Inventory Market Analysis System

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APPROVAL

This project titled on "**Inventory Market Analysis**", submitted by **Dipak Debnath, 181-35-2455** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfilment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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DECLARATION

It here by declares that this project has been done by **Dipak Debnath** under the supervision of **Mr. Md. Shohel Arman, Senior Lecturer,** Department of Software Engineering, Daffodil International University. It also declares that neither this project nor any part of this has been submitted elsewhere for award of any degree.

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In this present world of competition there is race of existence in which those are having will come to forward succeed. Project is a bridge between theoretical and practical working. With this willing I joined this particular project. First, I would like to thank the supreme power the Almighty ALLAH who is obviously the one who is guided me to work on the right path of life. Without his grace this project could not become a reality. Next to him are my parents, whom I am greatly indebted for brought up with love and encouragement to this stage.

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ABSTRACT

"Inventory" This is a system that is helpful for businesses, where shoppers can keep track of purchases and sales. Market analysis can be done based on buying and selling, through which we can understand the current market situation, inventory is important in running a large retail store, stock management is a very difficult business for our people but we can manage stock very easily through inventory. And the retailer will be alerted by looking at the quantity of stock when it is time to rearrange the stock. Large shipments can be easily tracked through this inventory. There is a possibility of error due to manual calculation. Inventory systems help reduce the risk of errors. In retail stores, an inventory system helps track the theft of merchandise, providing valuable information about store profits and the need for anti-theft measures. The inventory management system works by scanning a barcode on the item. The system may contain a list of items drawn up for purchase and shipping. Inventory management systems can serve a variety of functions in this case. This can help an employee identify items on the warehouse order list, keep an accurate count of buying and selling items. These purchased items can be removed from the inventory tally. All of these data work together to provide real-time inventory tracking information to businesses. The inventory system makes it easy to identify and analyze inventory information in real-time with a database search. And based on this buying and selling, we can do our market analysis, we can easily know the current state of our market, the demand of the people.

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CHAPTER-01

Introduction

1.1 Project Overview

Inventory system is helpful for traders, where shopkeepers can keep a record of purchases and sales. Inventory is important in running a large retail store. The retailer will be alerted when it comes time to rearrange the stock. Large shipments can be tracked very easily through this inventory and profit and loss can be calculated quickly, month or year. We can learn about customer demand through analysis. This analysis plays an important role in our business.

1.2 Project Purpose

1.2.1 Background

Prior to this system, buyers and sellers used to keep a written account on paper which was feared to be lost and lost. It was time dependent. Through this website we are able to keep track of all the tasks together, including keeping track of the purchase and delivery of the purchased items to the customer quickly and easily so that our time hassle is reduced.

1.2.2 Benefits & Beneficiaries

- Inventory management has been simplified.
- Reduced the possibility of overselling...
- Increased cost-cutting....
- Avoiding stock-outs and excess inventory.
- Better business negotiations

1.2.3 Goals

- Smooth fulfillment Having enough supply
- Knowing when to scale or shrink goods production
- Sales tracking.
- On a regular basis, track and review the company's sales.

1.3 Stakeholders

There are many members are associate with this project. They have helped to develop
The system directly or indirectly.

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Internal stakeholder:

1. Admin
2. System Administrator
3. Manger
4. Field Worker

1.4 Project Planning

Table 1.4: Project planning

Task name	Resource name	Start	Finish	Duration(Days)
Planning	PM,BA	01-09-2020	08-09-2020	08
Requirement	RE,RA	09-09-2020	18-09-2020	10
System Design	UI Designer	19-09-2020	08-10-2020	20
Database design	DB Designer	09-10-2020	18-10-2020	10
Development	Developer	19-10-2020	30-11-2020	42
Testing	Tester	1-12-2020	15-12-2020	15
Implementation	Implementation Eng.	16-12-2021	26-12-2021	11
Delivery	PM, Implementation Eng.	27-12-2021	27-12-2021	01 Total 117

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1.4.1 Gantt Chart

Weeks → Works↓	14 days	14 days	14 days	14 days	14 days	14 days	14 days	14 days	14 days	14 days
Planning										
Requirement										
System Design										
Database Design										
Development										
Testing										
Implementation										
Delivery										

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CHAPTER 2

SOFTWARE REQUIREMENTS SPECIFICATION

Requirements analysis is the best process of identifying the user satisfaction
From the system. So, requirements analysis is an important part of project management. When

Iselected this project, I thought about some specific software requirement, like as

- Who is the stakeholder of this project?
- Is it helpful for them or not?
- Functional and non- functional requirements
- Maintenance of the system
- Is it efficient for using?

2.1 Functional Requirement

The functional requirements of the system are like below---

Fieldworker Registration

FR-01	Fieldworker Registration
Description	This system allows to user to registration the system using name, Email, and password and become a valid user.
Stakeholder	Fieldworker

Manager Registration

FR-02	Manager registration
description	Allocate manager can register using name, email and password.
Stakeholder	manager

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Admin log in

FR-03	Admin Login
Description	Fieldworker, Admin, manager login this system. Without login no one can access the system.
Stakeholder	Admin, fieldworker, manager

Add Employee

FR-04	Add employee
description	Admin need to add new employee for business.
stakeholder	admin

Update Employee

FR-05	Update employee
description	If there is any mistake while adding admin, it can be updated later if you want or if you need to change something later, it can be updated Later.
stakeholder	admin

Delete Employee

FR-06	Delete employee
description	If that employee leaves or we don't need it then we can delete that Employee.
stakeholder	admin

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Add Customer

FR-07	Add customer
description	Admin need to add new customer for product sell.
stakeholder	admin

Update customer

FR-08	Update customer
description	If there is any mistake while adding admin, it can be updated later if You want or if you need to change something later, it can be updatedlater.
stakeholder	admin

Delete customer

FR-09	Delete customer
description	If that customer leaves or we don't need it then we can delete that Customer.
stakeholder	admin

Add Supplier

FR-10	Add supplier
description	Admin need to add new supplier for baying product delivery
stakeholder	admin

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Update Supplier

FR-11	Update supplier
description	If there is any mistake while adding admin, it can be updated later if You want or if you need to change something later, it can be updatedlater.
stakeholder	admin

Delete Supplier

FR-12	Delete supplier
description	If that supplier leaves or we don't need it then we can delete that Supplier.
stakeholder	admin

Add Category

FR-13	Add category
description	Admin need to add new category for business
stakeholder	admin

Update category

FR-14	Update category
description	If there is any mistake while adding category for admin, it can be updated later if you want or if you need to change something later, it Can be updated later.
stakeholder	admin

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Delete category

FR-15	Delete category
description	If that category don't available stock or we don't need it then we can Delete that category.
stakeholder	admin

Add Product

FR-16	Add product
description	Admin need to add new product for sell the product
stakeholder	admin

Update product

FR-17	Update product
description	If there is any mistake while adding product for admin, it can be updated later if you want or if you need to change something later, it Can be updated later.
stakeholder	admin

Delete product

FR-18	Delete product
description	If that product don't available stock or we don't need it then we can Delete that product.
stakeholder	admin

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Add Expanses

FR-19	Add Expenses
description	Admin need to add new expenses for business.
stakeholder	admin

Update Expanses

FR-20	Update Expenses
description	Admin can update expenses for business.
stakeholder	admin

Delete Expanses

FR-21	Delete Expenses
description	Admin can delete expenses.
stakeholder	admin

Add Salary

FR-22	Add Salary
description	Admin need to add new salary for employee by monthly
stakeholder	admin

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View Salary

FR-23	View Salary
description	Admin need to view salary for employee by any monthly or year.
stakeholder	admin

Add Advance Salary

FR-24	Add advance salary
description	Admin will be able to add advance salary if any problem arises in the Employee.
stakeholder	admin

Manage stock

FR-25	stock manage
description	We will be able to see how many products we have purchased through stock management after selling. If it seems that we need more of that product in stock, we will be able to increase the stock by chance, or we Will be able to increase it by ordering product.
stakeholder	admin

Today Order

FR-26	Today order
description	Today you can see all the records of what was sold and how much Money was sold.
stakeholder	admin

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Search

FR-27	Search
description	Depending on the month and date, we can look at all the information That has been sold in that month or day.
stakeholder	admin

POS (Inventory System)

POS (point of sale)

FR-28	Pos(Inventory System)
description	In POS (Point of sale) Inventory System where all kinds of products can be seen with search and search according to all categories will show products according to category. We can see all the products of our choice. We can update the cart and delete the old customer. We can add to cart for any product. We can sell products by selecting buyers. Or if there is a new customer, we can sell the product by creating a new account with that customer information. With the help of POS (point of Sale). Machine we can give a receipt of what product the customerbought through our POS (point of sale).
stakeholder	admin

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2.2 Non Functional Requirements

2.2.1 Security

NFR-01	Security
description	Using token-based authentication, session, validation 2FA it will be Secure from unauthorized access.
Priority	High

2.2.2 Availability

NFR-02	Availability
description	The system should work 24/7 as user can get access and service.
Priority	High

2.2.3 Accuracy

NFR-03	Accuracy
description	Data or process requirement concerned with defining the precision which the solution will record or produce data.
Priority	High

2.2.4 Maintenance

NFR-03	Accuracy
description	Its way how easy to support, change and enhance the system.
Priority	High

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2.3 Performance Requirements

2.3.1 Speed and Latency Requirements

1. Dataset would be inserted in MySQL Databases
2. UI design-build on the user fulfills table data set and show.

2.3.2 Precisions or Accuracy Requirements

1. All user capable to show accurate page.
2. Admin can Update any information
3. Admin can manage POS (Inventory System).
4. Admin product sell and automatic stock deleted POS (Inventory System)

2.3.3 Capacity Requirements

1. At time multiple users can use this system.
2. Admin can sell at a time multiple user.

2.4 Dependability Requirements

2.4.1 Reliability Requirements

1. Admin, manager, fieldworker should be log in to the system using his or her valid email and password.

2.4.2 Availability Requirements

1. When we are using this system need to run apace server.
2. Need to know command for run properly and easily.
3. This is a web application should run on a web browser. (Preferable browser is Chrome, Firefox, and Internet Explorer).

2.5 Maintainability and Supportability Requirements

2.5.1 Maintenance Requirements

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1. Web application did not modify or change.
2. If we need to data need to recover or update then need to using command line.
3. We are need to maintainers all security and others works.

2.5.2 Supportability Requirements

1. When the system did not work perfectly then need to check database and others work.
2. Update security patch and others system.

2.5.3 Adaptability Requirements

1. This is very important website.
2. This website can help to business then they can get all services easily.

2.5.4 Scalability or Extensibility Requirements

1. This website is good and reliable for each and every one.
2. Website is good help for business.

2.6 Security Requirements

2.6.1 Access Requirements

1. Only for registered user can access this system.
2. Guest cannot allow this system.

2.6.2 Integrity Requirements

1. This website cannot access another user like guest user.

2.6.3 Privacy Requirement

1. Here we are using activate user system.

2.7 Usability and Human Interaction Requirements

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This requirement defines how to meet the physical needs of the intended users of our website.

2.7.1 Ease of Use Requirements

The system is easy to use and can easily be understood.

UH-01	The system must be usable for Admin, Admin Administrator, Fieldworker, and Manager.
Description	The system indicates the several possible that the users.
Stakeholders	Admin, Admin Administrator, Fieldworker, and Manager.

2.7.2 Understand Ability and Politeness Requirements

UH-02	The features of the (POS) Inventory System.
Description	The system can more efficiently ease of use more added features. The system is understanding ability for both users. The system not use any term that is not specified in this website.
Stakeholders	Admin

2.7.3 Accessibility Requirements

There are no access requirements beside those that has been outline in the below:

AR-1: Log in as a Admin
AR-1: Log in as a Admin Administrator
AR-1: Log in as a Fieldworker
AR-1: Log in as a Manager
AR-1: Log out as Admin
AR-1: Log out as Admin Administrator
AR-1: Log out as Fieldworker
AR-1: Log out as Manager

To get access to this system or a specific module the system must provide a control. In order to

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prevent anyone to exploit stolen all user's passwords must be encrypted in the hash process

2.7.4 User Documentation Requirements

UH-03	The system developer documentation
Description	Develop this project we have specified requirements of user's documentation. The teams are involved to this project documentation
Stakeholders	System Developer

2.8 Look and Feel Requirements

The look and feel requirements describe the desired spirit the mood, the style of the product's appearance. The requirements specify the intention of the appearance and are not detailed design of an interfaces.

2.8.1 Appearance Requirements

It should be clear to the System Admin Patient and Doctor needs to be filled and which can be left blank in this system.

LF-01	Labels of mandatory fields must be bold.
Description	Label of obligation fields must be bold to identify them as being of Obligation.
Stakeholders	Admin, Admin Administrator, Fieldworker, Manager.

2.8.2 Style Requirements

We will provide a website user interface. This requirement does not only define the necessity to use a css but although the requirements regarding's the css's content as well as css framework like bootstrap.

LF-02	The look and feel must be controllable using a style sheets.
Description	The styling of the elements of the web application user interface will be define using css, JS, Bootstrap.
Stakeholders	Admin

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2.9 Operational and Environmental Requirements

This requirement focusses on how the users operate the system, including interfaces and interoperability with other systems. The requirement established how well and under what condition the system must perform.

2.9.1 Expected Physical Requirement

1. There are no specific expected physical requirements

2.9.2 The Requirements for Interfacing with Adjacent System

1. There is no specific interface with adjacent system requirements.

.

2.9.3 Release Requirements

1. There is no specific release requirement but in the project schedule. It was described briefly.

2.10 Legal Requirements

These requirements consider any violence of rules and regulation and which rules should be followers to maintainers these systems.

2.10.1 Compliance Requirements

1. There are no specific compliance requirements.

2.10.2 Standard Requirements

1. There are no specific standard requirements.

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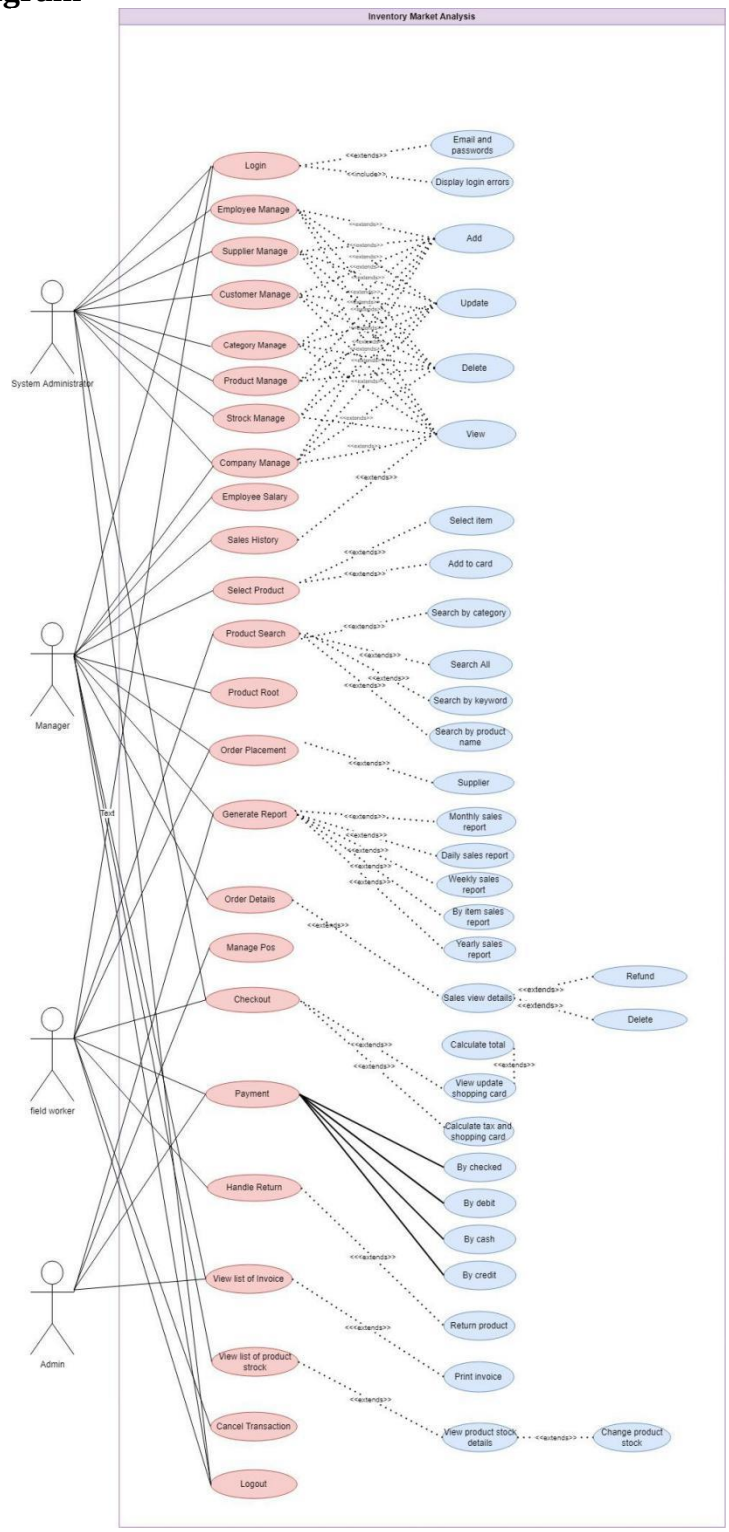
CHAPTER-03
SYSTEM ANALYSIS

3.1 Use Case Diagram



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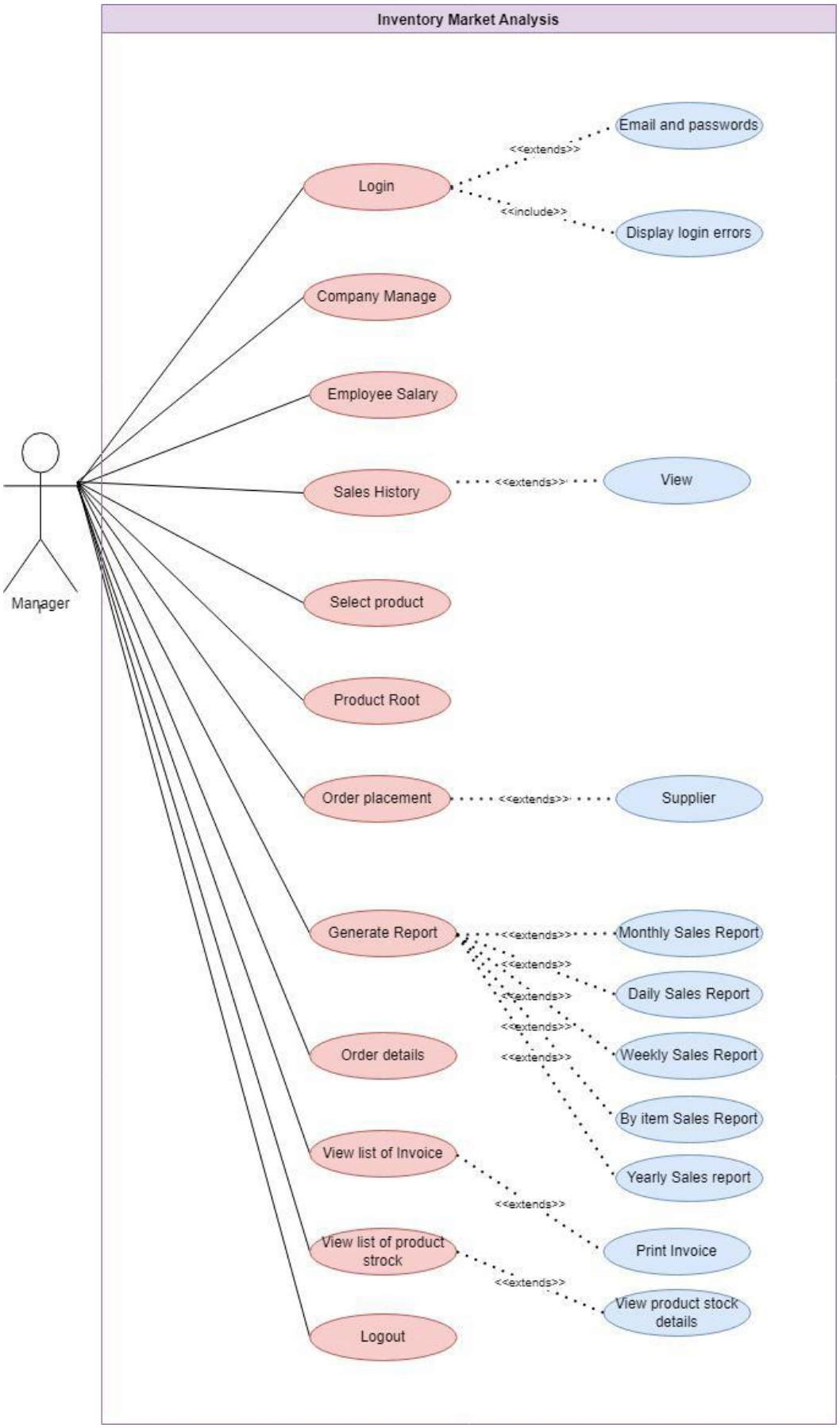

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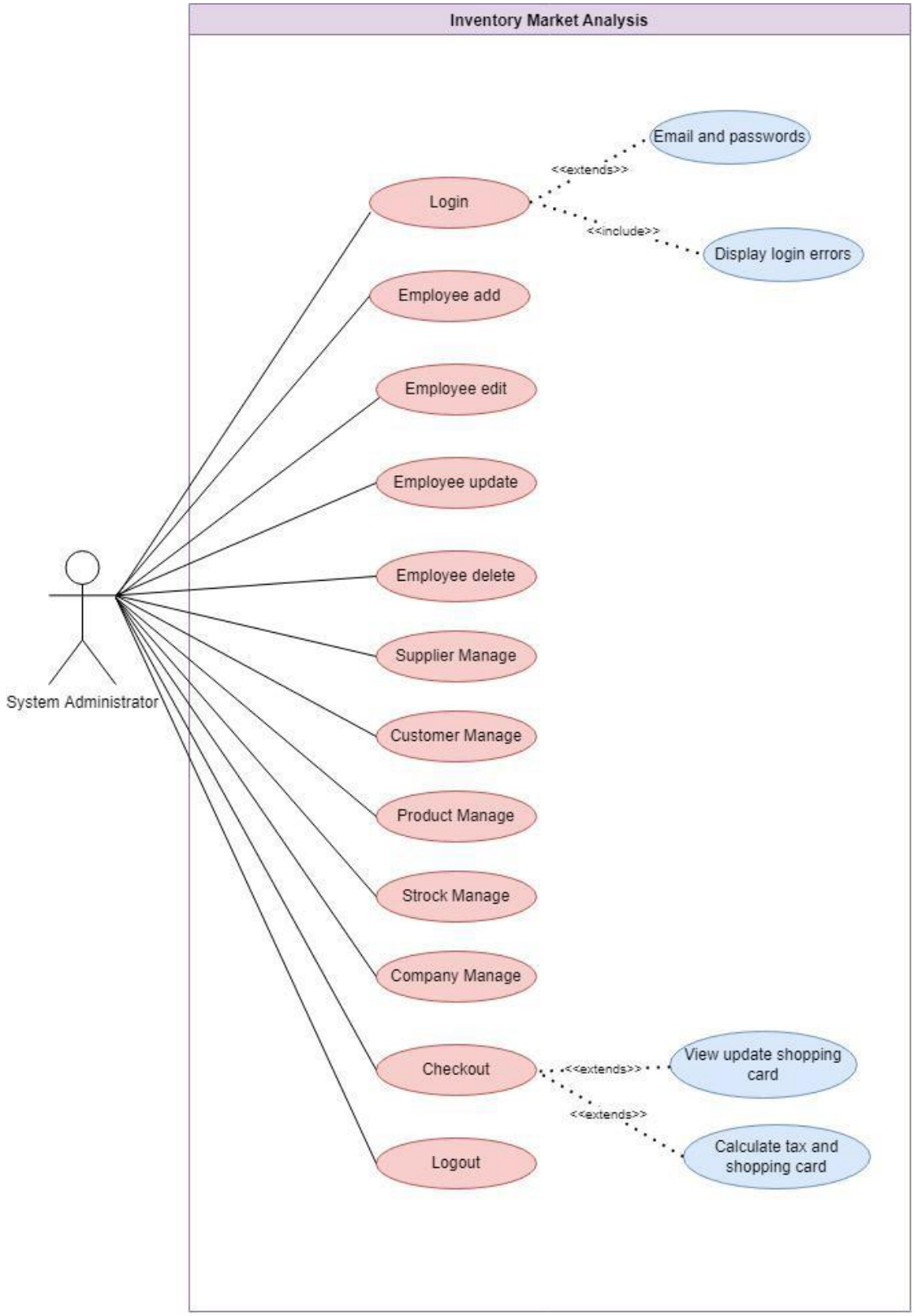

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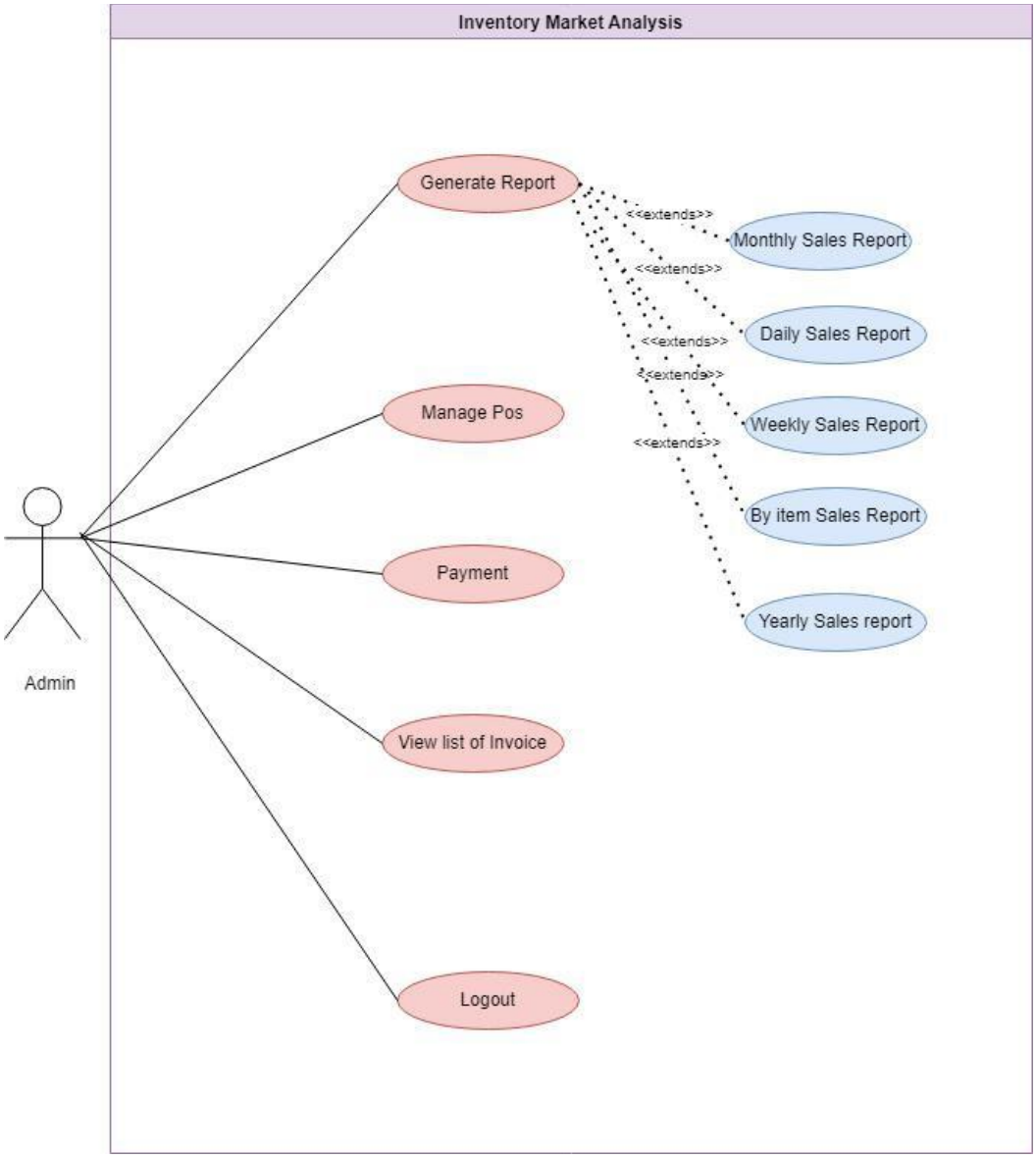

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3.2 Use Case Description

Registration System

Use Case	Registration	
Goal	Anyone can apply for register	
Preconditions	Must be fulfil register required fields.	
Success End Condition	System get registration applications from the public.	
Failed End Condition	System cannot get registration applications from the public.	
Primary Actors:	Public	
Secondary Actors	N/A	
Trigger	Access this website.	
Description/main Success Scenario	**Step**	**Action**
	1.	The public can register into this website
	2.	Public enter the URL & the URL show the "Registration" pages.
	3.	Public enter all required information in "Registration" form.
Alternative Flows	**Step**	**Branching Action**
	1.	Get "Registration" page again load if any error occurred.
Quality Requirements	**Step**	**Requirement**
	1.	Must be authentic as Public. And also edit or update these applications.

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Login and Log out System

Use Case	Login and log out system	
Goal	System Admin, Manager, Fieldworker, Admin Administrator can access the system. And finally, Log out.	
Preconditions	N/A	
Success End Condition	System Admin, Manager, Fieldworker, Admin Administrator can access this system	
Failed End Condition	System Admin, Manager, Fieldworker, Admin Administrator can access the system	
Primary Actors:	System Admin, Manager, Fieldworker, Admin Administrator	
Secondary Actors	N/A	
Trigger	Access This System	
Description/main Success Scenario	**Step**	**Action**
	1	System Admin, Manager, Fieldworker, Admin Administrator
	2	The user enters his or her email id and password in the returning user section of the sign in screen.
Alternative Flows	**Step**	**Branching Action**
	1a	The user enters his or her username and password
Quality Requirements	**Step**	**Requirement**
	1	When user login then needs to correct email id for login and password.

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Manage Pos (Point Of Seals) System

Use Case	Manage POS system	
Goal	In manage POS, admin can view all products, search category wise product and search category wise, then add product cart as per customer's choice, update or delete cart, or add new product. However, by selecting the specified customer, the order placement can be done with the customer's information. Customer does not exit then create new customer account then order placement new customer.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, add, update, delete point of seals (POS).	
Failed End Condition	Cannot view and other operation point of seals (POS).	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View, add, update and delete.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, add, update and delete.
	2	Successfully view add update delete.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Employee Manage System

Use Case	Employee Manage system	
Goal	Admin will be able to add new employee. If there is any mistake while adding employee, admin will be able to update it or delete it If that employee is not needed.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, add, update, delete employee.	
Failed End Condition	Cannot view and other operation employee.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View, add, update and delete.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, add, update and delete.
	2	Successfully view add update delete.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

Supplier Manage System

Use Case	Supplier Manage system	
Goal	Admin will be able to add new supplier. If there is any mistake While adding employee, admin will be able to update it or delete itif that supplier is not needed.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, add, update, delete supplier.	
Failed End Condition	Cannot view and other operation supplier.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View, add, update and delete.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, add, update and delete.
	2	Successfully view add update delete.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Category Manage System

Use Case	Category Manage system	
Goal	Admin will be able to add new supplier. If there is any mistake While adding category, admin will be able to update it or delete itif that supplier is not needed.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, add, update, delete category.	
Failed End Condition	Cannot view and other operation category.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View, add, update and delete.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, add, update and delete.
	2	Successfully view add update delete.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Customer Manage System

Use Case	Customer Manage system	
Goal	Admin will be able to add new supplier. If there is any mistake While adding customer, admin will be able to update it or delete itif that supplier is not needed.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, add, update, delete customer.	
Failed End Condition	Cannot view and other operation customer.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View, add, update and delete.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, add, update and delete.
	2	Successfully view add update delete.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Product Manage System

Use Case	Stock Manage system	
Goal	Admin can add new product. If you make a mistake while adding A product, you can update it or delete it when the product is out ofstock.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, add, update, delete product.	
Failed End Condition	Cannot view and other operation product.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View, add, update and delete.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, add, update and delete.
	2	Successfully view add update delete.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Stock Manage System

Use Case	Stock Manage system	
Goal	If the admin wants according to the customer's demand, he can increase the stock by adding new product with the previous stock.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, update stock.	
Failed End Condition	Cannot view and other operation stock.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View and update.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, update.
	2	Successfully view and update.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Employee Salary System

Use Case	Employee Salary system	
Goal	The admin will be able to pay the monthly salary of the employee and any employee will be able to take the advance month's salary, but if the admin thinks it is correct, he can take the advance Month's salary after applying.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, pay salary for employee.	
Failed End Condition	Cannot view and other operation employee.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View, and pay salary.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, and pay salary.
	2	Successfully view and pay salary.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Search Product System

Use Case	Search Product system	
Goal	If you want to search all the products while selling the product to the customer, it is a matter of time.as soon as possible find out for product search and category wise product search find easily and Faster find out.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, search product.	
Failed End Condition	Cannot view and other operation product.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View and search product.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, and search product.
	2	Successfully view and search product.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Select Product System

Use Case	Select Product system	
Goal	If you see all the products while selling the product to the customer, the product that your customer wants to buy from all the products may be one or more or different products. Select it And add all the products of the customer in the cart.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, select product for add to cart.	
Failed End Condition	Cannot view and other operation select product.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View and select product.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, and select product.
	2	Successfully view and select product.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Order Placement System

Use Case	Order Placement system	
Goal	When the customer buys the product, at the end of the purchase, the customer's product must be delivered according to the customer's address and here the admin has already added the supplier, then the admin will add the supplier option for the new customer so that the customer's product reaches the customer very Fast.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, order placement.	
Failed End Condition	Cannot view and other operation order placement.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View and search product.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, and order placement.
	2	Successfully view and order placement.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Order Details System

Use Case	Order Details system	
Goal	There will be a description of the product that the customer has purchased, such as what products you have purchased, how much you have purchased, how much each product will total cost, or How much each product will cost.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view and order details.	
Failed End Condition	Cannot view and other operation and order details.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View and search product.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view and order details.
	2	Successfully view and order details.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Generate Report System

Use Case	Generate Report system	
Goal	The report will keep a record of what I sold each month and how Much money I earned, how much money I lost, what day I sold itto a customer or how much money I sold in a month.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view, generate report daily monthly and yearly.	
Failed End Condition	Cannot view and other generate report daily monthly and yearly?	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View and generate report daily monthly and yearly.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, and generate report daily monthly and yearly.
	2	Successfully view and generate report daily monthly and yearly.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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Checkout System

Use Case	Checkout system	
Goal	After the customer buys the goods the record is kept with his Address so that the goods can be delivered according to thecustomer's address and the merchant can keep his account.	
Preconditions	Must be logged in the system then can access the system.	
Success End Condition	System successfully view and checkout.	
Failed End Condition	Cannot view and other and checkout.	
Primary Actors:	Admin	
Secondary Actors	N/A	
Trigger	View and checkout.	
Description/main Success Scenario	**Step**	**Action**
	1	Admin view, and checkout.
	2	Successfully view and checkout.
Alternative Flows	**Step**	**Branching Action**
	1a	N/A
Quality Requirements	**Step**	**Requirement**
	1	Must be logged in system.

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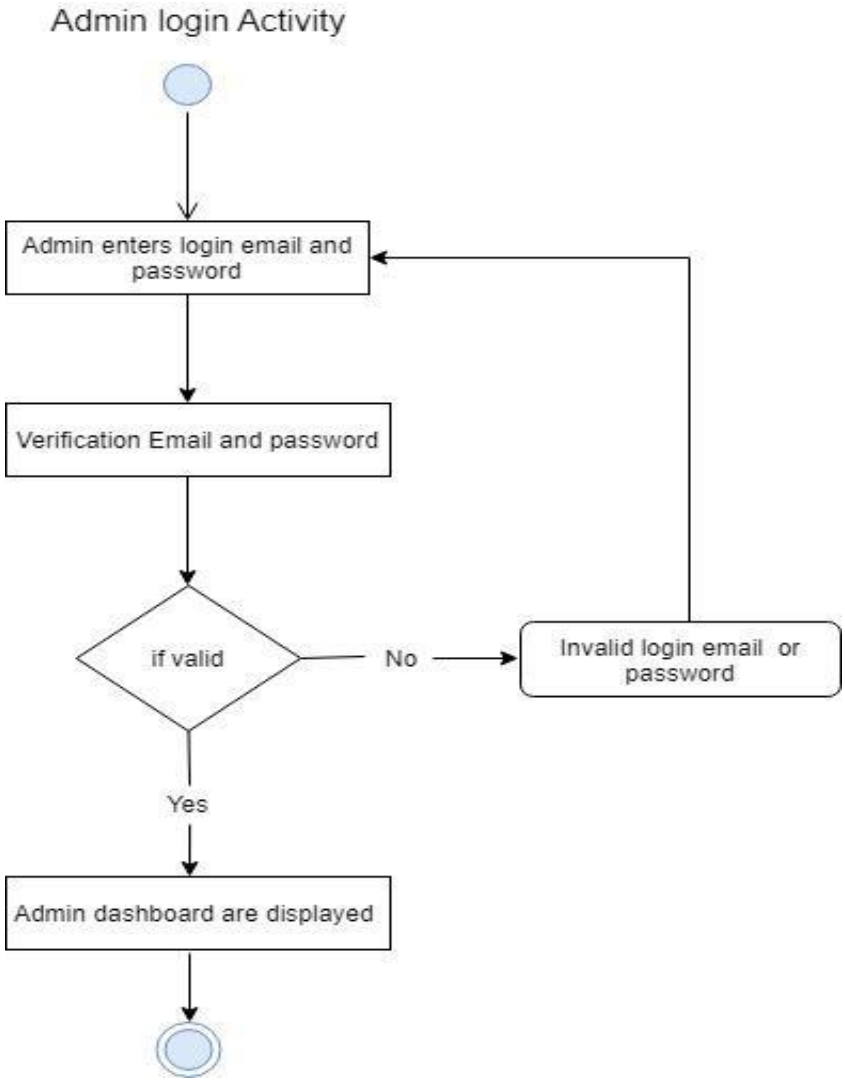
3.3 Activity Diagram

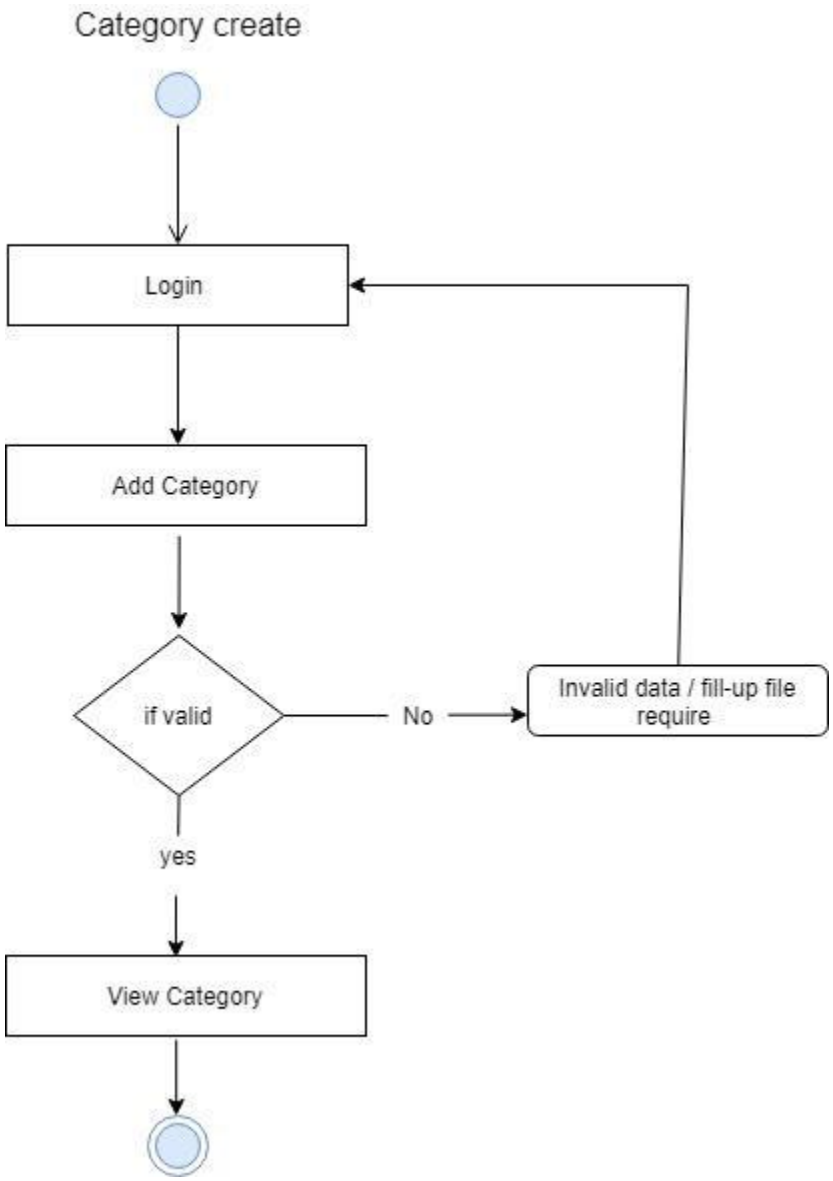
Admin Login



Admin Login Activity Diagram

©Daffodil International University

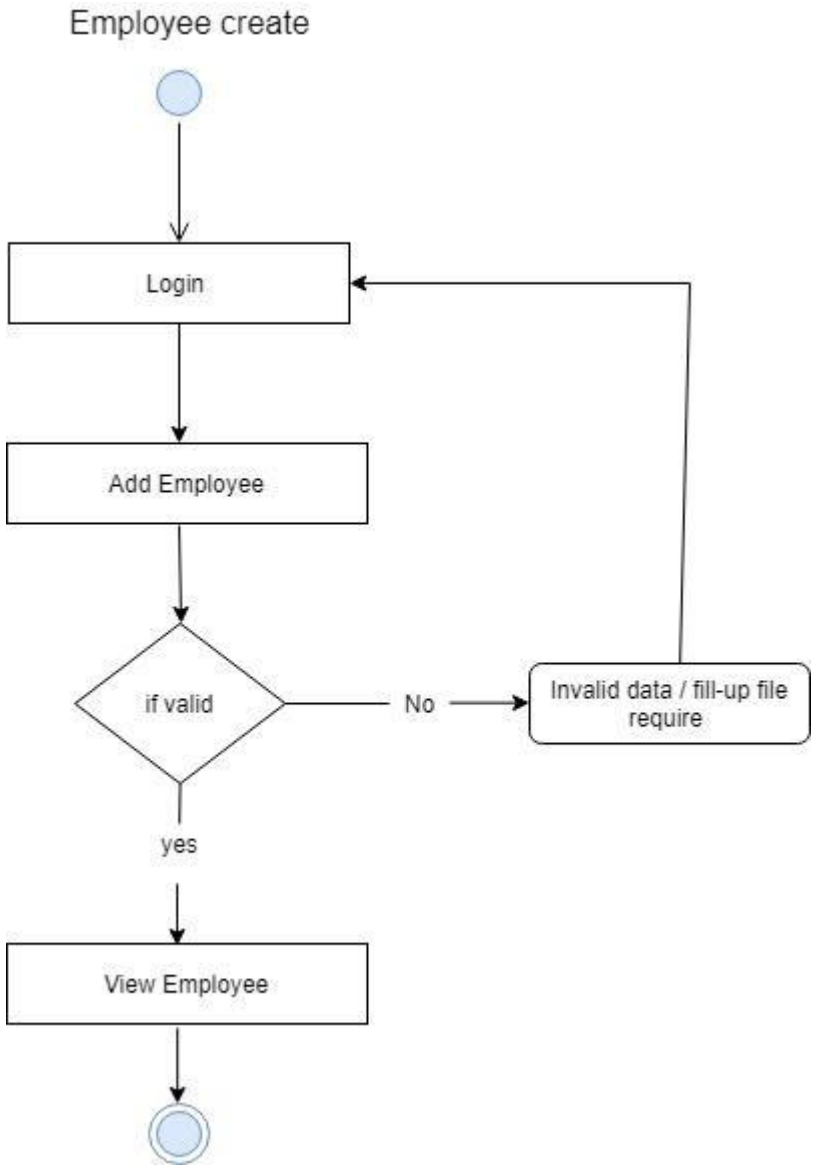
Add Category



Add Category Activity Diagram

©Daffodil International University

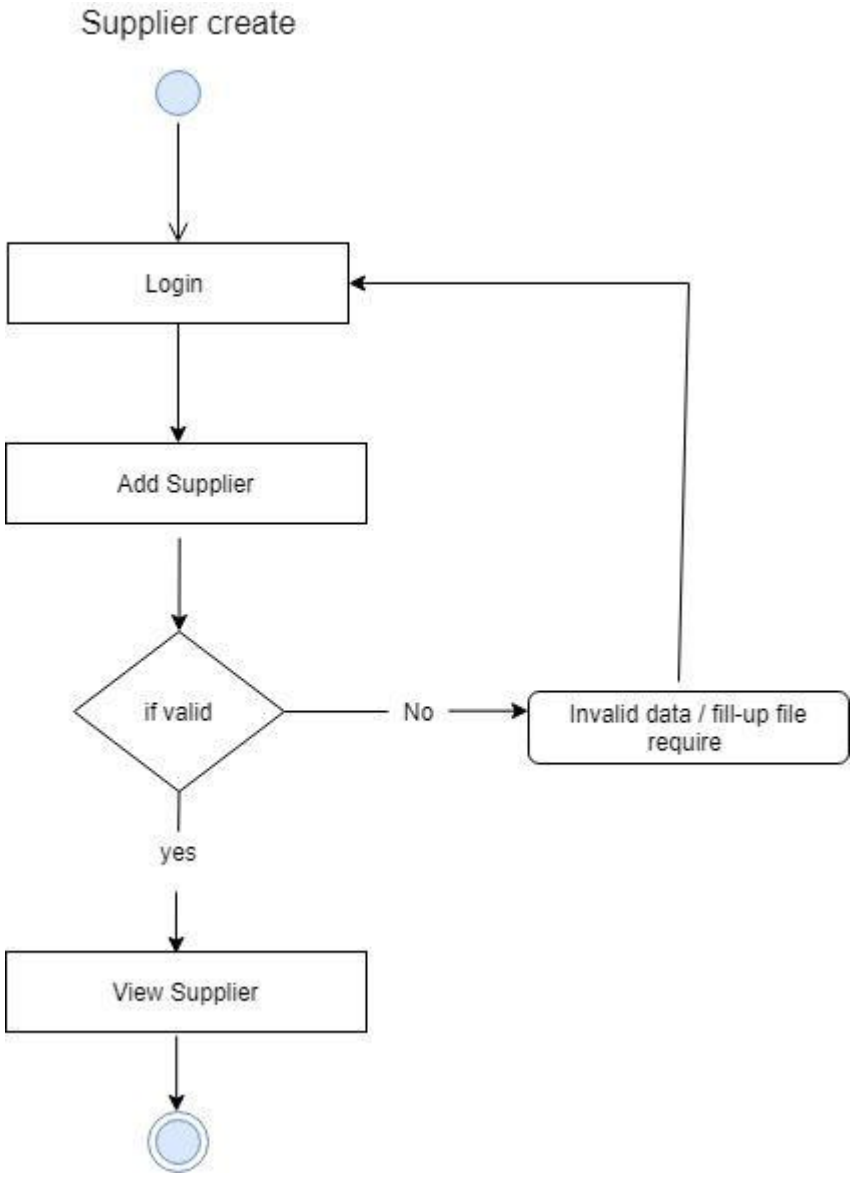
Add Employee



Add Employee Activity Diagram

©Daffodil International University

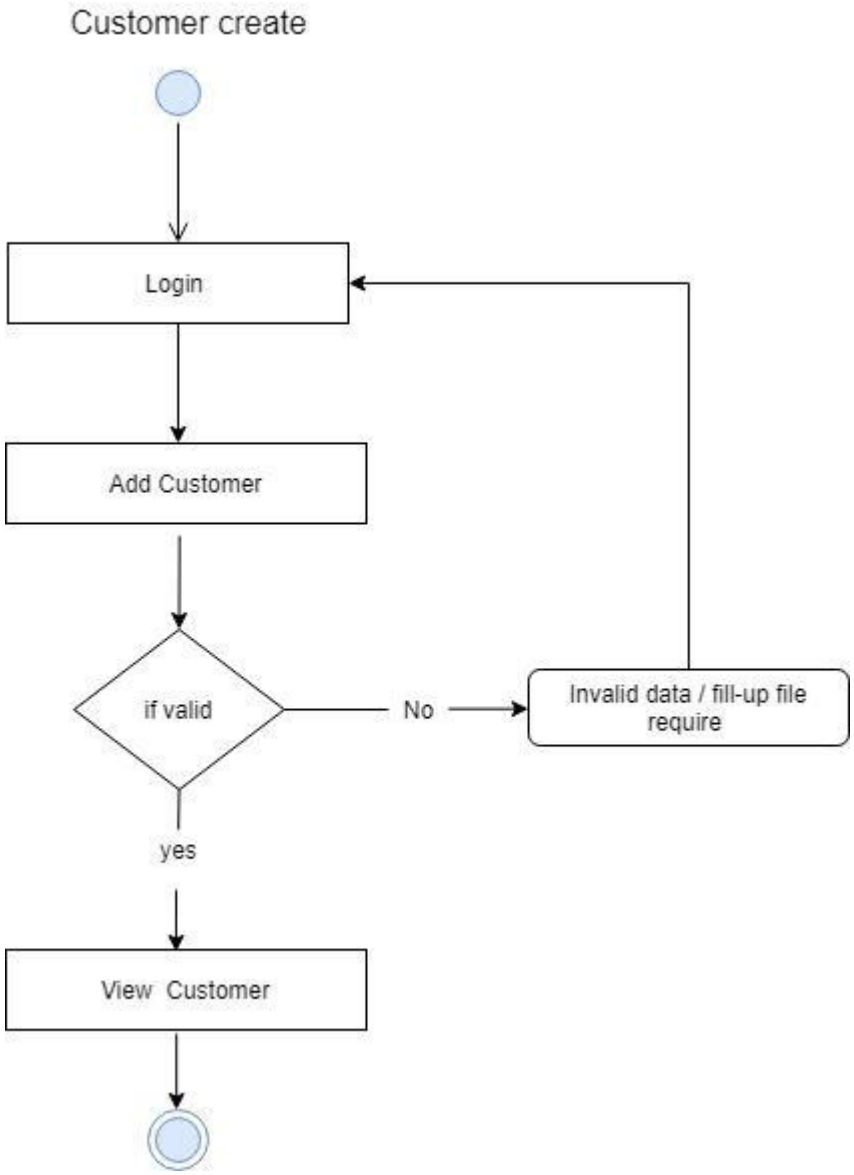
Add Supplier



Add Supplier Activity Diagram

©Daffodil International University

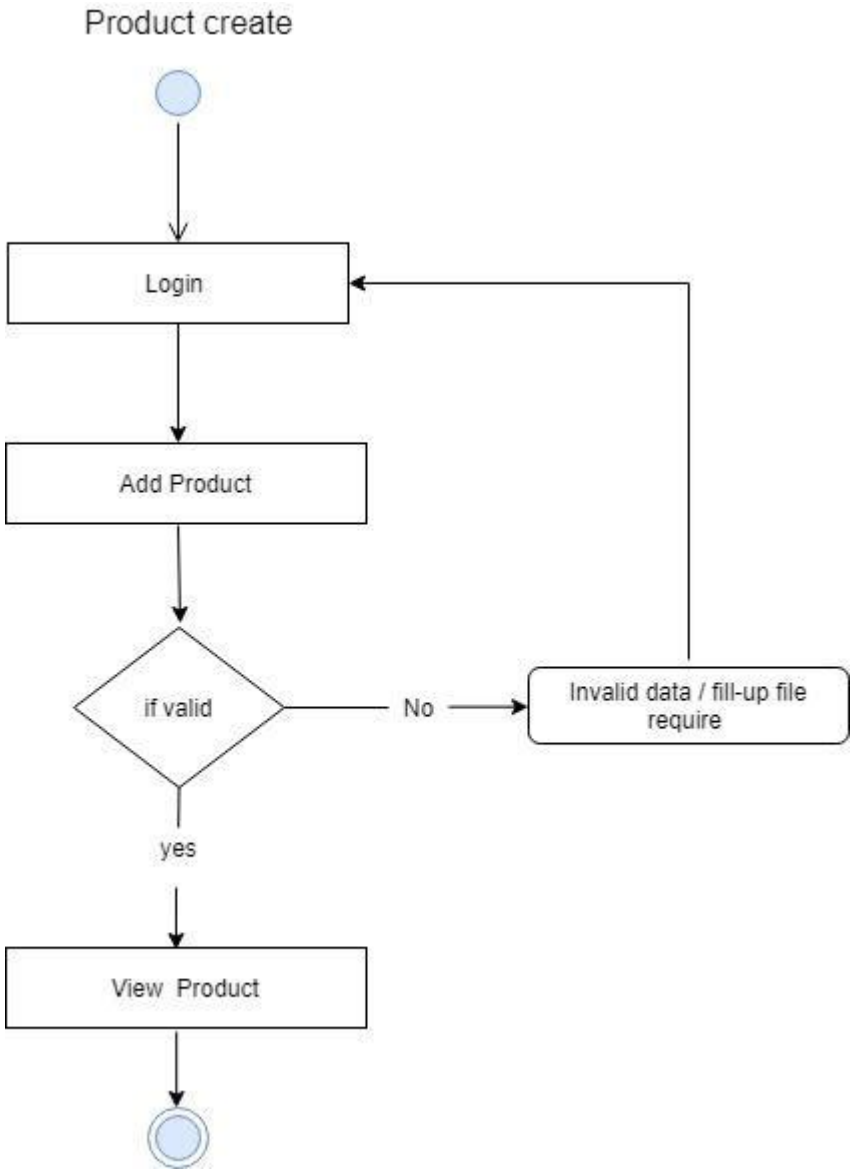
Add Customer



Add Customer Activity Diagram

©Daffodil International University

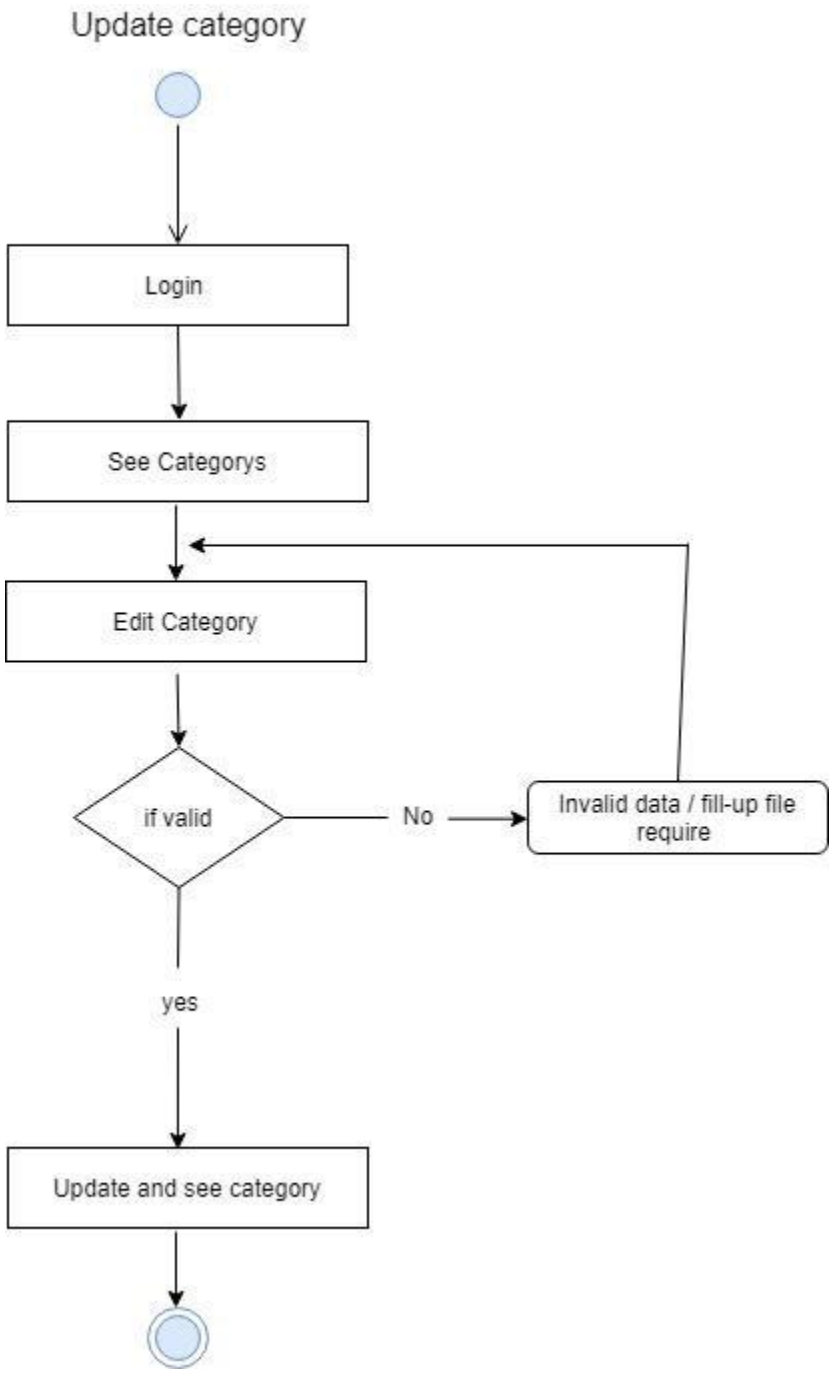
Add Product



Add Product Activity Diagram

©Daffodil International University

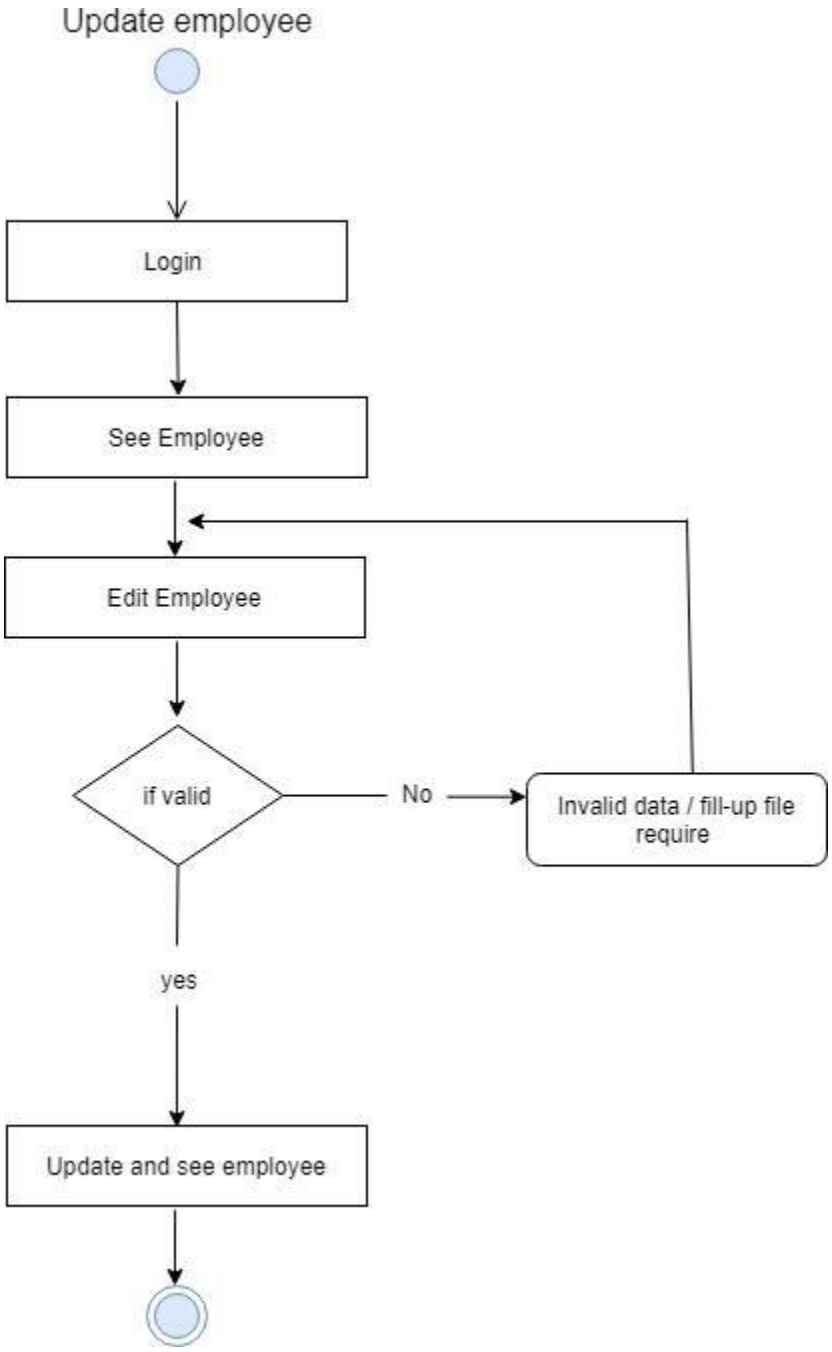
Update Category



Update Category Activity Diagram

©Daffodil International University

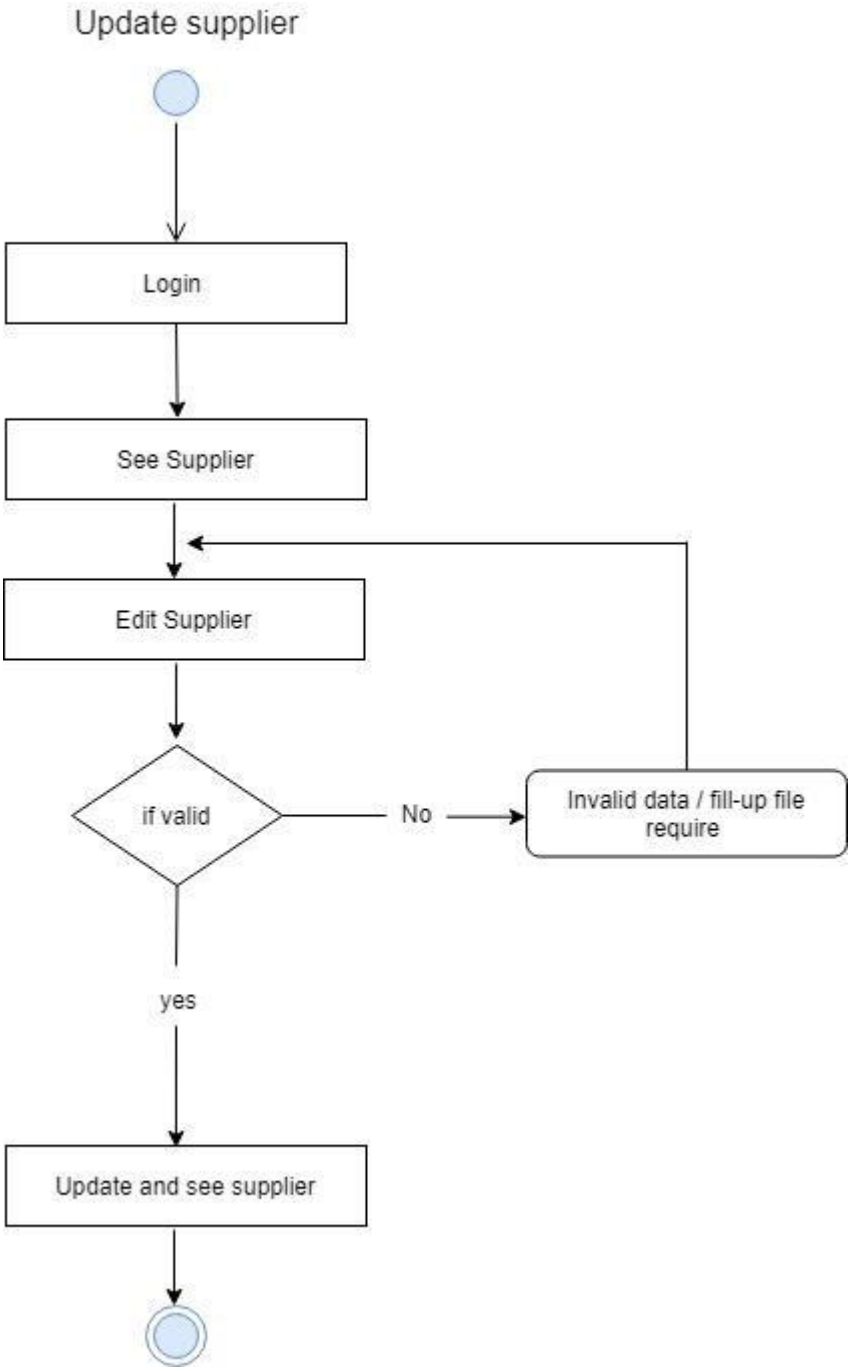
Update Employee



Update Employee Activity Diagram

©Daffodil International University

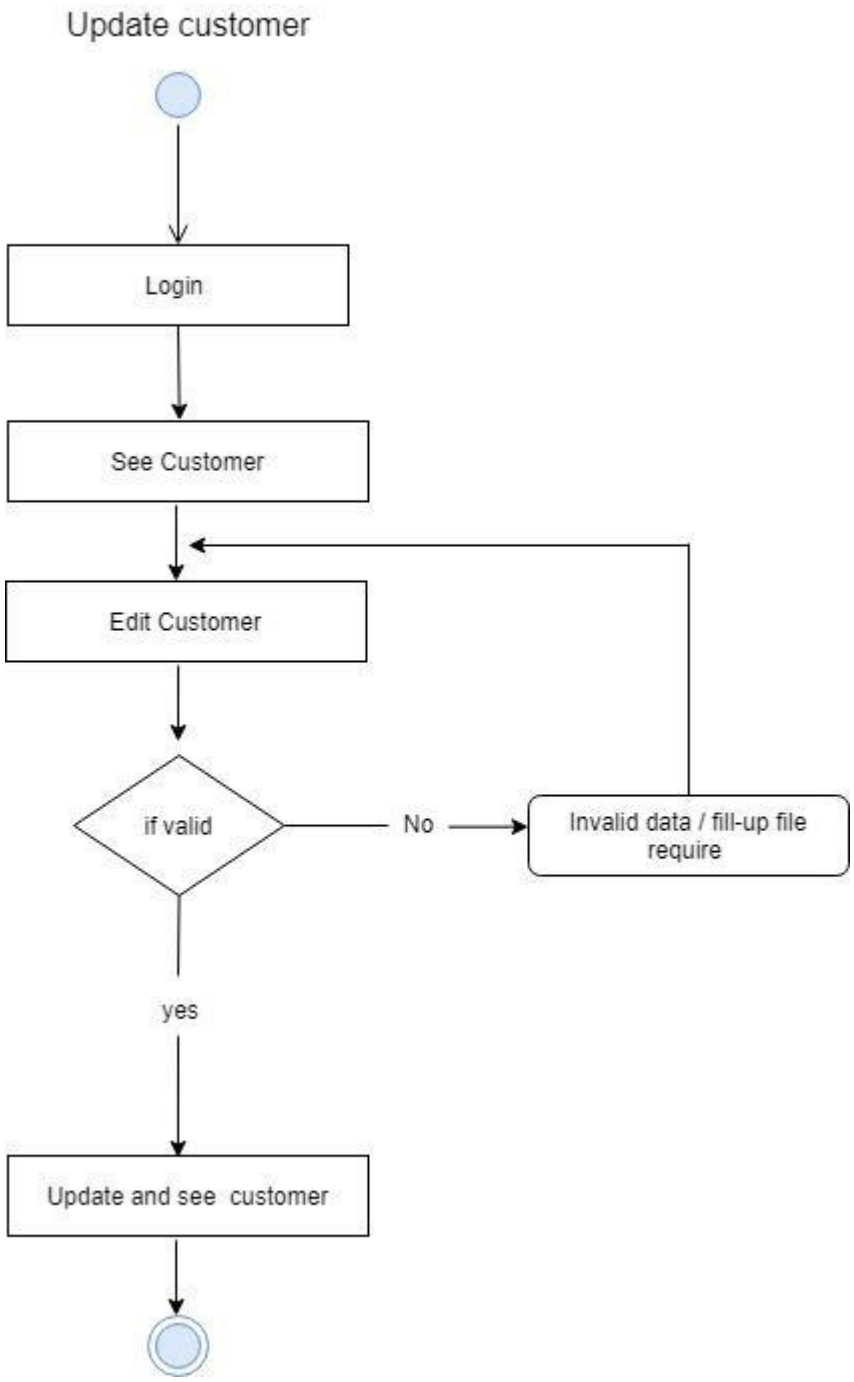
Update Supplier



Update Supplier Activity Diagram

©Daffodil International University

Update Customer



Update Customer Activity Diagram

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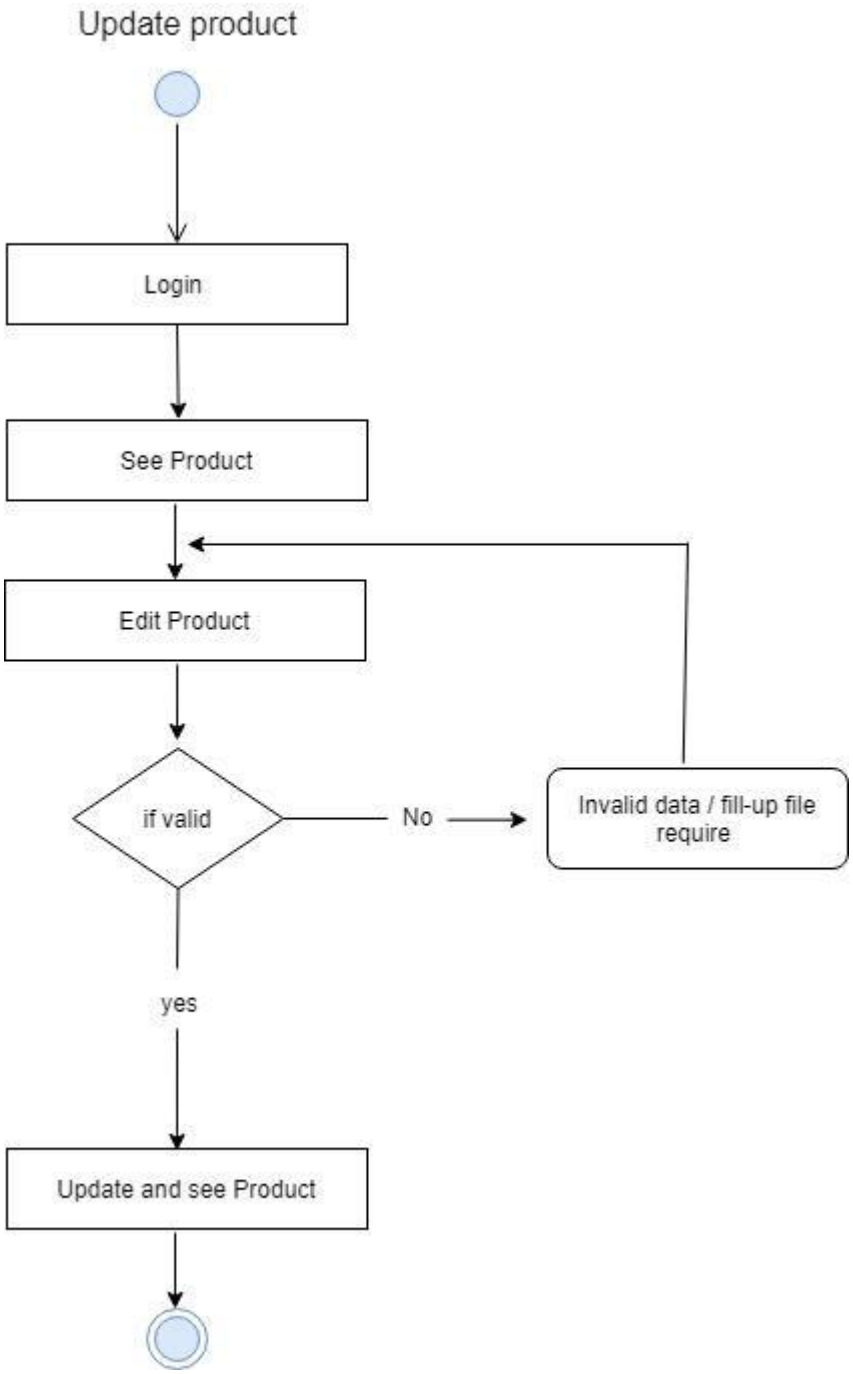
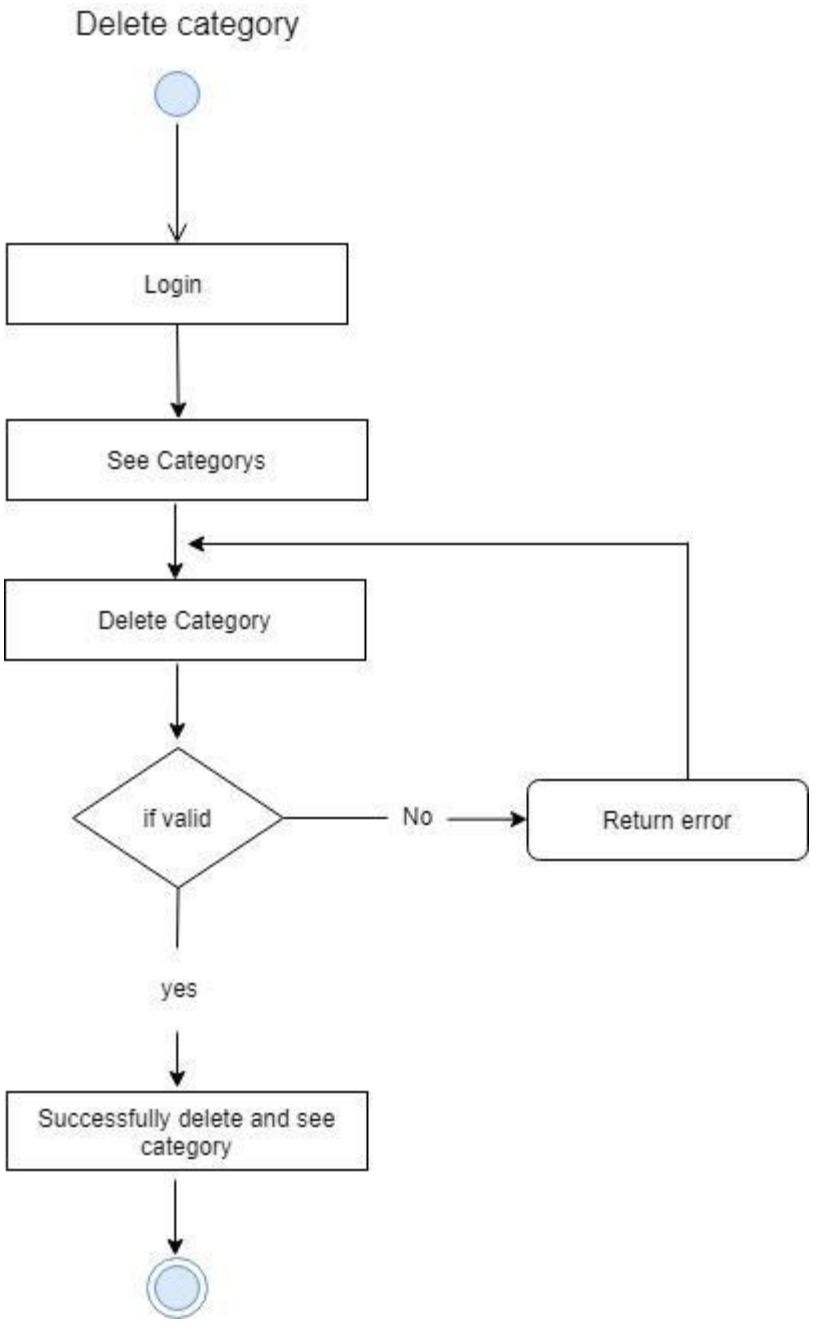
Update Product



Update Product Activity Diagram

©Daffodil International University

Delete Category



Admin Login Activity Diagram

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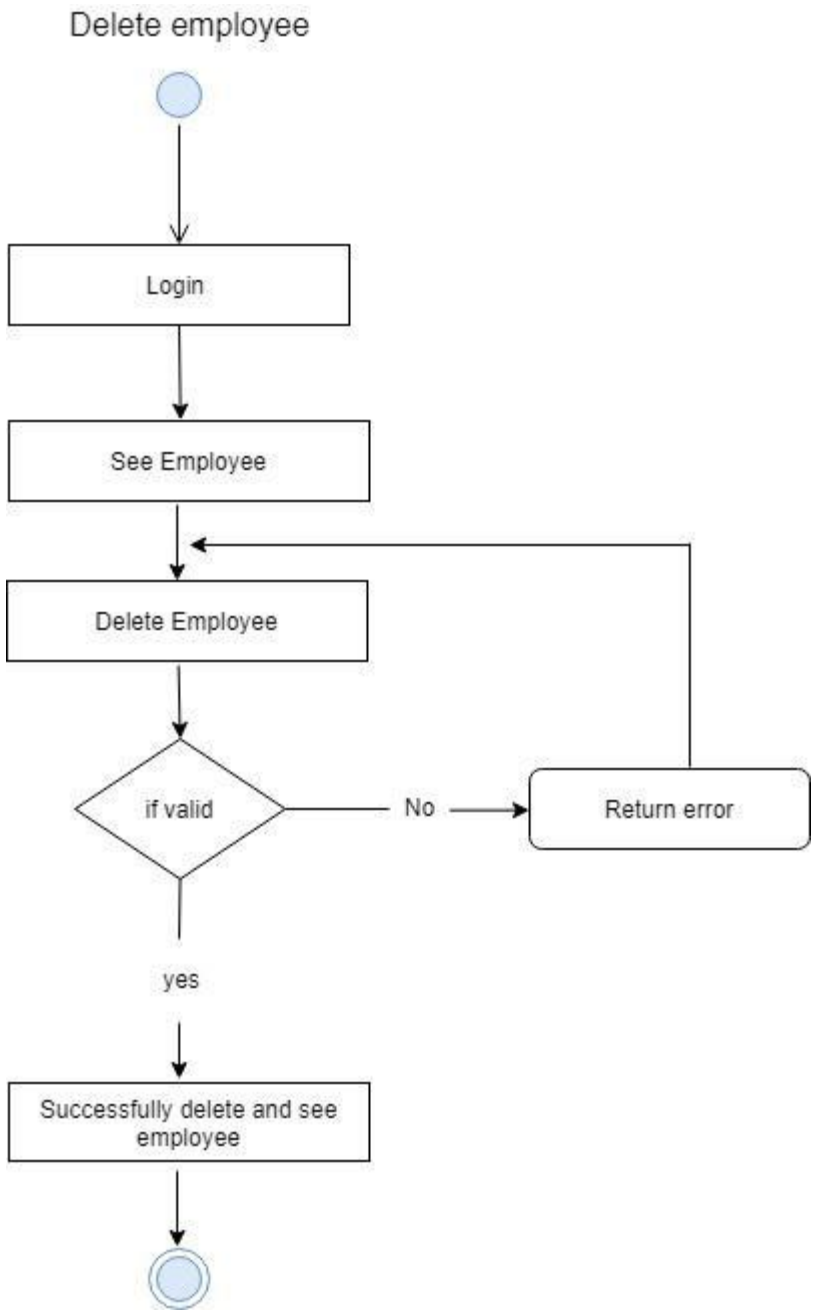
Delete Employee



Delete Employee Activity Diagram

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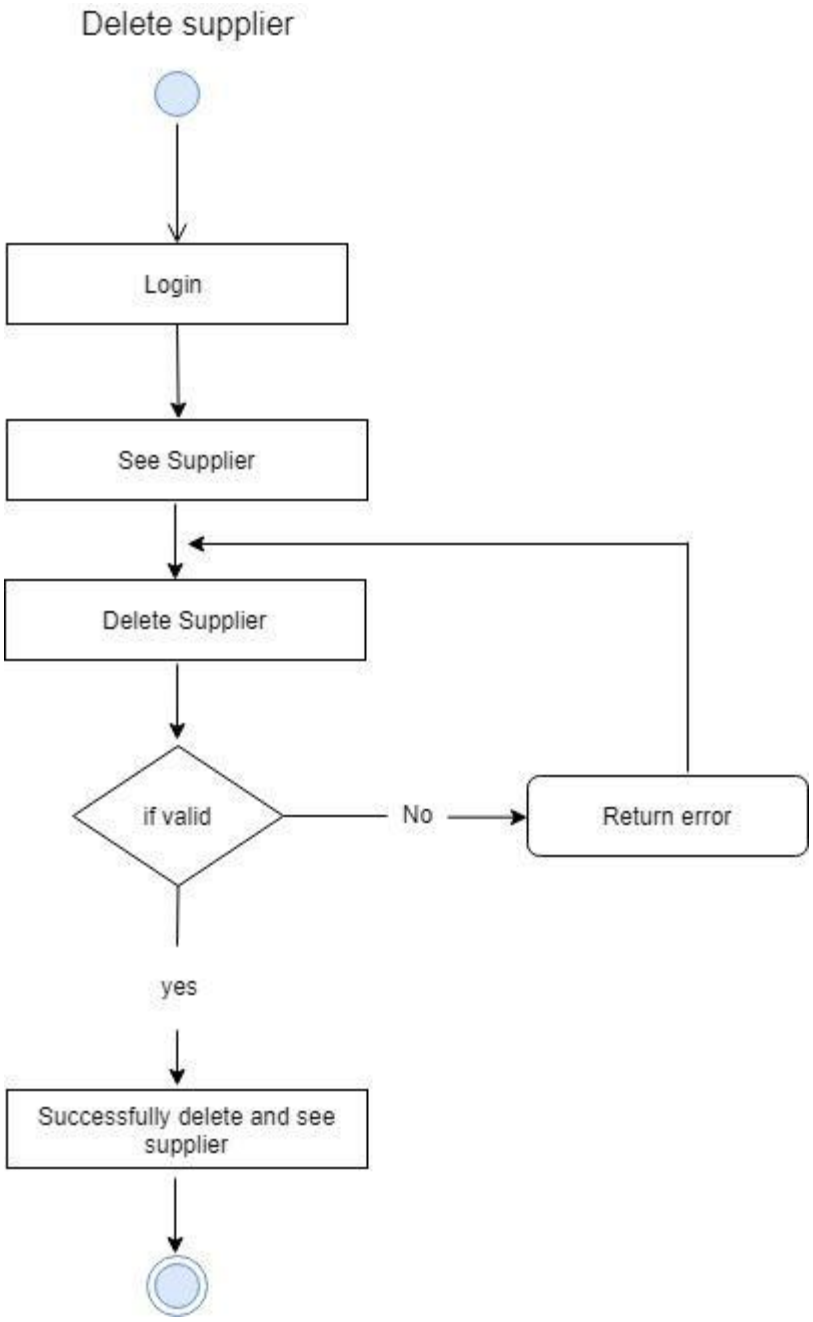
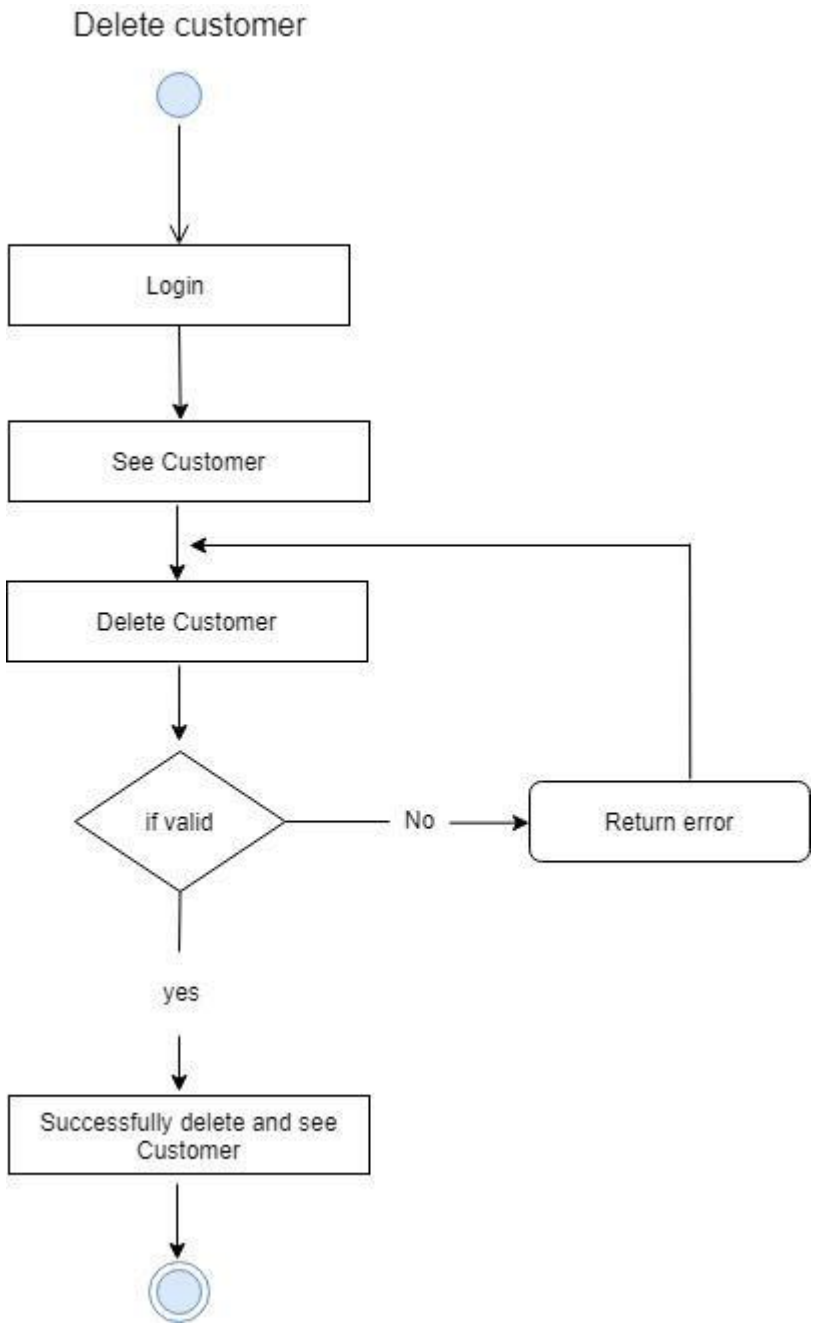
Delete Supplier



Delete Supplier Activity Diagram

©Daffodil International University

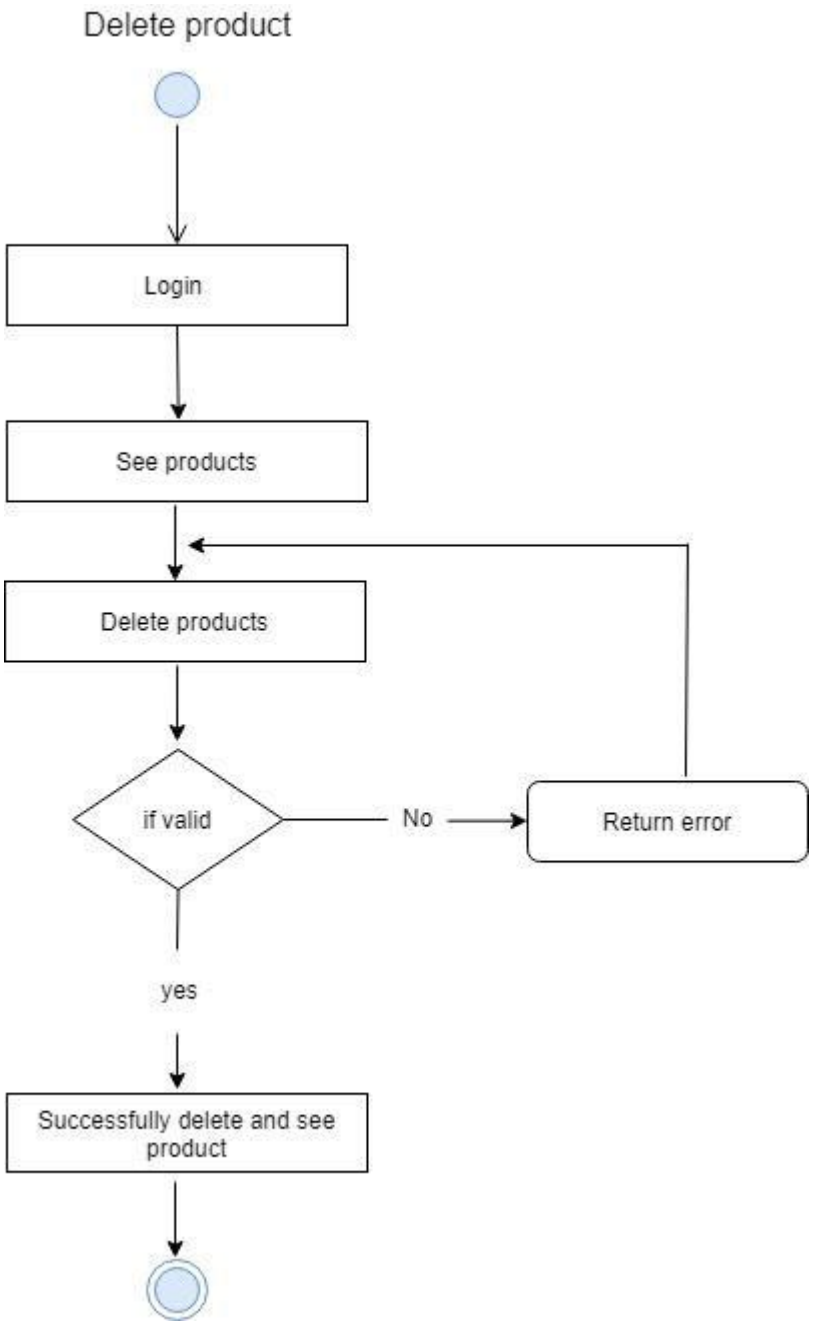
Delete Customer



Delete Customer Activity Diagram

©Daffodil International University

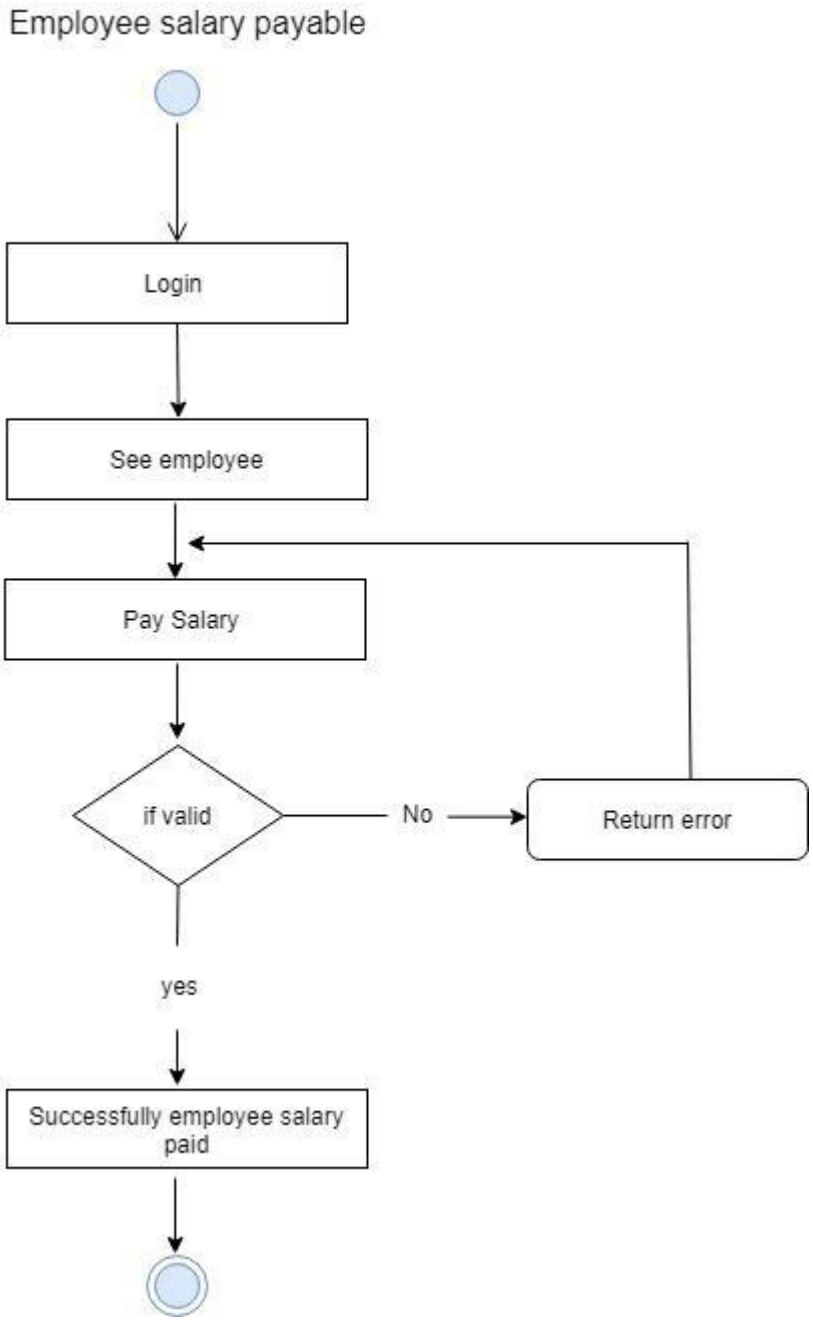
Delete Product



Delete Product Activity Diagram

©Daffodil International University

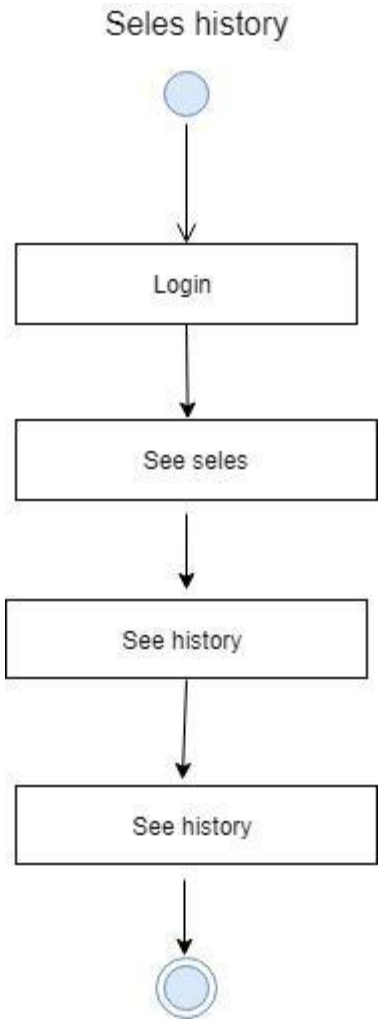
Employee Salary Payable



Salary Payable Activity Diagram

©Daffodil International University

Sales History



Sales History Activity Diagram

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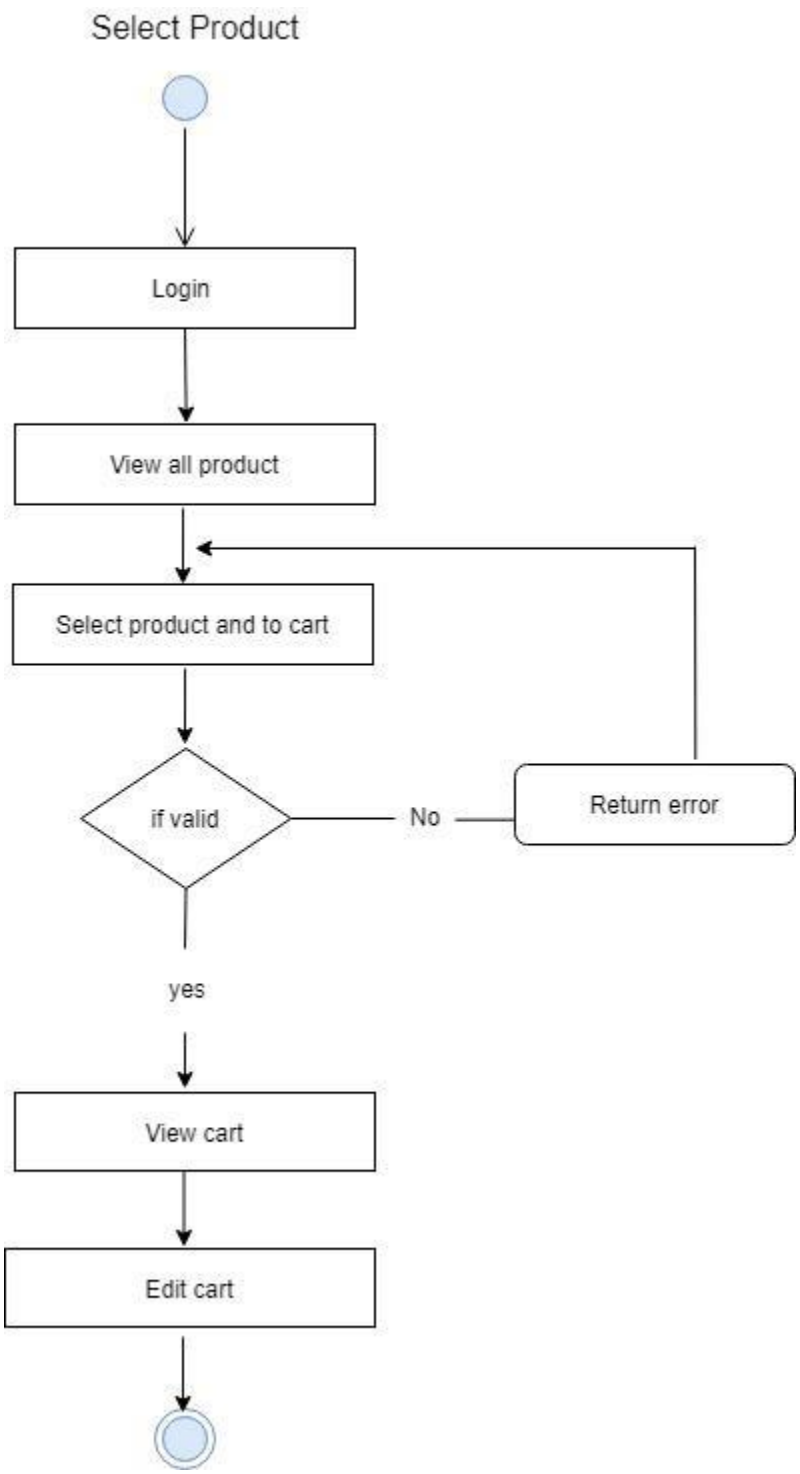
Select Product



Select Product Activity Diagram

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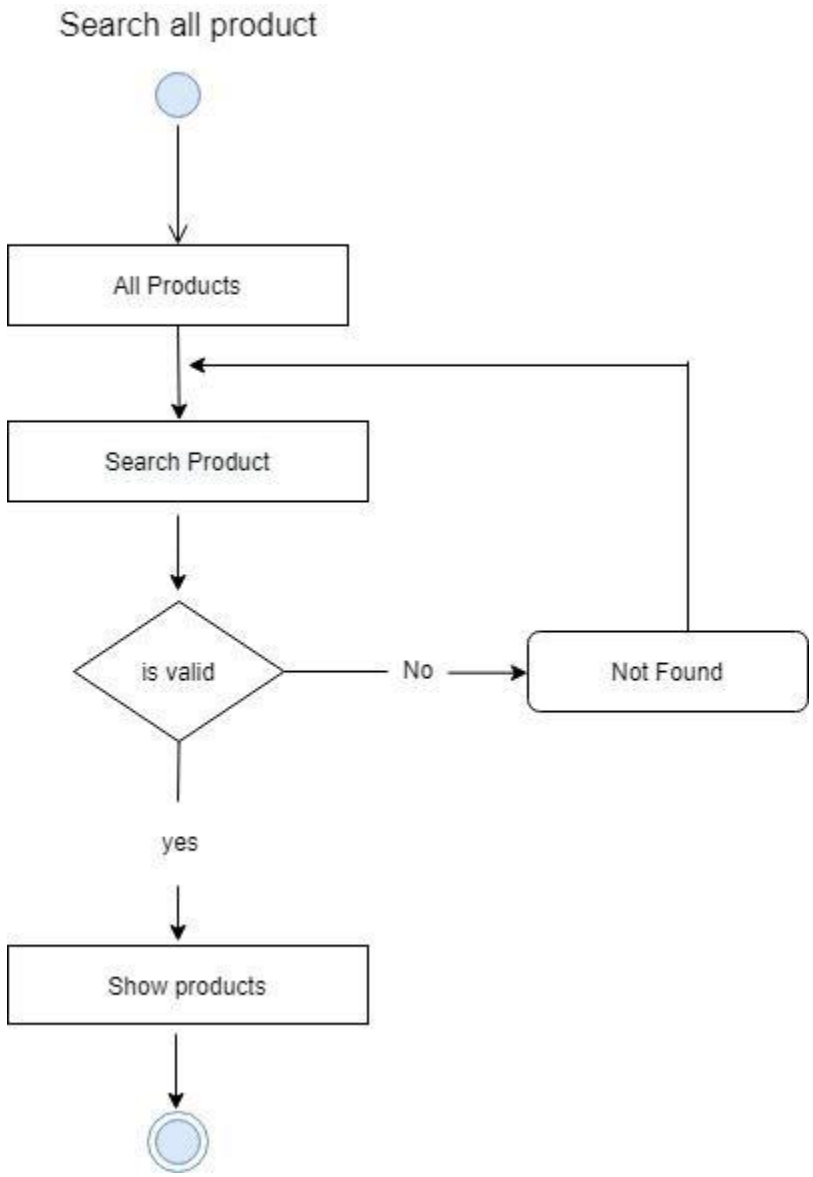
Search All Product Login



Search all Product Activity Diagram

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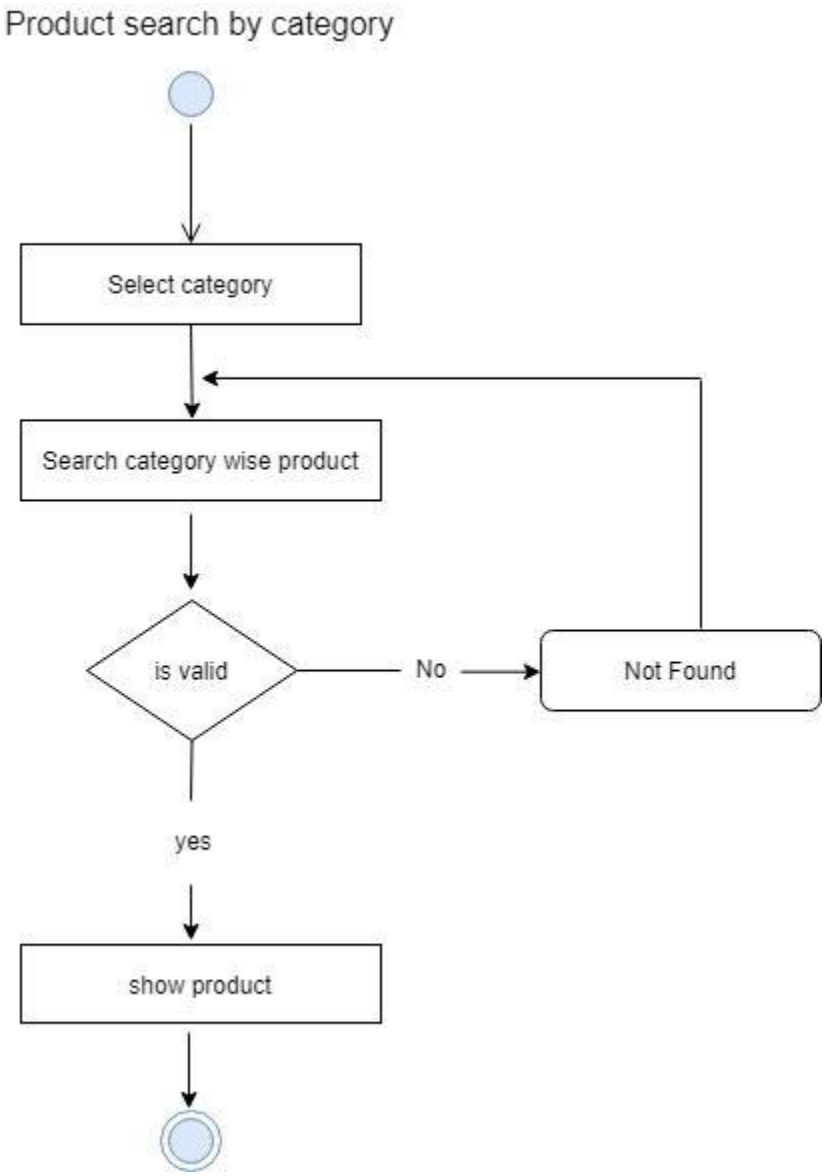
Product Search By Category



Product Search by Category Activity Diagram

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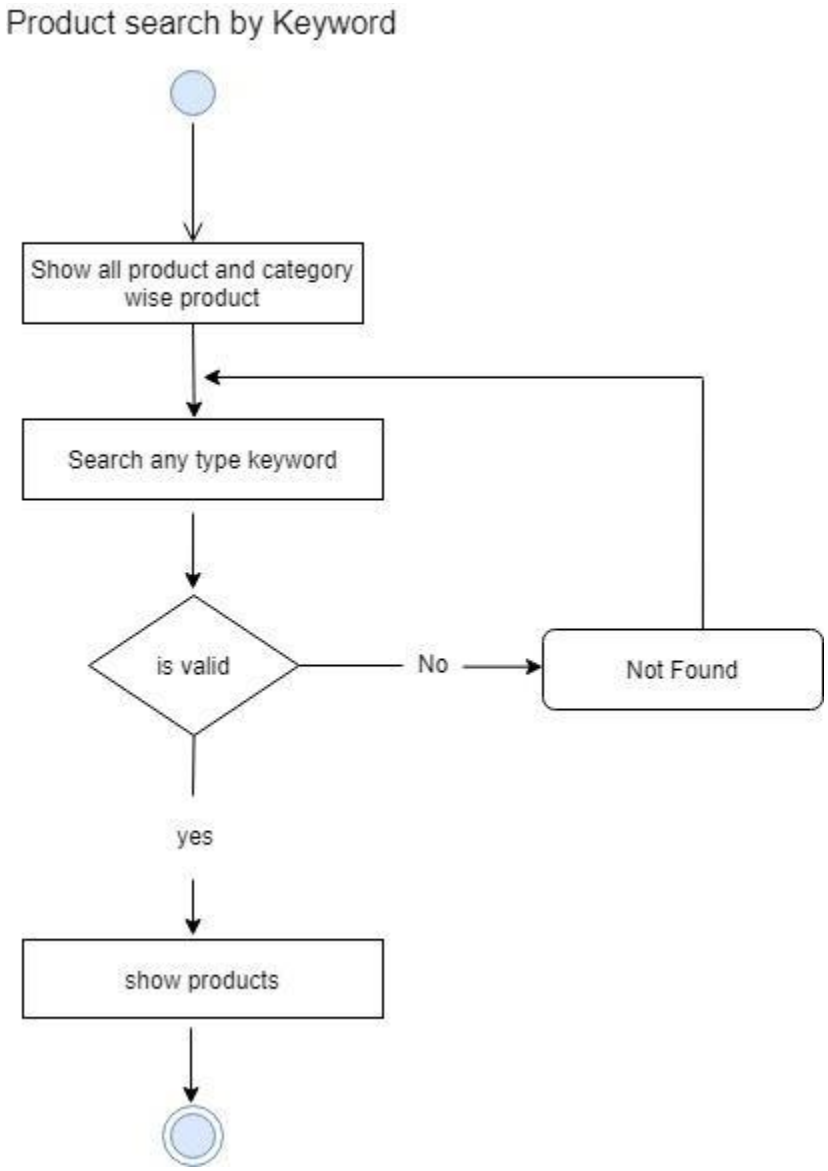
Search by Keyword Login



Search by keyword Activity Diagram

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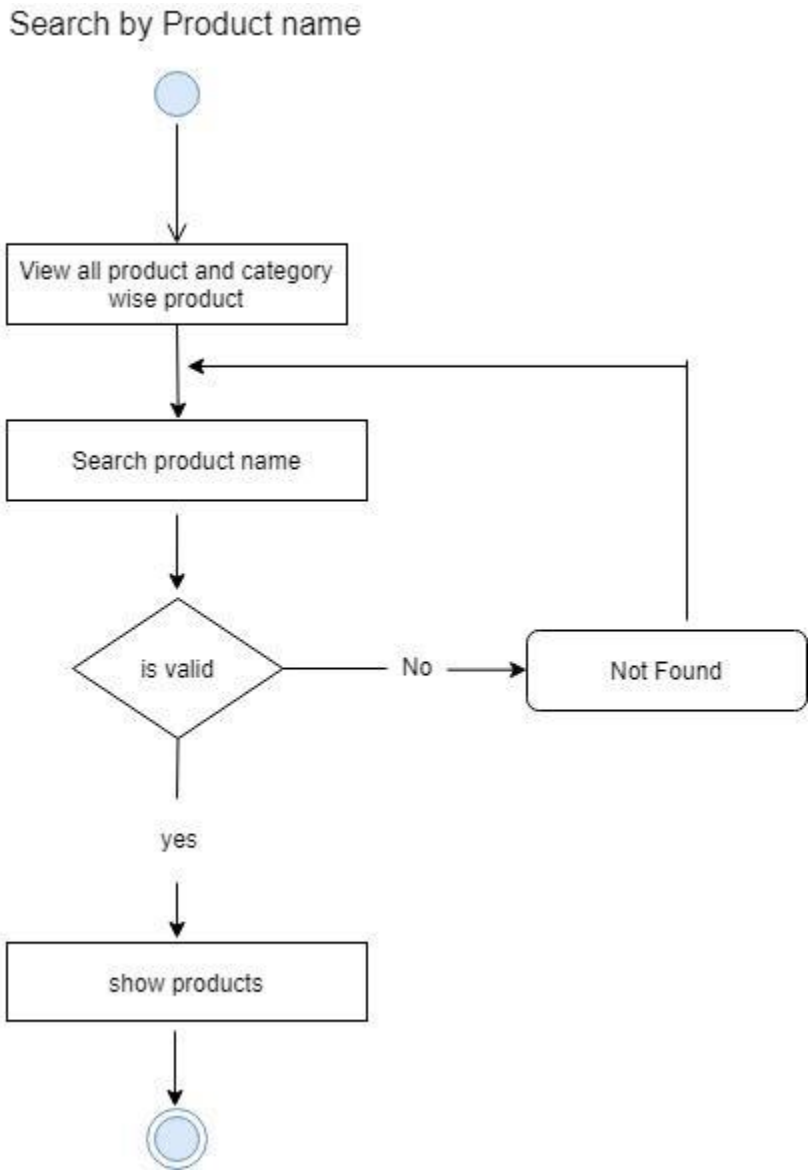
Search by Product Name



Search by Product Name Activity Diagram

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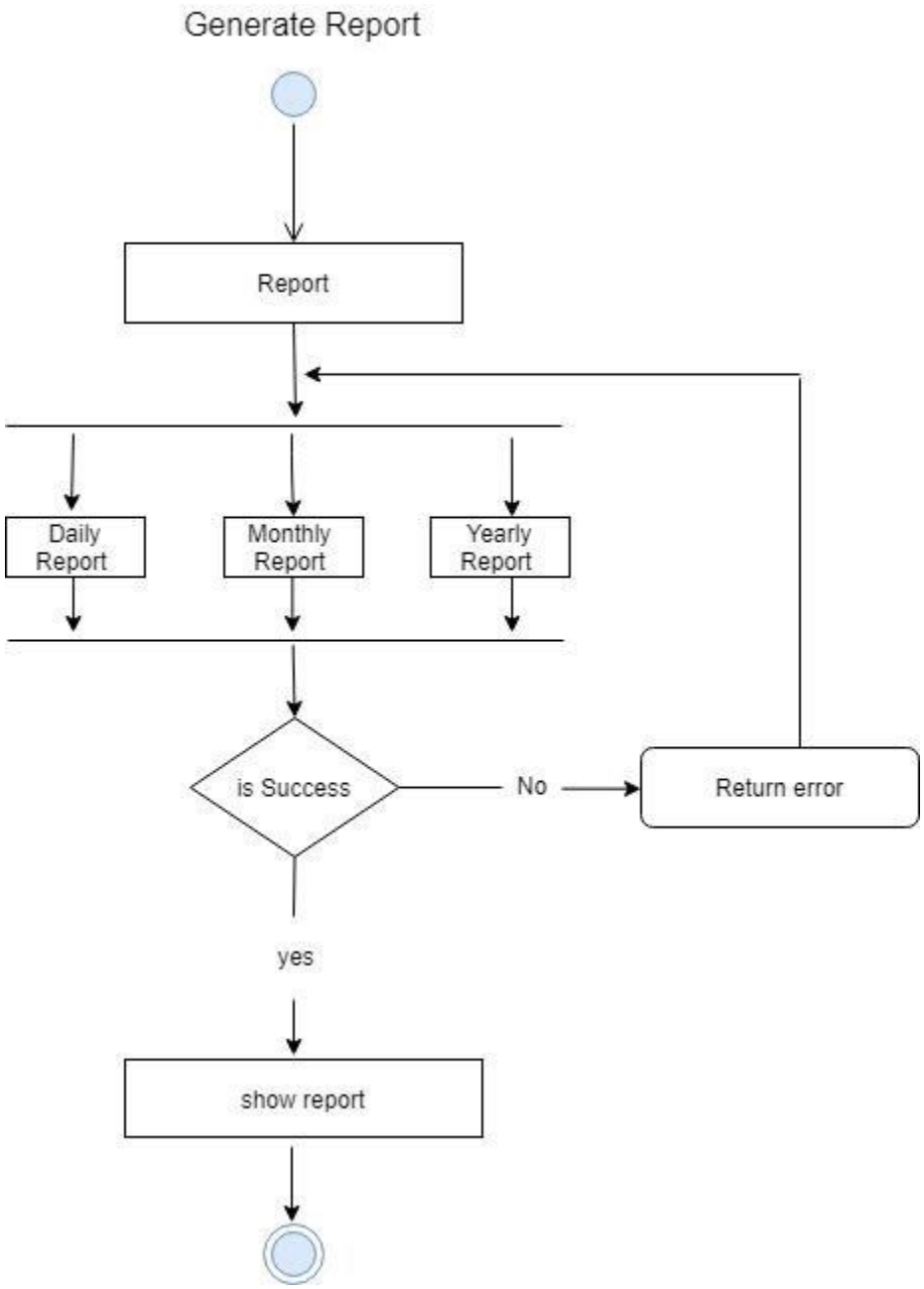
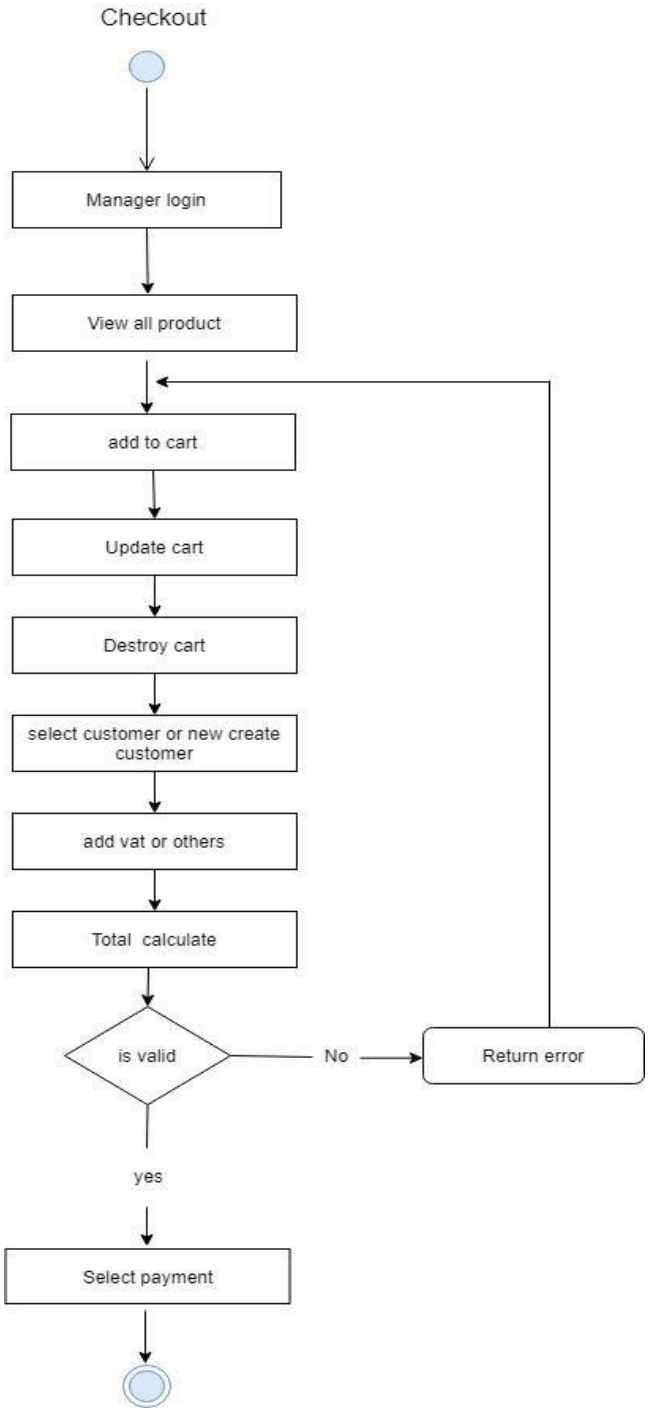
Generate Report Login



Generate Report Activity Diagram

©Daffodil International University

Checkout



Checkout Activity Diagram

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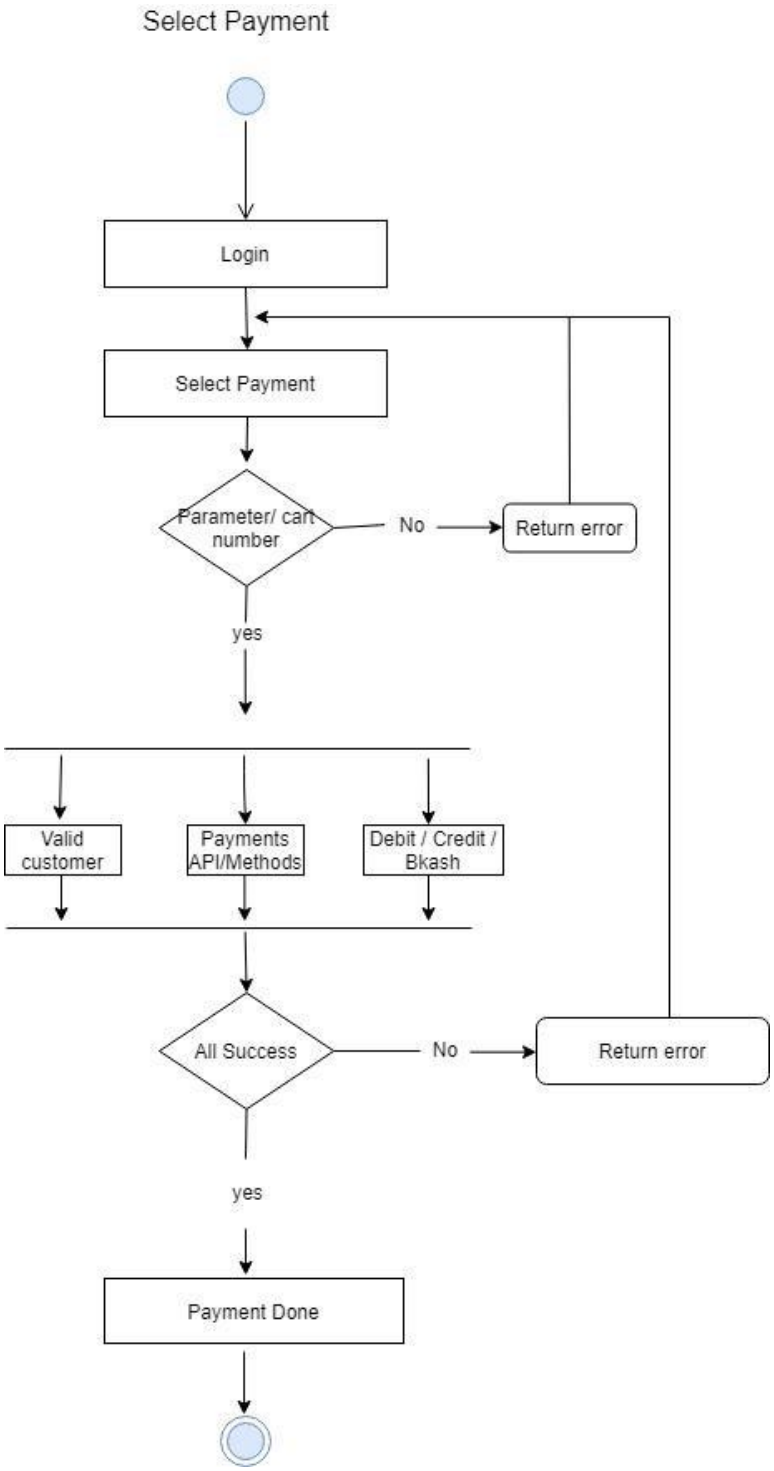
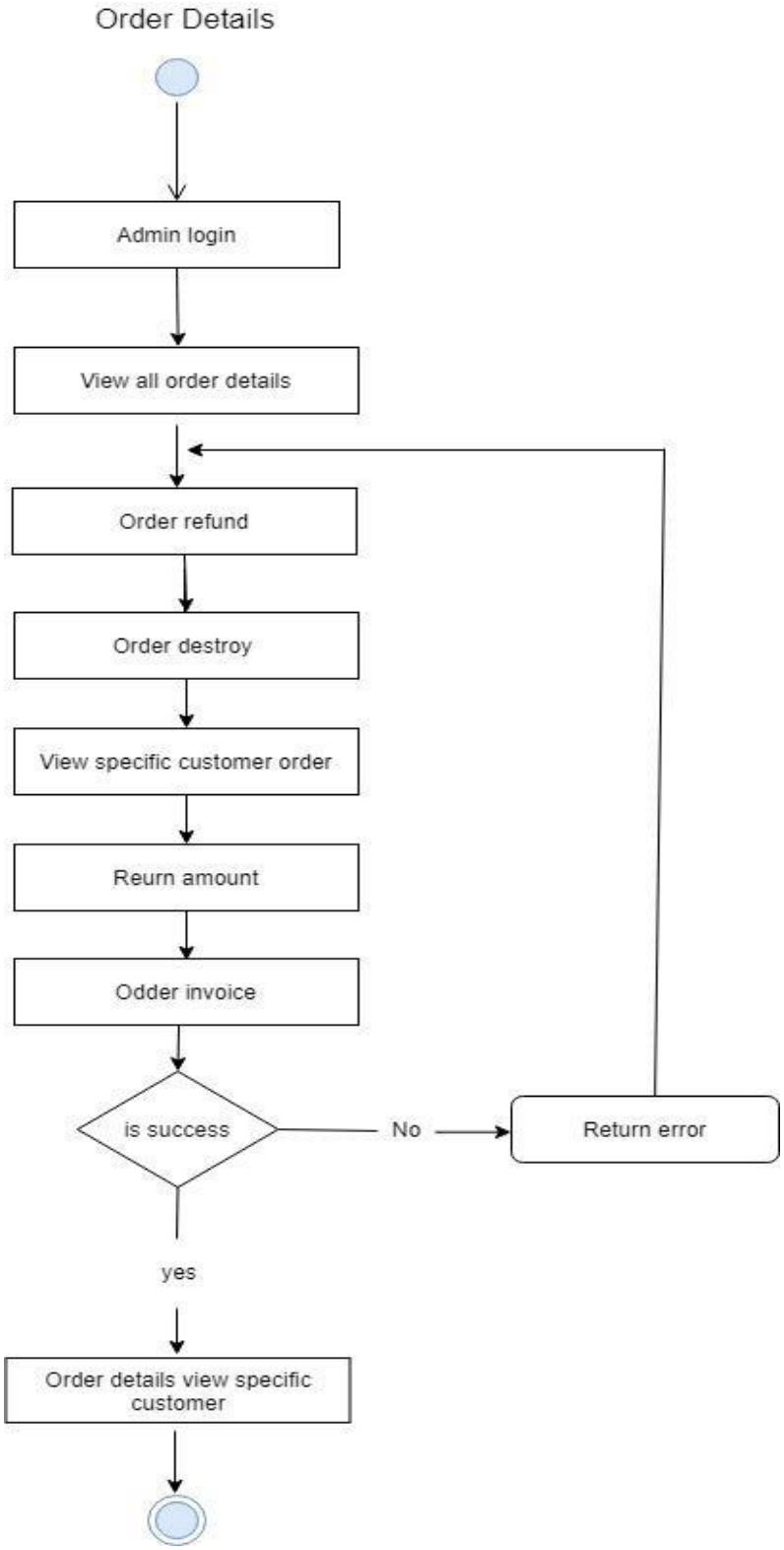
Select Payment



Select Payment Activity Diagram

©Daffodil International University

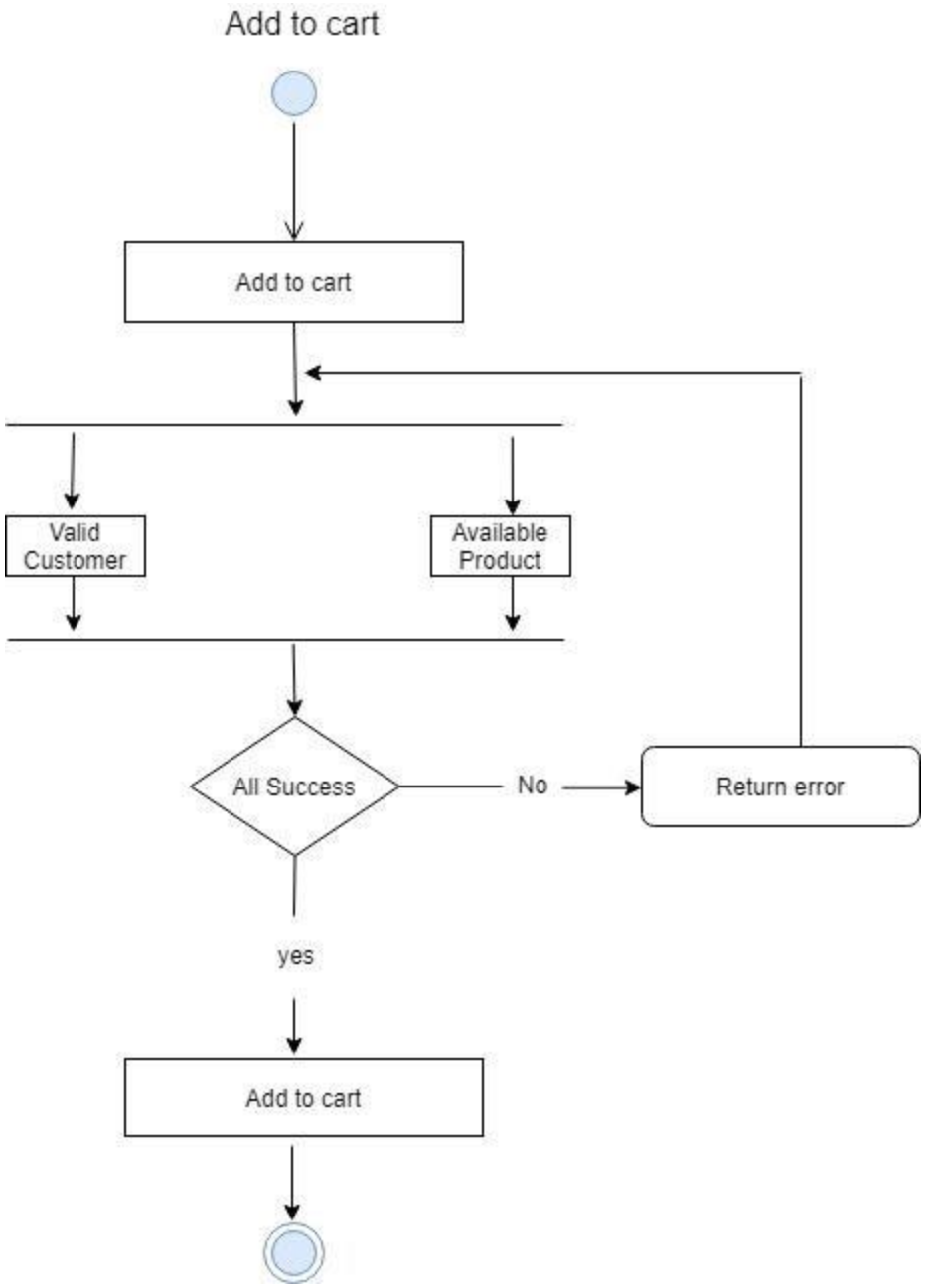
Order Details



Order Details Activity Diagram

©Daffodil International University

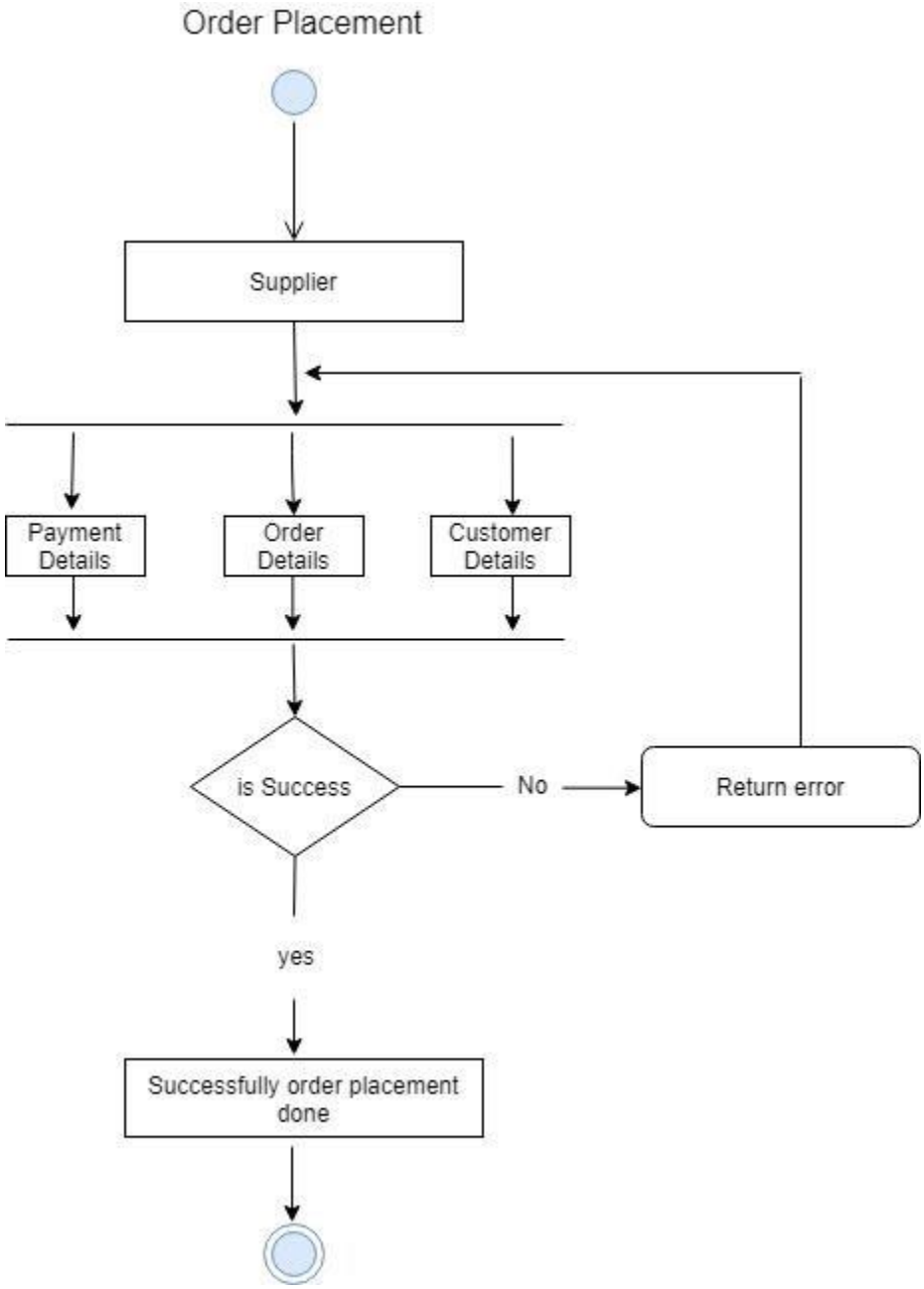
Add to Cart



Add To Cart Activity Diagram

©Daffodil International University

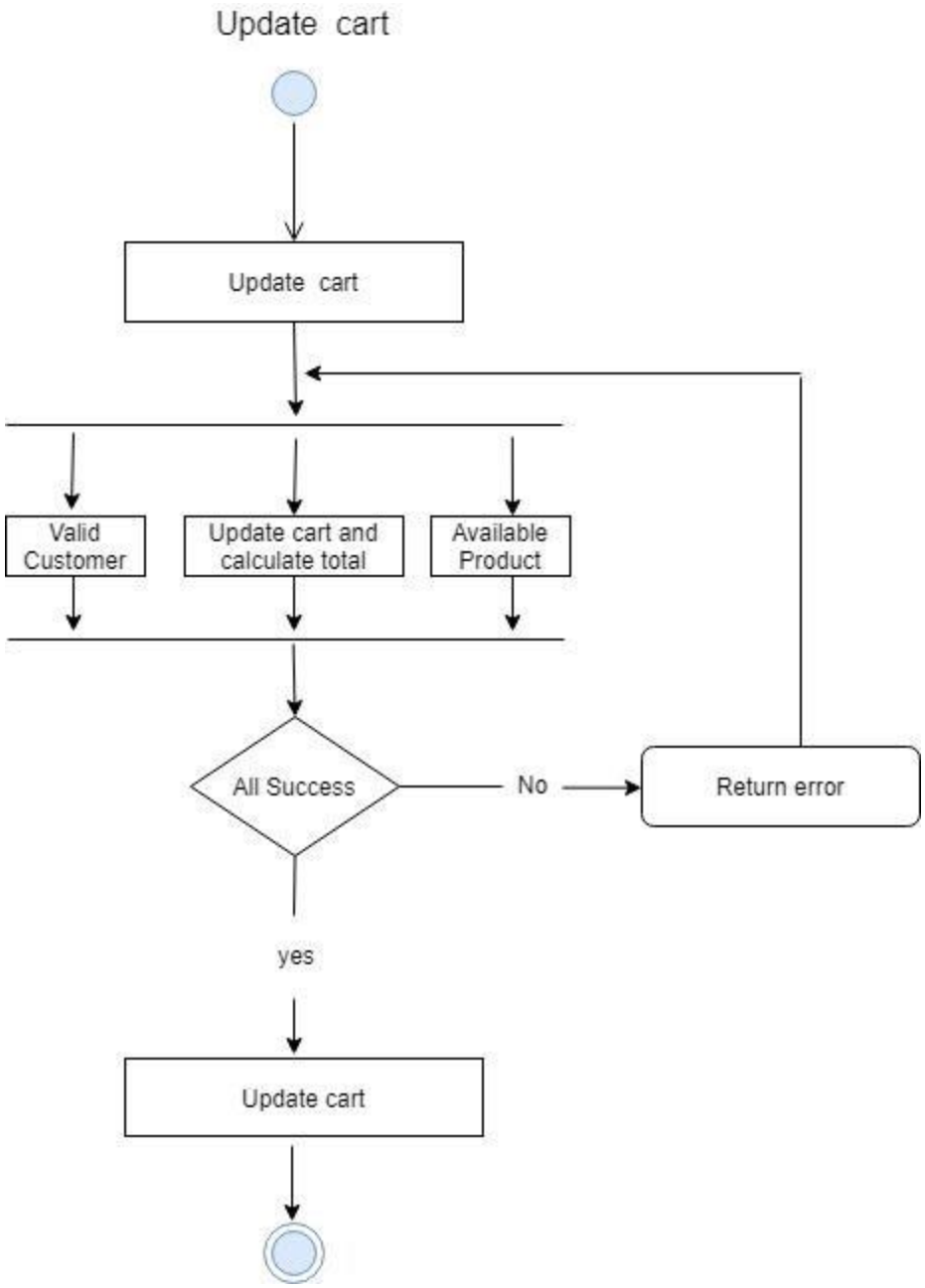
Order Placement



Order Placement Activity Diagram

©Daffodil International University

Update Cart



Update Cart Activity Diagram

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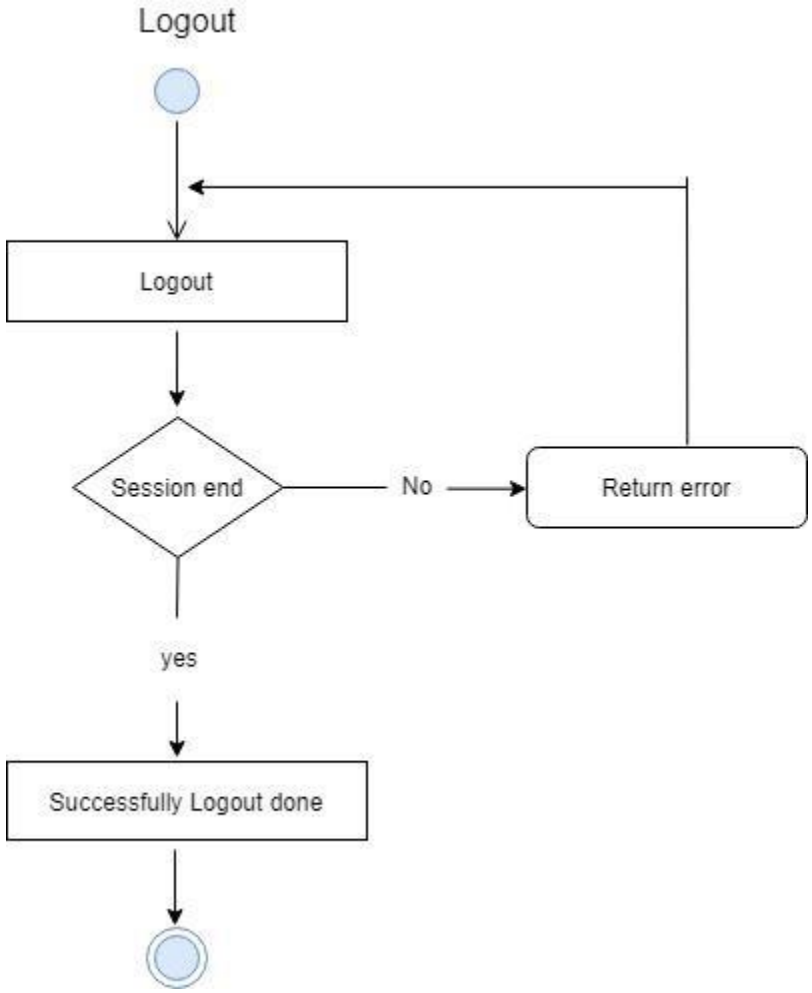
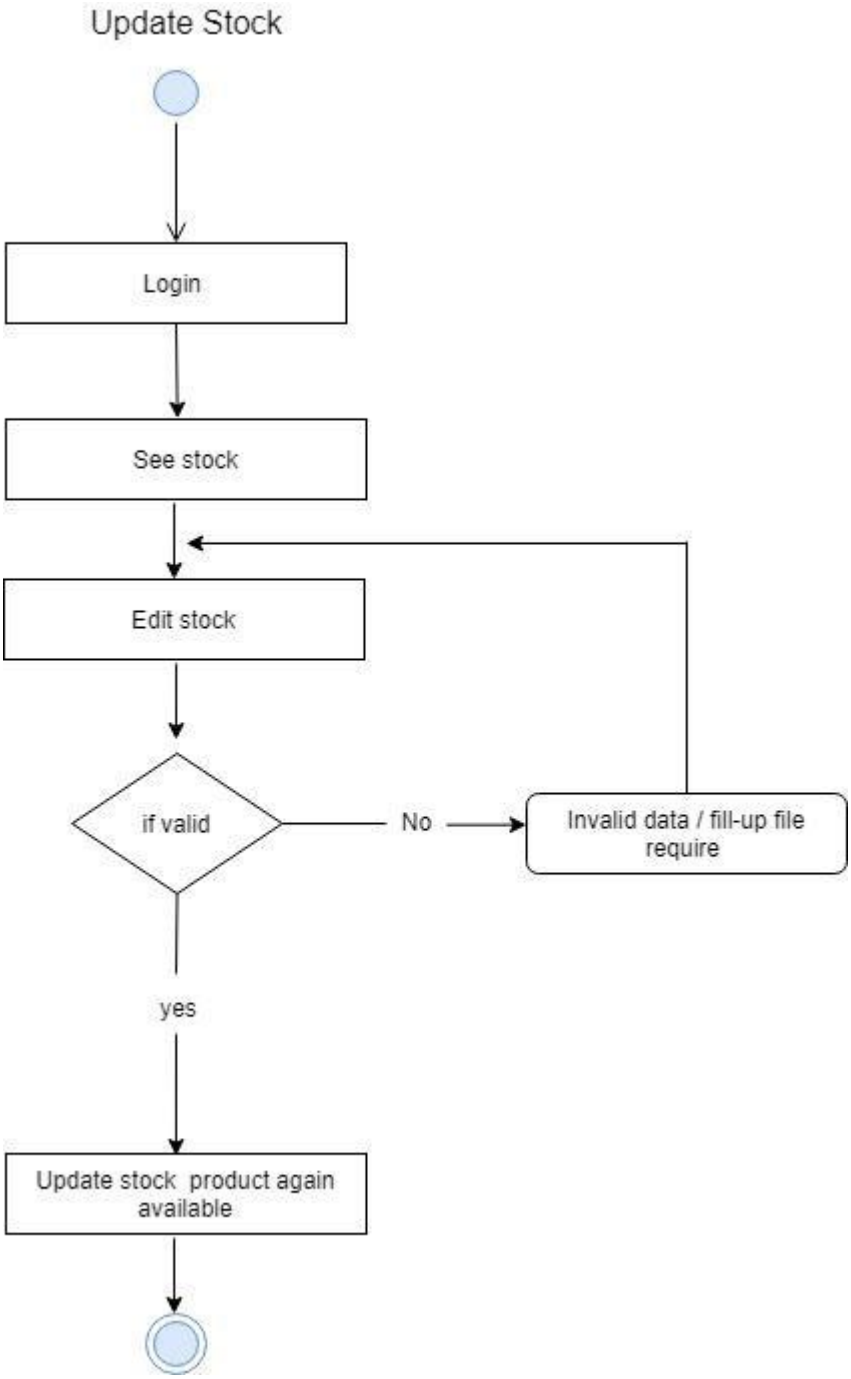
Logout



Logout Activity Diagram

©Daffodil International University

Update Stock



Update Stock Activity Diagram

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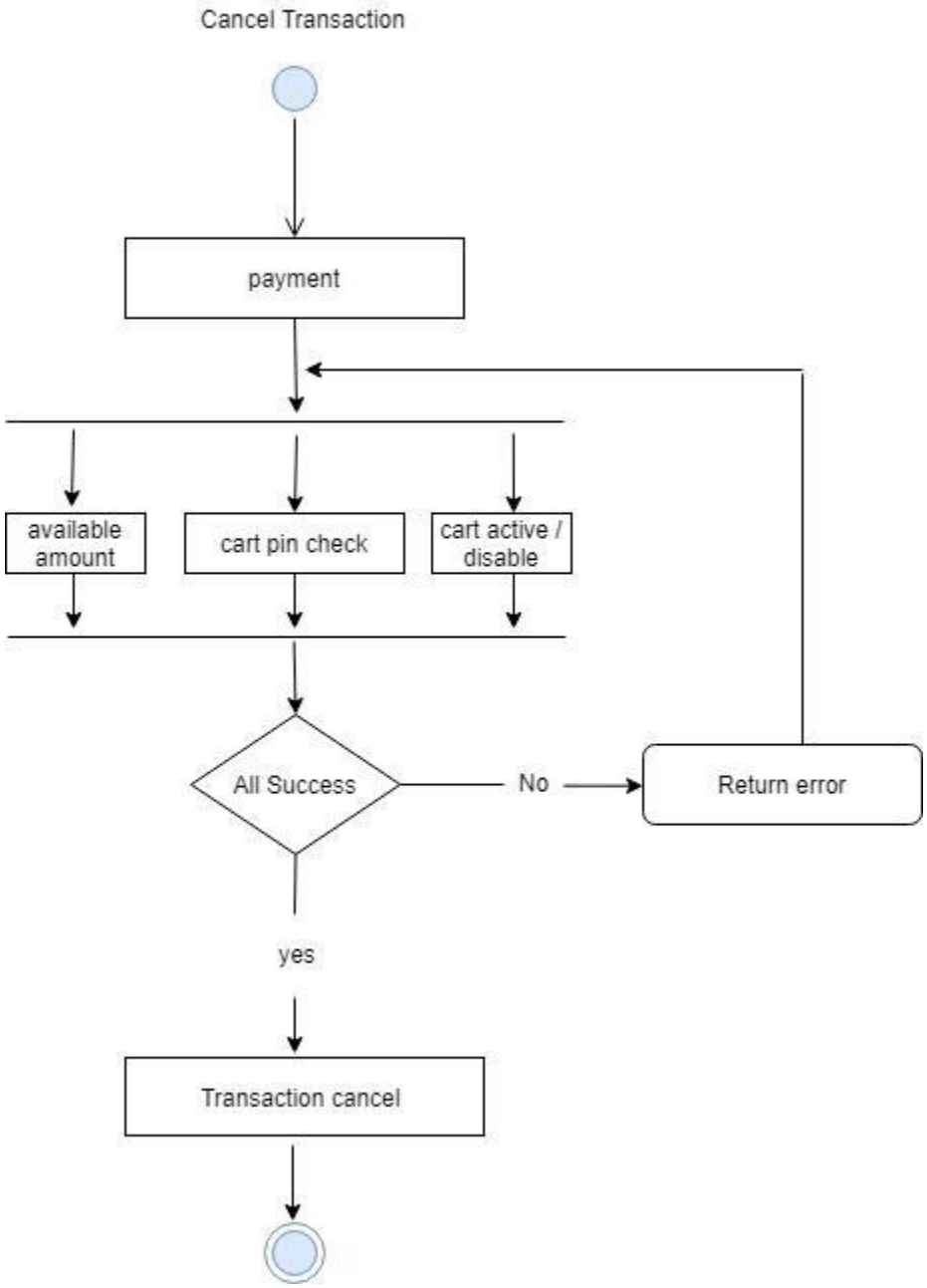
Cancel Transaction



Cancel Transaction Activity Diagram

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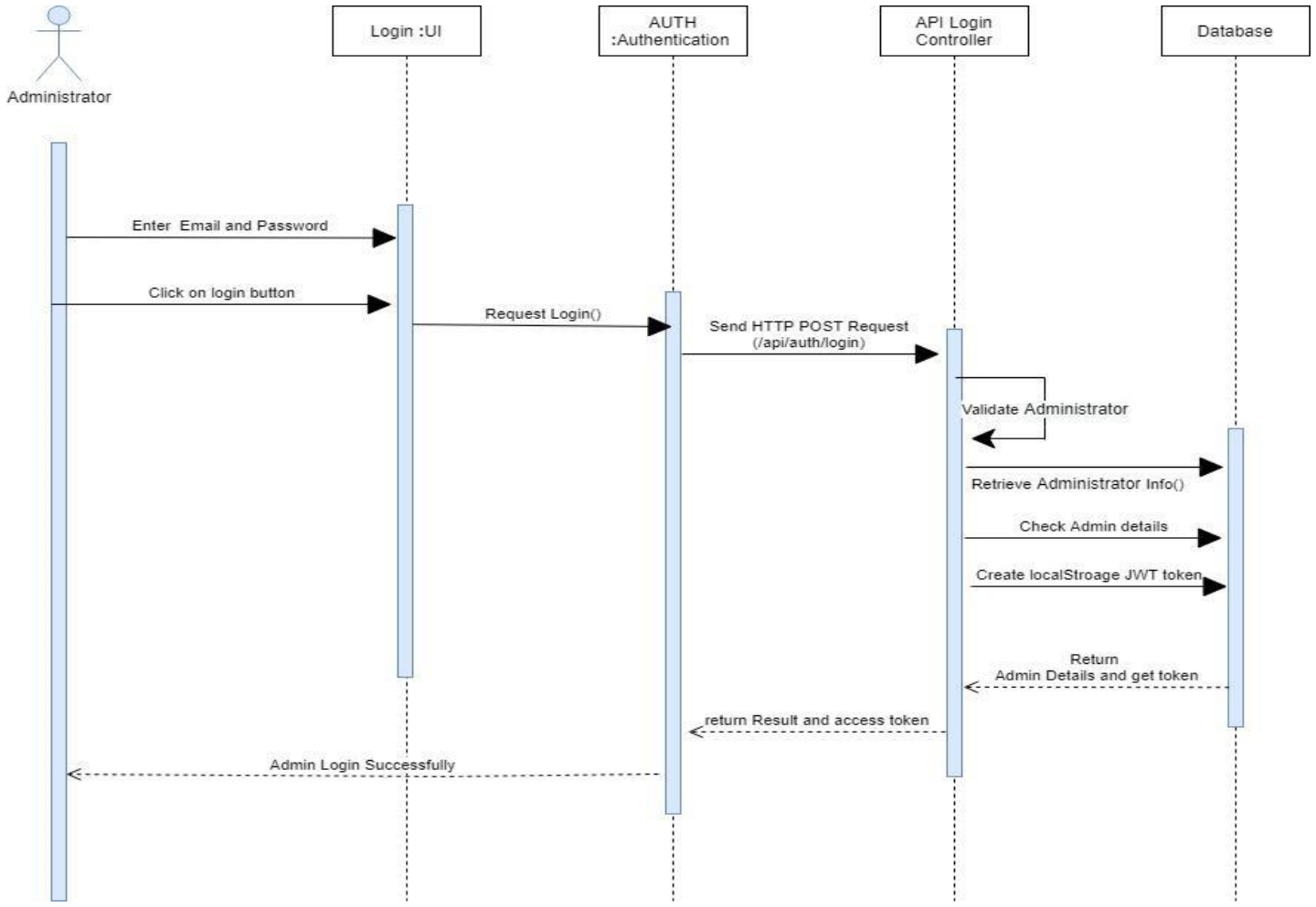
CHAPTER-04

4.1 Sequence Diagram

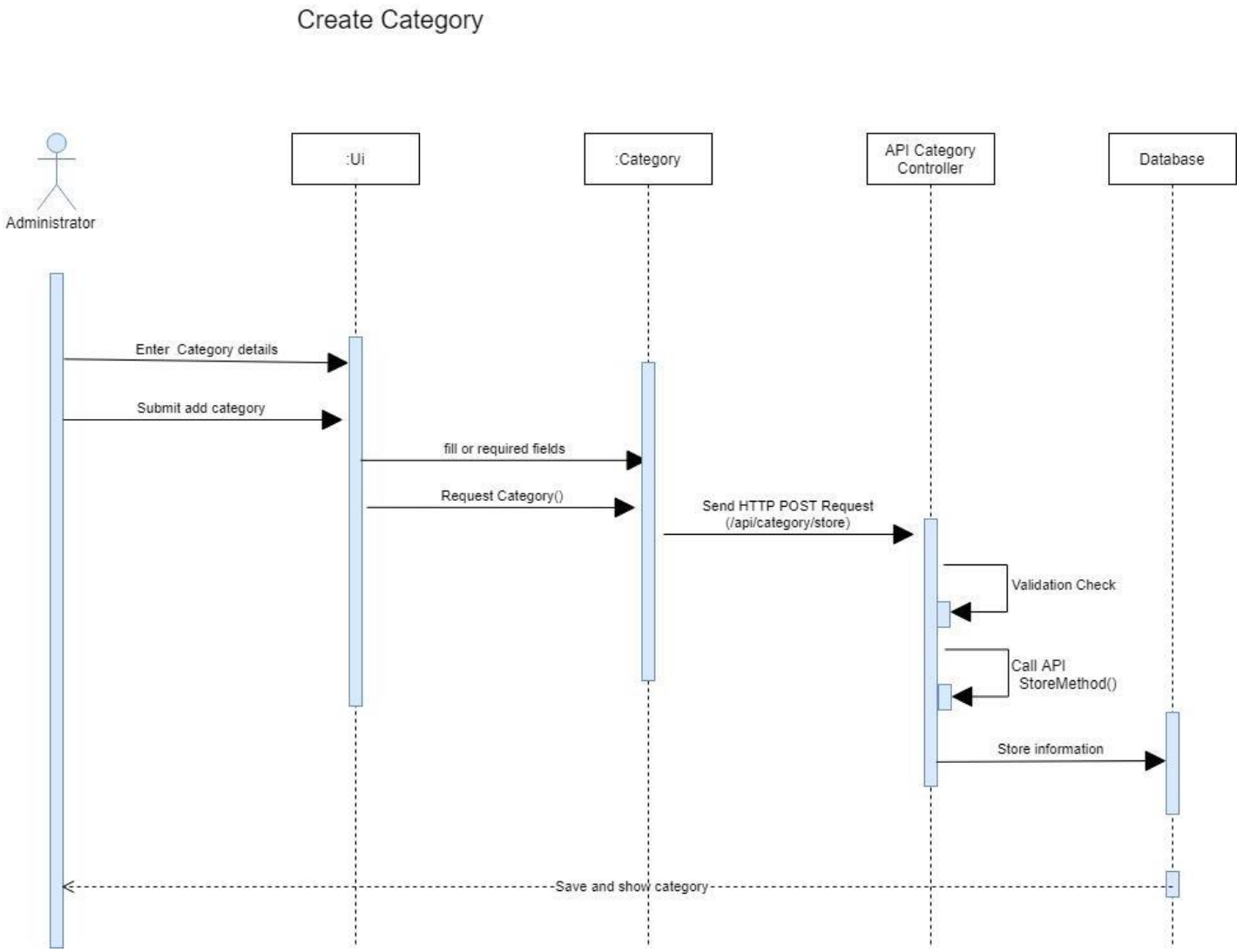
Sequence diagram show the process in sequential way that it's actor done. Sequence Diagram describe the sequence system to database.

Login



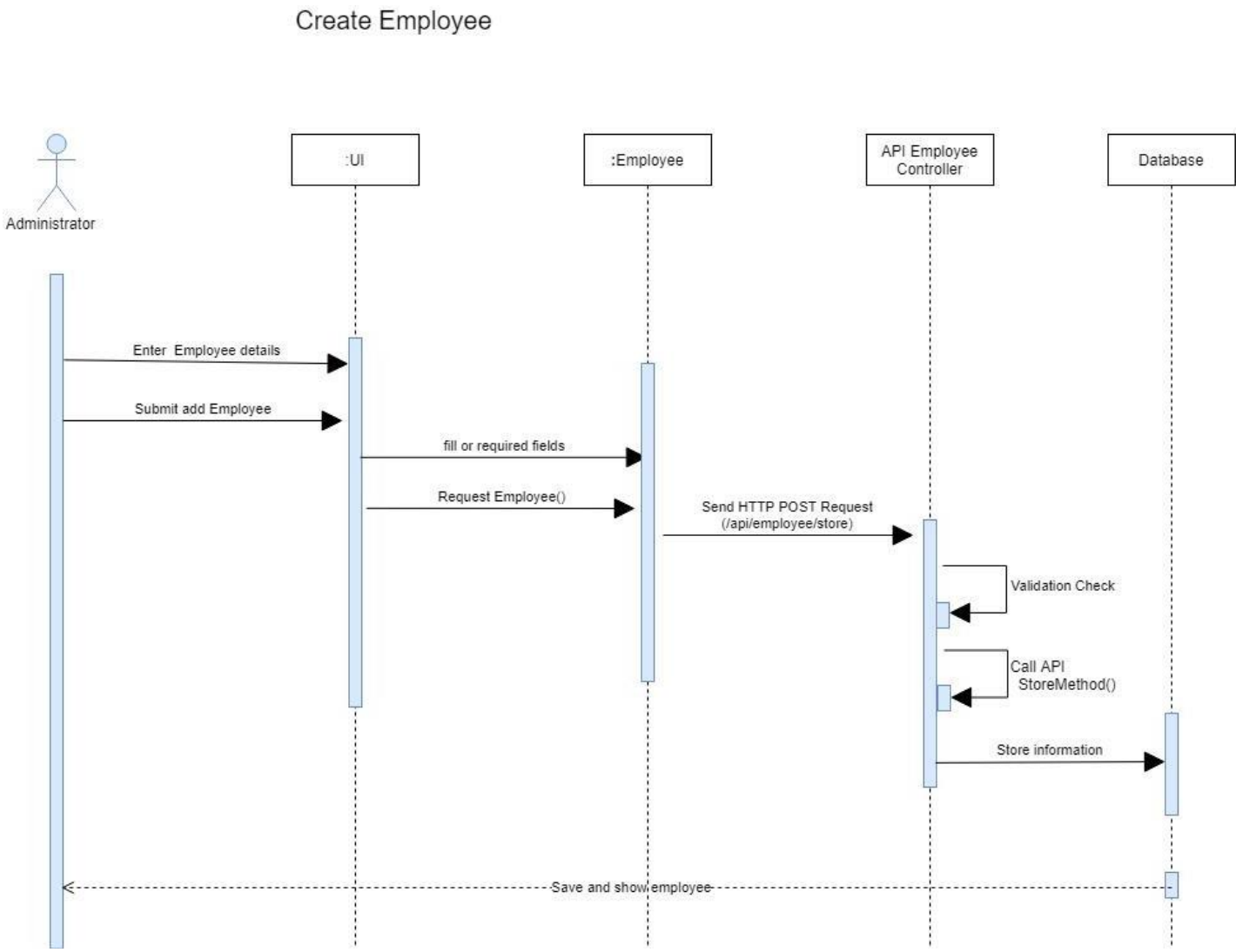
Login Sequence Diagram

Create Category



Create Category Sequence Diagram

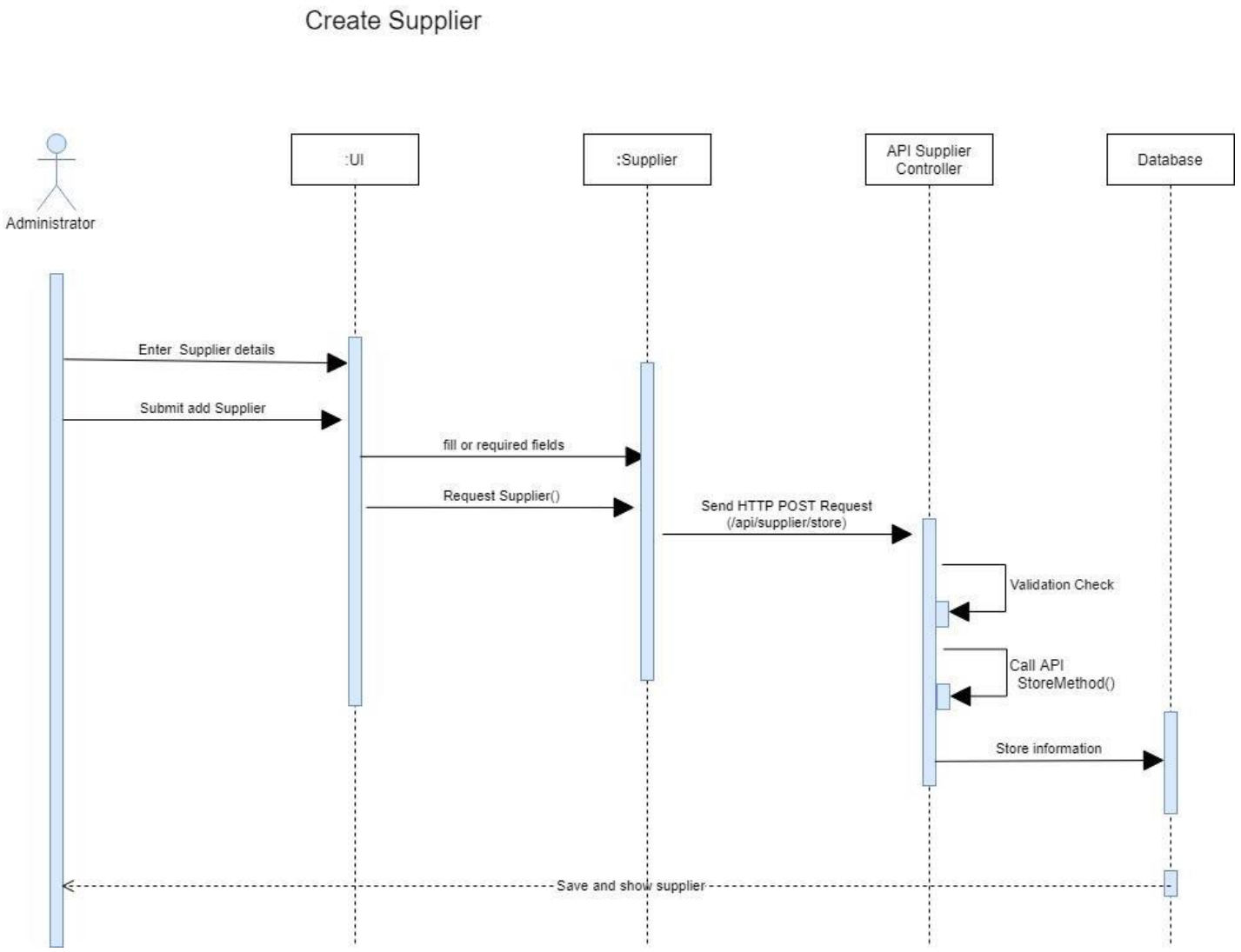
Create Employee



Create Employee Sequence Diagram

©Daffodil International University

Create Supplier



Create Supplier Sequence Diagram

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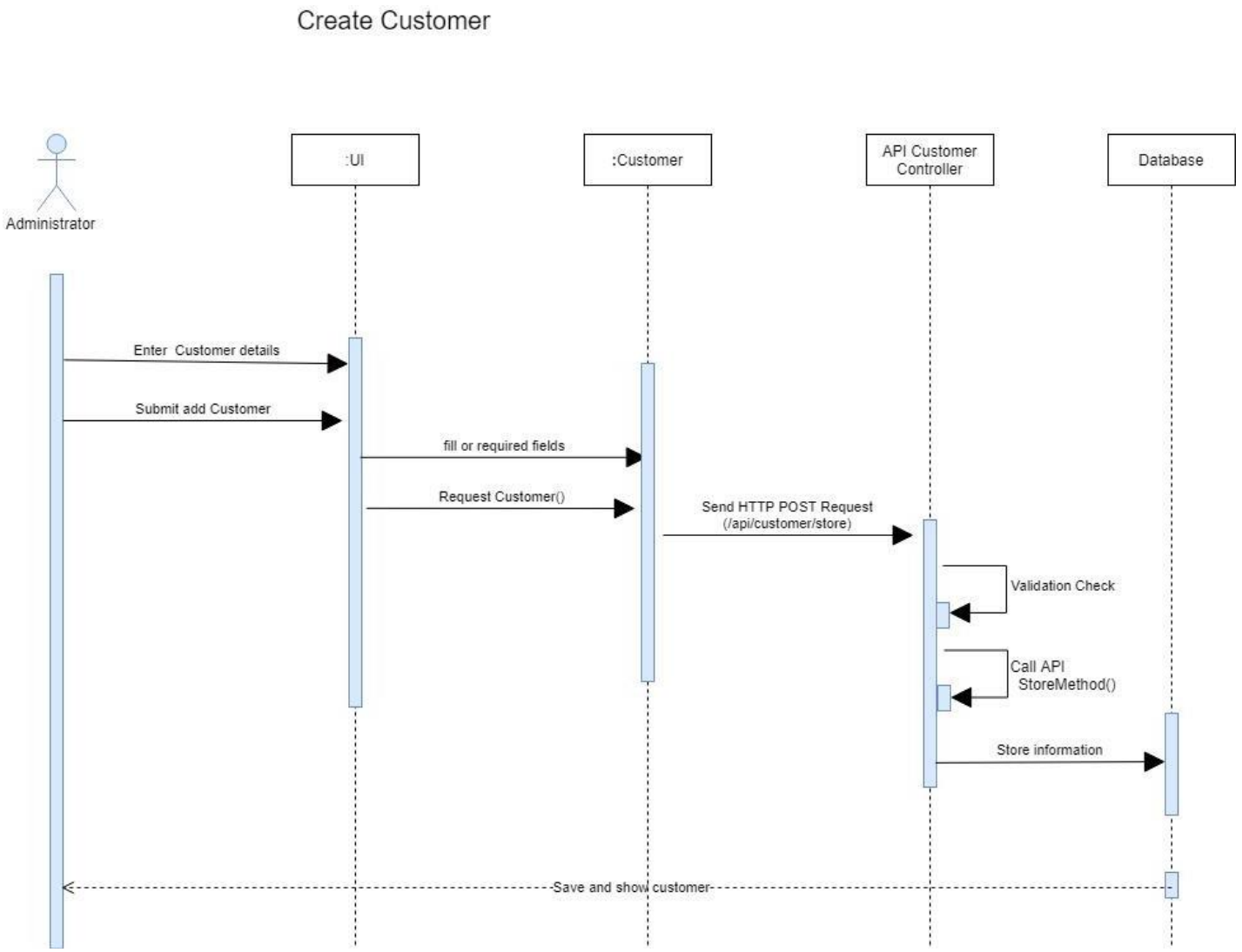
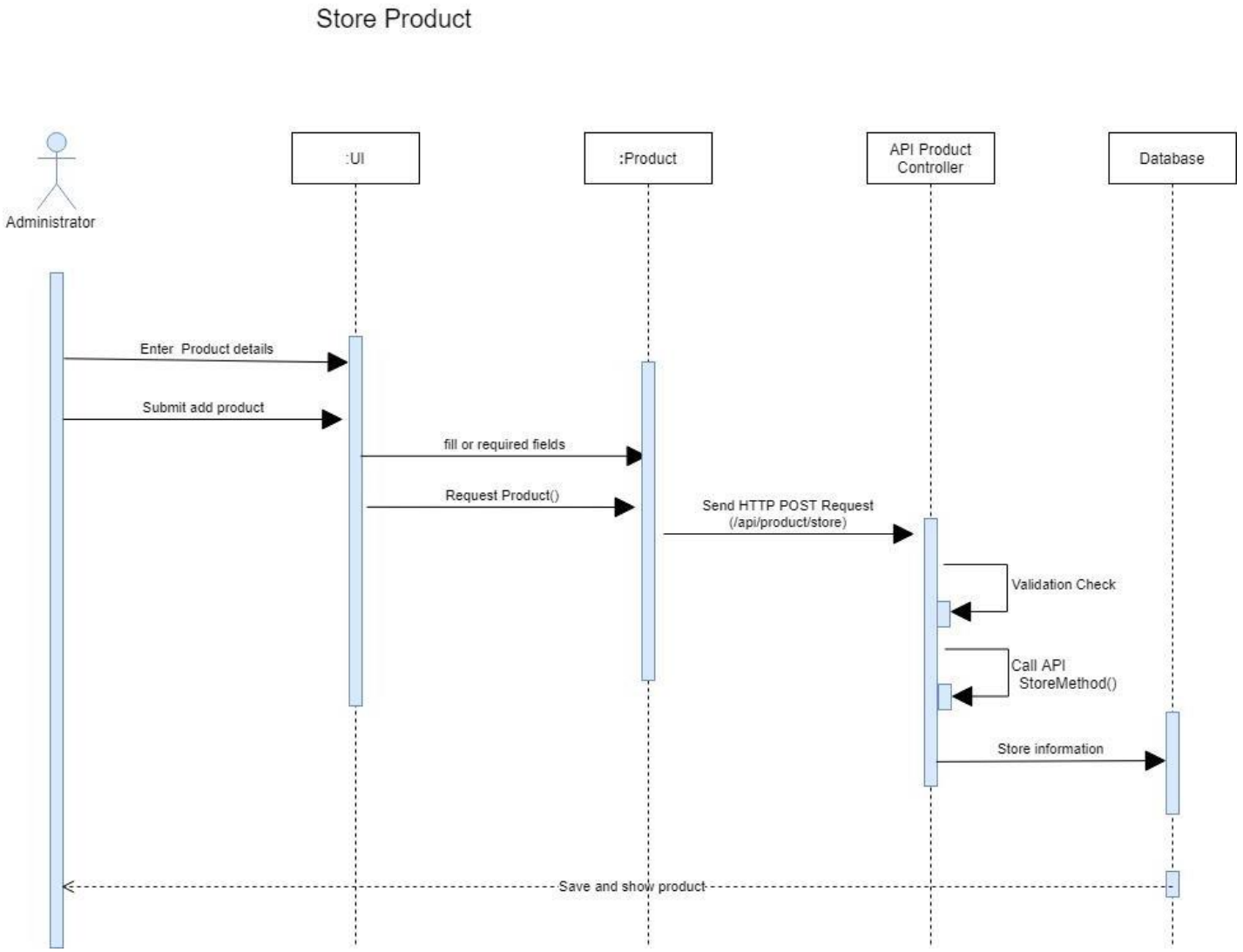
Create Customer



Create Customer Sequence Diagram

©Daffodil International University

Store Product



Store Product Sequence Diagram

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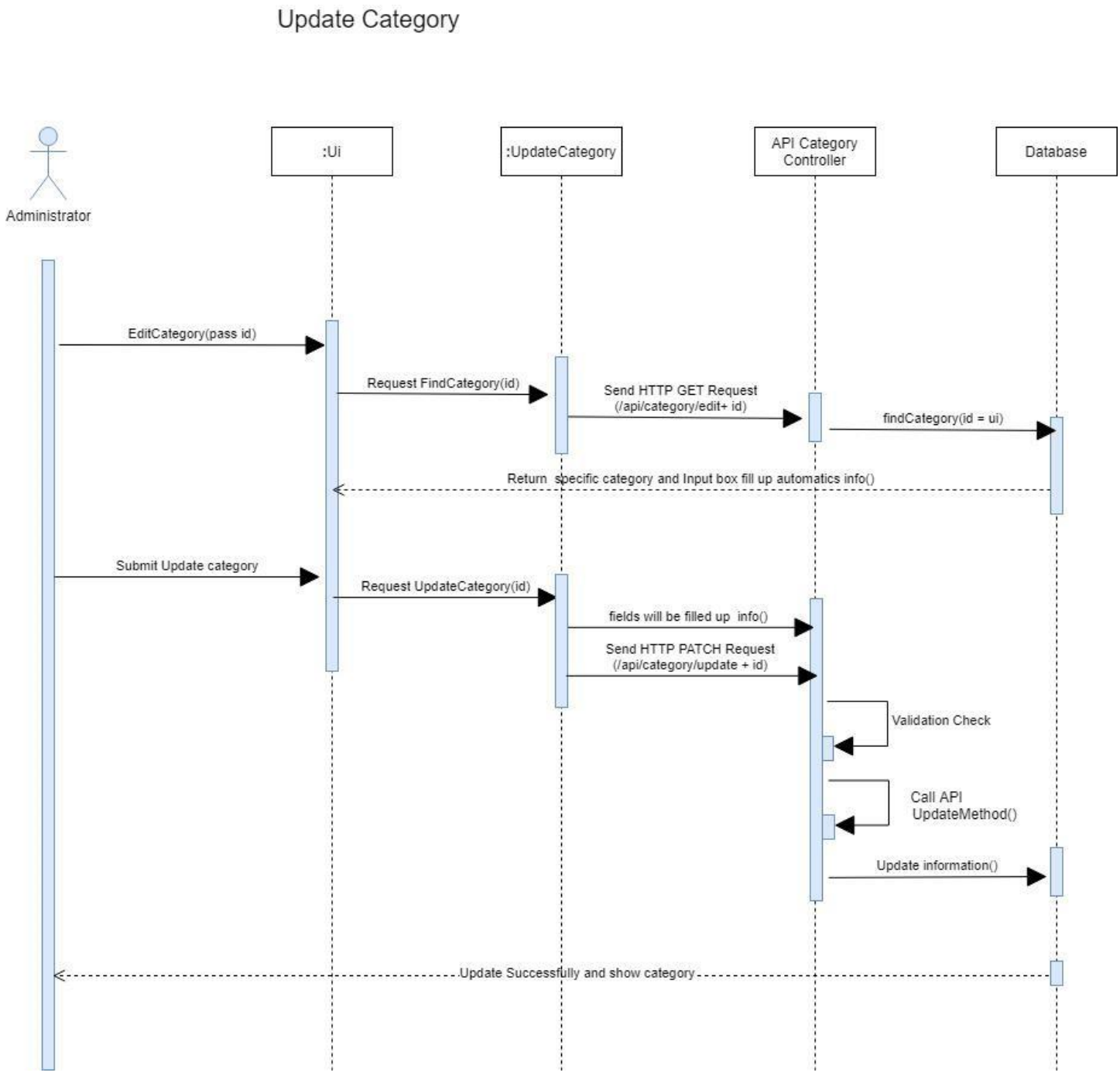
Update Category



Update Category Sequence Diagram

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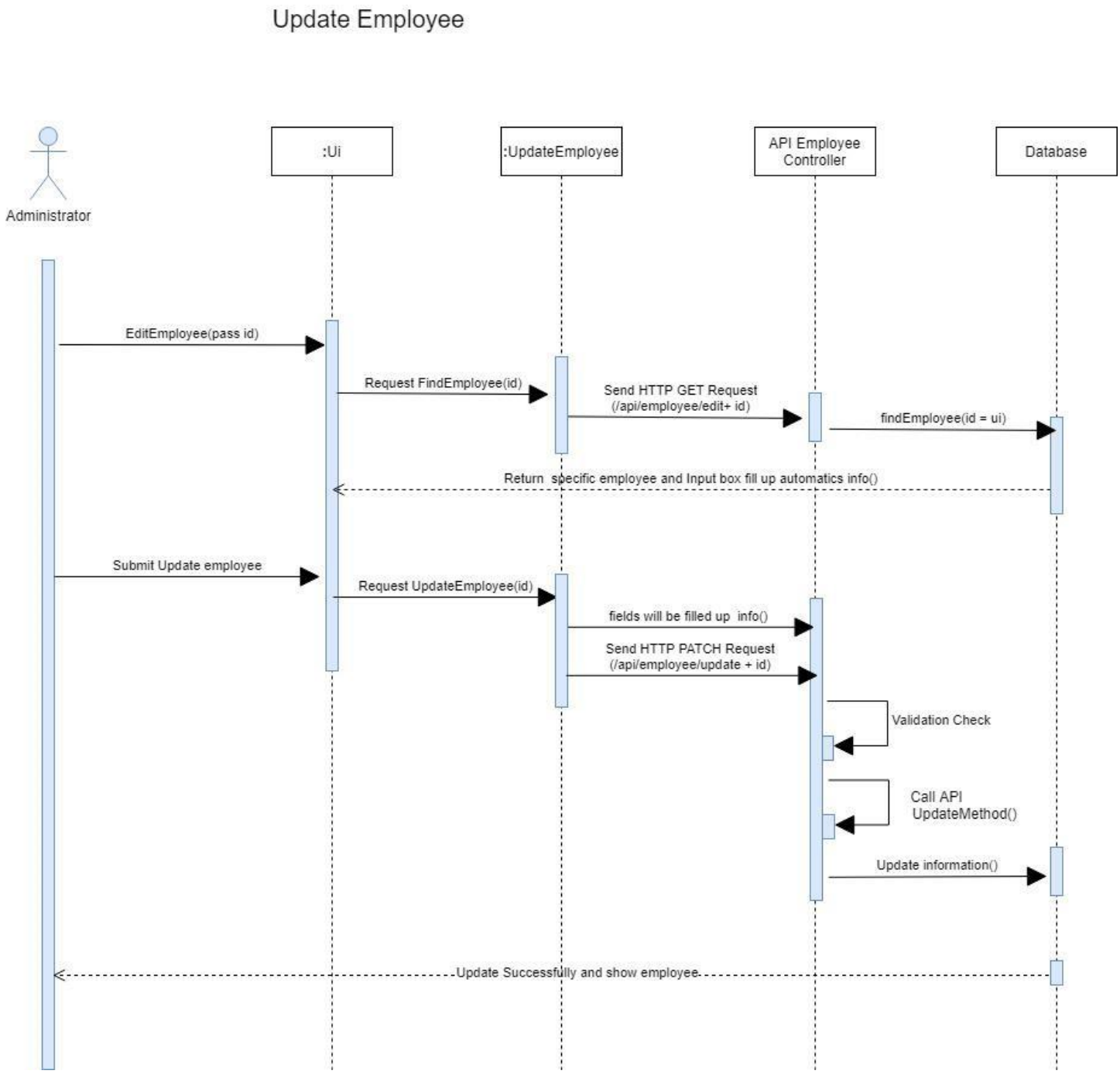
Update Employee



Update Employee Sequence Diagram

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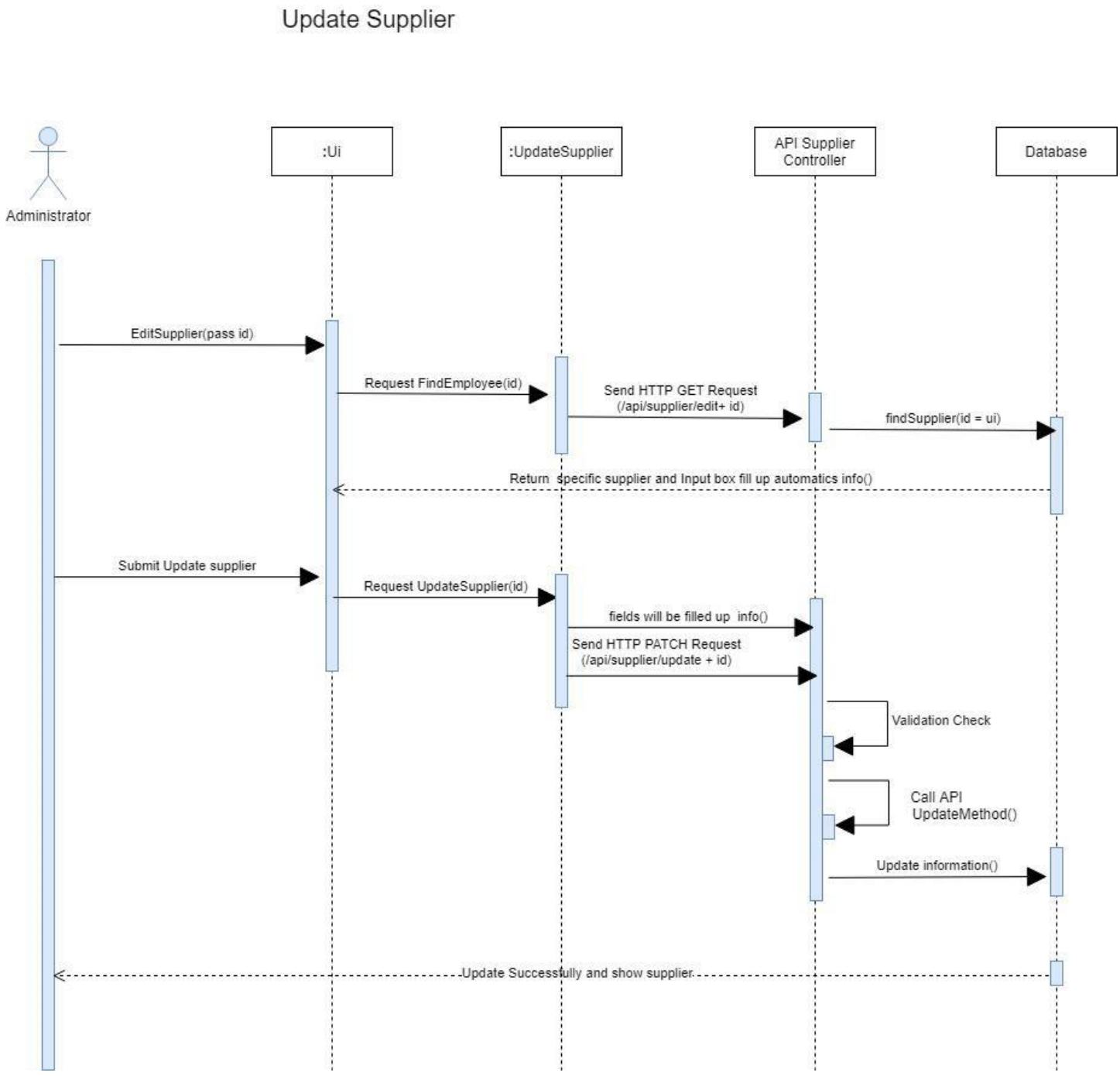
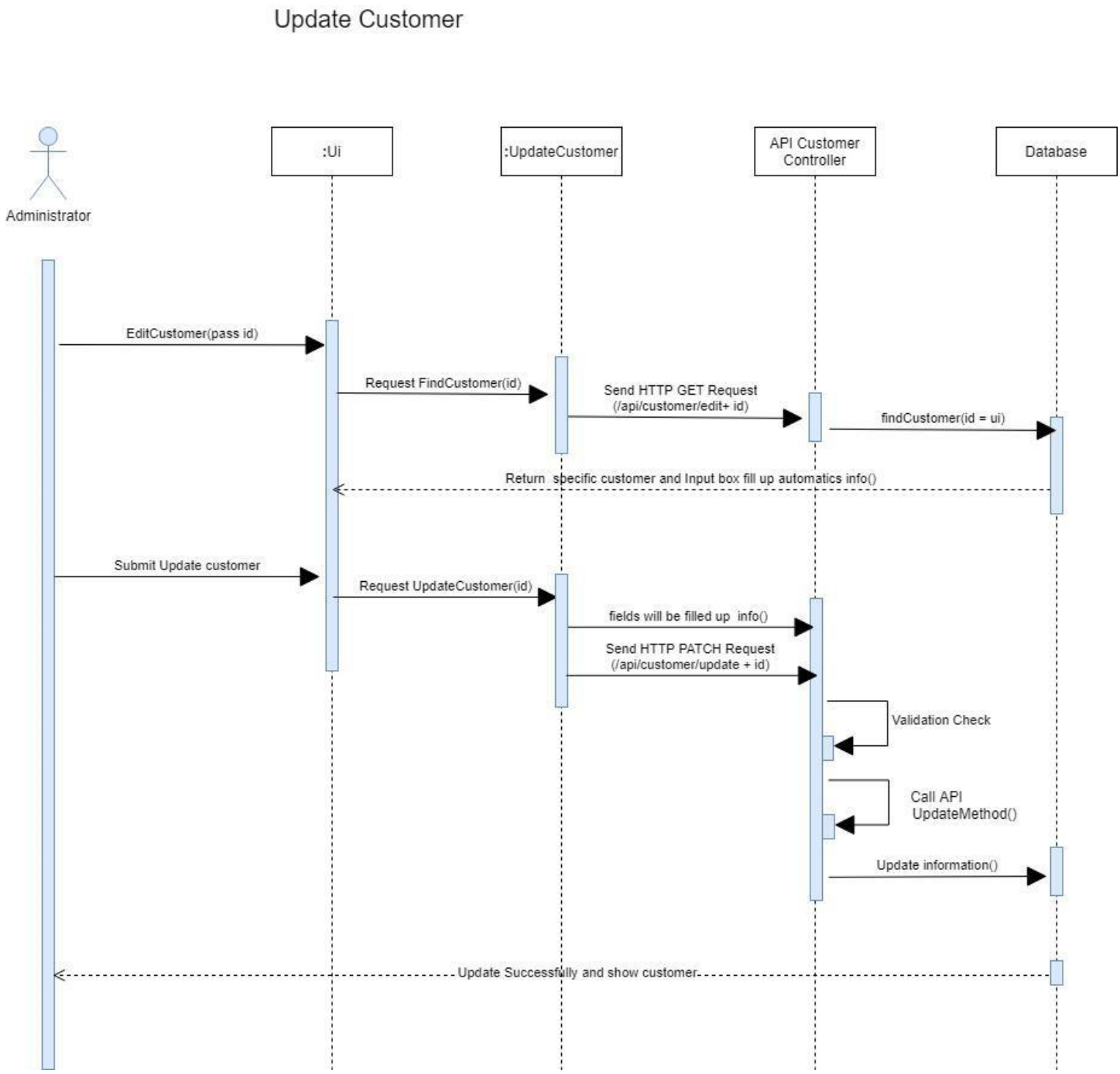
Update Supplier



Update Supplier Sequence Diagram

©Daffodil International University

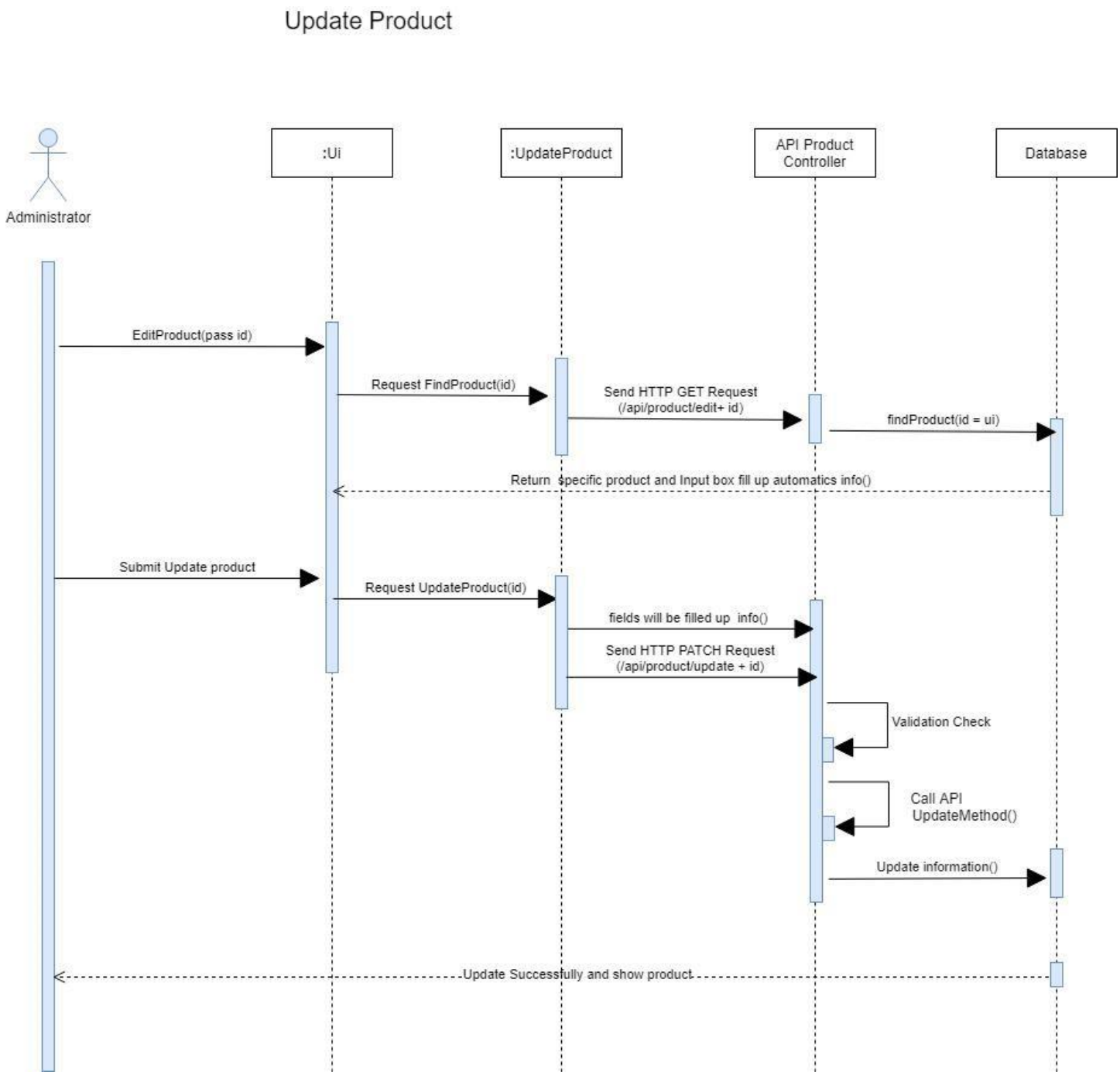
Update Customer



Update Customer Sequence Diagram

©Daffodil International University

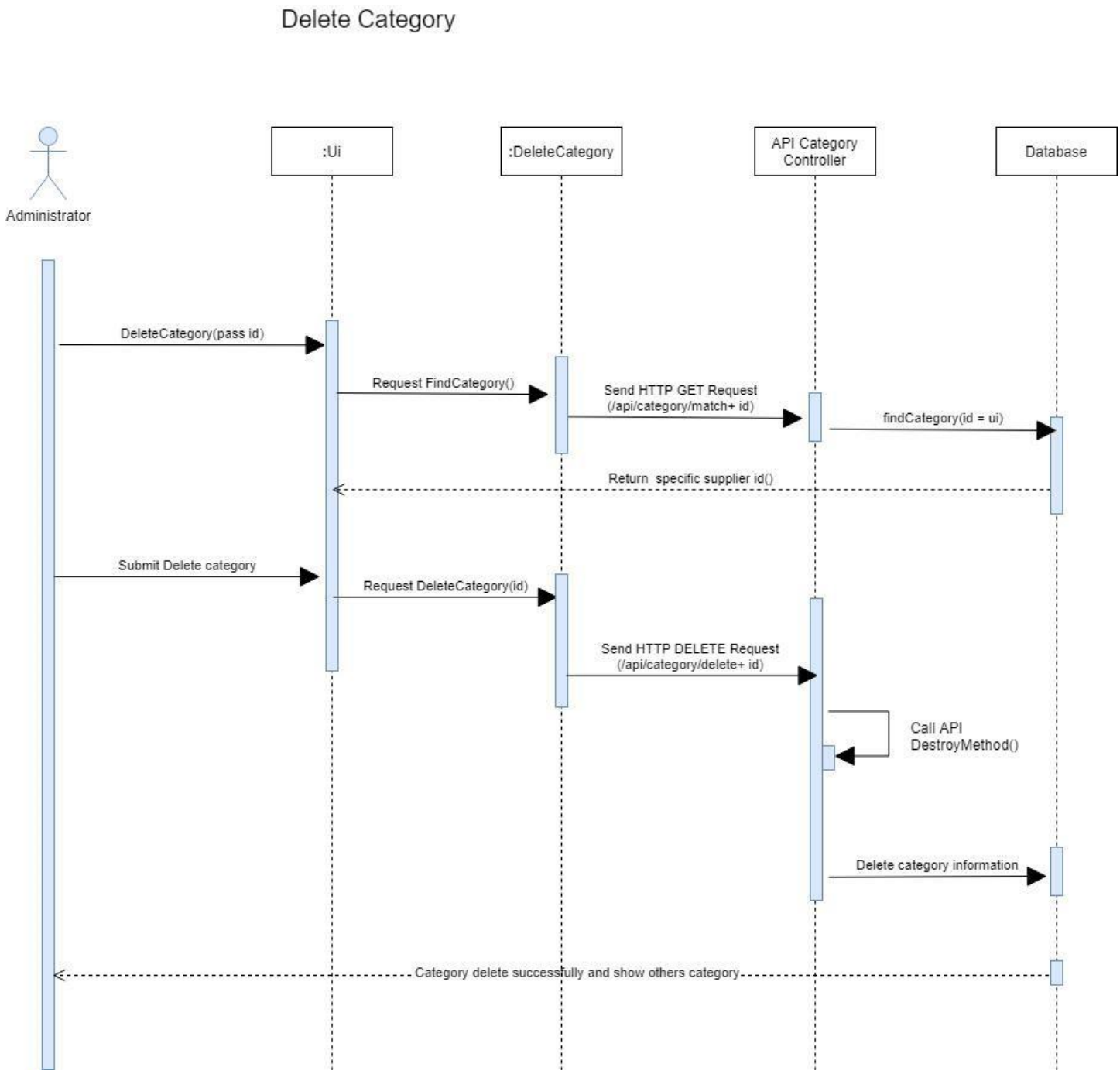
Update Product



Update Product Sequence Diagram

©Daffodil International University

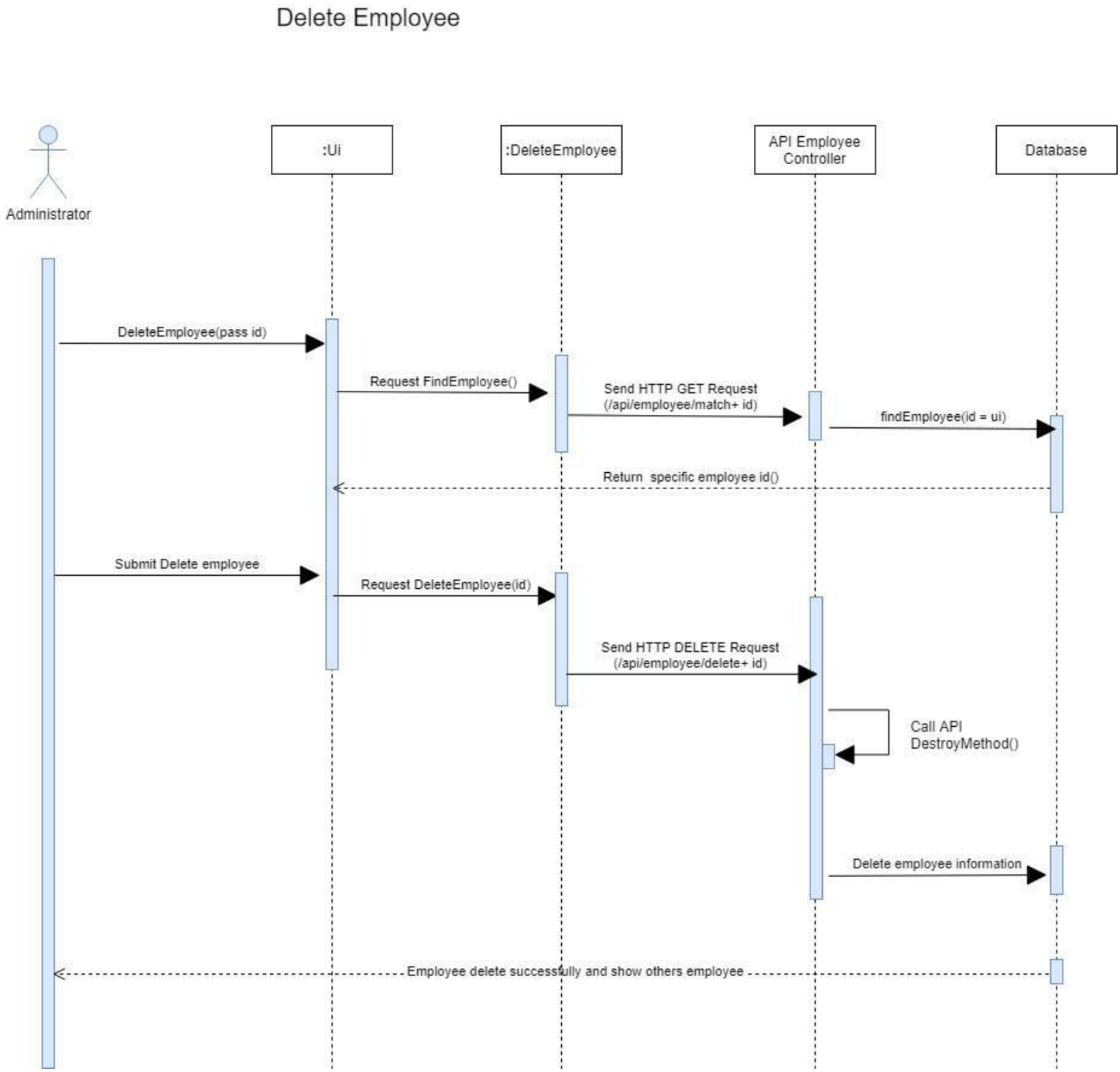
Delete Category



Delete Category Sequence Diagram

©Daffodil International University

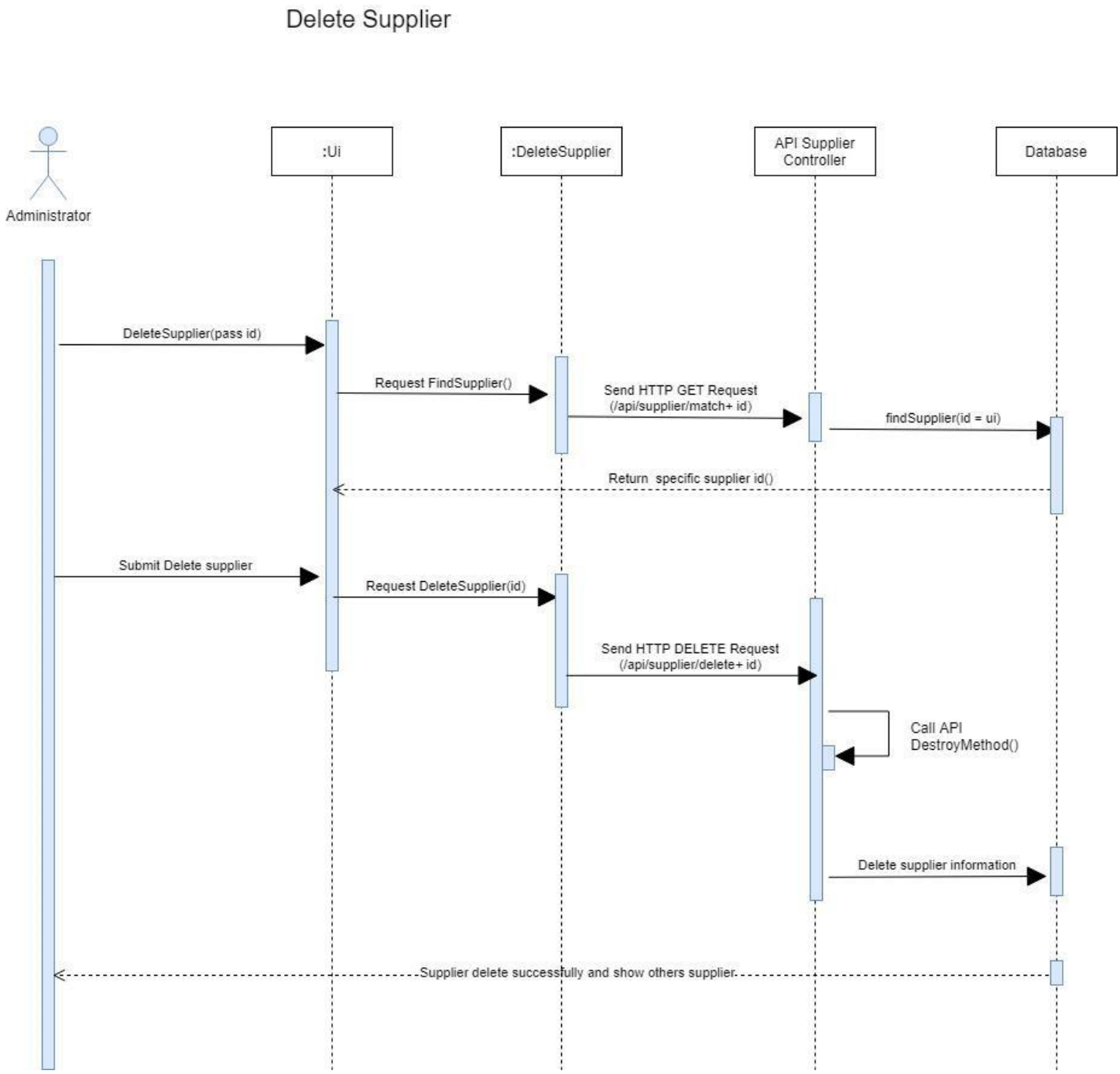
Delete Employee



Delete Employee Sequence Diagram

©Daffodil International University

Delete Supplier



Delete Supplier Sequence Diagram

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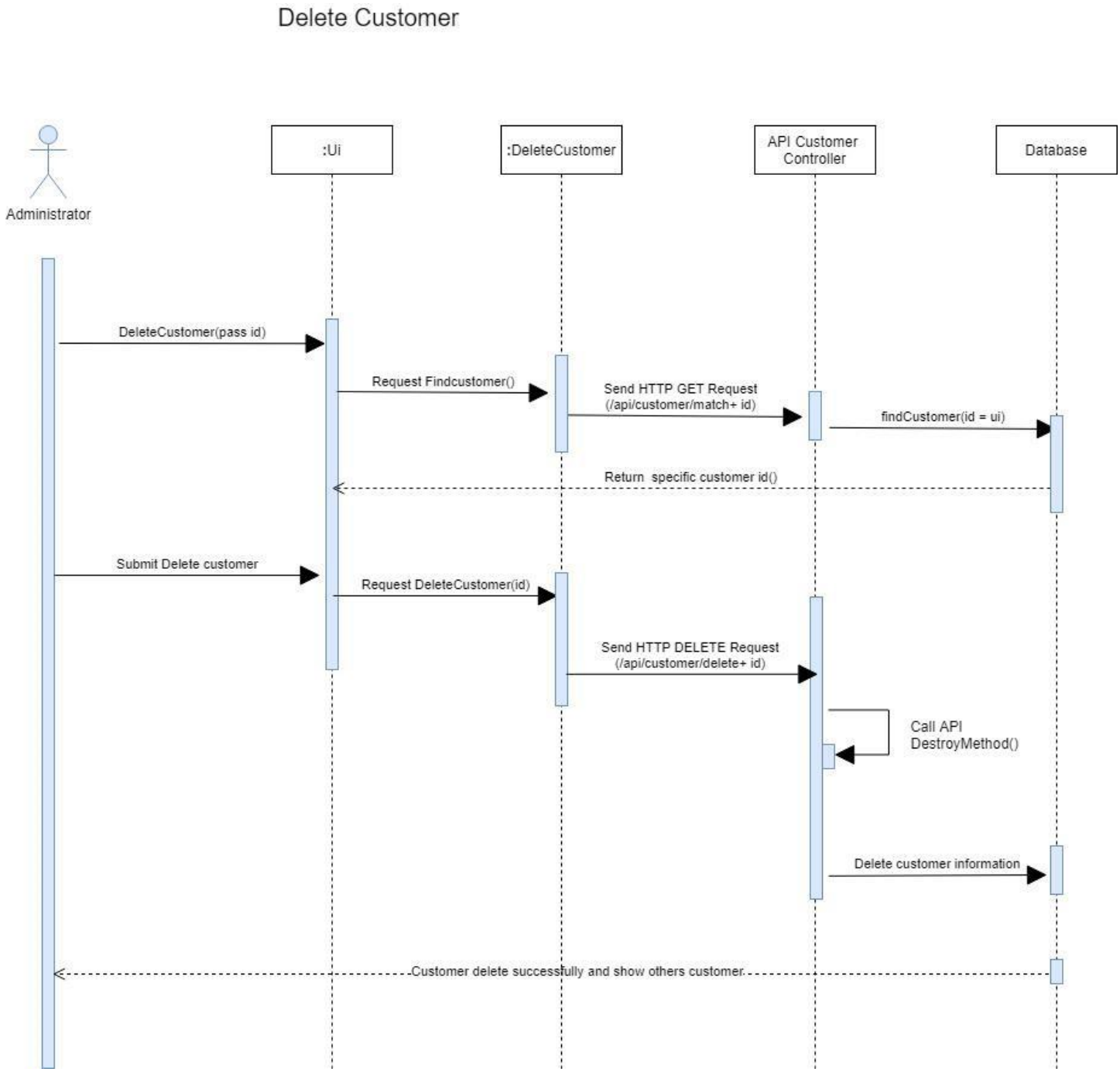
Delete Customer



Delete Customer Sequence Diagram

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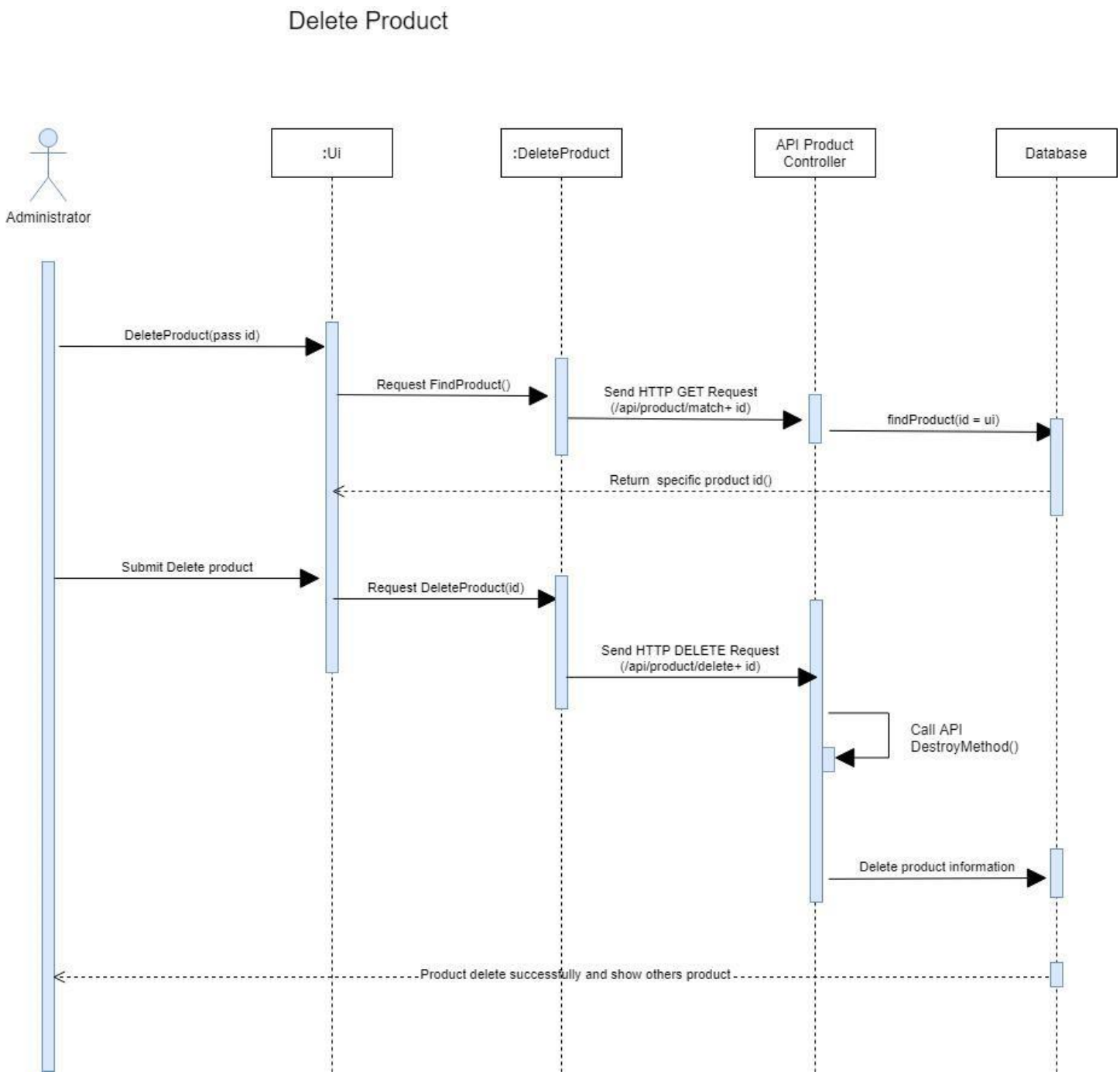
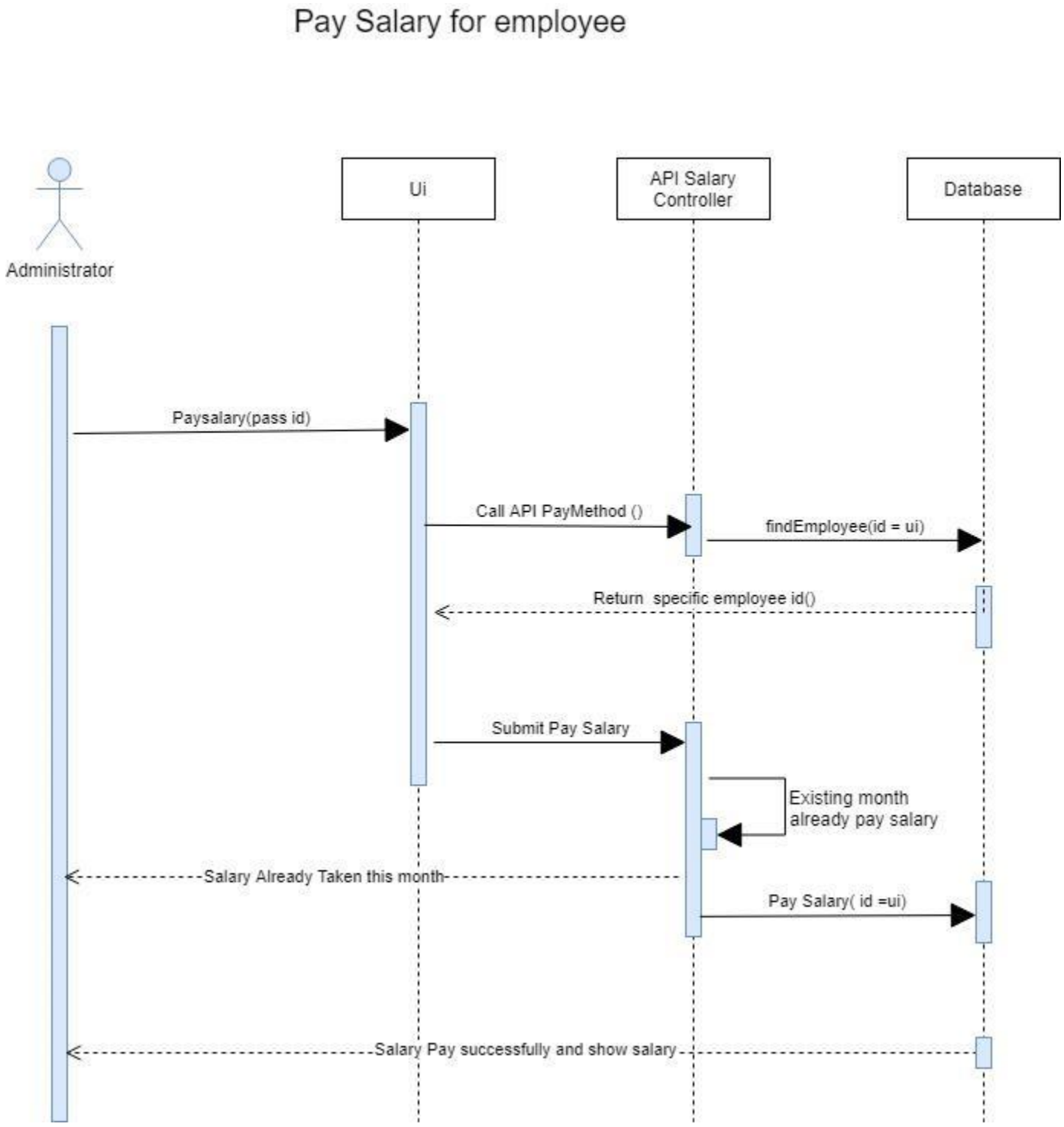
Delete Product



Delete Product Sequence Diagram

Pay Salary for Employee



Pay Salary for Employee Sequence

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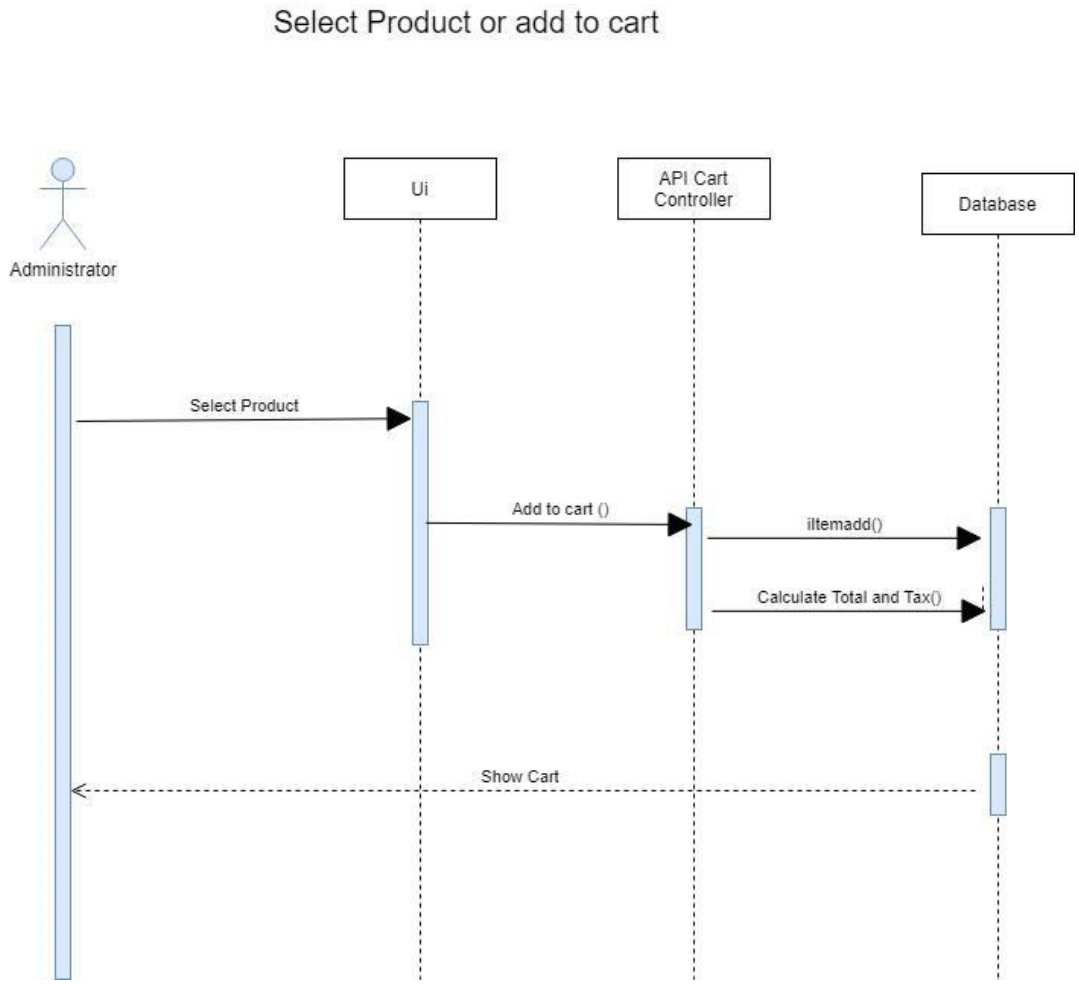
Select Product and Add To Cart



Select Product and Add To Cart Sequence

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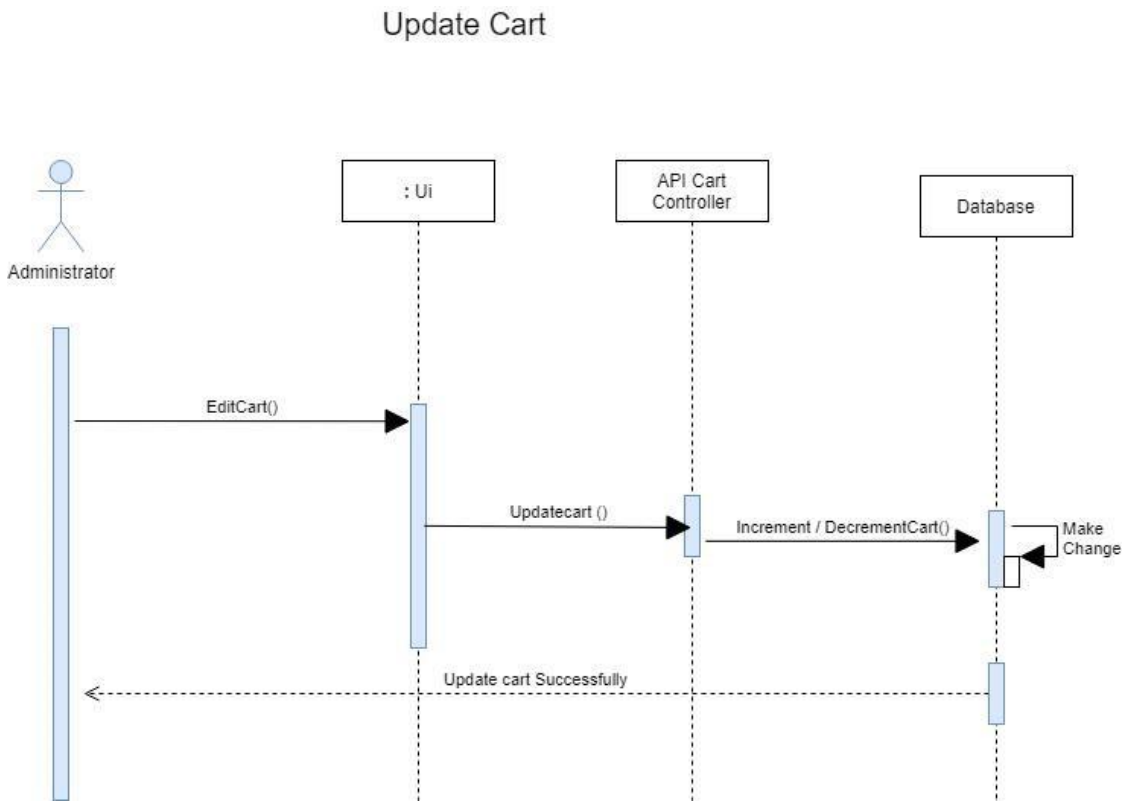
Update Cart



Update Cart

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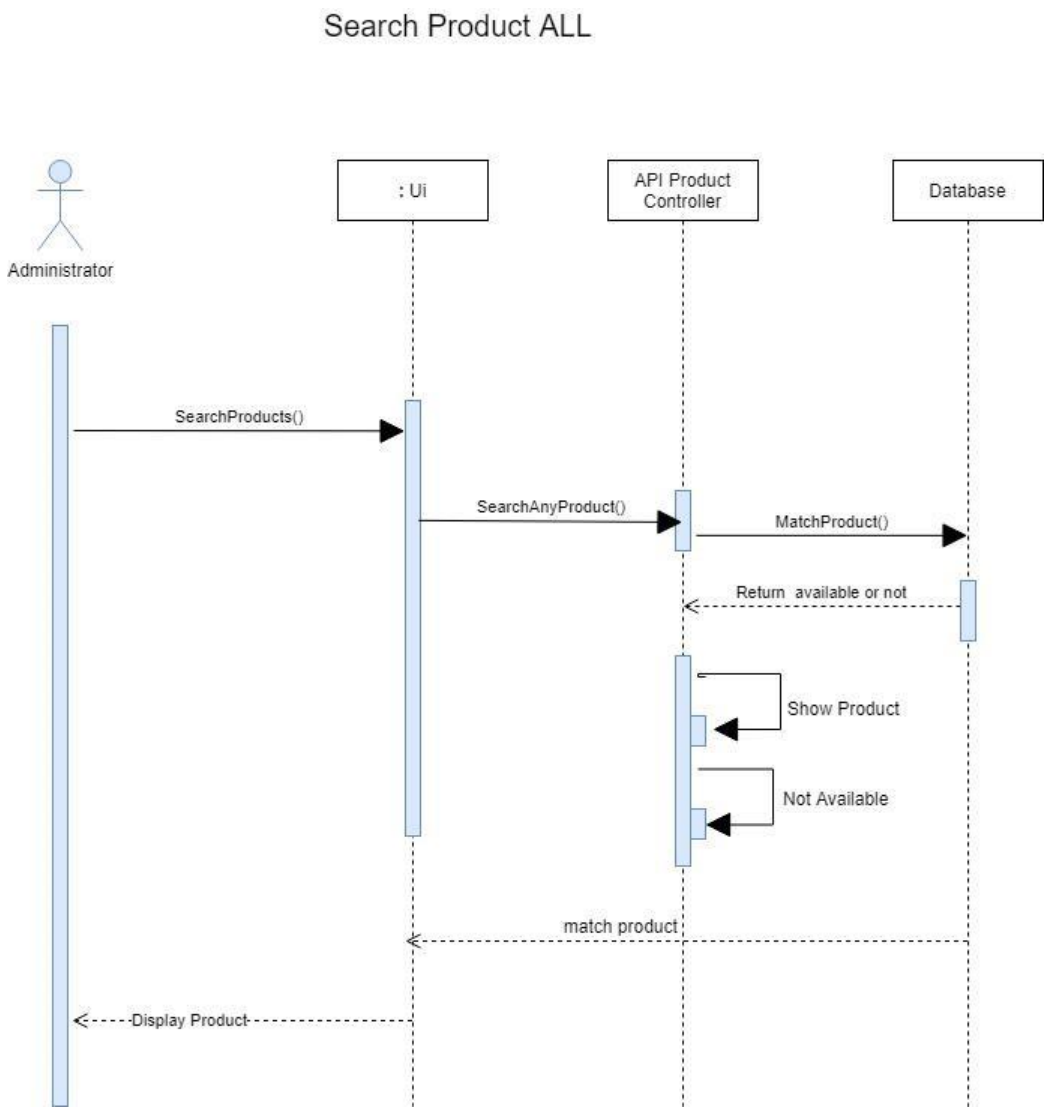
Search Product All



Search Product All Sequence

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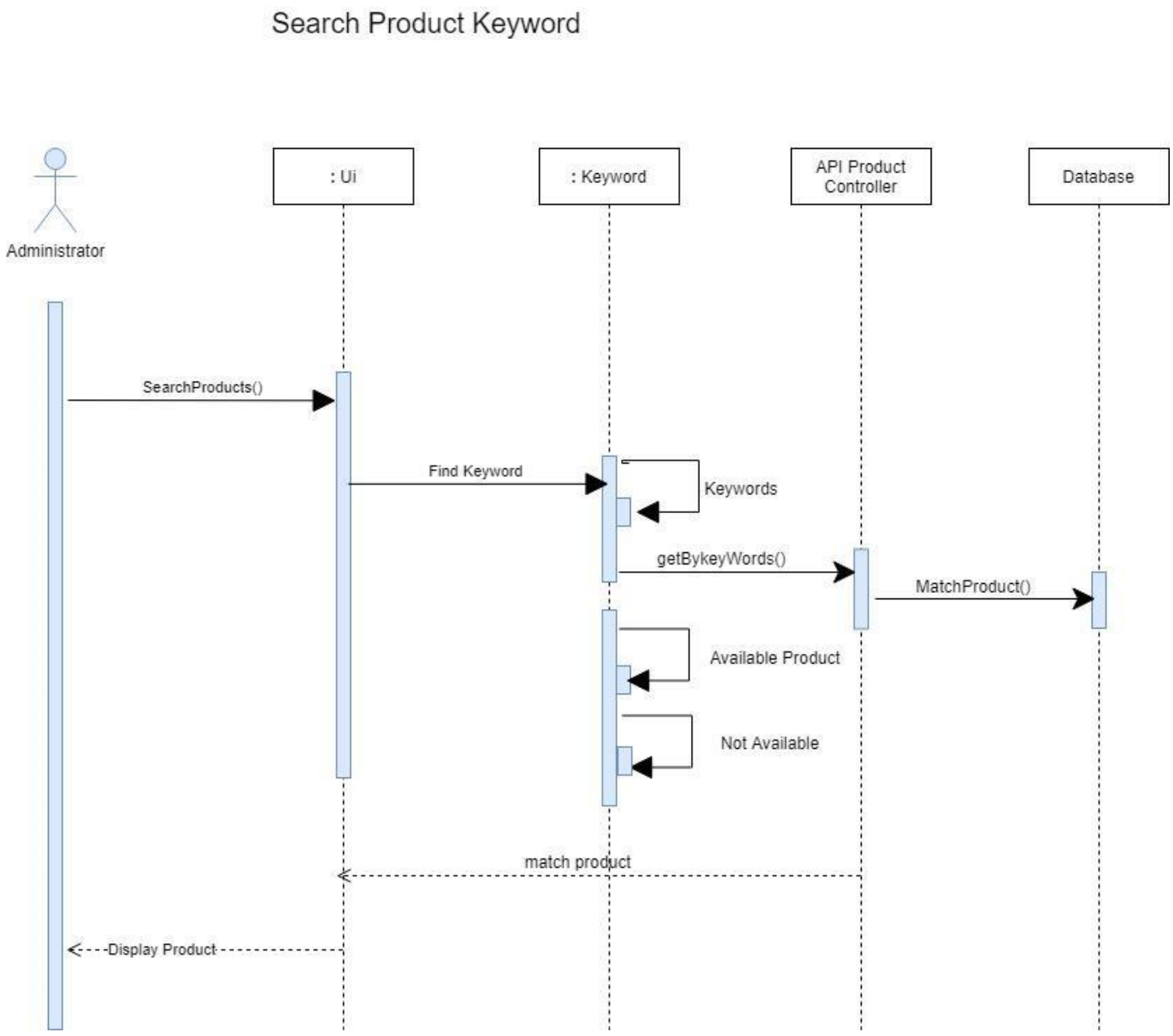
Search Product Keyword



Search Product Keyword Sequence Diagram

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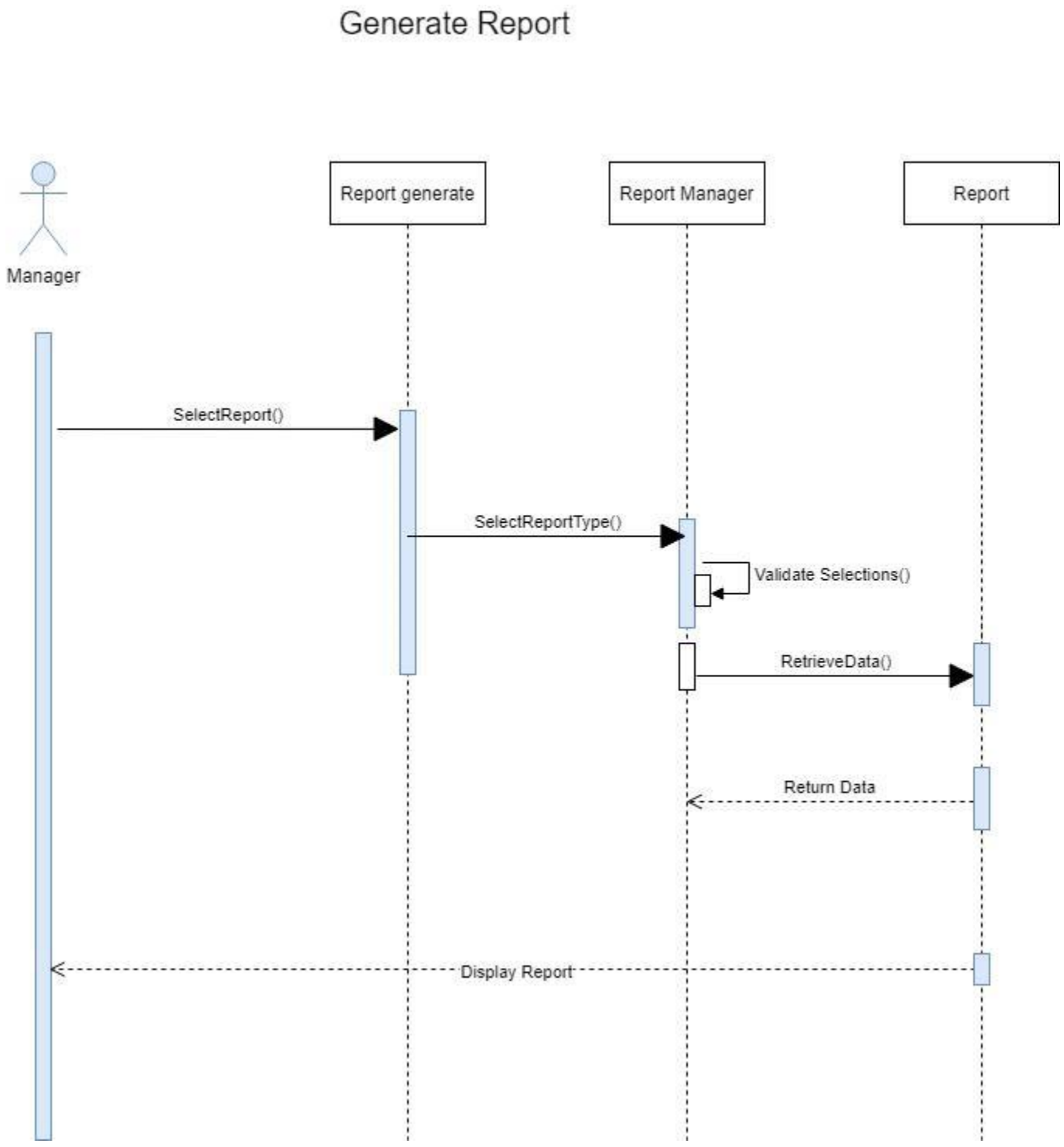
Generate Report



Generate Report Sequence Diagram

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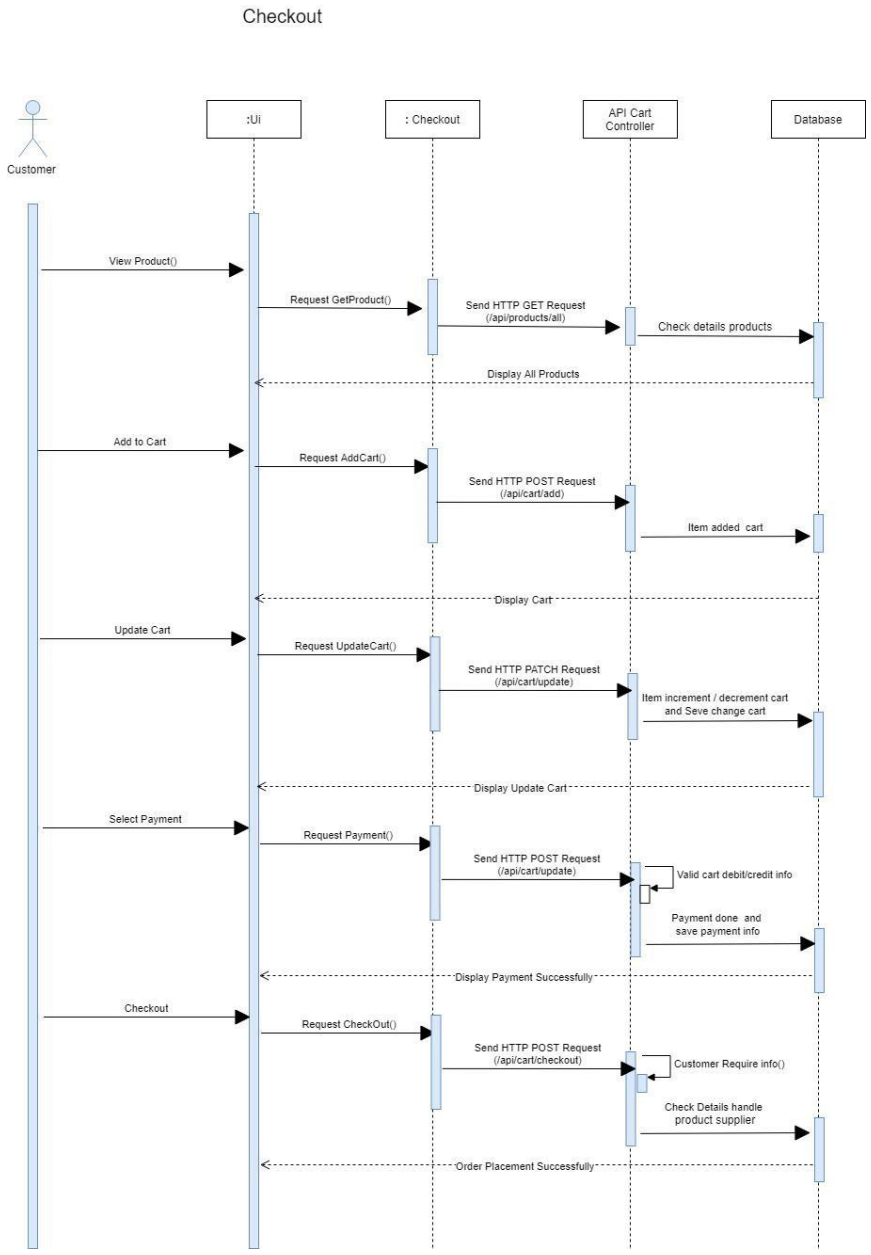
Checkout



Checkout Sequence Diagram

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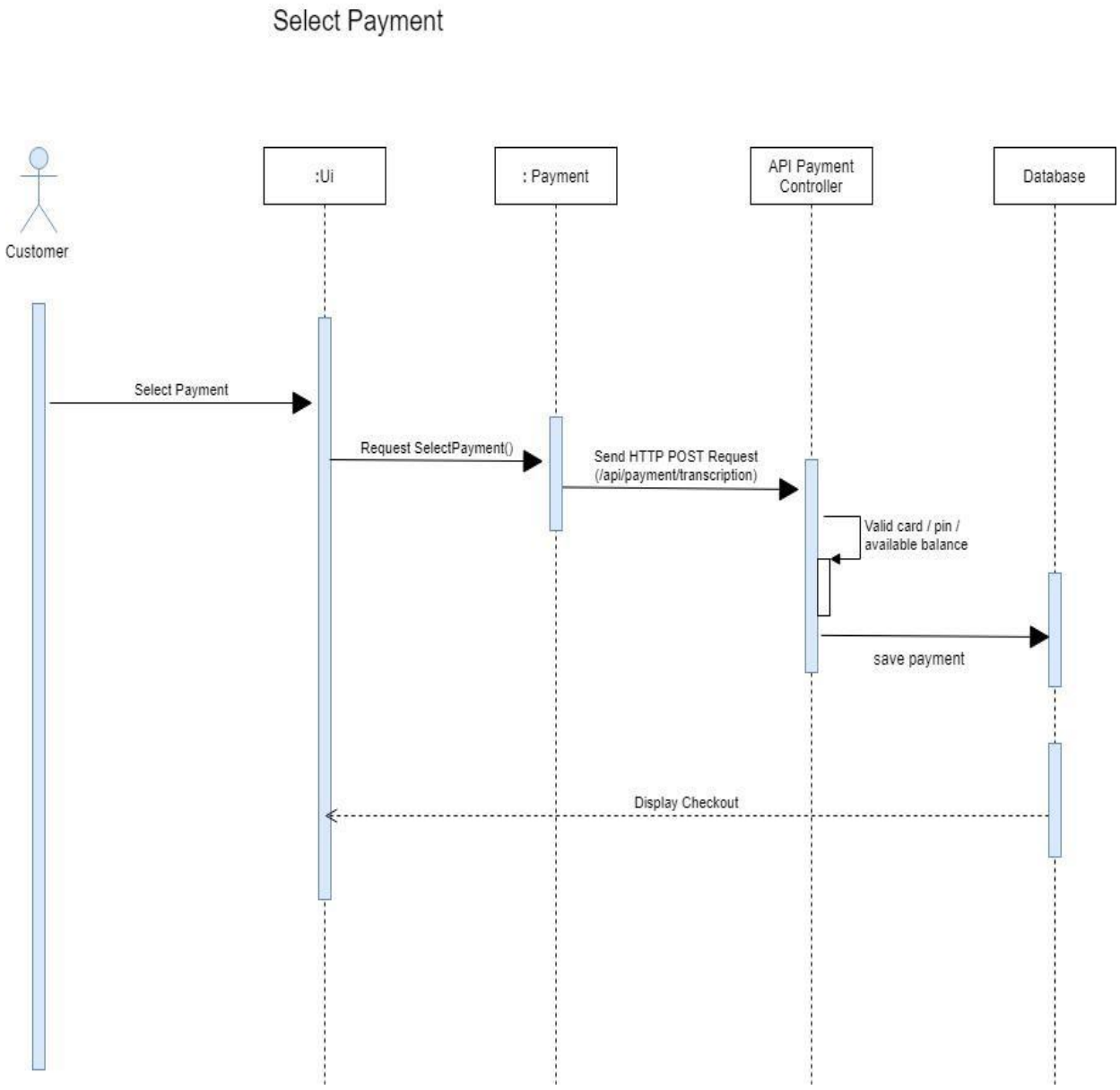
Select Payment



Select Payment Sequence Diagram

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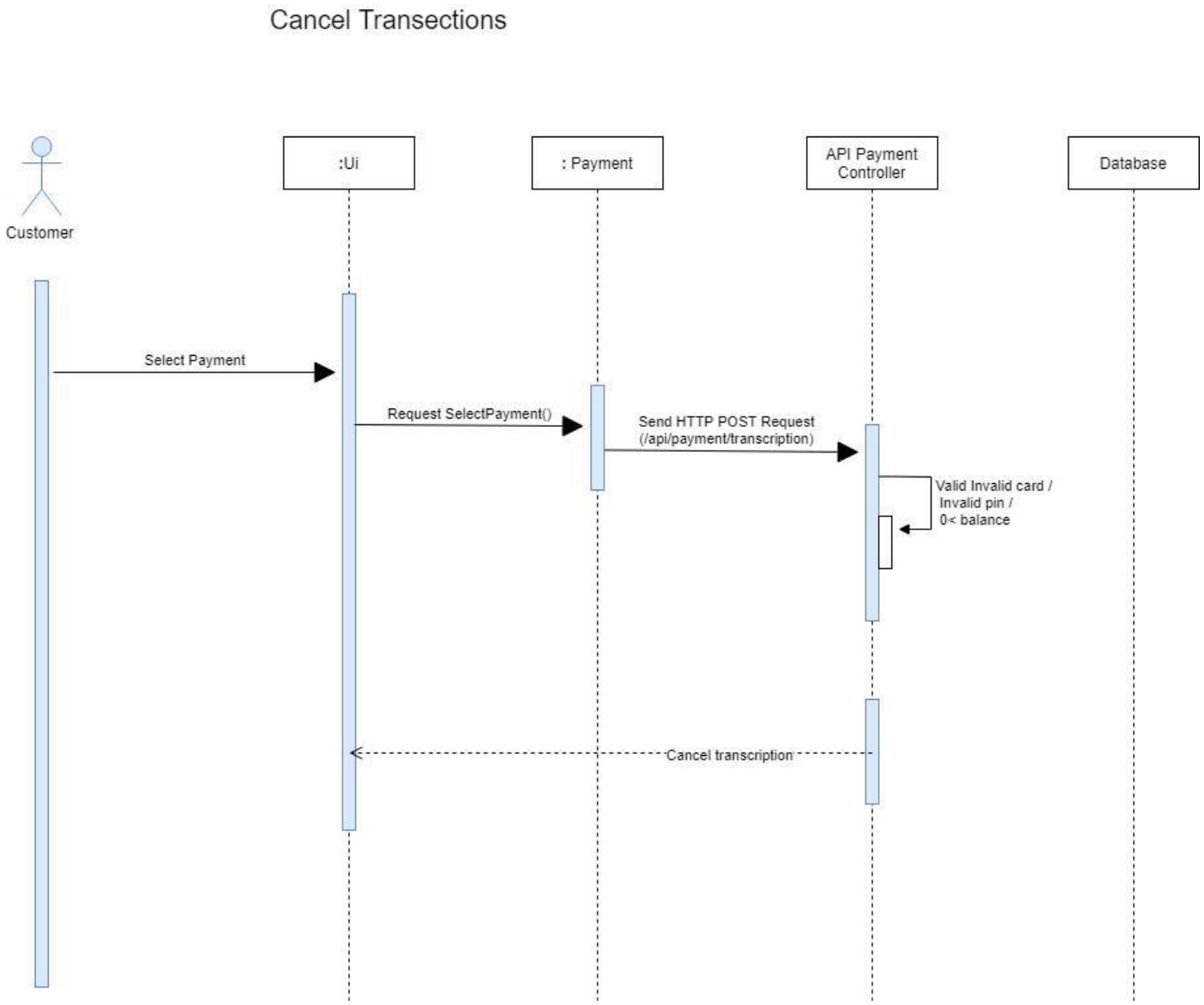
Cancel Transections



Cancel Transection Sequence Diagram

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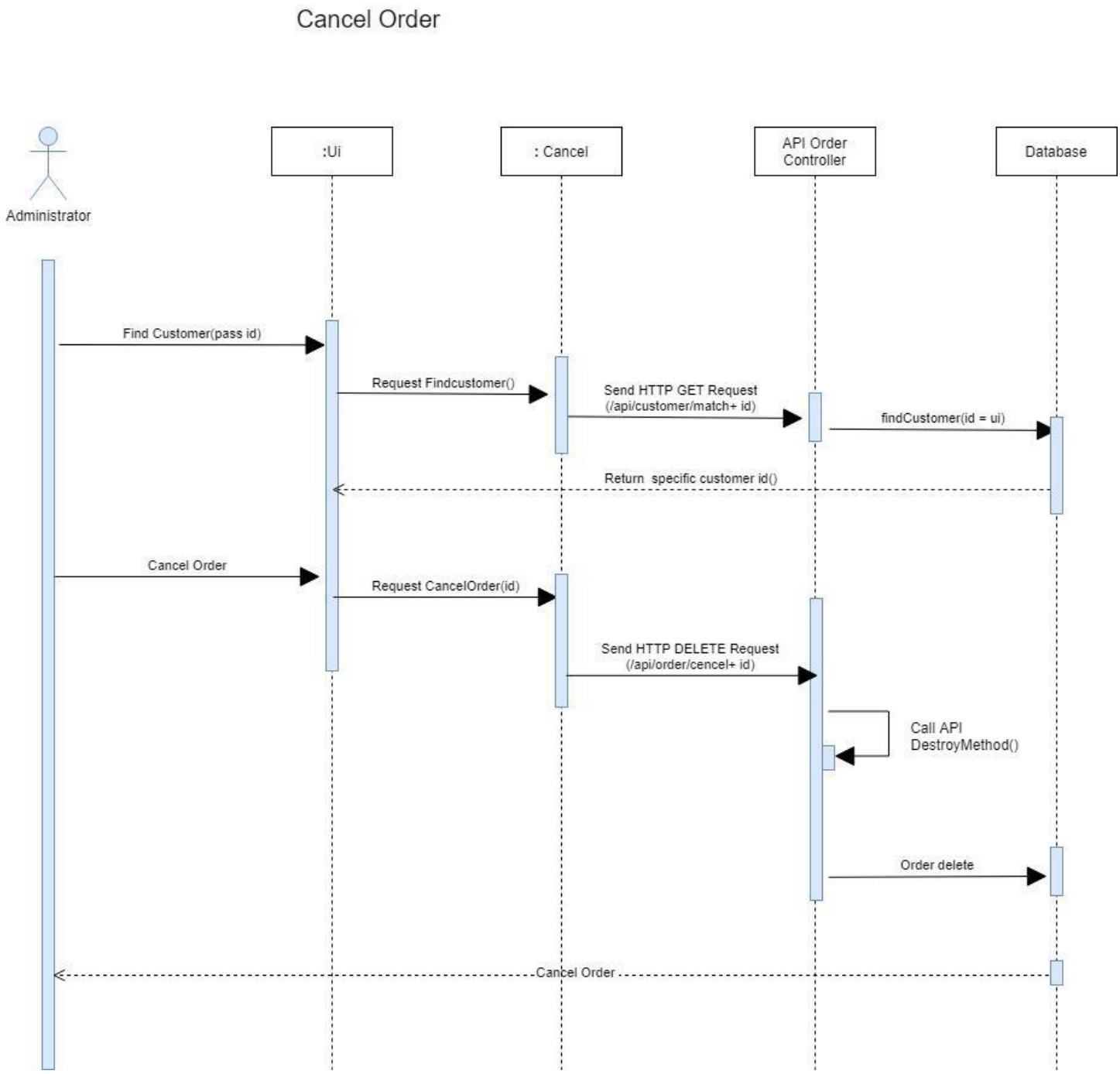
Cancel Order



Cancel Order Sequence Diagram

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4.2 ER Diagram

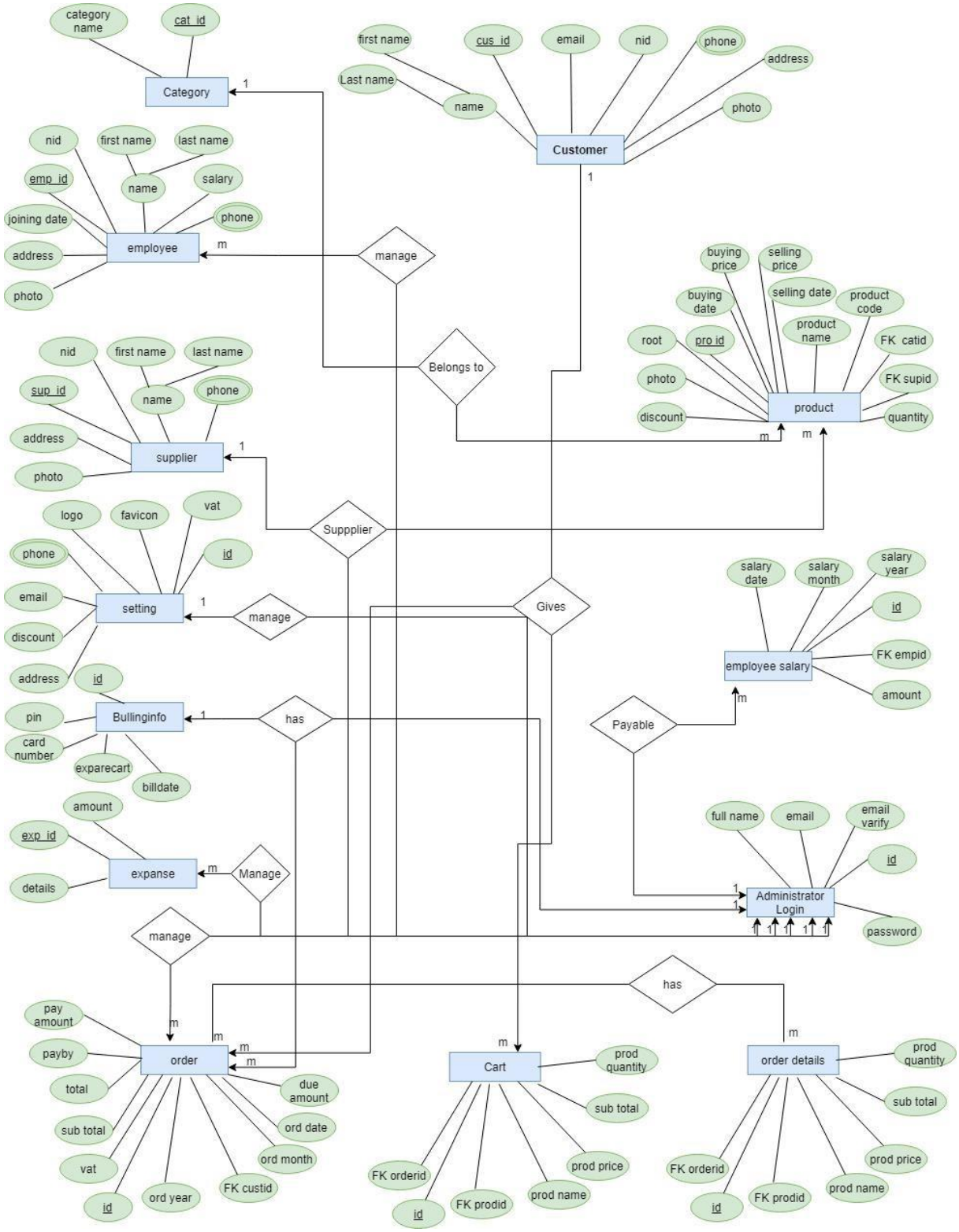

Fig 4.2 ER Diagram

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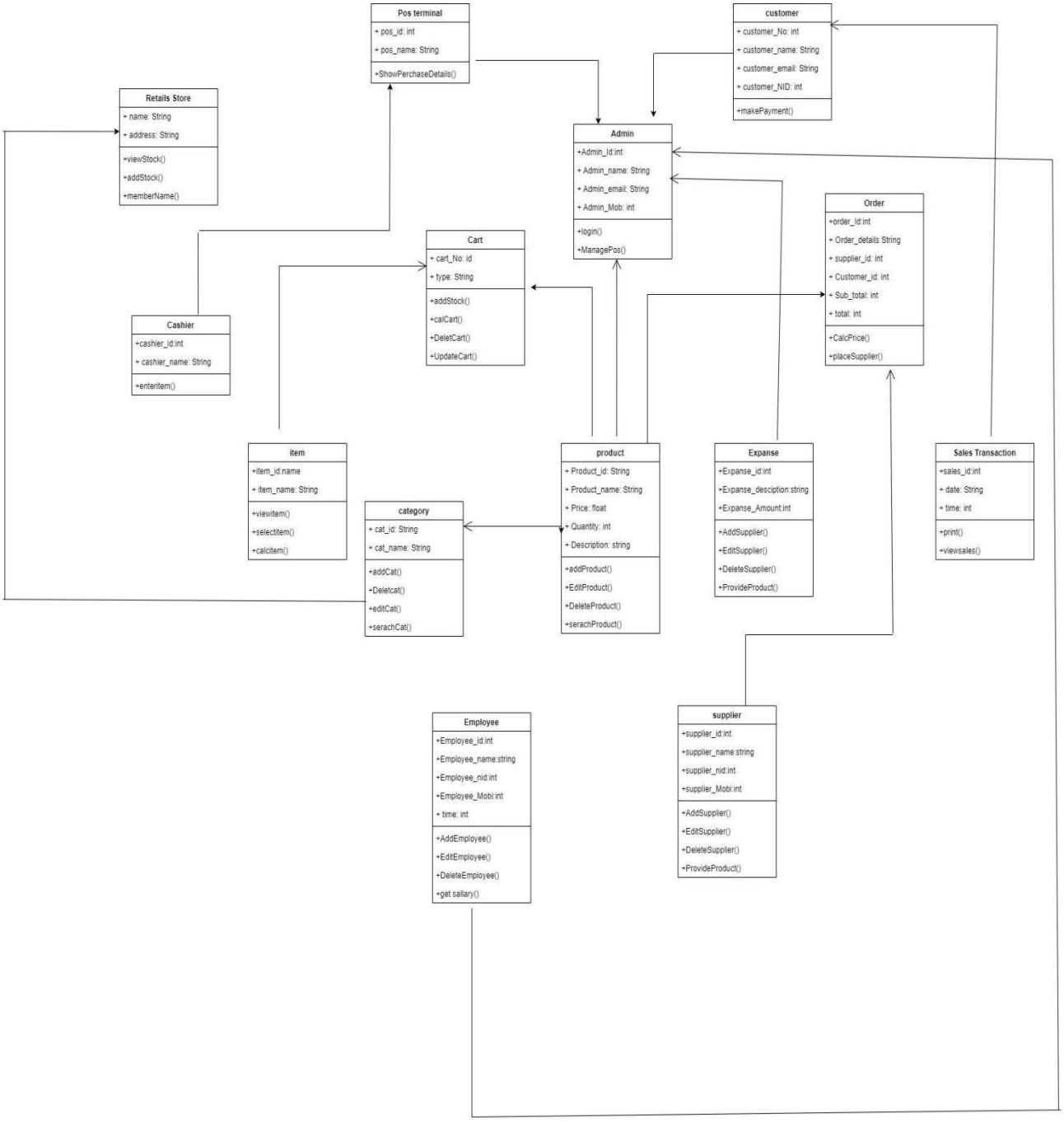
4.3 class Diagram



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4.4 Development Tools & Technology

4.4.1 User Interface Technology

- HTML, HTML5
- CSS3, CSS
- Bootstraps-4
- JavaScript Font Awesome

4.4.2 Implementation Tools Platform

- PHP Framework Laravel
- Vue Js (JavaScript Framework)
- Rest API Development
- Xampp
- VS code, Sublime Text.
- Windows CMD, Git Bash Here, Terminal.

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CHAPTER-05

System Testing

5.1 Introduction

Testing is a process of executing a program with the aim of finding error. To make our software perform well it should be error free. If testing is done successfully it will remove all the error from the software.

Two common type of testing is black box testing and white box testing. Black box testing is also called functional testing. In this stage we test only functionality, input, and output. White box testing is a structure level testing**. For this project I have used black box testing method**.

Black Box testing:

Black box testing is a method of software testing that examines the functionality of an application based on the specifications. It is also known as specifications based testing. Independent testing team usually performs this type of testing during the software testing life cycle.

Principle or Testing

- All the test should meet the customer requirements
- To make our software testing should be performed by third party
- Exhaustive testing is not possible. As we need the optimal amount of testing based on the risk assessment of the application.
- All the test to be conducted should be planned before implementing it
- If follows pare to rule (80/20 rule) which states that 80% of errors comes from 20% of program components.
- Start testing with small parts and extend it to large parts.

5.2 Testing Featured

A software feature can be defined as the changes made in the system to add new functionality or modify the existing functionality. Each feature is said to have a characteristic that is designed to be useful, intuitive and effective.

5.2.1 Featured to be tested

"Features to be Tested" you define which of the features of the system or sub-system will be tested. In UAT the principle, focus is on what the system can do for the organization rather than if it works. This is a key principle as whether it works should have been done in system testing. Therefore, you need to identify the business operations, scenarios, and functionality that are to be tested in each system and sub-system as these are what delivers value to the organization.

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5.3 Featured not to be tested

"Features Not to be Tested" you define which of the features of the system or sub-system will not be testing. This is necessary so as to avoid later confusion when stakeholders thought something's would be tested, but was not.

5.4 Testing Strategy

A test strategy is a plan for defining the approach to Software Testing Life Cycle (STLC). It guides the QA team to define test coverage and testing scope. It also aids testers to get a clear picture of the project at any instance. The possibility of missing any test activity is very low when there is a proper test strategy in place.

5.4.1 Test Approach

A test approach is the test strategy implementation of a project, defines how testing would be carried out. Test approach has two techniques:

- **Proactive –** An approach in which the test design process is initiated as early as possible in order to find and fix defects the build is created.
- **Reactive-** An approach in which the testing is not started until after design and coding are completed.

5.4.2 Pass/ fail Criteria

The entrance for each phase of testing must be met before the next phase can commence. Now the criteria for pass and fail are given below.

- According to the given scenario the expected result need to take place then the scenario will be considered as pass otherwise that criteria should be failed.
- If an item tested 10 times, 9 times perfectly worked and single time do not work properly then it will consider as fail case.
- System crash will be considered as fail case.
- After submitting a query in the system, if expected page won't appear then it will be considered as fail case.

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5.5 Test Case

5.5.1 Test case Module-1 Registration

Test case ID: ATCI	Test Design by Dipak Debnath
Test priority: High	**Test Design date: 08-01-21**
Module Name: Registration	**Test Execute by Dipak Debnath**
Description: This section covers the Functionality of registration new users	**Text Execute date: 01-12-21**

Precondition: User has no precondition

Dependencies: Enter input required information

Step	Test case	Test data	Expected Result	P/F	Actual Result
01	Entre empty value for required field		Display error massage “	pass	Display error massage
02	Enter non-numeric value in phone number field	gythh	Display error massage “Enter valid Number”	pass	Display error massage “Enter Valid Number”
03	Enter different Email format instead of xxxx@xxx.xx	try@gmail tr@gmailcom	Display error massage “Invalid Email Addess”	pass	Display error massage “Invalid Email Address”
04	Enter Existing Email	dipak@gmail .com	Display error massage “Email Already Exist”	pass	Display massage “Email already Exist”
05	New user Registration	N/A	Display Massage “Submitted Successfully”	pass	Display massage” Submitted Successfully”

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5.5.2 Test case Module- 2 User Login

Test Case ID: ATCI	Test Design by Dipak Debnath
Test Priority: High	**Test Design Date: 01-12-21**
Module Name: Login	**Test design by Dipak Debnath**
Description: this section covers the functionality of login register users.	**Text Execute date: 09-01-21**

Precondition: User has no precondition

Dependencies: Enter input required information

Step	Test case	Test data	Expected Result	P/F	Actual Result
01	Enter empty value for User name and password	N/A	Place enter name and password	pass	Place enter user name and password
02	Enter correct value For User name and password	Dipak	Accept	pass	Accept
03	Enter wrong value for User name and password	asdsdf	User name and password doesn't match	pass	User name and password doesn't match
04	After giving input click "submit" button	N/A	Direct on fieldworker/ manager/ admin Admin page	pass	Direct fieldworker/ manager Admin page

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5.6 Testing Environment (hardware/software requirements)

Testing environment means to prepare the environment with hardware and software so that test engineers can be able to execute test cases as required. Besides hardware and software usage, network configuration might be needed to execute test plans.

1. Browser: -Google Chrome, Firefox.
2. CoreI5, Ram# 8GB, SSD-120GB, HDD-1TB.

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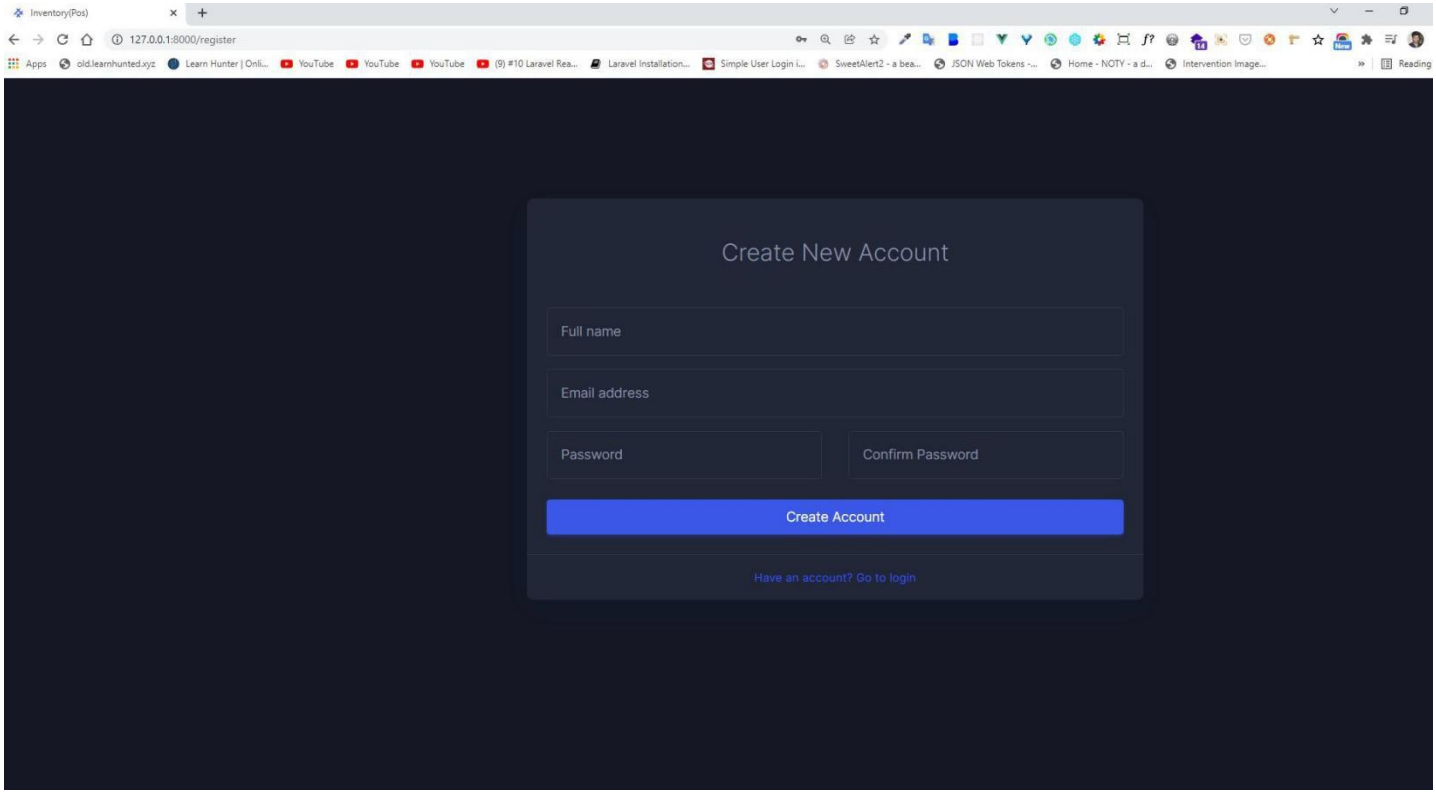
CHAPTER - 06

User Interface

Create Account



Create Account Page

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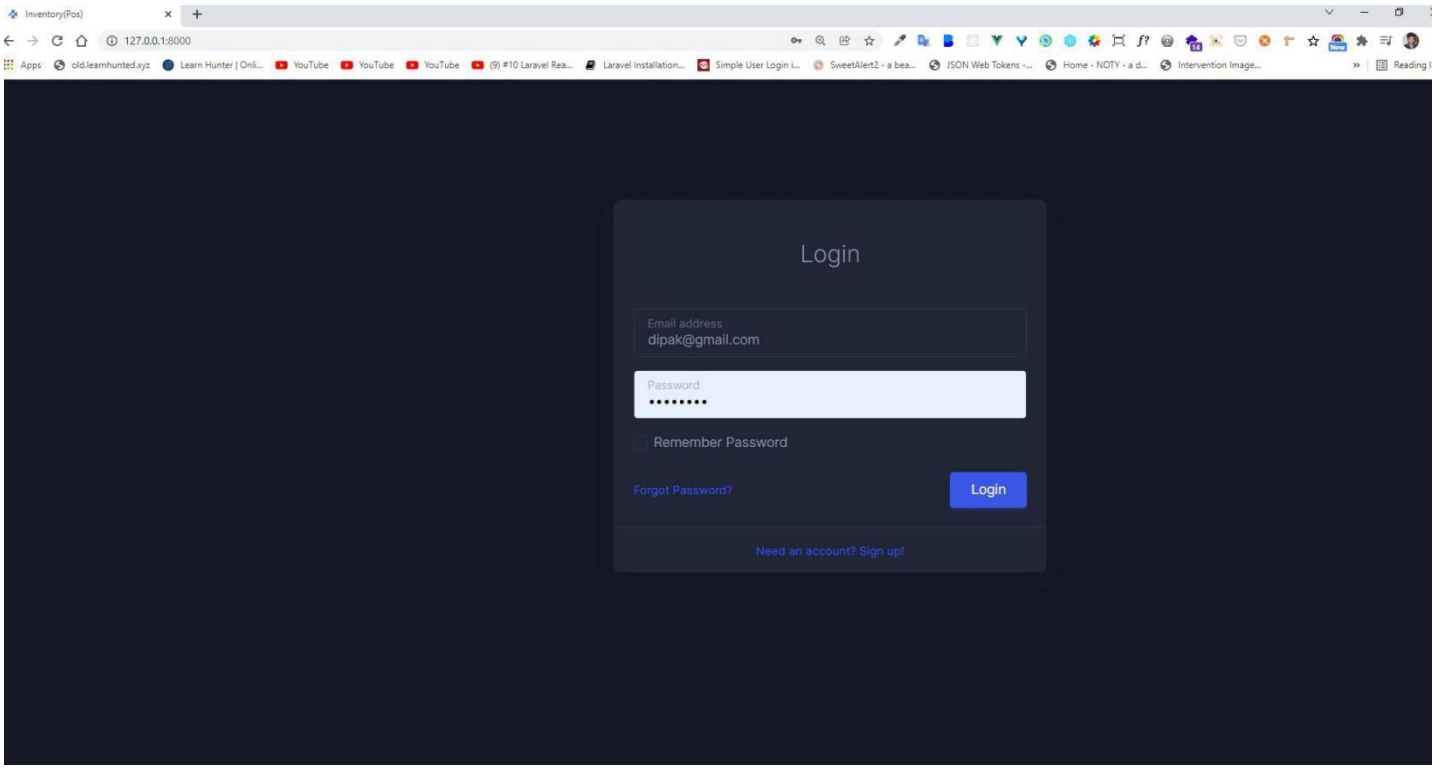
Login



Login Page

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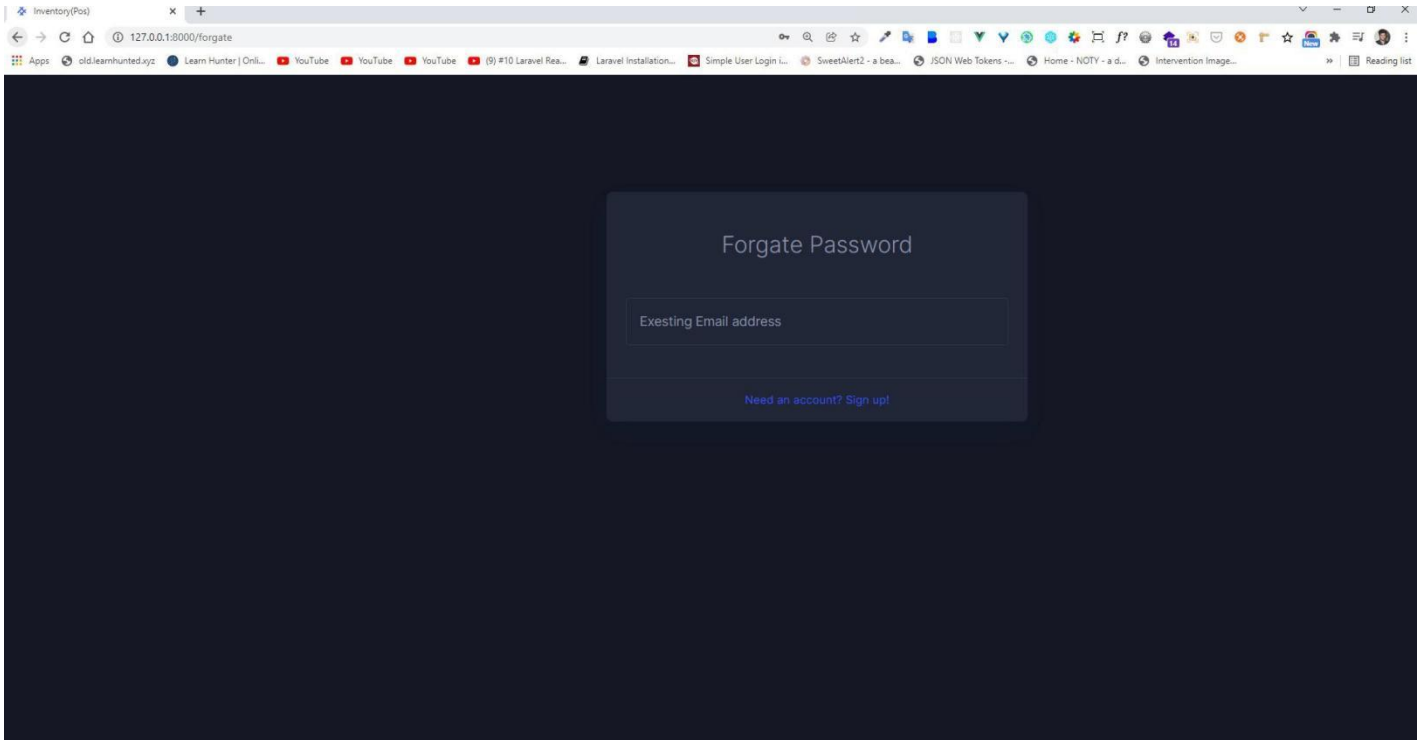
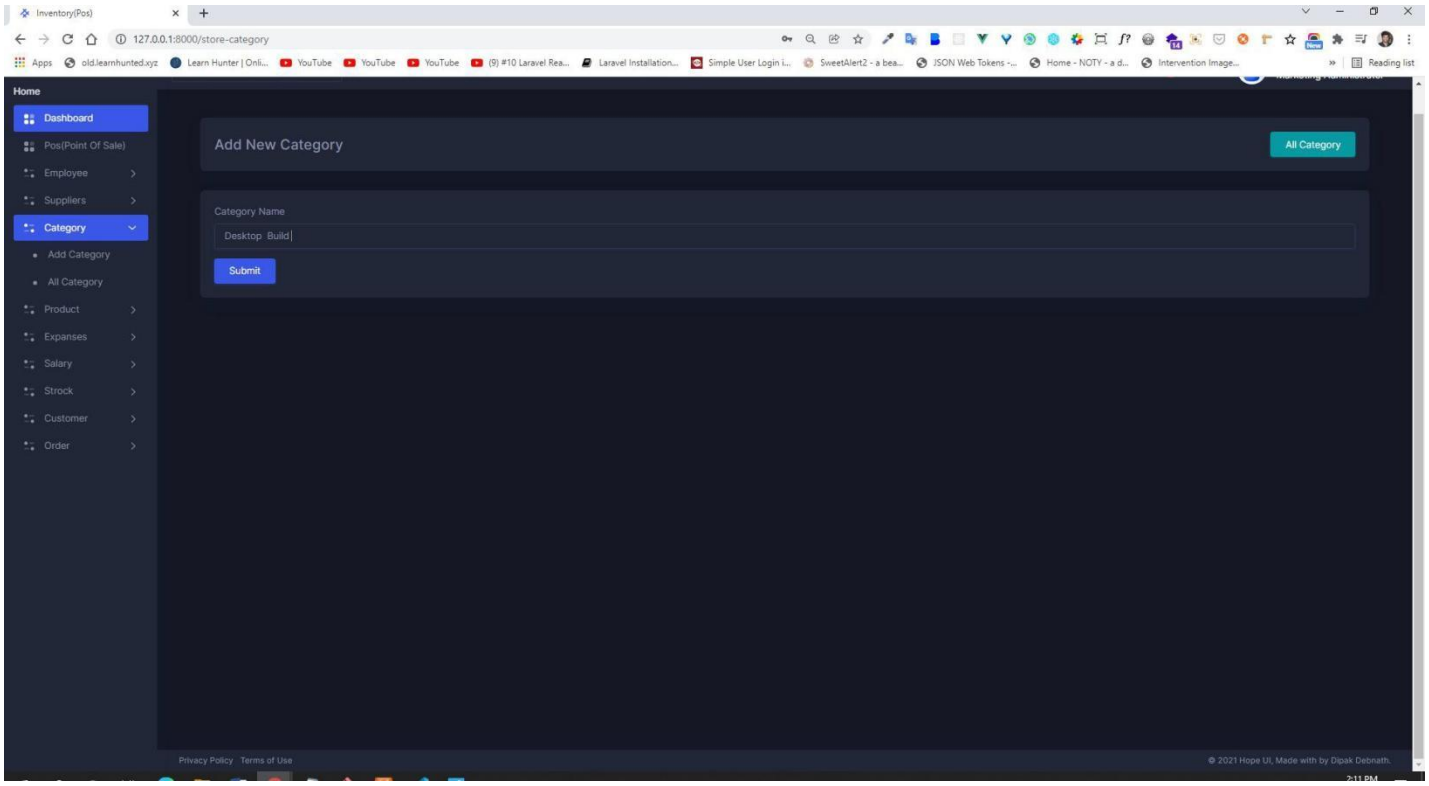
Forgate Password



Forgate Password Page

©Daffodil International University

Add Category



Add Category Page

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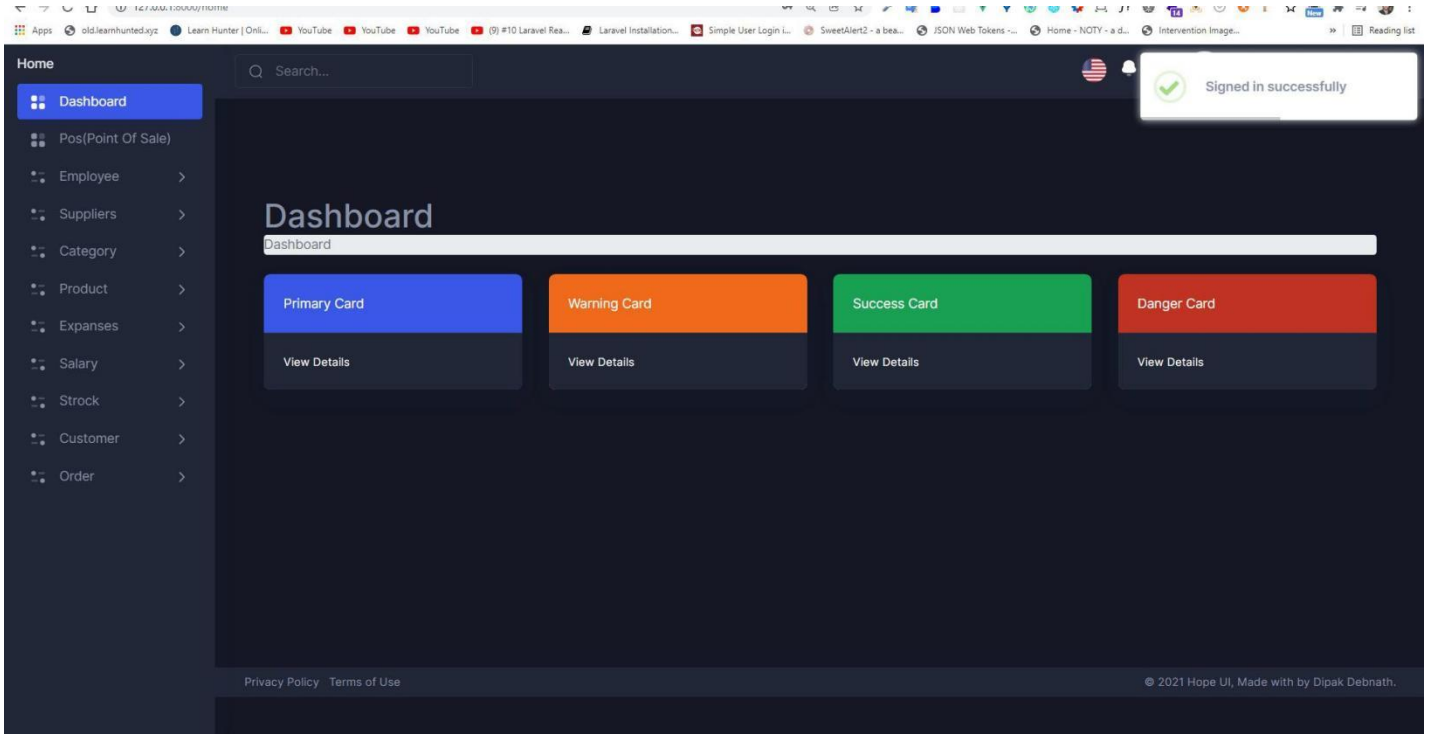
Admin Dashboard



Admin Dashboard Page

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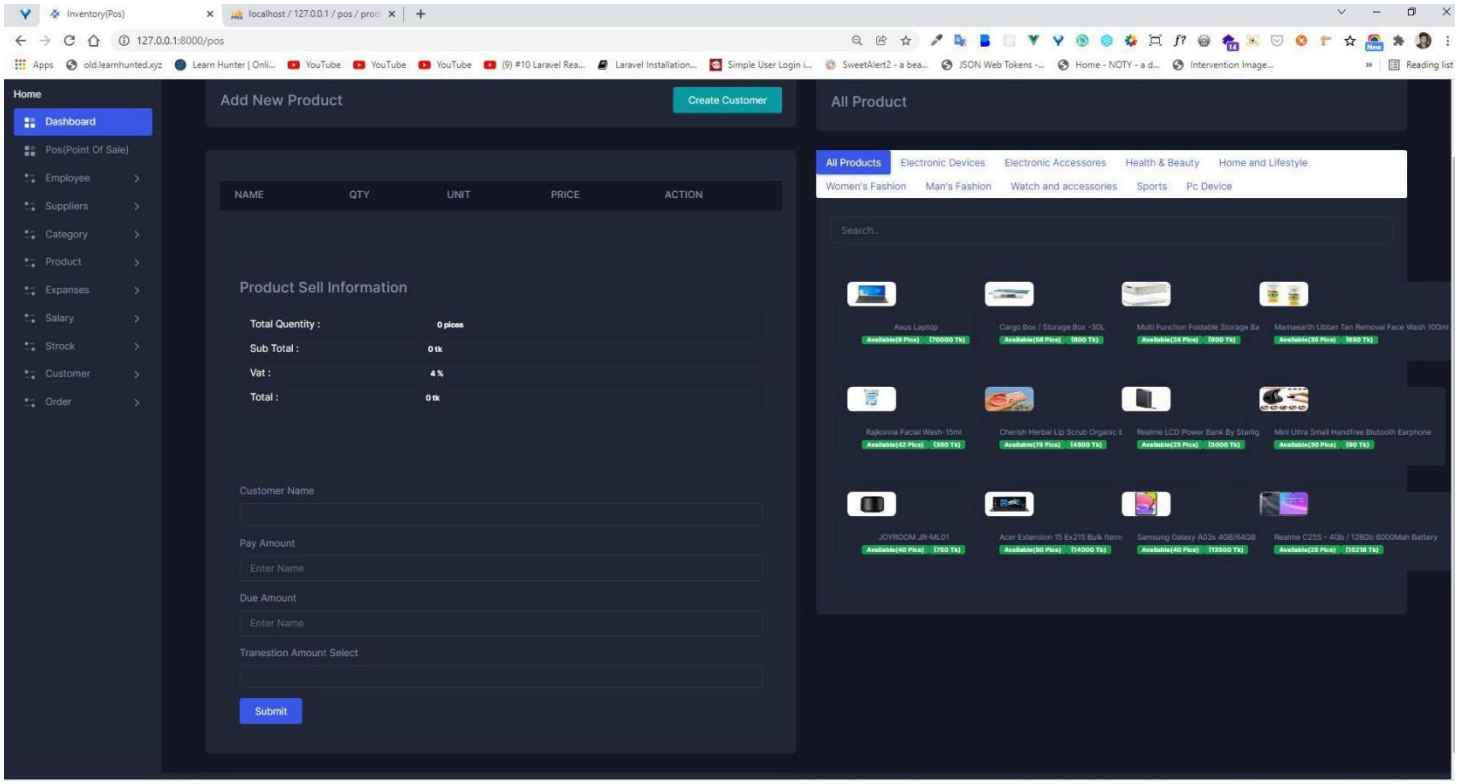
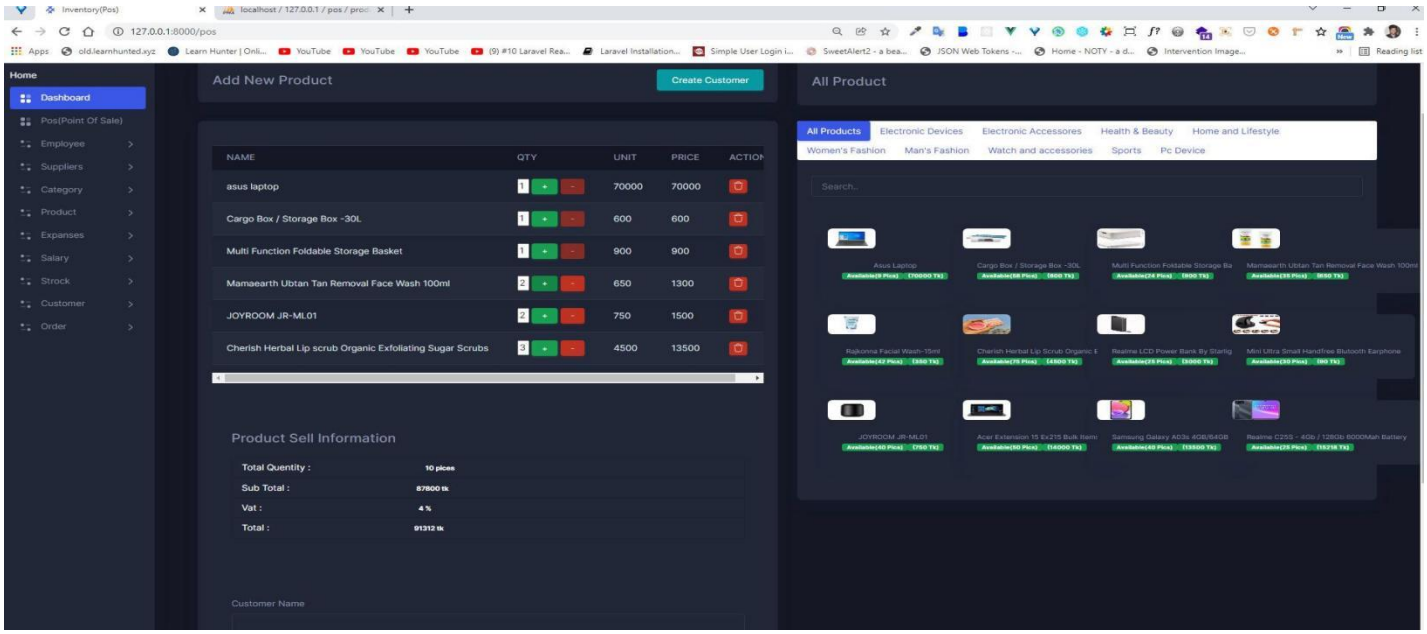
Inventory POS (Point Of Sale)



POS Page

Add To Cart Product



Add To Cart Page

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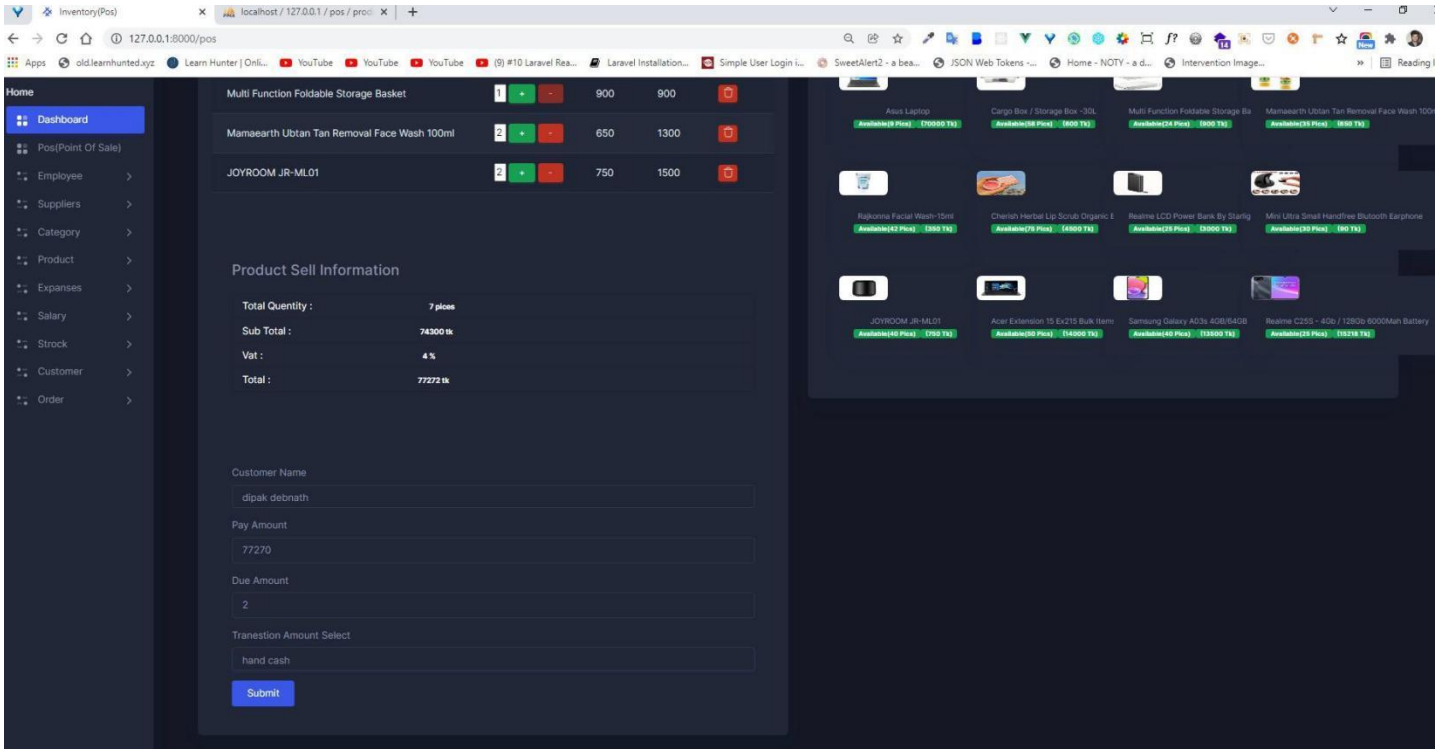
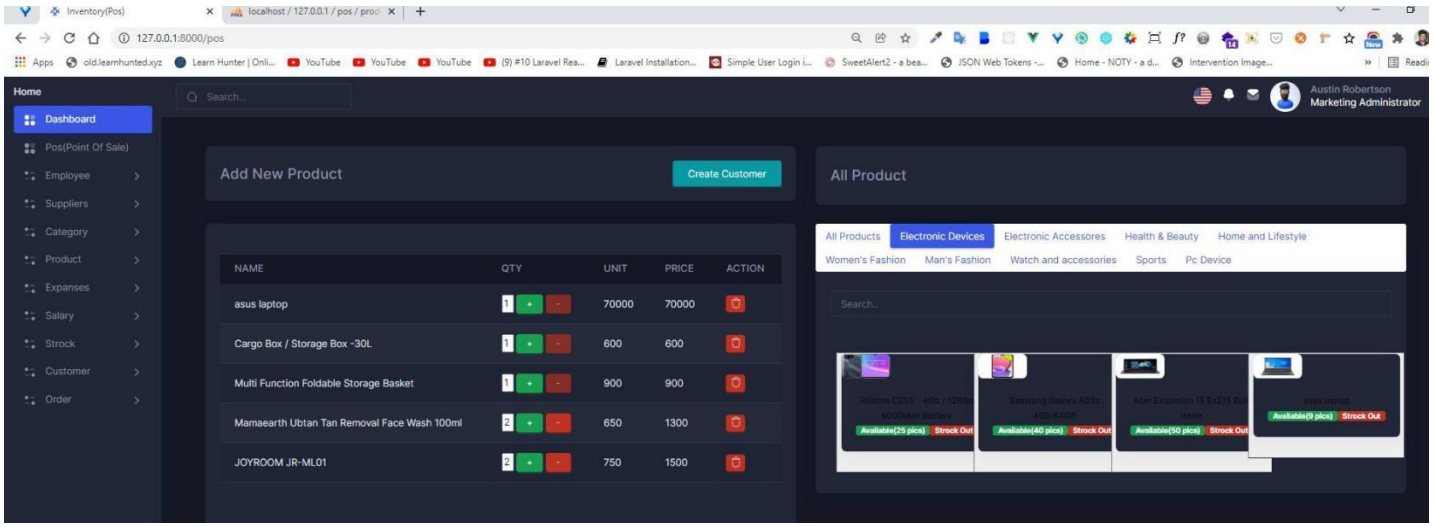
Select Customer



Select Customer Page

Update Cart



Update Cart Page

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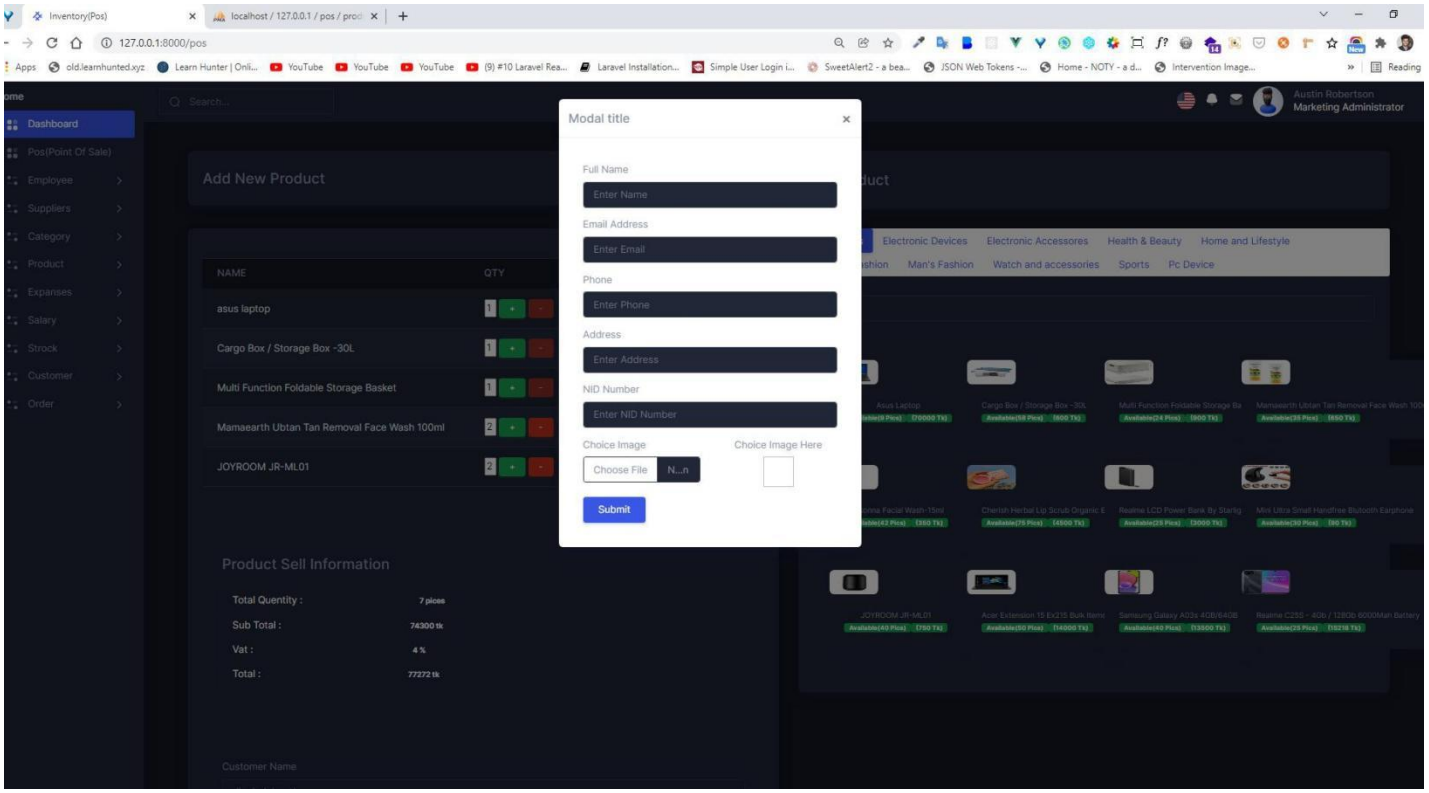
Create Customer Account



Create Customer Account

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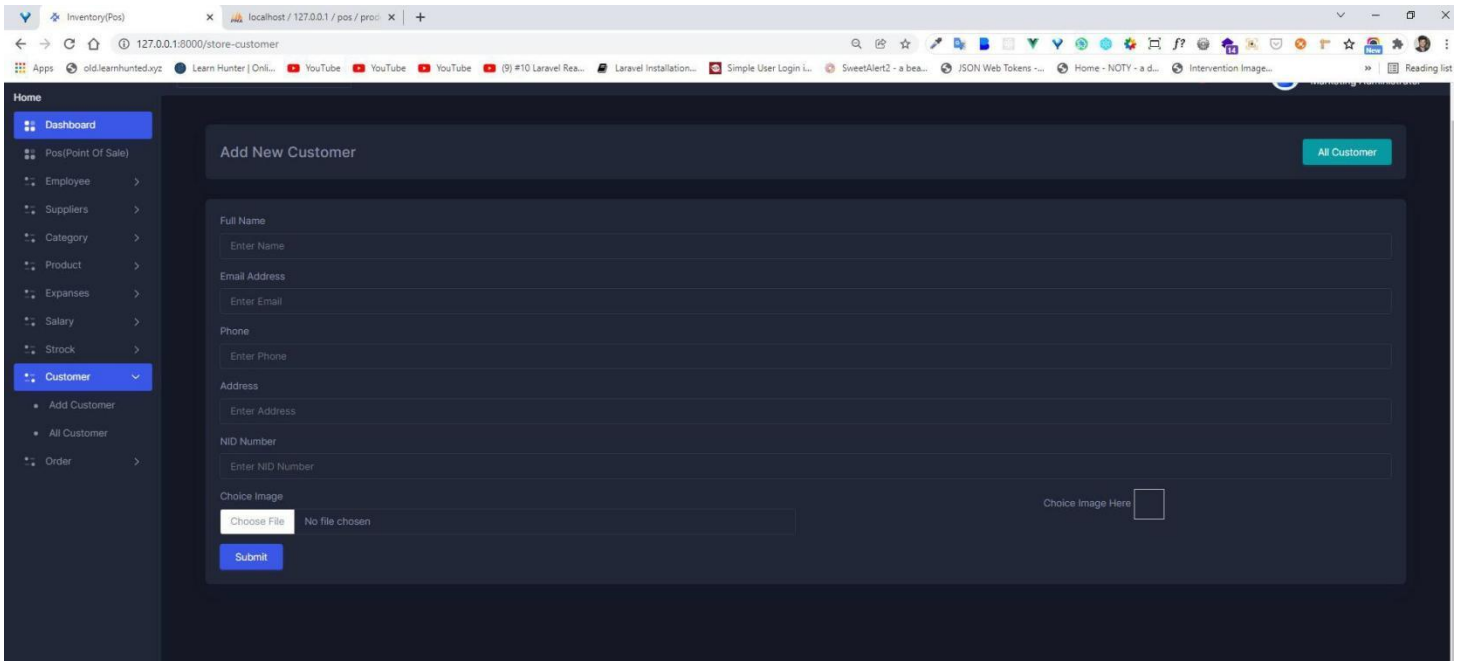
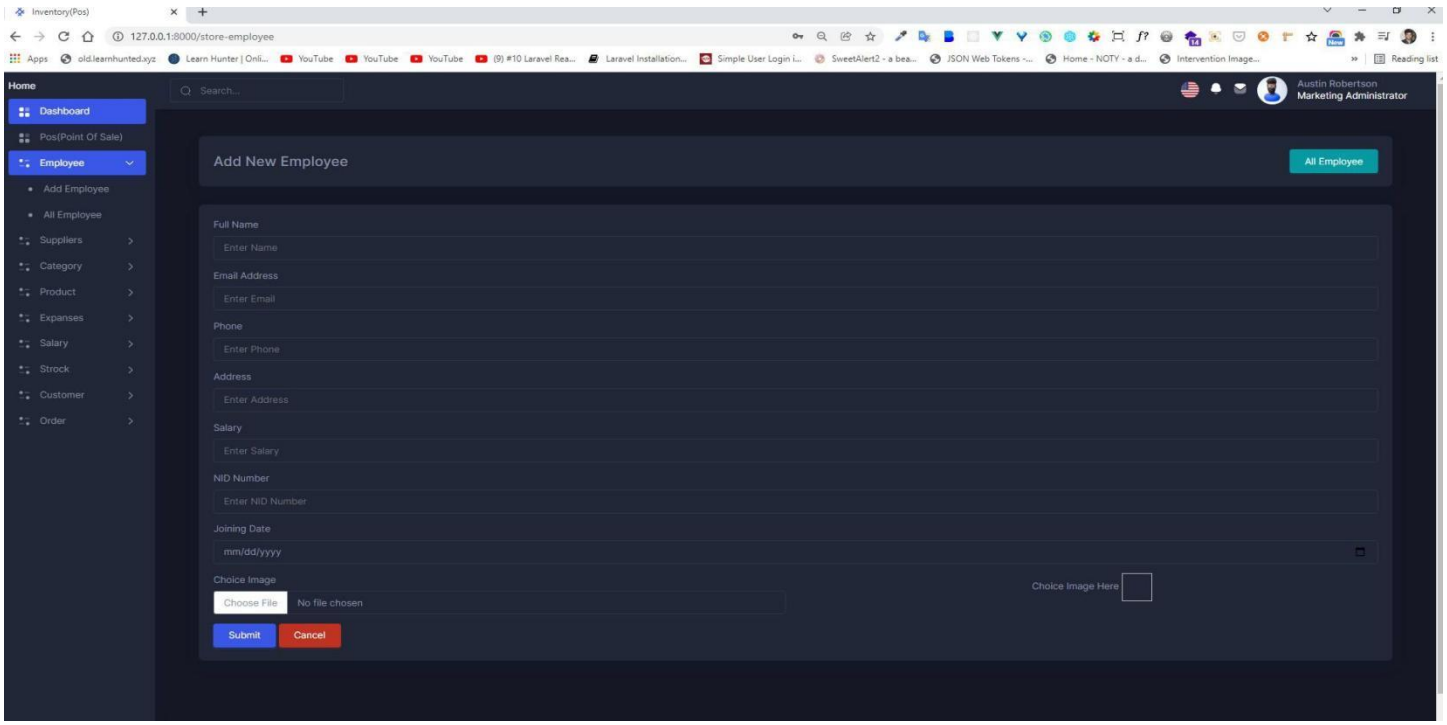
Add Customer



Add New Customer

Create Employee



Create New Employee

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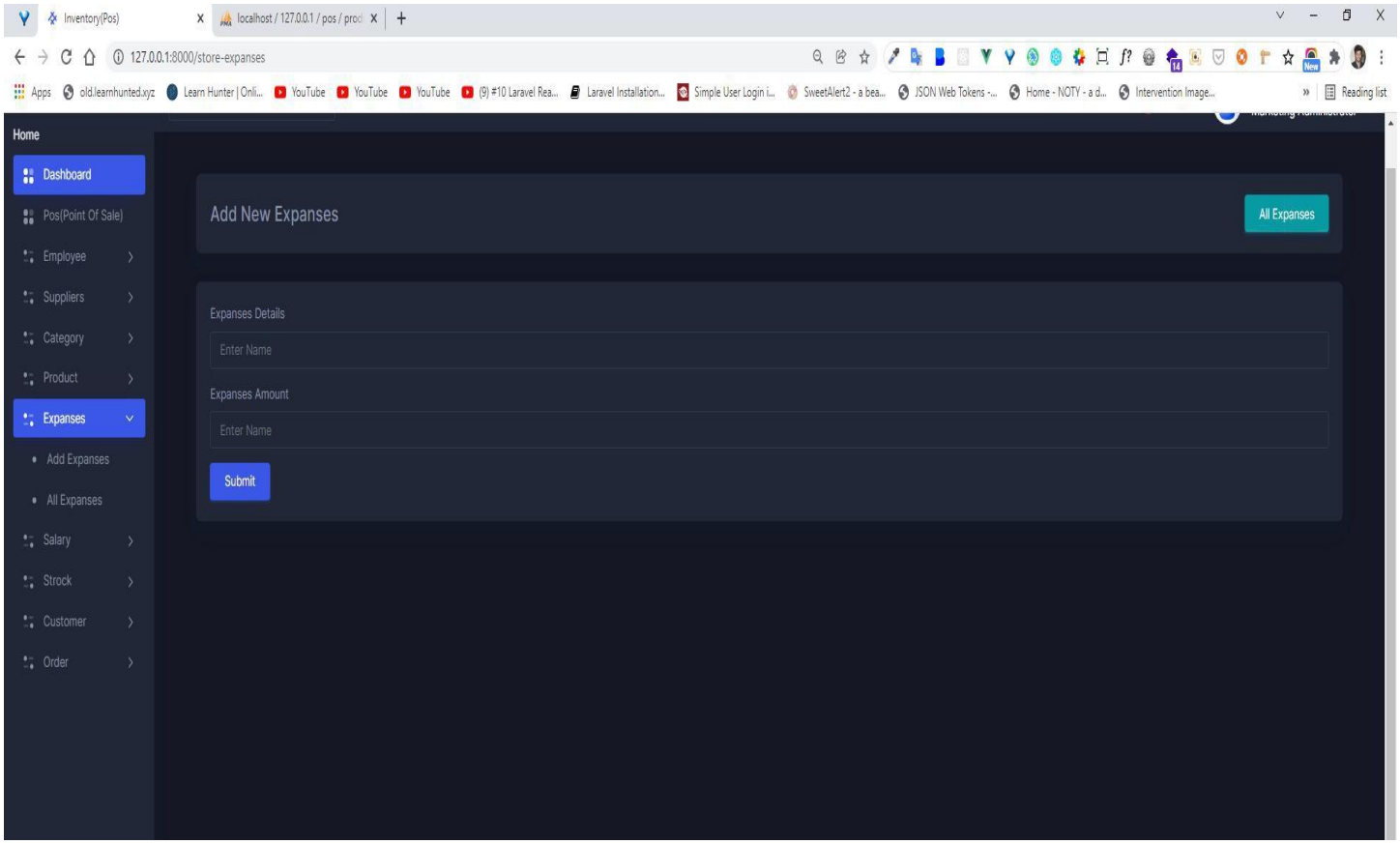
Add Expances



Add Expances Page

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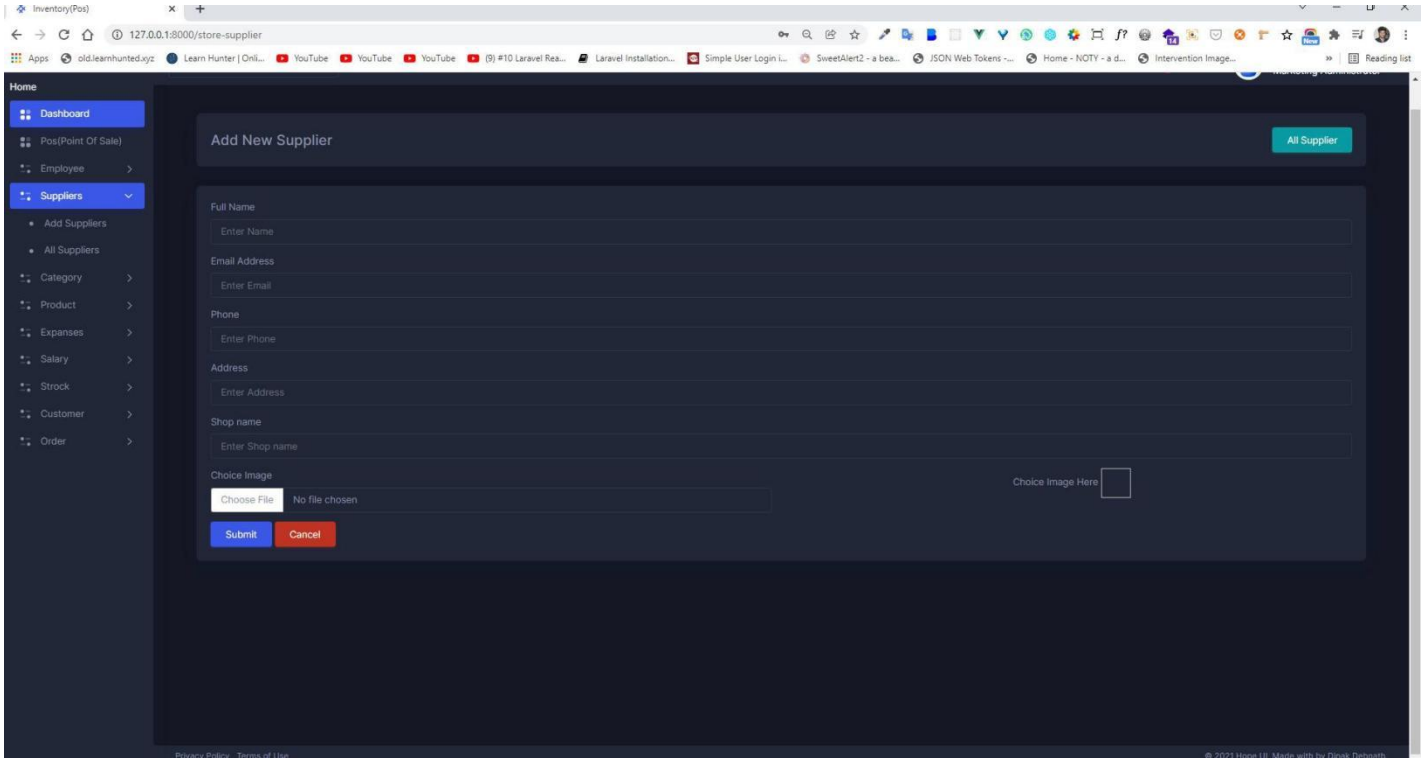
Create Supplier



Create Supplier Page

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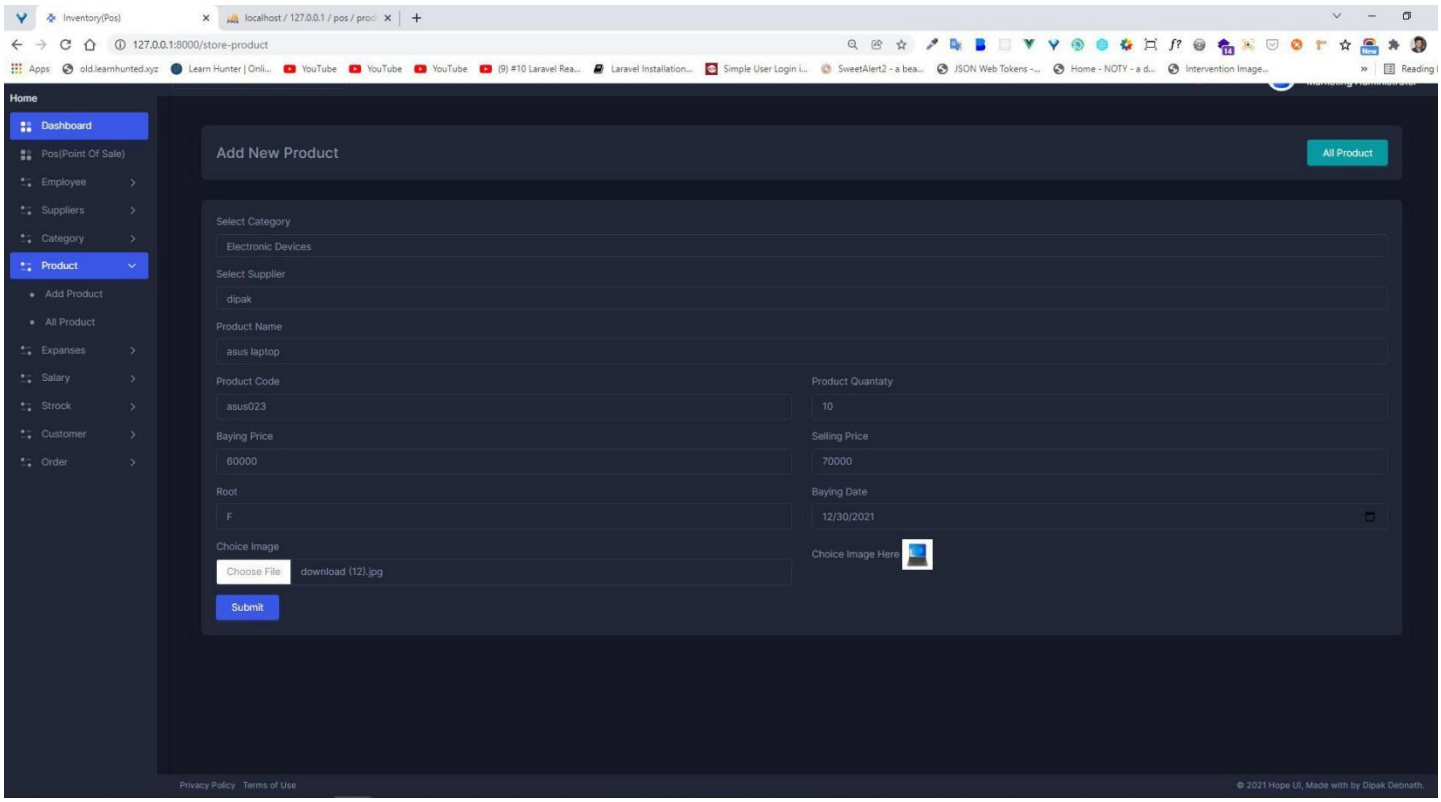

Create Product Page

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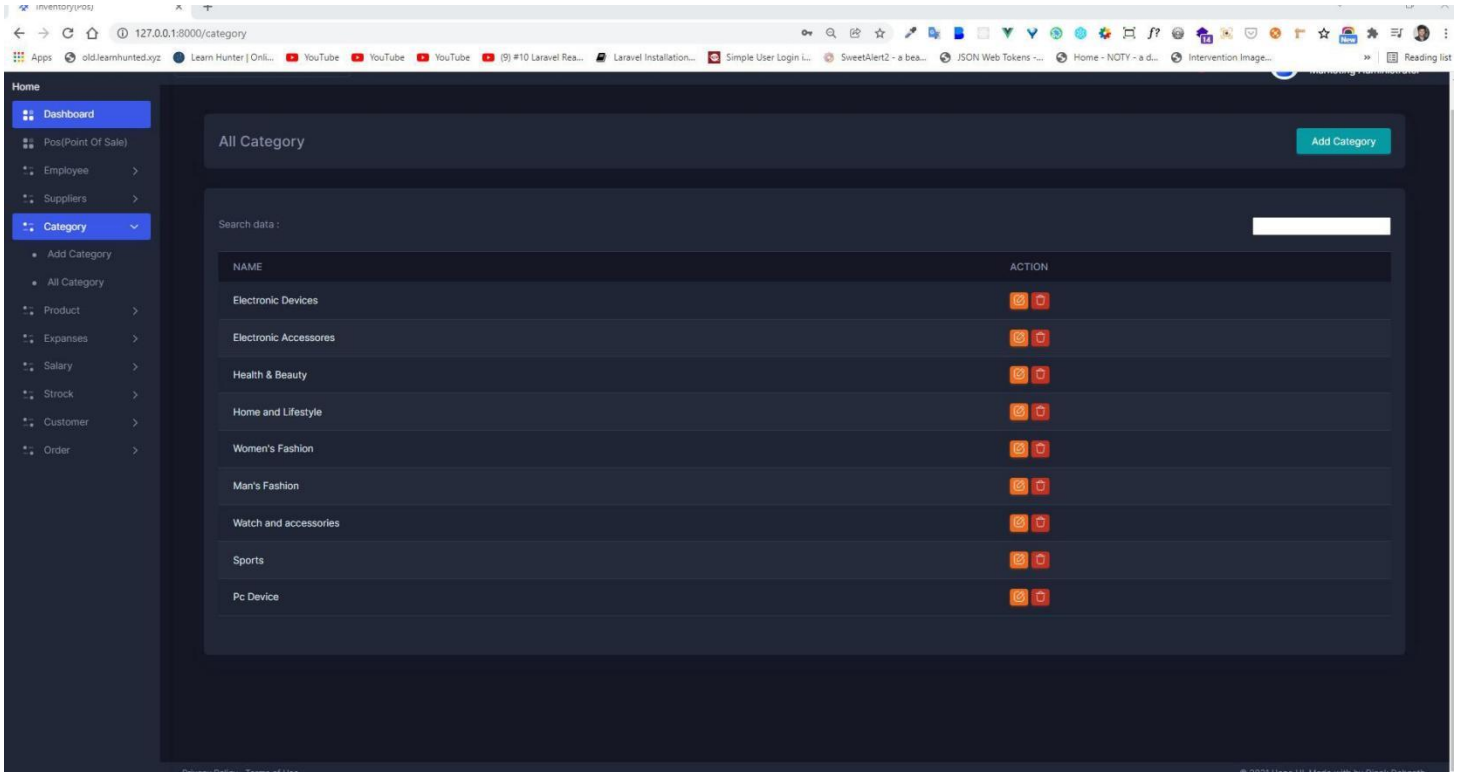
View Category



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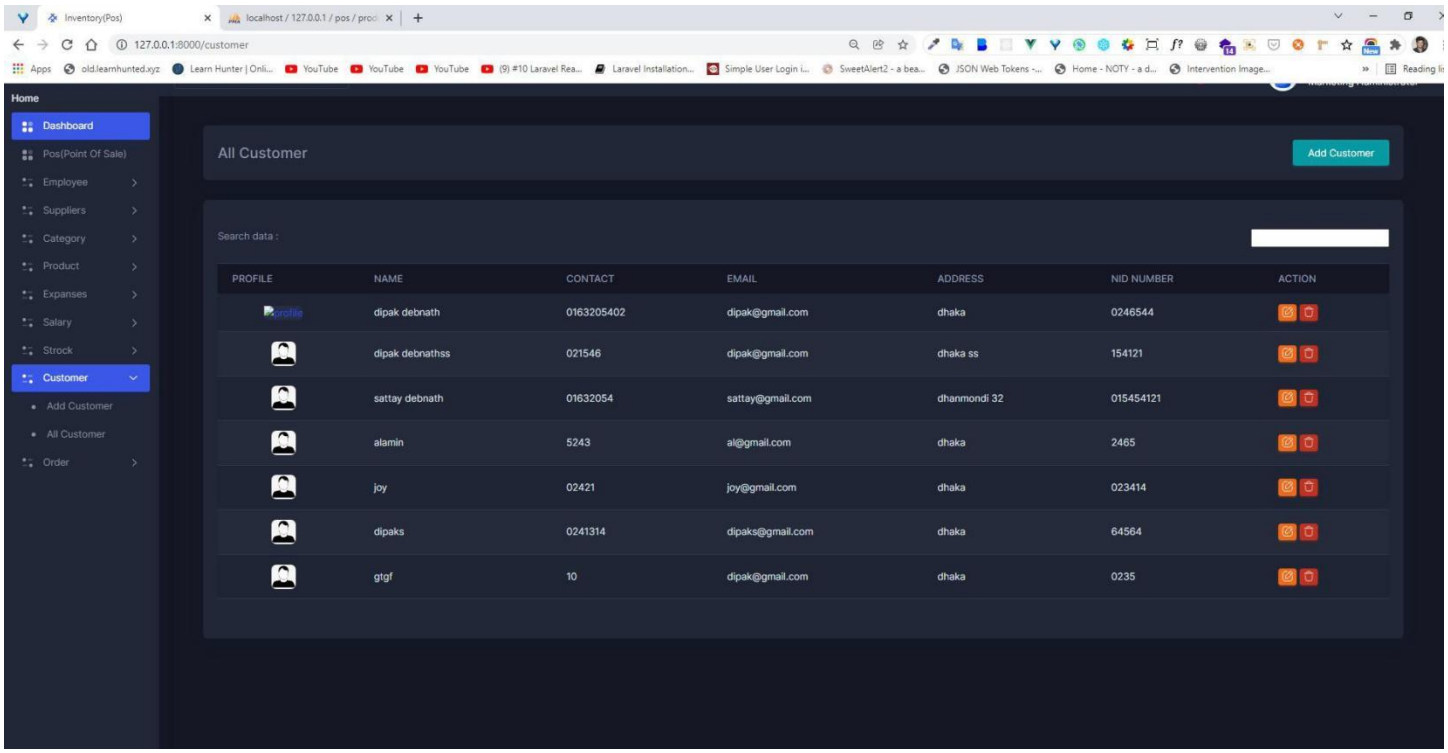

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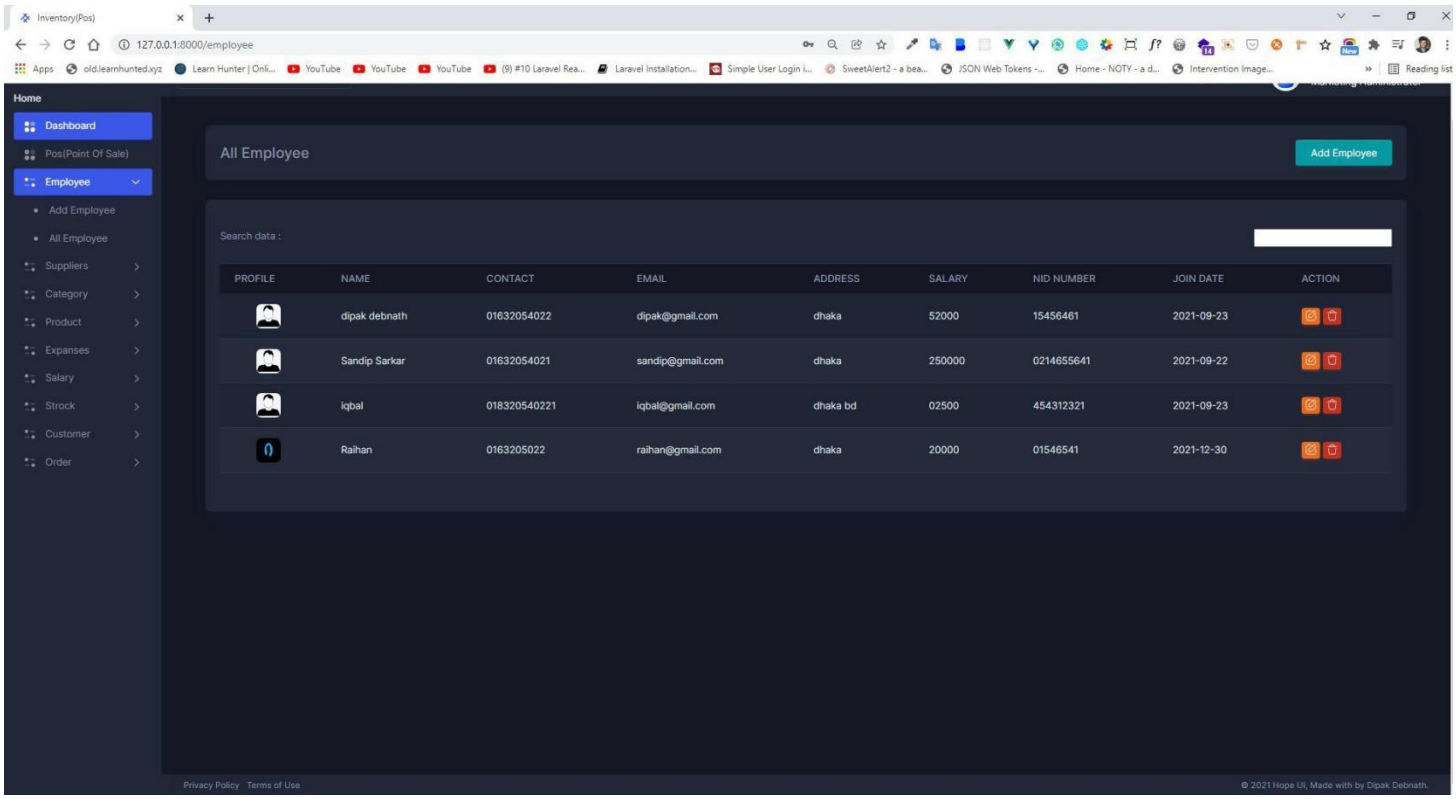
View Employee



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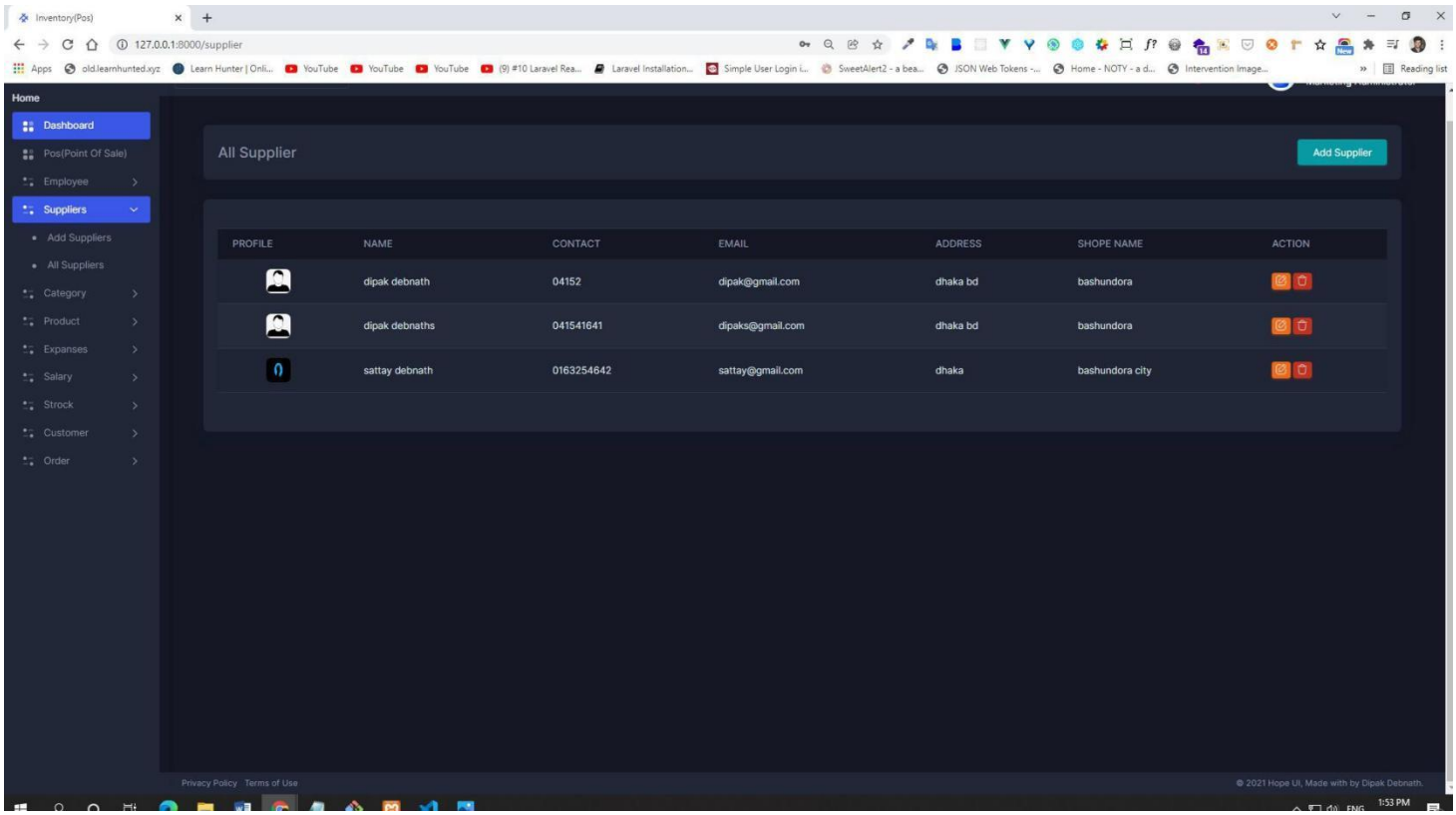

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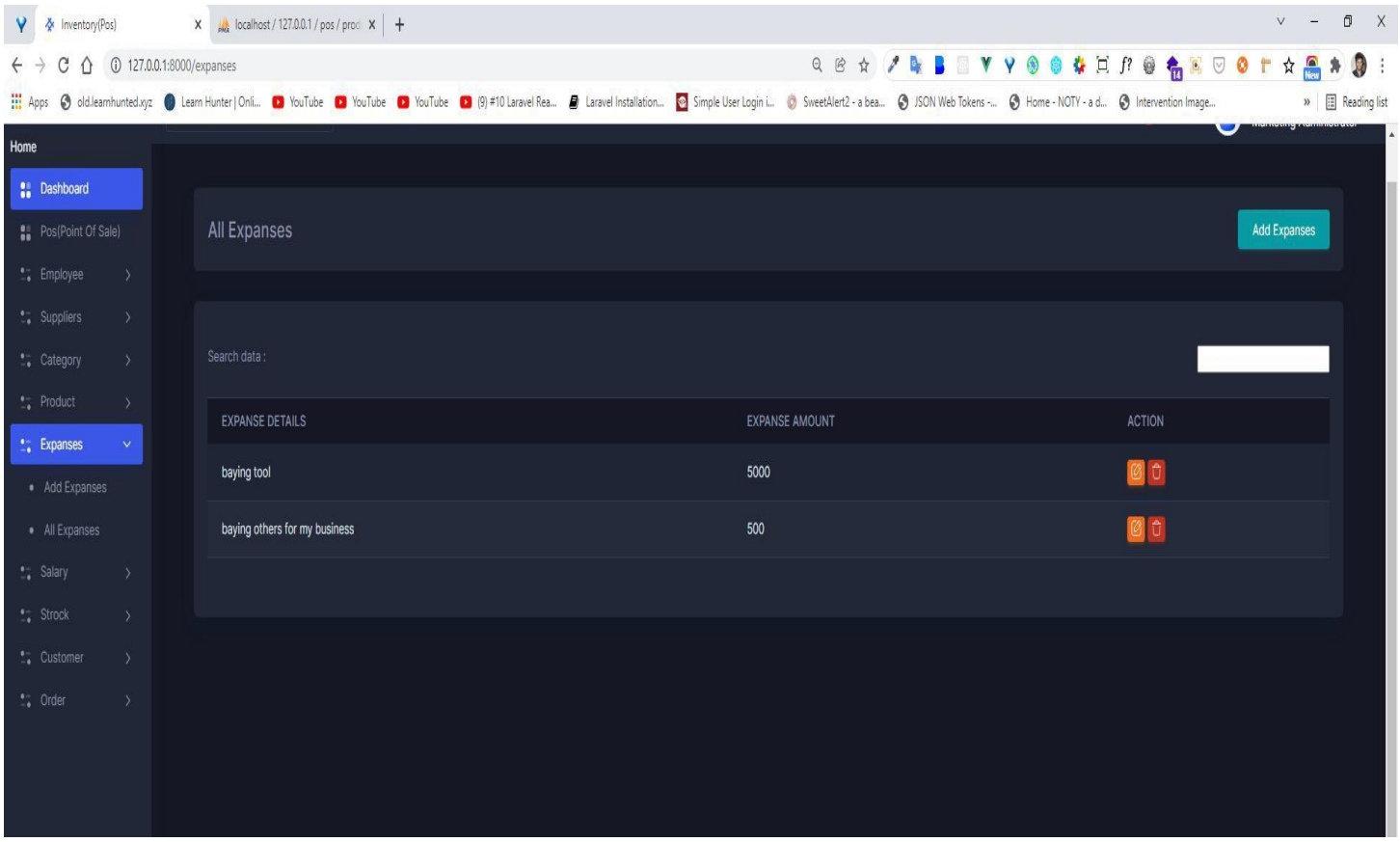

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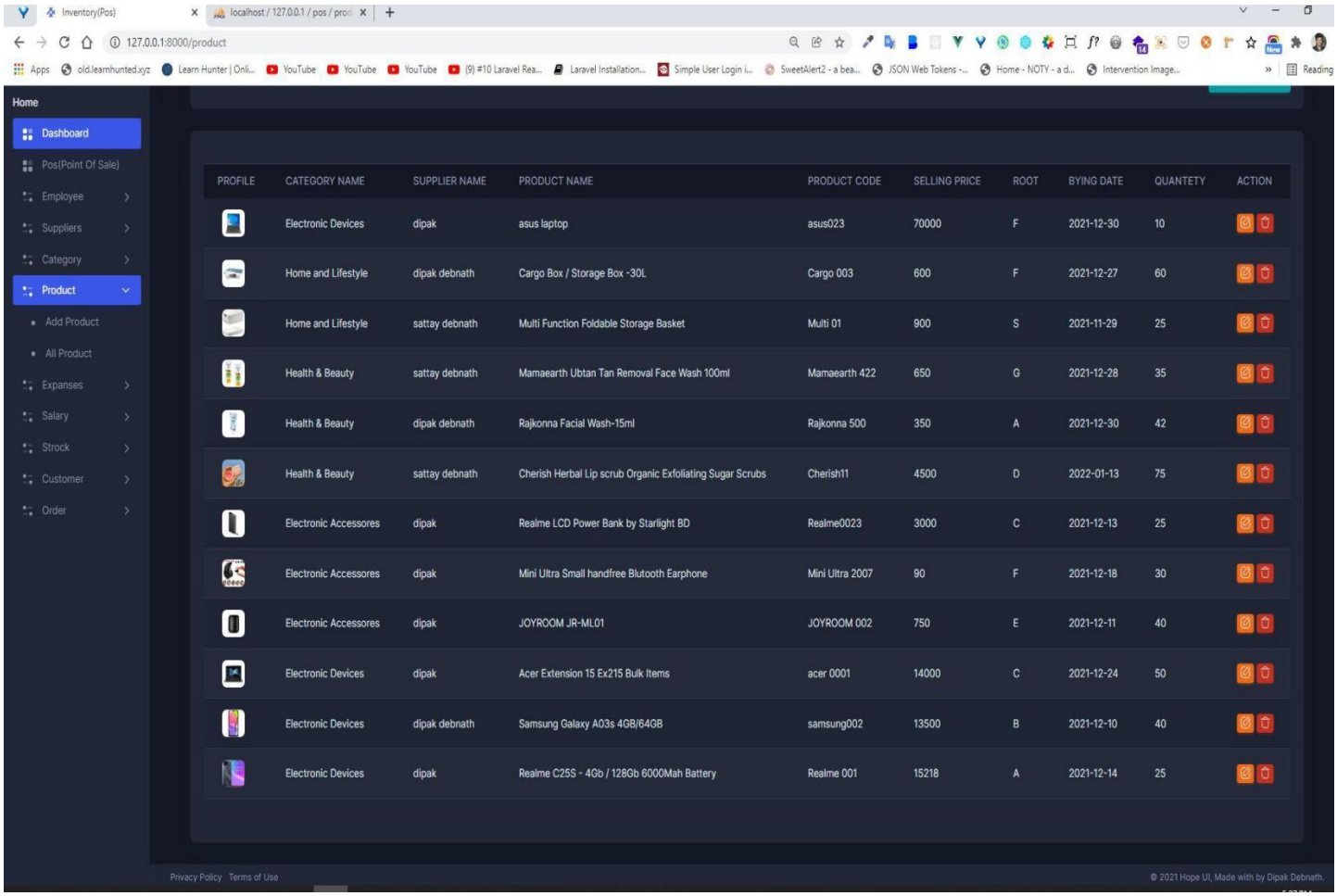

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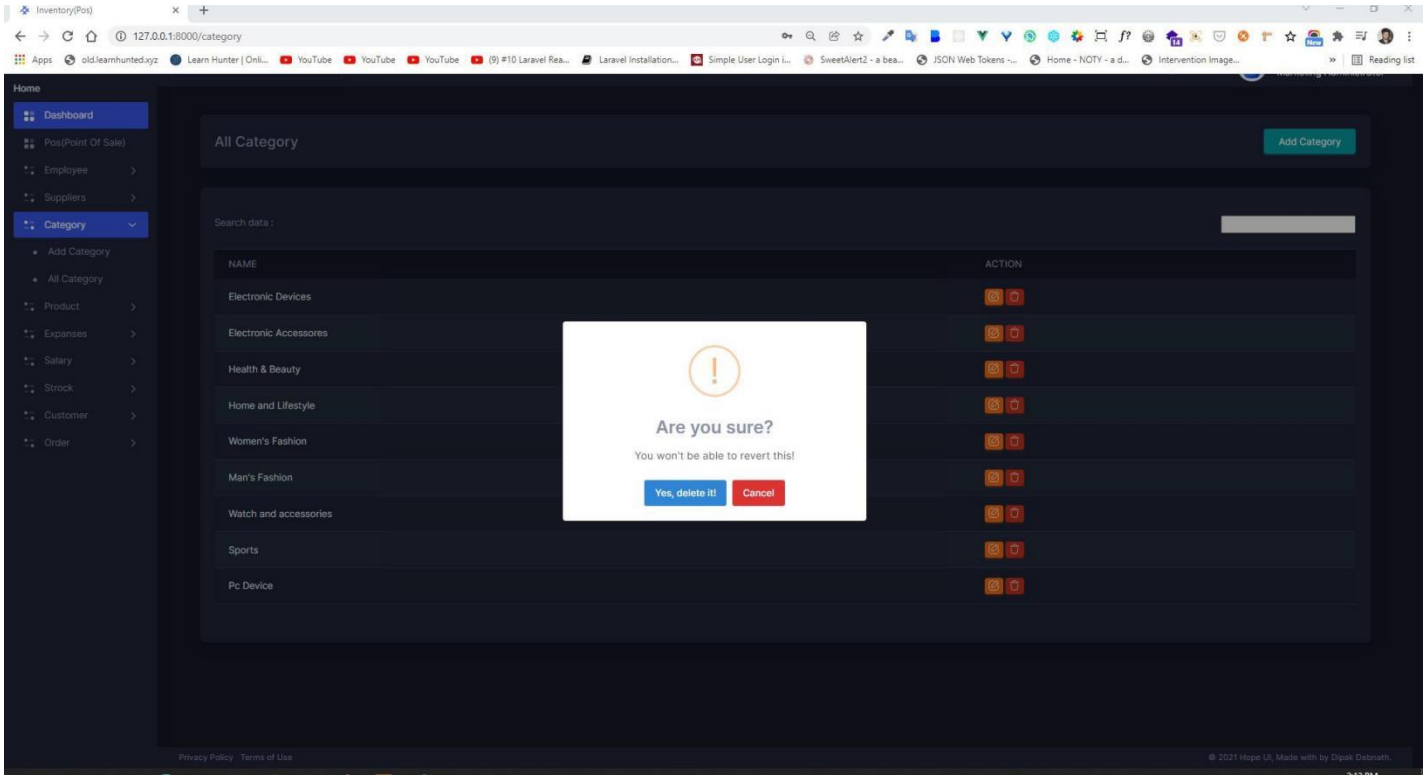
Destroy Category



Destroy Category Page

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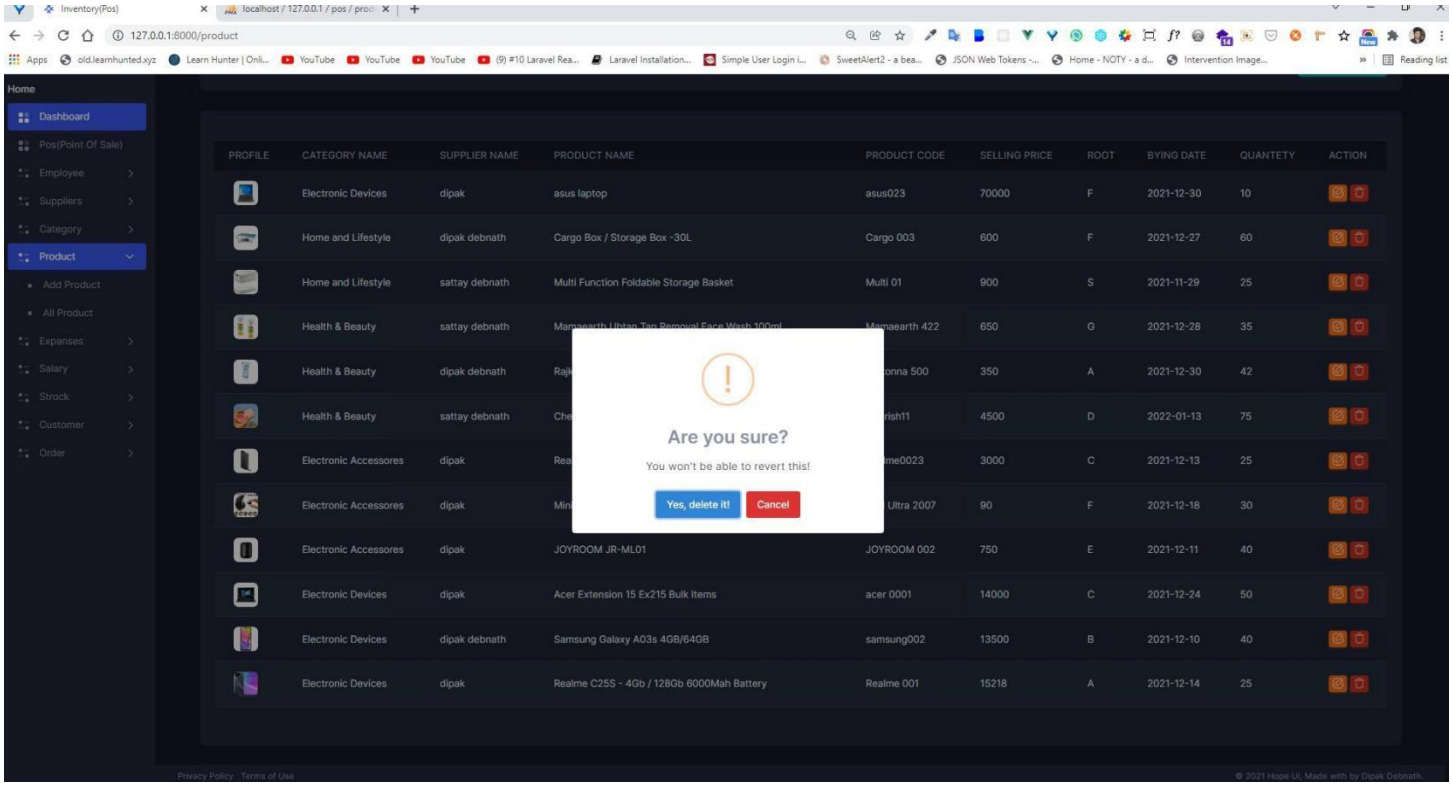

Destroy Product Page

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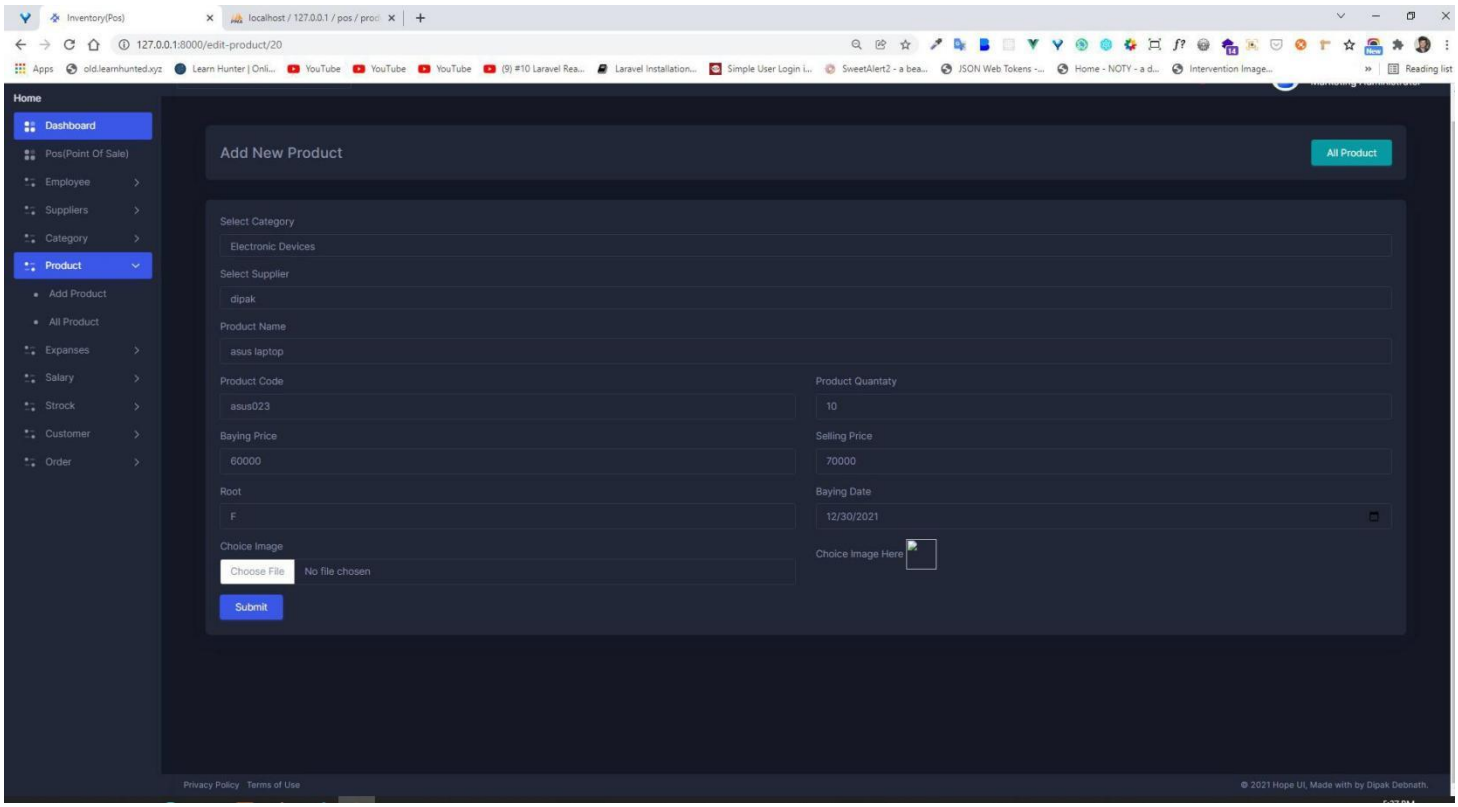
Update Product



Update Product Page

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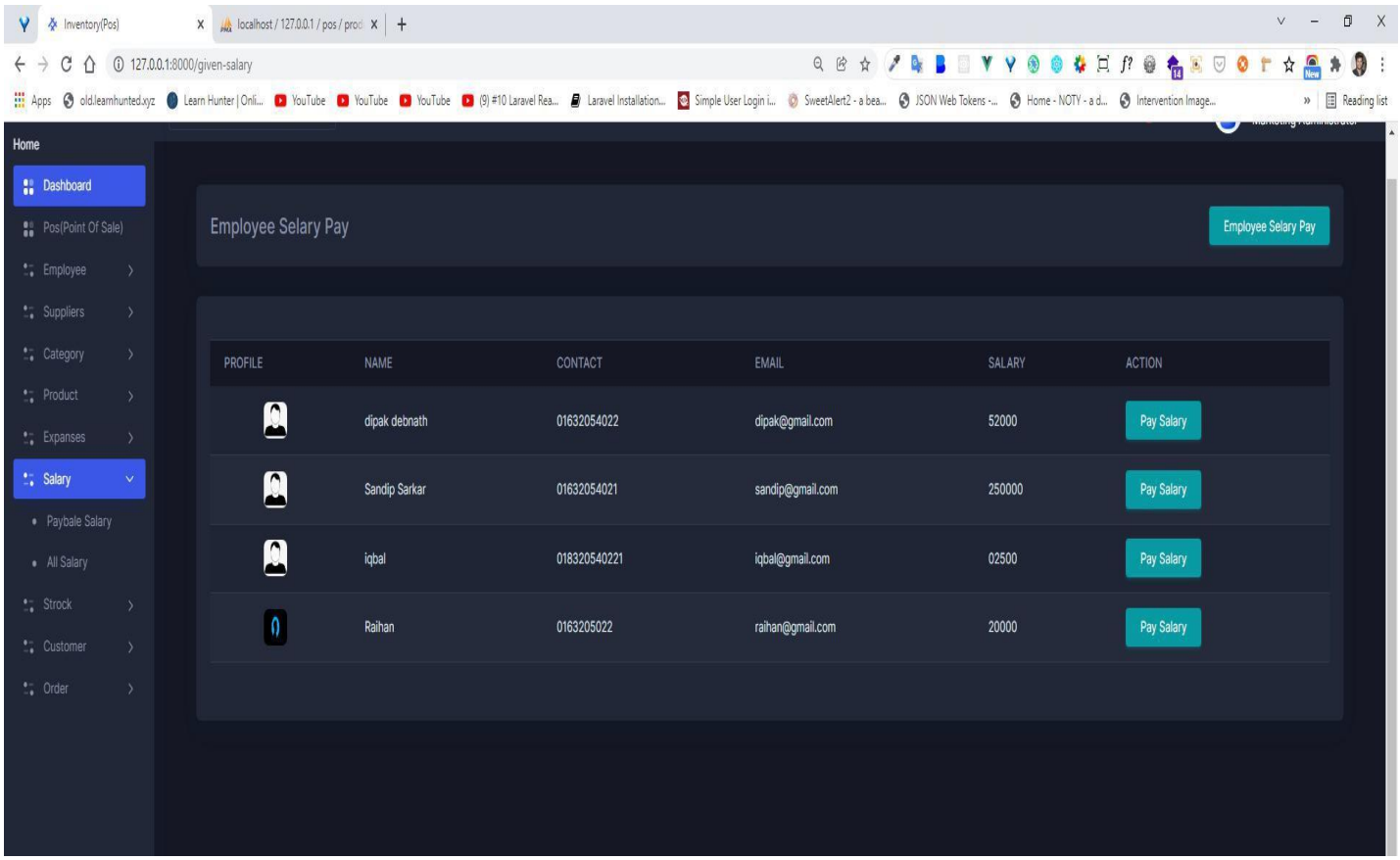
Pay Sallery



Pay Salary Page

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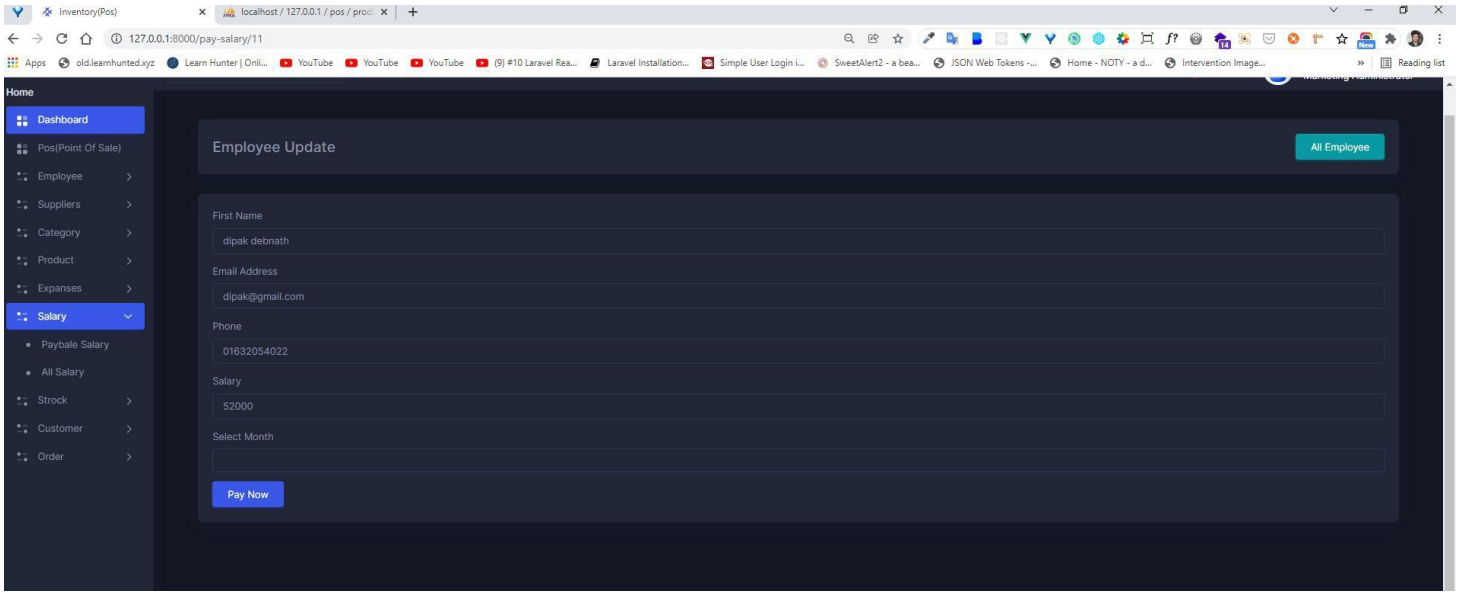

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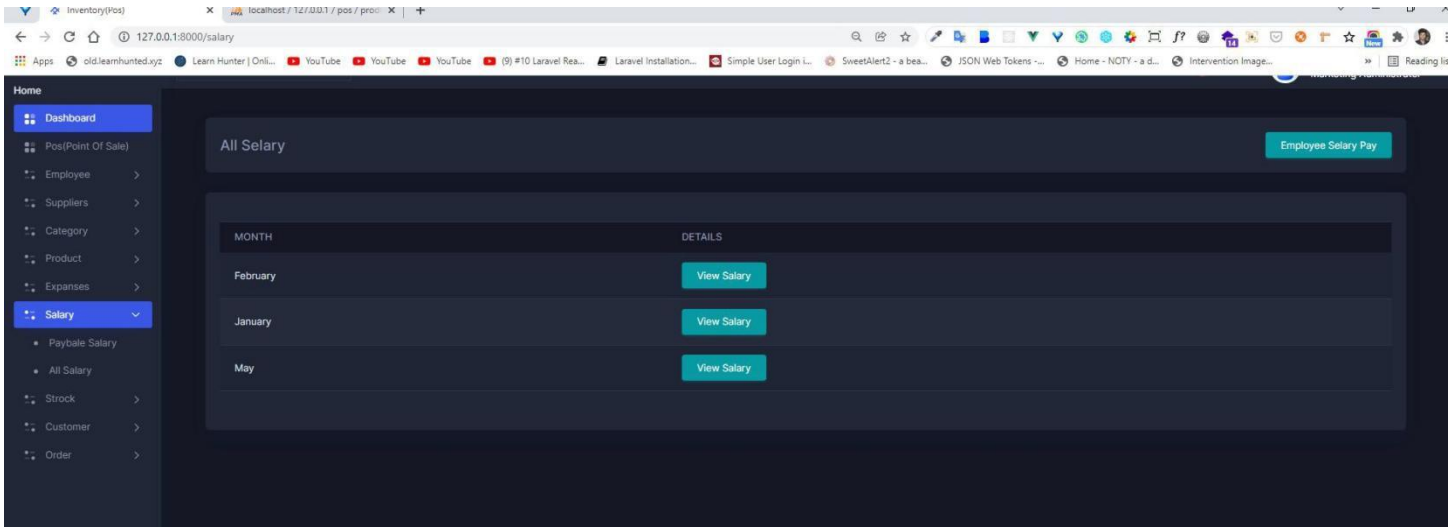
View Pay Salary



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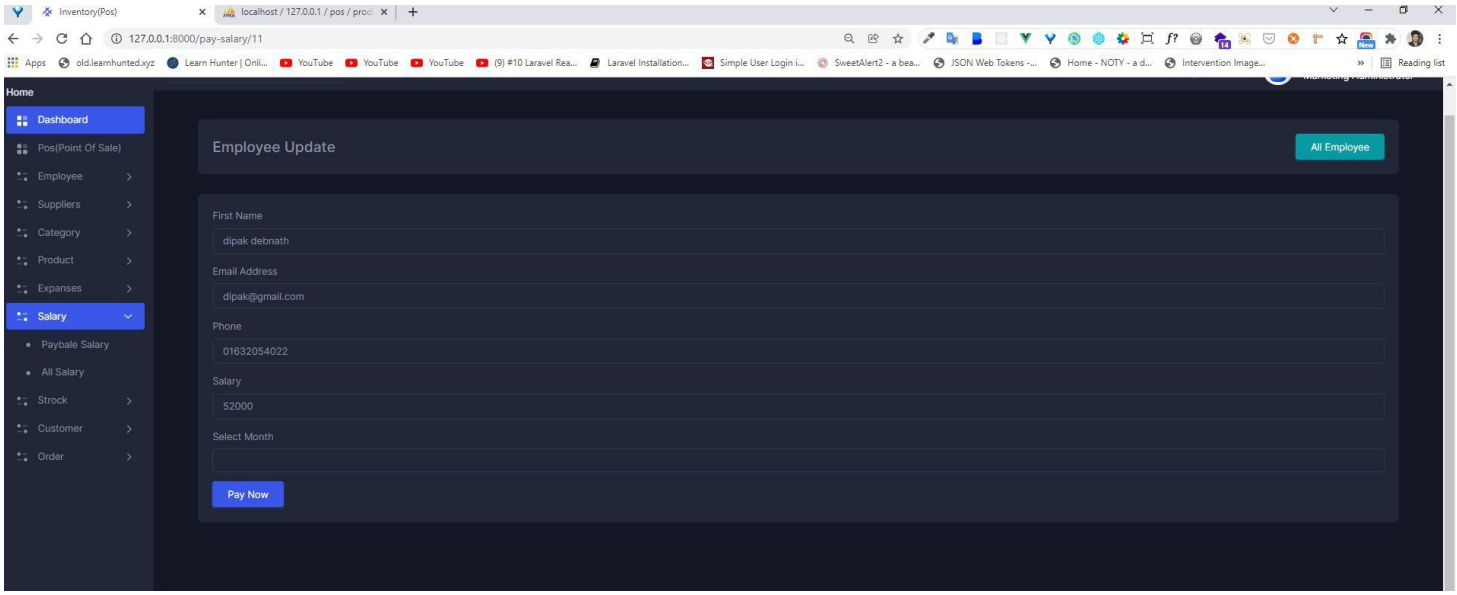
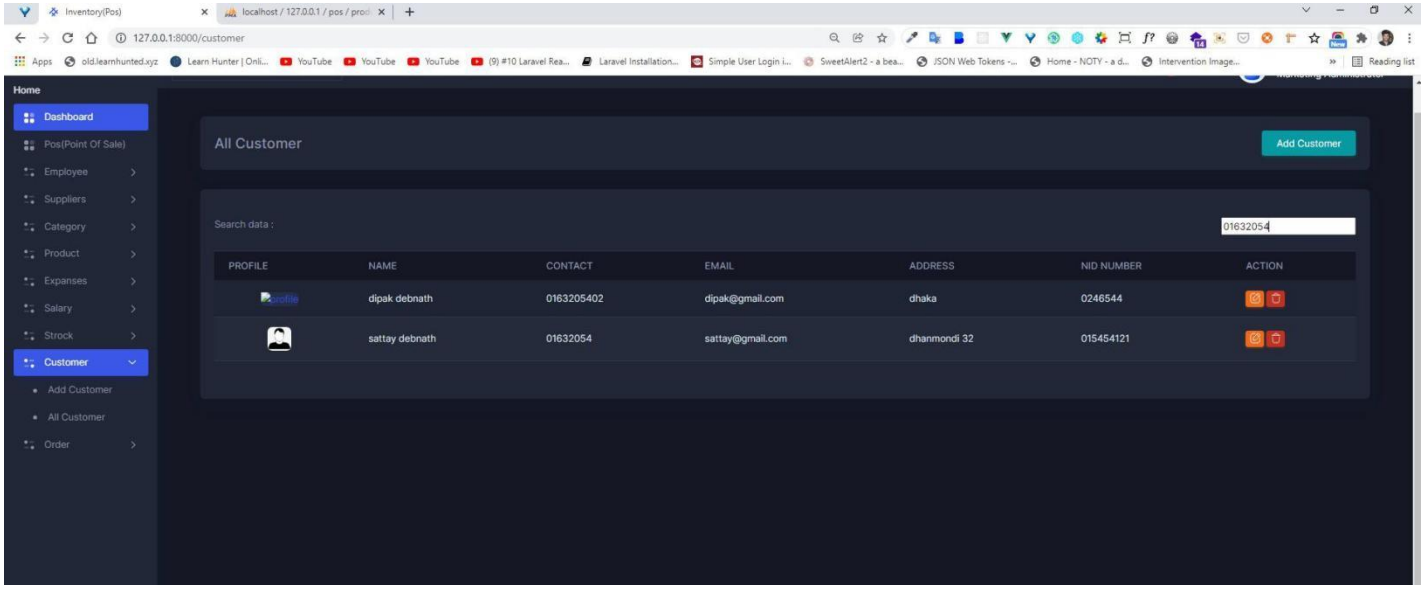


Advance Salary Page

View Customer



View Customer Page

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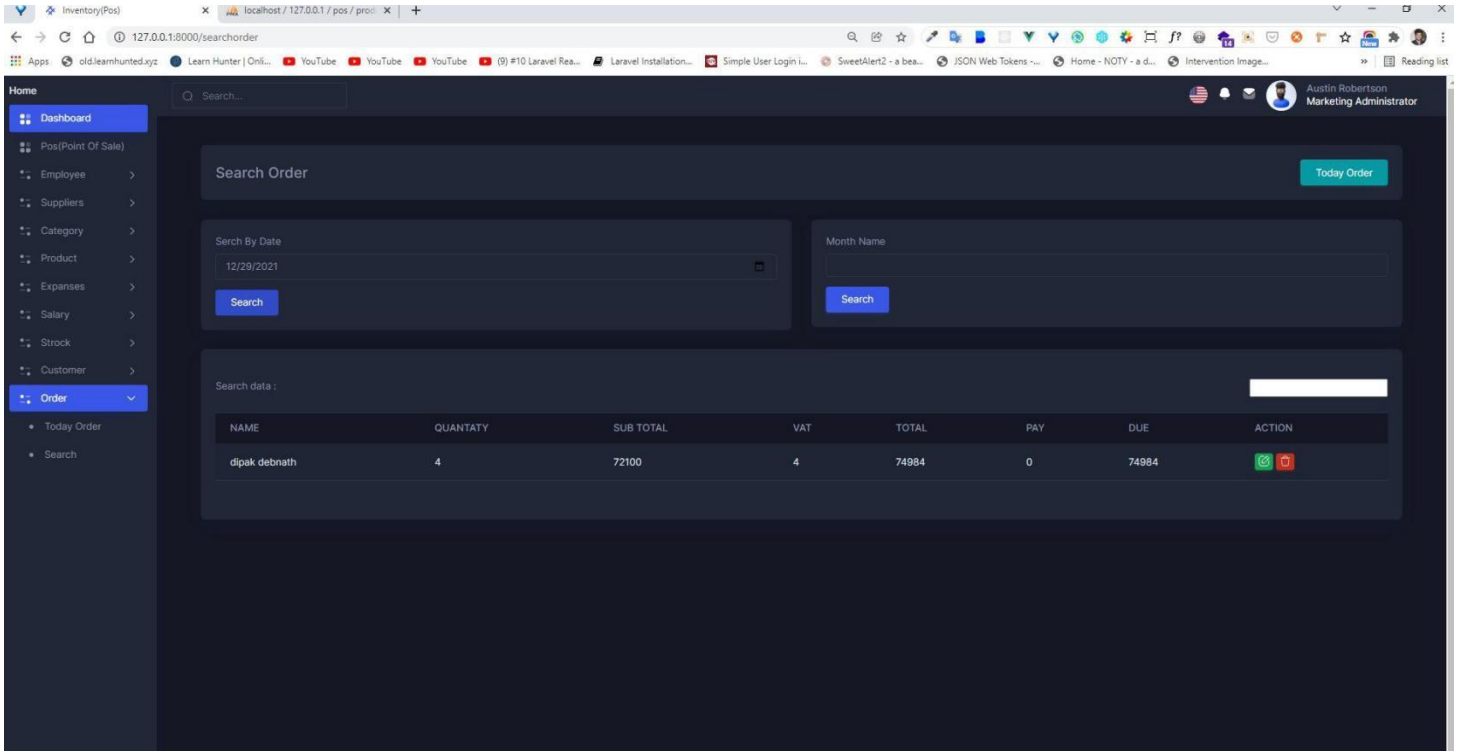
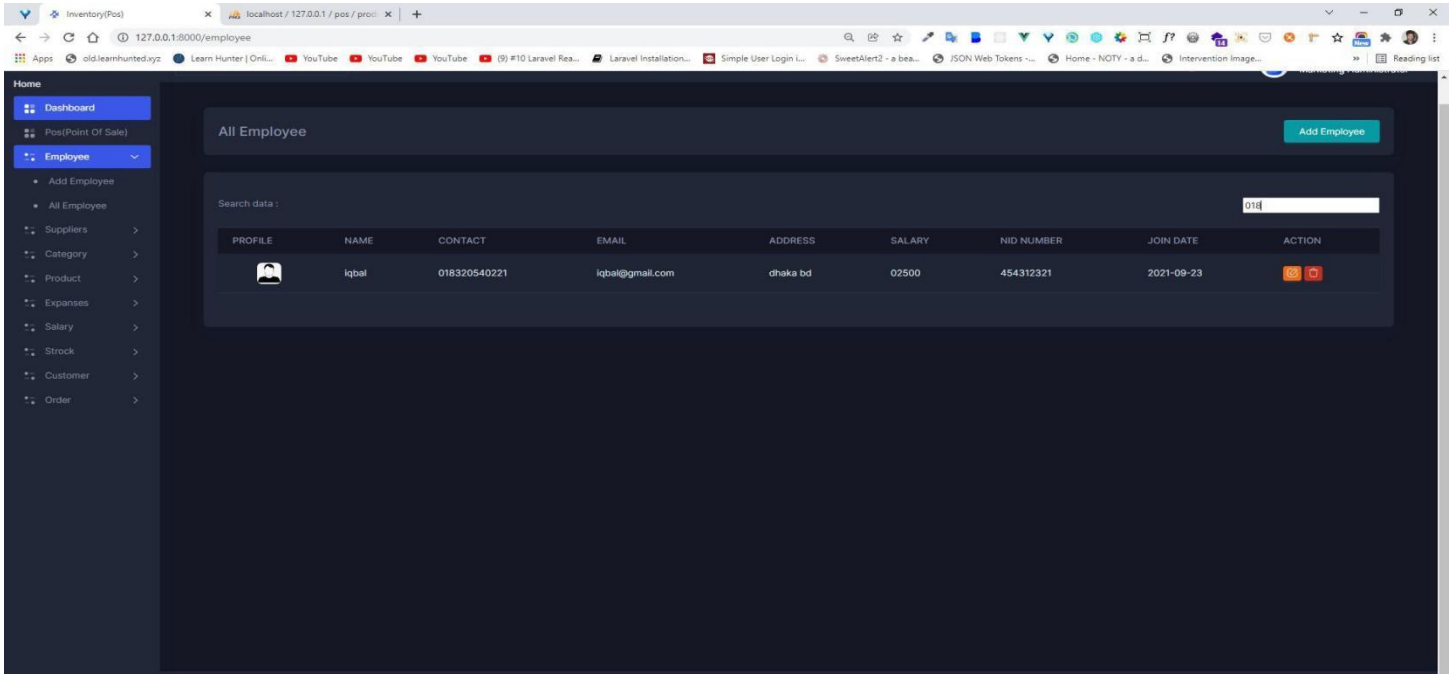
Search Order By Date



Search Order By Date Page

Send Problem



Send problem Page

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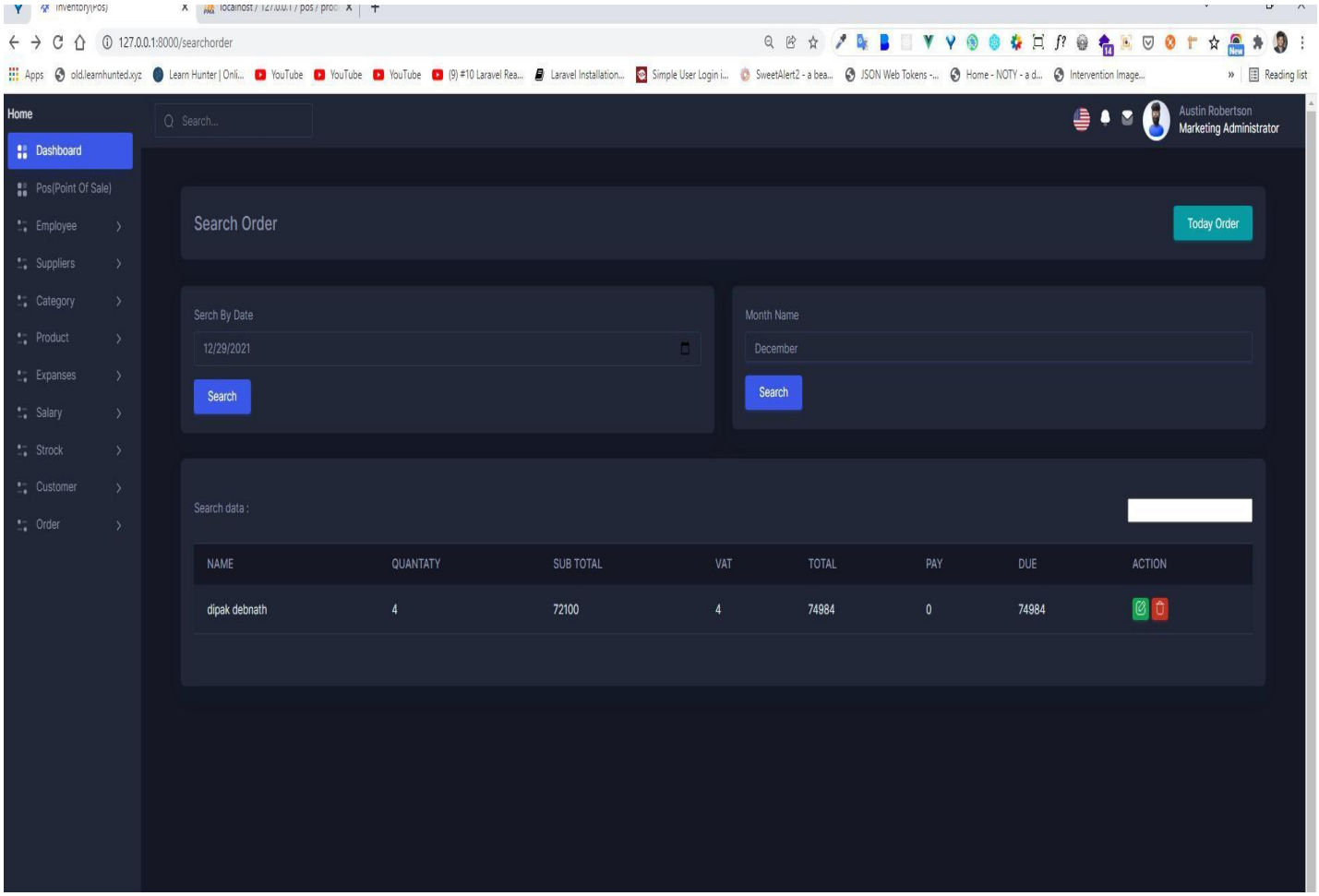

Search Order By Month Page

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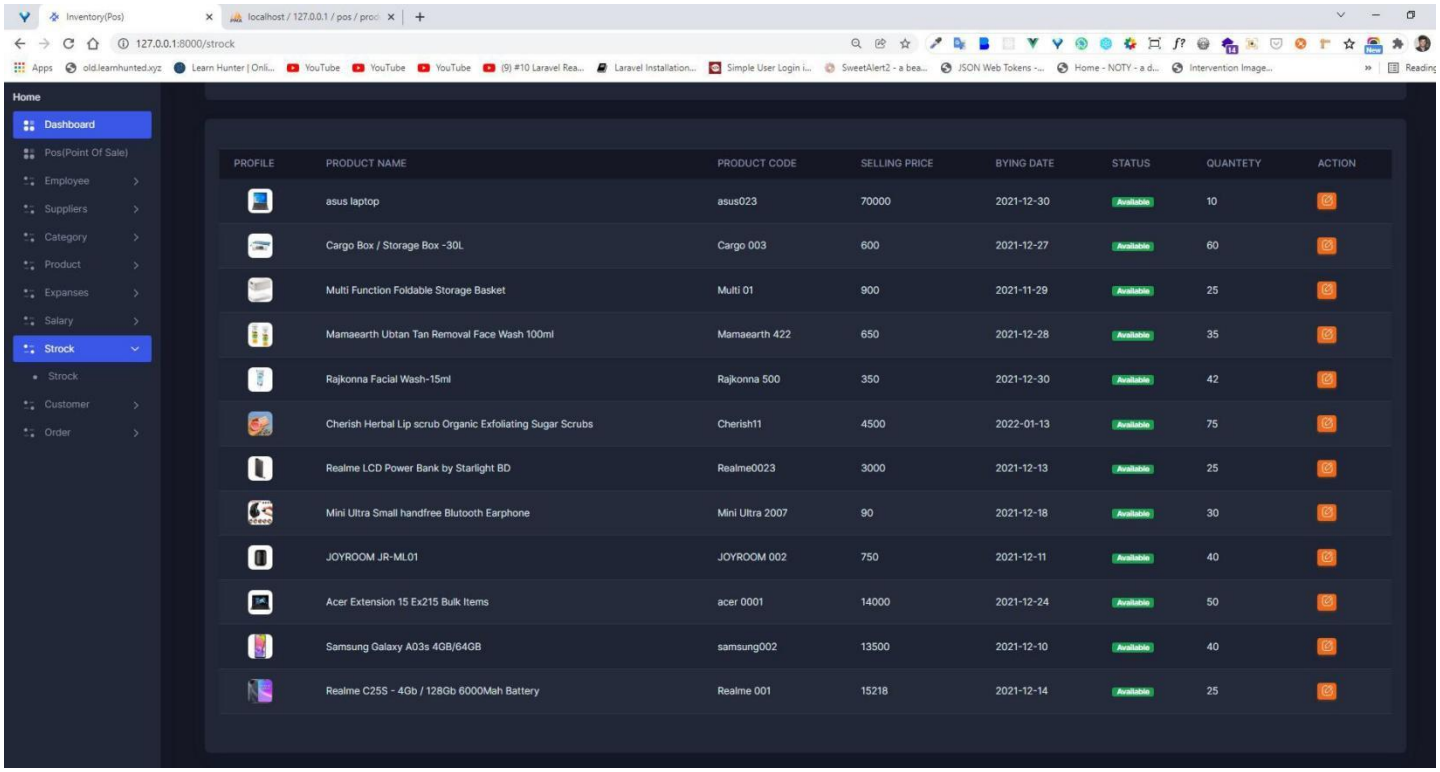

Managae Stock Page

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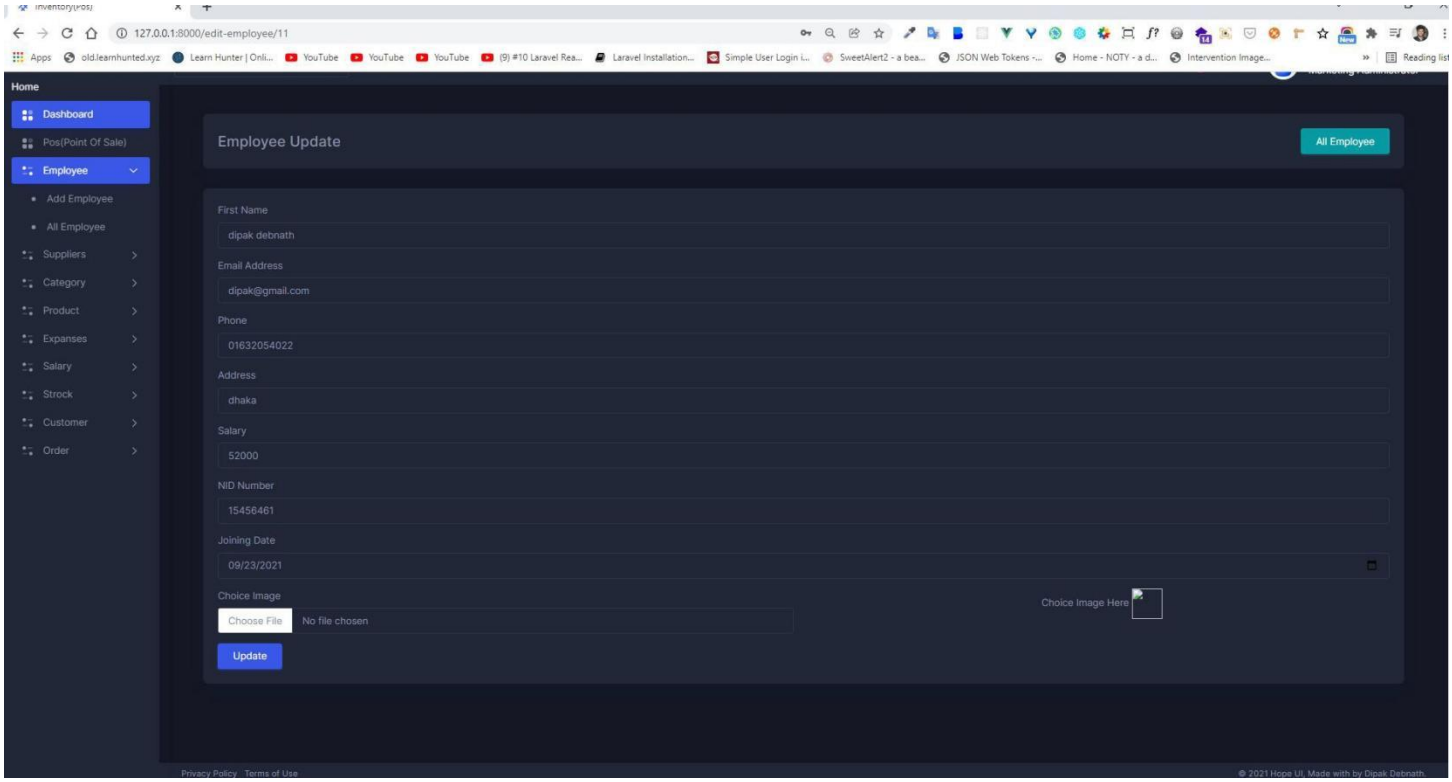
Update Employee



Update Employee Page

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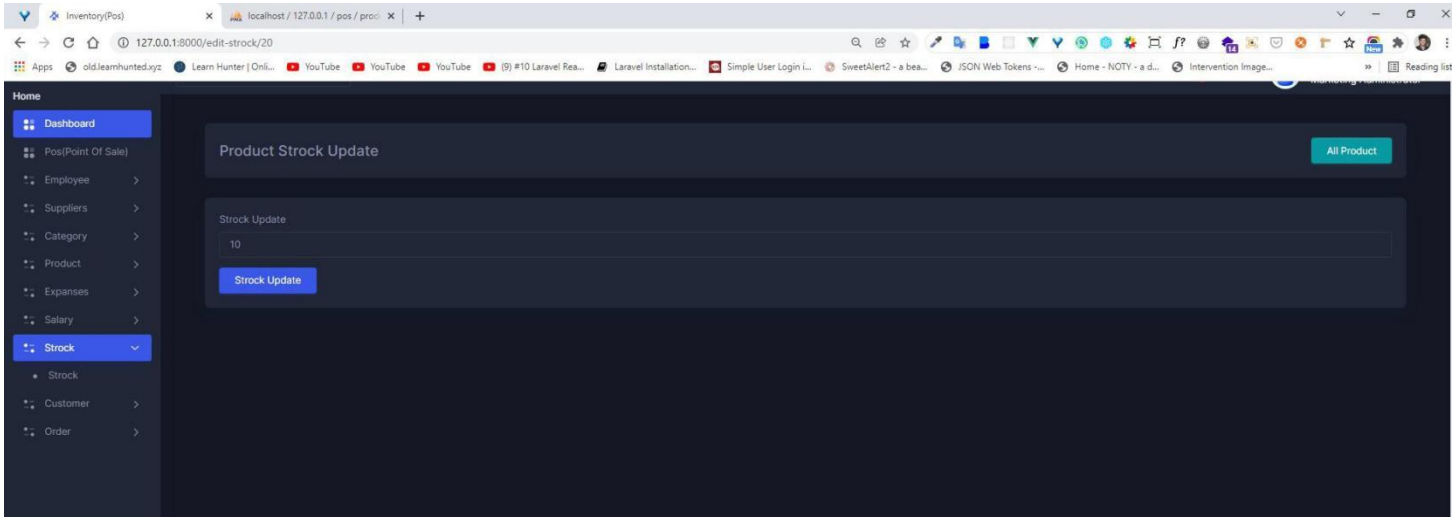

Stock Update Page

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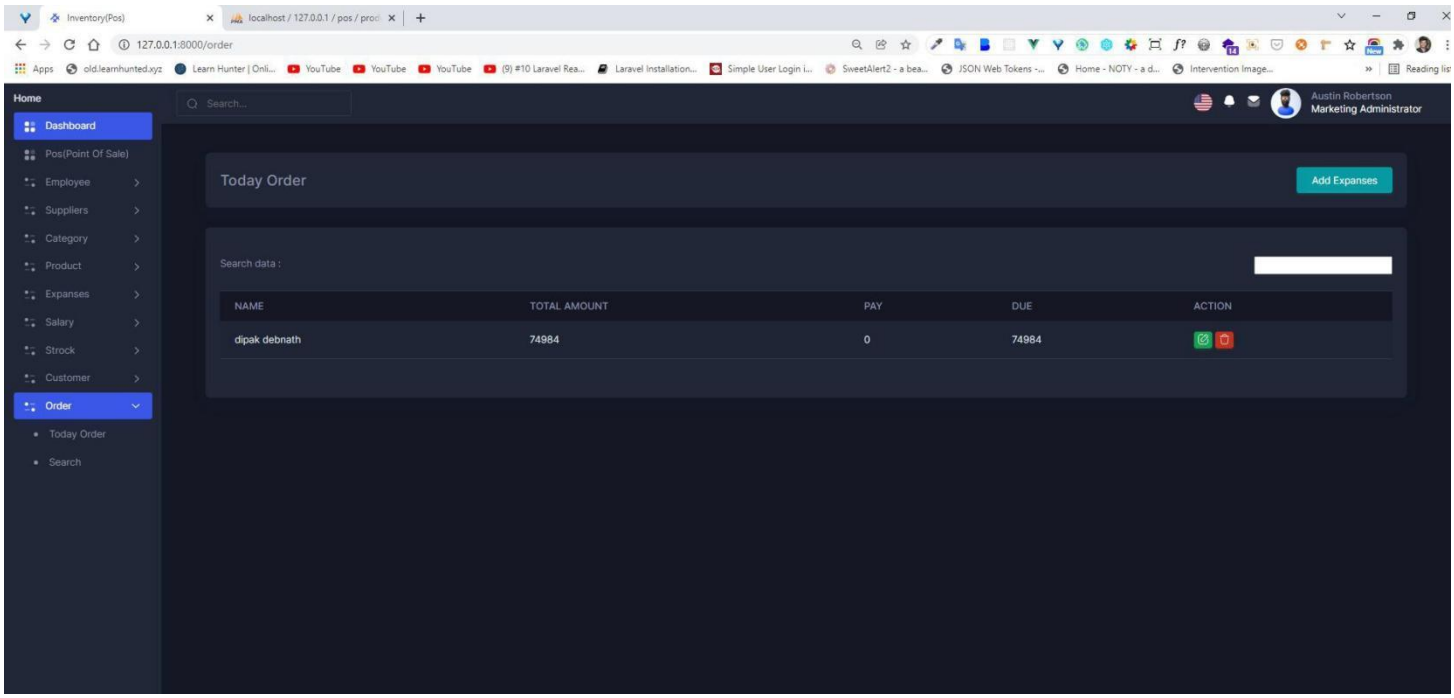
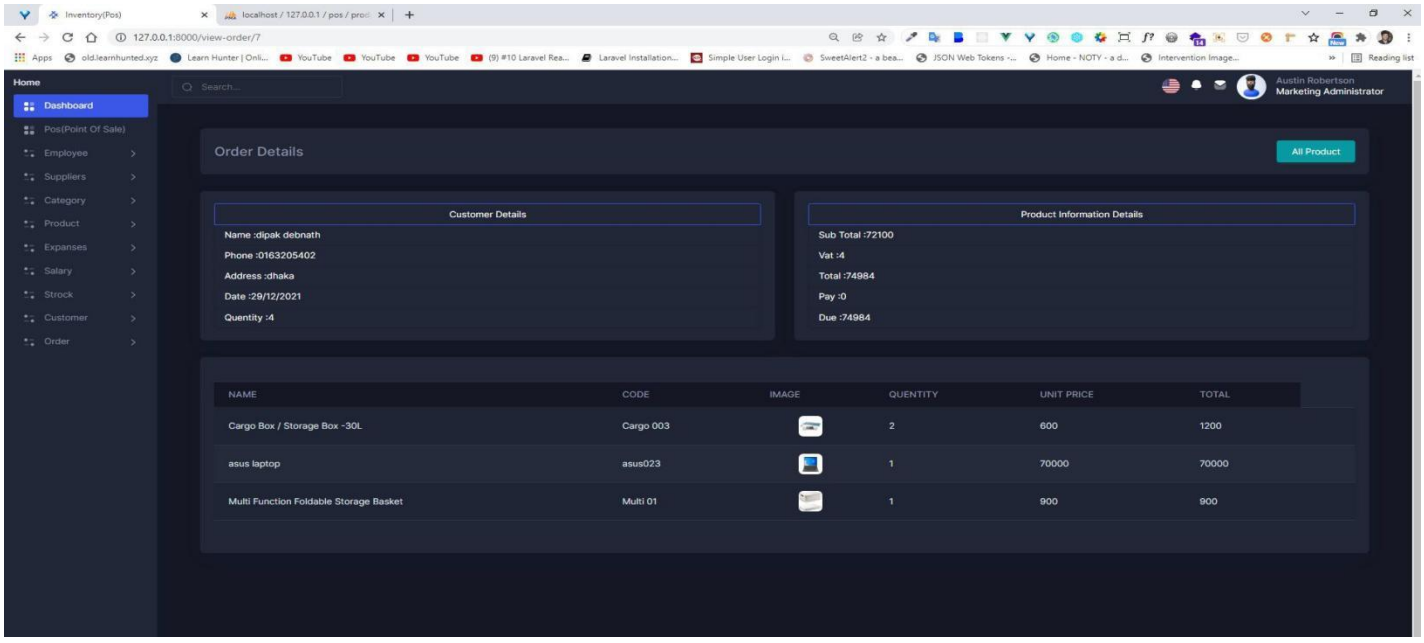
View Order



View Order Page

View Order Details



View Order Details Page

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CHAPTER - 07

Project Summary

7.1 Limitations

1. The main limitation is system cannot handle million data and signals at time.

7.2 Obstacles and Achievement

Obstacles

- Learning new technology and new environment is a big issue.
- It's very difficult to complete a work within limited time.
- To collect requirements is a very tough.

Achievement

- Successfully built a project.
- Learnt a new technology.
- Deploy a project is a new experience.
- Learned the real-life experience by uploading project on the live server.
- Know about document and the development process.

7.3 Future Work

Though the system was developed as much as needed and its work properly. But I have to add something new features to make the systems fulfillment. The future work will include some major changes, such as-

7.3 Github Link

https://github.com/dipak022/inventory

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References

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