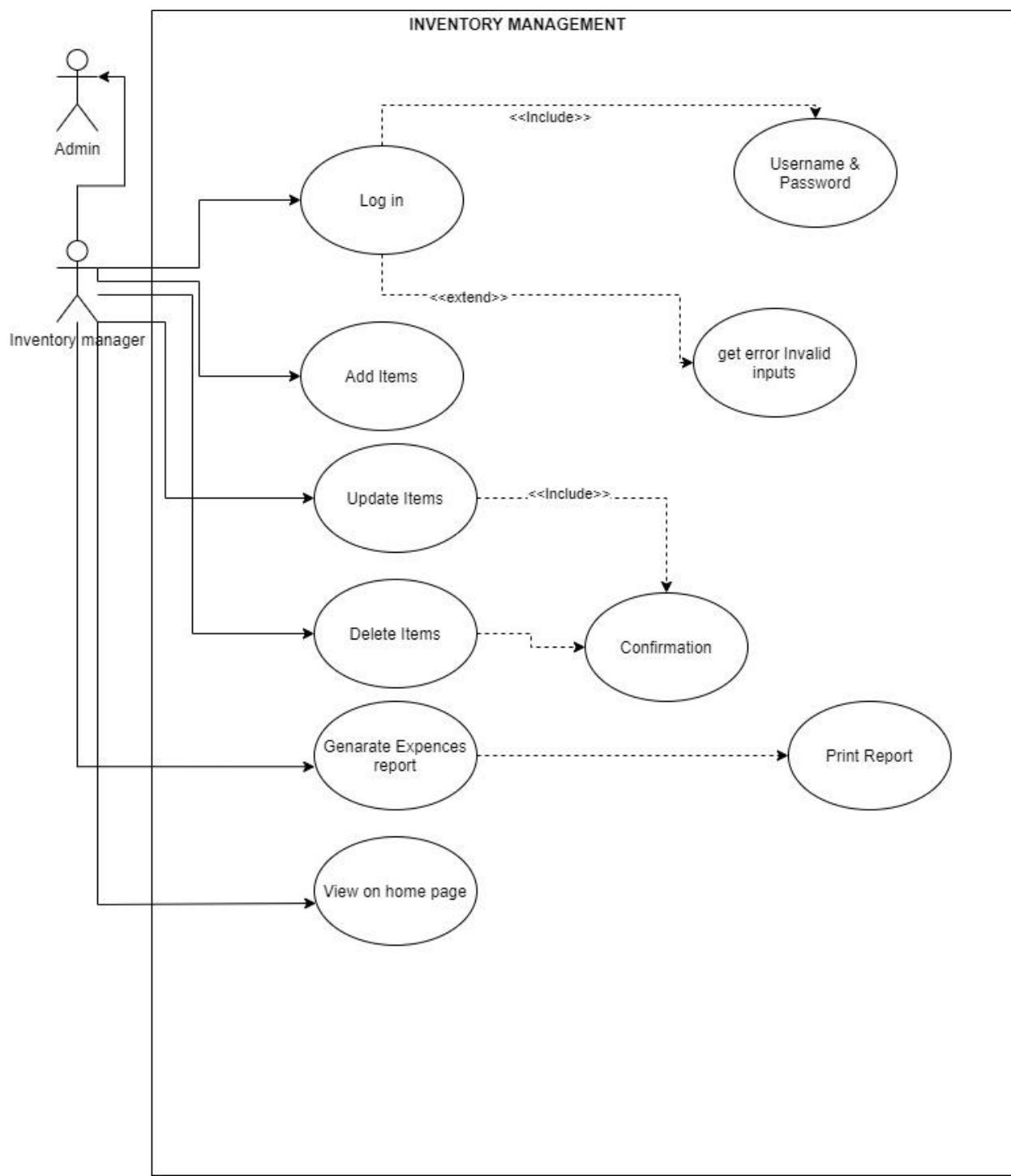


Figure 2.1.6 - 5 – Use Case Diagram – Inventory Management

- Supplier Management (IT19002484)

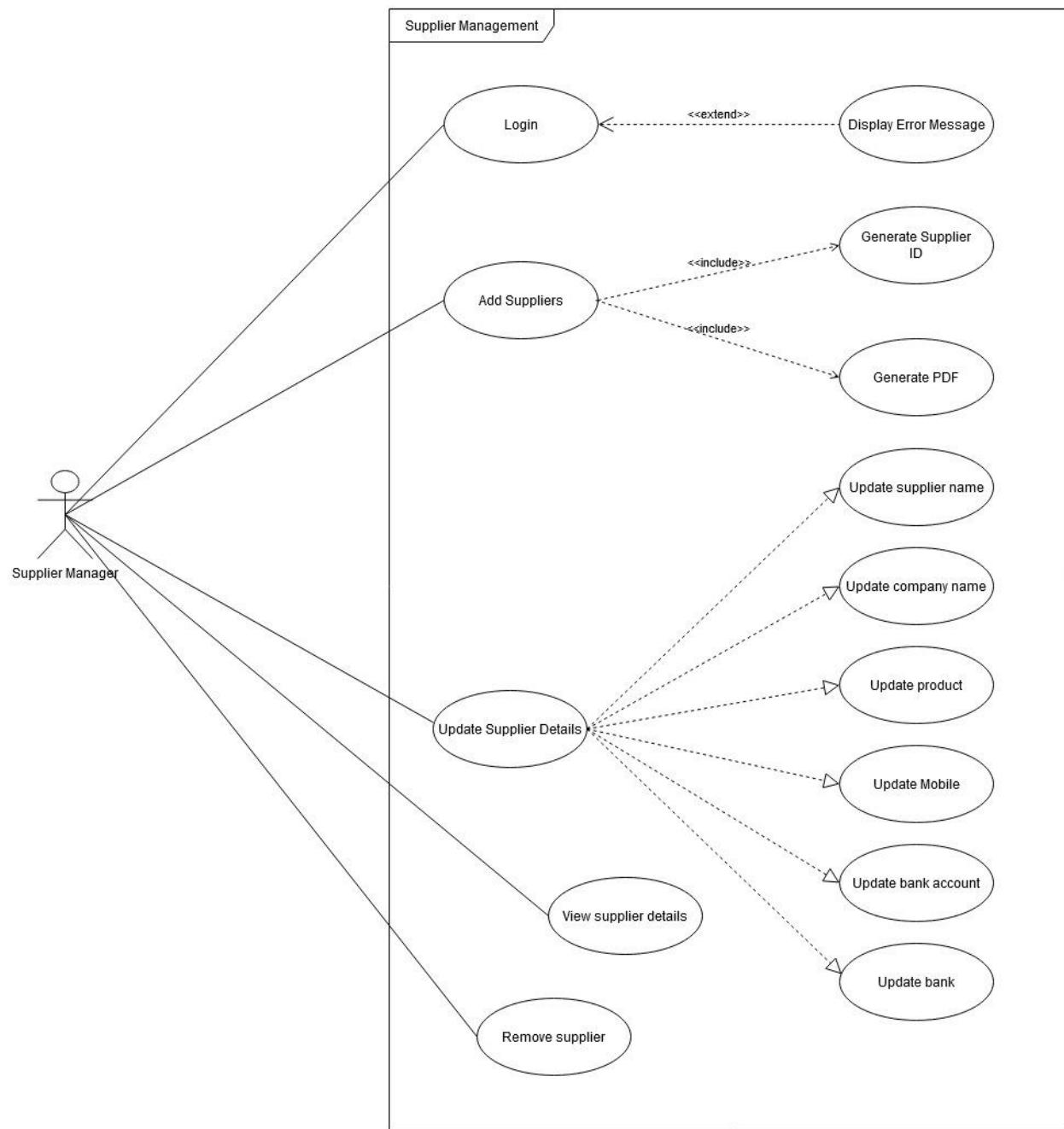


Figure 2.1.6 - 6 – Use Case Diagram – Supplier Management

- Delivery Management (IT19118000)

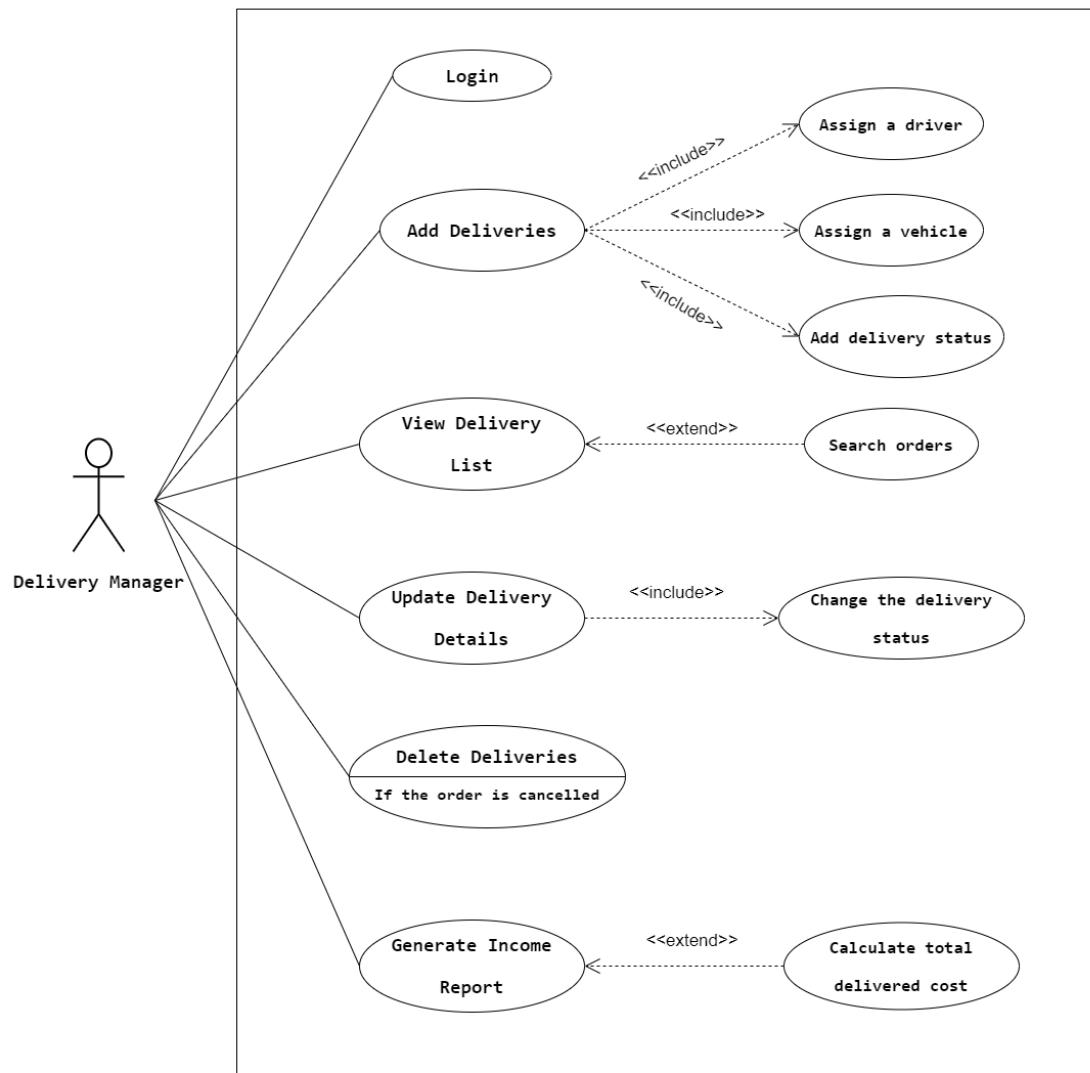


Figure 2.1.6 - 7 – Use Case Diagram – Delivery Management

- Vehicle Management (IT19161884)

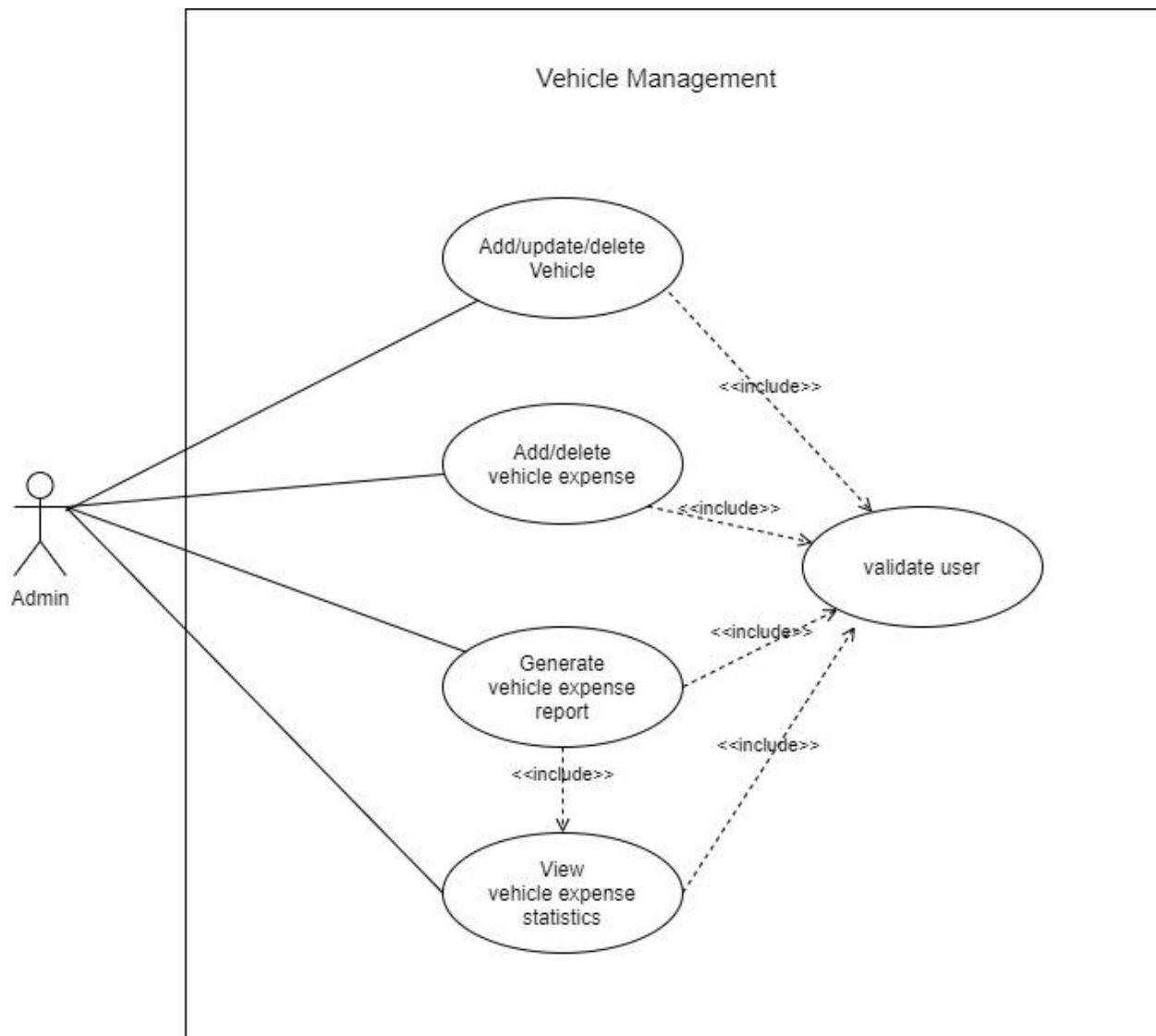


Figure 2.1.6 - 8 – Use Case Diagram – Vehicle Management

2.1.7 Activity Diagrams

- User Profile Management (IT19076362)

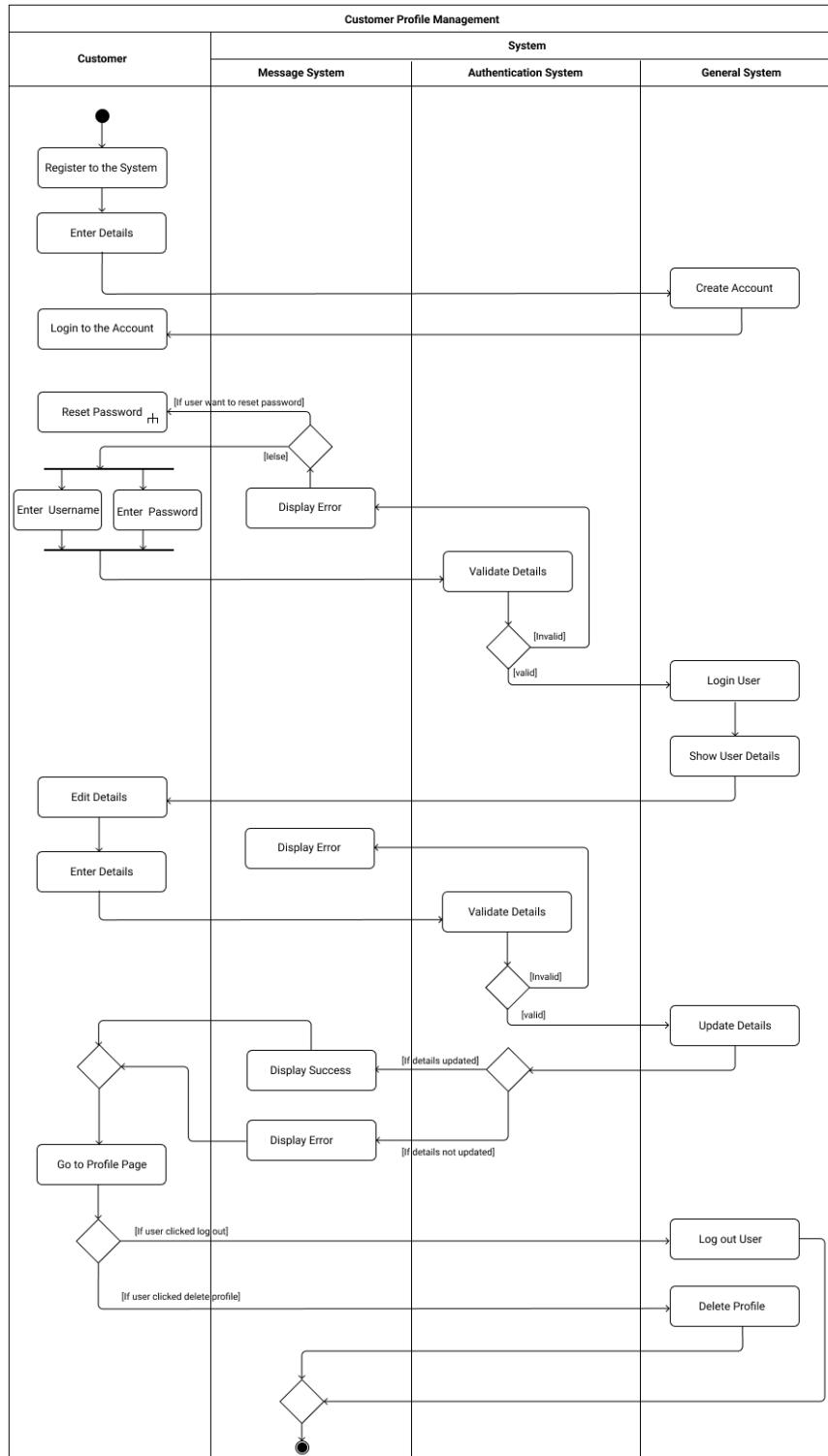


Figure 2.1.7 - 1 – Activity Diagram – User Profile Management

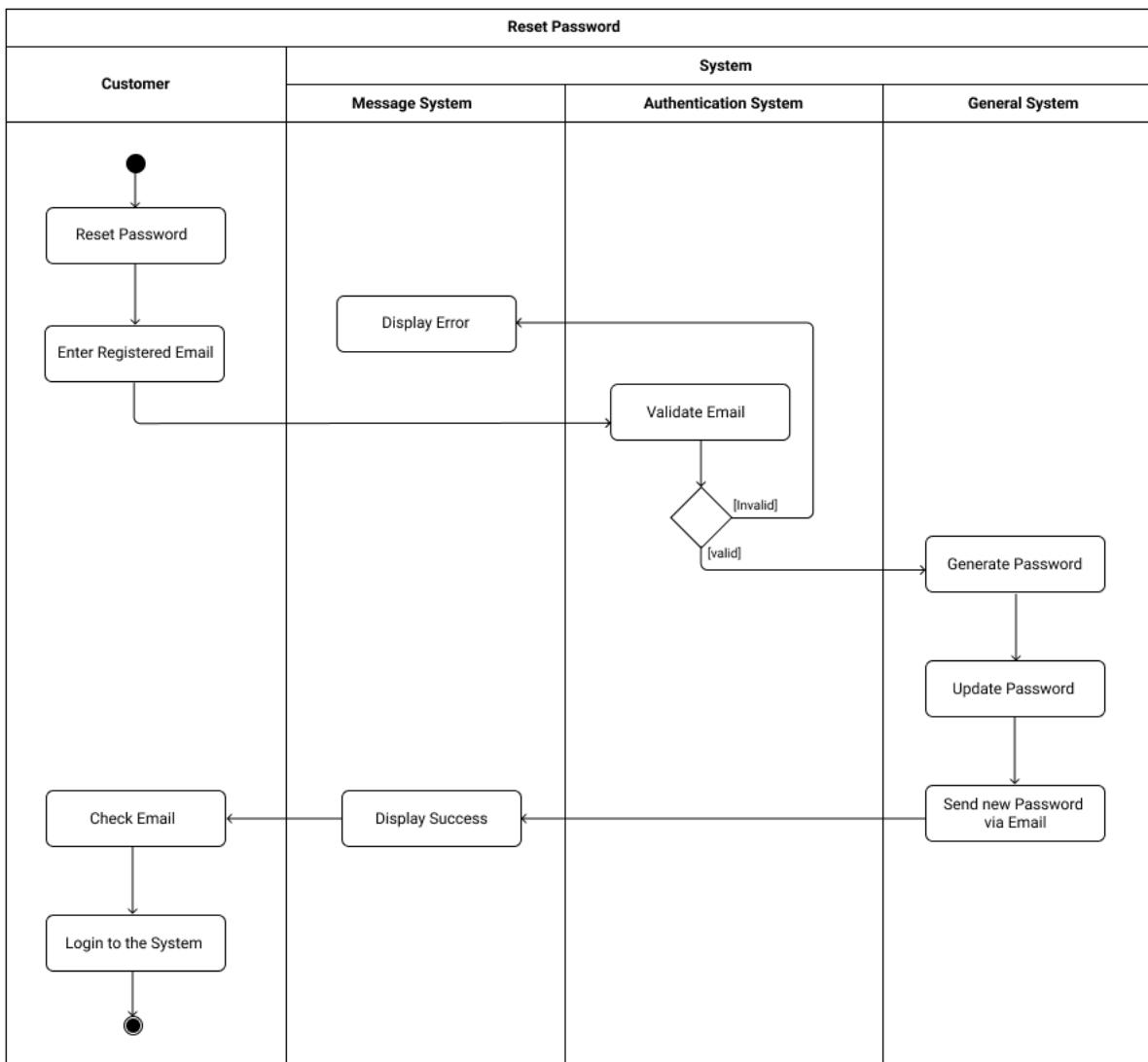


Figure 2.1.7 - 2 – Activity Diagram – Reset Password

- Cart Management (IT19086958)

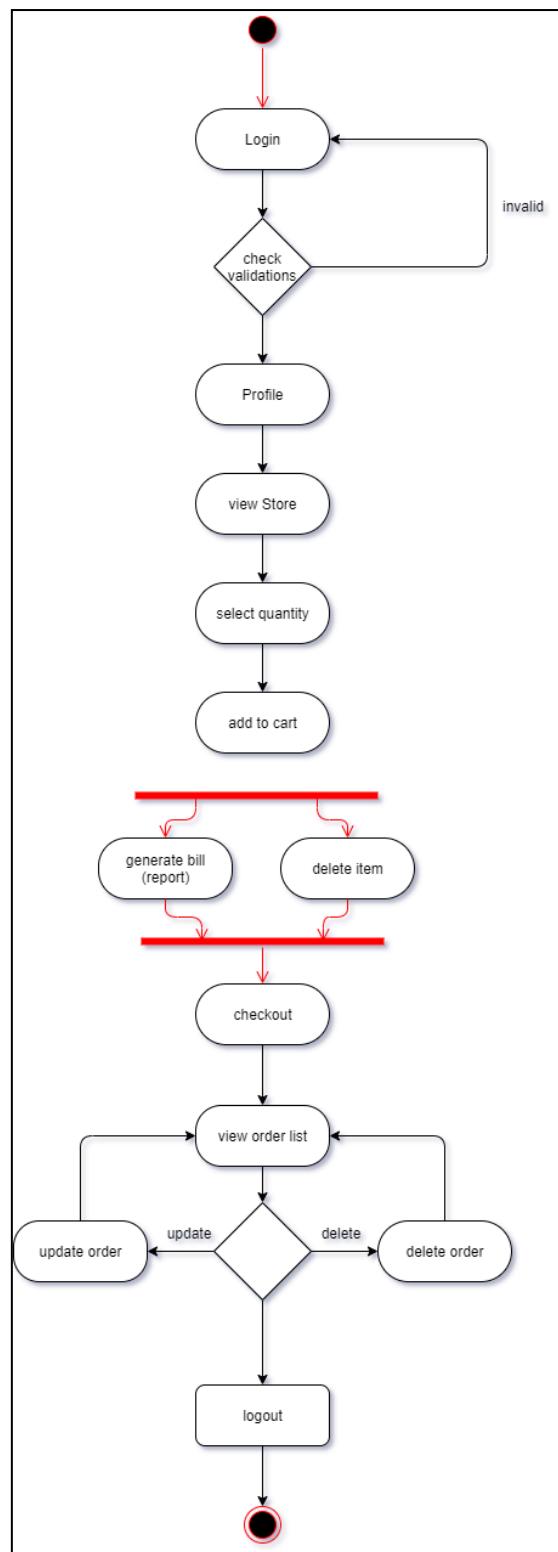


Figure 2.1.7 - 3 – Activity Diagram – Cart Management

- Feedback and Reviews Management (IT18161298)

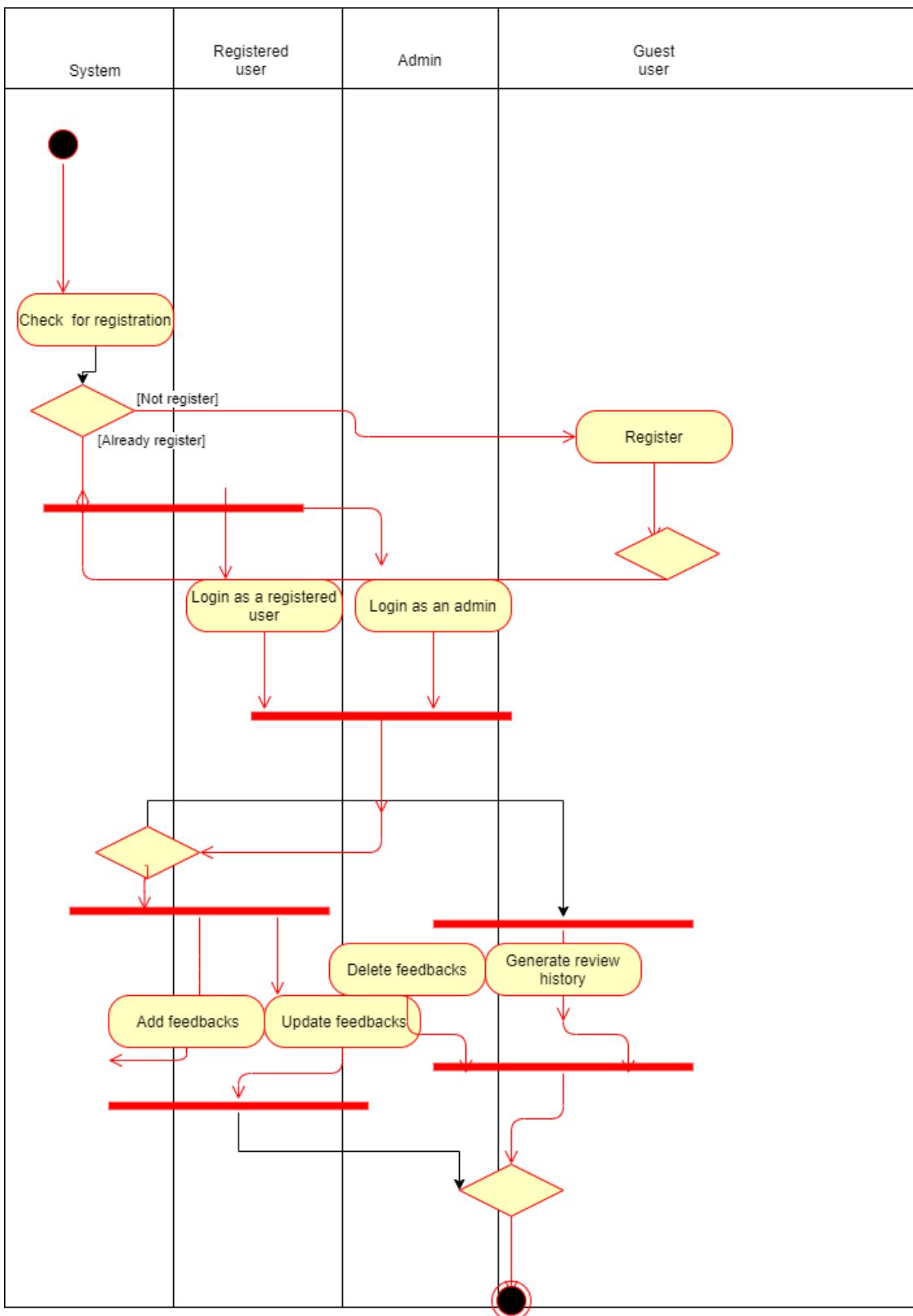


Figure 2.1.7 - 4 – Activity Diagram – Feedback and Reviews Management

- Employee Management (IT18125580)

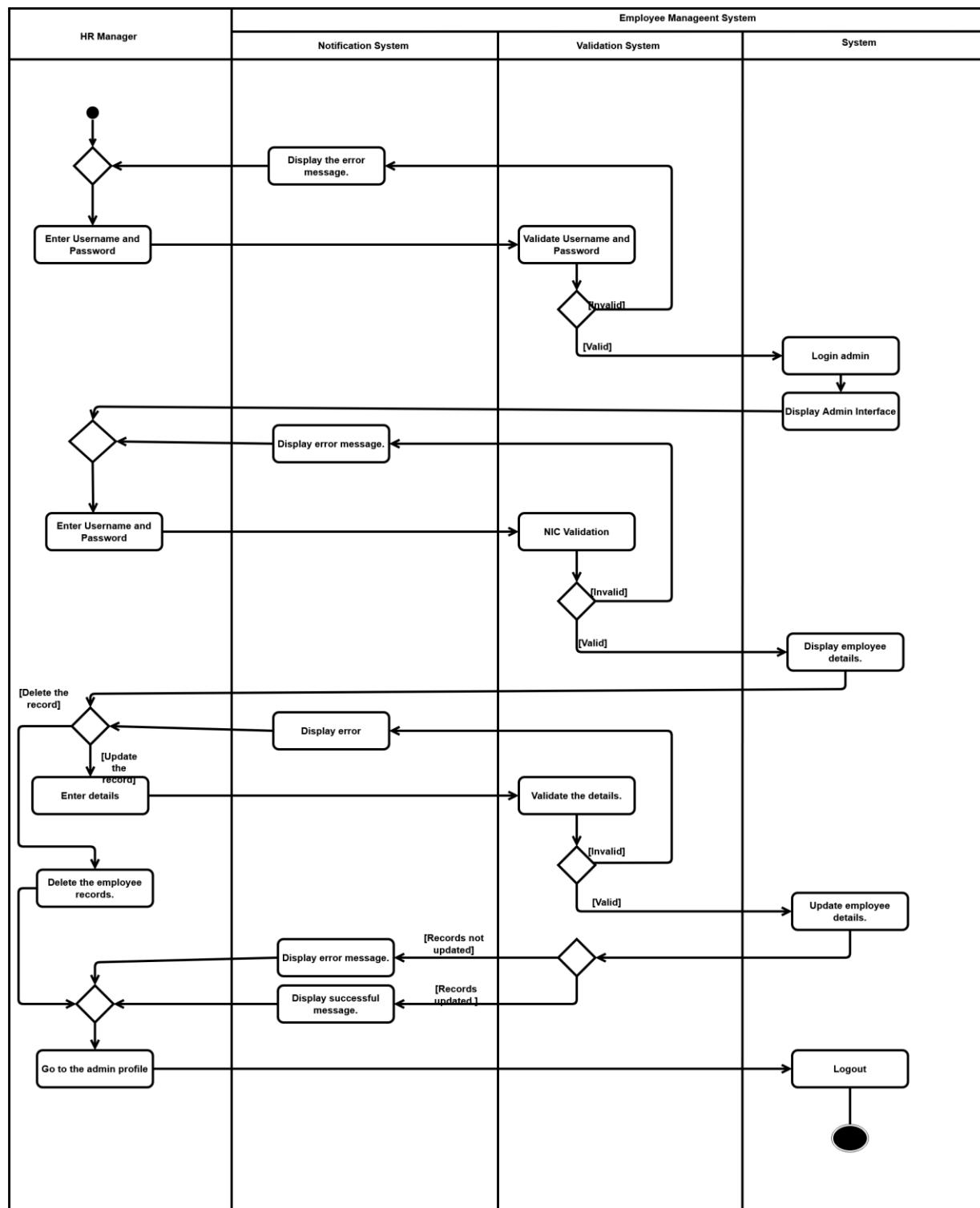


Figure 2.1.7 - 5 – Activity Diagram – Employee Management

- Inventory Management (IT19081076)

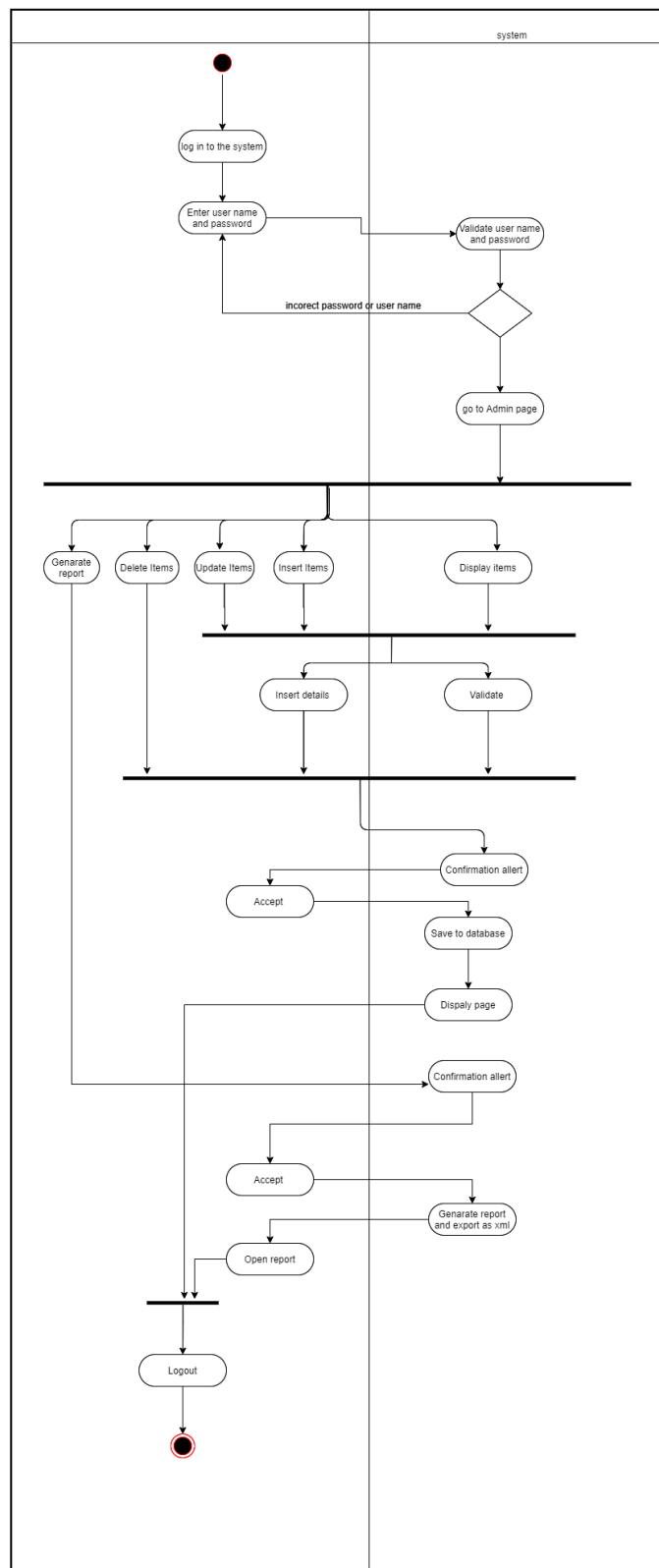


Figure 2.1.7 - 6 – Activity Diagram – Inventory Management

- Supplier Management (IT19002484)

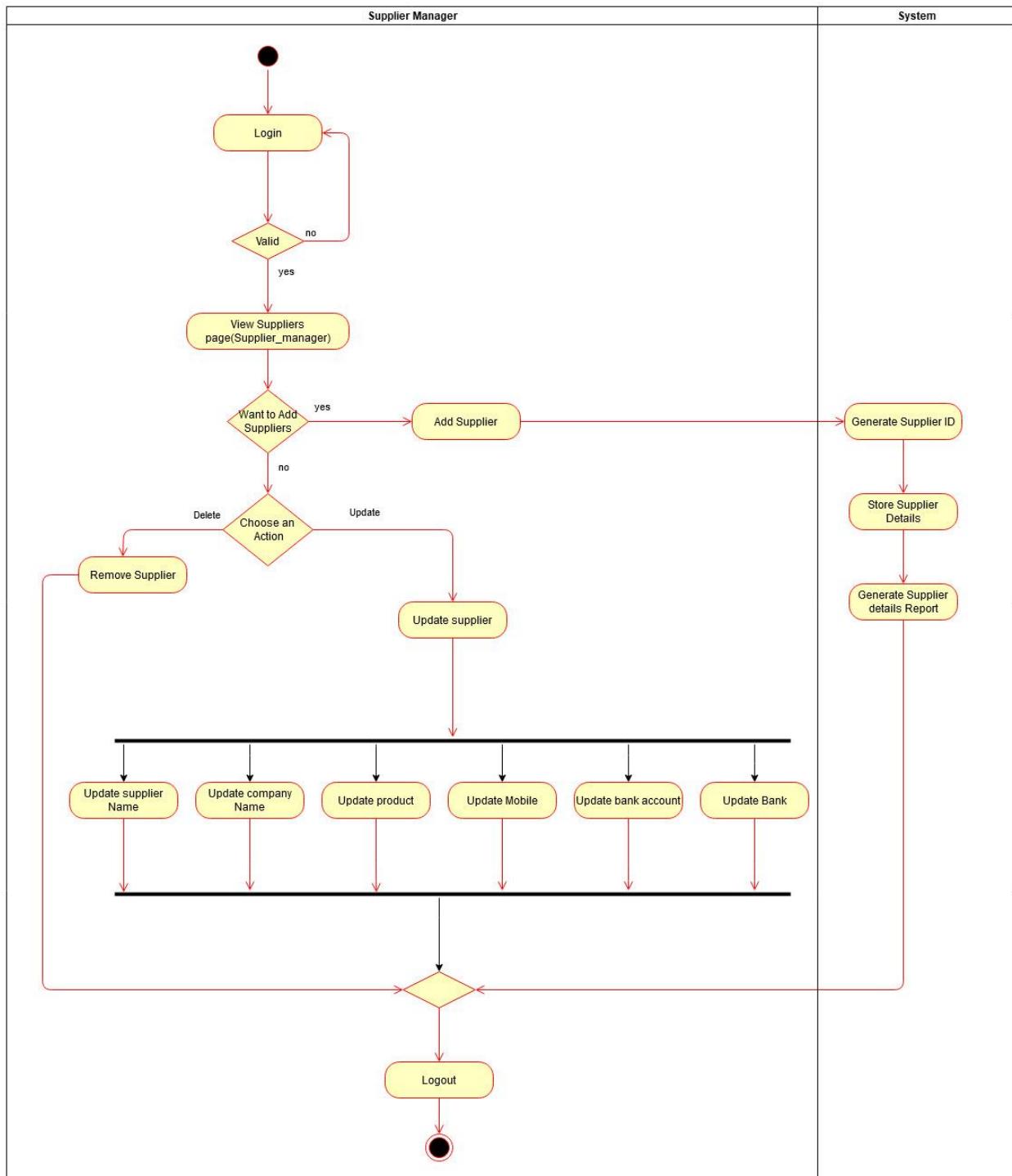


Figure 2.1.7 - 7 – Activity Diagram – Supplier Management

- Delivery Management (IT19118000)

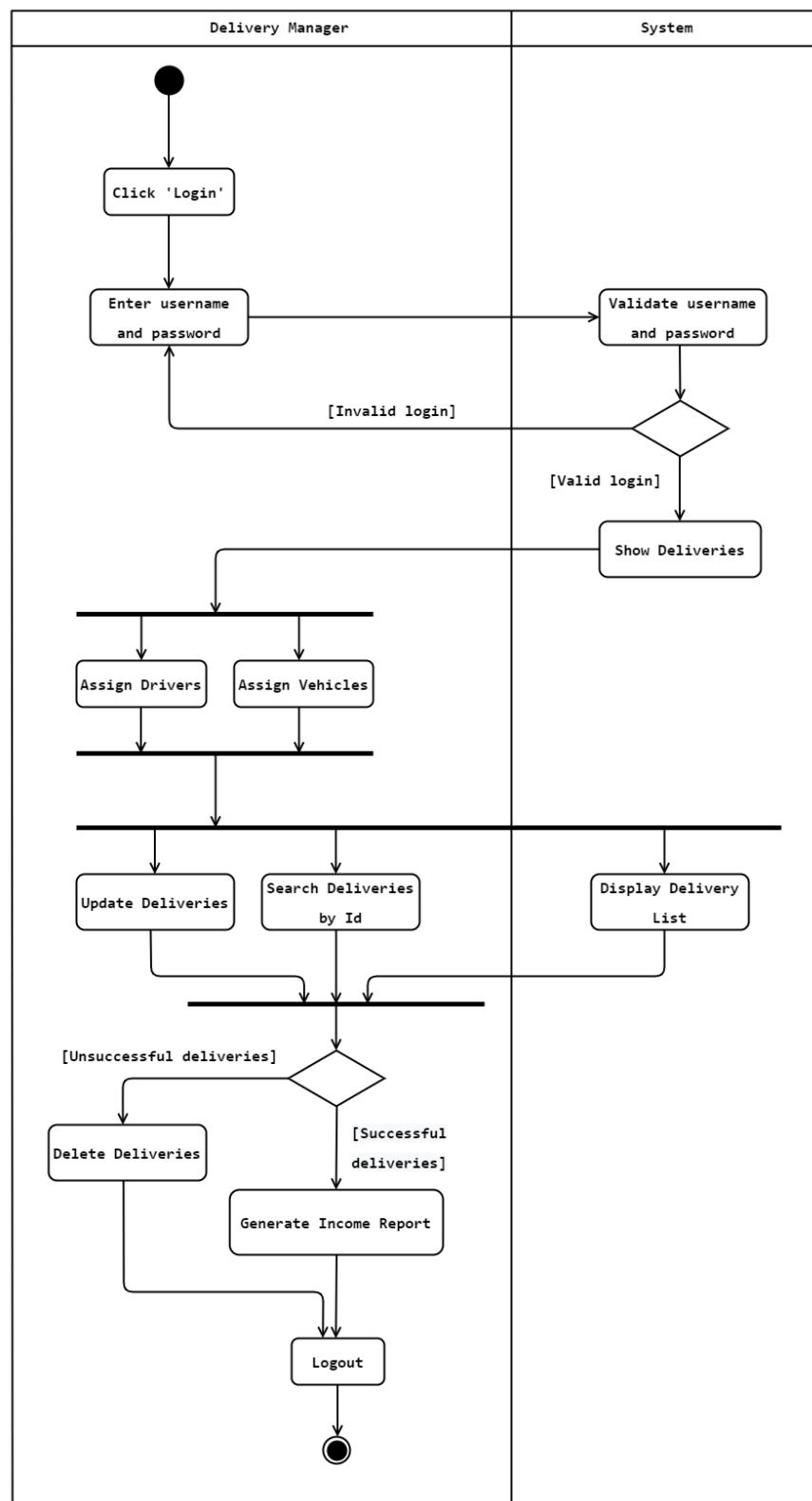


Figure 2.1.7 - 8 – Activity Diagram – Delivery Management

- Vehicle Management (IT19161884)

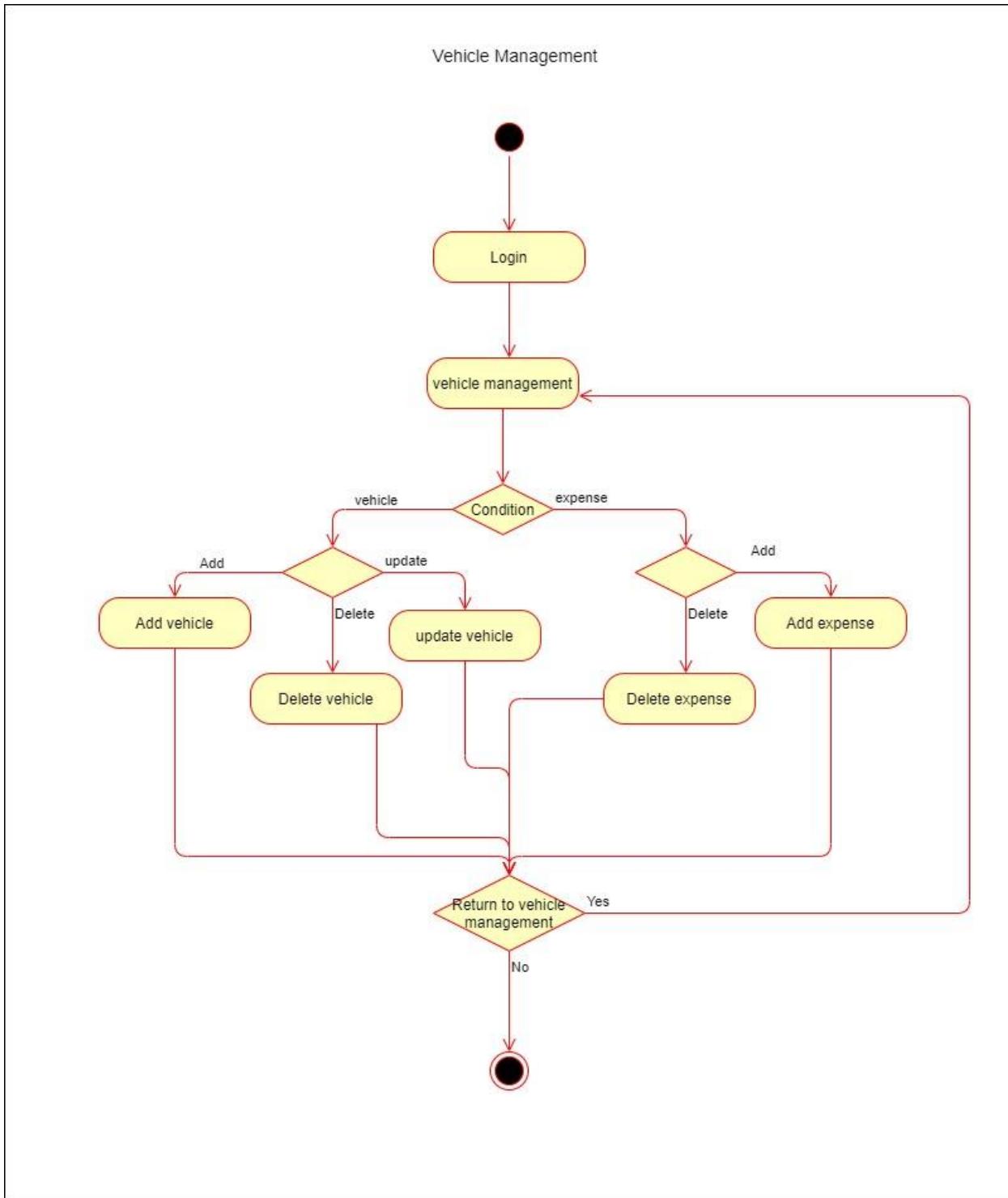


Figure 2.1.7 - 9 – Activity Diagram – Vehicle Management

2.2 Design

2.2.1 High Level Architecture Diagram

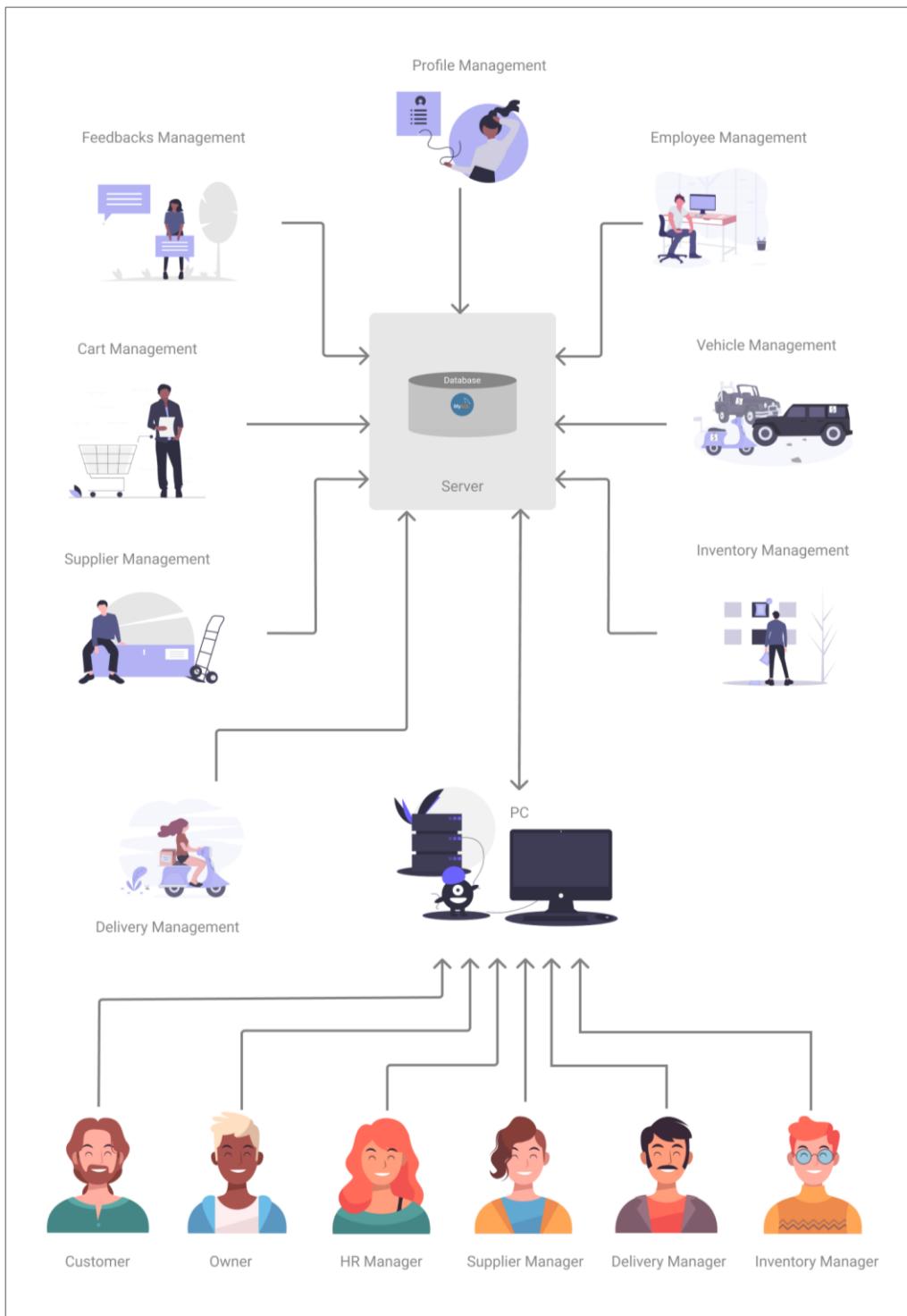


Figure 2.2.1 - 1 – High Level Architecture Diagram

2.2.2 Class Diagram

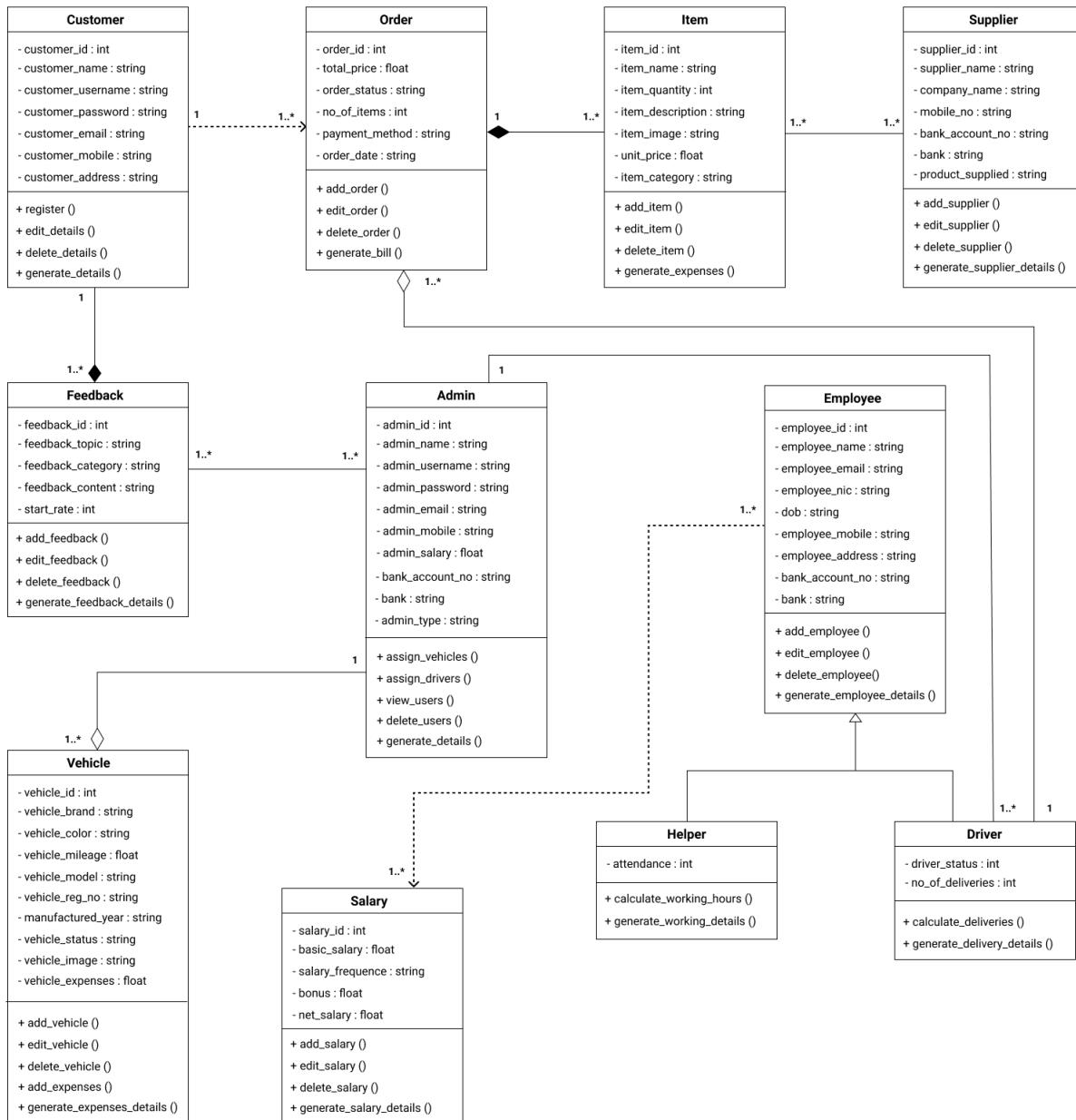


Figure 2.2.2- 1 – Class Diagram

2.2.3 ER Diagram

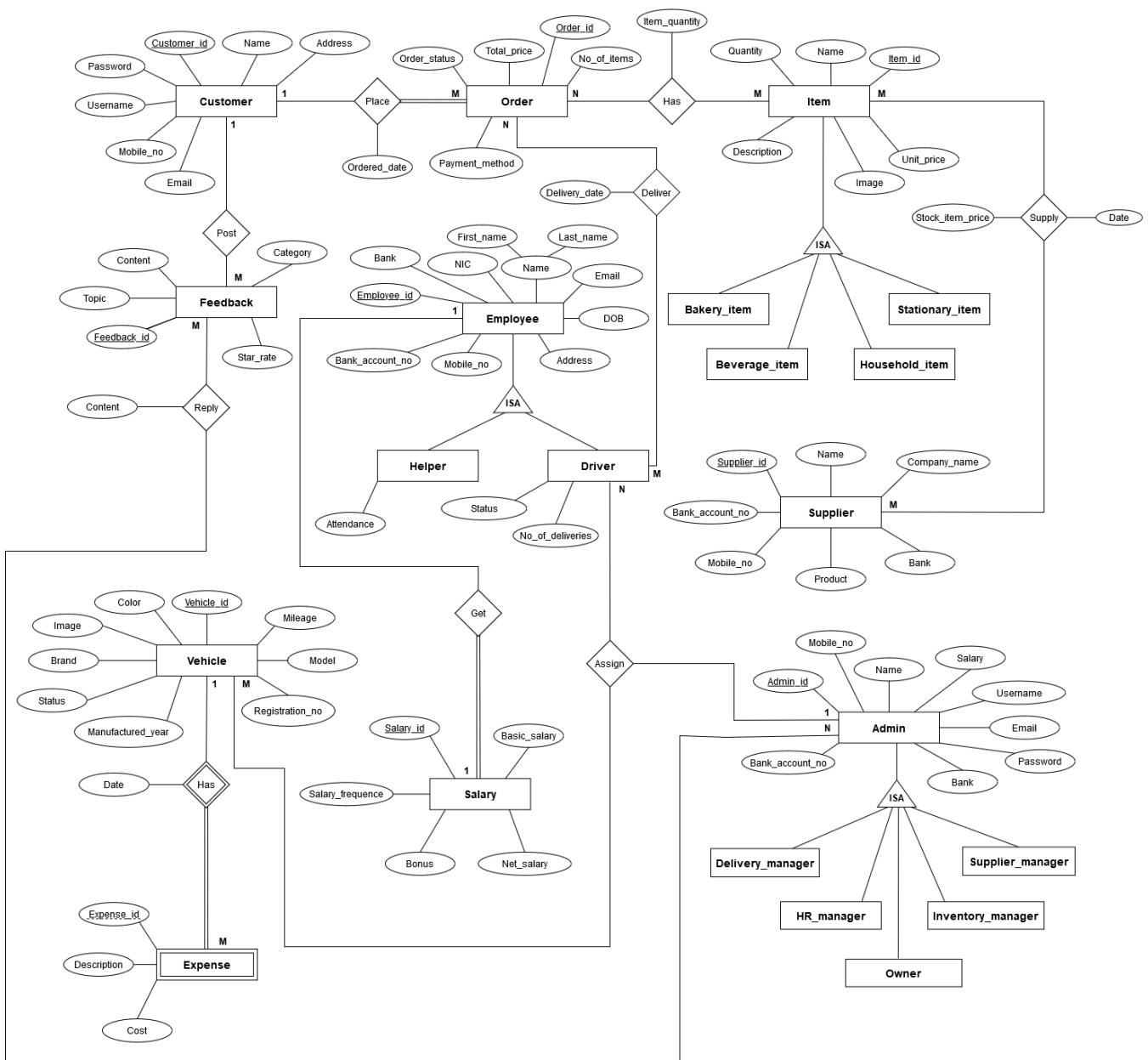


Figure 2.2.3 - I – Entity Relationship Diagram

2.2.4 User Interfaces

- Home Page

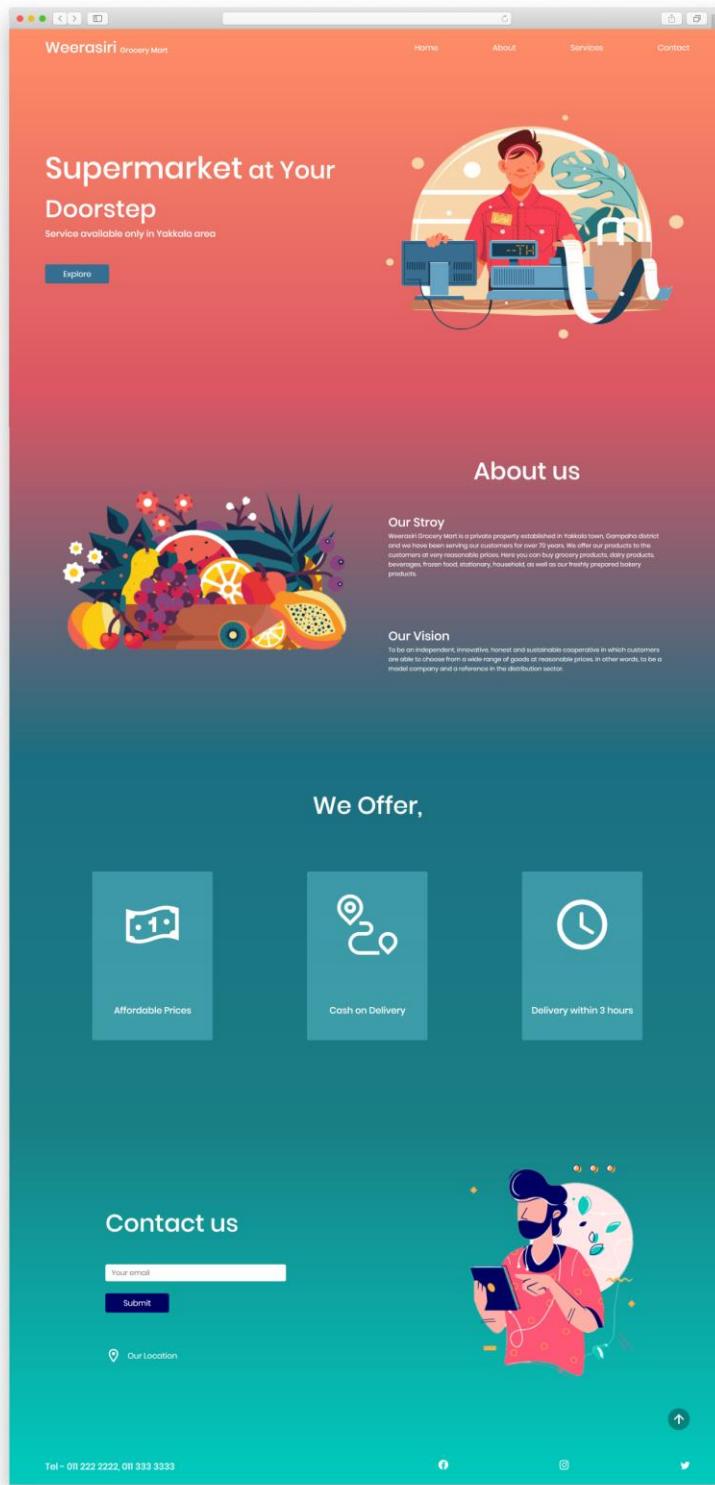


Figure 2.2.4 - 1 – Home Page

- 404 Error Page

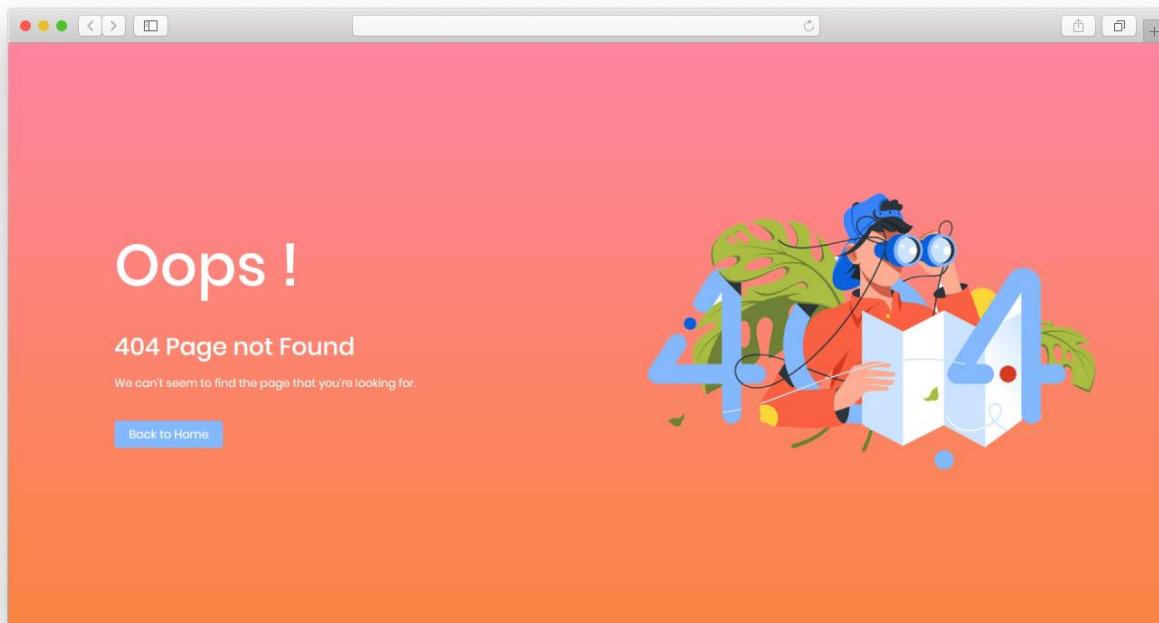


Figure 2.2.4 - 2 – 404 Error Page

- User Profile Management (IT19076362)

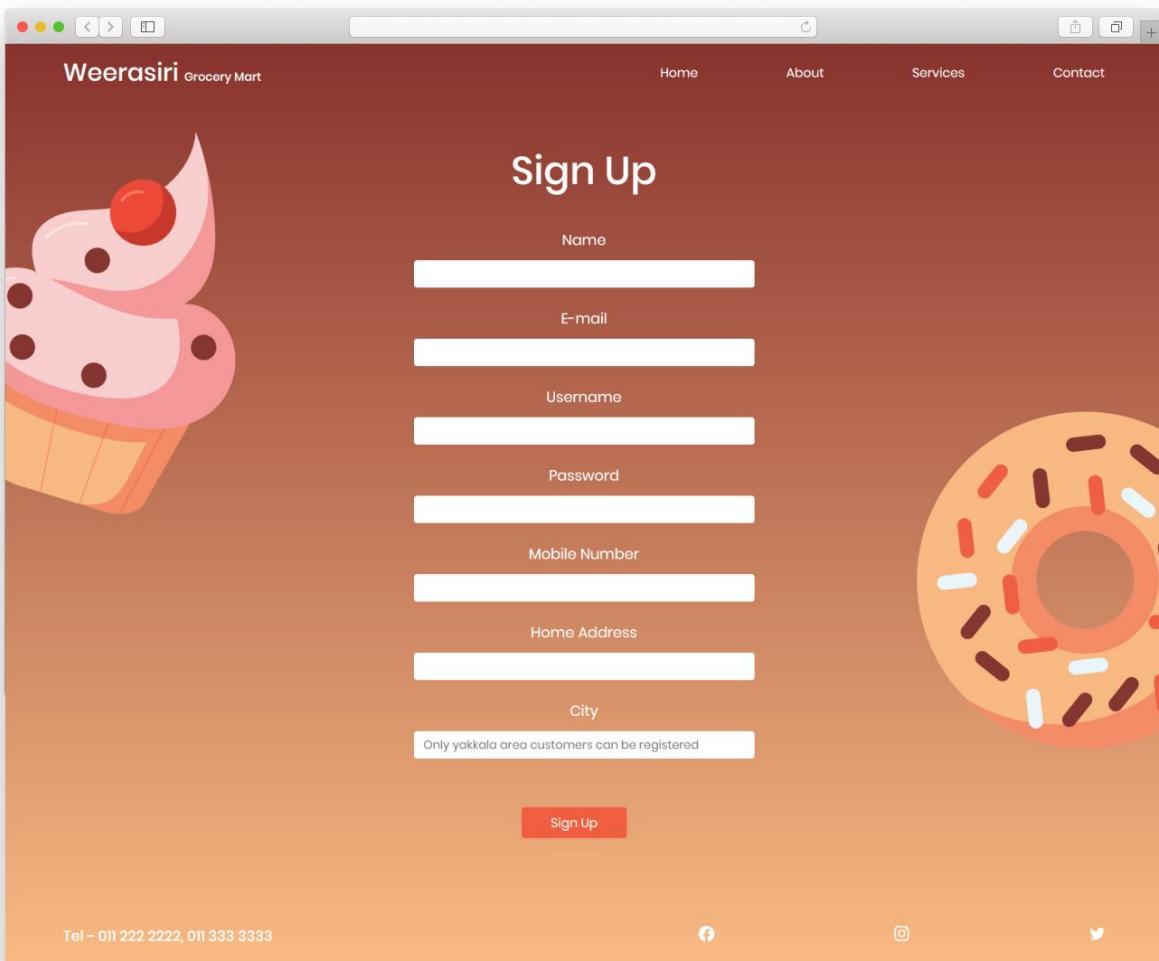


Figure 2.2.4 - 3 – Customer Sign Up Page

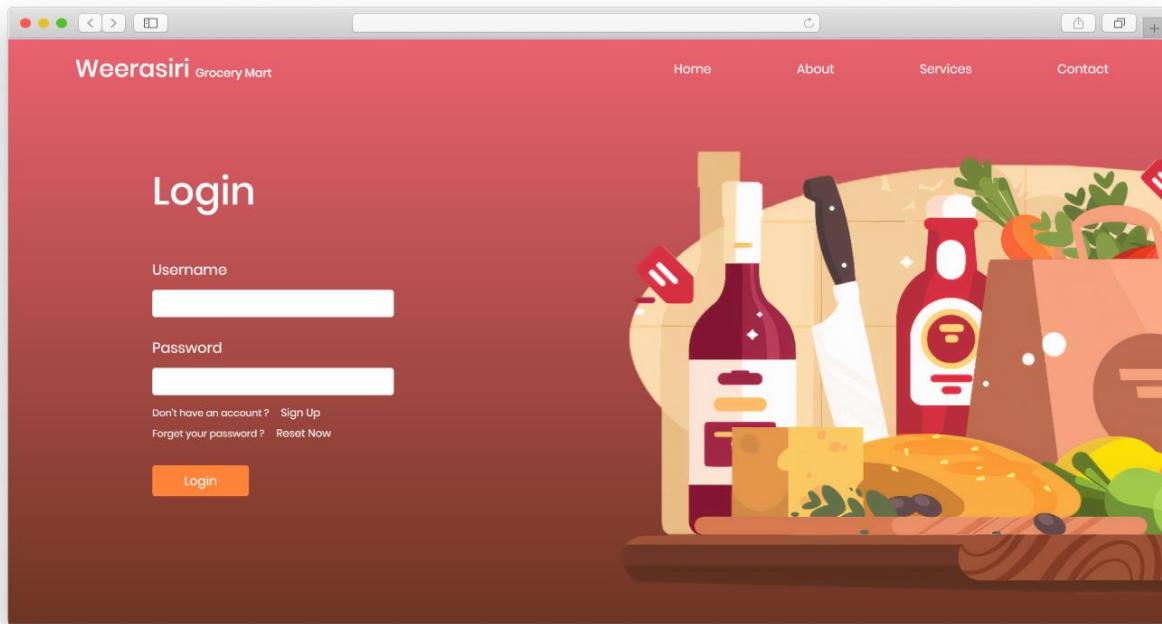


Figure 2.2.4 - 4 – Customer Login Page

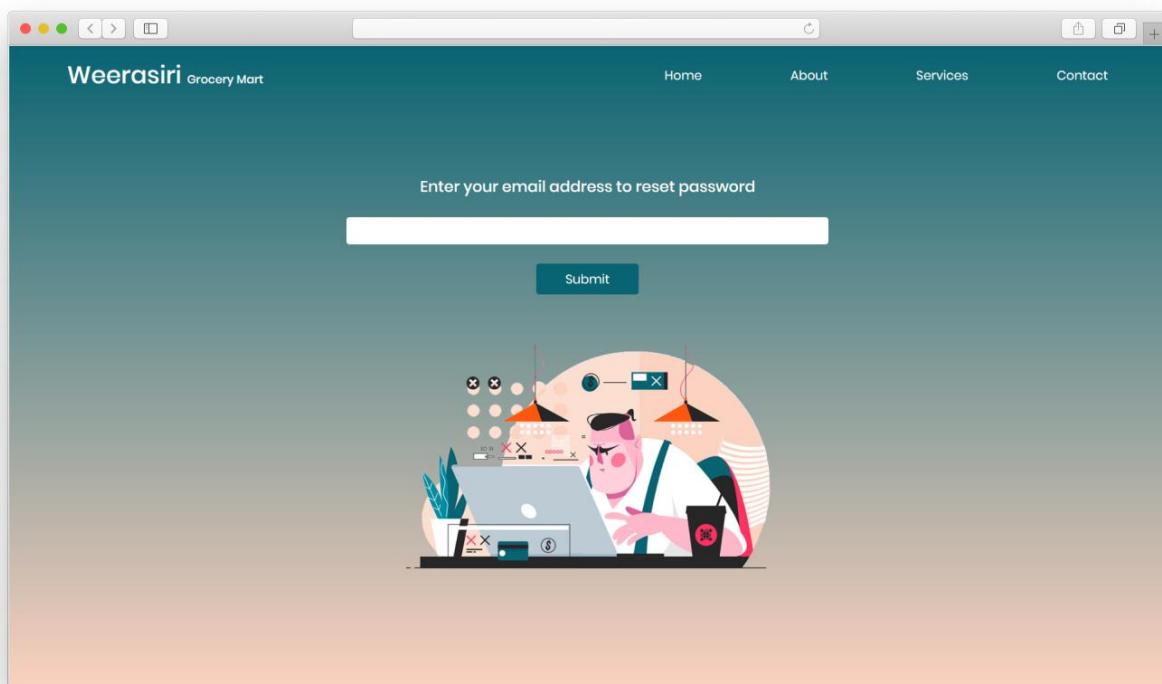


Figure 2.2.4 - 5 – Customer Password Reset Page

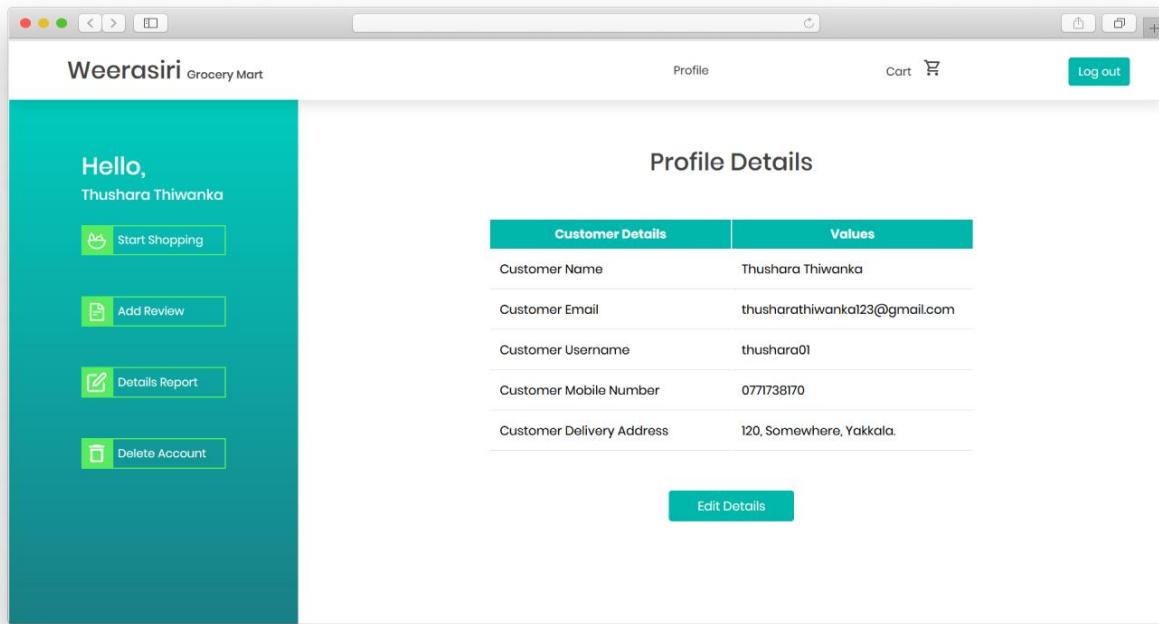


Figure 2.2.4 - 6 – Customer Profile Page

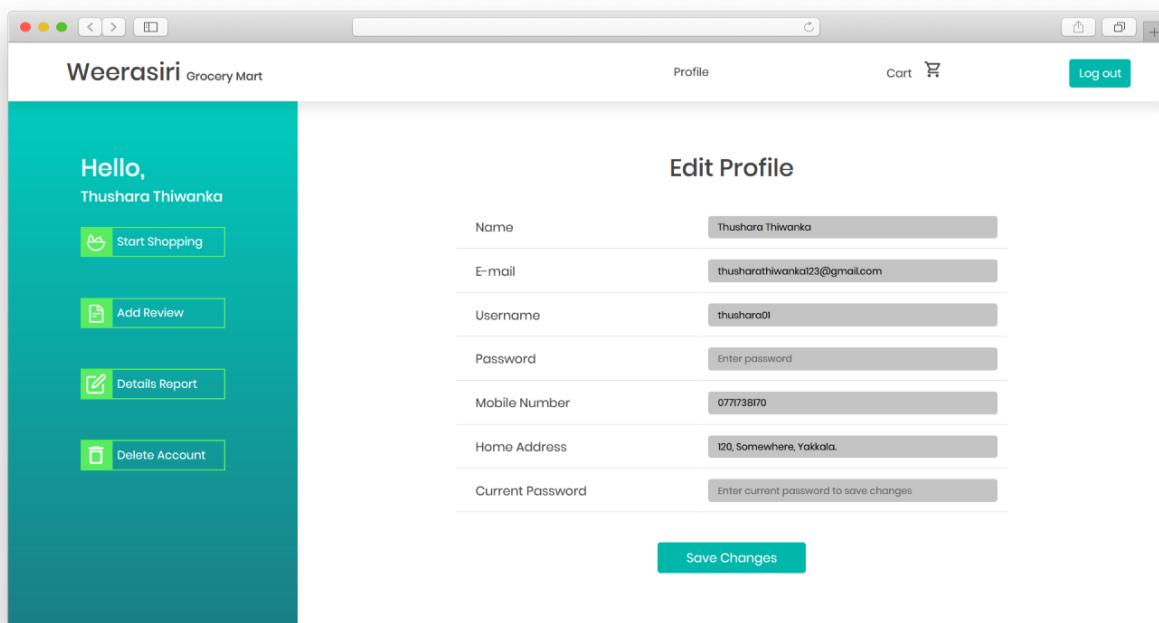


Figure 2.2.4 - 7 – Customer Edit Profile Page

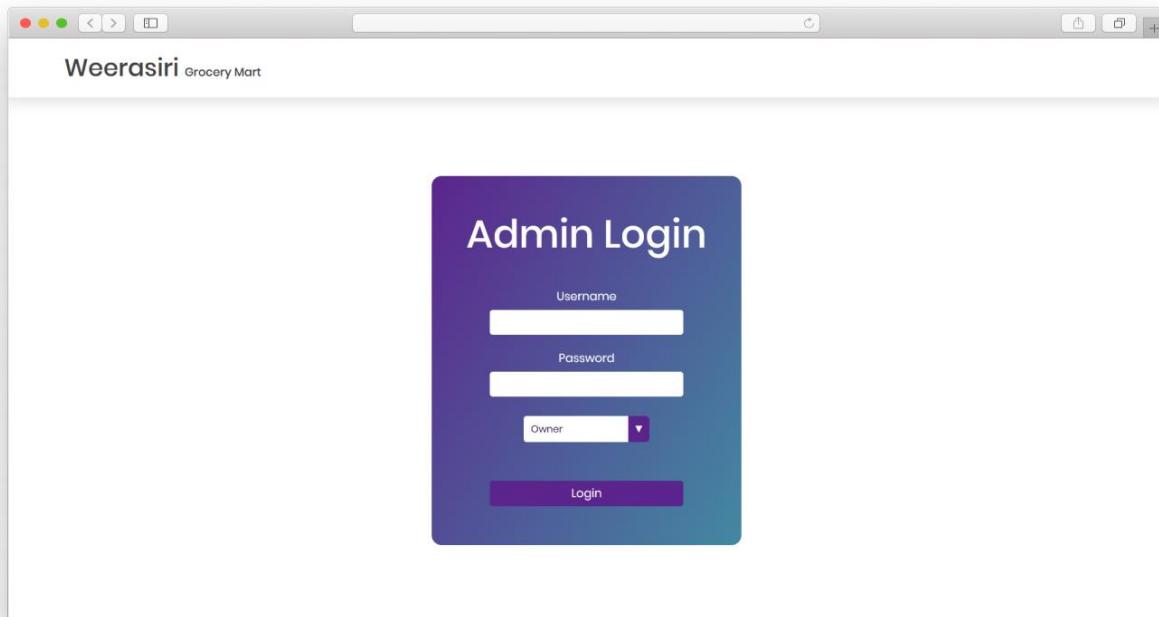


Figure 2.2.4 - 8 – Admin Login Page

The screenshot shows a web browser window with a title bar 'Weerasiri Grocery Mart'. The top right corner has 'Profile' and 'Log out' buttons. On the left, a sidebar titled 'Admin Panel' lists 'Owner' and several buttons: 'Manage Customers', 'Manage Vehicles', 'Manage Feedbacks', 'Edit Admins', and 'Income Report'. The main content area is titled 'All Registered Customers' and displays a table with five rows of customer data. Each row includes a 'Customer ID', 'Customer Name', 'Customer Username', 'Customer Mobile', and 'Actions' column with 'View' and 'Delete' buttons.

Customer ID	Customer Name	Customer Username	Customer Mobile	Actions
6	Udeepa Desarana	udeepa01	0765324323	<button>View</button> <button>Delete</button>
9	Pasindu Herath	pasindu01	0756755785	<button>View</button> <button>Delete</button>
23	Ovini Ruwanka	ovini01	0763743434	<button>View</button> <button>Delete</button>
26	Thushara Thiwanka	thushara01	0771738170	<button>View</button> <button>Delete</button>

Figure 2.2.4 - 9 – Admin (Owner) Profile Manage Customers Page

The screenshot shows the 'Customer Details' page of the Weerasiri Grocery Mart Admin Panel. The left sidebar, titled 'Admin Panel' under 'Owner', contains links for managing customers, vehicles, feedbacks, details, and an income report. The main content area is titled 'Customer Details' and displays a table with the following data:

Customer Details	Values
Customer ID	26
Customer Name	Thushara Thiwanka
Customer Email	thusharathiwanka123@gmail.com
Customer Username	thushara01
Customer Mobile	0771738170
Customer Address	120, Somewhere, Yakkala.

A 'Back to List' button is located at the bottom of the table.

Figure 2.2.4 - 10 – Admin (Owner) Profile - View Customer Page

The screenshot shows the 'All Registered Customers' page of the Weerasiri Grocery Mart Admin Panel. The left sidebar is identical to Figure 10. The main content area has a search bar with the placeholder 'Enter name to search customers' containing the text 'Thushara Thiwanka'. Below the search bar, the results are displayed in a table:

Customer ID	Customer Name	Customer Username	Customer Mobile	Actions
26	Thushara Thiwanka	thushara01	0771738170	<button>View</button> <button>Delete</button>

Figure 2.2.4 - 11 – Admin (Owner) Profile - Search Customer Results Page

The screenshot shows the Admin Panel for Weerasiri Grocery Mart. On the left, a sidebar titled "Admin Panel" lists "Owner" and several buttons: "Manage Customers", "Manage Vehicles", "Manage Feedbacks", "Edit Admins", and "Income Report". The main area is titled "Profile" and shows a search bar with "Owner" and a "Search" button. Below the search is a table with the following data:

Name	Thushara Thiwanka
E-mail	thushara@gmail.com
Username	thushara01
Password	*****
Mobile Number	0771738170
Salary	0
Bank Account Number	8625732323
Bank	NSB
Owner Password	Enter owner password to save changes

A "Save Changes" button is at the bottom.

Figure 2.2.4 - 12 – Admin (Owner) Profile - Edit Admins Page

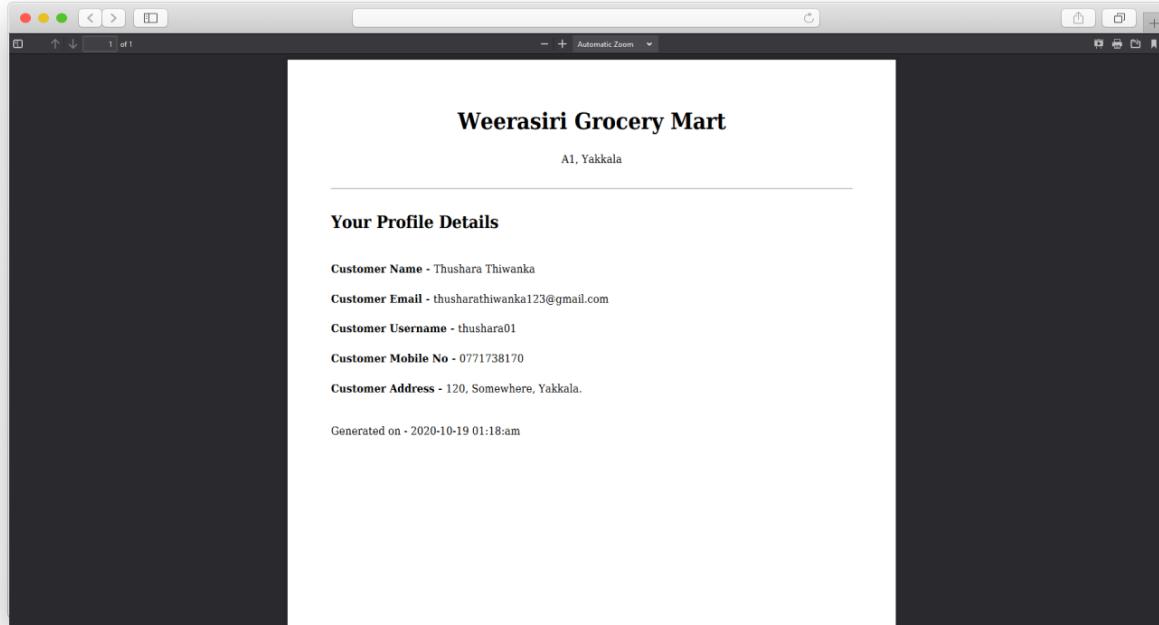


Figure 2.2.4 - 13 – Customer Details Report PDF

- Cart Management (IT19086958)

The screenshot shows the 'Cart' page of the Weerasiri Grocery Mart website. The header includes the store name 'Weerasiri Grocery Mart', a profile link, a cart icon, and a 'Log out' button. The main content area is titled 'Ordered Items' and displays a table of cart items:

Item Name	Quantity	Price	Total	Action
Super cream cracker	1	50	Rs. 50.00	Remove
Beejee biscuits	1	60	Rs. 60.00	Remove
Tiffin biscuits	3	50	Rs. 150.00	Remove
			Total	Rs. 260.00

Below the table, there's a section for 'Payment Method' with radio buttons for 'Cash on delivery' and 'Card Payments'. A 'Checkout' button is located at the bottom of this section. A promotional message 'Activate Windows' with the subtext 'Go to Settings to activate Windows.' is visible on the right.

Figure 2.2.4 - 14 – Cart Page

The screenshot shows the 'All Orders' page of the Weerasiri Grocery Mart website. The header includes the store name 'Weerasiri Grocery Mart', a profile link, a cart icon, and a 'Log out' button. The main content area is titled 'All Orders' and displays a table of previous orders:

Order ID	Ordered Date	Total Price	Payment Method	Update	Delete
5	2020-09-15 13:14:48	Rs.1050.00	Cash	Edit	Delete
37	2020-10-18 10:27:37	Rs.450.00	Card	Edit	Delete
38	2020-10-18 17:47:49	Rs.240.00	Card	Edit	Delete
39	2020-10-18 17:54:35	Rs.60.00	Cash	Edit	Delete

A promotional message 'Activate Windows' with the subtext 'Go to Settings to activate Windows.' is visible at the bottom right.

Figure 2.2.4 - 15 – Customer Orders Page

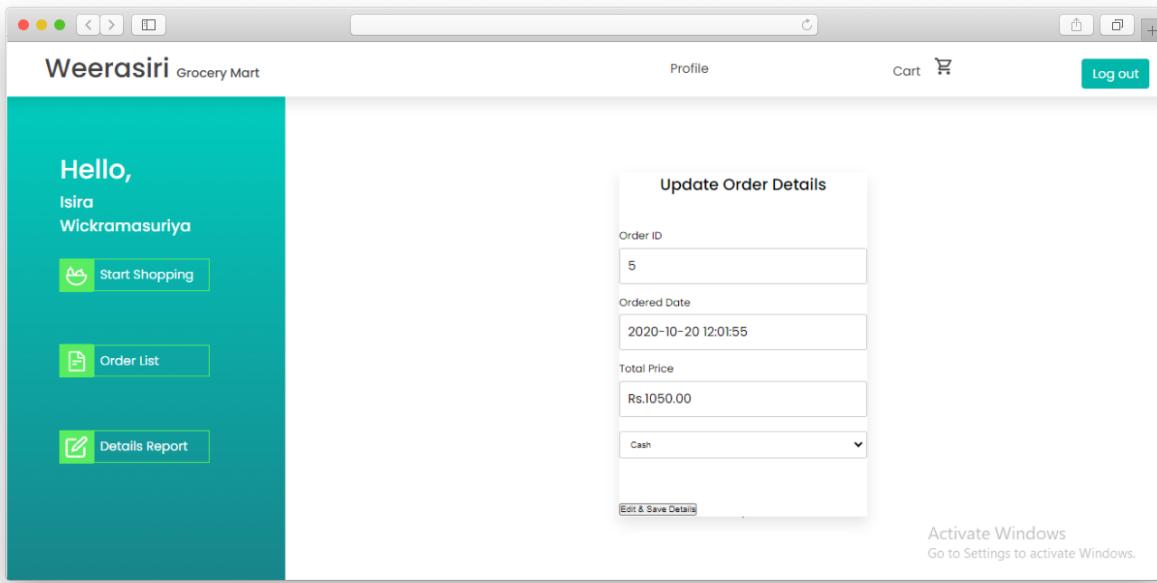


Figure 2.2.4 - 16 – Update Order Page

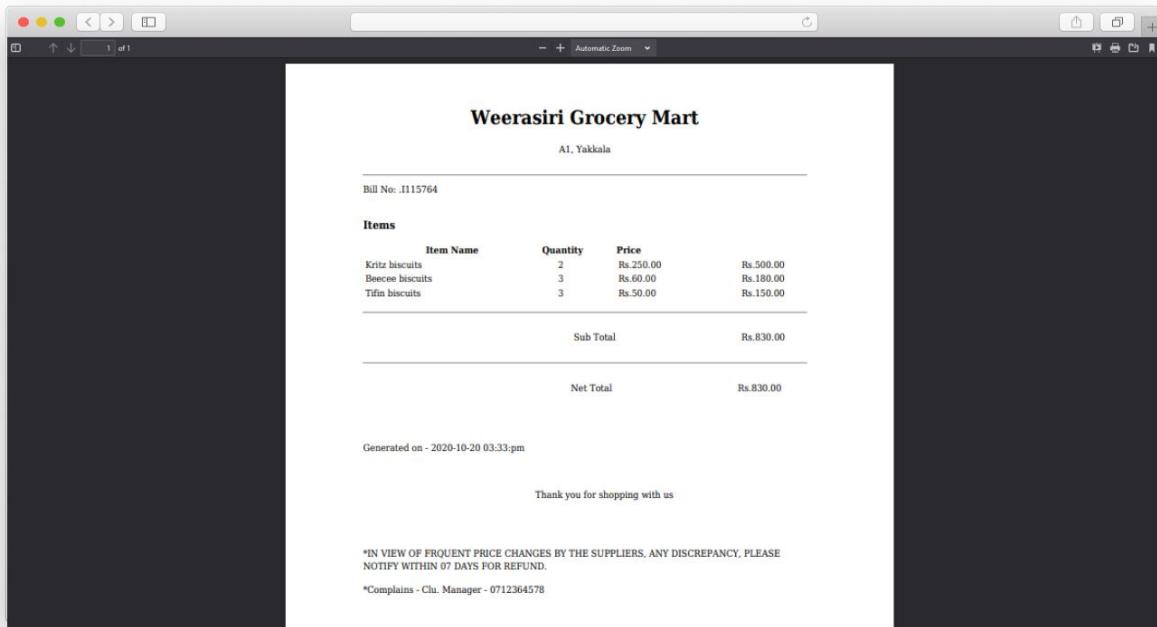


Figure 2.2.4 - 17 – Bill PDF

- Feedback and Reviews Management (IT18161298)

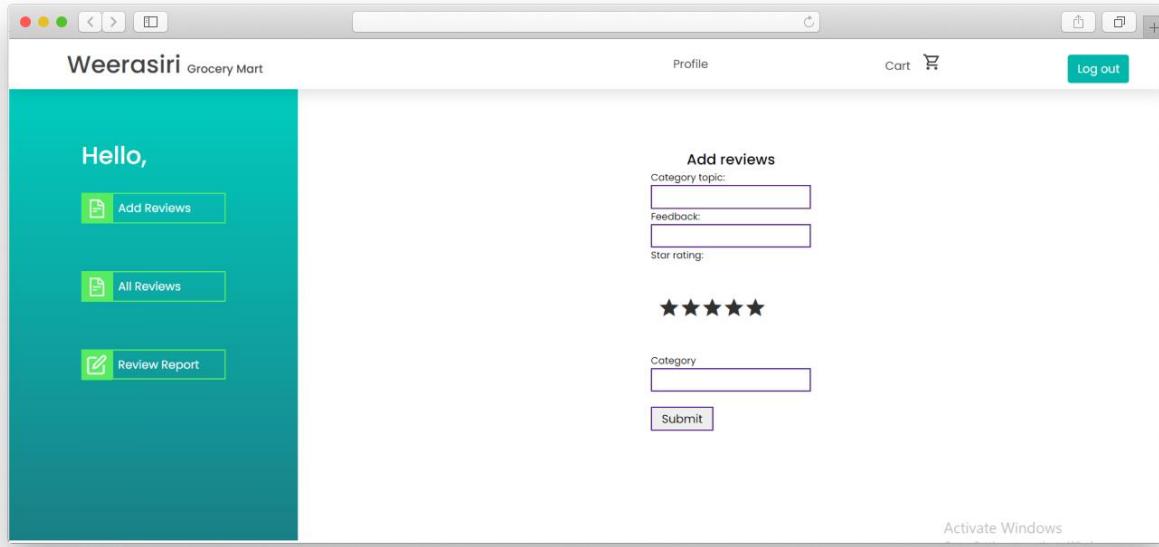


Figure 2.2.4 - 18 – Add reviews / Feedbacks Page

The screenshot shows a web browser window for 'Weerasiri Grocery Mart'. The top navigation bar includes 'Profile' and 'Log out'. The main content area is titled 'Manage reviews' and displays a table of feedback data. The table has columns for 'Feedback ID', 'Feedback Topic', 'Feedback Content', and 'Feedback Category'. Two rows of data are visible, each with a 'Delete' button. On the left side, there is a sidebar with a dark blue gradient background and white text, containing links for 'Admin Panel', 'Owner', 'Manage Customers', 'Manage Vehicles', 'Manage Reviews', 'Update Details', and 'Income Report'. A search bar at the top right allows users to search for reviews by name.

Figure 2.2.4 - 19 – View Feedbacks Admin Page

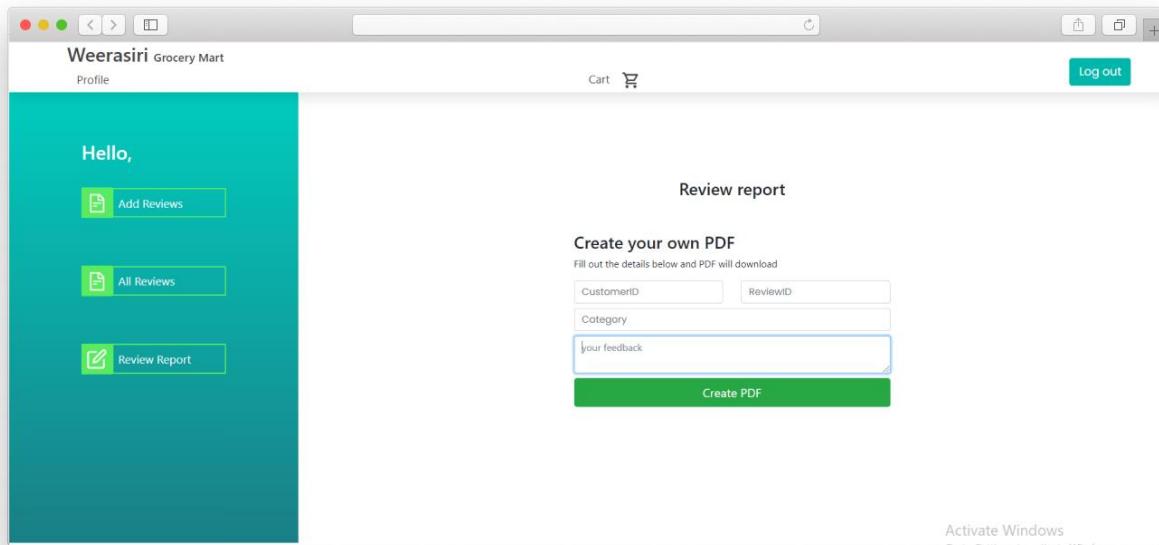


Figure 2.2.4 - 20 – Create Review Report Page

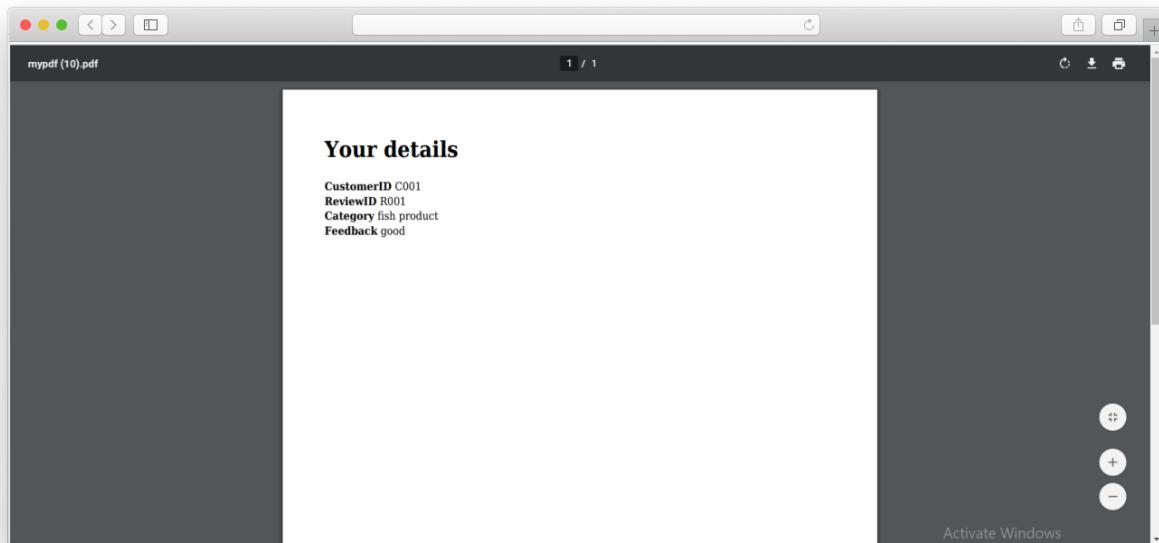


Figure 2.2.4 - 21 – Review Report PDF

- Employee Management (IT18125580)

Add Employee

Select the profile picture

First Name: Enter your First Name

Last Name: Enter your Last Name

NIC Number: NIC

Bank Account Number: Bank Account Number

Bank: Choose The Bank Name..

DOB: mm/dd/yyyy

Designation: Choose The Designation..

Telephone Number:

Email:

Address:

Add

Figure 2.2.4 - 22 – Add Employee Page

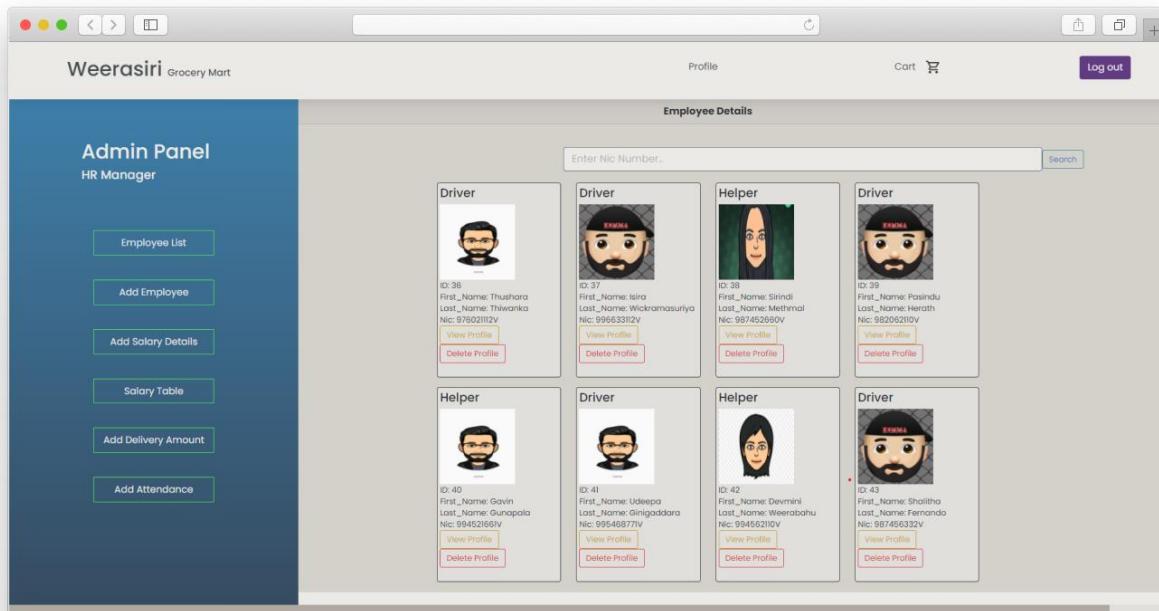


Figure 2.2.4 - 23 – View Employees Page

Weerasiri Grocery Mart

Employee Profile

Admin Panel
HR Manager

Employee List
Add Employee
Add Salary Details
Salary Table
Add Delivery Amount
Add Attendance

Select the profile picture
 Choose File No file chosen

First Name: Thushara
Last Name: Thiwanka

NIC Number: 976021112V
Bank Account Number: 555566666777

Bank: BOC
DOB: 08/01/1997

Designation: Driver

Telephone Number: 0771738770

Email: thusharathiwanka123@gmail.com

Address: No.39, Yakkala, Gampaha

UPDATE THE RECORD
DELETE THE RECORD

Figure 2.2.4 - 24 – Update Employee Page

Weerasiri Grocery Mart

Admin Panel
HR Manager

Employee List
Add Employee
Add Salary Details
Salary Table
Add Delivery Amount
Add Attendance

localhost/Weerasiri-grocery-mart-master/salary_table.php

Add Attendancy

Helper ID
 Enter Driver ID

Attendancy
 0

Save The Record
Helper Table

Figure 2.2.4 - 25 – Add Helper Attendance Page

The screenshot shows the 'Add Delivery Amount' page of the Weerasiri Grocery Mart Admin Panel. The left sidebar, titled 'Admin Panel HR Manager', contains buttons for 'Employee List', 'Add Employee', 'Add Salary Details', 'Salary Table', 'Add Delivery Amount', and 'Add Attendance'. The main content area is titled 'Add Delivery Amount' and includes fields for 'Driver ID' (with placeholder 'Enter Driver ID') and 'No Of Delivery' (with value '0'). It also features 'Save The Record' and 'Driver Table' buttons.

Figure 2.2.4 - 26 – Add Driver's Delivery Amount Page

The screenshot shows the 'Driver Details' page of the Weerasiri Grocery Mart Admin Panel. The left sidebar is identical to Figure 26. The main content area is titled 'Driver Details' and displays a table with five rows of driver information:

Driver ID	Attendance	Action
36	20	UPDATE DELETE
37	25	UPDATE DELETE
39	30	UPDATE DELETE
41	29	UPDATE DELETE
43	35	UPDATE DELETE

Figure 2.2.4 - 27 – View Driver's Delivery Details Page

The screenshot shows a web application interface for 'Weerasiri Grocery Mart'. On the left, a dark blue sidebar titled 'Admin Panel' contains the 'HR Manager' role and several buttons: 'Employee List', 'Add Employee', 'Add Salary Details', 'Salary Table', 'Add Delivery Amount', and 'Add Attendance'. The main content area is titled 'Helper Details' and displays a table with three rows of helper attendance data. The table has columns for 'Helper ID', 'Attendance', and 'Action'. The data is as follows:

Helper ID	Attendance	Action
38	25	[UPDATE] [DELETE]
40	20	[UPDATE] [DELETE]
42	23	[UPDATE] [DELETE]

Figure 2.2.4 - 28 – View Helper’s Attendance Details Page

The screenshot shows a web application interface for 'Weerasiri Grocery Mart'. On the left, a dark blue sidebar titled 'Admin Panel' contains the 'HR Manager' role and several buttons: 'Employee List', 'Add Employee', 'Add Salary Details', 'Salary Table', 'Add Delivery Amount', and 'Add Attendance'. The main content area is titled 'Salary Details' and displays a table with eight rows of employee salary data. The table has columns for 'Salary ID', 'Employee ID', 'Basic Salary', 'Salary Frequency', 'Bonus', 'Net Salary', and 'Action'. The data is as follows:

Salary ID	Employee ID	Basic Salary	Salary Frequency	Bonus	Net Salary	Action
52	36	1500	Delivery	5000	35000	[UPDATE] [DELETE] [SENT]
53	37	1500	Delivery	5000	42500	[UPDATE] [DELETE] [SENT]
54	38	1000	Daily	5000	30000	[UPDATE] [DELETE] [SENT]
55	39	1500	Delivery	5000	50000	[UPDATE] [DELETE] [SENT]
56	40	1000	Daily	5000	25000	[UPDATE] [DELETE] [SENT]
57	41	1500	Delivery	5000	48500	[UPDATE] [DELETE] [SENT]
58	42	1000	Daily	5000	28000	[UPDATE] [DELETE] [SENT]
59	43	1500	Delivery	5000	57500	[UPDATE] [DELETE] [SENT]

Figure 2.2.4 - 29 - View Employee Salary Details Page

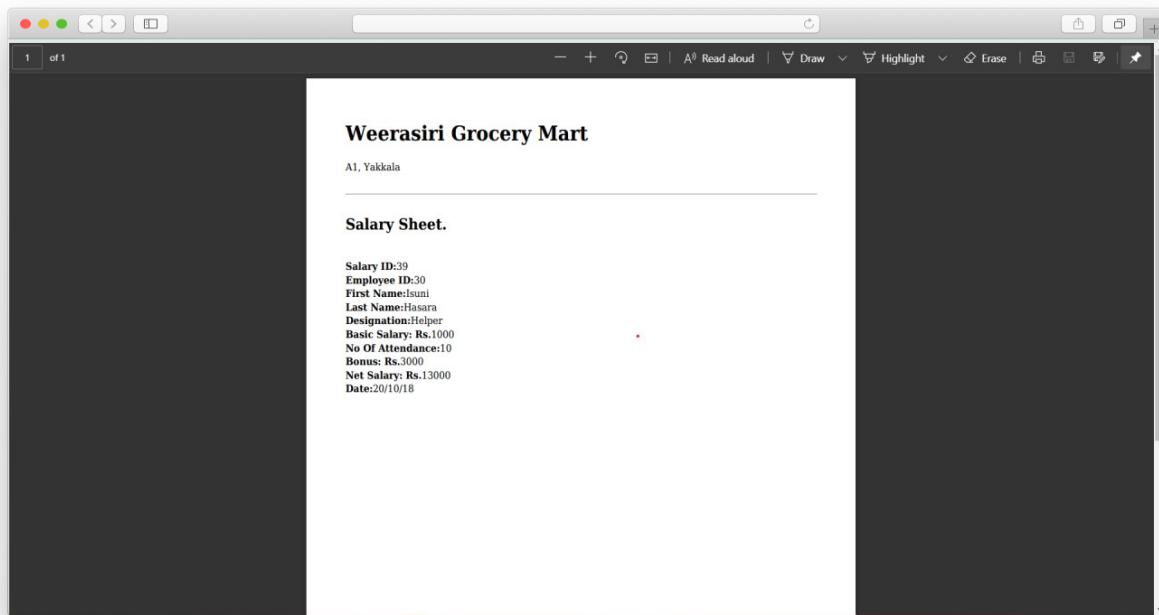


Figure 2.2.4 - 30 – Salary Report PDF

- Inventory Management (IT19081076)

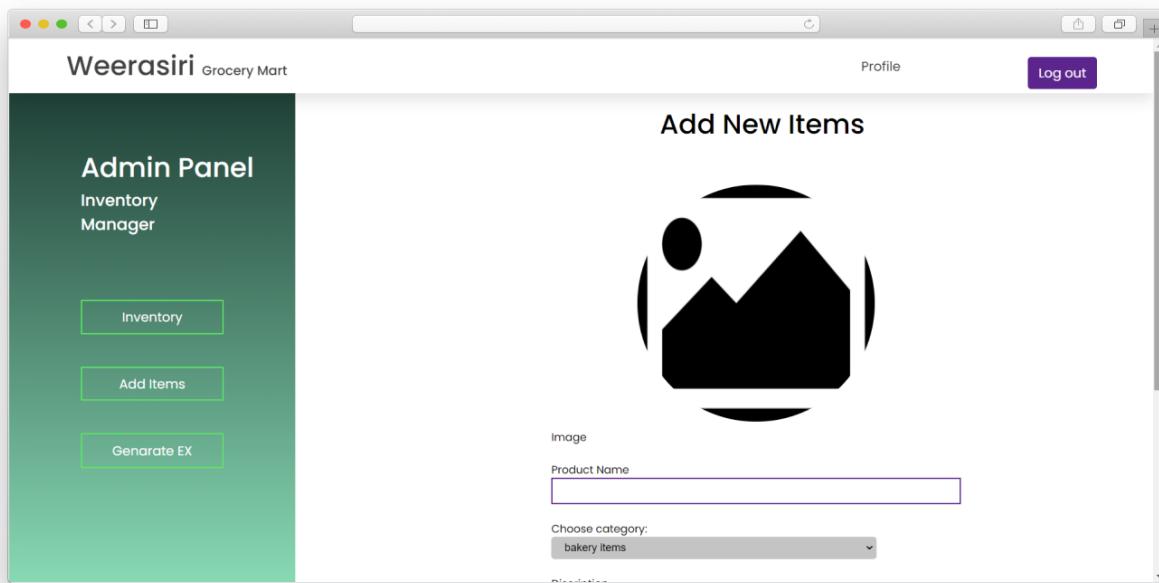


Figure 2.2.4 - 31 – Add Items Page

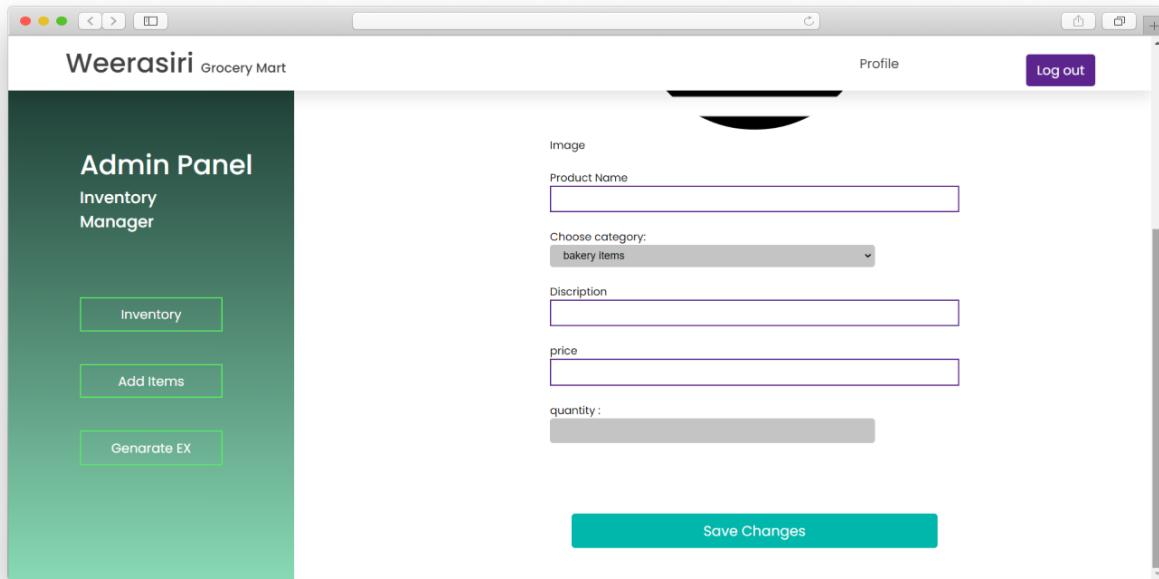


Figure 2.2.4 - 32 – Add Items Page

The screenshot shows the 'Admin Panel' interface for 'Weerasiri Grocery Mart'. On the left sidebar, there are three buttons: 'Inventory', 'Add Items', and 'Generate EX'. The main area is titled 'Product' and displays a table of items:

Item Id	Item Name	Description	price	Quantity	Action
3	chocoret biscuits	yami	Rs.45	5	Delete Edit
4	beecce biscuits	100g buscuts packet	Rs.60	5	Delete Edit
5	Super Cream Cracker	100g buscuts packet	Rs.50	10	Delete Edit
6	Potato Cracker	100g buscuts packet	Rs.50	5	Delete Edit
7	Kritz biscuits	500g buscuts packet	Rs.250	10	Delete Edit

A search bar at the top right says 'Enter name to search items' with a magnifying glass icon.

Figure 2.2.4 - 33 – View Items Page

The screenshot shows the 'Edit Inventory' page. The left sidebar has the same three buttons: 'Inventory', 'Add Items', and 'Generate EX'. The main area is titled 'Edit Inventory' and contains five input fields with labels: 'Item Id', 'Item Name', 'Description', 'price', and 'Quantity'. Below these fields is a 'Save Changes' button.

Figure 2.2.4 - 34 – Edit Items Page

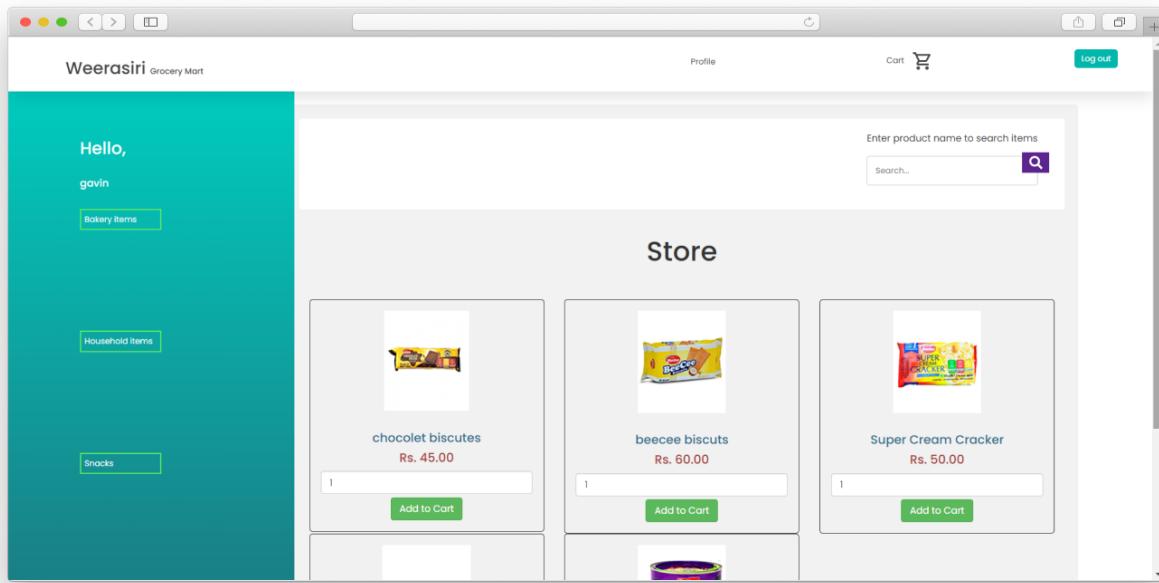


Figure 2.2.4 - 35 – Items Menu Page

Item Id	Item Name	Description	price	Quantity	tot price
1	Chocolate Cream Bisc	100g packet	60	10	600
2	Beecee Biscuit	100g Packet	60	5	300

Figure 2.2.4 - 36 – Expenses Report for Items

- Supplier Management (IT19002484)

The screenshot shows the 'Admin Panel, Supplier Management' interface. At the top right are 'Profile' and 'Log out' buttons. The main content area displays a table of supplier details:

Supplier ID	Supplier Name	Company Name	Product	Mobile	Bank Account	Bank Name	Actions
2	Isira Uthpala	ABC	Biscuits	0734374343	987854673657	BOC	<button>Remove</button> <button>Edit</button>
4	Udeepa Desarana	UD co	Diary prod	0778236523	767898785434	BOC	<button>Remove</button> <button>Edit</button>

The left sidebar has a red background and contains the following text and buttons:

Admin Panel,
Supplier Management

Navigate to the respective page using below buttons

[ADD SUPPLIER](#)

[SUPPLIER DETAILS](#)

Figure 2.2.4 - 37 – View Suppliers Page

The screenshot shows the 'Add Supplier Details' form. At the top right are 'Profile' and 'Log out' buttons. The main content area includes the following fields:

- Supplier Name:
- The Company Name:
- Product:
- Mobile:
- Bank Account:
- Bank:

A red button at the bottom right says 'SAVE DETAILS & PRINT PDF'.

The left sidebar has a red background and contains the following text and buttons:

Admin Panel,
Supplier Management

Navigate to the respective page using below buttons

[ADD SUPPLIER](#)

[SUPPLIER DETAILS](#)

Figure 2.2.4 - 38 – Add Supplier Page

The screenshot shows a web-based administration interface for 'Weerasiri Grocery Mart'. The top navigation bar includes a profile icon and a 'Log out' button. The main content area is titled 'Update Supplier Details'. On the left, there's a red sidebar with the heading 'Admin Panel, Supplier Management' and two buttons: 'ADD SUPPLIER' and 'SUPPLIER DETAILS'. The right side contains several input fields for supplier information: 'Supplier Name' (Udeepa Desarana), 'The Company Name' (UD co), 'Product' (Dairy products), 'Mobile' (0778236532), 'Bank Account' (767898765434), and 'Bank' (BOC). A red 'EDIT & SAVE DETAILS' button is at the bottom.

Figure 2.2.4 - 39 – Update Supplier Page

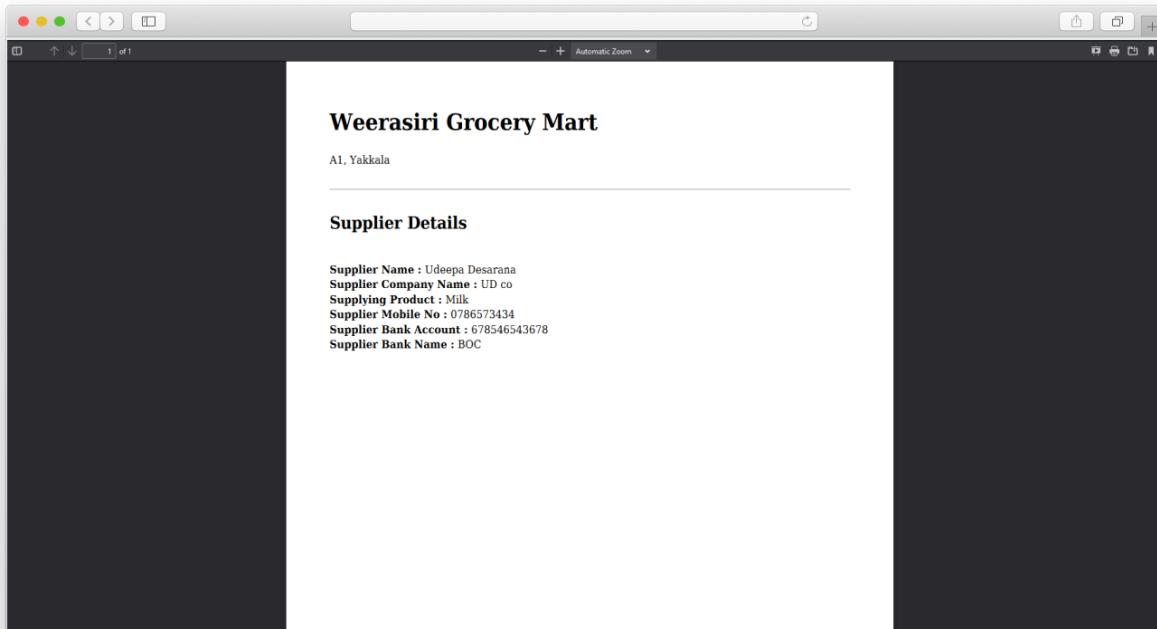


Figure 2.2.4 - 40 – Supplier Details Report Page

- Delivery Management (IT19118000)

ORDER NO	PRICE	CUSTOMER NAME	CUSTOMER ADDRESS	DRIVER ID	VEHICLE	STATUS
1	1450	Romali Perera	Kandy rd, Yakkal	Driver ID	Vehicle	Status
2	990	Kanishka Dias	Gampaha rd, Ya	Driver ID	Vehicle	Status
4	1840	S.M.Liyanage	Kirindiwela rd, Ya	Driver ID	Vehicle	Status
5	2800	Rashmi Silva	Kandy rd, Yakkal	Driver ID	Vehicle	Status
6	1000	K.N.Dilshan	Gampaha rd, Ya	Driver ID	Vehicle	Status
7	3200	T.K.Lakmal	Gampaha rd, Ya	Driver ID	Vehicle	Status

Activate Windows
Go to Settings to activate Windows.

Figure 2.2.4 - 41 – Add Deliveries Page

Delivery ID	Order NO	Driver ID	Vehicle NO	Status	Action
30	2	1	1	Delivered	<button>Delete</button>
31	4	2	2	Delivered	<button>Delete</button>
33	6	2	1	Delivered	<button>Delete</button>
34	7	1	1	Delivered	<button>Delete</button>

Activate Windows
Go to Settings to activate Windows.

Figure 2.2.4 - 42 – View Deliveries Page

Delivery No	Delivery Date	Name	Address	Price (Rs.)
30	2020-10-22 12:56:40	Kanishka Das	Gampaha rd, Yakkala	990
31	2020-10-22 13:03:42	S.M.Liyanage	Kirindiwela rd, Yakkala	1840
33	2020-10-22 14:22:36	K.N.Dilshan	Gampaha rd, Yakkala	1000
34	2020-10-22 14:48:39	T.K.Lakmali	Gampaha rd, Yakkala	3200

Total Amount (Rs.) = 7030

[Print](#)

Figure 2.2.4 - 43 – Delivery Income Report Page

Delivery No	Delivery Date	Name	Address	Price (Rs.)
30	2020-10-22 12:56:40	Kanishka Das	Gampaha rd, Yakkala	990
31	2020-10-22 13:03:42	S.M.Liyanage	Kirindiwela rd, Yakkala	1840
33	2020-10-22 14:22:36	K.N.Dilshan	Gampaha rd, Yakkala	1000
34	2020-10-22 14:48:39	T.K.Lakmali	Gampaha rd, Yakkala	3200

Total Amount(Rs.)=7030

Activate Windows
Go to Settings to activate Windows.

Figure 2.2.4 - 44 – Delivery Income Report PDF

- Vehicle Management (IT19161884)

Weerasiri Grocery Mart

Vehicles

ID	Vehicle No	Brand	Color	Mileage(km)	Action
11501	QU-1020	Toyota	Blue	1500	Delete
11502	MH-4582	suzuki	Red	4500	Delete
11503	AS-7854	Toyota	White	150	Delete
11504	WE-4580	Tata	White	5000	Delete
11505	AAB=5010	Ford	Black	400	Delete

Edit Vehicle

Figure 2.2.4 - 45 – View Vehicle Details Page

Weerasiri Grocery Mart

Add Vehicle

Registered Number:

Brand:

Model:

Manufacture Year:

Vehicle Color:

Mileage(km):

submit

Figure 2.2.4 - 46 – Add Vehicle Page

The screenshot shows a web browser window for the 'Weerasiri Grocery Mart' Admin Panel. The left sidebar, titled 'Admin Panel' under 'Owner', contains buttons for 'Vehicles', 'Add Vehicle', 'Enter expenses', and 'Expenses report'. The main content area is titled 'Edit Vehicle' and contains a form with the following fields:

- Vehicle Id: dropdown menu showing '11501'
- Mileage(km): input field
- Color: input field
- submit button

At the top right of the window are 'Profile' and 'Log out' links.

Figure 2.2.4 - 47 – Edit Vehicle Page

The screenshot shows a web browser window for the 'Weerasiri Grocery Mart' Admin Panel. The left sidebar, titled 'Admin Panel' under 'Owner', contains buttons for 'Vehicles', 'Add Vehicle', 'Enter expenses', and 'Expenses report'. The main content area is titled 'Enter expenses' and contains a form with the following fields:

- Vehicle id: dropdown menu showing '11501'
- Description: dropdown menu showing 'Fuel'
- Cost(Rs): input field
- Date: input field
- submit button

At the top right of the window are 'Profile' and 'Log out' links.

Figure 2.2.4 - 48 – Add Expenses for Vehicles Page

The screenshot shows the 'Admin Panel' for 'Weerasiri Grocery Mart'. On the left sidebar, under 'Owner', there are four buttons: 'Vehicles', 'Add Vehicle', 'Enter expenses', and 'Expenses report'. The main area is titled 'Vehicle Expenses' and displays a table with the following data:

Expense ID	Vehicle ID	Description	Cost(Rs)	Date	Action
20	11501	feul	1500	09/08/2020	Delete
21	11502	feul	500	09/30/2020	Delete
22	11503	maintenance	4500	09/20/2020	Delete
23	11504	feul	5000	09/10/2020	Delete
24	11505	maintenance	8500	09/28/2020	Delete

Figure 2.2.4 - 49 – View Expenses Page

The screenshot shows an Excel spreadsheet titled 'Expenses_report (5)'. The data is presented in a table with the following columns: Expense ID, Vehicle ID, Description, Cost, and Date. The data rows are as follows:

Expense ID	Vehicle ID	Description	Cost	Date
20	11501	feul	1500	9/8/2020
21	11502	feul	500	9/30/2020
22	11503	maintenance	4500	9/20/2020
23	11504	feul	5000	9/10/2020
24	11505	maintenance	8500	9/28/2020

Figure 2.2.4 - 50 – Expenses Report

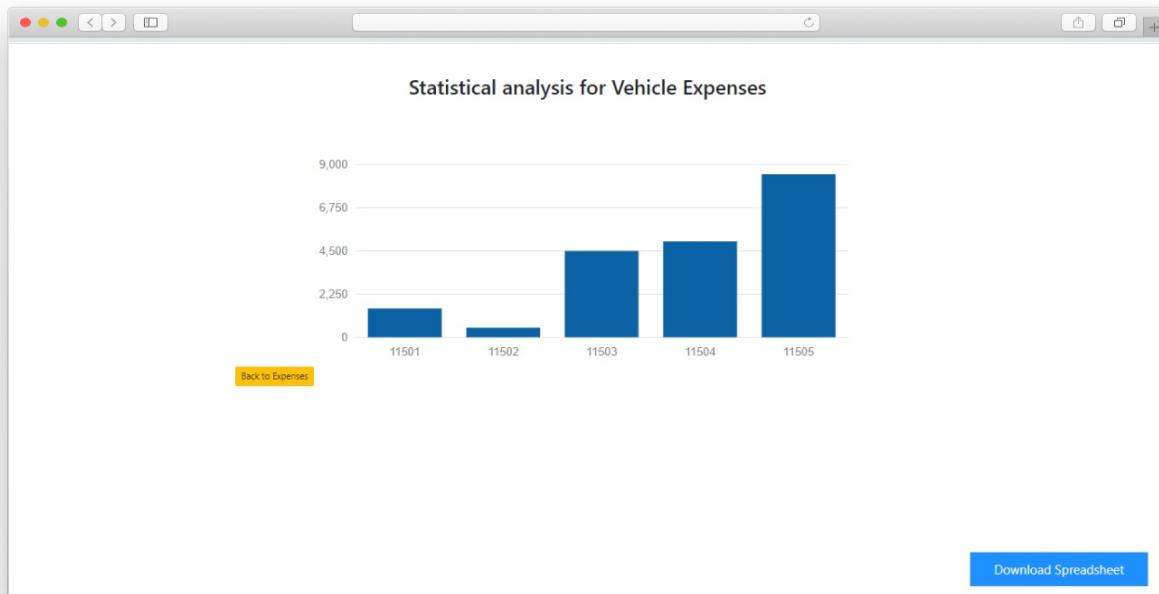


Figure 2.2.4 - 51 – Statistical Analysis of Vehicle Expenses

2.3 Implementation

In the development of this web application for Weerasiri grocery mart,

2.3.1 Technologies that used for implementing front end of the application

- HTML
- CSS
- JavaScript
- Bootstrap



2.3.2 Technologies that used for implementing back end of the application

- PHP



2.3.3 Technologies that used for implementing database of the application

- MySQL



2.3.4 Tools that used for implementing the application

- Operating System – Microsoft Windows 10 (Build Version 2004)
- Code Editor – Visual Studio Code (Version 1.47.2)
Atom (Version 1.52.0)
- Database configuration – MySQL Workbench (Version 8.0 CE)
- Local Server - Xampp (Version 3.2.4)
- Browser – Chrome (Version 84), Firefox (Version 78)
- Image Editing – Adobe Photoshop CC 2020 (Version 21.2.3)



2.3.5 Packages that used for implementing the application

- Composer (Package Manager)
- PHP Mailer
- M PDF
- Php Unit



2.4 Testing

2.4.1 User Profile Management (IT19076362)

Test cases for Customer Registration

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass / Fail)	Description
TPM_001	Name – Thushara Thiwanka Email – thushara@gmail.com Username – thushara01 Password – t0001 Mobile No – 0777777777 Address – 120, Somewhere. City - Yakkala	Display success message	Display success message	Pass	In order to pass this test case Name should contain only letters, email should be valid, username and email should not be exist in the database, and mobile should contain 10 numbers and city must be yakkala.
TPM_002	Name – Thushara Thiwanka123 Email – thushara@gmail.com Username – thushara01 Password – t0001 Mobile No – 0777777777 Address – 120, Somewhere. City - Yakkala	Display error as enter valid name	Display error as enter valid name	Pass	In order to pass this test case customer name should be invalid. It should contain numbers or special characters.

Table 2.4 - 1 – Test Cases for User Profile Management

2.4.2 Cart Management (IT19086958)

Test cases for Place Order

Test ID	Test Inputs	Expected output	Actual output	Result (pass/fail)	Description
TCM_001	Select “chocolate cream bisc” Quantity – 1 payment method - Cash	Display success message	Display success message	Pass	In order to pass this test case, quantity should be equal or more than 1 and payment method should be selected.
TCM_002	Select “chocolate cream bisc” Quantity – 1 payment method – ‘ ‘	Display error message as “can’t keep that field empty”	Display error message as “can’t keep that field empty”	Pass	In order to pass this test case payment method should be non-selected. It should be selected.

Table 2.4 - 2 – Test Cases for Cart Management

2.4.3 Feedback and Reviews Management (IT18161298)

Test cases for Feedback Management

Test ID	Test Inputs	Expected output	Actual output	Result (pass/fail)	Description
TFM_001	Review code:1005	Display invalid review message	Display invalid review message	Pass	Search reviews which are not added yet.
TFM_002	Click delete review button	Display are you sure you want to delete this review	Display are you sure you want to delete this review	Pass	Try to delete Reviews.
TFM_003	Review ID:R100	Display an error message by showing valid review IDs	Display an error message by showing valid review IDs	Pass	Add invalid review ID to the system
TFM_004	Click on create PDF button	Open generated report	Open generated report	Pass	Try to generate review report

Table 2.4 - 3 – Test Cases for Feedback and Reviews Management

2.4.4 Employee Management (IT18125580)

Test cases for Adding Employee Details

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass / Fail)	Description
TEM_001	Profile Picture – image1.png First Name – Pasindu Last Name – Herath NIC – 982062110V Bank Account Number- 55554444666 Bank – Commercial Bank DOB – 07/26/1998 Designation – Driver Tel Number – 0776918687 Email – pasinduherath18@gmail.com Address – No.72, Borupana Road	Display success message	Display success message	Pass	In order to pass this test case all the input fields should be fill.
TEM_002	Profile Picture – image1.png First Name – Pasindu Last Name – Herath NIC – 982062110V Bank Account Number- 55554444666 Bank – Commercial Bank DOB – 07/26/1998 Designation – Driver Tel Number – 0776918687 Email – pasinduherath18@gmailcom Address – No.72, Borupana	Display error as enter valid name	Display error as enter valid name	Pass	In order to pass this test case customer name should be invalid. It should contain numbers or special characters.

Table 2.4 - 4 – Test Cases for Employee Management

2.4.5 Inventory Management (IT19081076)

Test cases for Add item

Test ID	Test Inputs	Expected output	Actual output	Result (pass/fail)	Description
TIM_001	Image – ‘001.jpg’ Product name – ‘manche cream cracker’ Choose category – ‘snacks’ Description – 400g packet Price – 55.00 Quantity - 8	Display success message	Display success message	Pass	In order to pass this test case, all fields must be filled. also Price and quantity must be in positive numbers
TIM_002	Image – ‘002’ Product name – ‘manche cream cracker’ Choose category – ‘snacks’ Description – Price – 55.00 Quantity - 8	Display error message as “please fill this field”	Display error message as “ please fill this field ”	Pass	In order to pass this test case description must be fill.

Table 2.4 - 5 – Test Cases for Inventory Management

2.4.6 Supplier Management (IT19002484)

Test cases for Add Supplier

Steps:					
1. Supplier Manager is logged in					
2. Click on Add Supplier button to redirect to the add supplier page					
3. Fill every field of the form of the add supplier page according to validations					
4. Click the ‘Save details & print PDF’ button					
ID	Inputs	Expected Output	Actual Output	Result	
TSM_001	Supplier ID is generated automatically, Supplier name, company name, Product, Mobile, Bank account number and bank name is added by the supplier manager	New supplier will be added	A new supplier is added and all the details are stored in the database	pass	New supplier added successfully

Table 2.4 - 6 – Test Cases for Add Supplier

Test cases for Update Supplier

Steps:

1. Supplier Manager is logged in
2. Click on the ‘Edit’ button from the table in view details page(supplier_manager.php) to redirect to the update supplier page
3. Change the desired details of the supplier using desired field of the update supplier page according to validations
4. Click the ‘EDIT & SAVE DETAILS’ button

ID	Inputs	Expected Output	Actual Output	Result	
TSM_002	Update Supplier name, company name, Product, Mobile, Bank account number and bank name of the selected supplier	Only the changed details are updated	Supplier details are updated, and all the details are stored in the database	pass	Supplier details are updated successfully

Table 2.4 - 7 – Test Cases for Update Supplier

2.4.7 Delivery Management (IT19118000)

Test Cases for Add Deliveries

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)	Description
TDM_001	Driver ID – 1 Vehicle – 1 Status – Delivered	Display the newly added order with the relevant driver, vehicle and status on the ‘Delivery List’ page.	The newly added order with the relevant driver, vehicle and status is displayed on the delivery page.	Pass	Assign a driver, vehicle and status to the orders ready to be delivered and add them to the delivery list.
TDM_002	Driver ID – 2 Vehicle – Status –	This order will not be added to the ‘Delivery List’ page and database.	The action is displayed as ‘unsuccess’ and ‘all three fields must be filled’. The relevant order is not added to the delivery list.	Pass	Without assigning a vehicle and status, only a driver is assigned to the order to be delivered.

Table 2.4 - 8 – Test Cases for Delivery Management

2.4.8 Vehicle Management (IT19161884)

Test Cases for Update Supplier

Test Id	Test Inputs	expected output	Actual output	Result (Pass/Fail)	Description
TVM_001	Registered number =QU-1020 Brand = Toyota Model= Prius Manufacture date=20/12/2015 Color=Black Mileage=225km	Display success message	Display success message	Pass	To pass this test case, All the required details should be entered.
TVM_002	Vehicle Id = QU-1020 Description = Fuel Cost = Two hundred rupees Date = 12/08/2020 0	Display error message	Display error message	Pass	To pass this test case, user input for cost, should be contain numbers only.

Table 2.4 - 9 – Test Cases for Vehicle Management

3. Conclusion

4. References

- <https://www.youtube.com/>
- <https://stackoverflow.com/>
- <https://github.com/>
- <https://dribbble.com/>
- <https://www.behance.net/>
- <https://undraw.co/>
- <https://uigradients.com/>
- <https://icons8.com/>
- <https://fonts.google.com/>

Appendix A: Test Results

- Application was tested by using php unit. Some test cases are attached below,

```
<?php
use PHPUnit\Framework\TestCase;
class UserTest extends TestCase {
    /**
     * @test
     */
    public function userEmailValidation() {
        $validEmail = "test@gmail.com";
        $invalidEmail = "test@gmail";

        $isEmailValid = filter_var($validEmail, FILTER_VALIDATE_EMAIL
);

        $this->assertEquals($validEmail, $isEmailValid);
        $this->assertFalse(filter_var($invalidEmail,
FILTER_VALIDATE_EMAIL));
    }

    /**
     * @test
     */
    public function userNameValidation() {
        $validName = "Test";
        $invalidName = "Test01";

        $isNameValid = preg_match("/^[a-zA-Z ]*$/", $validName);
        $isNameInvalid = preg_match("/^[a-zA-Z ]*$/", $invalidName);

        $this->assertEquals(1, $isNameValid);
        $this->assertEquals(0, $isNameInvalid);
    }
}
```

Figure A - 1 – Test Class Upper Section

```

/**
 * @test
 */
public function userMobileValidation() {
    $validMobile = "0777777777";
    $invalidMobile1 = "0777777";
    $invalidMobile2 = "0777777M";
    $isMobileValid1 = false;
    $isMobileValid2 = true;
    $isMobileValid3 = true;

    if(preg_match("/^[\d]*$/", $validMobile) || strlen($validMobile) == 10) {
        $isMobileValid1 = true;
    }

    if(!preg_match("/^[\d]*$/", $invalidMobile1) || strlen($invalidMobile1) != 10) {
        $isMobileValid2 = false;
    }

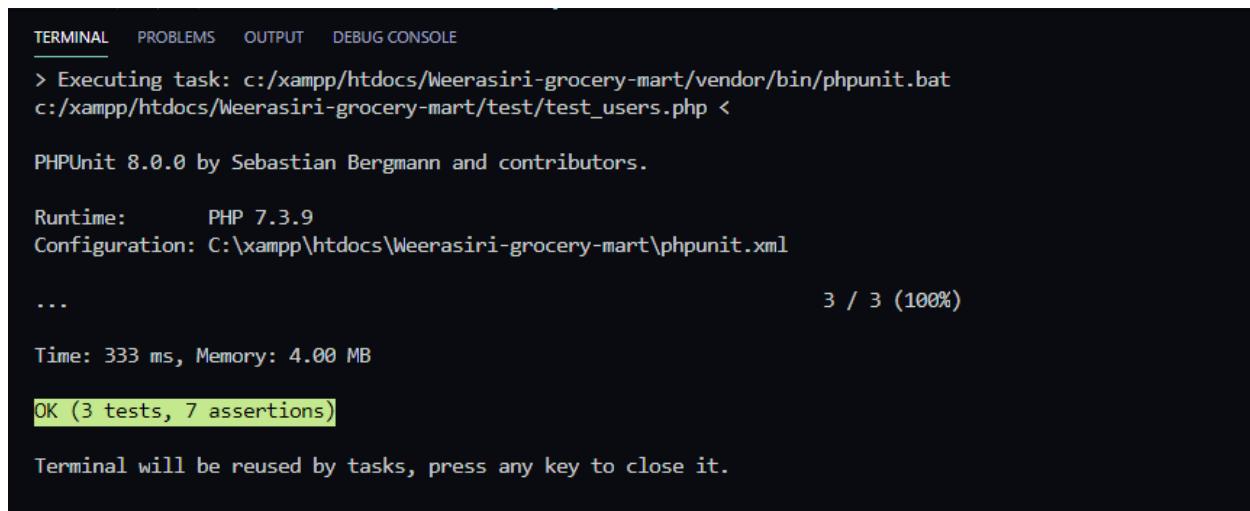
    if(!preg_match("/^[\d]*$/", $invalidMobile2) || strlen($invalidMobile2) != 10) {
        $isMobileValid3= false;
    }

    $this->assertTrue($isMobileValid1);
    $this->assertFalse($isMobileValid2);
    $this->assertFalse($isMobileValid3);
}
}
?>

```

Figure A - 2 – Test Class Lower Section

- Test case results are attached below,



The screenshot shows a terminal window with the following output:

```
TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE
> Executing task: c:/xampp/htdocs/Weerasiri-grocery-mart/vendor/bin/phpunit.bat
c:/xampp/htdocs/Weerasiri-grocery-mart/test/test_users.php <

PHPUnit 8.0.0 by Sebastian Bergmann and contributors.

Runtime:      PHP 7.3.9
Configuration: C:\xampp\htdocs\Weerasiri-grocery-mart\phpunit.xml

...
3 / 3 (100%)

Time: 333 ms, Memory: 4.00 MB

OK (3 tests, 7 assertions)

Terminal will be reused by tasks, press any key to close it.
```

Figure A - 3 – Results of Test Cases