E-Commerce Store

Final Year Project

Session 2018-2022

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*The candidates confirm that the work submitted is their own and appropriate credit has been given where reference has been made to work of others

Plagiarism Free Certificate

This is to certify that, I Hannan Haider Farooq S/D of Abdul Majeed, group leader of FYP under registration no FYP-BCSM-F21-052 at Computer Science Department, The Superior University, Lahore. I declare that my FYP report is checked by my supervisor.

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Designation: Lecturer

Signature: _____

HoD: Dr. Irfan Ud Din

Signature: _____

Project Report

E-commerce Store

Change Record

Author(s)	Version	Date	Notes	Supervisor's Signature
	1.0			

APPROVAL

PROJECT SUPERVISOR

Comments:

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Name:_____

Date:_____ Signature:_____

PROJECT MANAGER

Comments:

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Date:_____ Signature:_____

HEAD OF THE DEPARTMENT

Comments:

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Date:_____ Signature:_____

Dedication

This work is dedicated to our parents who provide us the opportunities and support us to learn and do everything we want. Moreover, we want to dedicate our work to our supervisor, Ma'am Arshia Naeem, who taught us well in the semester and enabled us to do this project. Also, we want to dedicate this work to our institute (Superior college Gold campus, Lahore), which is providing us so much opportunities to polish our skills.

Acknowledgments

It is by the Grace of Allah Almighty, the Lord, and Creature of this Universe. Whose power and Glory all things are accomplished and his Prophet (P.B.U.H) who is, forever, a torch of guidance and knowledge for humanity as whole. We thank to Allah Almighty who made it possible for us to complete this project and to overcome all the difficulties faced during the course of this project. We would like to pay our thanks to our project supervisor PROF. ARSHIA NAEEM Lecturer at Superior University for specialist advice and support. It was due to his knowledge and skill that we were able to handle problems faced during the project. His kind, accommodating, Suggestions Constant Encouragement and generous supervision made this project easy for us. We would also like to thank all the teachers of computer science and IT department who helped us a lot during all the semesters we have studied so far and assisted us at becoming good computer scientists. We are also grateful to our family for their help and support when we needed it the most.

Executive Summary

In the present quick changing business climate, it's critical to have the option to answer client needs in the best and convenient way. For example, your clients may wish to see your business on the web and want to know about your offered services or products. Shopping virtually is a way of life in which e-commerce web-based application retails different style and various items of living. This application permits seeing different available items, empowering enlisted clients to buy required items promptly by utilizing different methods of payments, and furthermore can submit a request by utilizing the “Cash on Delivery (Pay Later)” choice. This application enables Administrators and Managers to see the placed orders with the choice of advance payment or cash on delivery. To run an online business site, various Technologies should be considered and perceived. These incorporate multi-layered design, server, and client-side prearranging methods, and executing innovations like React.JS, Node.JS, and social data sets. This is a task with the goal to foster a fundamental site where a shopper is given a shopping basket application and furthermore to learn about the innovative technology used to run such an application. This assignment will talk about every required fundamental technology to make and carry out an internet business site application and also to know about the technologies used to develop such an application.

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Chapter 1

Introduction

Chapter 1: Introduction

Now a days many people around the world used to shopping online sites like “Amazon”, “Alibaba” or “Daraz” etc... because these are the biggest online shopping platform. In Amazon customer can schedule the delivery of desired product with “Amazon Day”, Customer purchase Amazon credit with NoRush delivery, Customer can protect his cash with “Amazon Warehouse, and Amazon Outlet”, Customer also claim for money back offer when packages did not arrive on time, and Customer can also get discounts with Subscribe & Save.

The world we see today is becoming more and more digital. In this digitized world, e-commerce is taking over by bringing products within reach of customers where the customer no longer has to leave the house. As people today depend on products online, the importance of a review is becoming increasingly important. To select a product, a customer has to go through thousands of reviews to understand a product. But in this thriving day of machine learning, it would be much easier to search through thousands of reviews if a template were used to polarize and learn from those reviews. We used the guided learning method on a large-scale Amazon dataset to polarize it and achieve satisfactory accuracy. **(Haque, 2018, May)**

Developments in the digital marketing have pushed manufacturers, especially those in the “information technology (IT)” business, to invent goods that customers can modify to meet their own specific requirements. This study observes the strategies of companies to offer such customizable products to consumers. Our analysis shows that a monopoly company gains more profit by presenting a personalized item to the consumer rather than by selling a homogenous product that is pre-configured only if the customers are adequately able to perform the job of personalization; rather than it is more lucrative for the company to offer a homogenous product. In addition, customers get a larger surplus in case the company offers personalized products. We likewise consider the situation where the organization can offer both a versatile item and a normalized item and find that the organization make more profit from offering the two items than from offering either item, as the flexibility and the customer variation costs are not excessively high. Strangely, when the organization offers the two items, its endeavors to further develop

buyer personalization (e.g., offering free training of customers) consistently benefit both the organization and purchasers. **(Gu, 2015)**

In our site we will provide fully customer support so it will be easy for customer to interact with our sites, we will also provide standardized product and customizable products as the customer can also customize his products and customer can also see a 3D model of his design. And it will also easy for him to select a good design for his shirt.

1.1. Background

There were millions of People in the current era who do online shopping from different websites, and they got scams because many websites are not registered and many times, they even not get what they ordered for, and if they get the ordered thing, they face size issue many times.

Our website will solve all these problems as our website will secure and will be a registered shopping store where customers can purchase not only their dresses but also they can design them according to their own wishes and color combinations. In this way they will design their own unique dress and they will give their real size of dress so there will be no issue of sizes when the customer get their dress. Our website will also provide easily instant payment method and will also provide cash on delivery. So, it will be easy for customer to pay their dues. **(RAZIF, 2018)**

1.2. Motivations and Challenges

Nowadays, many e-commerce websites provide online shopping for their customers. Many ecommerce websites, provide the same type of products for customers and have fixed sizes whether they fit their customers or not and customers have no other choices for their dress and he/she has to adjust with the size too and sometime they complete with their order and purchase anything from different website with online payment then they get scam by that website because that website was not secure but our website will be secure and in our website customer can purchase anything from our store and if he/she could not find anything according to his/her will then he/she can design his/her dress according to own wish, after designing that customer will

give his perfect size for their dress and can go for payment method like instant payment method and can also elect cash on delivery as he will pay when he get his dress. So, In this way we can fulfill the customers wishes.

1.3. Goals and Objectives

In our E-Commerce Store, Every vendor will provide special customization for customers so every customer will design his/her products. All customization will happen in front of the customer in a 3D image, So, the customer will also get a 3D view of his product that will help him to design his product and see the changes in the product, and after completing the customization the customer will give his perfect size for their dress and can go for payment method like instant payment method and can also elect cash on delivery as he will pay when he gets his dress. So, In this way, we can fulfill the customer's wishes.

1.4. Proposed Solution

In our E-Commerce Store Every vendor will provide special customization for customer so every customer will design his/her products. All customization will happen in front of customer in a 3D image, So, the customer will also get a 3D view of his product that will help him to design his product and see the changes in the product.

For example, a customer has to purchase a Pant and the customer is very healthy, So, its size will not be easily available in others online store but in ours store he not only get the size of his pants, he also customizes his pant according to his favorite color and design.

In this way, every customer will get his/her favorite product according to his wish. And every vendor will have different designs so the customer will have lots of design and customer will also customize that design according to his wish.

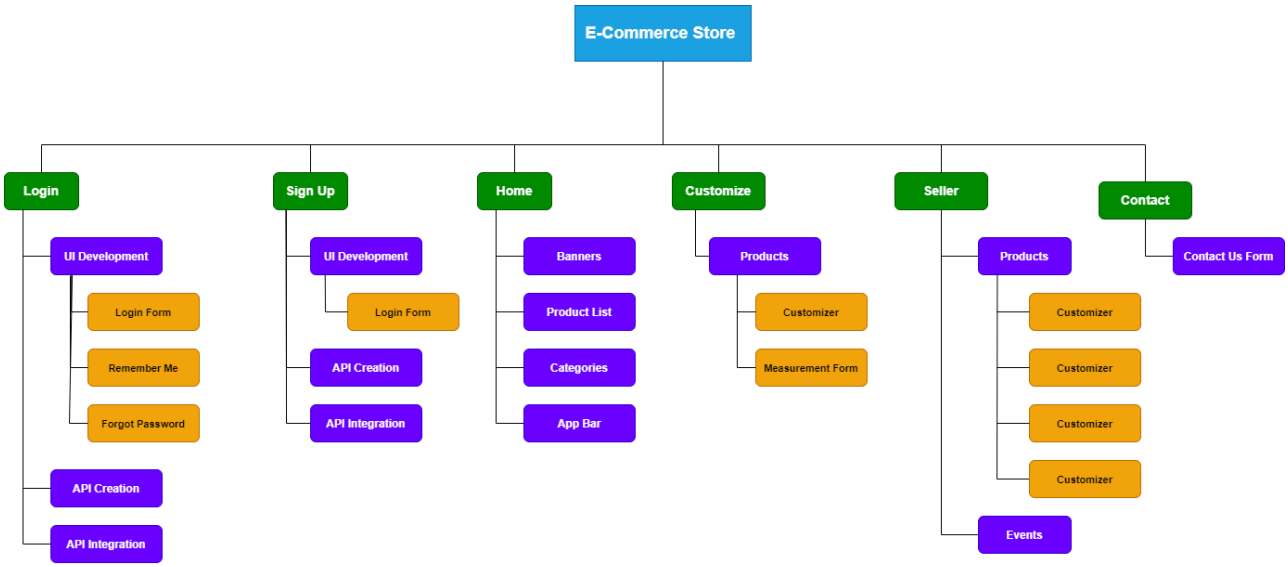
1.5. Project Plan

The arrangement of doing the project depended on a steady model which was essentially founded on a strategy of doing things bit by bit. We expected to construct the initial part of our task and

afterward we would conclude that what to do next then. To start with, we expected to characterize the necessities of our undertaking then to affirm that these were the main prerequisites or we could have more from here on out. As we have only 2 members in our group and we have to achieve the goal of completion of our project, we would give responsibilities to each of the members of this group and these responsibilities will be monitored by our project leader Mr. Hannan Haider Farooq.

Monitoring the members was such an important task that we needed to conduct meetings on daily basis. So that, if there was any problem in the tasks and responsibilities, we needed to solve those problems by providing suitable solutions in a very short period of time.

1.5.1. Work Breakdown Structure



1.5.2. Roles & Responsibility Matrix

WBS #	WBS Deliverable	Activity no.	Activity to Complete the Deliverable	Duration (no. of Days)	Responsible Team Member(s) & his Role(s)
01	Requirement collection	1.0		6	All of us
02	System Design flow	1.1		7	Hannan Haider Farooq, Mustafa
03	Database design	1.2		4	All of us
04	Database implementation	1.3		2	Mustafa, Hannan Haider Farooq
05	GUI design	1.4		5	Mustafa
06	GUI & Database Integration			4	All of Us

07	Coding	1.5		10	All of us
08	Bug Fixing	1.6		--	M Sheroz, Mustafa
09	Final Testing	1.7		2	All of Us

Chapter 2

Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2.1. Introduction

2.1.1. Purpose

The web application is expected to give total package for merchants as well as clients through a solitary entryway involving the web as the sole medium. It will empower sellers to set up internet-based shops, clients to peruse the shop and buy them online without visiting the shop actually. The organization module will empower a framework director to support and reject demands for new shops and keep up with different arrangements of shop classifications.

2.1.2. Document Conventions

- Entire document should be justified ✦ Convention for main title:
  - Font Face: Times New Roman. ○ Font Style: Bold.
  - Font Size: 32.
- Convention for sub title:
  - Font Face: Times New Roman. ○ Font Style: Bold.
  - Font Size: 32.
- Convention for body:
  - Font Face: Times New Roman. ○ Font Style: Normal.
  - Font Size: 11.

2.1.3. Intended Audience and Reading Suggestions

- Consumer
- Web developers
- Designers

- All Users

2.1.4. Product Scope

- Secure enlistment and profile set up for Customers
- Sufficient scanning components for simple and speedy admittance to specific items and offered services.
- Making a Shopping cart so clients can shop 'n' no. of things and checkout at last with the whole shopping baskets. Clients can add or erase things in the selected cart.
- Customary updates to enlisted clients regarding the OFS (Offer for Sale) about fresh stock.
- Transferring 'Most Purchased' Items in every class of items in the Shop.
- Vital information and diagrams for Administrators and Shop proprietors about the things that are best selling in every classification and age bunch.
- Keeping up with data set of normal clients of various necessities.
- Shop representatives are liable for inner matters like handling orders, confirming home delivery of the products, getting client's feedback regarding order processing time, refreshing request's status and noting client's inquiries on the web.
- Client feedback component, so clients can express their experience for the item or administration which they have bought. Additionally, monitor the rating of individual items by significant clients.
- Sufficient payment system and gateway for all famous Visas, and other pertinent choices for payments, as accessible over time.

2.1.5. References

- React JS: (reactjs.org/)
- Node JS: (nodejs.org/)
- MySQL: (dev.mysql.com)

2.2. Overall Description

2.2.1. Product Perspective

E-Commerce Store is pointed towards the sellers who need to connect with the greatest cross segment of client and average folks who can be possible client. This task imagines overcoming any issues between the dealer, the retailer and the client. OFS ought to be easy to use, 'speedy to learn' and solid programming for the above reason. OFS is planned to be an independent item and shouldn't rely upon the accessibility of other programming. It ought to run on both UNIX and Windows based stage.

2.2.2. Product Functions

- The principal reason for this venture is to decrease the manual work.

- A Customer can peruse the shops and pick items to put in a virtual shopping basket. The shopping basket subtleties can be seen and things can be taken out from the cart. To continue with the shopping, the client is incited to login. Likewise, the client can alter individual profile data, (for example, telephone number and transportation address) put away by the application. The client can likewise see the situation with any past orders, and drop any request that has not been transported at this point.

2.2.3. Client Classes and Characteristics

- The client ought to be know all about the shopping mall related wording like Shopping cart/Checking out/Transaction and so on.

- The client ought to be know about the Internet.

2.2.4. Working Environment

The item will be working in windows climate. E-commerce Store is a site which will work in every renowned program, for a model we are talking Microsoft Internet Explorer, Google Chrome and

Mozilla Firefox. Likewise, it will be viable with the IE 6.0. The vast majority of the elements will be viable with the Mozilla Firefox and Opera 7.0 or higher variant. The main prerequisite to utilize this web-based item would be the web association. The hardware configuration includes Hard Disk: 40GB, Monitor: 15-inch Color monitor, Keyboard: 122 keys. The basic input devices required are keyboard, mouse and output devices are monitor etc.

2.2.5. Design and Implementation Constraints

A web-based store is a virtual store on the Internet where clients can peruse the index and select results of interest. The chose things might be gathered in a shopping basket. At checkout time, the things in the shopping basket will be introduced as a request. Around then, more data will be expected to finish the exchange. Typically, the client will be approached to fill or choose a charging address, a transportation address, a delivery choice, and payment data, for example, Visa number. An email warning is shipped off the client when the request is set.

2.2.6. User Documentation

The item will incorporate client manual. The client manual will incorporate item outline, complete arrangement of the pre-owned programming (like SQL server), specialized subtleties, reinforcement methodology and contact data which will incorporate email address. There will be no internet-based help for the item right now. The item will be viable with the Internet Explorer 6.0 or higher. The data sets will be made in the MySQL.

2.2.7. Assumptions and Dependencies

The assumptions are:

- The coding ought to be sans mistake.
- The framework ought to be easy to understand so it is not difficult to use for the clients.
- The framework ought to have greater limit and give quick admittance to the data set.
- The framework ought to give search office and backing speedy exchanges.

- The E-Commerce Store is running 24 hours per day.
- Clients might access from any PC that has web perusing capacities and a web association.
- Client should have their right usernames and passwords to go into their internet based accounts and do activities.

The dependencies are:

- The particular equipment and programming because of which the item will be run.
- Based on posting necessities and determination the task will be create and run.
- The end clients (administrator) ought to have appropriate comprehension to the item.
- The framework ought to have the general report store.
- The data, everything being equal, should be put away in a data set that is open by the ECommerce Store.

2.3. External Interface Requirements

2.3.1. User Interfaces

- Administrator can View, Edit and Delete everything on the item.
- Client can see entire site
- Likewise add the item in their cart

2.3.2. Hardware Interfaces

- Working framework : Windows, MacOS, Linux
- Hard circle :40 GB RAM: 512 MB.
- Processor : Pentium(R)Dual-center CPU

2.3.3. Software Interfaces

- PgAdmin
- VS Code

- PyCharm

2.3.4. Communications Interfaces

The Customer should associate with the Internet to get to the Website:

- Dialup Modem of 52 kbps
- Broadband Internet
- Dialup or Broadband Connection with an Internet Provider

2.4. System Features

- The site authority ought to guarantee the client give genuine item
- Client assistance is accessible from the power
- Client data security affirm.
- Oversee client data.
- To build effectiveness of dealing with the power work.

2.5. Other Nonfunctional Requirements

2.5.1. Performance Requirements

There is no presentation prerequisite in this framework in light of the fact that the server solicitation and reaction is relied upon the end client web association.

To keep an OK speed at greatest number of transfers permitted from a specific client as quite a few clients can admittance to the framework whenever. Additionally the associations with the servers will be founded on the characteristics of the client like his area and server will be working 24X7 times.

Clients need 16 Mbps of download speed to work our site.

2.5.2. Safety Requirements

The information base might get squashed at a specific time because of infection or working framework disappointment. There for it is expected to take the data set reinforcement so the data set isn't lost. Legitimate UPS/Inverter office ought to be there in the event of force supply disappointment.

2.5.3. Security Requirements

- Framework will utilize got information base.
- Typical clients can just understand data yet they can't alter or change anything aside from their own and another data
- Framework will have various kinds of clients and each client approaches requirements.

2.5.4. Software Quality Attributes

- There might be different administrator's making the task, every one of them will reserve the option to make changes to the framework. Be that as it may, the individuals or different clients can't do changes.

- The task ought to be open source
- The nature of the data set is kept up with in such a manner so it tends to be extremely easy to understand to every one of the clients of the data set

2.5.5. Business Rules

Kindly allude to our security strategy to figure out our circumstances on this issue. That strategy is likewise material to your meeting on our site.

All the data posted on Switch Techsuch as explanation, chart, sign, button symbol, picture, sound archive sections, advanced download, information alter and programming have a place with the property of Switch Techor its partnered organizations or asset providers, under the security of Chinese and International Copyright Law.

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2.6. Other Requirements

E-Commerce Store will deal with expected and non-expected mistakes in manners that forestall misfortune in data and long free time period.

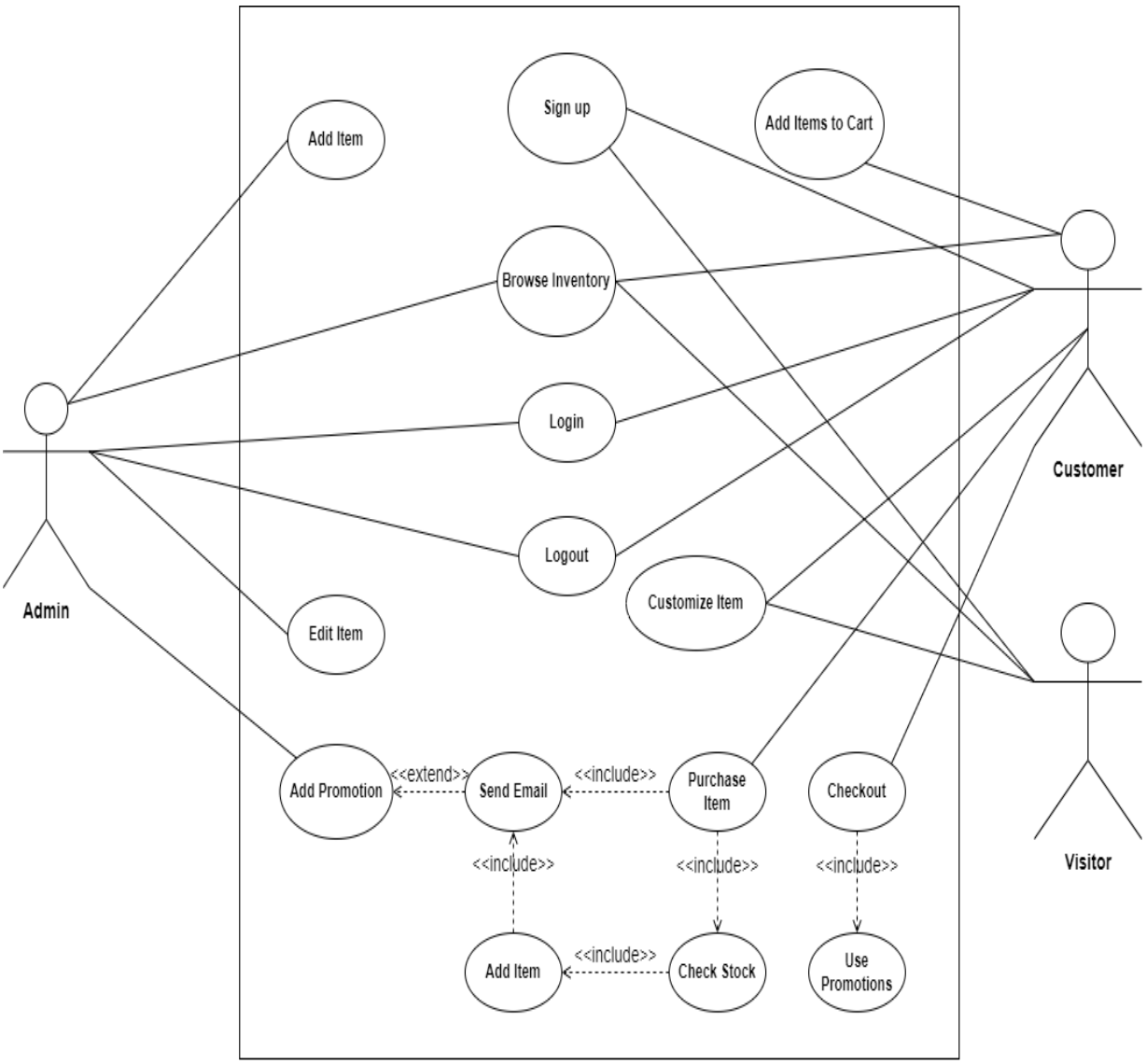
Chapter 3

Use Case Analysis

Chapter 3: System Analysis

This chapter consists of use case, use cases and fully dressed usage of case modeling, that is frequently utilized to model interactions between a system and external actors (users or other systems)

3.1. Use Case Model



3.2. Use Case Descriptions

- **Register New User**

Use Case ID	UC_01	
Use Case Name	Register New User	
Description	This use case describes the process of registering a new user for more options on web application.	
Primary Actor	User	
Secondary Actor	System	
Pre-Condition	User should have a little knowledge of computer system.	
Post-Condition	New user or customer registered successfully.	
Basic Flow	Actor Action	System Action
	Step1: Click on signup button. Step2: Fill the form fields. Step3: Click on submit button.	Step1: Signup page will be displayed. Step2: Fetch data from form fields. Step3: Register new user successfully.
Alternative Flow	The user is already registered. The user is with incomplete information.	Show the message error. Ask the user to complete the missing information

- **Login**

Use Case ID	UC_02 Login	
Use Case Name	Login	
Description	A user can login to the system by entering username and password.	
Primary Actor	User	
Secondary Actor	System	
Pre-Condition	Customer has open the site successfully or admin has open the site successfully.	
Post-Condition	User logs in successfully to web application Admin login successfully to website.	
Basic Flow	Actor Action	System Action
	Step1: This use case is initiated when the admin opens site or user clicks on sign in button. Step2: User or admin enter the password and username. Step3: User then click sign in button	Step1: Sign in page will be displayed. Step2: Validate the data Step3: User record shown to user.
Alternative Flow	Wrong username or password.	Invalid user.

- **Add to Cart**

Use Case ID	UC_03	
Use Case Name	Add to Cart	
Description	The user can add their favorite products to their shopping cart.	
Primary Actor	User	
Secondary Actor	System	
Pre-Condition	User should have internet connectivity to visit the website and add items to cart	
Post-Condition	Item added to shopping cart successfully.	
Basic Flow	Actor Action	System Action
	Step1: Click on the shop button. Step2: Click on add to cart button Step3: View your product on shopping cart.	Step1: The shop page is loaded. Step2: Favorite product is added to cart. Step3: Cart is loaded and item is shown to user.
Alternative Flow	User don't have internet connectivity.	No shopping cart will be displayed.

- **Remove Product From Cart**

Use Case ID	UC_04
Use Case Name	Remove Product form cart.
Description	The user can remove added product from cart.

Primary Actor	User	
Secondary Actor	System	
Pre-Condition	User should have internet access to open the website and the user added the product in the cart.	
Post-Condition	The item is deleted from the cart.	
Basic Flow	Actor Action	System Action
	Step1: the user selects the item. Step2: Click on delete button	Step1: Item selected. Step2: Successfully deleted the selected item.
Alternative Flow	Wrong username or password.	Invalid user.

- **View Product**

Use Case ID	UC_05	
Use Case Name	View Products	
Description	The user can view the products of their choice.	
Primary Actor	User	
Secondary Actor	System	
Pre-Condition	The user has internet access to open the website.	
Post-Condition	The products list is shown to the user.	
Basic Flow	Actor Action	System Action
	Step1: The website is opened in the computer.	Step1: Website loaded to customer's computer

	Step2: The customer clicks on the shop button Step3: The drop down menu with new products and used products option is showed to user.	Step2: A dropdown menu is shown to user Step3: The system waits for user's choice for the drop down list.
Alternative Flow	No Internet Access	Website name is not entered correctly.

- **Logout**

Use Case ID	UC_06	
Use Case Name	Logout	
Description	The user can close their account by simply clicking on signout button.	
Primary Actor	User	
Secondary Actor	System	
Pre-Condition	User should be logged in before to use this option.	
Post-Condition	Logged out from the system successfully.	
Basic Flow	Actor Action	System Action
	Step1: Click on signout button.	Step1: Hide user details imeediately.
Alternative Flow	User is not logged in	Tell user you are not logged in.

- **Payment**

Use Case ID	UC_07	
Use Case Name	Payment selection	
Description	User selects the payment selection method to pay the company	
Primary Actor	User	
Secondary Actor	System	
Pre-Condition	User must be logged into the website	
Post-Condition	Payment of cart is paid to the company and order number is sent via email to the customer.	
Basic Flow	Actor Action	System Action
	Step1: Open the website Step2: Completes shopping on the website and then provides billing information to the company Step3: Selects the payment method to pay company for checkout completion.	Step1: Website home page is shown. Step2: Billing information saved to the database of the company. Step3: Payment received confirmation email sent to customer for verifying the payment and order is sent via sms to the customer.
Alternative Flow	Checkout selection.	Cash on delivery confirmed.

- **Add Product**

Use Case ID	UC_08	
Use Case Name	Add New product	
Description	Seller can add new product to the website.	
Primary Actor	Seller	
Secondary Actor	System.	
Pre-Condition	Seller is logged into the website.	
Post-Condition	Seller successfully adds new product in the stock.	
Basic Flow	Actor Action	System Action
	Step1: Login to the dashboard using Seller credentials. Step2: Click on Products. Step3: Click on Add new product. Step4: Save Product.	Step1: Dashboard returned to the user. Step2: Products dropdown menu is displayed. Step3: create new product page displayed. Step4: Show success message.
Alternative Flow	Invalid	Invalid.

- **Update Product**

Use Case ID	UC_09	
Use Case Name	Edit Product	
Description	Seller can edit information of the product.	
Primary Actor	Seller	
Secondary Actor	System	
Pre-Condition	Logged in as Seller	
Post-Condition	Product information is updated successfully.	
Basic Flow	Actor Action	System Action
	Step1: login to admin panel. Step2: Click on view products Step3: Click on Edit	Step1: Verify the user and return the dashboard. Step2: Products are displayed on the screen. Step3: Editable product information is displayed on screen.
Alternative Flow	Seller not Authenticated	Error 404 not found.

- **Delete Product**

Use Case ID	UC_10	
Use Case Name	Delete Product	
Description	Seller logs into the system to delete the product.	
Primary Actor	Seller	
Secondary Actor	System	
Pre-Condition	Seller logs into the website successfully.	
Post-Condition	Product Deleted from the website.	
Basic Flow	Actor Action	System Action
	Step1: Login to the system using Seller credentials. Step2: Click on Products. Step3: Click on view products. Step4: Click on delete product.	Step1: Verify if the user is Seller or not and prompt it to dashboard. Step2: Products dropdown menu showed. Step3: All products in stock are displayed. Step4: Product removed from the stock.
Alternative Flow	Wrong username or password.	Invalid user.

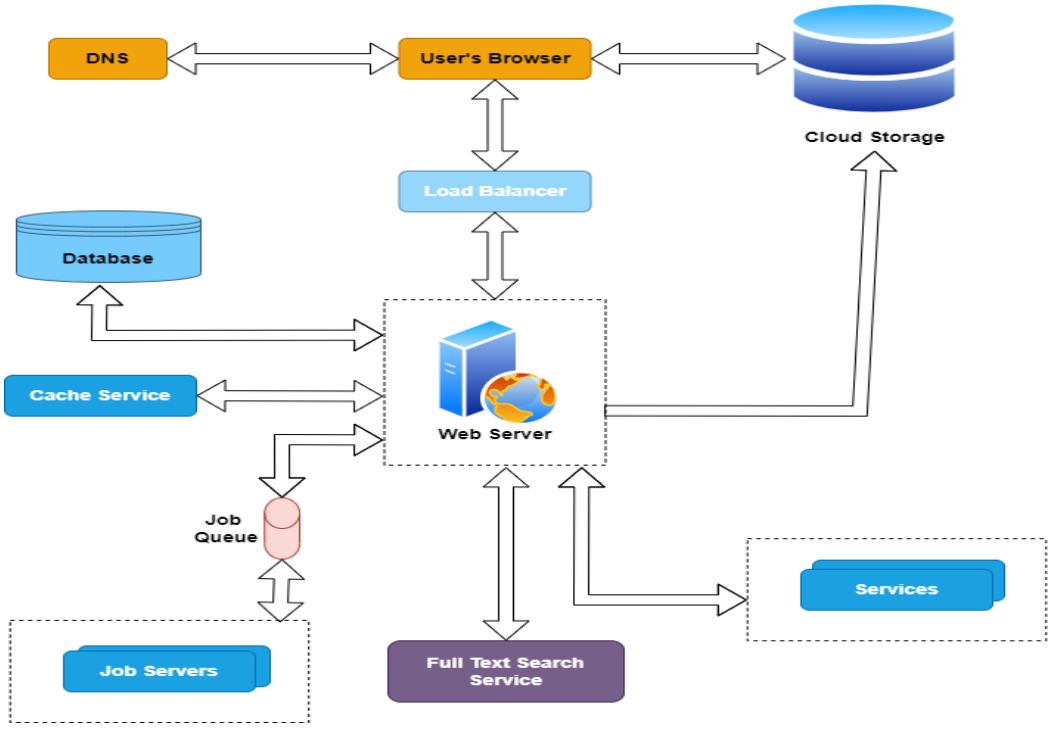
Chapter 4

System Design

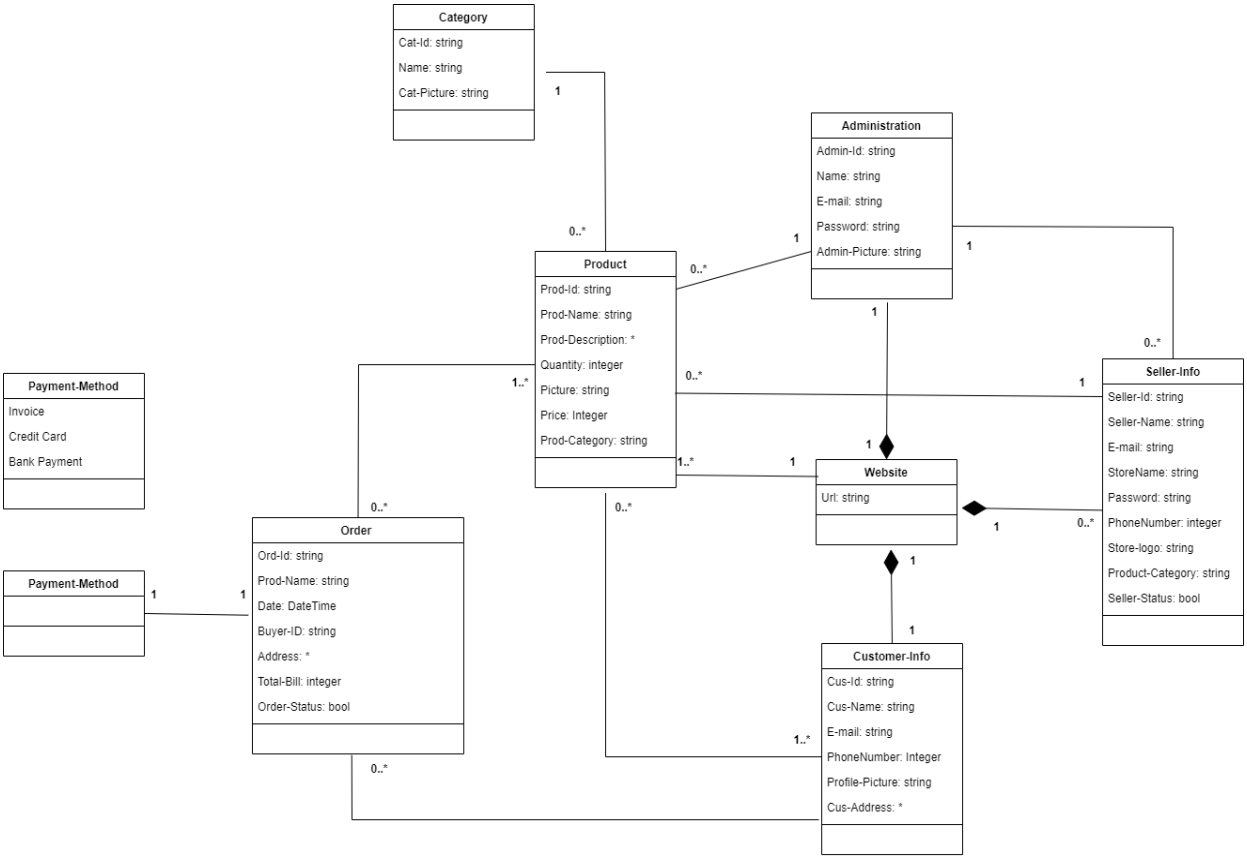
Chapter 4: System Design

- Use Case Diagram
- Architecture Design
- Domain Model
- Entity Relationship Diagram
- Class Diagram
- Sequence / Collaboration Diagram
- Activity Diagram
- Component Diagram
- State Transition Diagram
- DFD Diagrams

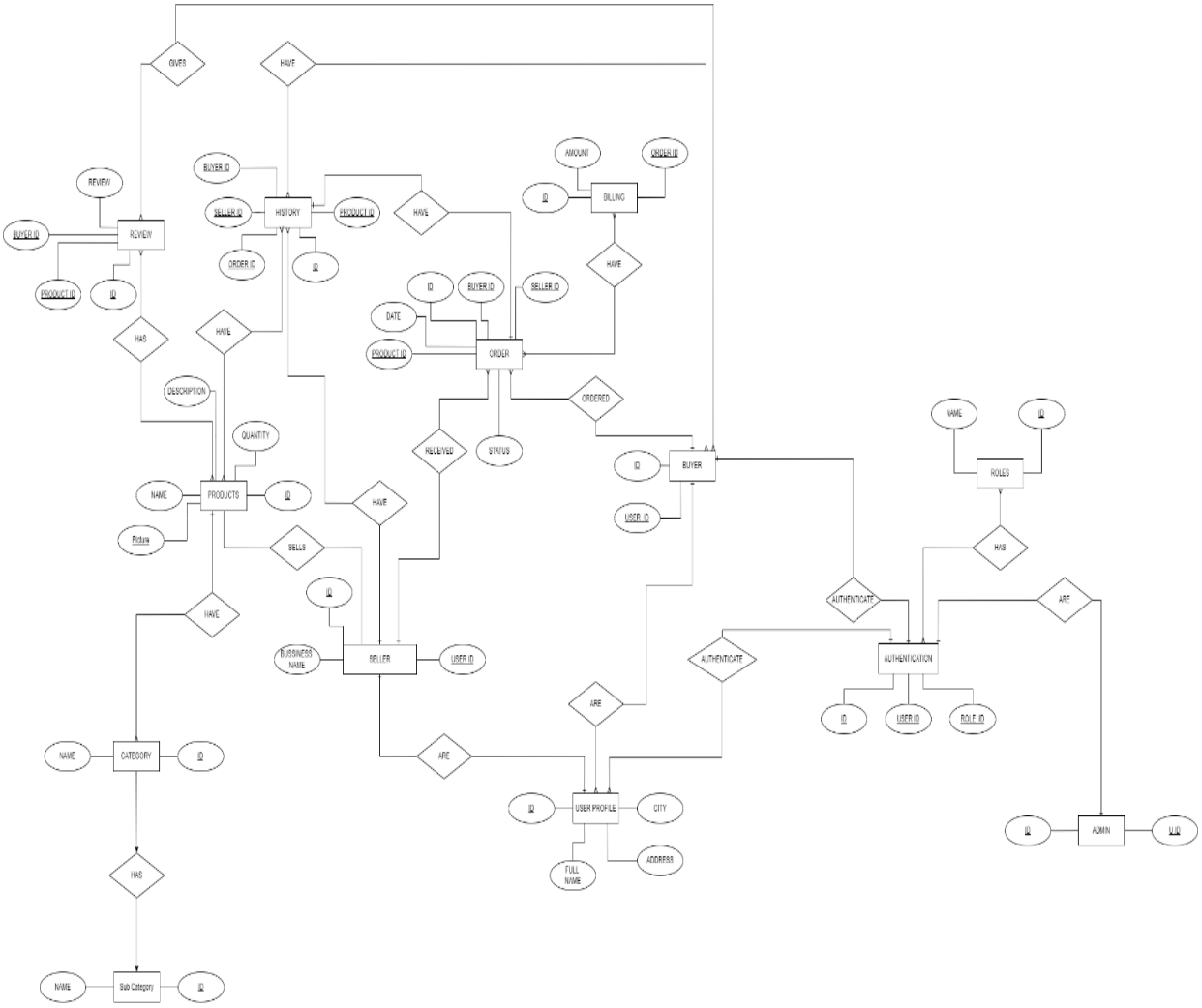
4.1. Architecture Diagram



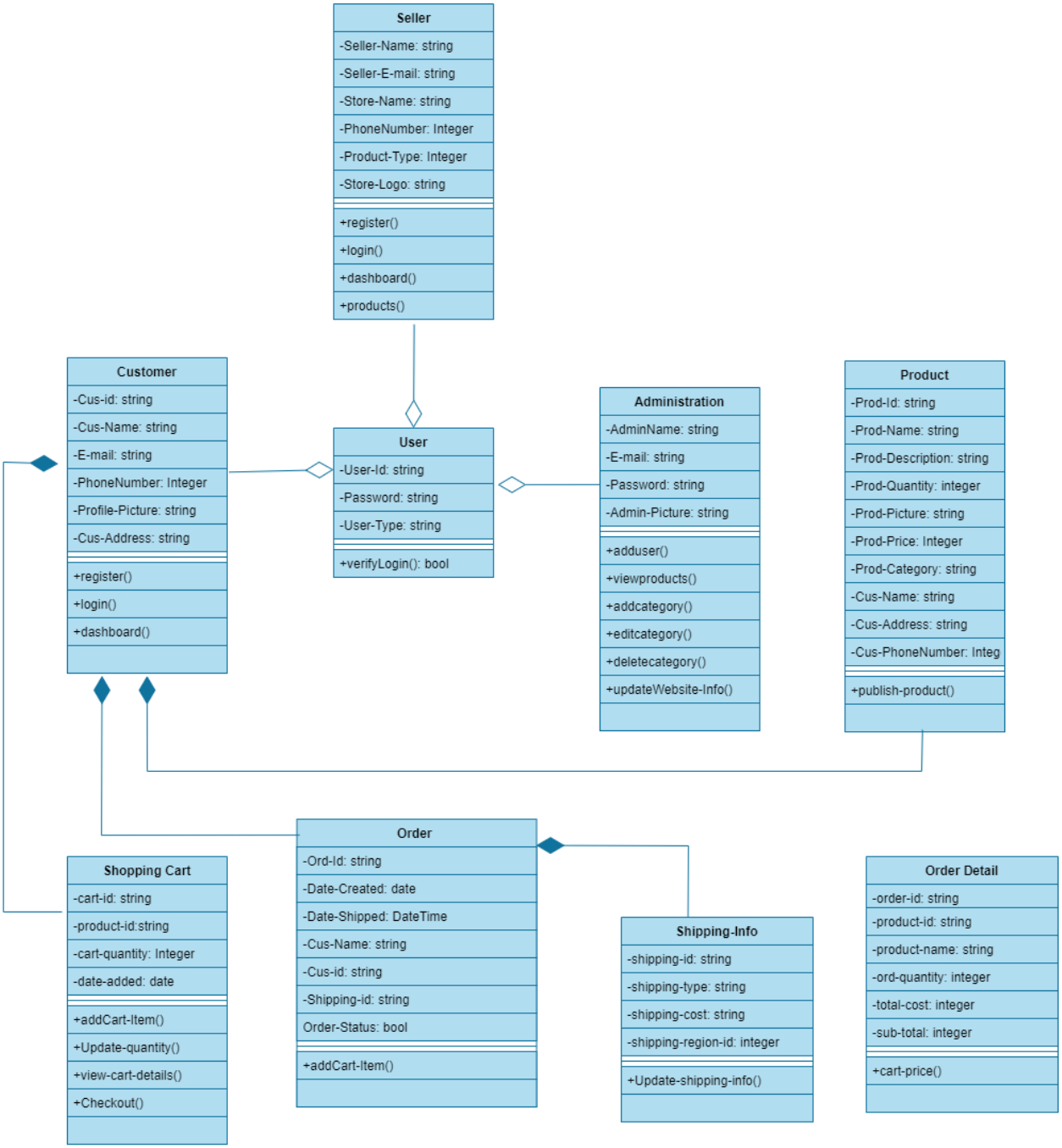
4.2. Domain Model



4.3. Entity Relationship Diagram with data dictionary

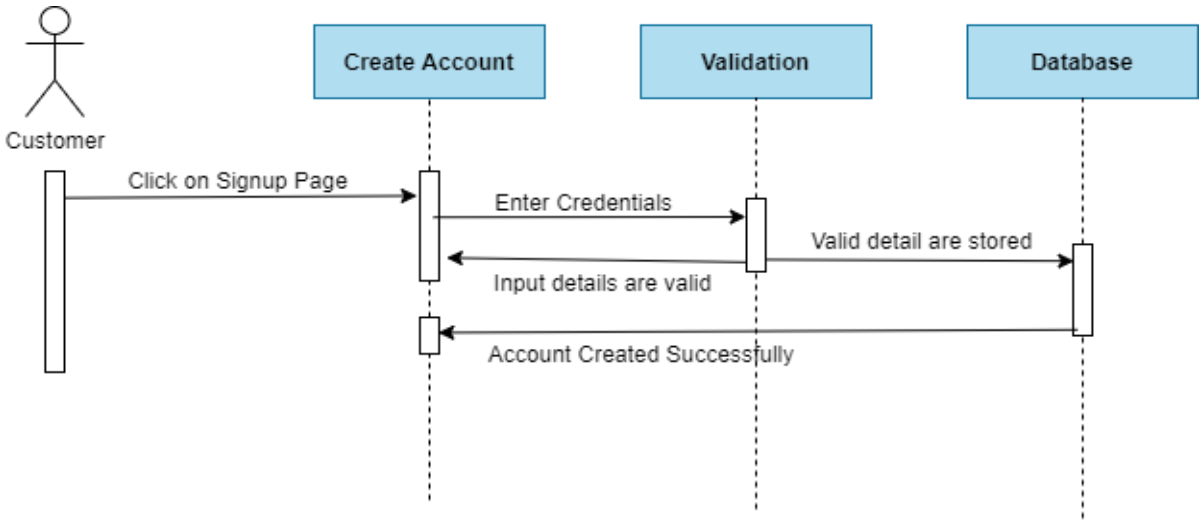


4.4. Class Diagram

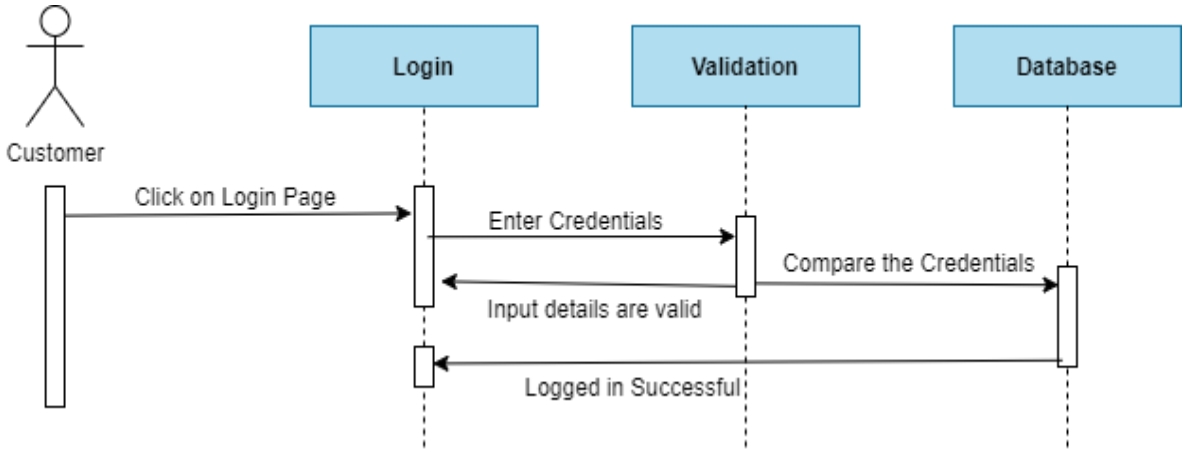


4.5. Sequence / Collaboration Diagram

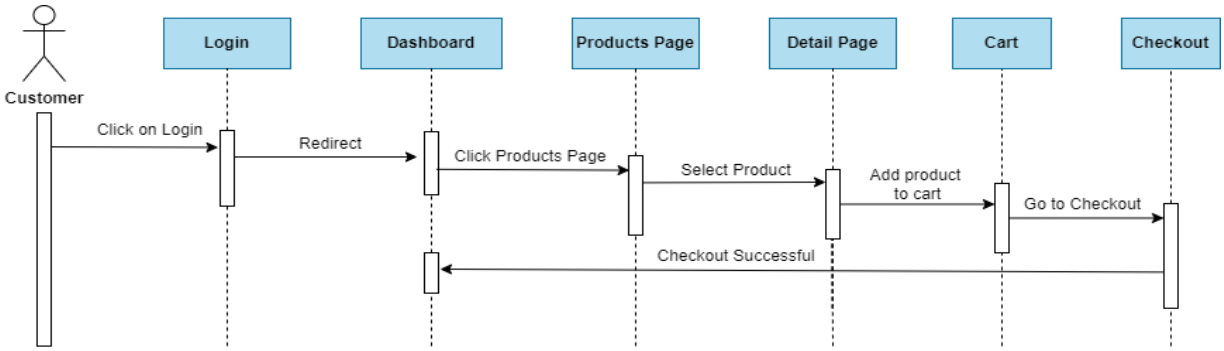
- Registration



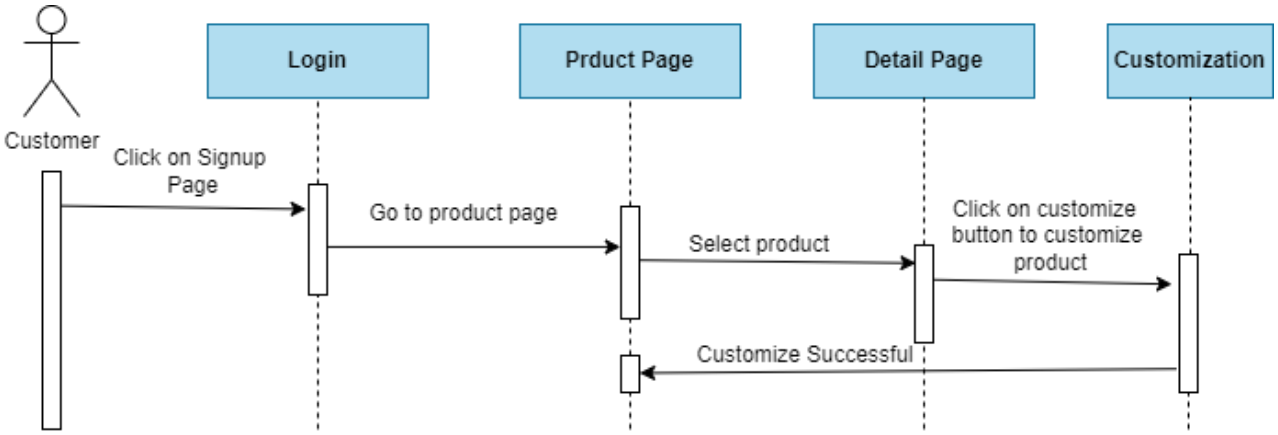
- Login



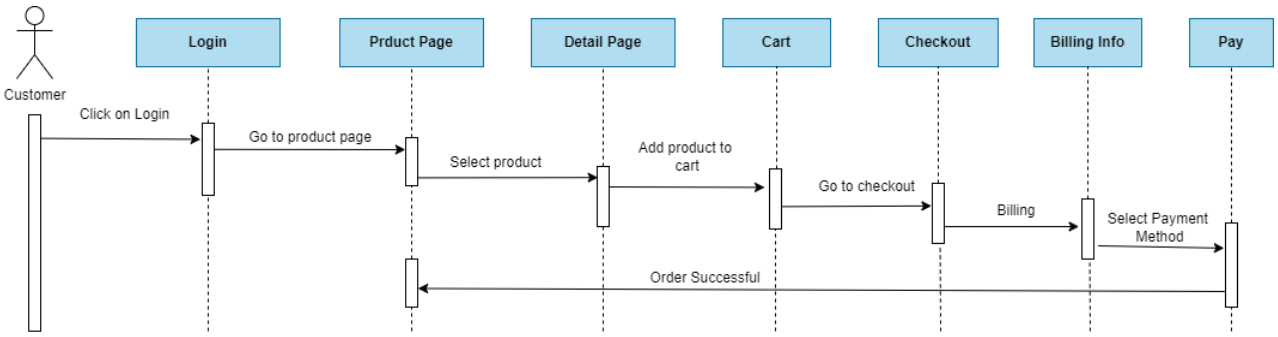
- Place order



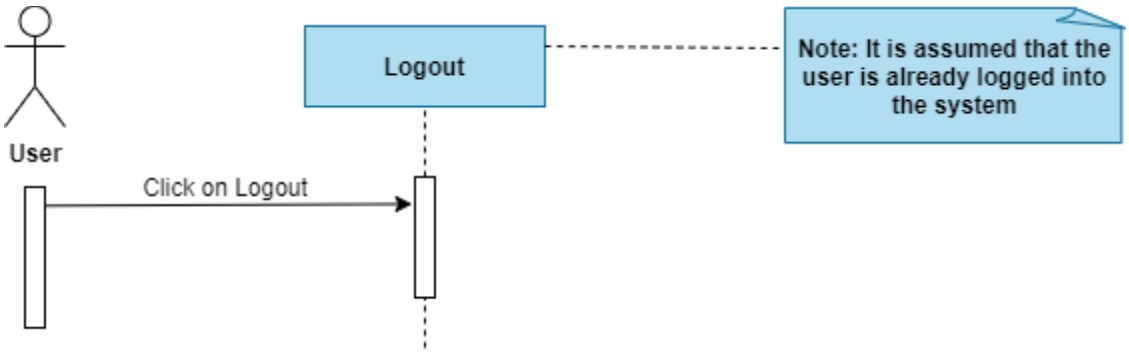
- Customization



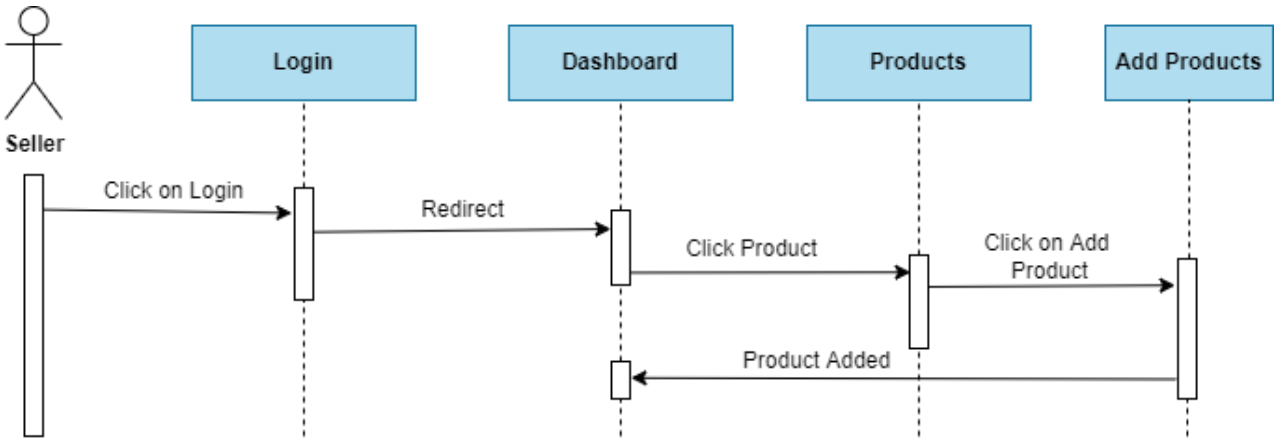
- Payment



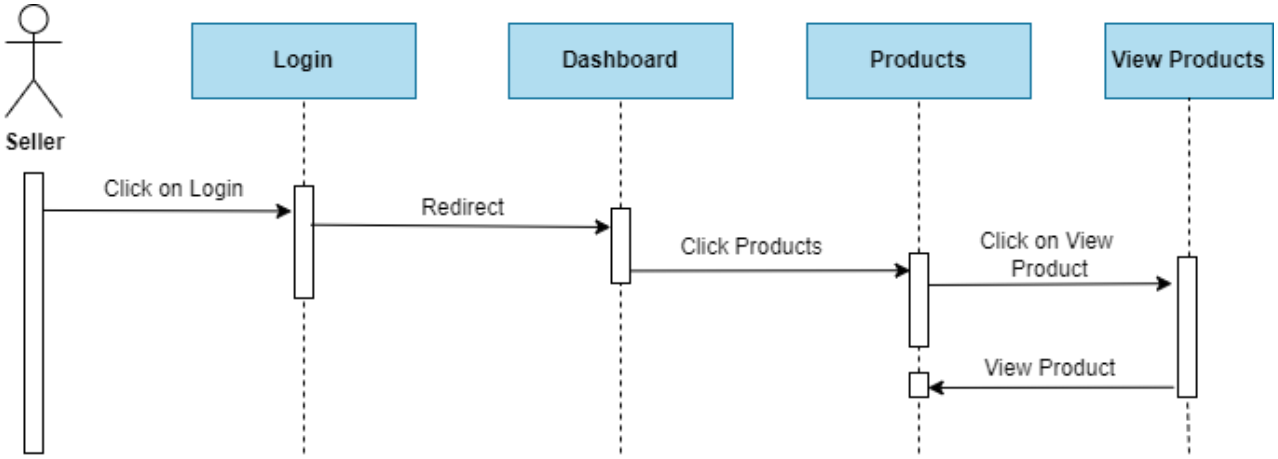
- Logout



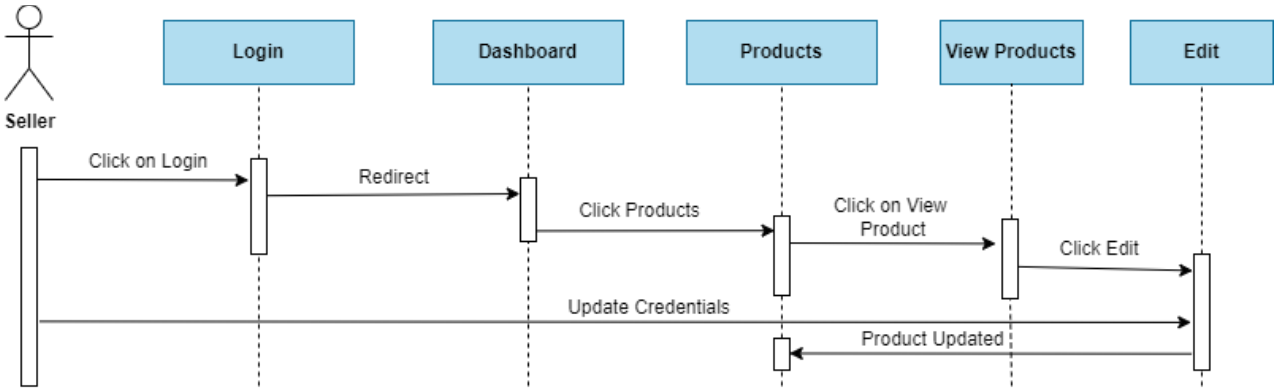
- Add Product



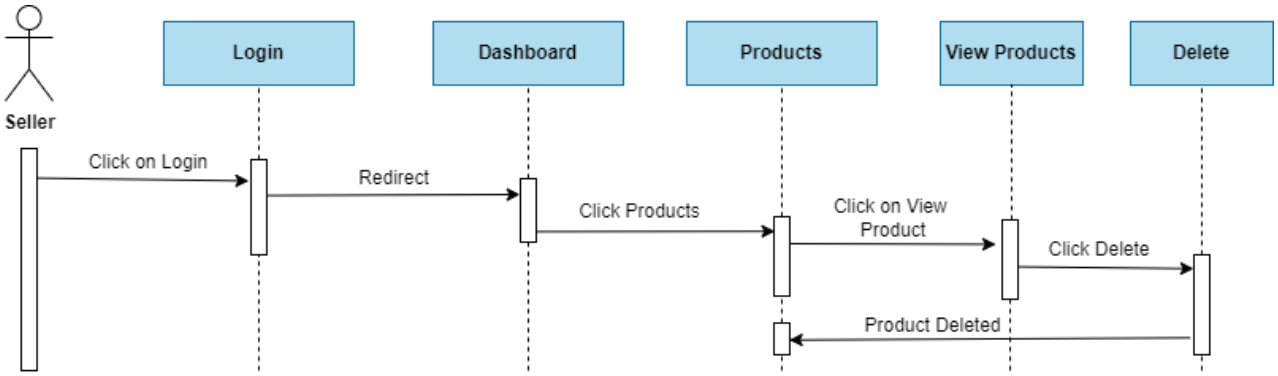
- View Product



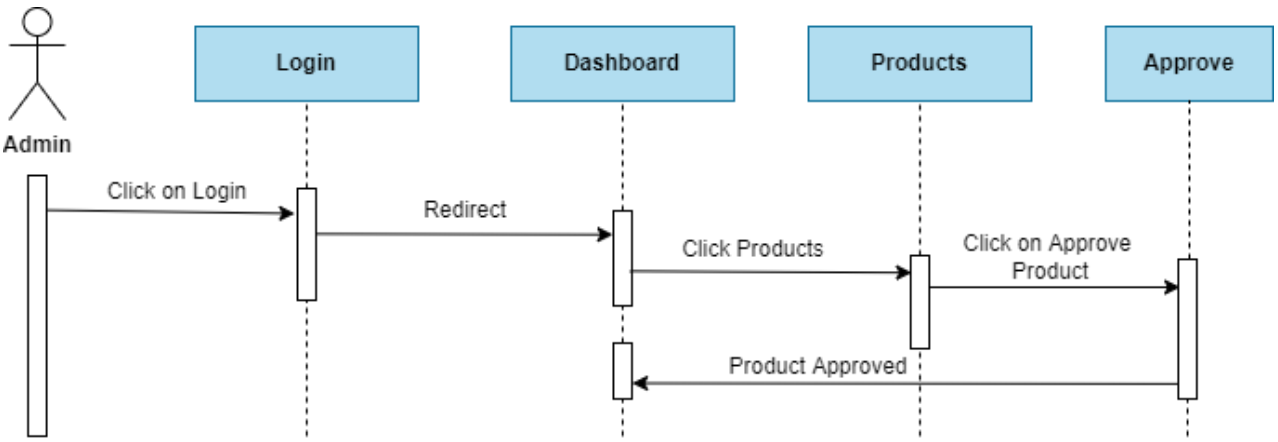
- Update Product



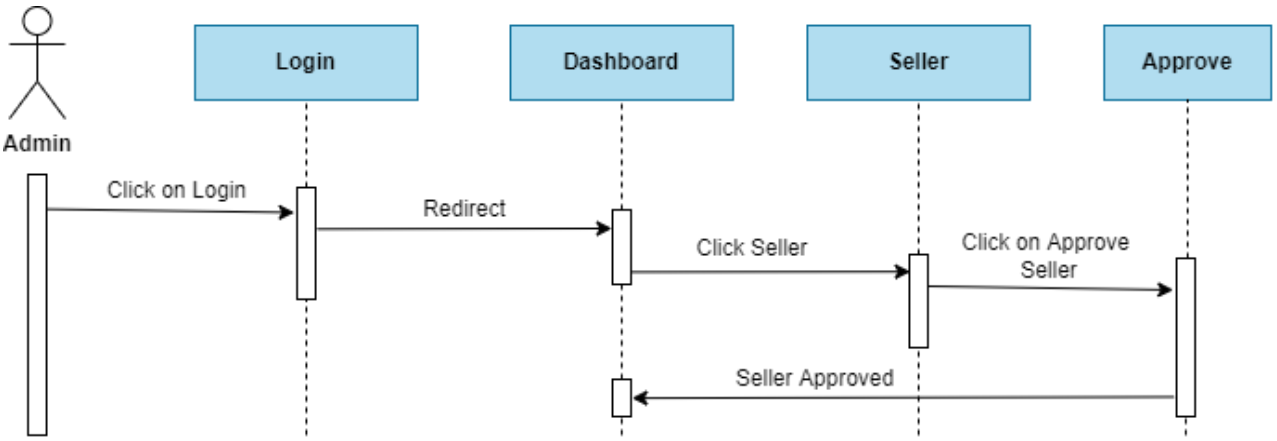
- Delete



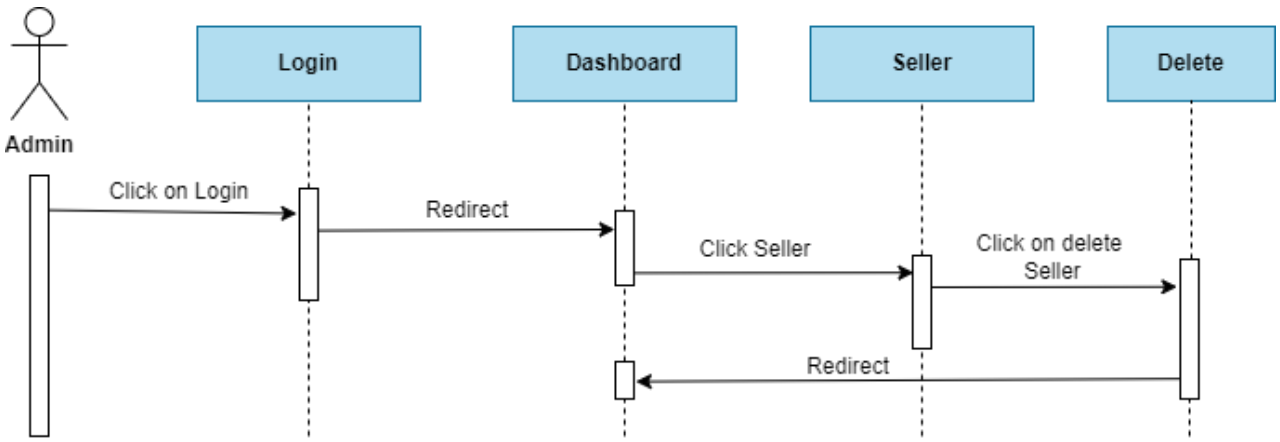
- Approve Products



- Approve Seller

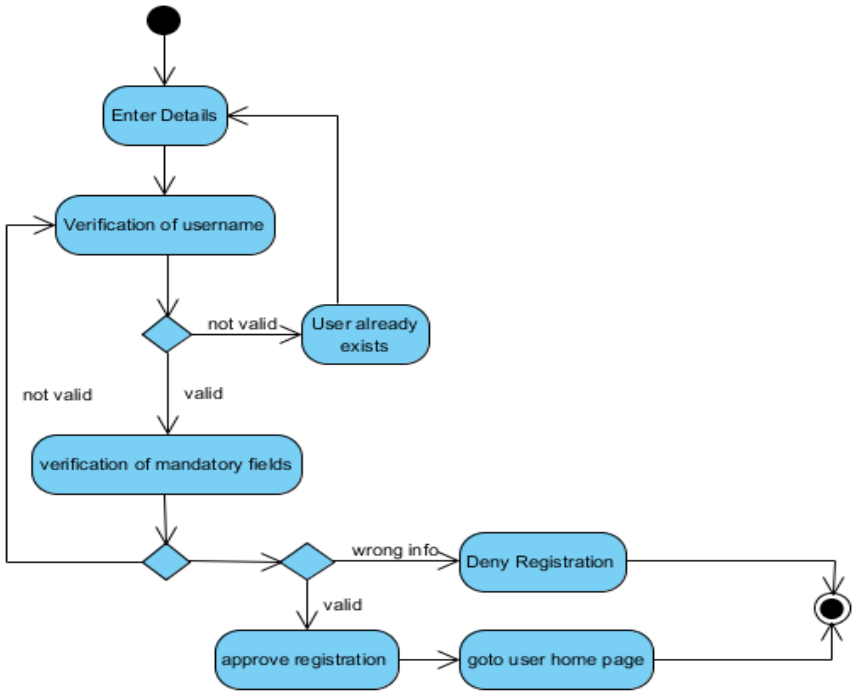


- Delete Seller

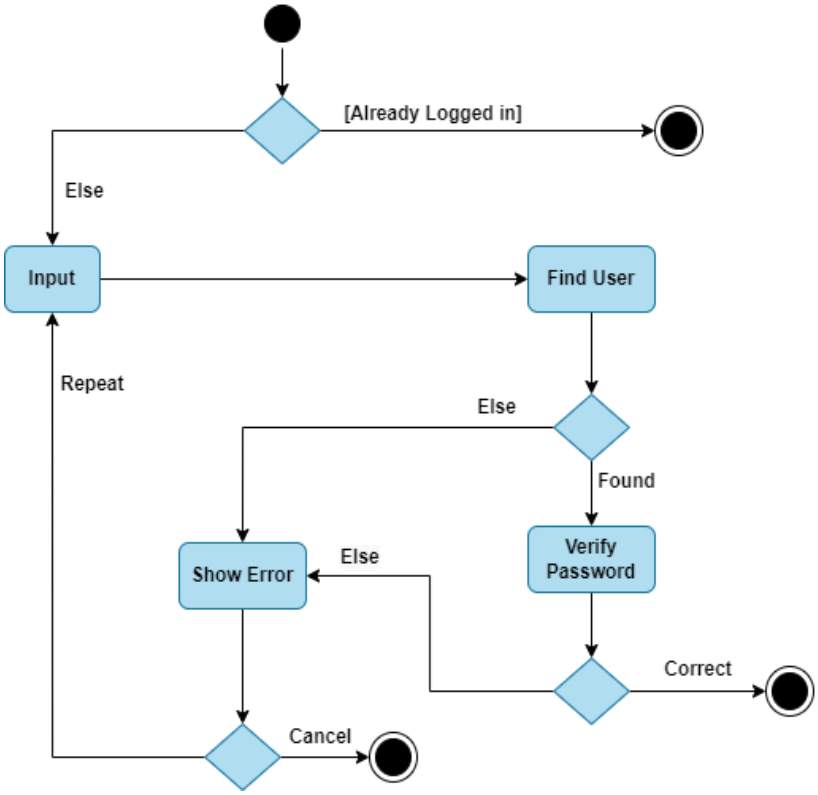


4.7. Activity Diagram

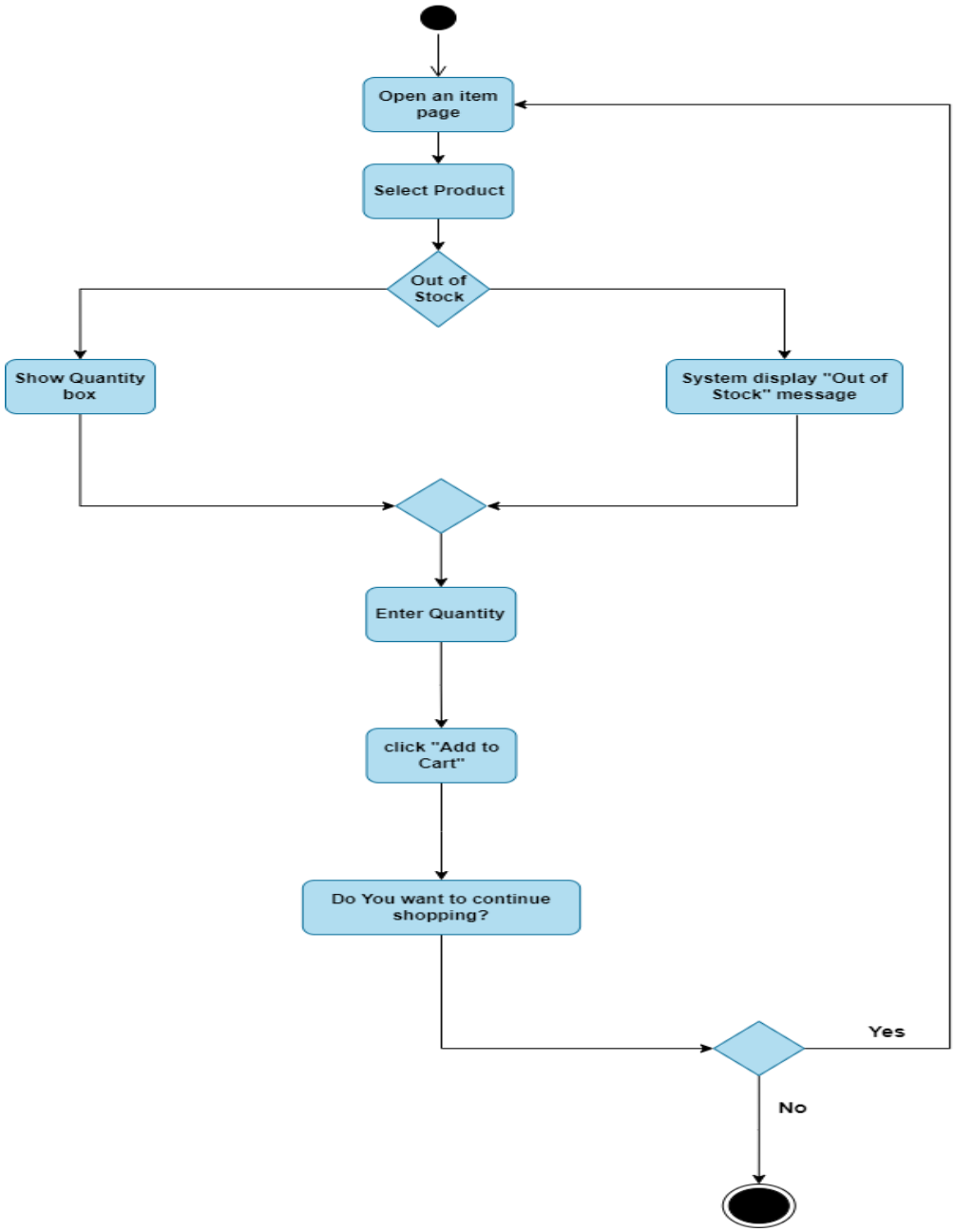
- Registration



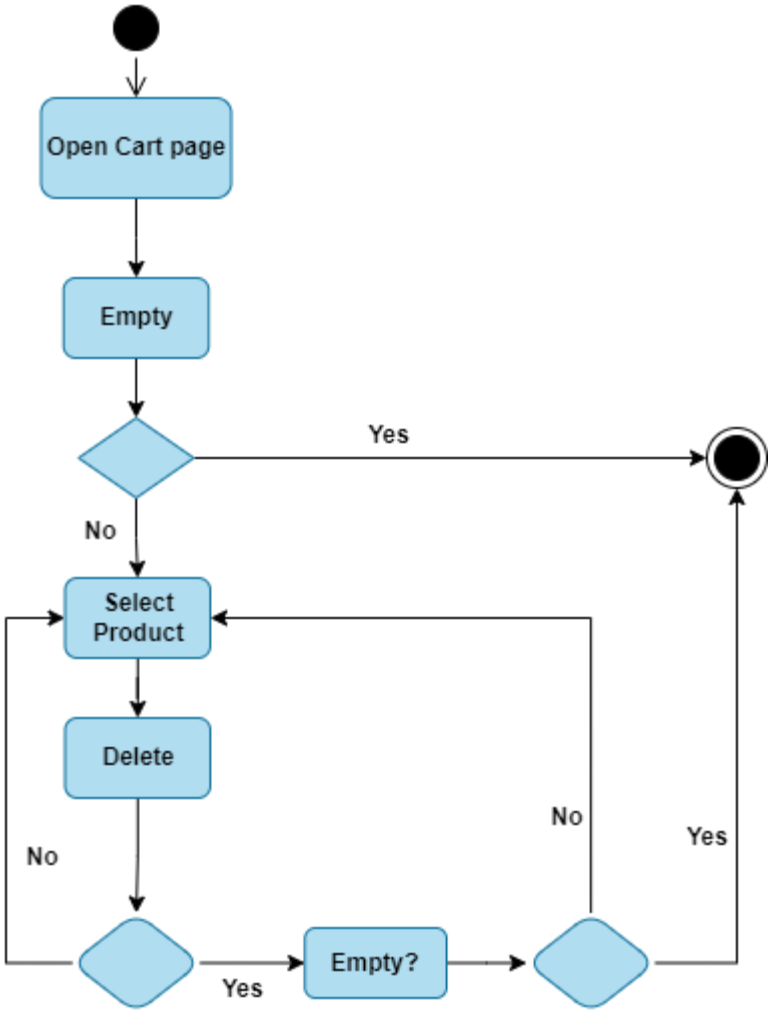
- Login



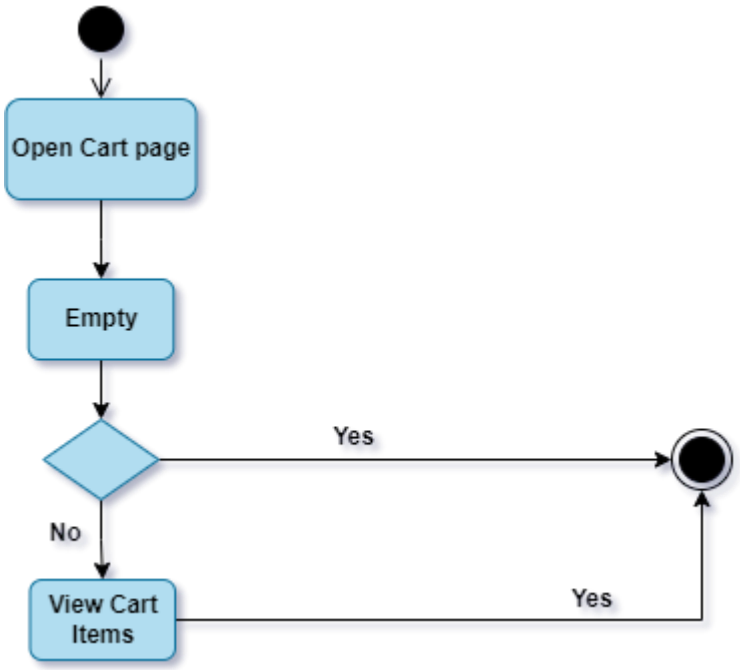
- Add to cart


Open an item page
Select Product
Out of Stock
Show Quantity box
System display "Out of Stock" message
Enter Quantity
click "Add to Cart"
Do You want to continue shopping?
Yes
No

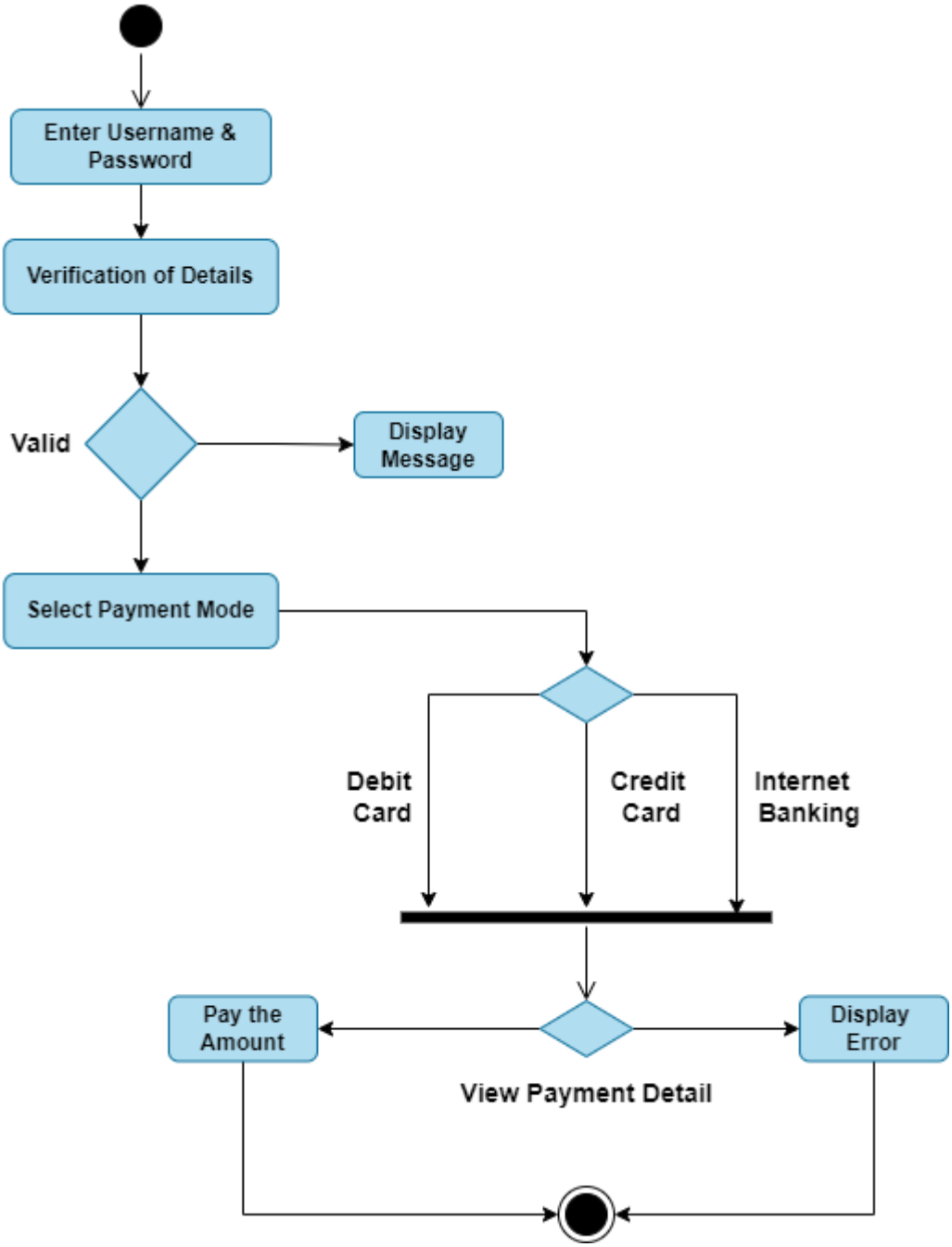
- Remove Product From Cart



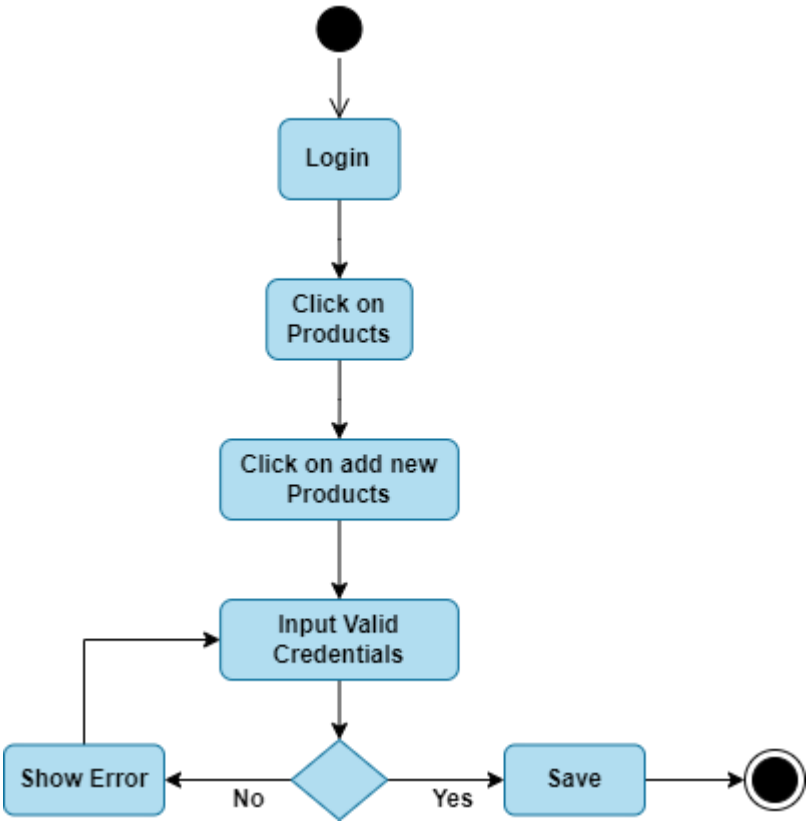
- View Cart Products



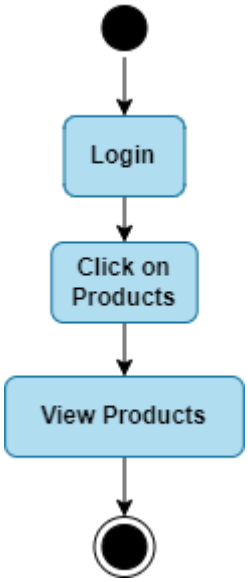
- Payment Gateway



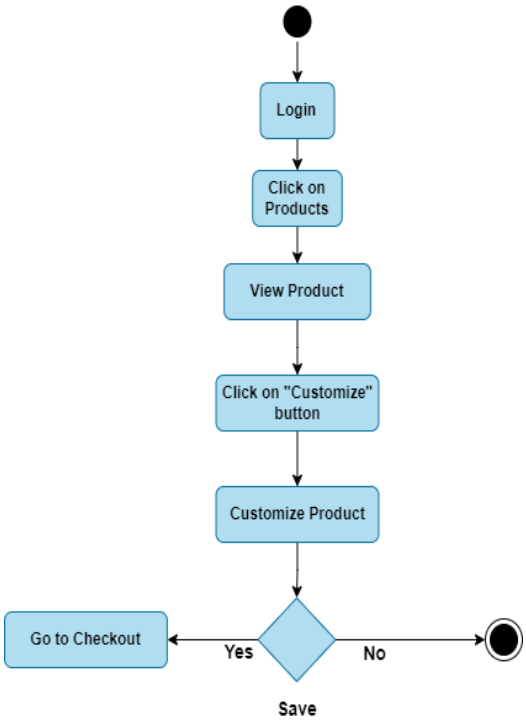
- Add New Stock Product



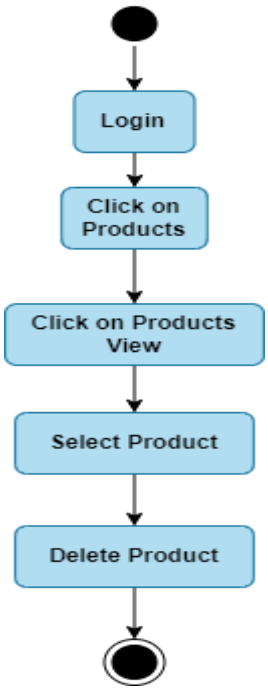
- View Cart



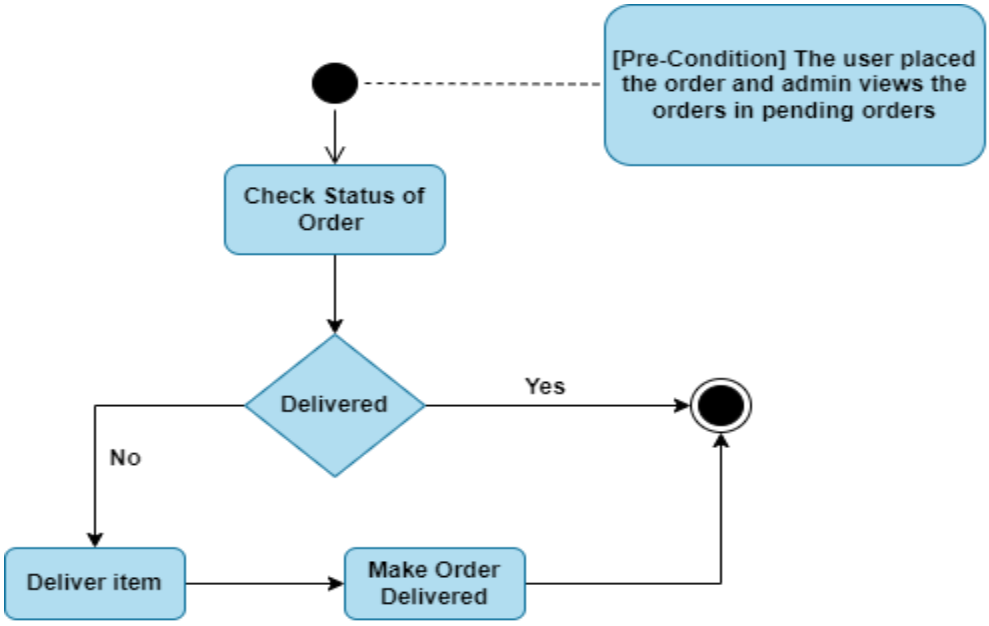
- Customize Product



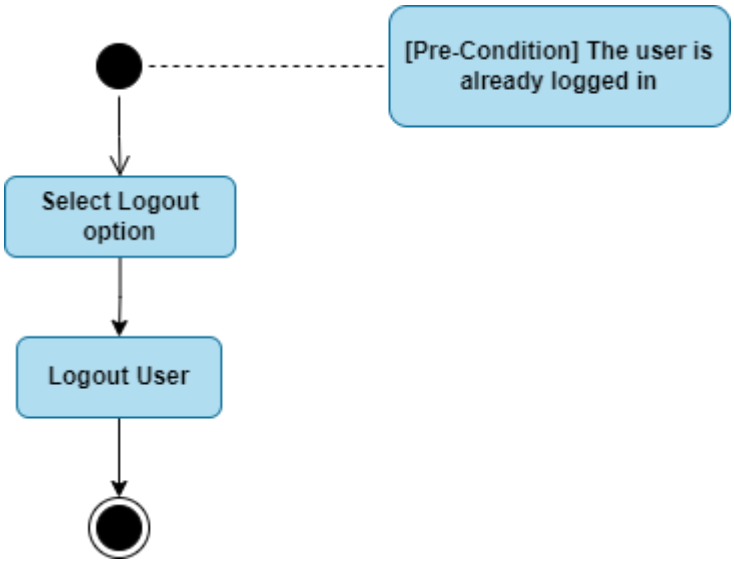
- Delete Product



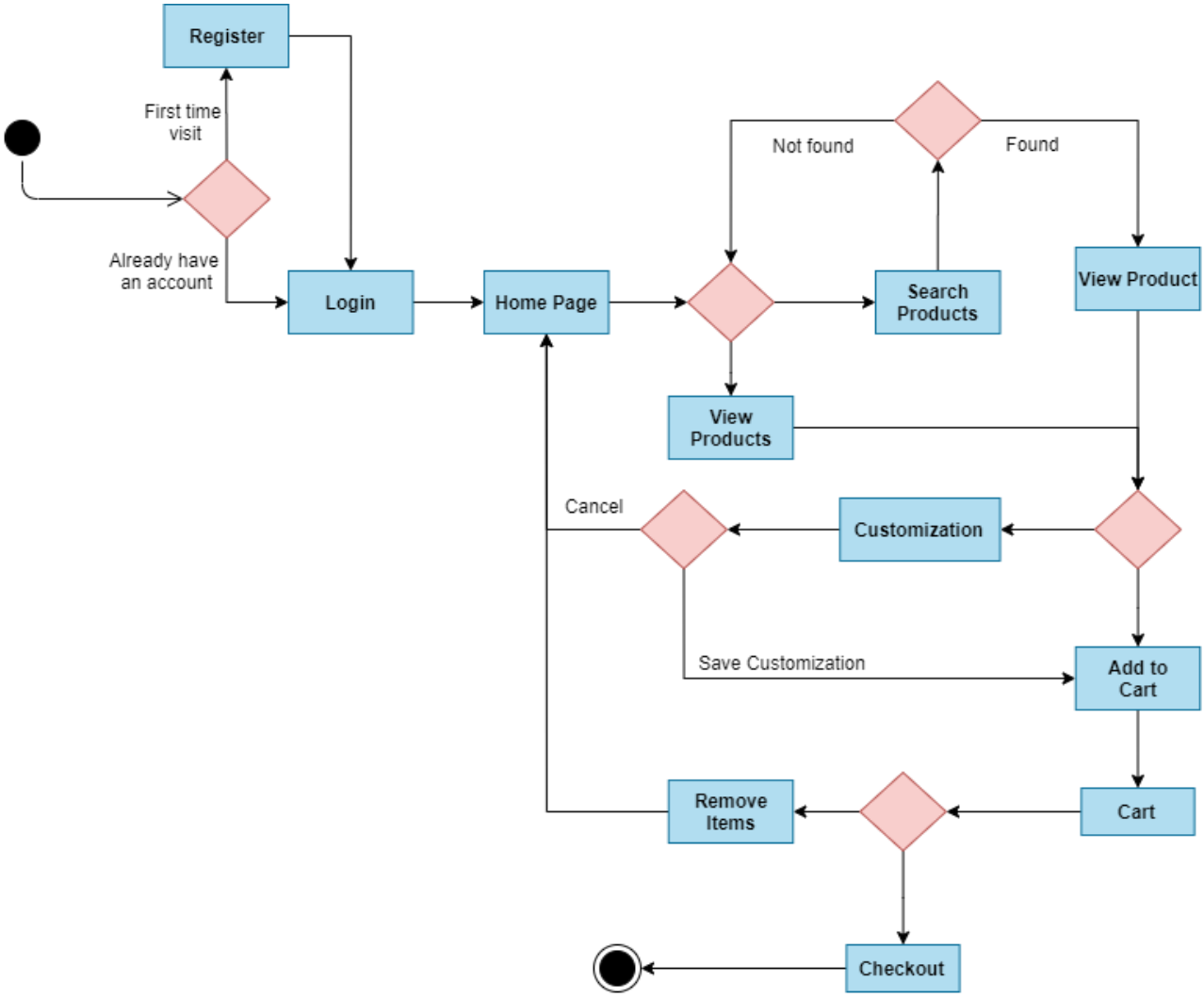
- Process Order



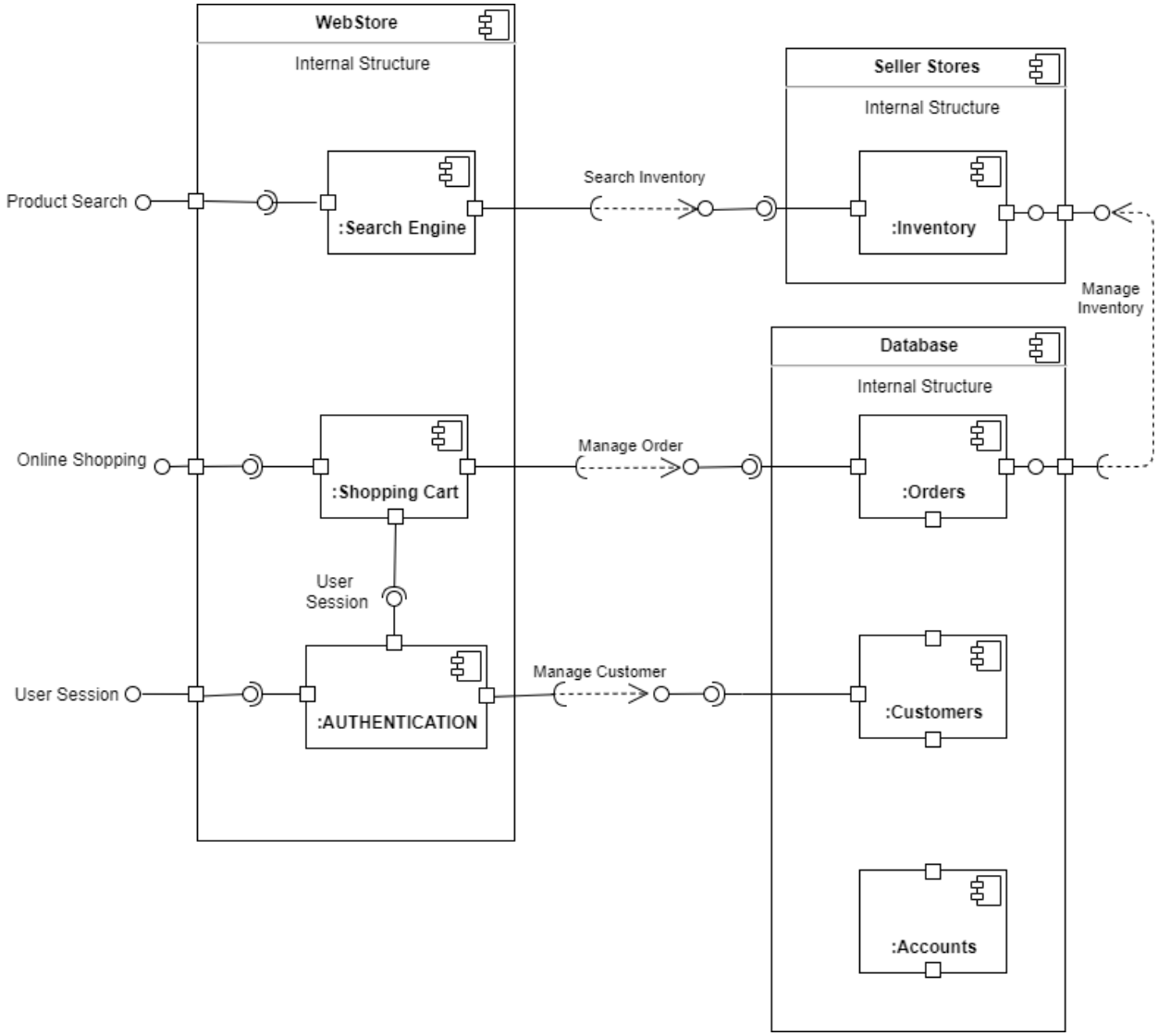
- Logout



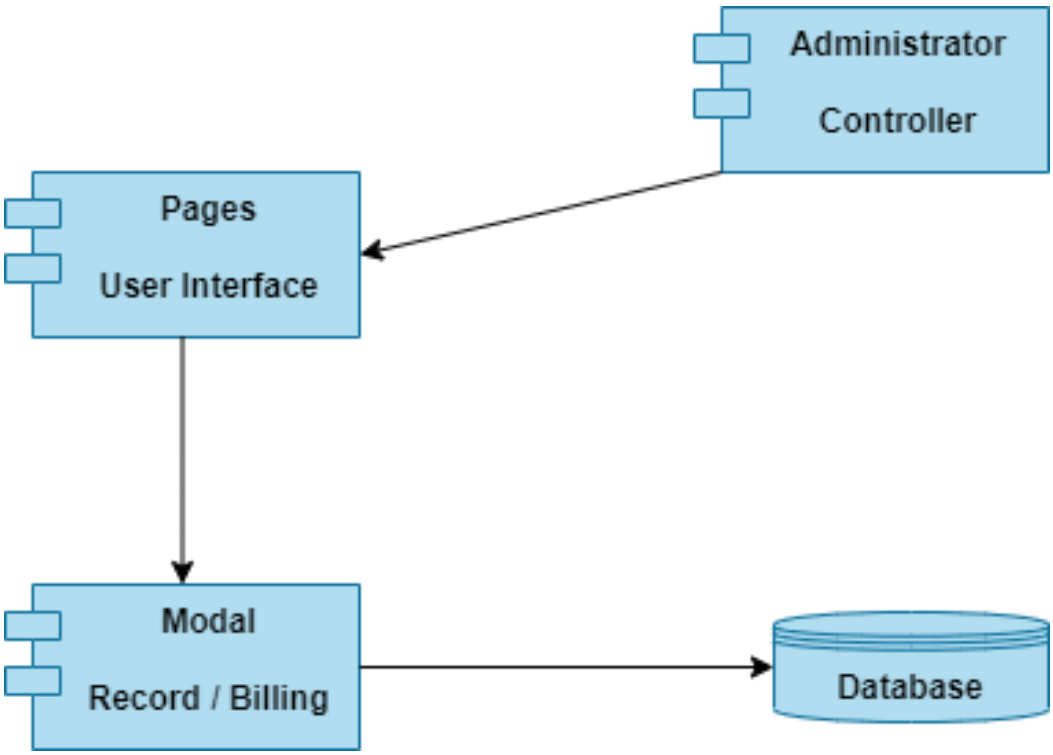
4.8. State Transition Diagram



4.9. Component Diagram

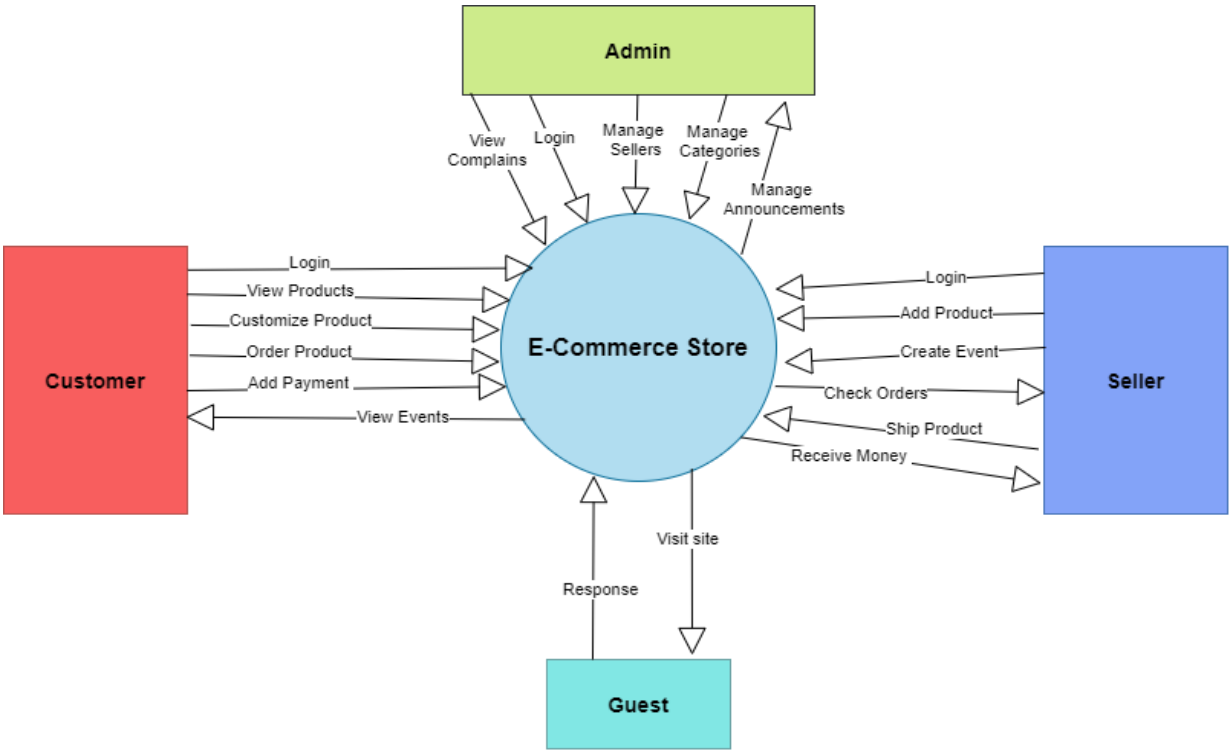


4.10. Deployment Diagram

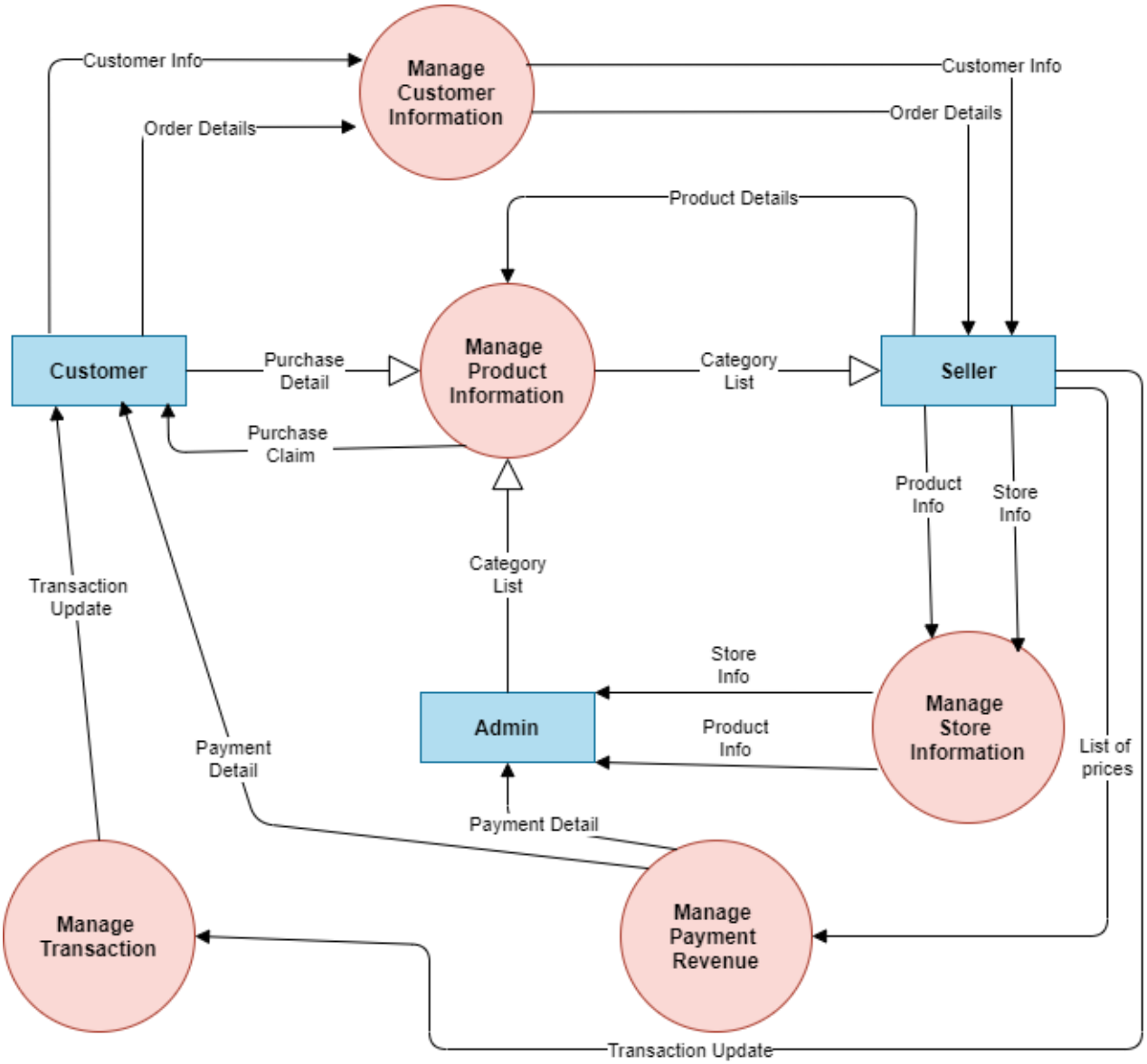


4.11. Data Flow diagram

- **Level 0**



- **Level 1**


Customer Info
Manage Customer Information
Customer Info
Order Details
Order Details
Product Details
Customer
Purchase Detail
Manage Product Information
Category List
Seller
Purchase Claim
Product Info
Store Info
Transaction Update
Category List
Store Info
Admin
Product Info
Manage Store Information
List of prices
Payment Detail
Payment Detail
Manage Transaction
Manage Payment Revenue
Transaction Update

Chapter 5

Implementation

Chapter 5: Implementation

This chapter is all about implementation of tools and techniques, coding standards, flow of program. It should help to understand how much this system is efficient and sufficient to meet functional requirements.

5.2. Components, Libraries, Web Services and stubs

E-Commerce Store is based on Web Development ReactJS and NodeJS Frameworks including Database queries are based on stored procedures, triggers.

5.3. Deployment Environment

Our system required a Web environment to work fully functional. It also can work on mobiles, tablets and all others devices.

5.4. Tools and Techniques

Following tools and techniques which are used:

- HTML
- CSS
- Bootstrap
- ReactJS
- NodeJS
- PgAdmin
- PostgreSQL
- VS Code.

5.5. Best Practices / Coding Standards

PostgreSQL Database, ReactJS and NodeJS coding standards are used to implement E-Commerce Store. ReactJS and NodeJS Framework have some constraints that should fulfill to acquire the accurate results. Code is efficient and can be reused.

5.6. Version Control

We are working on these versions

- ReactJS **17.0**
- NodeJS **16.13**
- MySql

Chapter 6

Testing and Evaluation

Chapter 6: Testing and Evaluation

Test and Evaluation (T&E) is the interaction by which a framework or parts are looked at against prerequisites and details through testing. The outcomes are assessed to evaluate progress of plan, execution, acceptability, and so on.

6.1 Use Case Testing

Test A :

On app testing run the command “npm run start:dev” , and server will start running and there is no error consoled in app , app is running as aspected

Test B:

For postman testing , run the server on vs code , open any role request and hit send and wait for response , if the body is correct status will be 200 and response will be accurate and in case of bad body it will show the error with reponse 200

6.1.1 Equivalence partitioning

Equivalence Class Partitioning is kind of black box testing procedure which can be applied to all degrees of programming testing like unit, coordination, framework, and so on. In this method, input information units are separated into comparable allotments that can be utilized to determine experiments which decreases time expected for testing due to modest number of experiments.

- It partitions the info information of programming into various proportionality information classes.
- You can apply this strategy, where there is a reach in the info field.

6.1.2 Boundary value analysis

Boundry testing is the method involved with testing between outrageous finishes or limits between segments of the information values.

- So these outrageous closures like Start-End, Lower-Upper, Maximum-Minimum, Just Inside-Just Outside values are called limit values and the testing is classified "limit testing".

- The essential thought in typical limit esteem testing is to choose input variable qualities at their:

1. Minimum
2. Just above the minimum
3. A nominal value
4. Just below the maximum
5. Maximum

6.2 Data flow testing

Information Flow Testing is a sort of underlying testing. A strategy is utilized to track down the test ways of a program as per the areas of definitions and utilizations of factors in the program. It doesn't have anything to do with information stream outlines

6.3 Unit testing

UNIT TESTING is a sort of programming testing where individual units or parts of a product are tried. The design is to approve that every unit of the product code proceeds true to form. Unit Testing is finished during the turn of events (coding period) of an application by the engineers.

6.4 Integration testing

Mix testing - - otherwise called combination and testing (I&T) - - is a kind of programming testing in which the various units, modules or parts of a product application are tried as a consolidated substance. In any case, these modules might be coded by various software engineers.

6.5 Performance testing

Performance testing is a trying measure that assesses the speed, responsiveness and security of a PC, organization, programming system or gadget under a responsibility. Associations will run execution tests to distinguish execution related bottlenecks.

6.6 Stress Testing

Stress testing is the most common way of deciding the capacity of a PC, organization, program or gadget to keep a specific degree of viability under negative circumstances. The cycle can include quantitative tests done in a lab, for example, estimating the recurrence of mistakes or framework crashes.

Chapter 7

Summary, Conclusion and Future Enhancements

Chapter 7: Summary, Conclusion & Future Enhancements

7.1 Project Summary

Internet Shopping is a way of life online business web application, which retails different style and way of life items. This task permits seeing different items accessible empowering enlisted clients to buy wanted items quickly utilizing different installment process, and furthermore can put in a request by utilizing the Cash on Delivery (Pay Later) choice. This venture gives simple admittance to Administrators and Managers to see orders put utilizing Pay Later and Instant Pay choices.

To foster an online business site, various Technologies should be considered and perceived. These incorporate multi-layered engineering, server, and client-side prearranging methods, and execution innovations like React.JS, Node.JS, and social data sets. This is a task with the target to foster an essential site where a purchaser is furnished with a shopping basket application and furthermore to realize about the innovations used to foster such an application.

7.2 Achievements and Improvements

Progresses in the advanced economy have pushed makers, particularly those in the data innovation (IT) industry, to imagine items that shoppers can alter to meet their own particular requirements. This study inspects the systems of organizations to offer such adjustable items to purchasers. Our investigation shows that an imposing business model organization acquires benefit by offering an adjustable item to the shopper than by offering a normalized item that is pre-designed provided that the purchasers are adequately ready to play out the undertaking of personalization; in any case it is more beneficial for the organization to offer a normalized item. Likewise, purchasers get a bigger excess when the organization offers adjustable items. We likewise consider the situation where the organization can offer both a versatile item and a normalized item and find that the organization helps more from offering the two items than from offering either item, as the flexibility and the purchaser variation costs are not excessively high. Strangely, when the organization offers the two items, its endeavors to further develop customer

personalization (e.g., offering free purchaser preparation) consistently benefit both the organization and shoppers. **(Gu, 2015)**

7.3 Critical Review

The world we see today is becoming more and more digital. In this digitized world, e-commerce is taking over by bringing products within reach of customers where the customer no longer has to leave the house. As people today depend on products online, the importance of a review is becoming increasingly important. To select a product, a customer has to go through thousands of reviews to understand a product. But in this thriving day of machine learning, it would be much easier to search through thousands of reviews if a template were used to polarize and learn from those reviews. We used the guided learning method on a large-scale Amazon dataset to polarize it and achieve satisfactory accuracy. **(Haque, 2018, May)**

7.4 Future Enhancements/Recommendations

E-Commerce Store is pointed towards the merchants who need to connect with the most extreme cross section of client and ordinary citizens who can be likely client. This venture conceives overcoming any issues between the dealer, the retailer and the client. OFS (make available for purchase) ought to be easy to use, 'fast to learn' and solid programming for the above reason. OFS is planned to be an independent item and shouldn't rely upon the accessibility of other programming. It ought to run on both UNIX and Windows based platform.