



Sri Lanka Institute of Information Technology

Supermarket Management System. Project Report

Information Technology Project 2021

Project ID: ITP2021_S2_B02_G15

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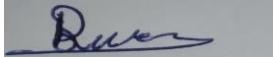
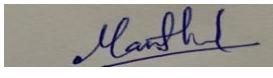
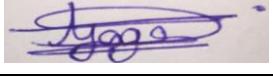
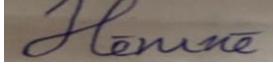
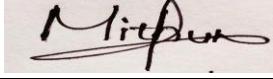
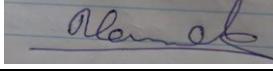
Declaration

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	Supermarket Management System.
Project ID	ITP2021_S2_B02_G15

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Abstract

Supermarkets are important to the communities they serve. Food is needed everywhere for everyone and this is where supermarkets come in. Most businesses focus on supply and demand chains. But supermarkets and grocery stores will always have customers (everyone has to eat) and their product is worth nothing if they don't sell it before it goes off. The needs of supermarkets are driven by two main factors: time and available income. A supermarket is a retailing shop where a general range freshly packed food products are available. On an everyday life people have to use a Supermarket to get their livelihood items. To buy the necessary products people visit a Supermarket, collect the products from different shelves and then pay for the item and proceed. But many times this process does not seem very convenient. People nowadays are very busy.

So we planned to make a web base application for a supermarket. In other word this is a supermarket management system. Supermarket management system is the system where all the aspects related to the proper management of supermarket is done. These aspects involve managing information about the various products, staff, managers, customers, billing etc.

Seven main functions have been covered all the complete system. The functions are customer management, service management, item management, performance management, payment management, administration management, supplier management. We have used react js for the front-end and node js for the back-end. Also express js has been used for the back-end framework. GitHub has been used for the version control. Visual studio code has been bused for the source code editor.

If we talk about the client, no any client has been taken for this project. Due to this COID-19 situation it was hard to find a client to this project.

In my opinion all the supermarket should use this system for manage their supermarkets easily and grow up top level in the industry.

Acknowledgement

We, the member of ITP2021_S2_B02_G15 would like to offer our heartfelt thanks to all who supported and advised us to make our project a success. We are thankful to and fortunate enough to get constant encouragement, support and guidance from all Teaching staffs of faculty of computing which helped us in successfully completing our project work. Without your great support and guidance, we will definitely not be able to achieve this success.

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List of Acronyms and Abbreviations

ER – Entity Relationship

IEEE - the Institute of Electrical and Electronics Engineers

DB - Database

1. Introduction

1.1 Problem Statement

The main problem that we have focused is, how to manage a supermarket during this COVID-19 pandemic situation. Because managing supermarket is not easy with COVID-19 situation. Also, People nowadays are very busy. In their busy schedule they always forget to make time for grocery shopping. Some people try to avoid it because of traffic jam, just to avoid gathering of people. Other than that, duplicate of data entry is another problem that we can consider. It affects an organization's insights, eats up expensive storage space, messes up customer information & leads the business into making flawed decisions. Also lack of security is another bad problem. This problem occurs because of the lack of proper understanding and in a supermarket normally people trust the supermarket staff and their services. Some time it can be the reason for security threat. Another problem is time and money wasting. If things take less effort than usual, then time consumption leads to inertia. Managing time to improve day today life and works, because time management means spending time in the right places and on the right things. Because of the customer's and manager's busy life they want to save their time. Same as the time, people want to save their money without wasting for irrelevant things. Also using man-power is now an obsolete concoction. Generating reports are time consuming & costly to create

Proposed Solutions

Considering all the issues and reasons behind the issues we think That the following solutions are the best solutions for above problems.

- Create customer registration system and Login system for every customer.
- Create options to manage the services and Items stocks.
- Create Databases for every function.
- Create easy and safe payment option.
- Create another option for administration and staff to login to the system.
- Create a details updating option.

- Auto-generate a report.

1.2 Product Scope

The overall scope of the project is to build system to manage the daily based functionalities of the restaurant. 7 functions which contain main functional activities are included into whole project scope.

Those functions are as follows.

1. Customer management

Customer management function is about to control customer activities. Customer role and authentication policies are managed under this functions. Also some additional options such as manual or automatic logout, controlling customer activity through permissions are added under this function. Create new user account, update user details, retrieve customer data, delete customer account have been taken as the main options in this function. Under create account part, a valid account should be created to look about the web site. A valid email address, a user name, password must be supplied to the registration form to complete the registration process. And also that entered email address should not be in the database. After clicking register button a verification email is sent to the entered email address. After verifying this, a new account can be created by the user. Under update operation, user name, password, and customer profile photo can be updated. The database is updated after clicking the update button. In the delete operation, after clicking the recycle bin icon the customer account can be deleted. Two customer roles have been included under the user role (also called as customer role). Normal user role and user manager role (customer manager role) have been taken as the main customer roles. Other customer roles can be updated by the user manager. Also other customer accounts can be deleted by the user manager. Customer report about the customer details, is created after clicking the generate report button. Other customer data also can be printed by the user managers. Other web pages can be accessed after creating the account by the customer.

Benefits of this function.

- An account can be created easily.

- Customer passwords have been encrypted. so the security performances have been increased
- Better organization.
- Better report generating option.
- Customer profile UI performances have been improved.so the system will be used by the lot of customers.
- Forgot password option with email verification.
- Easily manageable profile pages for normal customers and customer managers.

2. Supplier management

Service management is the section where different kinds of customer services are implementing in the system. Through service management basically we are considering two areas. They are delivery management and offerings management. Under delivery management, the system stores delivery request information of customers in a database. After the completion of a delivery, the system displays its completed status in the system. Number of reports can be generated through the system regarding service management. All previous delivery orders made by the customer are displaying through an interface in the user account. A delivery order includes its cart ID number, delivery location, delivery cost, delivery date and the customer ID number. Here the deliveries can be searched using its cart ID number, delivery location, delivery date or customer ID number. A report can be generated including all the past delivery orders of a customer from this interface. Also, another kind of a report can be generated here by including information on each single delivery. The system requests information on customer cart identity number (cartID), delivery location, delivery cost, delivery date and the customer identity number (customerID) when making a new delivery order. Customer details are validated when entering to the system. The validations can be denoted as, irrespective to the implemented data type of the input fields, users cannot enter values to the system. And unless the user is completing all the required fields an order request cannot be submitted. Updating the delivery information and deleting delivery records can be done through the system. Customers notify with pop-up messages when they are making a successful delivery, updating a delivery or deleting a delivery information.

There is another interface about the delivery charges in the system. It shows information on how the supermarket system calculate charges on deliveries. Delivery charges are calculated relevant to the total kilometers. A table including information on delivery charges respective to the number of kilometers are displaying in this interface. Furthermore, by providing the customer delivery town, the customer can get the total delivery payment through this interface. If customer wants, this total delivery payment can be downloaded as a receipt here.

Making offers on customers is the other service providing by the supermarket system. All the customer offerings respective to the time period they offer, are displaying in an interface of the system. Service managers can include new offers to the system. And they can update and delete information on current offers existing in the system. All the information on customer offers are included to a database. A complete report on customer offers can be generated from the system. An offer contains its offer identity number (offerID), offer name and a description about the offering. Offer details are validated when entering to the system. An offer can be searched either by its offer ID or offer name from the system. Here also the pop-up messages arouse when entering a successful offer to the system, updating an offer and deleting an offer

3. Item management

Item control management system is responsible of adding and maintaining of all items and stock details of the supermarket. Item management help to track stock and provide items to display to the customers and manage it.

This includes :-

- Maintaining all item details
- Maintaining all categories
- Notifying relevant personnel about the stock at relevant time.

To achieve these tasks item management system is using tools such as item codes and asset tags. When peered with Item management system, which provides a central database and point of reference for all stock, coupled with the ability to generate reports, forecast future demand make up the item management system.

Benefits of the system :-

- Better organization
- Reduction in dead stock
- Achieve maximum efficiency
- Better reporting
- Better forecast capabilities

When implementing an item management system following best practices is very important to the success of the supermarket otherwise it may cause too much slow-moving items in stock, unexpectedly running out of stock of an essential items, to avoid all those flows implementing a good item management system with best practices is essential for the success of the supermarket.

When executed properly a good item management system can help to enhance productivity.

4. Performance management

Performance management is divided into two main parts. Part of it has sales details. There you can add month to month sales values. Can also be updated. Only numbers can be entered for that. At the bottom of the form, which includes sales values, there is a section to calculate the total. When a new sales value is added or updated, the value of the part in the total automatically changes to the correct value. Sales records can also be removed if required. Clicking on the year in which the sales report is relevant will give you a brief overview of that year. Information related to the year can be seen from the numbers as well as from the bar charts and line charts. If necessary, the description can be downloaded as a PDF. Also, if you want to quickly find information related to a particular year, you can quickly find it by typing the year you want in the search bar. Then only the year we want is left and the other years disappear. The other part that is included in the performance is the part that includes the suggestions, ideas, requests, etc. of the employees. For example, if an employee is unable to return to work at a later date, an employee working in the office should be notified. He then enters that information into the system. It is mandatory to include all the information requested here. Not a single piece of information can be saved without filling it out also the name and job cannot be changed during the update. If there is unwanted information, it can be deleted.

Benefits of this function.

- Entering selling details is very easily.
- All the information entered can be clearly viewed.
- Detailed sales summary for each year can be easily understood by everyone.
- If necessary, you can print the sales summary.
- The head of the institution should not be directly involved in submitting ideas and suggestions to the employees
- Designed to be user-friendly.

5. Payment management

In the payment management function, there is covered three different areas such as employee payment management, supplier payment management and customer payment management.

In employee payment management, payment manager has access to do all the tasks which is related to the employee payments.

- Insert salary details according to the registered employees.
- Calculate the total net salary accordingly.
- Retrieve old record of employee salaries such as total additions and deductions.
- Update old records and calculate net salary accordingly.
- Delete old records.
- In the end of the month employee payment report can be printed.

In supplier payment management, payment manager has access to do all the tasks which is related to the payments of suppliers who is involved to the system.

- Insert item price and quantity and calculate the total amount.
- Calculate the total price of all the items.
- Retrieve old records of payments in a month.

- Update old records and calculate total amounts and total price accordingly.
- Delete old records.
- In the end of the month supplier payment report can be printed.

In customer payment management, payment manager has access to,

- Retrieve old records of customer cart.
- Delete old records.
- In the end of the month customer payment report can be printed.

Payment manager is able to search old records thorough the payment id. Admin also can access the payment management area.

Benefits of the system

- Easier to track and manage finance.
- Develop vision of financial sector.
- Increase sales.
- Keep records of old payments.
- Compare revenue and expenses

6. Administration management

In the Administration Management System, it covers all the staff members requirements. It allows staff members to access the system and register to the system.

In administration management page Admin can manage access controls and reports about staff members.

- Admin can insert new staff members to the system
- Admin can update staff member's details
- Admin can delete staff members
- Admin can view staff member's details individually

- Admin can view salary reports about staff members
- Admin can generate reports about staff members and their salary details

Staff members can access the system via login page by entering their valid credentials that saved in the database.

Staff members can create their own access controls by entering to the staff register page in the system. In that page staff members can do multiple tasks.

- Staff members can provide their details to the system
- Staff members can add a valid password to the system to login to the system
- Staff members can enter their selected job position to the system.

After login to the system staff members can choose their relevant management section and access to their relevant section. Staff members also can leave the system via logout option.

Benefits of the system

- Easy to handle the staff members in the system
- Staff members can easily access to the system and do their works easily
- Administrator can instantly generate monthly reports about staff members
- Staff members can quickly create their profiles

Administrator can compare salary details and staff member details via the given option and manage the system easily

7. Supplier management

All activities related to suppliers are done in this function. It maintains all the information about supplier and product details. This also helps to create and store reports about suppliers. It helps to store the details about suppliers and their details. Supplier manager can add supplier details, edit and delete details using this system. And supplier manager can generate a report as a PDF using this system.

Supplier manager has to access:

- Add new supplier to the system

- Edit supplier details
- Delete supplier details

1.3 Project Report Structure

In this document, it is possible to get a clear understanding of the whole picture of the system because it contains detailed explanation and diagram to support every function and database connectivity in the newly developed system

2. Methodology

2.1 Requirements and Analysis

Functional Requirements

1. Customer management function.

- Submit registration form.
- Verify the verification email and registered with the system.
- Login to the system.
- View profile page.
- Update customer details.
- Update customer role using customer manager view.
- Delete customer account.
- Delete other customer's account using customer manager view.
- Report generating about customer details.

2. Service Management function

- View past delivery orders.
- Generate a report on past delivery orders.
- View a single delivery order record.
- Generate a report on a single delivery order.
- Create a new delivery order.
- Update a delivery order.
- Delete a delivery order.
- Search deliveries.
- Calculate the delivery charges.
- Download the delivery charge receipt.

- View customer offers.
- Create a new offer.
- Update customer offers.
- Delete customer offers.
- Search offers.

3. Item management function

- View item details
- Add item details
- Update item details
- Delete item from the system
- Search item
- Add items to cart and get total price of the items
- View category
- Add category
- Update category
- Delete category from the system
- Generate items report that are still in the stock

4. Performance management function

- Enter employee feedback according to requirements.
- Update employee feedback according to requirements.
- Delete employee feedback.
- Enter sales values according to requirements.
- Update sales values according to requirements.
- Delete sales details.
- Search details by entering year.
- Report generating about selling details.

5. Payment management function

- Add employee salary details.
- Update employee salary payments.
- Delete employee salary records.
- Retrieve employee salary additions and deductions.
- Generate monthly salary details.
- Add supplier payment details.
- Update supplier payment details.
- Delete supplier payment old records.
- Retrieve supplier payments.
- Generate monthly supplier payment reports.
- Delete old customer payment records.
- View customer payments.
- Generate monthly customer payment reports.

6. Administration management function

- Add staff member details
- Update staff member details
- Delete staff member details
- Retrieve staff member details
- Generate staff member's details
- Retrieve staff member's salary details
- Generate monthly staff member's salary details

7. Supplier management function

- View supplier details list
- Add new suppliers to the system
- Delete suppliers from the system
- Update supplier details
- View supplier options
- Generate supplier details report

Non-Functional Requirements

Performance

- The system is platform independent & open source.
- The user-interface screen will respond within few seconds.

Safety

- Customer and Admin have specific username & password to access the system. Username and password are validated.
- Customer email addresses are unique.

Security

- Every registered user has to login to the system using own username & password.
- Passwords have been encrypted in the customer's database.
- Customer email address are unique.

Software Quality Attributes

- **Accuracy:** The system represents all the functionalities which mentioned in this document with expected outputs.
- **Availability:** The system is available for every online customer in 24x7 hours.
- **Operability:** The interfaces of the system is very simple & easy to understand. Therefore, the users can work with the system easily without wasting time.
- **Reliability:** The system can be used by the multiple customers in the same time.

2.2 Designs

2.21 Use case diagrams

Figure 2.2.1 – Customer management

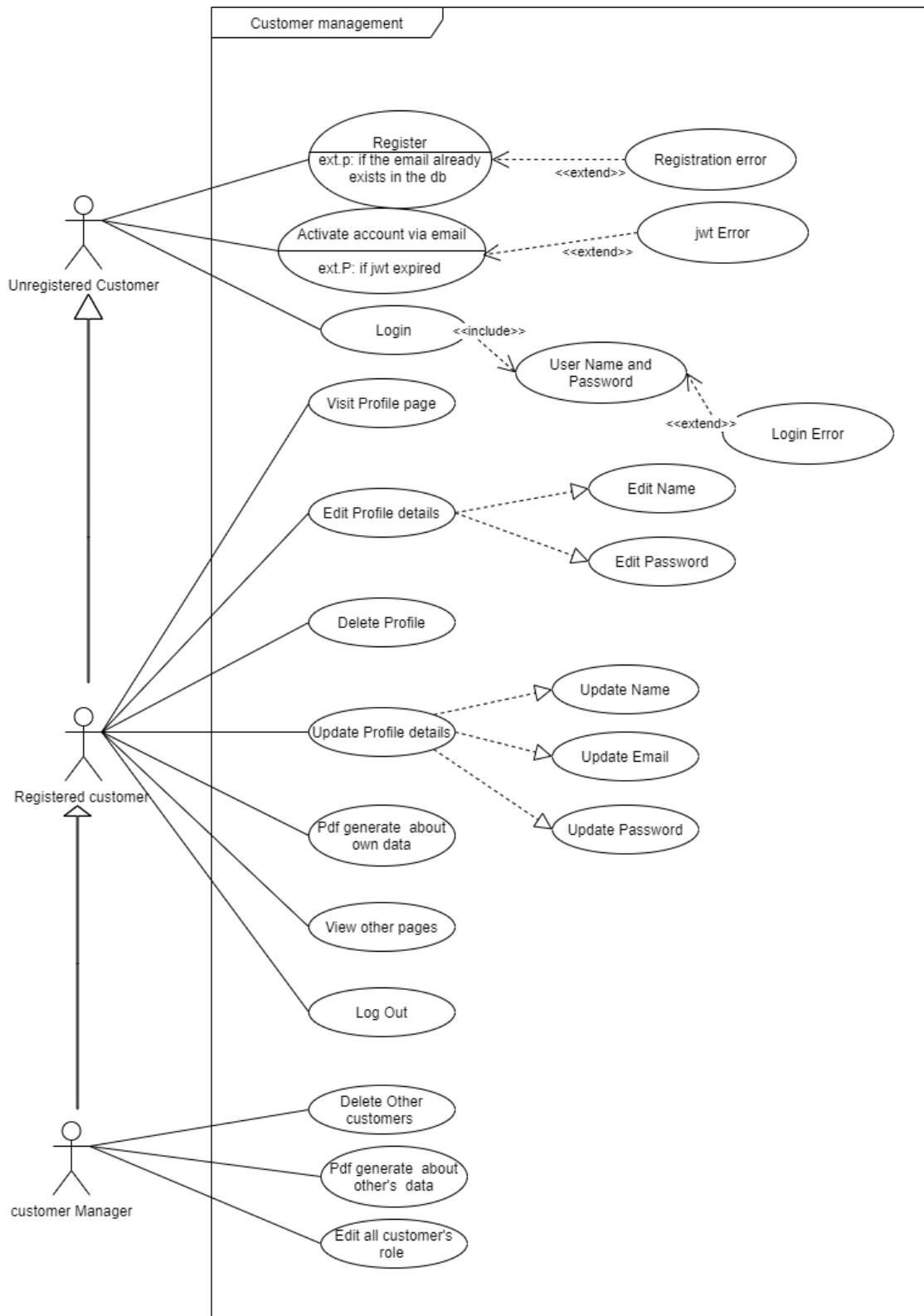


Figure 2.2.2 – service management

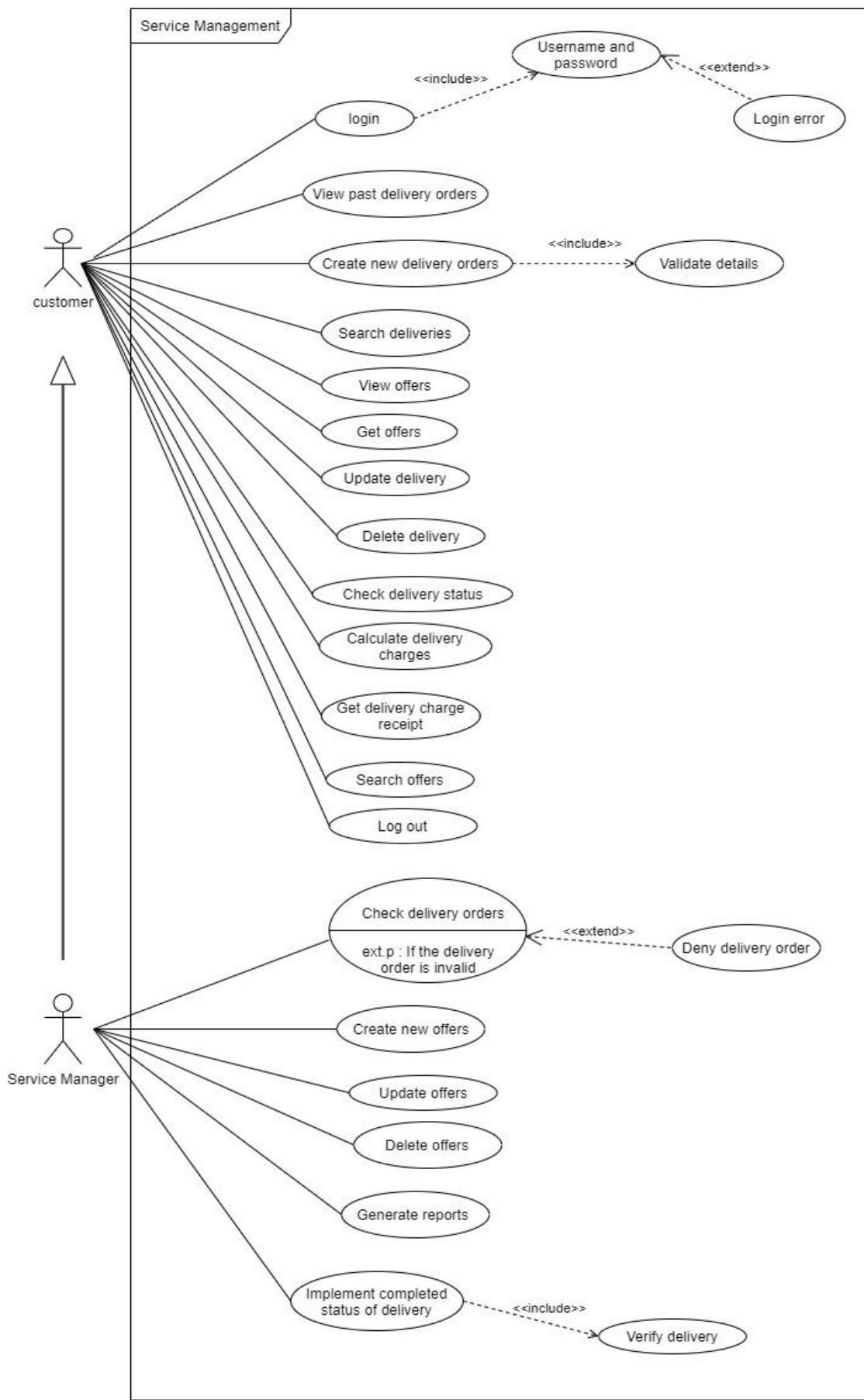


Figure 2.2.3 – Item management

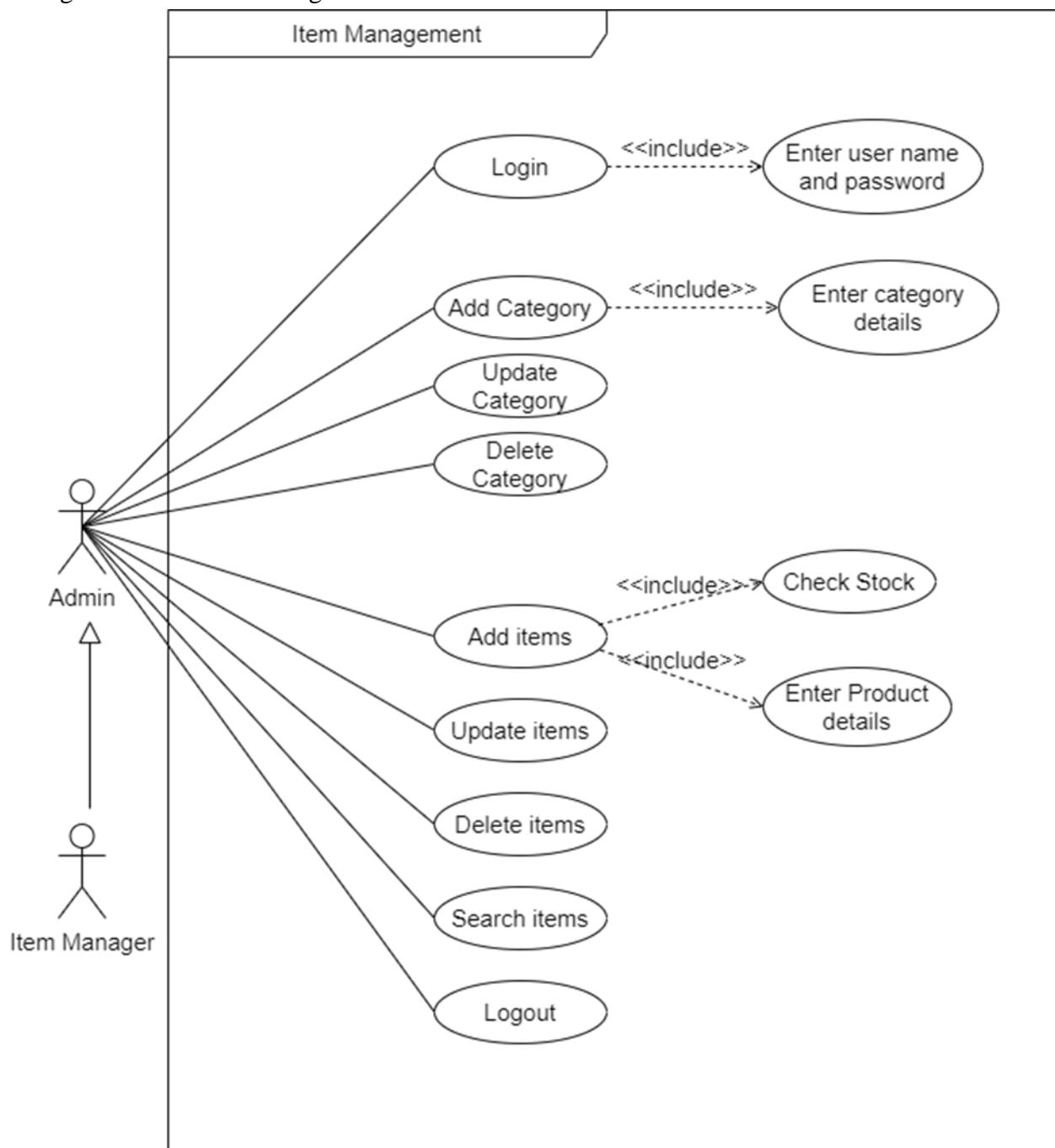


Figure 2.2.4 – Performance management



Figure 2.2.5 – Payment management

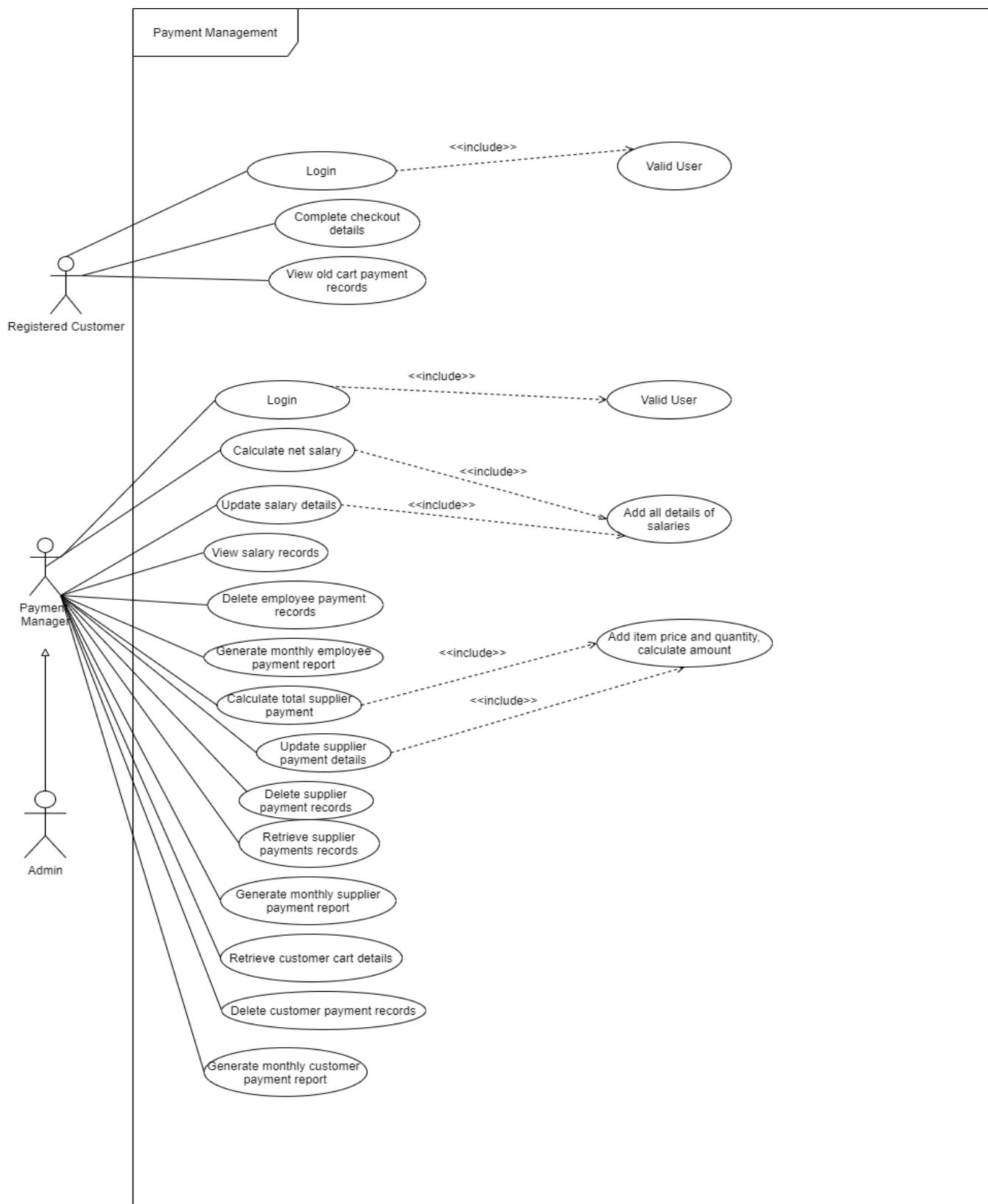


Figure 2.2.6 – Administration management

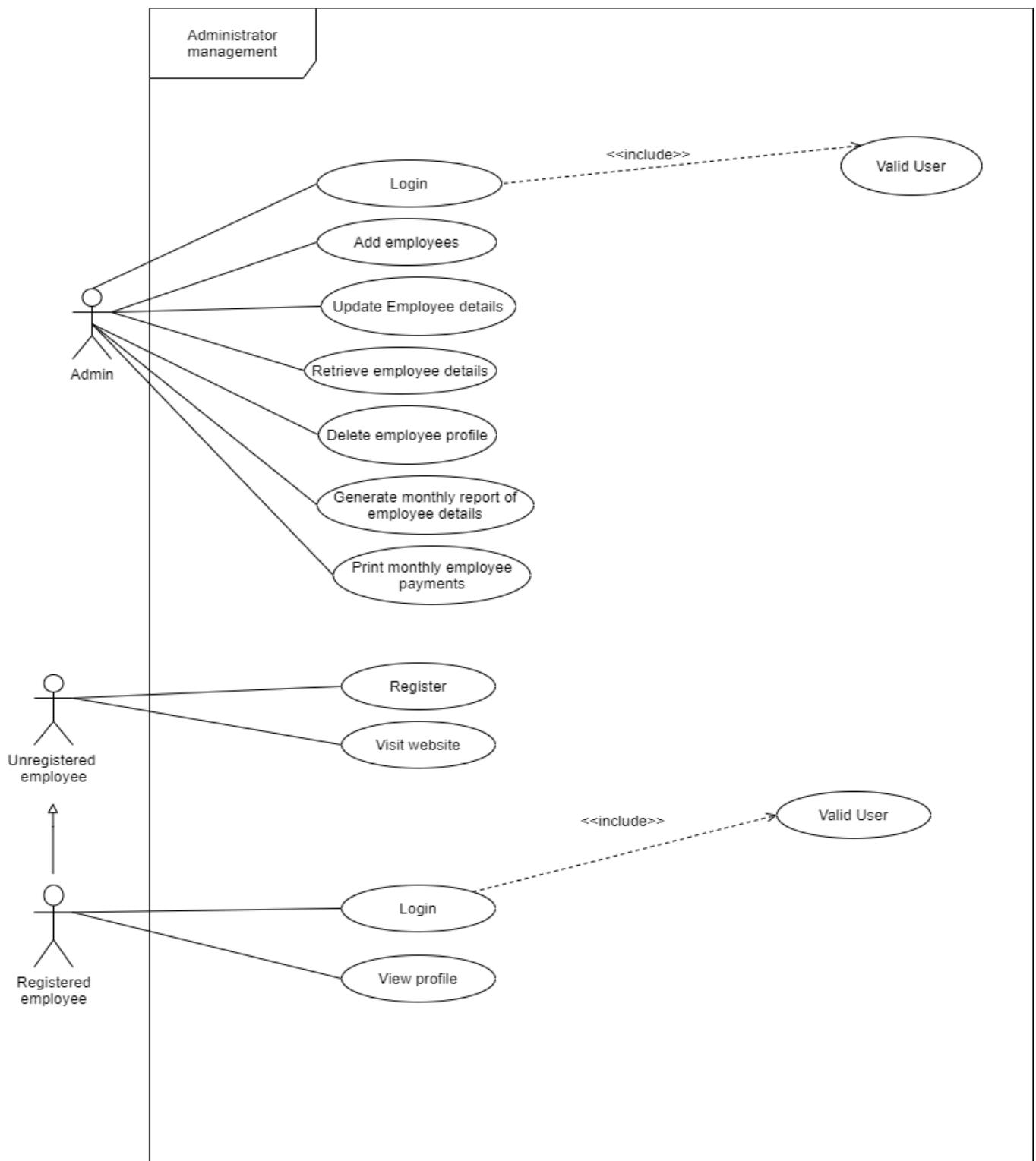
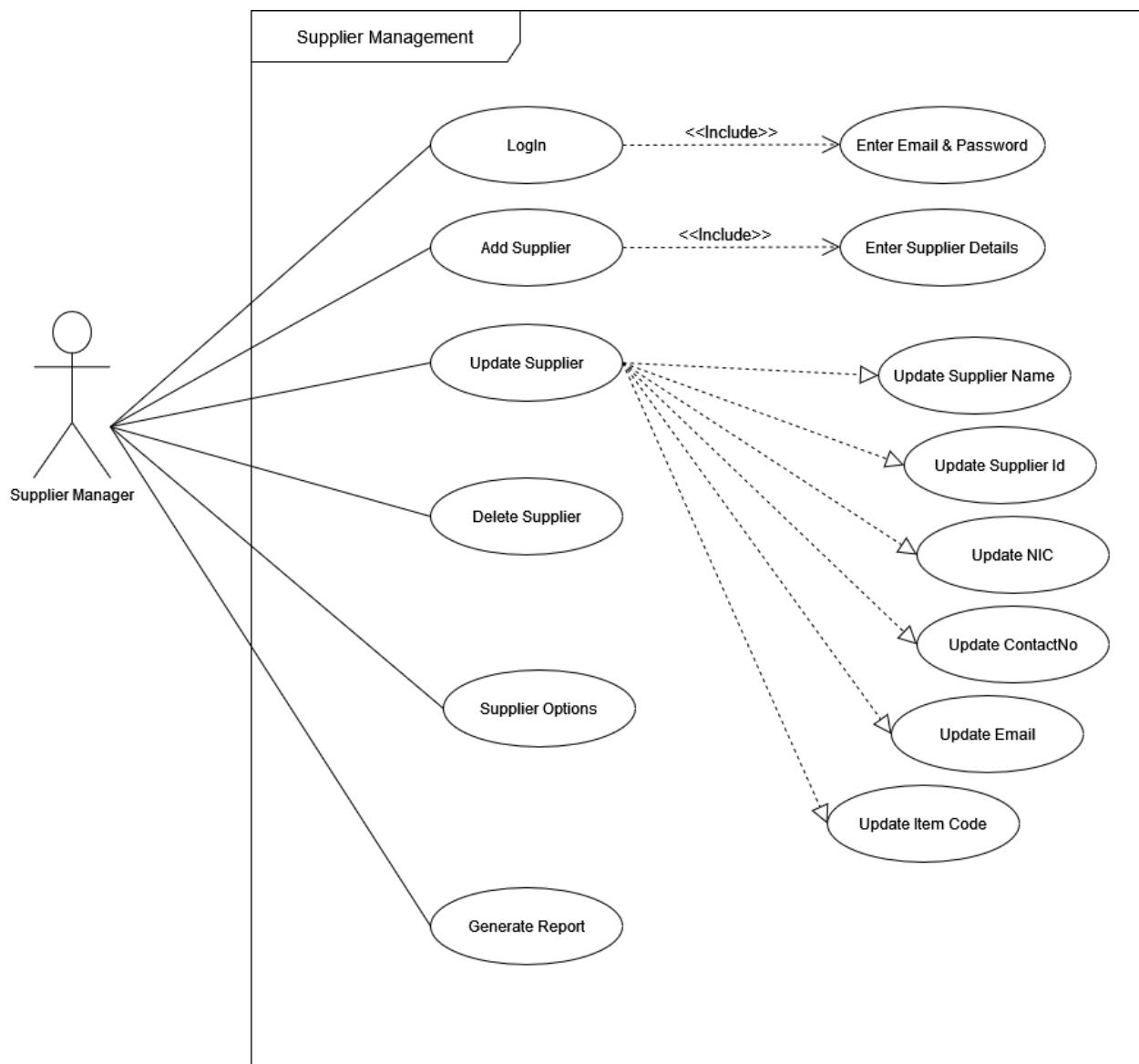


Figure 2.2.7 – Supplier management



2.21 Activity diagrams

2.2.8 – Customer management

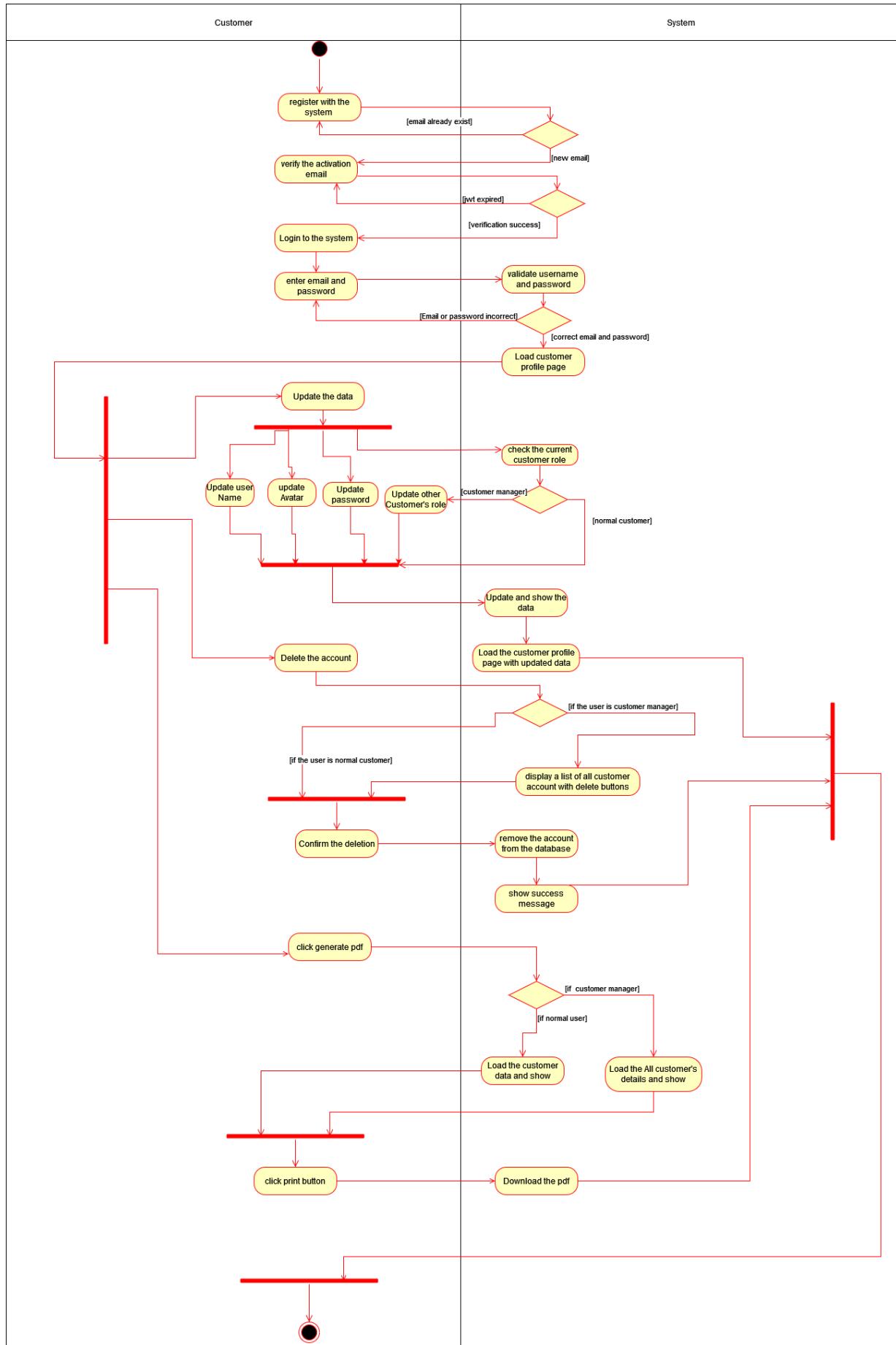


Figure 2.2.9 – Service management

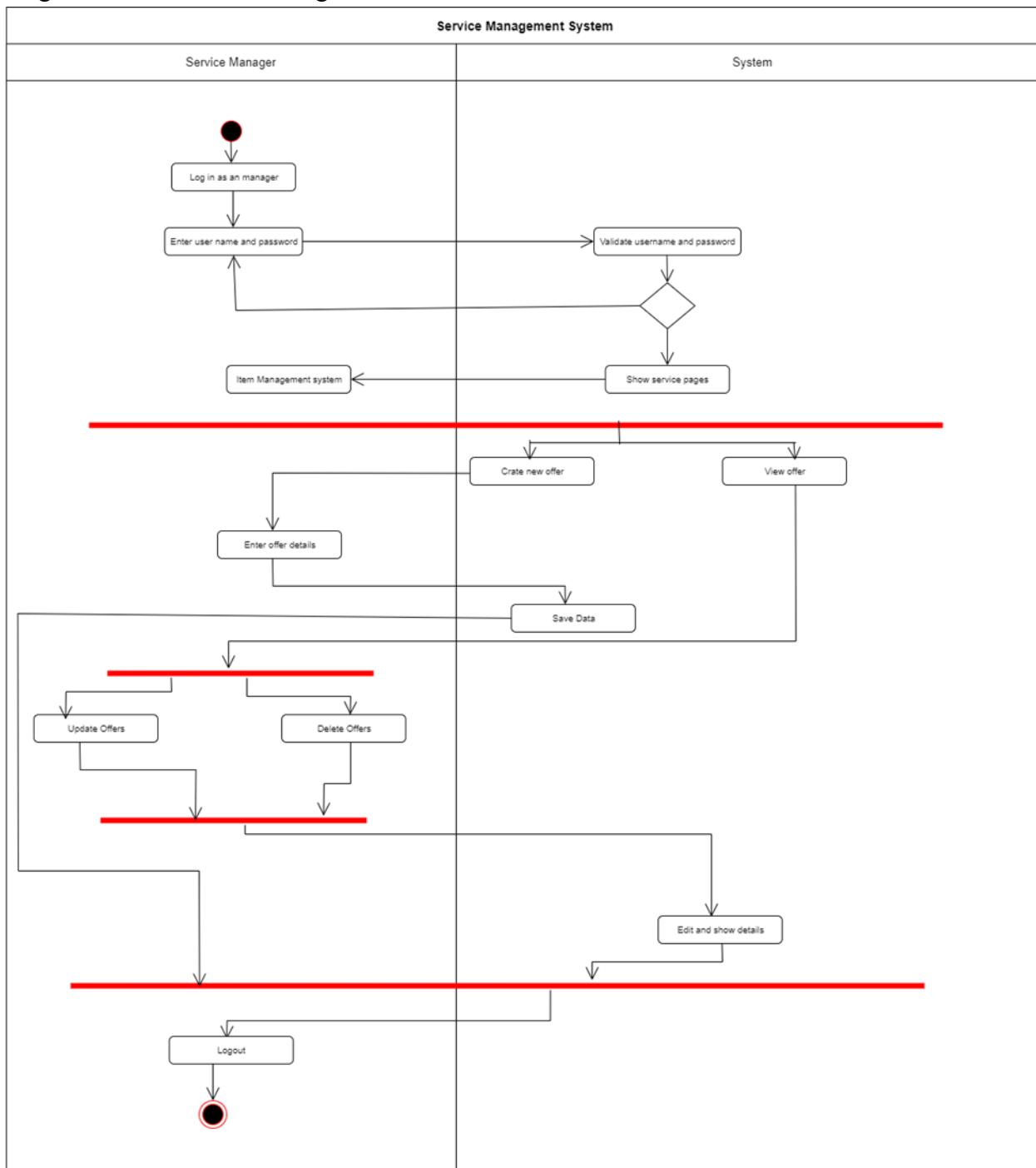


Figure 2.2.10 – Item management

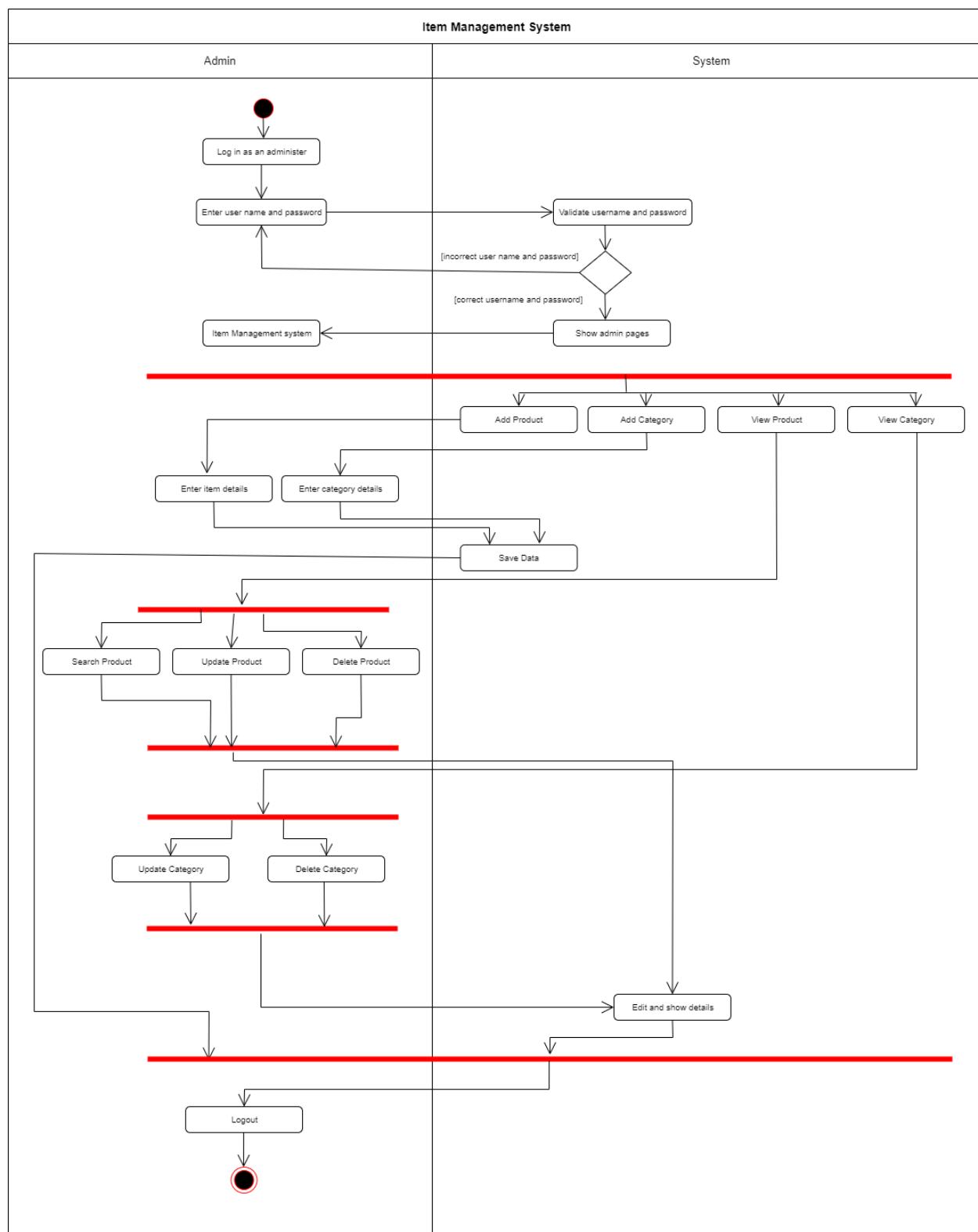


Figure 22.2.11 –Performance management

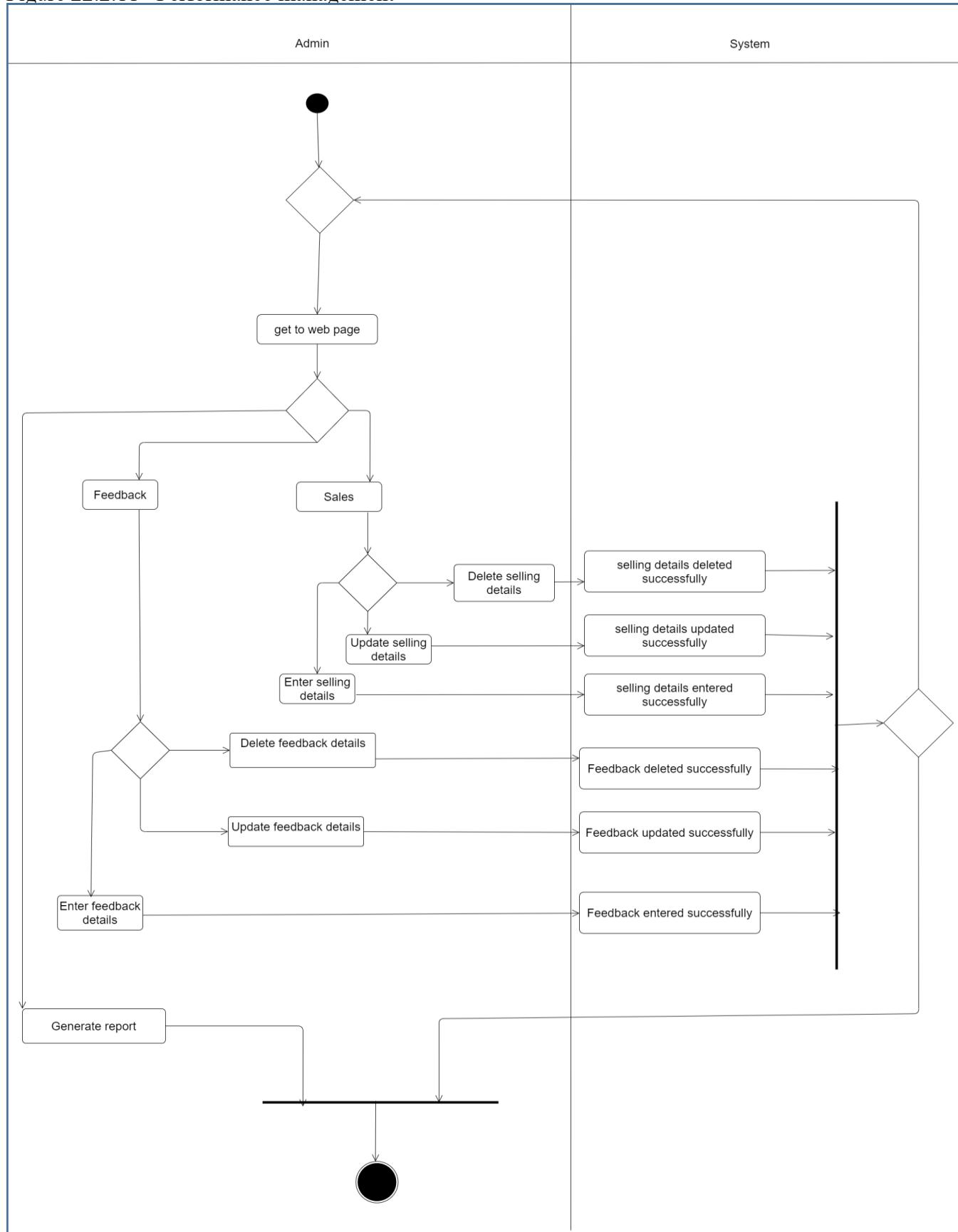


Figure 2.2.12 – Payment management

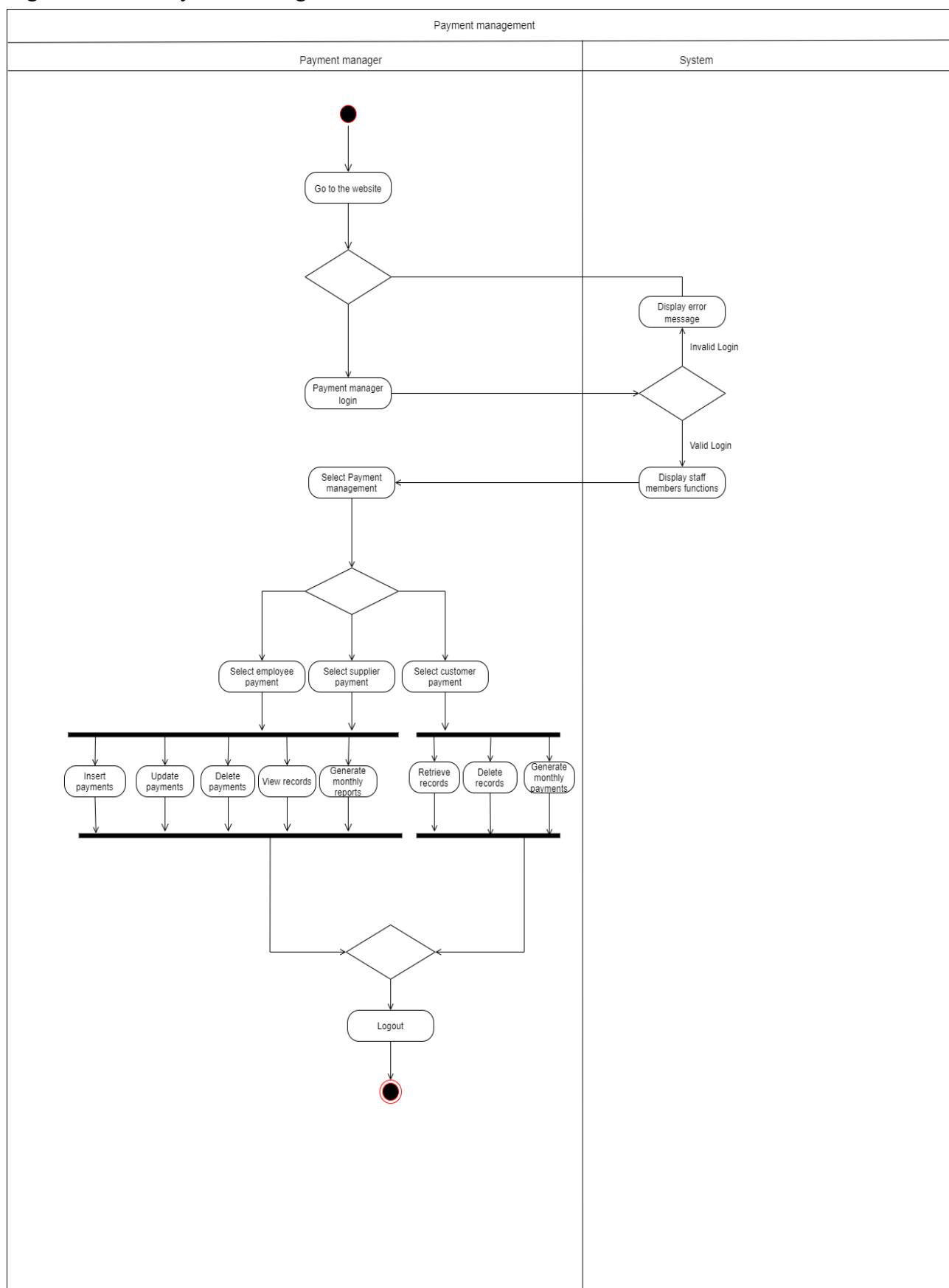


Figure 2.2.13 – Administration management

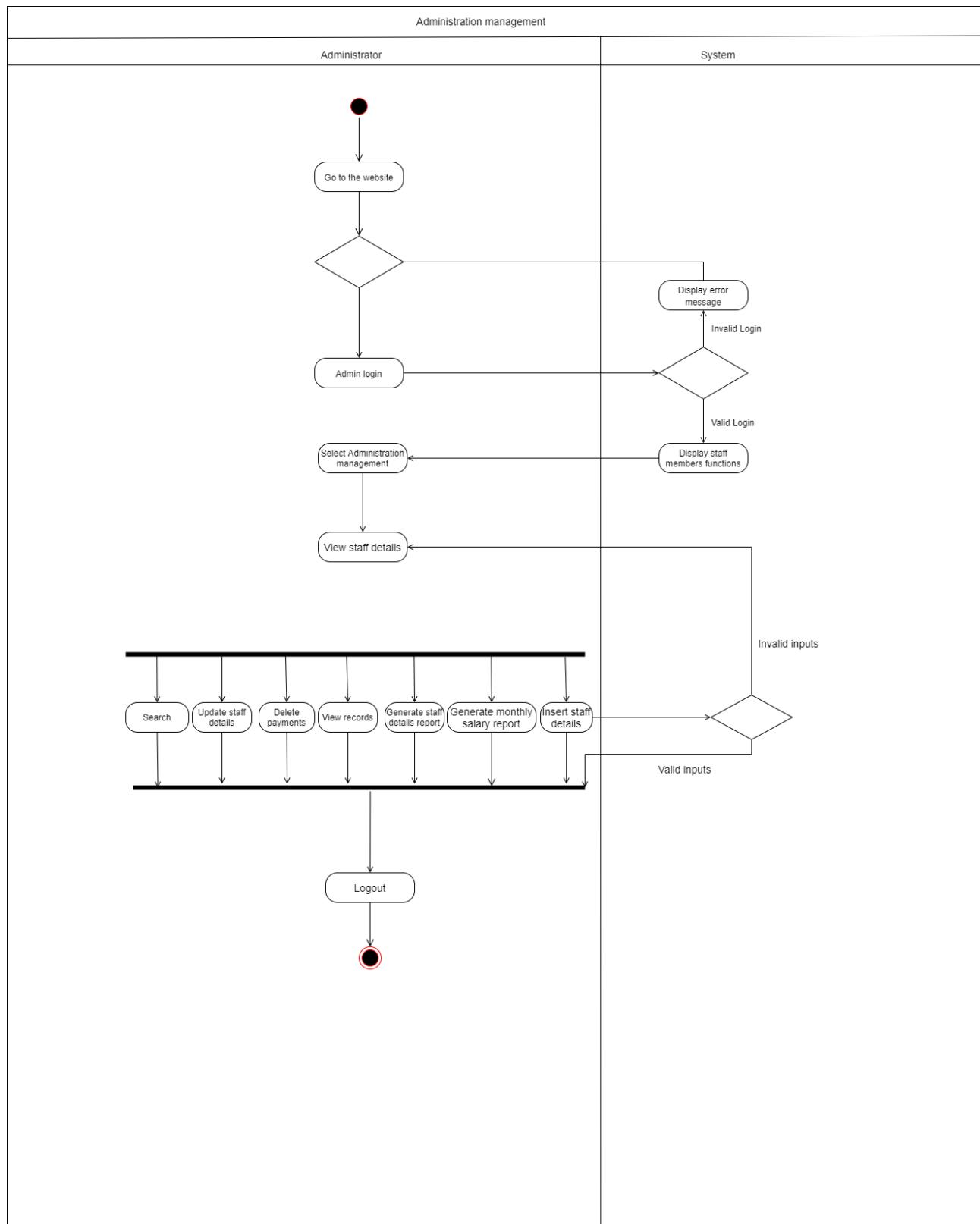


Figure 2.2.14 - Supplier management

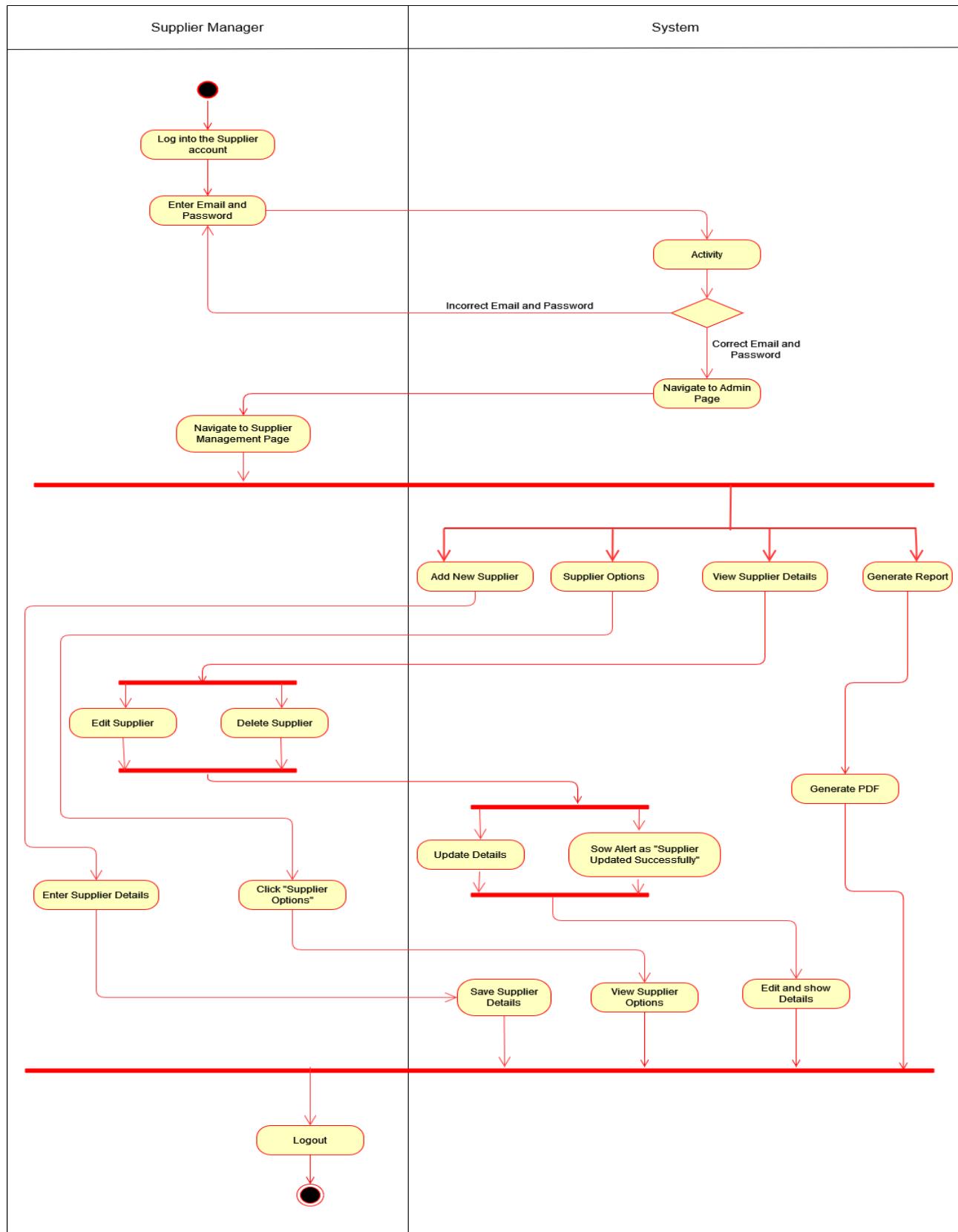


Figure 2.2.15 – High level Architecture

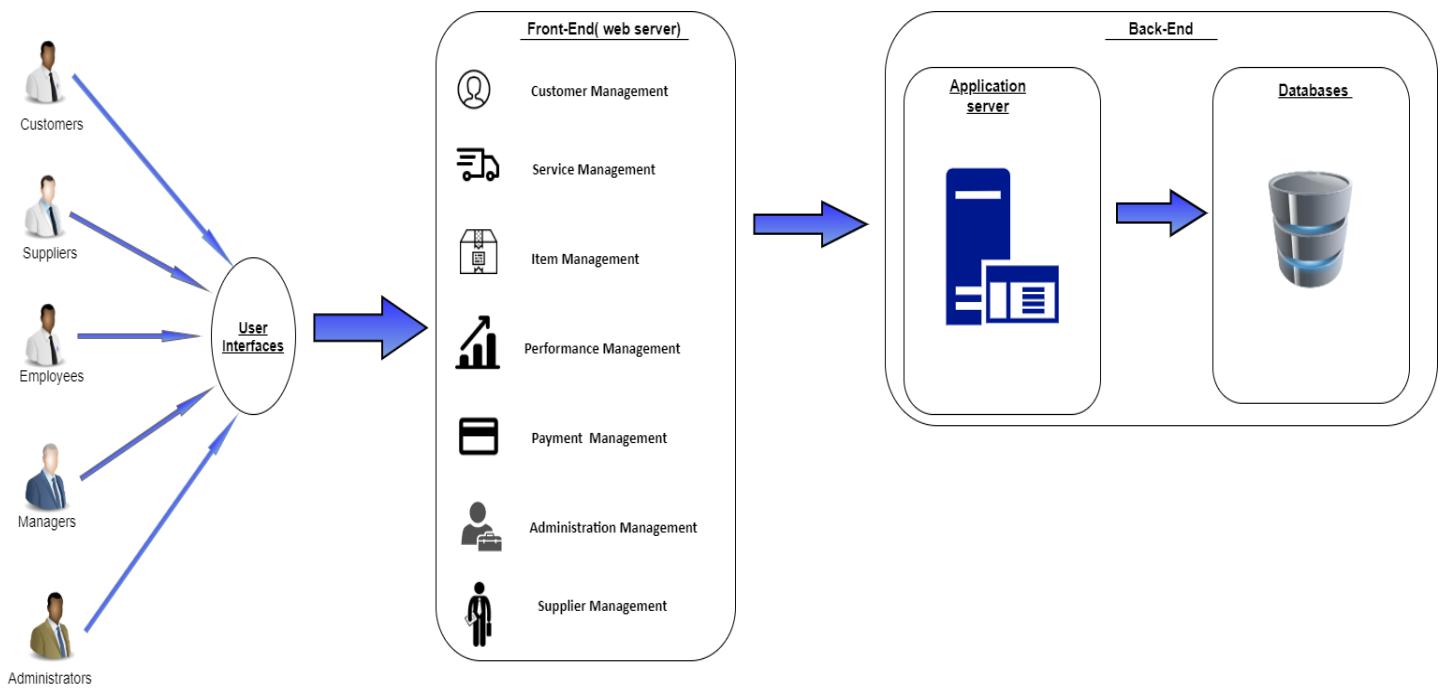


Figure 2.2.16 – Class diagram

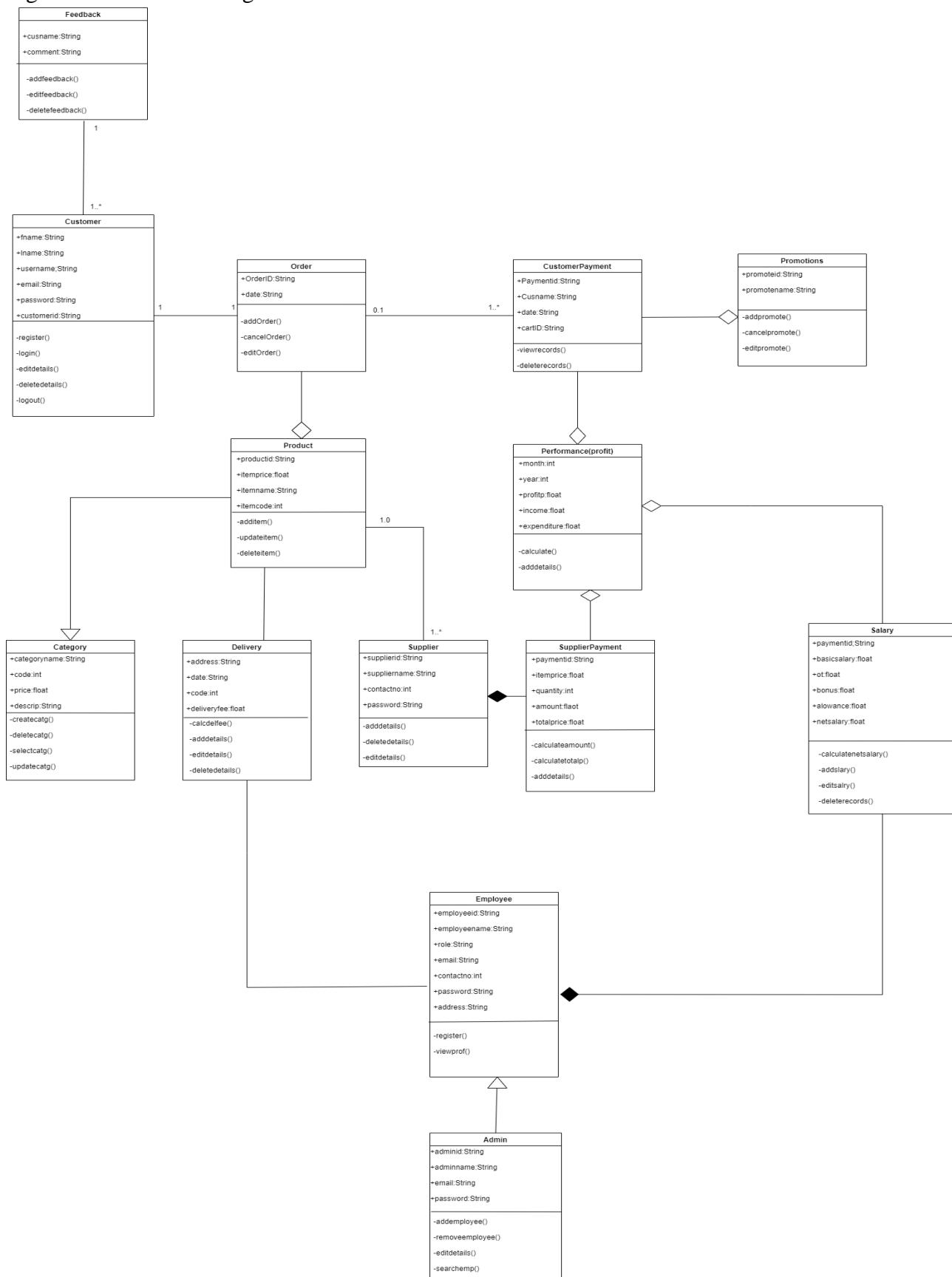
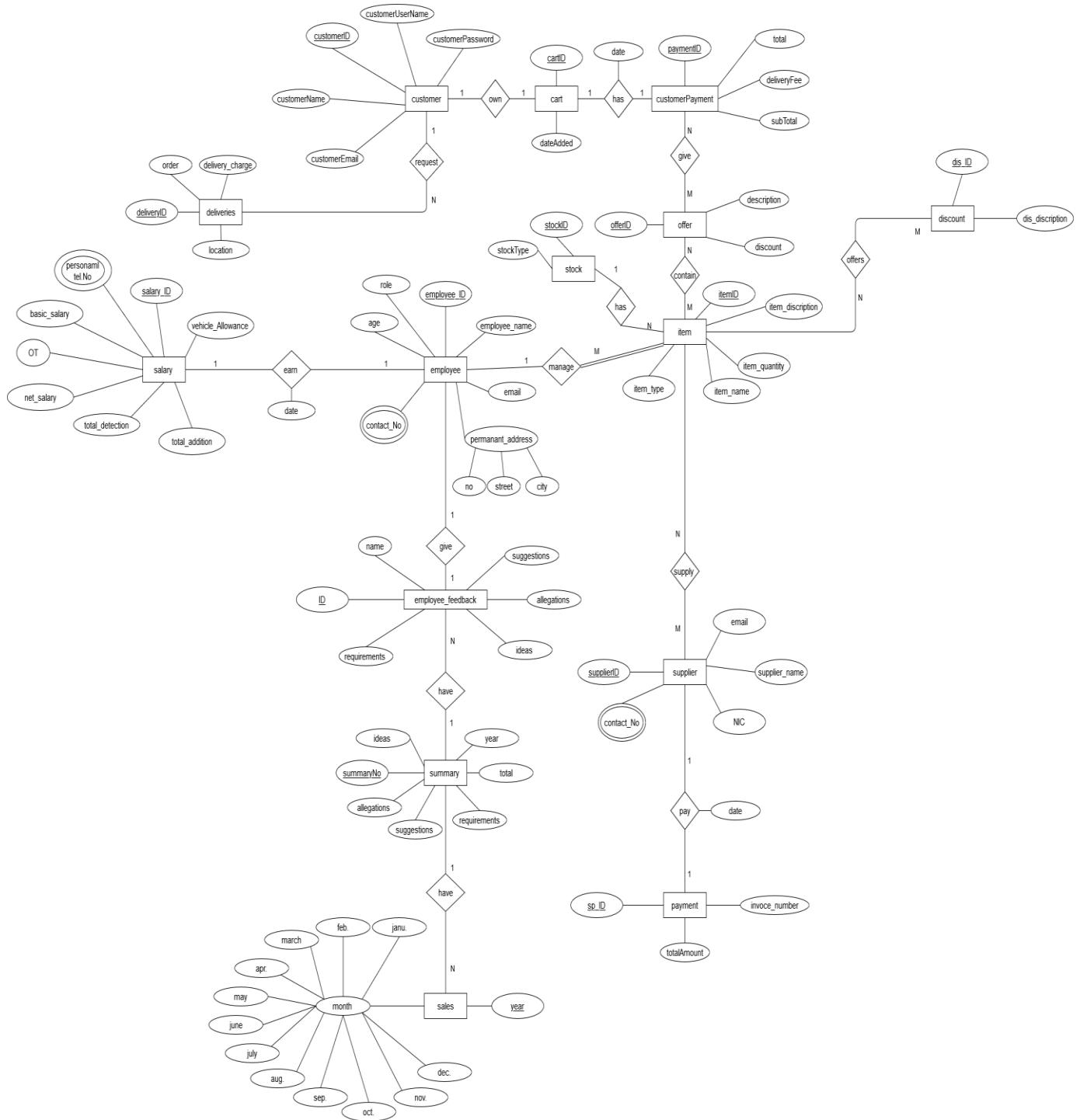


Figure 2.2.17 – ER diagram



2.2 User Interfaces

Home Figure - 2.2.17.1

The screenshot shows the homepage of the SuperMarket Management System. The URL in the browser is `localhost:3000/home`. The page features a dark header with the logo ".SuperMarket" and navigation links for HOME, PRODUCTS, ABOUT, STAFF, CART, and a user session indicator "IT20118372". Below the header is a banner with the text "Supermarket Management System" and "Welcome !!!". A descriptive paragraph encourages users to order from Sri Lanka's freshest online grocery store. A large blurred image of a supermarket aisle with a red shopping cart is centered below the text. At the bottom, a dark bar contains the text "Why You Want Us".

Customer management Figure – 2.2.18

The screenshot shows the "CUSTOMER REGISTER" page. The URL in the browser is `localhost:3000/register`. The page has a dark header with the ".SuperMarket" logo and navigation links for HOME, PRODUCTS, ABOUT, STAFF, CART, and SIGN IN. The main content area is titled "CUSTOMER REGISTER" and contains five input fields: "Name", "Email Address", "Password", "Confirm Password", and a "REGISTER" button. Below the input fields is a link to "Login".

Figure – 2.2.19

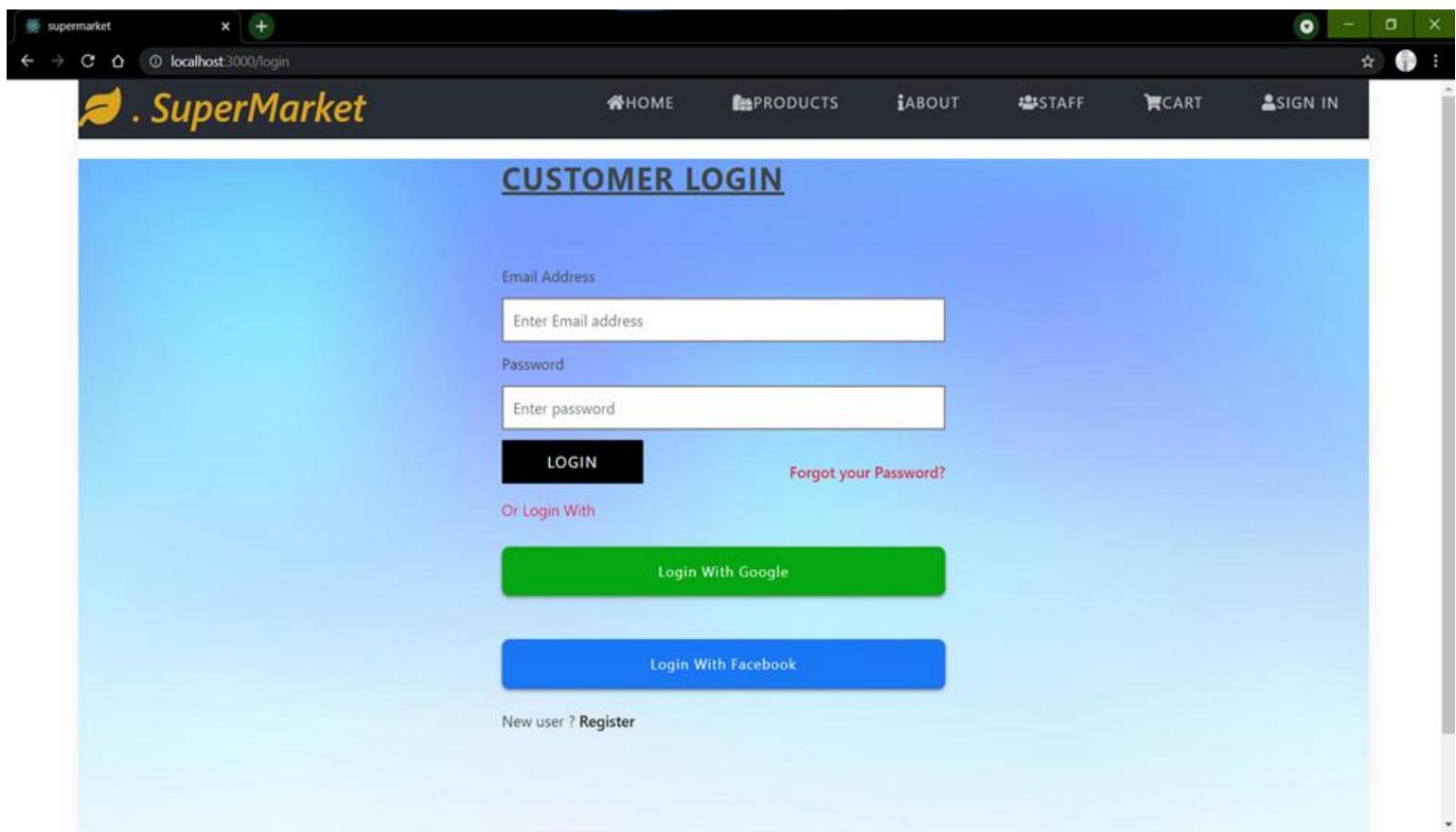


Figure - 2.2.20 (normal customer profile page view)

The screenshot shows the 'USER PROFILE' page for a user named 'Kaushalya M.K.B.'. At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, CART, and the user's name 'Kaushalya M.K.B.'. The main area has a light blue gradient background. On the left, there is a circular profile picture of the user. Below it, there are input fields for 'Your ID' (containing '61432a32554e970294a656e5') and 'Your Email' (containing 'it20118372@my.sliit.lk'). There are also fields for 'Name' (containing 'Kaushalya M.K.B.'), 'New Password', 'Confirm New Password', and 'Confirm password'. A note at the bottom states: '* you can change only the red color parts in the form..'. On the right, there is a section titled 'YOUR ROLE : USER (0)' with a table showing one user record:

ID	Name	Email	Manager	Action
61432a32554e970294a656e5	Kaushalya M.K.B.	it20118372@my.sliit.lk	X	

Below this table, there is a section titled 'Edit Other Users' with the note 'This will only work if you are a manager of user management'. It contains a table with columns for ID, Name, Email, Manager, and Action.

Figure – 2.2.21 (customer manager profile page view)

The screenshot shows the 'ADMIN PROFILE' section of the SuperMarket application. On the left, there is a circular profile picture of a man. Below it, the 'Your ID' field is highlighted in green and contains the value '61432a32554e970294a656e5'. The 'Your Email' field is also highlighted in green and contains 'it20118372@my.sliit.lk'. Other fields like 'Name' (IT20118372), 'New Password', 'Confirm New Password', and 'Confirm password' are shown in light orange. A note at the bottom states: '* you can change only the red color parts in the form.' To the right, under 'YOUR ROLE : USER MANAGER (1)', there is a table with columns: ID, Name, Email, Manager, and Action. The table contains one row with the values: '61432a32554e970294a656e5', 'IT20118372', 'it20118372@my.sliit.lk', checked 'Manager', and a red 'Delete' icon. A search bar at the top right says 'Search Type to search...'. Below the table, another section titled 'Edit Other Users' is visible, with a note: 'This will only work if you are a manager of user management'. It contains a similar table with several rows of user data.

Figure – 2.2.22 (report print preview – normal customer view)

The screenshot shows a report print preview titled 'User report'. A message at the top left says 'This is only a preview. Select "generate report" button for more...'. The main content area is titled 'My data' and contains a table with columns: ID, Name, Email, and Your Role(0,1). The table has one row with the values: '61432a32554e970294a656e5', 'Kaushalya M.K.B.', 'it20118372@my.sliit.lk', and 'User'. Below this, a section titled 'Other details' contains another table with columns: ID, Name, Email, and Status. This table is currently empty. To the right of the preview, a purple rectangular button labeled 'GENARATE REPORT .pdf' is overlaid on a large green graphic of overlapping curved shapes.

Figure – 2.2.23 (report print preview – customer manager)

This is only a preview. Select "generate report" button for more...

User report

My data

ID	Name	Email	Your Role(0,1)
61432a32554e970294a656e5	IT20118372	it20118372@my.sliit.lk	Manager

Other details

ID	Name	Email	Status
61432a32554e970294a656e5	IT20118372	it20118372@my.sliit.lk	Manager
615e5f0bb618ed241808d96c	kaushalya mkb	mkbkaushalya@gmail.com	Manager
615e6492b618ed241808d978	Sumanasiri	supermarket.project.itp.2021@gmail.com	Manager
615e663bb618ed241808d97e	Nimal	my.itp.project.version.2.extra@gmail.com	User
615e6825b618ed241808d994	supun	kshalya20@gmail.com	User

GENARATE REPORT .

Figure – 2.2.24 (pdf generating – normal customer view)

Click Printer Icon To Print This Out ...

My data

ID	61432a32554e970294a656e5
Current Email	it20118372@my.sliit.lk
Name	Kaushalya M.K.B.
Status	User

Other Details
Only for User Managers

ID	Name	Email	Status
----	------	-------	--------

Figure 2.2.25 (pdf generating – customer manager view)

The screenshot shows a web browser window with a title bar "supermarket" and a URL "localhost:3000/PrintCus". The main content area displays a PDF print preview. At the top center is a printer icon with the text "Click Printer Icon To Print This Out ...". Below it is a section titled "My data" containing a table with four rows:

ID	61432a32554e970294a656e5		
Current Email	it20118372@my.sliit.lk		
Name	IT20118372		
Status	Manager		

Below this is a section titled "Other Details" with the sub-instruction "Only for User Managers". It contains another table with three rows:

ID	Name	Email	Status
61432a32554e970294a656e5	IT20118372	it20118372@my.sliit.lk	Manager
615e5f0bb618ed241808d96c	kaushalya mkb	mkbkaushalya@gmail.com	Manager

Service Management Figure – 2.2.26

Past Delivery orders

SEARCH DELIVERIES

Orders Report

Delivery ID	Cart ID	Delivery Location	Delivery Cost	Delivery Date	customer ID	Action
1	CID20	Galle	210	2020/01/22	ID40	 Update  Delete
2	CID22	Matara	350	2020/06/20	ID43	 Update  Delete
3	CID25	Hambanthota	220	2020/08/21	ID46	 Update  Delete
4	CID26	Malabe	270	2021/07/14	ID50	 Update  Delete
5	CID30	Kalutara	300	2021/01/14	ID60	 Update  Delete
6	CID33	Gampaha	310	2021/10/05	ID62	 Update  Delete

[Print as a PDF](#)

Create New Delivery

[Check Where We Deliver](#)

[Check Our New Offers](#)

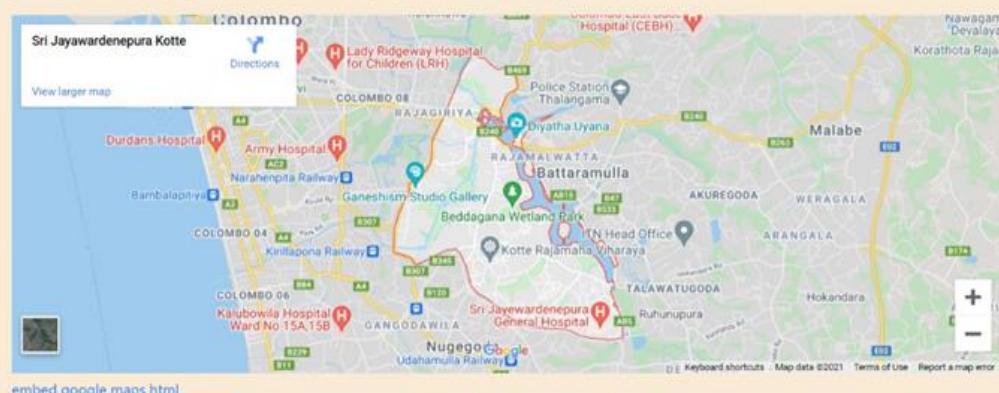


Figure – 2.2.27

. SuperMarket

HOME PRODUCTS ABOUT STAFF CART

Delivery Report

Cart ID Number	CID20
Delivery Location	Galle
Delivery Charge	210
Delivery Date	2020/01/22
Customer ID Number	ID40

This Order Fulfilment Report, one of the Ecommerce reports is crucial for keeping an eye out on customer order statuses. Essentially, "the Order Fulfilment Report provides information about customer shipments, including tracking numbers for individual packages," explains Katherine Brown from Spyic. "Hence, managers know when they have been shipped off and how many items were included in a particular shipment." Having this information at hand is critical for solving any customer queries related to shipping and returns that may come in. This report is also important for those of you who are aiming to improve customer experience by offering free and fast delivery – something that 79.3% say is important to them with 28.6% admitting delivery dates influence their buying decisions. with 28.6% admitting delivery dates influence their buying decisions.

[Print as a PDF](#)

Order Status

Your order has successfully reached to destination location, Galle on 2020/01/22 before 17:30 on our working time.
Thank You.

Figure – 2.2.28

The screenshot shows the 'Place Your Delivery Order' page. At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. Below the navigation, there is a promotional banner for NESCAFÉ GOLD coffee, featuring three cans of Nescafé Gold and a woman reading a book while holding a cup of coffee. The main form area contains fields for Cart ID Number, Delivery Location, Delivery Cost, Delivery Date, and Customer ID Number, each with an associated input field. A green 'Make Order' button is located at the bottom of the form.

Figure – 2.2.29

The screenshot shows the 'Update Delivery' page. The top navigation bar is identical to Figure 2.2.28. The main content area features a large illustration of a delivery person on a scooter navigating through a city map on a smartphone screen. Below the illustration are five input fields for Cart ID Number (CID20), Delivery Location (Galle), Delivery Cost (210), Delivery Date (2020/01/22), and Customer ID Number (ID40). A green 'Update Details' button is positioned at the bottom of the form. At the very bottom of the page, there is a promotional banner for Coca-Cola Zero, which includes the text 'SHARE THE TASTE OF COKE NO SUGAR', 'Tried it yet?', and a 'SHOP NOW' button.

Figure – 2.2.30

The screenshot shows a PDF document titled "Orders Report". The table has columns: Delivery ID, Cart ID, Delivery Location, Delivery Cost, Delivery Date, and customer ID. The data is as follows:

Delivery ID	Cart ID	Delivery Location	Delivery Cost	Delivery Date	customer ID
1	CID20	Galle	210	2020/01/22	ID40
2	CID22	Matara	350	2020/06/20	ID43
3	CID25	Hambanthota	220	2020/08/21	ID46
4	CID26	Malabe	270	2021/07/14	ID50
5	CID30	Kalutara	300	2021/01/14	ID60
6	CID33	Gampaha	310	2021/10/05	ID62

Figure – 2.2.31

The screenshot shows a PDF document titled "Delivery Report". It contains the following details:

Cart ID Number	CID26
Delivery Location	Malabe
Delivery Charge	270
Delivery Date	2021/07/14
Customer ID Number	ID50

This Order Fulfilment Report, one of the Ecommerce reports is crucial for keeping an eye out on customer order statuses. Essentially, the Order Fulfilment Report provides information about customer shipments, including tracking numbers for individual packages, "explains Katherine Brown from Spyic. "Hence, managers know when they have been shipped off and how many items were included in a particular shipment." Having this information at hand is critical for solving any customer queries related to shipping and returns that may come in. This report is also important for those of you who are aiming to improve customer experience by offering free and fast delivery – something that 79.3% say is important to them with 28.6% admitting delivery dates influence their buying decisions.

Figure – 2.2.32

The screenshot shows a web page titled "Delivery Charge Calculation". At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. Below the navigation bar, there is a message to the customer: "Dear Valued Customer, It is a great pleasure to see you standing with us for your shopping experience. We improve our services day-by-day with new strategies to make you more satisfied. Insert your Delivery Town and get know your total fee for the delivery. An additional Fee will be added as taxes and our service charge. Thank You!!!". In the center, there is a table showing delivery charges based on distance:

No of Km	Amount We Charge
Within Galle Town	Rs.200.00
Below 5 km	Rs.250.00
Between 5 - 10 km	Rs.350.00
Above 10 km	Rs.400.00

At the bottom, there is a dropdown menu labeled "Select your Delivery Town" with "Galle" selected, and a green "Submit" button.

Figure – 2.2.33

This screenshot is similar to Figure 2.2.32, showing the delivery charge calculation page. The table and dropdown menu are identical. However, a black overlay box has been placed over the bottom portion of the page, containing the following information:

Your Delivery Area is :
Galle
Total Payment =
Rs.260.00

****Rs.60.00 of a service charge is added to your total bill.**

[Click Here to Print Receipt](#)

(screenshot of the interface is captured into two parts. Otherwise the table is not displaying properly and it divides into two parts.)

Figure – 2.2.34

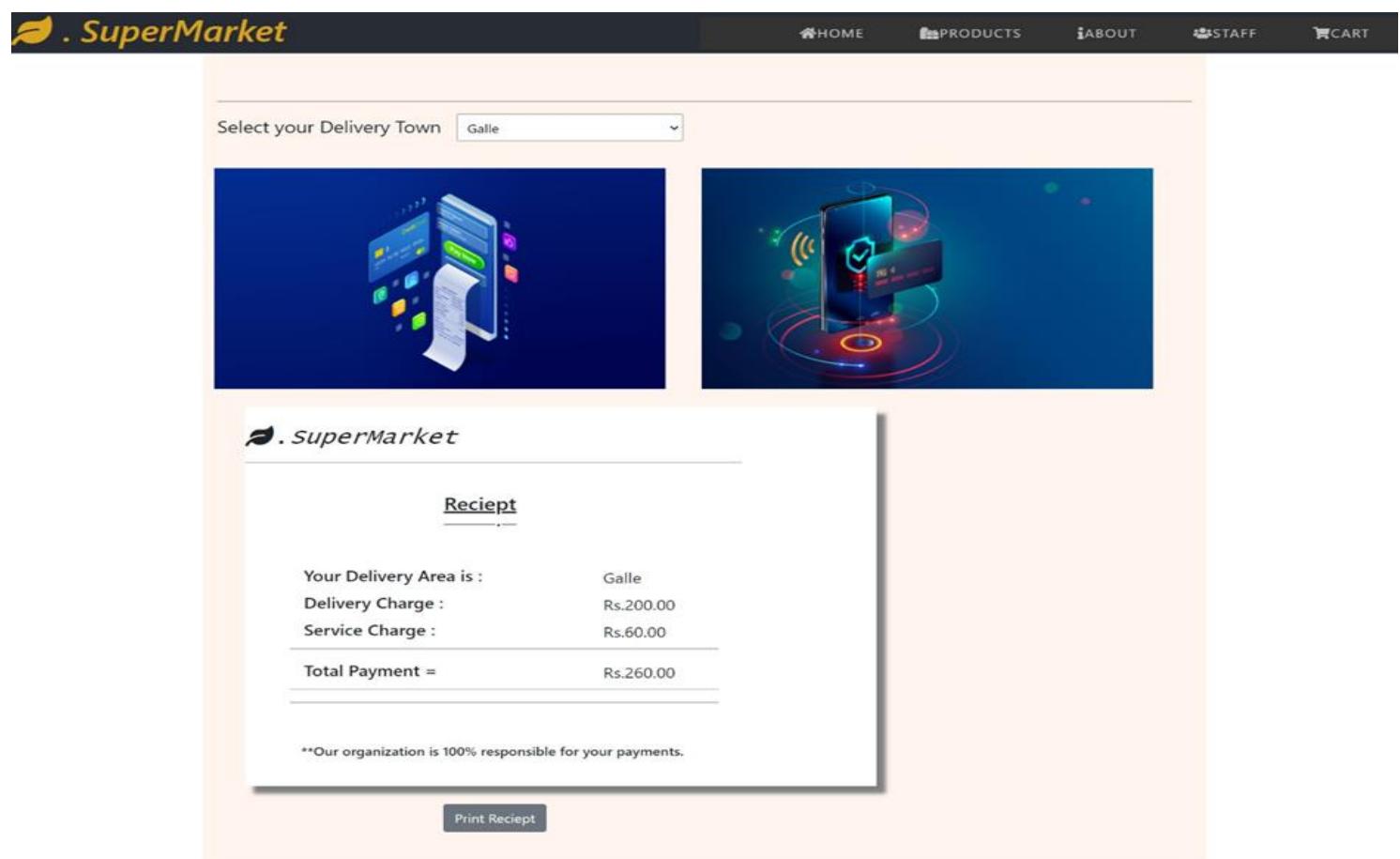


Figure – 2.2.35

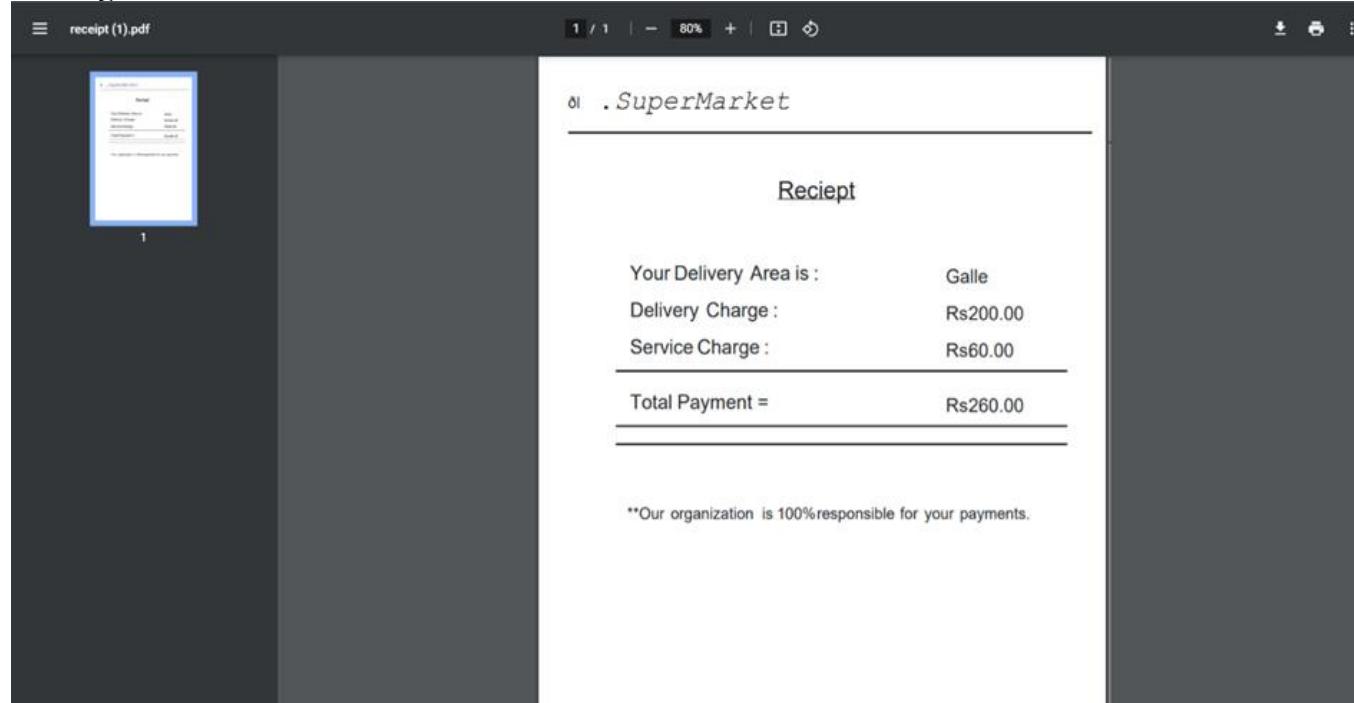


Figure – 2.2.36

The screenshot shows the 'Offerings Report' page of the SuperMarket website. At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. Below the navigation bar, there are 'Back' and 'Next' buttons. A banner says 'Enjoy Our Fascinating Offers !!'. A search bar labeled 'SEARCH OFFERS' is present. The main content is titled 'Offerings Report' and displays a table of offers:

No.	OfferID	Offer Name	Description	Action
1	OFFID10	Monthly Bakery Offers	Buy 2 medium pizzas, 1 beverage, 1 garlic bread and get 3 lava cakes free.	<input checked="" type="button"/> Update <input type="button"/> Delete
2	OFFID11	Kist Product Offers	Buy 2 units of any 1L Kist Nectar and get 240g Kist Shorties free	<input checked="" type="button"/> Update <input type="button"/> Delete
3	OFFID12	People's Bank Offer	25% off on fresh fruits, vegetables and seafood for People's Bank credit card	<input checked="" type="button"/> Update <input type="button"/> Delete
4	OFFID13	Panda Baby Product Offers	Enjoy up to 20% off on selected range of Panda Baby products.	<input checked="" type="button"/> Update <input type="button"/> Delete
5	OFFID15	Loyalty Rewards	Enjoy 50% off on the second purchase of the same product from our super market.	<input checked="" type="button"/> Update <input type="button"/> Delete
6	OFFID16	Commercial Bank Offer	Get 10% off on your total bill by using Commercial bank credit cards on every wednesday from the 6 th to the 27 th of October 2021.	<input checked="" type="button"/> Update <input type="button"/> Delete

At the bottom, there are 'Print as a PDF' and 'Create New Offer' buttons.

Figure – 2.2.37

The screenshot shows the 'Introducing A New Offer' page of the SuperMarket website. At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. Below the navigation bar, there is a 'Go Back' button. The main content is titled 'Introducing A New Offer' and features a promotional image for a 'One Day Sale' with a person pushing a shopping cart full of groceries. Below the image, there are fields for entering offer details:

- Offer ID Number:** Enter Offer ID Number
- How you name the new offer ?** Enter Offer Name
- What is about the new offer ?** Enter the description

At the bottom, there is a 'Save Offer' button.

Figure – 2.2.38

Update offer Details

Offer ID Number
OFFID10

How you name the new offer ?
Monthly Bakery Offers

What is about the new offer ?
Buy 2 medium pizzas, 1 beverage, 1 garlic bread and get 3 lava cakes free.

Update Offer

Figure – 2.2.39

Offerings Report

No.	OfferID	Offer Name	Description
1	OFFID10	Monthly Bakery Offers	Buy 2 medium pizzas, 1 beverage, 1 garlic bread and get 3 lava cakes free.
2	OFFID11	Kist Product Offers	Buy 2 units of any 1L Kist Nectar and get 240g Kist Shorties free
3	OFFID12	People's Bank Offer	25% off on fresh fruits, vegetables and seafood for People's Bank credit card
4	OFFID13	PandaBaby Product Offers	Enjoy up to 20% off on selected range of PandaBaby products.
5	OFFID15	Loyalty Rewards	Enjoy 50% off on the second purchase of the same product from our super market.
6	OFFID16	Commercial Bank Offer	Get 10% off on your total bill by using Commercial bank credit cards on every wednesday from the 6 th to the 27 th of October 2021.

Item management Figure – 2.2.40

The screenshot shows a web-based item management system for a supermarket. At the top, there's a navigation bar with a logo, 'HOME', 'PRODUCTS', 'ABOUT', 'LOGOUT', and a shopping cart icon. Below the navigation is a search bar with filters for 'All Products' and a search input field. A dropdown menu for sorting is set to 'Newest'. The main area displays a grid of fruit items:

- Apricots**: Rs.120. Description: An apricot is a small, soft, round fruit with yellowish-orange flesh... Buttons: BUY, VIEW.
- Avocado**: Rs.50. Description: The fruit of domestic varieties has a buttery flesh when ripe.... Buttons: BUY, VIEW.
- Banana**: Rs.130. Description: A banana is a curved, yellow fruit with a thick skin and soft sweet... Buttons: BUY, VIEW.
- Cherries**: Rs.55. Description: Ripe cherries are deep red and exquisitely sweet, with small... Buttons: BUY, VIEW.
- Grapes**: Rs.150. Description: Grapes are a type of fruit that grow in clusters of 15 to 300,... Buttons: BUY, VIEW.
- Kiwi**: Rs.100. Description: It has a thin, fuzzy, fibrous, tart but edible light brown skin and... Buttons: BUY, VIEW.
- Lemon**: Rs.55. Description: The lemon is a round, slightly elongated fruit, it has a strong and... Buttons: BUY, VIEW.

Below the first row, there are two more rows of items:

- Grapefruit**, **Crab**, **Fish**, **Shrimps**, **Chicken**, **Bagels**, **Bread**.

Figure – 2.2.41

This screenshot shows a detailed view of an item page for 'APRICOTS' (ID: 2). The page includes a large image of two apricots, the product name 'APRICOTS', the price 'RS.120', and a pink box containing the ID 'ID: 2'. Below the product name are sections for 'Content:' (Fresh and Ripe) and 'Description:' (An apricot is a small, soft, round fruit with yellowish-orange flesh and a large seed inside.). There are also fields for 'SOLD: 0' and a 'BUY NOW' button.

Related Products



Figure – 2.2.42

The screenshot shows a product management interface for a supermarket. At the top, there is a navigation bar with links for PRODUCTS, CREATE PRODUCT, CATEGORIES, STOCK, ABOUT, and LOGOUT. Below the navigation bar, there are search and filter options: 'Filters: All Products' with a dropdown arrow, a search input field 'Enter the name for search', and a sorting dropdown 'Sort: Newest'. There are also 'SELECT ALL' and 'DELETE ALL' buttons.

Product Image	Name	Price	Description	Actions
	Pizza	Rs.550	Pizza, dish of Italian origin consisting of a flattened disk of brea...	<button>DELETE</button> <button>EDIT</button>
	Nuts	Rs.500	Nut, in botany, dry hard fruit that does not split open at...	<button>DELETE</button> <button>EDIT</button>
	Shrimp	Rs.900	Shrimp are characterized by a semitransparent bod...	<button>DELETE</button> <button>EDIT</button>
	Baby Diaper	Rs.1000	Baby diapers are safely used every day by parents all over the...	<button>DELETE</button> <button>EDIT</button>
	Beets	Rs.65	Beetroot is the large and fleshy root growing in the plant ...	<button>DELETE</button> <button>EDIT</button>
	Crab	Rs.1497	Crabs are decapod crustaceans which have a very short tail...	<button>DELETE</button> <button>EDIT</button>
	Cookies	Rs.120	A cookie is a baked or cooked snack or dessert that is typical...	<button>DELETE</button> <button>EDIT</button>
				<button>DELETE</button> <button>EDIT</button>

Figure – 2.2.43

The screenshot shows a product creation form. On the left, there is a large input field with a red plus sign inside it. To the right, there are several input fields and buttons:

- Product_id: An input field containing a long string of numbers.
- Title: An input field.
- Price: An input field containing the value '0'.
- Description: A text area with a green 'G' icon in the bottom right corner.
- Content: A text area with a green 'G' icon in the bottom right corner.
- Category: A dropdown menu with the placeholder 'Please Select a category'.
- CREATE PRODUCT: A black button.

Figure 2.2.44

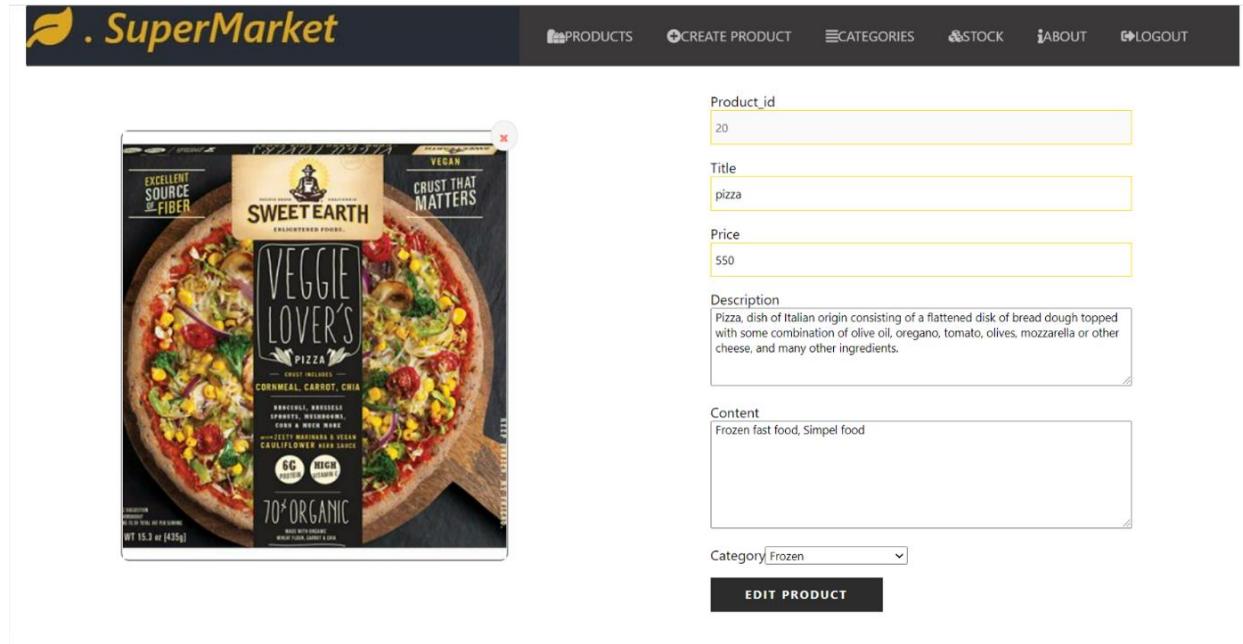


Figure – 2.2.45

The screenshot shows a category management interface for a supermarket. At the top, there is a navigation bar with links for PRODUCTS, CREATE PRODUCT, CATEGORIES, STOCK, ABOUT, and LOGOUT. Below the navigation bar, there is a section titled 'CATEGORY' with a 'Save' button. To the right, there is a list of categories, each with an 'Edit' and 'Delete' button:

CATEGORY	Actions
Baby	Edit Delete
Bakery	Edit Delete
Baking	Edit Delete
Breakfast	Edit Delete
Cans and Jars	Edit Delete
Cleaning	Edit Delete
Drinks	Edit Delete
Frozen	Edit Delete
Fruits	Edit Delete
Meat	Edit Delete

Figure - 2.2.46

The screenshot shows the 'Categories' section of the SuperMarket application. At the top, there is a navigation bar with links for PRODUCTS, CREATE PRODUCT, CATEGORIES, STOCK, ABOUT, and LOGOUT. Below the navigation bar, the word 'CATEGORY' is displayed in bold capital letters. A dropdown menu labeled 'Fresh Flowers' is open. A black 'Update' button is positioned below the dropdown menu. To the right, there is a grid of categories, each represented by a small icon and a table row with 'Edit' and 'Delete' buttons.

Category	Action	Action
Baby	Edit	Delete
Bakery	Edit	Delete
Baking	Edit	Delete
Breakfast	Edit	Delete
Cans and Jars	Edit	Delete
Cleaning	Edit	Delete
Drinks	Edit	Delete
Frozen	Edit	Delete
Fruits	Edit	Delete
Meat	Edit	Delete

Figure – 2.2.47

The screenshot shows the 'Fruits' page of the SuperMarket application. At the top, there is a navigation bar with links for PRODUCTS, CREATE PRODUCT, CATEGORIES, STOCK, ABOUT, and LOGOUT. Below the navigation bar, there are filters for 'Filters: Fruits' and a search bar with placeholder text 'Enter the name for search'. There is also a 'Sort: Newest' dropdown and a 'SELECT ALL' checkbox with a 'DELETE ALL' button.

Apricots Rs.120 An apricot is a small, soft, round fruit with yellowish-orange flesh...	Avocado Rs.50 The fruit of domestic varieties has a buttery flesh when ripe....	Banana Rs.130 A banana is a curved, yellow fruit with a thick skin and soft sweet...	Cherries Rs.55 Ripe cherries are deep red and exquisitely sweet, with small...	Grapes Rs.150 Grapes are a type of fruit that grow in clusters of 15 to 300...	Kiwi Rs.100 It has a thin, fuzzy, fibrous, tart but edible light brown skin and...	Lemon Rs.55 The lemon is a round, slightly elongated fruit, it has a strong and...
--	--	---	---	---	---	---

Below the main grid, there is a partial view of another fruit category.

Figure – 2.2.49

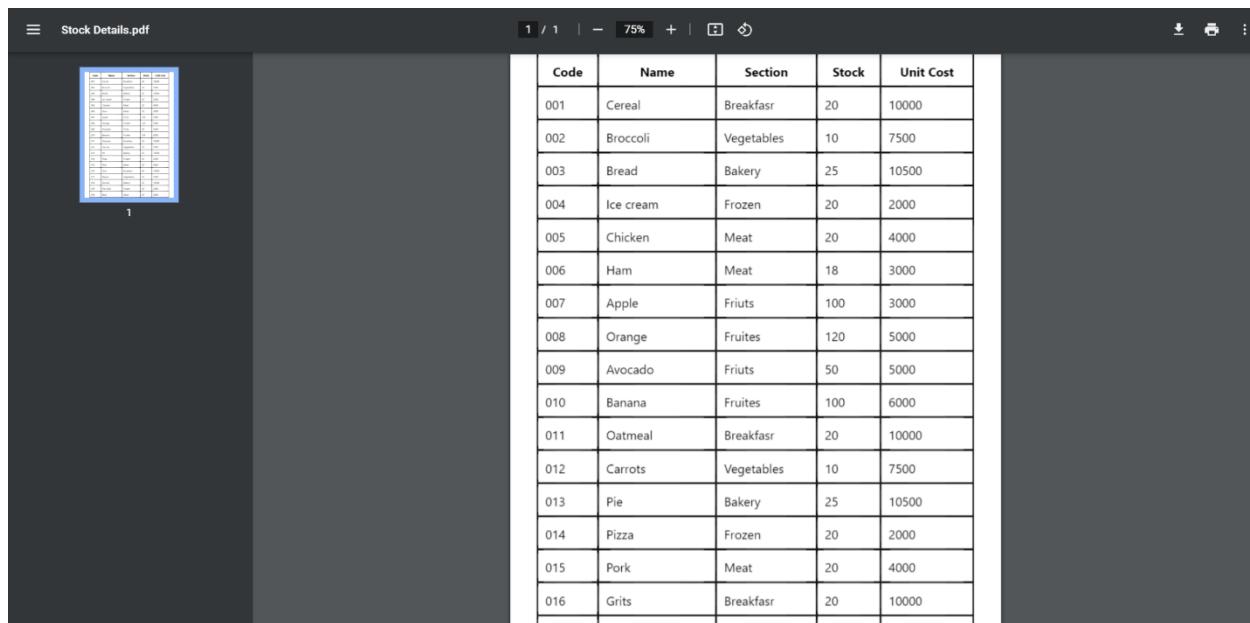
The screenshot shows a web application interface for a supermarket. At the top, there is a navigation bar with links for PRODUCTS, CREATE PRODUCT, CATEGORIES, STOCK, ABOUT, and LOGOUT. Below the navigation bar, there are search filters: 'Filters: All Products' with a dropdown arrow, a search input field containing 'pizza', and a 'Sort: Newest' dropdown. There are also 'SELECT ALL' and 'DELETE ALL' buttons. The main content area displays a single product item: a pizza from 'SWEET EARTH' with 'VEGGIE TOPPINGS'. The product details are: Name: Pizza, Price: Rs.550, Description: Pizza, dish of Italian origin consisting of a flattened disk of brea... Below the product details are two buttons: 'DELETE' and 'EDIT'.

Figure – 2.2.50

The screenshot shows a web application interface for a supermarket. At the top, there is a navigation bar with links for PRODUCTS, CREATE PRODUCT, CATEGORIES, STOCK, ABOUT, and LOGOUT. Below the navigation bar, there is a 'Print Data' button. The main content area displays a table of 13 products. The table has columns for Code, Name, Section, Stock, and Unit Cost. The data is as follows:

Code	Name	Section	Stock	Unit Cost
001	Cereal	Breakfasr	20	10000
002	Broccoli	Vegetables	10	7500
003	Bread	Bakery	25	10500
004	Ice cream	Frozen	20	2000
005	Chicken	Meat	20	4000
006	Ham	Meat	18	3000
007	Apple	Fruits	100	3000
008	Orange	Fruites	120	5000
009	Avocado	Fruits	50	5000
010	Banana	Fruites	100	6000
011	Oatmeal	Breakfasr	20	10000
012	Carrots	Vegetables	10	7500
013	Pie	Bakery	25	10500

Figure – 2.2.51



The screenshot shows a PDF document titled "Stock Details.pdf". The table contains 16 rows of data, each representing a different item with its code, name, section, stock level, and unit cost.

Code	Name	Section	Stock	Unit Cost
001	Cereal	Breakfasr	20	10000
002	Broccoli	Vegetables	10	7500
003	Bread	Bakery	25	10500
004	Ice cream	Frozen	20	2000
005	Chicken	Meat	20	4000
006	Ham	Meat	18	3000
007	Apple	Fruits	100	3000
008	Orange	Fruites	120	5000
009	Avocado	Fruits	50	5000
010	Banana	Fruites	100	6000
011	Oatmeal	Breakfasr	20	10000
012	Carrots	Vegetables	10	7500
013	Pie	Bakery	25	10500
014	Pizza	Frozen	20	2000
015	Pork	Meat	20	4000
016	Grits	Breakfasr	20	10000

Payment Management Figure – 2.2.52

Figure - 2.2.53

Index	Employee Name	Employee Role	Action
1	Mithun Madeeshan	Admin	Insert
2	Hiruni Mudannayake	PaymentManager	Insert
3	Navindu Adikari	dbSupplier	Insert
4	Manthila Nethmi	serviceManager	Insert
5	Malith Dayanga	Performance Manager	Insert
6	Sadisha Sumeera	dbDeveloper	Insert
7	Nuwan	dbDeveloper	Insert
8	Mithun nuwan	dbDeveloper	Insert

Figure – 2.2.54

Enter Payment ID (eg:EP01892389)

Enter Basic Salary

Enter OT Hour Charges

Enter Vehicle Allowance

Enter Bonus Charges

Enter Insurance charges

Enter Transport Charges

Do not keep the fields empty/ if there is no value please enter 0

Calculate
Netsalary

save

Figure – 2.2.55

*Payment ID cannot be Null

*Basic Salary cannot be Null

*OT charges cannot be Null

*Vehicle Allowance cannot be Null

*Bonus Charges cannot be Null

*Insurance Charges cannot be Null

*Transport Charges cannot be Null

Enter Payment ID (eg:EP01892389)

Enter Basic Salary

Enter OT Hour Charges

Enter Vehicle Allowance

Enter Bonus Charges

Enter Insurance charges

Enter Transport Charges

Do not keep the fields empty/ if there is no value please enter 0

Calculate
Netsalary

save

Figure – 2.2.56

The screenshot shows a web application interface for managing employee payments. At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. Below the navigation bar, the title "Employee Payment Summary" is displayed. A dropdown menu labeled "Select Month" shows "January". The main content area contains a table with 8 rows of payment data. Each row includes columns for PaymentID, Basic Salary (Rs), OT (Rs), Allowance (Rs), Bonus (Rs), Insurance (Rs), Transport (Rs), NetSalary (Rs), and Action (with Edit and Delete buttons). The table data is as follows:

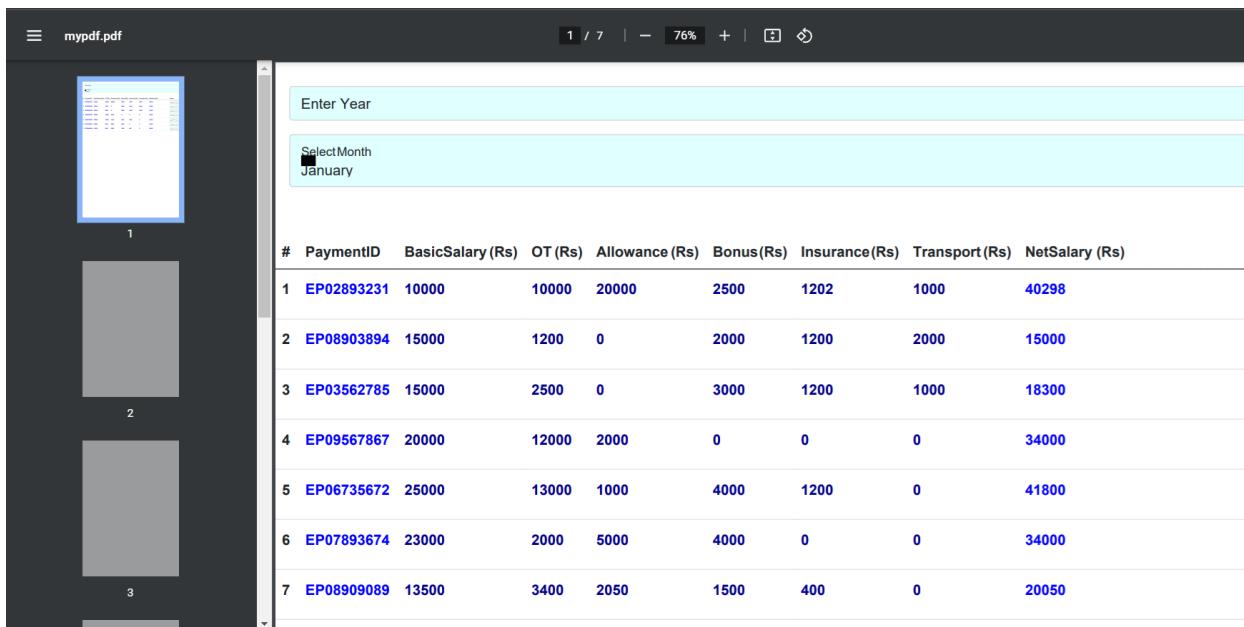
#	PaymentID	Basic Salary (Rs)	OT (Rs)	Allowance (Rs)	Bonus (Rs)	Insurance (Rs)	Transport (Rs)	NetSalary (Rs)	Action
1	EP02893231	10000	10000	20000	2500	1202	1000	40298	<input checked="" type="button"/> Edit <input type="button"/> Delete
2	EP08903894	15000	1200	0	2000	1200	2000	15000	<input checked="" type="button"/> Edit <input type="button"/> Delete
3	EP03562785	15000	2500	0	3000	1200	1000	18300	<input checked="" type="button"/> Edit <input type="button"/> Delete
4	EP09567867	20000	12000	2000	0	0	0	34000	<input checked="" type="button"/> Edit <input type="button"/> Delete
5	EP06735672	25000	13000	1000	4000	1200	0	41800	<input checked="" type="button"/> Edit <input type="button"/> Delete
6	EP02893674	23000	2000	5000	4000	0	0	34000	<input checked="" type="button"/> Edit <input type="button"/> Delete
7	EP07893674	23000	2000	5000	4000	0	0	34000	<input checked="" type="button"/> Edit <input type="button"/> Delete
8	EP08909089	13500	3400	2050	1500	400	0	20050	<input checked="" type="button"/> Edit <input type="button"/> Delete

At the bottom left of the table area, there is a button labeled "Print the Report".

Figure – 2.2.57

The screenshot shows a modal dialog titled "Update Salary". It contains several input fields for basic salary, OT, allowance, bonus, insurance, and transport, each with a value of 10000. Below these fields is a note: "Do not keep the fields empty/ if there is no value please enter 0". A blue button labeled "Calculate Netsalary" displays the result "40298". At the bottom right of the modal is a green "save" button.

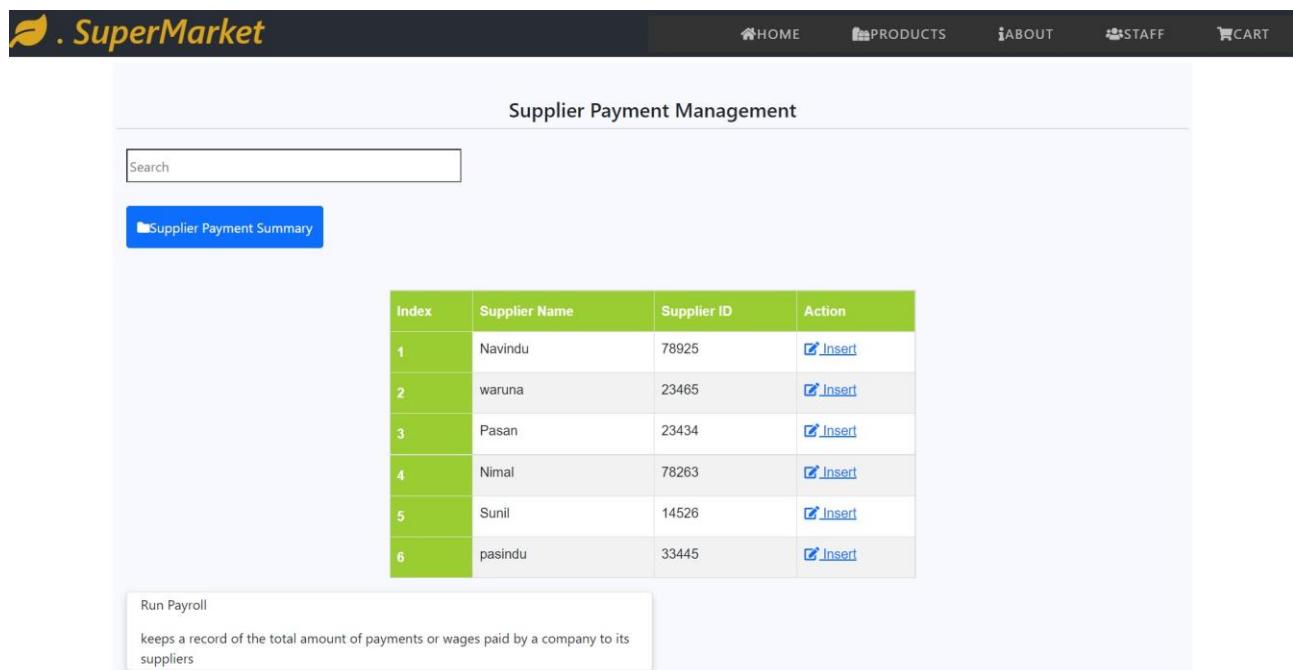
Figure – 2.2.58



The screenshot shows a PDF document titled "mypad.pdf". At the top, there are navigation controls: a menu icon, page numbers (1 / 7), zoom levels (76%), and other icons. Below the header, there is a form with fields for "Enter Year" and "Select Month" (set to January). To the left of the main content area, there are three numbered callout boxes (1, 2, 3) pointing to different parts of the interface.

#	PaymentID	BasicSalary (Rs)	OT (Rs)	Allowance (Rs)	Bonus(Rs)	Insurance(Rs)	Transport (Rs)	NetSalary (Rs)
1	EP02893231	10000	10000	20000	2500	1202	1000	40298
2	EP08903894	15000	1200	0	2000	1200	2000	15000
3	EP03562785	15000	2500	0	3000	1200	1000	18300
4	EP09567867	20000	12000	2000	0	0	0	34000
5	EP06735672	25000	13000	1000	4000	1200	0	41800
6	EP07893674	23000	2000	5000	4000	0	0	34000
7	EP08909089	13500	3400	2050	1500	400	0	20050

Figure – 2.2.59



The screenshot shows a web application for "Supplier Payment Management" under the ".SuperMarket" brand. The header includes links for HOME, PRODUCTS, ABOUT, STAFF, and CART. A search bar is present at the top. Below the header, a button labeled "Supplier Payment Summary" is visible. The main content area features a table with columns for Index, Supplier Name, Supplier ID, and Action. The table contains six rows of data. At the bottom, a box contains the text "Run Payroll" and a descriptive note about payroll management.

Index	Supplier Name	Supplier ID	Action
1	Navindu	78925	Insert
2	waruna	23465	Insert
3	Pasan	23434	Insert
4	Nimal	78263	Insert
5	Sunil	14526	Insert
6	pasindu	33445	Insert

Run Payroll
keeps a record of the total amount of payments or wages paid by a company to its suppliers

Figure – 2.2.60

Insert Supplier Payment

Payment ID		
Price	Quantity	Calculate Amount1
Price	Quantity	Calculate Amount2
Price	Quantity	Calculate Amount3
Price	Quantity	Calculate Amount4
Price	Quantity	Calculate Amount5
Price	Quantity	Calculate Amount6

Do not keep the fields empty/ if there is no value please enter 0

Calculate Total

save

Figure – 2.2.61

Supplier Payment Summary

Index	Payment ID	Amount1(Rs)	Amount2(Rs)	Amount3(Rs)	Amount4(Rs)	Amount5(Rs)	Amount6(Rs)	Total(Rs)	Action
1	SP09893878	20000	4600	6250	12000	4200	144000	191050	<input checked="" type="button"/> Edit <input type="button"/> Delete
2	SP09893746	23	120000	270000	18450	23800	2250	487400	<input checked="" type="button"/> Edit <input type="button"/> Delete
3	SP09789876	23	23	14000	270000	43500	87000	417329	<input checked="" type="button"/> Edit <input type="button"/> Delete
4	S09093456	40000	73500	30000	42000	140000	12000	337500	<input checked="" type="button"/> Edit <input type="button"/> Delete
5	SP7387823	120	96	78	48	276	144	762	<input checked="" type="button"/> Edit <input type="button"/> Delete

Print the Report

Figure – 2.2.62

The screenshot shows a web-based application for managing supplier payments. At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. The main content area is titled "Edit Supplier Payment". It displays six rows of payment data, each consisting of two input fields (Amount1 and Amount2) and a calculated amount. The calculated amounts are: 20000, 4600, 6250, 12000, 4200, and 144000. Below these rows is a large blue button labeled "Calculate Total" with the value 191050. At the bottom right is a green "save" button with a checked checkbox.

Index	Payment ID	Amount1(Rs)	Amount2(Rs)	Amount3(Rs)	Amount4(Rs)	Amount5(Rs)	Amount6(Rs)	Total(Rs)
1	SP09893878	20000	4600	6250	12000	4200	144000	191050
2	SP09893746	23	120000	270000	18450	23800	2250	487400
3	SP09789876	23	23	14000	270000	43500	87000	417329
4	S09093456	40000	73500	30000	42000	140000	12000	337500
5	SP7387823	120	96	78	48	276	144	762

Figure – 2.2.63

The screenshot shows a PDF document titled "mypdf (1).pdf". The document contains a table with payment data. The table has columns for Index, Payment ID, Amount1(Rs), Amount2(Rs), Amount3(Rs), Amount4(Rs), Amount5(Rs), Amount6(Rs), and Total(Rs). The data from the table in Figure 2.2.62 is present in the PDF, along with additional rows. The PDF viewer interface includes a sidebar with page numbers 1 and 2, and a toolbar at the top with zoom and orientation controls.

Index	Payment ID	Amount1(Rs)	Amount2(Rs)	Amount3(Rs)	Amount4(Rs)	Amount5(Rs)	Amount6(Rs)	Total(Rs)
1	SP09893878	20000	4600	6250	12000	4200	144000	191050
2	SP09893746	23	120000	270000	18450	23800	2250	487400
3	SP09789876	23	23	14000	270000	43500	87000	417329
4	S09093456	40000	73500	30000	42000	140000	12000	337500
5	SP7387823	120	96	78	48	276	144	762

Figure – 2.2.64

The screenshot shows the 'Customer Payment Summary' page of the SuperMarket application. At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. Below the navigation bar, there is a search bar with fields for 'Enter Year' and 'Select Month' (set to January). The main content area displays a table of customer payment records:

#	Customer Name	Customer Payment ID	Cart ID	Total (Rs)	Action
1	Pasan Janaka	CP54536725	C83937	11250	<button>Delete</button>
2	Nimal Perera	CP5826725	C87675	10890	<button>Delete</button>
3	Kmani Botheju	CP63756445	C86374	7500	<button>Delete</button>
4	Jeewan Amarasinghe	CP68935654	C89378	2390	<button>Delete</button>
5	Priya Mandakini	CP73675643	C35674	8990	<button>Delete</button>
6	Gunasena Silva	CP8931212	C32224	1890	<button>Delete</button>

At the bottom left of the table, there is a button labeled 'Print the Report'.

Figure – 2.2.65

The screenshot shows the 'mfpdf (2).pdf' document in a PDF viewer. The document contains the same search fields and customer payment table as Figure 2.2.64. On the left side of the viewer, there is a sidebar with three numbered sections: 1, 2, and 3. The first section shows a preview of the first page, the second shows a preview of the second page, and the third shows a preview of the third page.

#	Customer Name	Customer Payment ID	Cart ID	Total (Rs)
1	PasanJanaka	CP54536725	C83937	11250
2	Nimal Perera	CP5826725	C87675	10890
3	Kmani Botheju	CP63756445	C86374	7500
4	Jeewan Amarasinghe	CP68935654	C89378	2390
5	Priya Mandakini	CP73675643	C35674	8990
6	Gunasena Silva	CP8931212	C32224	1890

Administration management Figure – 2.2.66

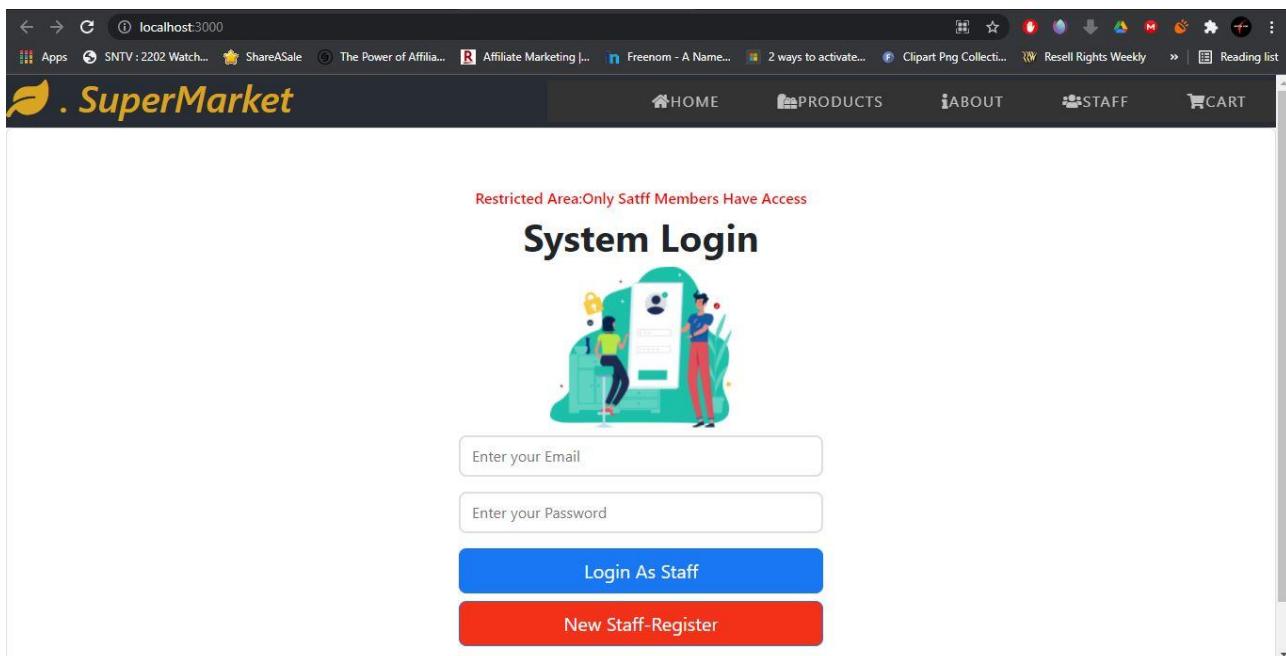


Figure – 2.2.67

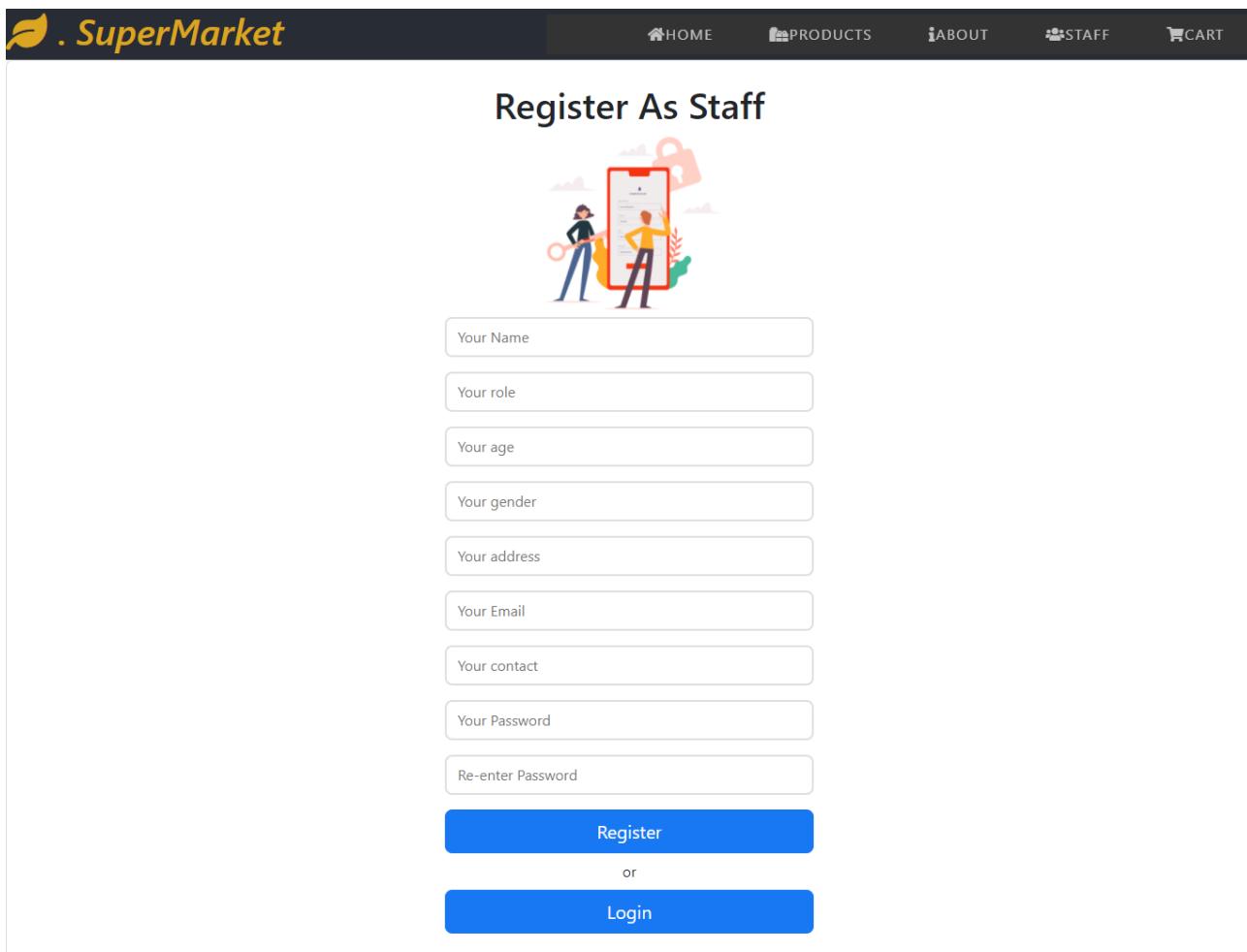


Figure – 2.2.68

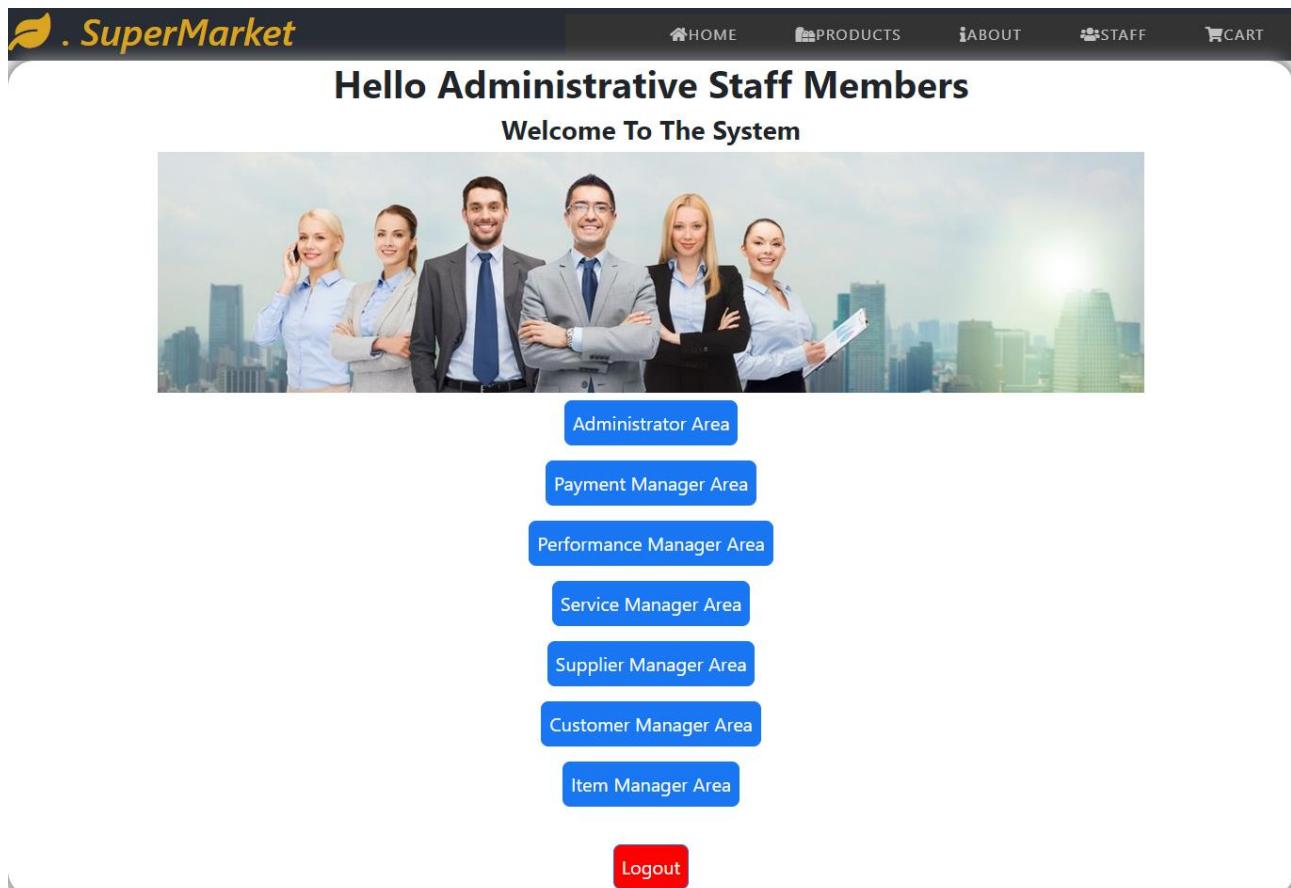


Figure – 2.2.69

The screenshot shows the "All Staff Members" page. At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. A search bar labeled "Search By Name" is located on the right side of the header. The main content area displays a table titled "All Staff Members" with the following columns: No, Name, Role, Age, Gender, Address, Email, Contact No, and Action. The table lists eight staff members with their details and action buttons for update and delete. Below the table is a black button labeled "Create A New Administrative User" and another black button labeled "Staff Payment Summary". At the bottom left is a red "Create pdf" button.

No	Name	Role	Age	Gender	Address	Email	Contact No	Action
1	Mithun Madeeshan	Admin	27	Male	mithunariyarakthna123@gmail.com	166/3, 3rd lane, Melwaththa, Wariyapola	+0985632445	<button>Update</button> <button>Delete</button>
2	Hiruni Mudannayake	PaymentManager	25	Female	mudannayakehiruni@gmail.com	Nugegoda	0704537222	<button>Update</button> <button>Delete</button>
3	Navindu Adikari	dbSupplier	21	Male	navinduviksura@gmail.com	164,gasp, bandura goda	0712478077	<button>Update</button> <button>Delete</button>
4	Manthila Nethmi	serviceManager	20	female	gwmanthila@gmail.com	galle	0771234567	<button>Update</button> <button>Delete</button>
5	Malith Dayanga	Performance Manager	22	male	malithdayanga00@gmail.com	235, Debahera, Nittambua.	0710101136	<button>Update</button> <button>Delete</button>
6	Sadisha Sumeera	dbDeveloper	20	Male	sadisha123@gmail.com	155/3, colombo 7	0112566566	<button>Update</button> <button>Delete</button>
7	Nuwan	dbDeveloper	19	Male	mithun123@gmail.com	166/3, Melwaththa, Wariyapola	+0985632445	<button>Update</button> <button>Delete</button>
8	Mithun nuwan	dbDeveloper	19	Male	mithun1234@gmail.com	166/3,	+0985634562	<button>Update</button> <button>Delete</button>

Figure – 2.2.70

The screenshot shows a web page titled "Insert New Staff Member Details". At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. The main content area contains seven input fields labeled Name, UserRole, Age, Gender, Email, Address, and ContactNo. Below these fields is a password input field labeled "Admin Declared Password". At the bottom right of the form is a green button labeled "save" with a checked checkbox.

Name	<input type="text"/>
UserRole	<input type="text"/>
Age	<input type="text"/>
Gender	<input type="text"/>
Email	<input type="text"/>
Address	<input type="text"/>
ContactNo	<input type="text"/>
Admin Declared Password	<input type="password"/>
<input checked="" type="checkbox"/> save	

Figure – 2.2.71

The screenshot shows a web page titled "Update User Details". At the top, there is a navigation bar with links for HOME, PRODUCTS, ABOUT, STAFF, and CART. The main content area contains seven input fields labeled Name, UserRole, Age, Gender, Email, Address, and ContactNo. The Name field contains "Mithun Madeeshan", the UserRole field contains "Admin", the Age field contains "27", the Gender field contains "Male", the Email field contains "mithunarilyarathna123@gmail.com", the Address field contains "166/3, 3rd lane, Melwaththa, Wariyapola", and the ContactNo field contains "+0985632445". At the bottom right of the form is a green button labeled "save" with a checked checkbox.

Name	<input type="text" value="Mithun Madeeshan"/>
UserRole	<input type="text" value="Admin"/>
Age	<input type="text" value="27"/>
Gender	<input type="text" value="Male"/>
Email	<input type="text" value="mithunarilyarathna123@gmail.com"/>
Address	<input type="text" value="166/3, 3rd lane, Melwaththa, Wariyapola"/>
ContactNo	<input type="text" value="+0985632445"/>
<input checked="" type="checkbox"/> save	

Figure – 2.2.72

The screenshot shows the SuperMarket website's staff profile details page. The header includes a logo, navigation links for Home, Products, About, Staff, and Cart, and a search bar. The main content displays a table of staff information:

Name	Mithun Madeeshan
Role	Admin
Age	27
Gender	Male
Email	mithunariyarathna123@gmail.com
Address	166/3, 3rd lane, Melwaththa, Wariyapola
Contact No	+0985632445

Staff Profile Details

Name	Mithun Madeeshan
Role	Admin
Age	27
Gender	Male
Email	mithunariyarathna123@gmail.com
Address	166/3, 3rd lane, Melwaththa, Wariyapola
Contact No	+0985632445

Figure – 2.2.73

The screenshot shows the SuperMarket website's staff payment summary page. The header includes a logo, navigation links for Home, Products, About, Staff, and Cart, and a search bar. The main content displays a table of payment details:

No	Payment ID	Basic Salary(Rs:)	Net Salary(Rs:)
1	EP02893231	10000	40298
2	EP08903894	15000	15000
3	EP03562785	15000	18300
4	EP09567867	20000	34000
5	EP06735672	25000	41800
6	EP07893674	23000	34000
7	EP08909089	13500	20050

Staff Payment Summary

No	Payment ID	Basic Salary(Rs:)	Net Salary(Rs:)
1	EP02893231	10000	40298
2	EP08903894	15000	15000
3	EP03562785	15000	18300
4	EP09567867	20000	34000
5	EP06735672	25000	41800
6	EP07893674	23000	34000
7	EP08909089	13500	20050

Create pdf

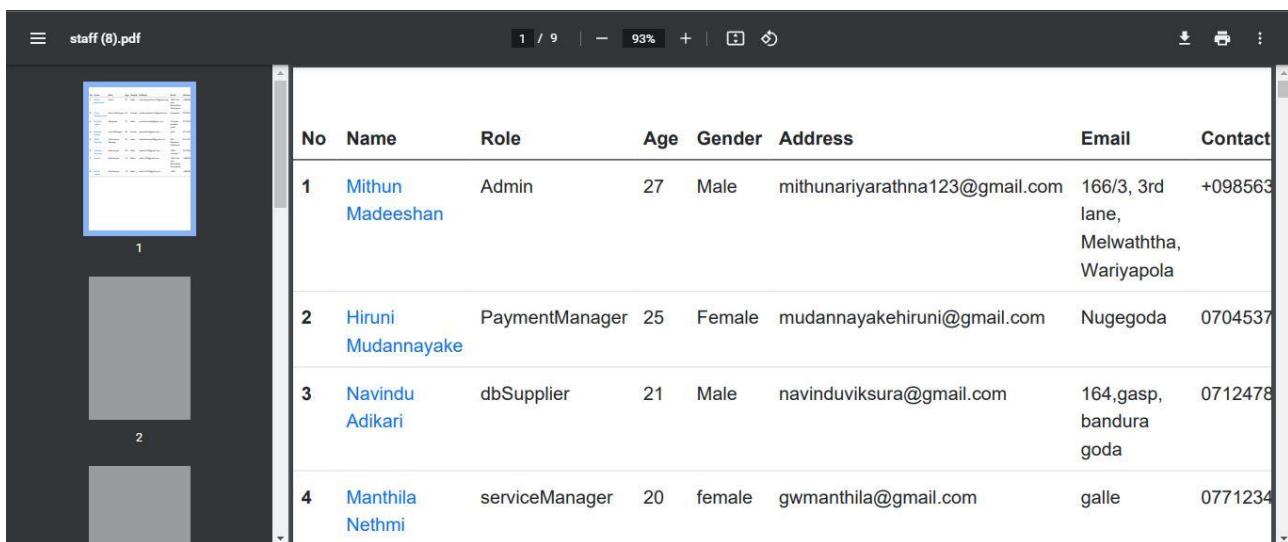
Figure – 2.2.74



A screenshot of a PDF viewer window titled "Staff Payment Summary (3).pdf". The table has four columns: "No", "Payment ID", "BasicSalary(Rs:)", and "Net Salary(Rs:)". The data is as follows:

No	Payment ID	BasicSalary(Rs:)	Net Salary(Rs:)
1	EP02893231	10000	40298
2	EP08903894	15000	15000
3	EP03562785	15000	18300
4	EP09567867	20000	34000
5	EP06735672	25000	41800
6	EP07893674	23000	34000
7	EP08909089	13500	20050

Figure – 2.2.75



A screenshot of a PDF viewer window titled "staff (8).pdf". The table has seven columns: "No", "Name", "Role", "Age", "Gender", "Address", "Email", and "Contact". The data is as follows:

No	Name	Role	Age	Gender	Address	Email	Contact
1	Mithun Madeeshan	Admin	27	Male	mithunariyathna123@gmail.com	166/3, 3rd lane, Melwaththa, Wariyapola	+098563
2	Hiruni Mudannayake	PaymentManager	25	Female	mudannayakehiruni@gmail.com	Nugegoda	0704537
3	Navindu Adikari	dbSupplier	21	Male	navinduviksura@gmail.com	164,gasp, bandura goda	0712478
4	Manthila Nethmi	serviceManager	20	female	gwmanthila@gmail.com	galle	0771234

Supplier management Figure – 2.2.76

. SuperMarket

- [HOME](#)
- [PRODUCTS](#)
- [ABOUT](#)
- [STAFF](#)
- [CART](#)

Supplier Management



#	Supplier Name	Supplier Id	NIC	ContactNo	E-Mail	Item Code	Action
1	Navindu	78925	895678433V	753478532	navindu@gmail.com	987	
2	waruna	23465	234586789V	735678943	kavindu@gmail.com	234	
3	Pasan	23434	485546567V	767676832	pasan@gmail.com	333	
4	Nimal	78263	7289282V	778987673	nimal@gmail.com	872	
5	pasindu	33445	123567V	71246767	1pasindu@gmail.com	123	

[Add New Supplier](#) [Supplier Options](#) [Generate Report](#)

Figure – 2.2.77

. SuperMarket

- [HOME](#)
- [PRODUCTS](#)
- [ABOUT](#)
- [STAFF](#)
- [CART](#)

Insert Supplier Details

Supplier Name

Supplier Id

NIC

ContactNo

E-Mail

Item-Code

save

Figure – 2.2.78

 . SuperMarket

HOME PRODUCTS ABOUT STAFF CART

Edit Supplier Details

Supplier Name
Navindu

Supplier Id
78925

NIC
895678433V

ContactNo
753478532

E-Mail
navindu@gmail.com

Item-Code
987

save

Figure – 2.2.79

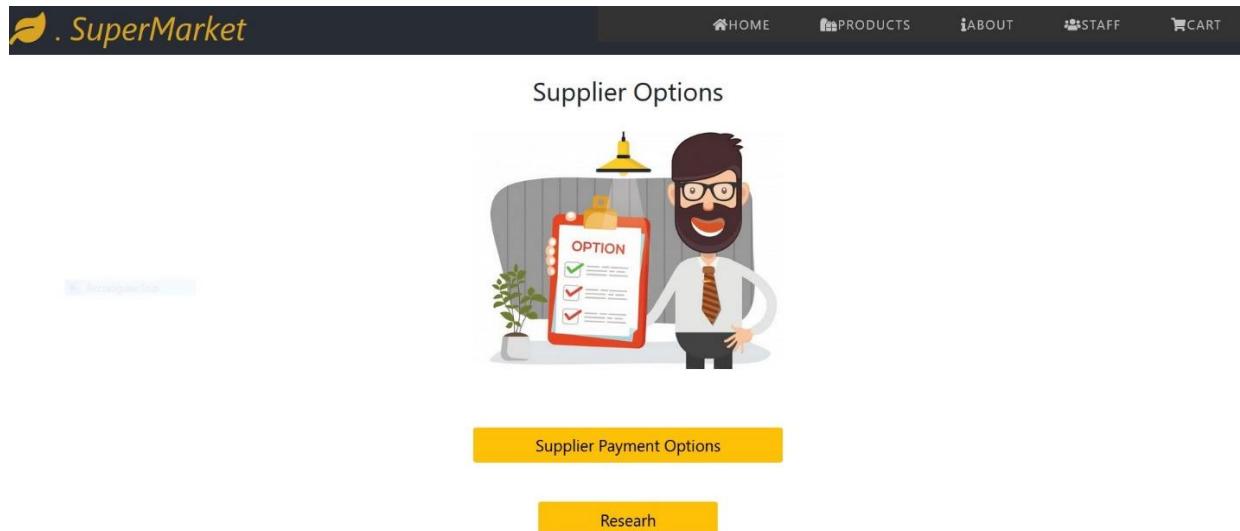


Figure – 2.2.80

#	Supplier	ContactNo	E-Mail	Item Code	Action
1	Navin	753478532	navindu@gmail.com	987	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
2	waru	735678943	kavindu@gmail.com	234	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
3	Pasan	23434	485546567V	767676832	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
4	Nimal	78263	7289282V	778987673	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
5	pasindu	33445	123567V	71246767	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

Add New Supplier Supplier Options Generate Report

Figure – 2.2.81

Supplier Name

Supplier Id

NIC

ContactNo

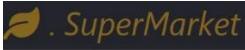
E-Mail

Item-Code

save

localhost:3000
Suppliers Updated Successfully

Figure – 2.2.82

 SuperMarket

HOME PRODUCTS ABOUT STAFF CART

Insert Supplier Details

Supplier Name

Supplier Id

NIC
 (Decomma Sep)

ContactNo

E-Mail

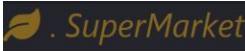
Item-Code

save

localhost:3000
New Supplier Added Successfully!

OK

Figure – 2.2.83

 SuperMarket

HOME PRODUCTS ABOUT STAFF CART

Supplier Management

Search

localhost:3000
Delete successfully

OK

#	Supplier Name	Supplier Id	NIC	Item Code	Action
1	Navindu	78925	895678433	987	 
2	waruna	23465	234586789V	735678943	 
3	Pasan	23434	485546567V	767676832	 
4	Nimal	78263	7289282V	778987673	 
5	pasindu	33445	123567V	71246767	 

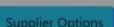
Add New Supplier  Generate Report

Figure – 2.2.84

The screenshot shows a PDF document titled "mypad.pdf - Foxit Reader" open in the Foxit Reader application. The PDF contains a table with the following data:

#	Supplier Name	Supplier Id	NIC	ContactNo	E-Mail	Item Code
1	Navindu	78925	895678433V	753478532	navindu@gmail.com	987
2	waruna	23465	234586789V	735678943	kavindu@gmail.com	234
3	Pasan	23434	485546567V	767676832	pasan@gmail.com	333
4	Nimal	78263	7289282V	778987673	nimal@gmail.com	872

Preference management Figure – 2.2.85

Supermarket

localhost:3000/sale/add

. SuperMarket

HOME PRODUCTS ABOUT STAFF CART

Back

Enter New Sales Details

Year

January

February

March

April

May

June

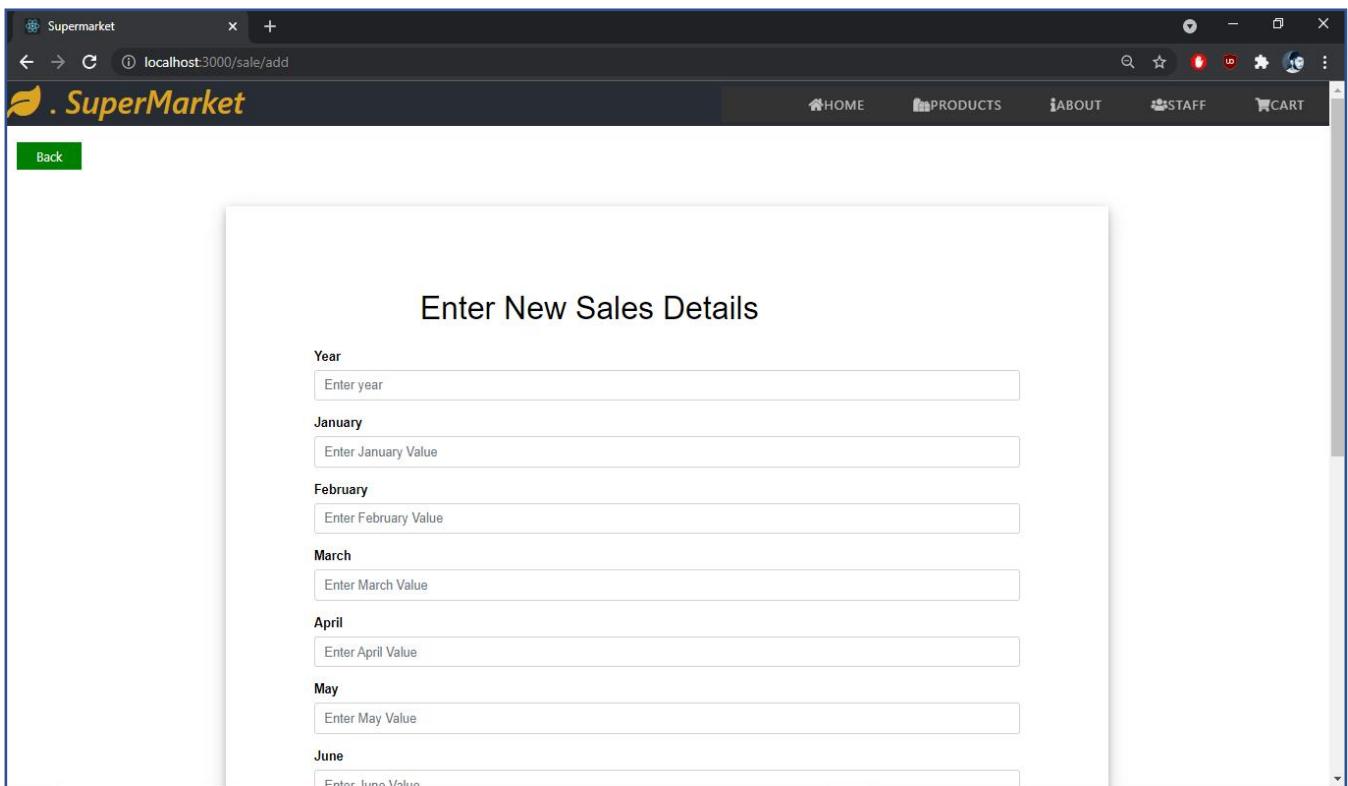


Figure – 2.2.86

Supermarket

localhost:3000/sale/add

June

July

August

September

October

November

December

Total

Save

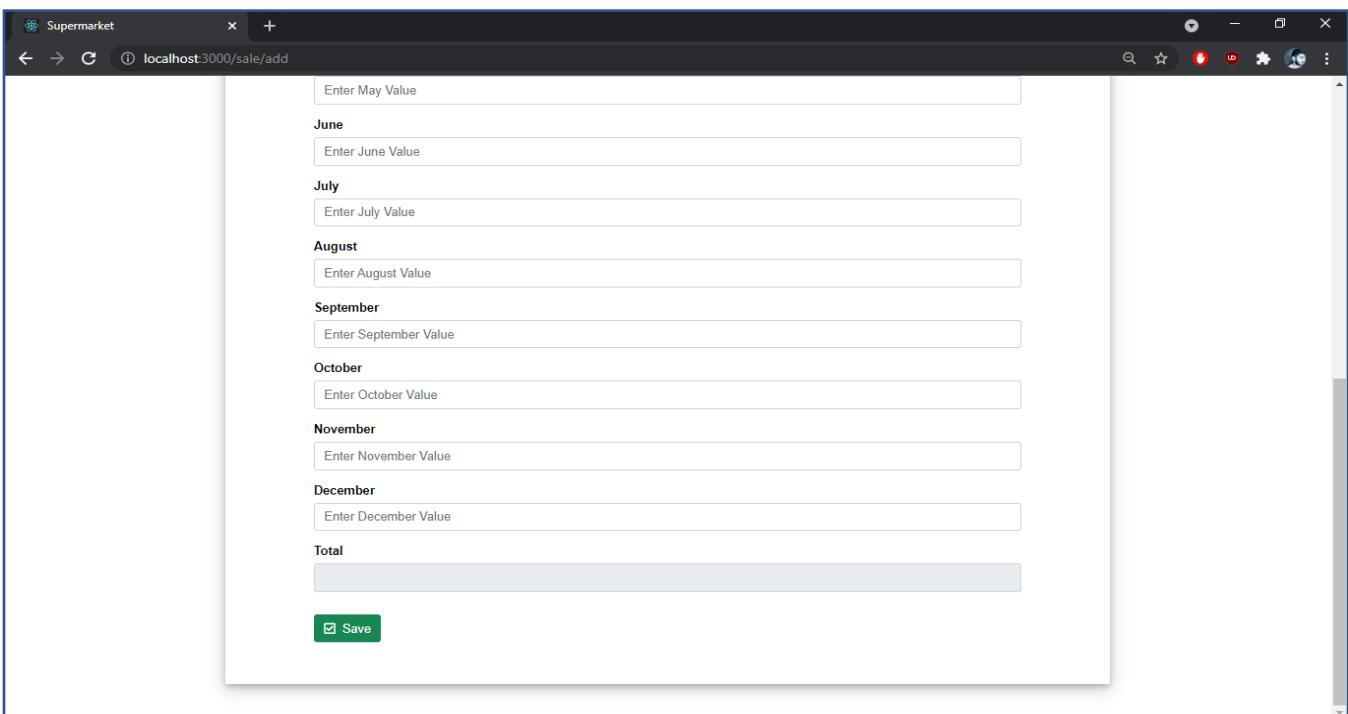


Figure – 2.2.87

A screenshot of a web browser window titled "Supermarket". The URL is "localhost:3000/sale/edit/6156b99d1e13541a06609451". The page displays a form titled "Update Sales Details" for the year 2017. The form contains fields for each month from January to June, with their respective sales values. A "Back" button is visible on the left.

Month	Sales Value
January	12500.87
February	11950.45
March	12200.32
April	12285.46
May	12350.98
June	12430.25

Figure – 2.2.88

A screenshot of a web browser window titled "Supermarket". The URL is "localhost:3000/sale/edit/6156b99d1e13541a06609451". The page displays a form titled "Update Sales Details" for the year 2017. The form contains fields for each month from June to December, with their respective sales values. A "Total" field shows the sum of all months. A green "Update" button is at the bottom. The "Total" value has been highlighted with a light gray background.

Month	Sales Value
June	12430.25
July	12480
August	12510.23
September	12540.52
October	12605.4
November	12600.22
December	13500.6
Total	149053.12

Figure – 2.2.89

The screenshot shows a web browser window for 'Supermarket' at localhost:3000/sale. The page title is 'All Selling Details (LKR.)'. It features a search bar for 'Search Year' and a green button for 'Create New Sale'. Below is a table with columns: ID, year, Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec, Total, and Options. The table contains three rows of data:

ID	year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Options
1	2017	12500.87	11950.45	12200.32	12285.46	12350.98	12430.25	12480	12510.23	12540.52	12605.4	12600.22	13500.6	149053.12	<button>Update</button> <button>Delete</button>
2	2018	12600.45	12630.21	12650.24	12640.21	12680.62	12730.42	12760.94	12780.56	12805.84	12822.54	12850.87	12868.37	152821.27	<button>Update</button> <button>Delete</button>
3	2019	12845.39	12870.56	12887.96	13567.98	13250.45	13170.86	13105.75	12968.49	12999.59	13110.78	13100.2	13200.5	157078.51	<button>Update</button> <button>Delete</button>

Figure – 2.2.90

The screenshot shows a web browser window for 'SuperMarket' at localhost:3000/sale/post/6156b99d1e13541a06609451. The page title is '2017 Summary'. It displays summary statistics: Page views 261, Page clicks 121, and Customer feedback 68. Below is a table of monthly sales data and several green callout boxes with summary metrics.

Month	Sale
Jan	12500.87
Feb	11950.45
Mar	12200.32
Apr	12285.46
May	12350.98
Jun	12430.25
Jul	12480
Aug	12510.23
Sep	12540.52
Oct	12605.4
Nov	12600.22
Dec	13500.6

Callout boxes on the right side show:

- Current Total Sale: Rs. 149053.12
- Target: Rs. 200000.00
- Working capital Rs. 1021847.54

Figure – 2.2.91

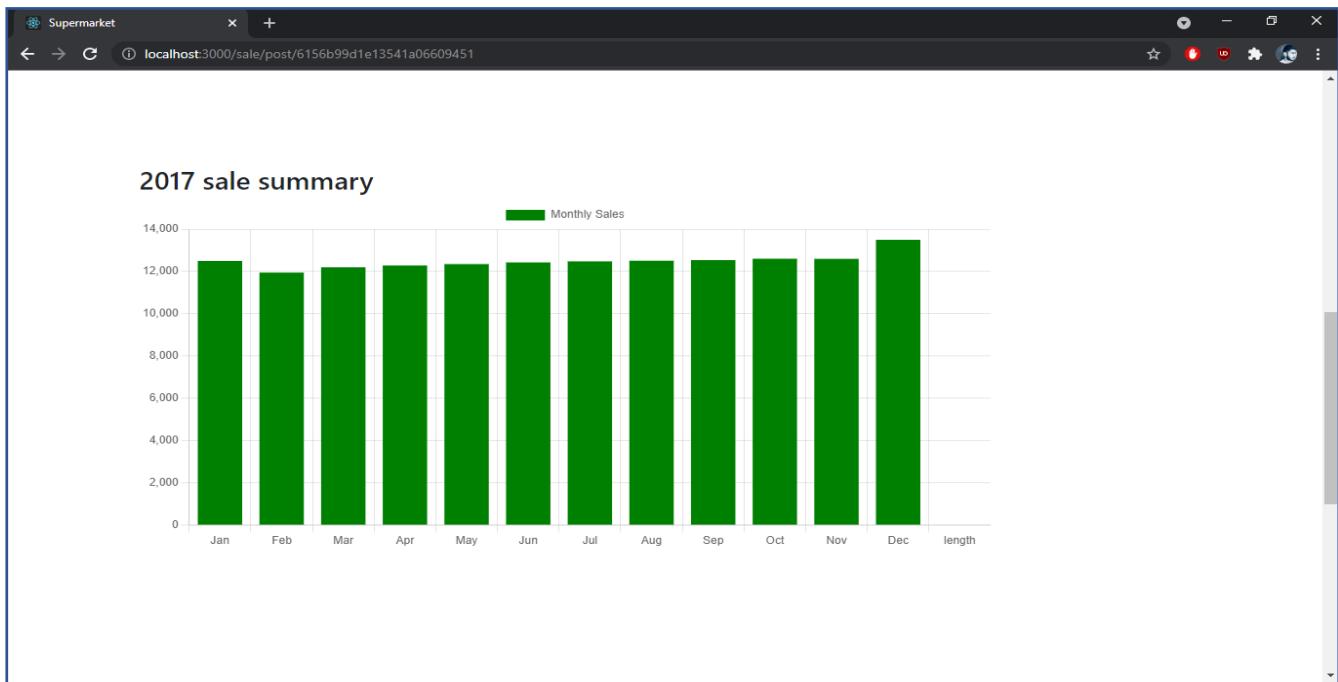


Figure – 2.2.92

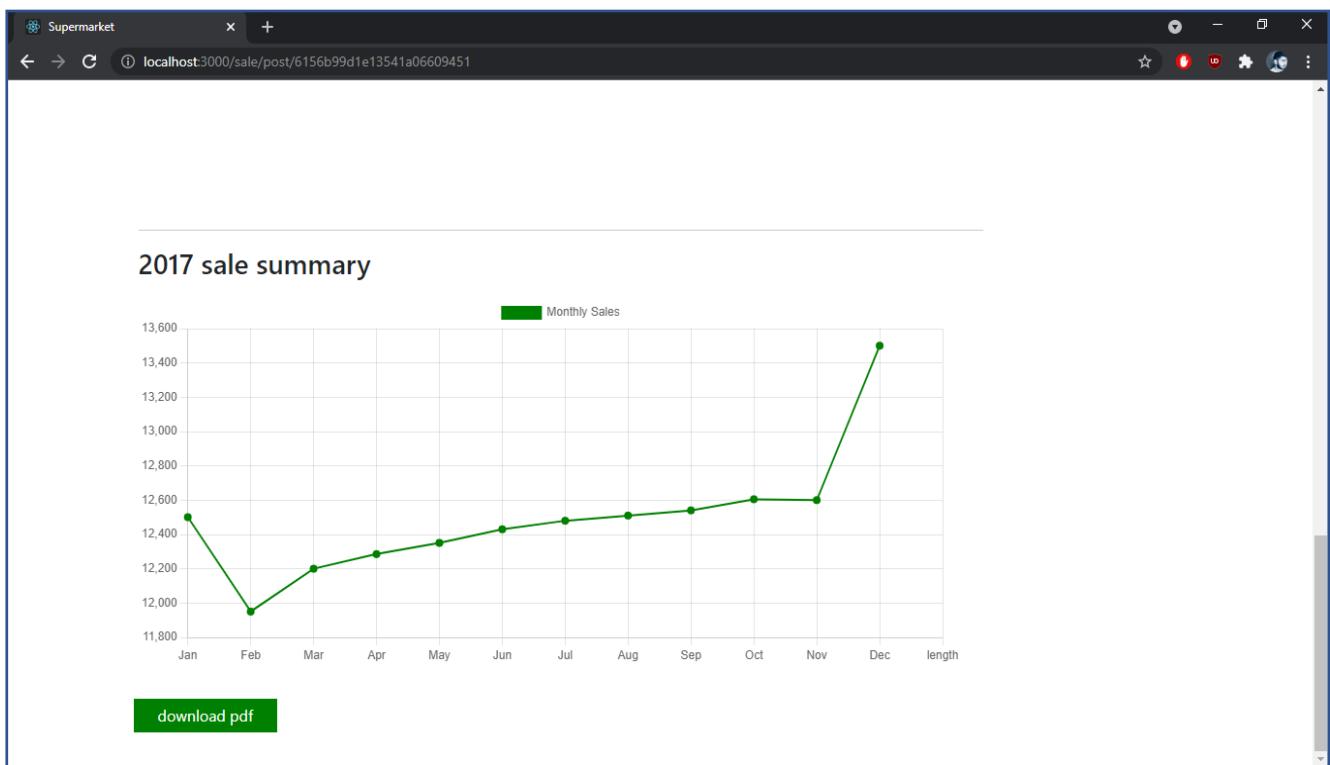


Figure – 2.2.93

The screenshot shows a web browser window for 'SuperMarket' at localhost:3000/feedback/create. The page title is 'Enter Feedback'. The form fields are:

- Date: mm/dd/yyyy (input field)
- Name: Enter Name (input field)
- Job Position: Enter Job Position (input field)
- Mobile Number: Enter A Valid Mobile Number (input field)
- Feedback: Enter your suggestions/ Ideas/ Allegations/ requirements. (text area)

A green 'Save' button is located at the bottom left of the form.

Figure – 2.2.94

The screenshot shows a web browser window for 'SuperMarket' at localhost:3000/feedback/edit/6156bc971e13541a06609466. The page title is 'Update Feedback'. The form fields are identical to Figure 2.2.93, but the Date field contains the value '10/01/2021'. The feedback text area contains the text 'I request a pay rise'.

Figure – 2.2.95

The screenshot shows a web browser window with the title 'Supermarket' and the URL 'localhost:3000/feedback'. The page has a header with the 'SuperMarket' logo and navigation links for HOME, PRODUCTS, ABOUT, STAFF, and CART. Below the header, there is a navigation bar with links for Description, All Sales, and Feedback. The main content area is titled 'All Feedback Details' and features a green button labeled '+ Create New feedback'. A table displays two rows of feedback data:

ID	Date	Name	Job Position	Mobile Number	Feedback	Action
1	2021-10-01	tharaka	HR manager	751122335	I request a pay rise	<button>Update</button> <button>Delete</button>
2	2021-10-02	tharaka	financial manager	750101136	best place to work	<button>Update</button> <button>Delete</button>

2.3 Implementation

According to requirement that identified, an online web application has been created.

React.js has been used for the front- end works and Node.js has been used for the back-end works.

Express.js has been used for the back-end frame work. Visual studio code application has been used as the IDE. MongoDB has been used as the database.

Additional packages were used in the development of the report generating part in each function.

Software

- MongoDB
- Vs code

Technology

- Express.js
- React.js
- Node.js

2.4 Testing

Testing of Supermarket management system has done in two ways to confirm that the system runs more reliable and efficient manner. The main idea of this testing part to provide an efficient, user friendly and best performing system to the client.

As the first testing method, each function has been tested as unit testing to make sure that each unit is running without any error.

System testing is the most important part of the testing cycle. After the integration whole system tests with special test cases. Mainly focused on the system performance. This have been done by inputting selected manual data. The group will be testing whether the output value is same as in the manual document

Table – 2.4.1

Testing Function: Customer Management									
Test case ID: 01		Test case designed by, ID No: IT20118372 Name: Kaushalya M.K.B							
Test Priority (High/Medium/Low)		high							
Test Description: Enter to the system, User must have a valid account. User need to use the registration form to create an account. Entered Email address will be the primary key of the database and there should not be the same email addresses in the database. If the new user tries to use existing email address, user should be able to see the Error message.									
Test steps – 1. Click the Register button after filling the registration form with new E-mail address. 2. Click the Register button after filling the registration form with existing E-mail address									
Pass-condition: 1. An activation Email should be received to the entered Email address									
Test ID	Test Inputs	Expected output	Actual Output	Result (pass/fail)	Comments				
001	Enter an email in to registration form that already used in Database	Error message Should be shown as “email already used”.	As expected	pass	-				
002	Click register Button after filling the register form	A confirmation e mail should be sent by the system	As expected	pass	-				
003	Enter wrong password for the confirm password section	Error message Should be shown as “Password Not Matched”.	As expected	Pass	-				

Table – 2.4.2

Testing Function: Service Management									
Test case ID: S01		Test case designed by, ID No: IT20118440 Name: Nethmi G.W.M.							
Test Priority (High/Medium/Low)		Medium							
Test Description: Customer clicks create new delivery button. Then the customer is directing to the create new delivery page. Enter the delivery information and submit.									
Test steps – Step 1 – Customer login to the system. Step 2 – Click create new delivery button. Step 3 – Fill the delivery information form. Step 4 - Click make order button and submit.									
Pass-condition:									
Test ID	Test Inputs	Expected output	Actual Output	Result (pass/fail)	Comments				
001	Try to enter a letter to the Delivery Cost field.	Letters should not be able to enter to the Delivery Cost field.	Letters are not entering to the Delivery Cost field.	pass	-				
002	Try to submit the form without completing all the required fields.	Form should not be submitted.	Form is not submitting.	pass	-				
003	Enter delivery details correctly.	Details must be submitted and should display a pop-up message as Delivery details entered successfully and the form submitted.	Got the pop-up message as Delivery Details entered successfully and the form submitted.	pass	-				

Table – 2.4.3

Testing function: item management									
Test case ID:17		Test case designed by: ID No: IT20247904 Name: G U N Samarawickrama							
Test Priority (High/Medium/Low)		Medium							
Test Description: user should be logged in as an admin									
Test Steps: Step 1: user should be logged in as an admin Step 2: select item management section									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/Fail)	Comments				
001	View item details	Show all the item details	Show all the item details	Pass	Successfully viewed				
002	Add new items: Enter item details	Display successful message saying data added successfully and show details in product view page	Display successful message and show details in product view page	Pass	Successfully added				
003	Update current items details	Display successful message saying data updated successfully and show updated data in product view page	Display successful message and show updated data in product view page	Pass	Successfully updated				
004	Delete items	Display successful message saying data has deleted successfully and show updated items in product view page	Display successful message saying data has deleted successfully and show updated items in product view page	Pass	Successfully deleted				
005	Search items	Display the list of items according to the searched key words	Display the list of items according to the searched key words	Pass	Successfully searched				

Table – 2.4.4

Testing Function: Performance Management									
Test case ID: 01		Test case designed by, ID No: IT20119980 Name: Senaraathna S.P.M.D.							
Test Priority (High/Medium/Low)		high							
Test Description: All boxes must be filled in when entering employee feedback. Only numbers can be entered where the mobile phone number is entered. After clicking the save button, the feedback is saved in the list									
Test steps –									
<ol style="list-style-type: none"> 1. Fill out the form to skip one section. 2. Type letters where you want to enter the mobile phone number 3. Click the Save button after filling the full feedback form. 									
Pass-condition: After pressing the save button, that part of the feedback list will be displayed.									
Test ID	Test Inputs	Expected output	Actual Output	Result (pass/fail)	Comments				
001	Fill out the form to skip one or more sections.	Error message Should be shown as “cannot be blank”.	Error message Should be shown as “cannot be blank”.	pass	-				
002	Type letters where employee wants to enter the mobile phone number	Typed letters are not displayed in that section.	Typed letters are not displayed in that section.	pass	-				
003	Click the Save button after filling the full feedback form.	After pressing the save button, that part of the feedback list will be displayed.	After pressing the save button, that part of the feedback list will be displayed.	Pass	-				

Table – 2.4.5

Testing function: Employee Payment Management									
Test case ID:05.1		Test case designed by: ID No: IT20248994 Name: M.A.P.H.N. Mudannayake							
Test Priority (High/Medium/Low)		Medium							
Test Description: Payment Manager login to the Employee Payment Management section									
Test Steps: Step 1: User must be logged in as Payment Manager Step 2: Select Payment Management Section Step 3: Select Employee Payment Management									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/Fail)	Description				
001	View Employee Details	Display all Employee Details	Display all Employee details	Pass	Show details successfully				
002	Add Salary Details: Insert salary details and calculate net salary	Display calculated net salary	Display calculated net salary	Pass	Data calculated successfully				
003	Save salary details	Display a successful message, <i>“Data inserted successfully”</i>	Display a successful message, <i>“Data inserted successfully”</i>	Pass	Data saved successfully				
004	View Employee Salary Details	Display all Employee Salary Details	Display all Employee Salary Details	Pass	Show Salary Details Successfully				

005	Update current employee Salary Details and Calculate Net Salary	Display successful message, <i>“Data Updated successfully”</i>	Display successful message, <i>“Data Updated successfully”</i>	Pass	Data updated successfully in the database
006	Delete employee salary details	Display successful message, <i>“Data Deleted Successfully”</i>	Display successful message, <i>“Data Deleted Successfully”</i>	Pass	Data deleted successfully

Table – 2.4.6

Testing function: Supplier Payment Management									
Test case ID:05.2		Test case designed by: ID No: IT20248994 Name: M.A.P.H.N. Mudannayake							
Test Priority (High/Medium/Low)		Medium							
Test Description: Payment Manager login to the Supplier Payment Management section									
Test Steps: Step 1: User must be logged in as Payment Manager Step 2: Select Payment Management Section Step 3: Select Supplier Payment Management									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/Fail)	Description				
001	View Supplier Details	Display all Supplier Details	Display all Supplier details	Pass	Show details successfully				
002	Add Supplier payment Details: Insert item price and quantity and calculate total	Display calculated price	Display calculated price	Pass	Data calculated successfully				

	price				
003	Save payment details	Display a successful message, <i>“Data inserted successfully”</i>	Display a successful message, <i>“Data inserted successfully”</i>	Pass	Data saved successfully
004	View Supplier payment details	Display all supplier payment Details	Display all supplier payment Details	Pass	Show payment Successfully
005	Update current supplier payment Details and Calculate total	Display successful message, <i>“Data Updated successfully”</i>	Display successful message, <i>“Data Updated successfully”</i>	Pass	Data updated successfully in the database
006	Delete supplier payment details	Display successful message, <i>“Data Deleted Successfully”</i>	Display successful message, <i>“Data Deleted Successfully”</i>	Pass	Data deleted successfully

Table – 2.4.7

Testing function: Customer Payment Management	
Test case ID:05.3	Test case designed by: ID No: IT20248994 Name: M.A.P.H.N. Mudannayake
Test Priority (High/Medium/Low)	Medium
Test Description: Payment Manager login to the Customer Payment Management section	
Test Steps:	

Step 1: User must be logged in as Payment Manager

Step 2: Select Payment Management Section

Step 3: Select Customer Payment Management

Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/Fail)	Description
001	View Customer payment Details	Display all customer payment records	Display all customer payment records	Pass	Show details successfully
002	Delete customer payment details	Display successful message, <i>“Data Deleted Successfully”</i>	Display successful message, <i>“Data Deleted Successfully”</i>	Pass	Data deleted successfully

Table – 2.2.8

Testing function: Administration Management									
Test case ID:06		Test case designed by: ID No: IT20120634 Name: H.M.M.M. Ariyarathna							
Test Priority (High/Medium/Low)		Medium							
Test Description: Administrator login to the Administration Management section									
Test Steps: Step 1: User must be logged in as an Admin Step 2: Choose Administration Management Section									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/Fail)	Description				
001	View Staff Member's Details	Display all Staff Member's Details	Display all the Staff Member's details	Pass	Display details successfully				
002	Add New staff member: Enter staff member details	Display a successful message alert, " Data added successfully " and display details in Staff Member Details page	Display successful alert and show details in Staff Member Details page and Staff member details added successfully to the database	Pass	Data added successfully				
003	Update current staff member details	Display successful message alert saying, " Data Updated successfully " and show updated data in Staff Member Details page	Display successful alert and show updated details in Staff Member Details page and Staff member details updated successfully in the database	Pass	Data updated successfully				
004	Delete staff member details	Display successful message alert saying, " Data Deleted Successfully " and show updated supplier data in Staff Member Details page	Display successful alert and show updated Staff Member data in Staff Member Details page	Pass	Delete data successfully				

Table – 2.4.9

Testing function: Administration Management									
Test case ID:07		Test case designed by: ID No: IT20120634 Name: H.M.M.M. Ariyarathna							
Test Priority (High/Medium/Low)		Medium							
Test Description: Staff members login to the system									
Test Steps:									
Step 1: User must be navigated to login page									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/Fail)	Description				
001	Enter Staff member's email and password	Display a successful message alert, " <i>Login Successful</i> " and redirected to the section page	Display a successful message alert, " <i>Login Successful</i> " and redirected to the section page	Pass	Successfully redirected				
002	Enter invalid email and password	Display an error message alert, " <i>Password is invalid</i> "	Display an error message alert, " <i>Password is invalid</i> "	Pass	Display alert				
003	Press log in button without entering any details	Display an error message alert saying, <i>User not registered</i> "	Display an error message alert saying, <i>User not registered</i> "	Pass	Display alert				

Table – 2.4.10

Testing function: Supplier Management									
Test case ID:08		Test case designed by: ID No: IT20400286 Name: Adikari A.A.D.N.V.							
Test Priority (High/Medium/Low)		Medium							
Test Description: Add supplier details in to the database									
Test Steps:									
Step 1: Login as a Supplier Manager Step2: Click on the Add New supplier button									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/Fail)	Comments				
001	Enter New supplier details Supplier Name, Supplier Id, NIC, Contact No, Email, Item Code	Display a successful message alert, " <i>New Supplier Added Successfully!</i> "	A new supplier details is added and all the supplier details are stored in the database. Existing supplier details and the newly added can be seen in the home page.	Pass	Display Alert				
002	Enter Invalid Supplier details	Display a error message alert, " <i>New Supplier Added Unsuccessfully</i> "	Display a error message alert, " <i>New Supplier Added Unsuccessfully</i> "	Pass	Display Alert				
003	Press Save button without entering any details	Display a error message alert, " <i>New Supplier Added Unsuccessfully</i> "	Display a error message alert, " <i>New Supplier Added Unsuccessfully</i> "	Pass	Display Alert				

Table – 2.4.11

Testing function: Supplier Management									
Test case ID:09		Test case designed by: ID No: IT20400286 Name: Adikari A.A.D.N.V.							
Test Priority (High/Medium/Low)		Medium							
Test Description: Update supplier details in to the database									
Test Steps:									
Step 1: Login as a Supplier Manager Step2: Click on the Edit New supplier button									
Test ID	Test Inputs	Expected Outputs	Actual Outputs	Result (Pass/Fail)	Comments				
001	Edit supplier details Supplier Name, Supplier Id, NIC, Contact No, Email, Item Code	Display a successful message alert, " <i>Supplier Updated Successfully!</i> "	A new supplier details is added and all the supplier details are stored in the database. Existing supplier details and the newly added can be seen in the home page.	Pass	Display Alert				
002	Enter Invalid Supplier details	Display a error message alert, " <i>Supplier Updated Unsuccessfully</i> "	Display a error message alert, " <i>Supplier Updated Unsuccessfully</i> "	Pass	Display Alert				

3.Evaluation

3.1 Assessment of the project results

If we look about the overall completion of the project, all the results are like the expected result. So the project is completed.

3.2 Lessons learned

As a group we learnt lot of new things such as leadership, team work, how to face the problems. Also lot of new technologies and methods have been learnt.

3.3Future work

As the future works, we hope to increase the ui facilities of the system.

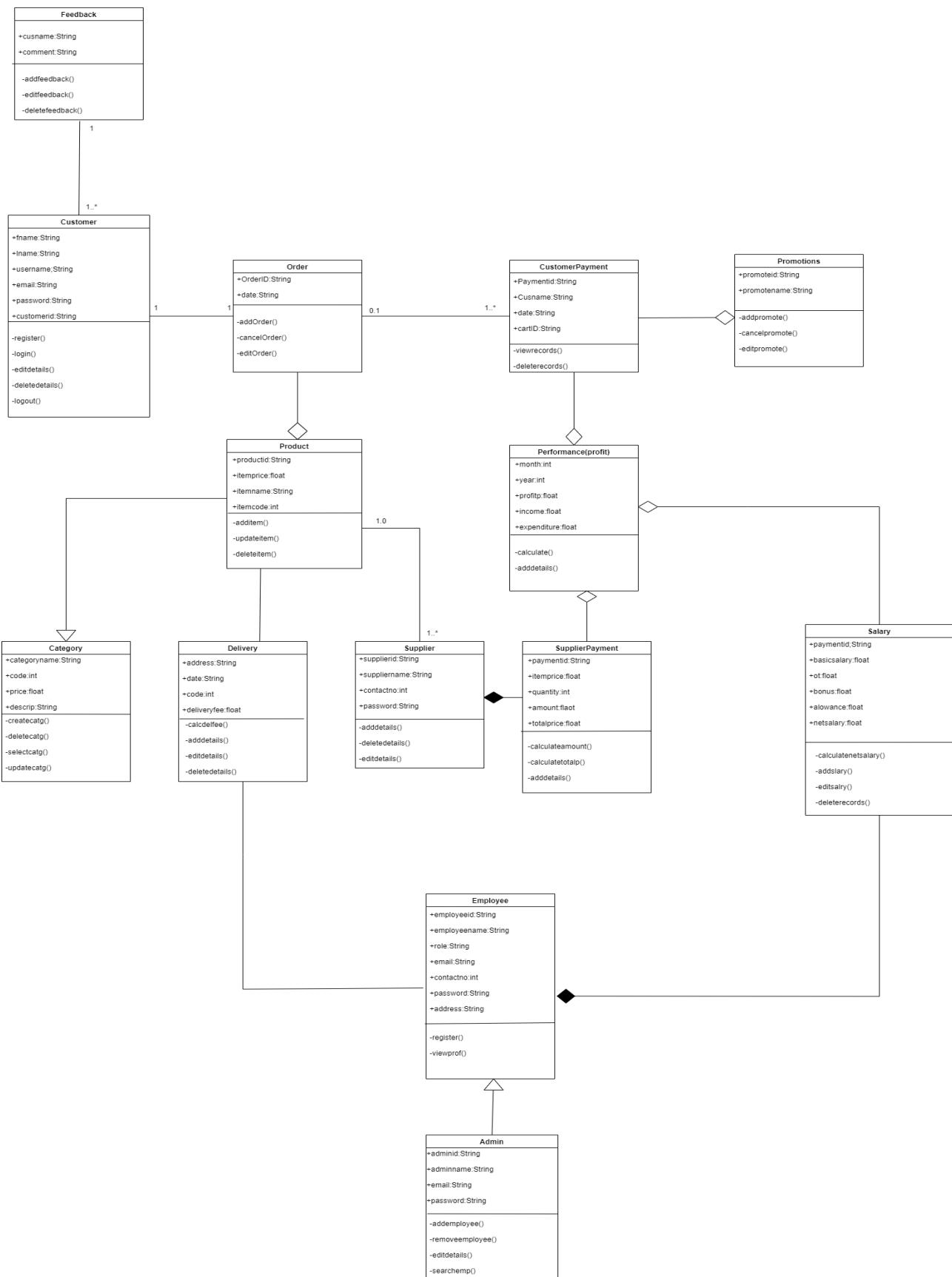
4. Conclusion

- The customers of the supermarket can reach the supermarket very easily through our website.
- Orders can be easily handled via online by the supermarket management.
- Payment can be done via online easily.
- Delivery services also can be done via online
- Supermarket can directly keep in touch with their customers and they can introduce new promotions for their customers as well as it may affect their sales.
- Customers can go through the menu list and get updates about the new dishes which they have.
- Employee and manager management has become more efficient and productive where they can handle all the employee personal details and their salary details.
- Supermarket can handle their expenditures and get monthly report of their utility expenditures, it will be helpful to manage their expenses.

5. References

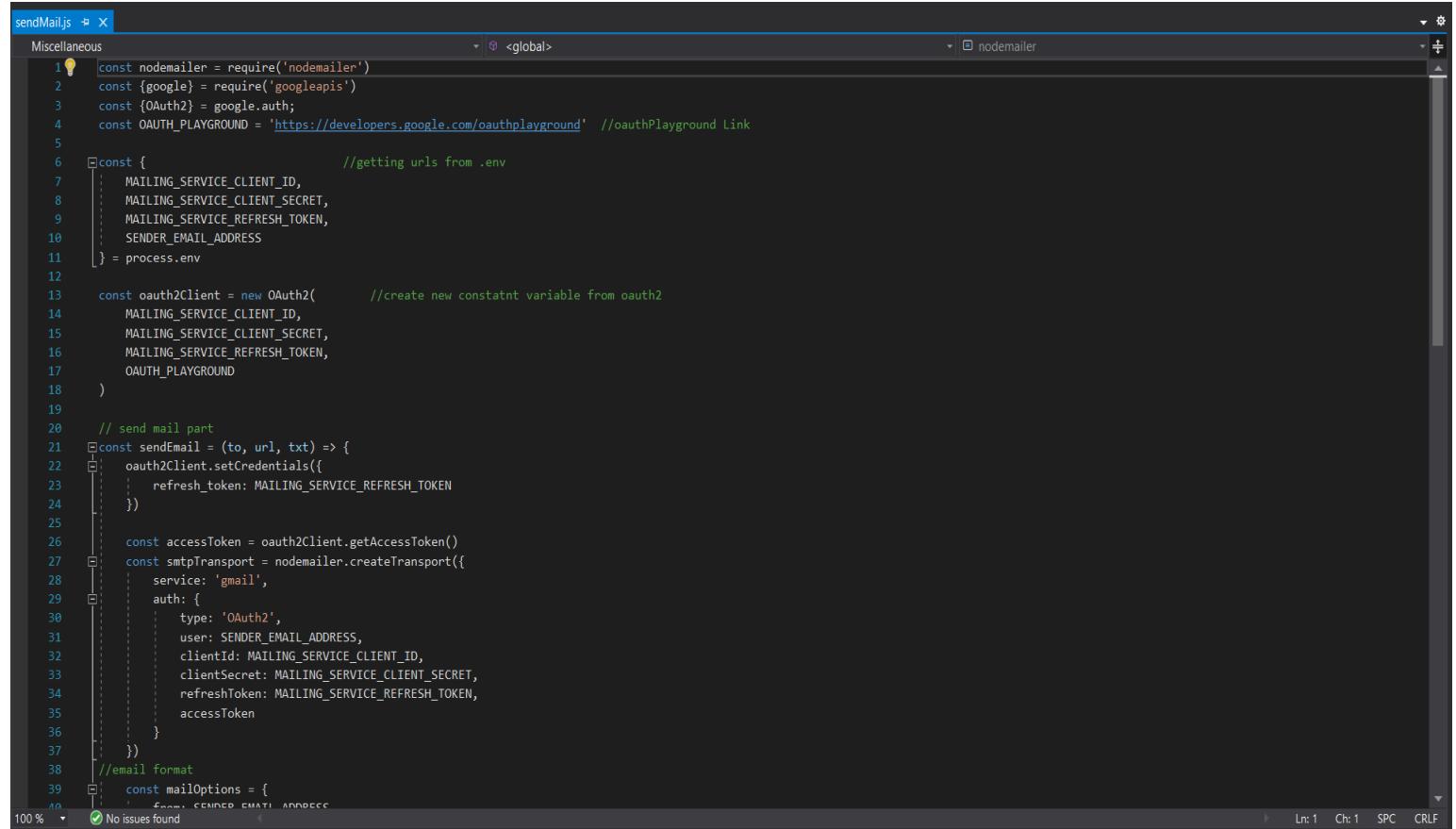
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Appendix A: Design Diagrams



Appendix C: Selected Code Listings

This is the code about Send mails. System is sent a mail to the customer using this code. This is a special algorithm used in Customer registration function



```
sendMail.js ✘ x
Miscellaneous <global> nodemailer
1 const nodemailer = require('nodemailer')
2 const {google} = require('googleapis')
3 const {OAuth2} = google.auth;
4 const OAUTH_PLAYGROUND = 'https://developers.google.com/oauthplayground' //oauthPlayground Link
5
6 const { MAILING_SERVICE_CLIENT_ID,
7   MAILING_SERVICE_CLIENT_SECRET,
8   MAILING_SERVICE_REFRESH_TOKEN,
9   SENDER_EMAIL_ADDRESS
10 } = process.env
11
12 const oauth2Client = new OAuth2(
13   MAILING_SERVICE_CLIENT_ID,
14   MAILING_SERVICE_CLIENT_SECRET,
15   MAILING_SERVICE_REFRESH_TOKEN,
16   OAUTH_PLAYGROUND
17 )
18
19 // send mail part
20 const sendEmail = (to, url, txt) => {
21   oauth2Client.setCredentials({
22     refresh_token: MAILING_SERVICE_REFRESH_TOKEN
23   })
24
25   const accessToken = oauth2Client.getAccessToken()
26   const smtpTransport = nodemailer.createTransport({
27     service: 'gmail',
28     auth: {
29       type: 'OAuth2',
30       user: SENDER_EMAIL_ADDRESS,
31       clientId: MAILING_SERVICE_CLIENT_ID,
32       clientSecret: MAILING_SERVICE_CLIENT_SECRET,
33       refreshToken: MAILING_SERVICE_REFRESH_TOKEN,
34       accessToken
35     }
36   })
37   //email format
38   const mailOptions = {
39     from: SENDER_EMAIL_ADDRESS
40   }
41 }
```