



FINAL SEMESTER ASSESSMENT (FSA)
B.TECH. (CSE)
VI SEMESTER

**UE18CS355 – OBJECT ORIENTED ANALYSIS AND DESIGN
WITH SOFTWARE ENGINEERING LABORATORY**

PROJECT REPORT
ON
ONLINE SHOPPING

SUBMITTED BY

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JANUARY – MAY 2021
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TABLE OF CONTENTS		
SI.No	TOPIC	PAGE No
	ABSTRACT	3
1.	SOFTWARE REQUIREMENTS SPECIFICATION	4
2.	PROJECT PLAN	24
3.	DESIGN DIAGRAMS	31
4.	MODULE DESCRIPTION	41
5.	TEST CASES	42
6.	SCREENSHOTS OF OUTPUT	52

ABSTRACT

With the online world expanding extremely in the last few decades, online shopping too has gained significant importance. Customers can buy products through online shops by the click of a button. It has brought the buyers and sellers together at an unprecedented scale. Online shopping deals with providing a platform for sellers to put up their goods online and hence easily connect with the buyers thereby increasing their sales.

The online shopping application enables vendors to set up online shops, customers to browse through the shops, and a system administrator to approve and reject requests for new shops and maintain lists of shop categories. The online shopping application will allow the customer to purchase goods online without visiting a store physically. Online shopping applications use the internet as the sole medium to sell goods to the customers.

While developing an online application, both the admin and user perspective have to be kept in mind to allow for smooth functioning of the application. The admin takes care of the products that have to go up on the application and the user can purchase the said goods. These roles are crucial for the application.

CHAPTER 1

SOFTWARE REQUIREMENT SPECIFICATIONS

1.1 Introduction

1.1.1 Purpose

This project is aimed at developing a Web application that depicts online Shopping of products and purchasing using Payment Gateway. This document is meant to delineate the features of OSS, so as to serve as a guide to the developers on one hand and a software validation document for the prospective client on the other. The Online Shopping System (Amazon) for products shop web application is intended to provide complete solutions for vendors as well as customers through a single get way using the internet. It will enable vendors to set up online shops, customers to browse through the shop and purchase them online without having to visit the shop physically. The administration module will enable a system administrator to approve and reject requests for new shops and maintain various lists of shop categories.

1.1.2 Intended Audience

This website is intended to attract people who indulge in online shopping. This is mainly for the people who don't have time to shop physically.

1.1.3 Product Scope

Online Shopping is one of the applications to improve marketing. This web application involves a few features of online shopping. This system allows the customer's to maintain their cart for adding or removing the product over the internet.

1.2 Overall Description

Online Shopping System is the process in which consumers go through to purchase of products or services over the Internet. A Shopping application that typically runs on the computer where your Web site is located (the Web server), and allows your customers to do things such as viewing the product in your store catalogue, adding a selected product to a basket, and placing an order for it. Online shopping application advertises some of the products for shopping .Here the customer will be able to purchase the products and the purchased products will be added to the cart. After the shopping of the products the user will confirm the purchase of the products in the cart. After confirmation the products are purchased by specifying the debit card number to the paypal website.

1.2.1 Product Perspective

The employees have to register for online shopping of products. Only the admin is allowed to add or remove items from the specific group of items. It helps the user to maintain an account and a cart and buy the products in the cart when even he wishes.

1.2.2 Product Functions

The product functions will include the following steps:

- 1.Easy registration
- 2.Helps to maintain a cart
- 3.Helps in giving a genuine bill
- 4.Helps to manage the order if required
- 5.Products in the cart can be removed if not required

1.2.3 User Classes and Characteristics

The user of this product is supposed to be fairly educated about the usage of the computers. He should understand how to open web pages and must be able to understand all the features of the website. A person who has no knowledge of computers will find it difficult to understand the system. But with a little knowledge it will be very easy to handle the project.

1.2.4 Operating Environment

A proper internet connection is required as it is a web service. A browser is also required along with an OS

1.2.5 Design and Implementation Constraints

Implementation design constraints:

- 1.Fetching the products which is wished by the user may be challenging
- 2.A secured protocol must be ensured
- 3.Tools to use will be updated

1.2.6 Assumptions and Dependencies

The project depends on the users ability to understand the features of the online shopping website and able to use to the best of his/her use. The employee has to be able to access most of the features of the website. The system which uses the product will have to be able to install this component. It will be assumed that a LAN network is already in place. In other words , working on OSS needs an internet connection.

1.3 External Interface Requirements

1.3.1 Hardware Interfaces

Hardware requirements for insurance on internet will be same for both parties which are as follows:

Processor: Dual Core

RAM:2 GB

Hard Disk:320 GB

NIC: For each party

1.3.2 Software Interfaces

An Operating System such as Linux, WINDOWS and a browser is required.

1.3.3 User Interfaces

Online Shopping System User interface has been designed with their customers in mind , allowing the customer to buy products without going to shop.

The home screen offers a menu with a list of functions that the device performs. The User can select one of the options on the menu , and is taken to the respective screen. Every screen displays the menu on the bottom. The User can click on any one of the options and is taken to the screen of their choice. In addition, clicking on the power button displays the home screen with the menu options.



Sign-In

Email or mobile phone number

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Create Account

Your name

Mobile number

IN +91 ▾

Mobile number

Email (optional)

Password

At least 6 characters

i Passwords must be at least 6 characters.

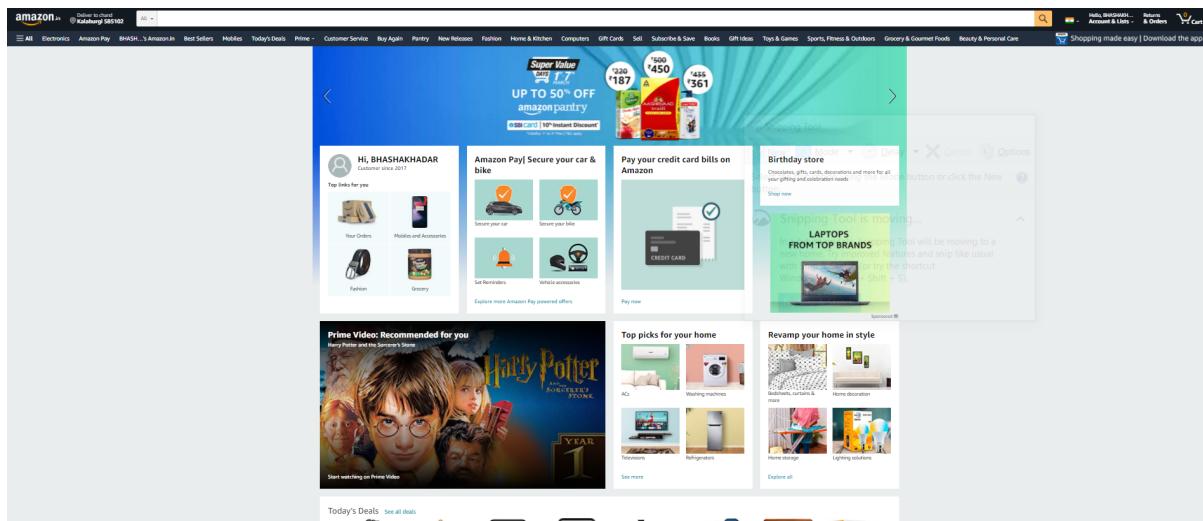
We will send you a text to verify your phone.
Message and Data rates may apply.

Continue

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The screenshot shows the Amazon.in cart page. At the top, there is a header with the Amazon logo, a delivery address ("Deliver to chand Kalaburgi 585102"), a search bar, and a shopping cart icon. Below the header, a message says "Pay faster for all your shopping needs with Amazon Pay balance" and "Get Instant refund on cancellations | Zero payment failures". The main content area has a heading "Your Amazon Cart is empty." followed by a sub-instruction "Check your Saved for later items below or continue shopping." Below this, there is a section titled "Your Items" with a sub-section "Saved for later (3 items)". The first item listed is "ANGEL Products Plastic Jug Water Bottle 1200 ml, Clear (1)" with a price of ₹149.00. It includes a thumbnail image of the water bottle, a "In stock" status, the seller information "Sold by ANGEL PRODUCTS", and the delivery option "Amazon Delivered". Below the item are "Delete" and "Move to cart" buttons. The second item listed is "Mi Notebook 14 Intel Core i5-10210U 10th Gen Thin and Light Laptop(8GB/512GB SSD/Windows 10/Intel UHD Graphics/Silver/1.5Kg), XMA1901-FA+Webcam". It shows a thumbnail of the laptop, a "Currently unavailable" status, and "Delete" and "Move to Wish List" buttons. The overall layout is clean with a white background and a grid-based layout for the product cards.

amazon.in

All Electronics Amazon Pay BHASH..'s Amazon.in Best Sellers Mobiles Today's Deals Prime Customer Service Buy Again Pantry New Releases Fashion Shop

Your Account > Your Orders

Your Orders

Orders Buy Again Open Orders Cancelled Orders

0 orders placed in past 3 months

You have not placed any orders in past 3 months. View orders in 2021

Buy in other parts of the store

Philips BT1212/15 USB charging cordless rechargeable Beard Trimmer ★ ★ ★ ★ ★ 32,182 ₹ 897.00	Philips BT3203/15 cordless rechargeable Beard Trimmer - 10 length settings; 45 min run time ★ ★ ★ ★ ★ 12,175 ₹ 1,299.00	Lifelong LLPCM05 Cordless Beard Trimmer, 1 Year Warranty ; Runtime: 50 minutes and 20... ★ ★ ★ ★ ★ 2,779 ₹ 599.00	Ustraa Beard Growth Oil - 35ml - More Beard Growth, With Redensyl, 8 Natural Oils including... ★ ★ ★ ★ ★ 6,335 ₹ 319.00	SYSKA HT200U Beard Pro Trimmer Runtime: 40 Mins Cordless Use (Black) ★ ★ ★ ★ ★ 640 ₹ 640.00	Philips BT1210 Cordless Beard Trimmer (Black) ★ ★ ★ ★ ★ 4,810 ₹ 867.00	MuscleBlaze Beginner Whey Protein Supplir (Chocolate, 1 kg with Shaker) ★ ★ ★ ★ ★ 605 ₹ 1,099.00

Explore more items

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amazon.in Deliver to chand Kalaburgi 58102 Electronics

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Electronics Mobiles & Accessories Laptops & Accessories TV & Home Entertainment Audio Cameras Computer Peripherals Smart Technology

Electronics > Mobiles & Accessories > Smartphones & Basic Mobiles > Smartphones > Vivo V17 (8GB RAM, 128GB Storage)

Vivo V17 (Glacier Ice, 8GB RAM, 128GB Storage)
[Visit the Vivo Store](#)
 ★ ★ ★ ★ ★ 2,492 ratings | 685 answered questions

M.R.P.: ₹27,999.00
 Price: ₹ 23,500.00
 You Save: ₹ 4,490.00 (16%)
 Inclusive of all taxes

FREE delivery: Monday, March 8 [Details](#)
 EMI starts at ₹1,106. No Cost EMI available [EMI options](#)

[Save Extra with 5 offers](#)

No Cost EMI: Avail No Cost EMI on select cards for orders above ₹3000 | [Details](#)

Exchange Offer: Up to ₹ 14,850.00 off on Exchange

[See 3 more](#)

Only 1 left in stock.
 Sold by PRANSU MOBILE and Fulfilled by Amazon.
 New (2) from ₹ 23,500.00 + FREE Shipping
 Style name: **with No Cost EMI/Additional Exchange Offers**

Without Offer

Select a payment method

Pay faster for all your shopping needs with Amazon Pay balance
Get instant refund on cancellations | Zero payment failures

Your available balance

Use your ₹12.00 Amazon Pay balance

1. For optimal utilization of your Amazon Pay balance, balance expiring the earliest will be redeemed first.
2. Your Amazon Pay balance cannot be used along with Cash on Delivery or the EMI payment modes.

Continue

You can review this order before it's final.

Your saved credit and debit cards

Visa ending in 3768 

Name on card

Expires on

BHASHAKHADAR

12/2024

State Bank of India Debit Card ending in 6955 

HAROON RASHID

09/2021

Enter CVV (?):

 This card is recommended for you [Why?](#)

Another payment method

Add Debit/Credit/ATM Card



Net Banking

Other UPI Apps

EMI

Pay on Delivery

Due to high demand and to ensure social distancing, Pay on Delivery is not available.

Continue

You can review this order before it's final.

More payment options

Gift Cards, Vouchers & Promotional Codes



Continue

You can review this order before it's final.

amazon.in  [SIGN IN](#) [DELIVERY & PAYMENT](#) [PLACE ORDER](#) [COMPLETE PAYMENT](#)

Review your order

By placing your order, you agree to Amazon's [privacy notice](#) and [conditions of use](#).

Important message

Check this box to default to these delivery and payment options in the future.

Shipping address Change chand flat no:1 NEW OZA layout near rammander (near banshakari hospital) KALABURGI, KARNATAKA 585102 India Phone: 9513006615 Add delivery instructions	Payment method Change Net Banking: Axis Bank	Gift cards, Voucher & Promotional codes <input type="text" value="Enter Code"/> Apply
---	--	---

amazon prime BHASHAKHADAR, Enjoy Prime Video, Music, Gaming & more
[Join Prime at ₹329 for 3 months](#)

Delivery date: 8 Mar 2021
If you order in the next 14 hours and 19 minutes ([Details](#))

 Vivo V17 (Glacier Ice, 8GB RAM, 128GB Storage)
₹27,999.00 **₹ 23,500.00** 
You Save: ₹ 4,490.00 (16%)
Quantity: 1 [Change](#)
Sold by: PRANSU MOBILE
[Add gift options](#)

Place Your Order and Pay

You'll be securely redirected to Axis Bank to enter your password and complete your purchase.

Order Summary

Items:	₹23,500.00
Delivery:	₹40.00
Total:	₹23,540.00
Promotion Applied:	-₹40.00

Order Total: **₹23,500.00**

Your Savings: ₹ 4,530.00 (16%)
 FREE Delivery
 Item discount

Details

[How are delivery costs calculated?](#)
[Why didn't I qualify for FREE Delivery?](#)

Your Account

 **Your Orders**
Track, return, or buy things again

 **Login & security**
Edit login, name, and mobile number

 **Prime**
View benefits and payment settings

 **Your Addresses**
Edit addresses for orders and gifts

 **Payment options**
Edit or add payment methods

 **Amazon Pay balance**
Add money to your balance

Digital content and devices

[Apps and more](#)
[Content and devices](#)
[Digital gifts you've received](#)

Email alerts, messages, and ads

[Advertising preferences](#)
[Communication preferences](#)
[SMS alert preferences](#)
[Message center](#)
[Alexa shopping notifications](#)
[Deals Notifications](#)

More ways to pay

[Default Purchase Settings](#)
[Amazon Pay](#)
[Bank accounts for refunds](#)
[Coupons](#)

Ordering and shopping preferences

[Leave packaging feedback](#)
[Lists](#)
[Photo ID proofs](#)
[Profile](#)
[Language settings](#)

Other accounts

[Amazon Business registration](#)
[Seller account](#)
[Amazon Web Services](#)
[Login with Amazon](#)

Shopping programs and rentals

[Manage Your Profiles](#)
[Subscribe & Save](#)
[One Stop Kids' Shop](#)

Subscriptions

[Email](#)
[Memberships & Subscriptions](#)

Amazon.in Deliver to chand Kalaburgi 585102 Deals

Great Savings. Every Day. Shop from our Deal of the Day. Lightning Deals and avail other great offers. [Sign up](#) for deal notifications.

Deal of the Day

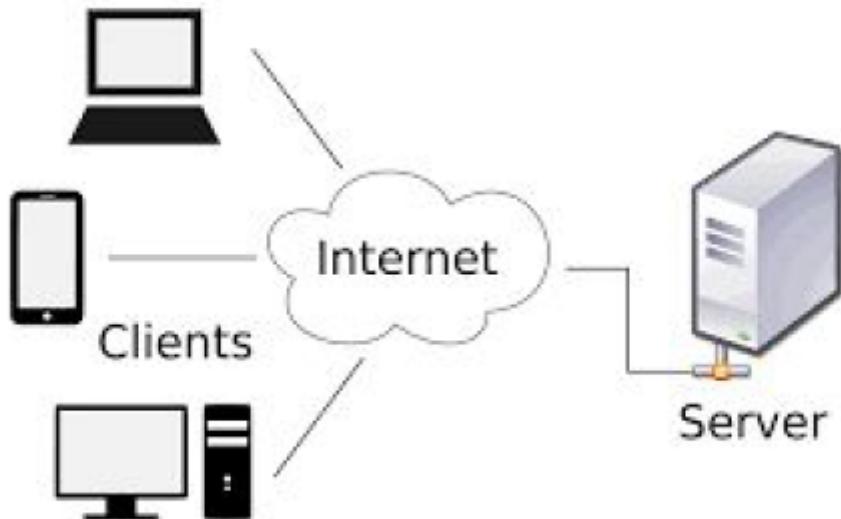
All Available Upcoming Missed Category Page 1 of 5

Product Image	Deal Title	Price Range	Description	Rating
	DEAL OF THE DAY	₹179 - ₹1,299	Up to 70% off on pTron Mobile Accessories	★★★★☆ 6514
	DEAL OF THE DAY	₹200 - ₹1,147	Up to 80% off on Fashion Earrings and Necklaces	★★★★★ 2
	DEAL OF THE DAY	₹5,499	M.R.P. ₹6,499 (15% off) Up to 80% off on Fashion Earrings and Necklaces	★★★★☆ 12
	DEAL OF THE DAY	₹11,999	M.R.P. ₹13,999 (14% off) Ends in 2:23:47 Itel A47 Dual Rear Camera 5.5" HD+ Display	★★★★☆ 3
	DEAL OF THE DAY	₹12,999	M.R.P. ₹16,999 (24% off) Ends in 2:23:47 Coolpad Cool 6 21MP selfie camera	★★★★☆ 243
	DEAL OF THE DAY	₹749 - ₹1,299	Digital & SmartWatches starting from 699	★★★★☆ 4
	DEAL OF THE DAY	₹99 - ₹749	Ends in 4 days Upto 30% Off on Superfoods	★★★★☆ 1578

[View Deal](#) [View Deal](#) [View Deal](#) [View Deal](#) [View Deal](#) [View Deal](#) [View Deal](#)

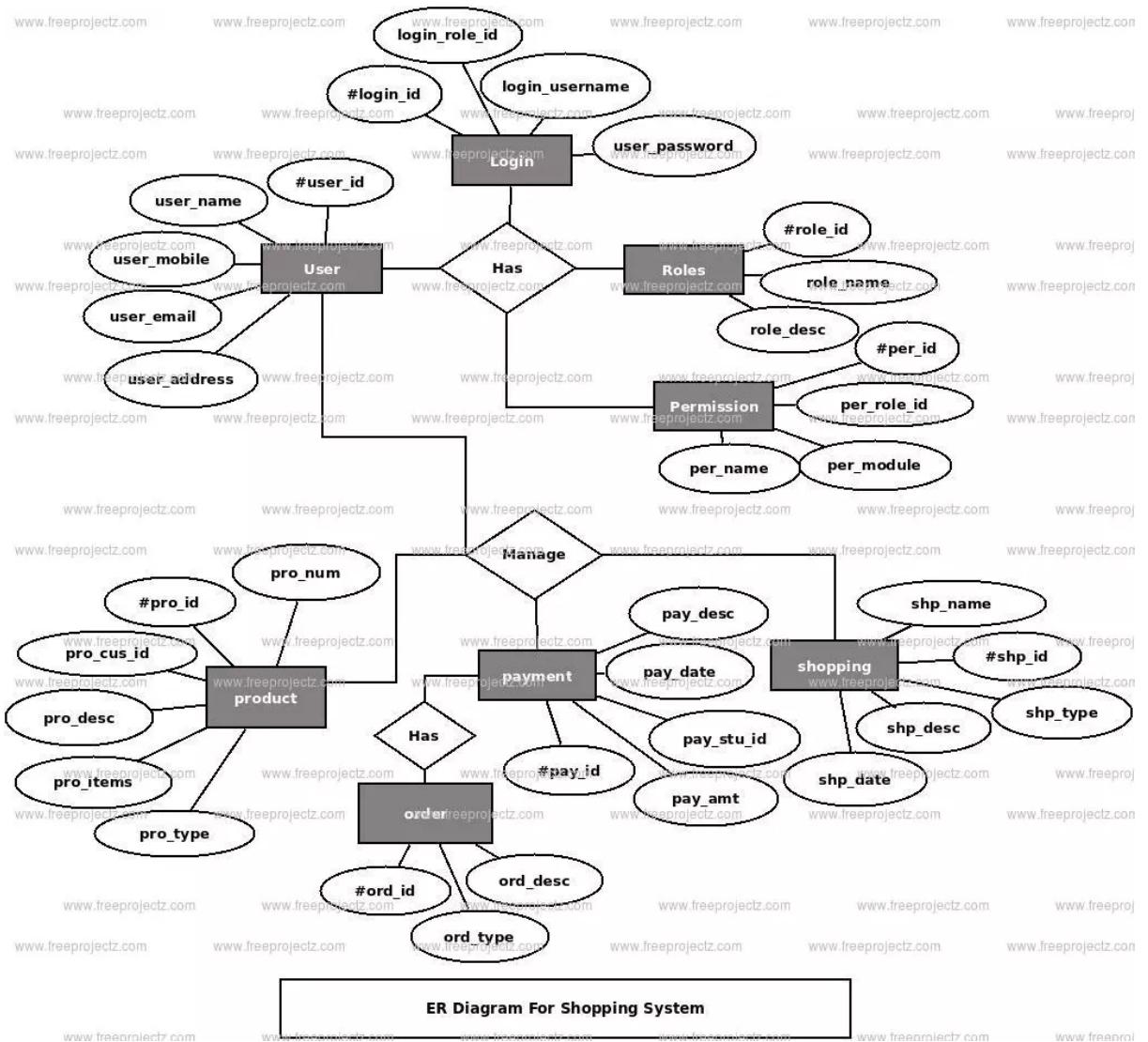
1.3.4 Communications Interfaces

Users can interact using the system browser and via the internet once he/she has logged in.

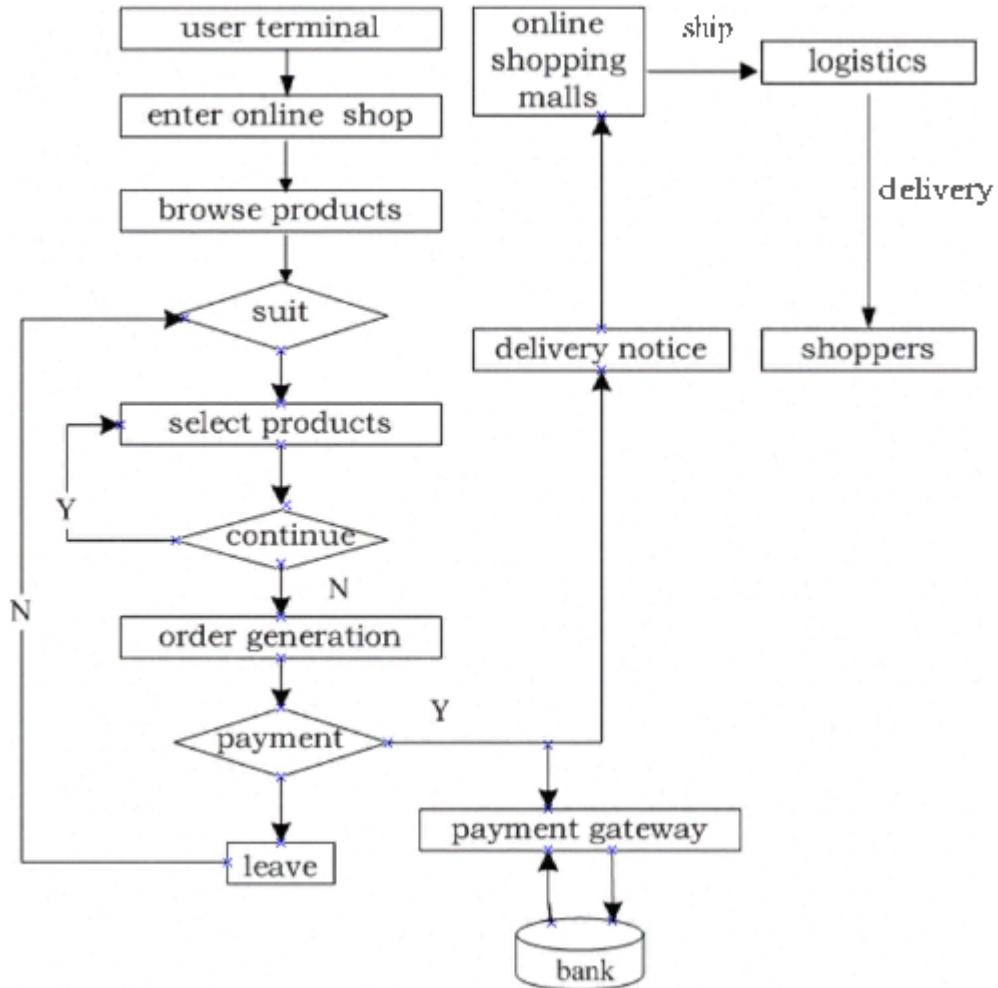


1.4 Analysis Model

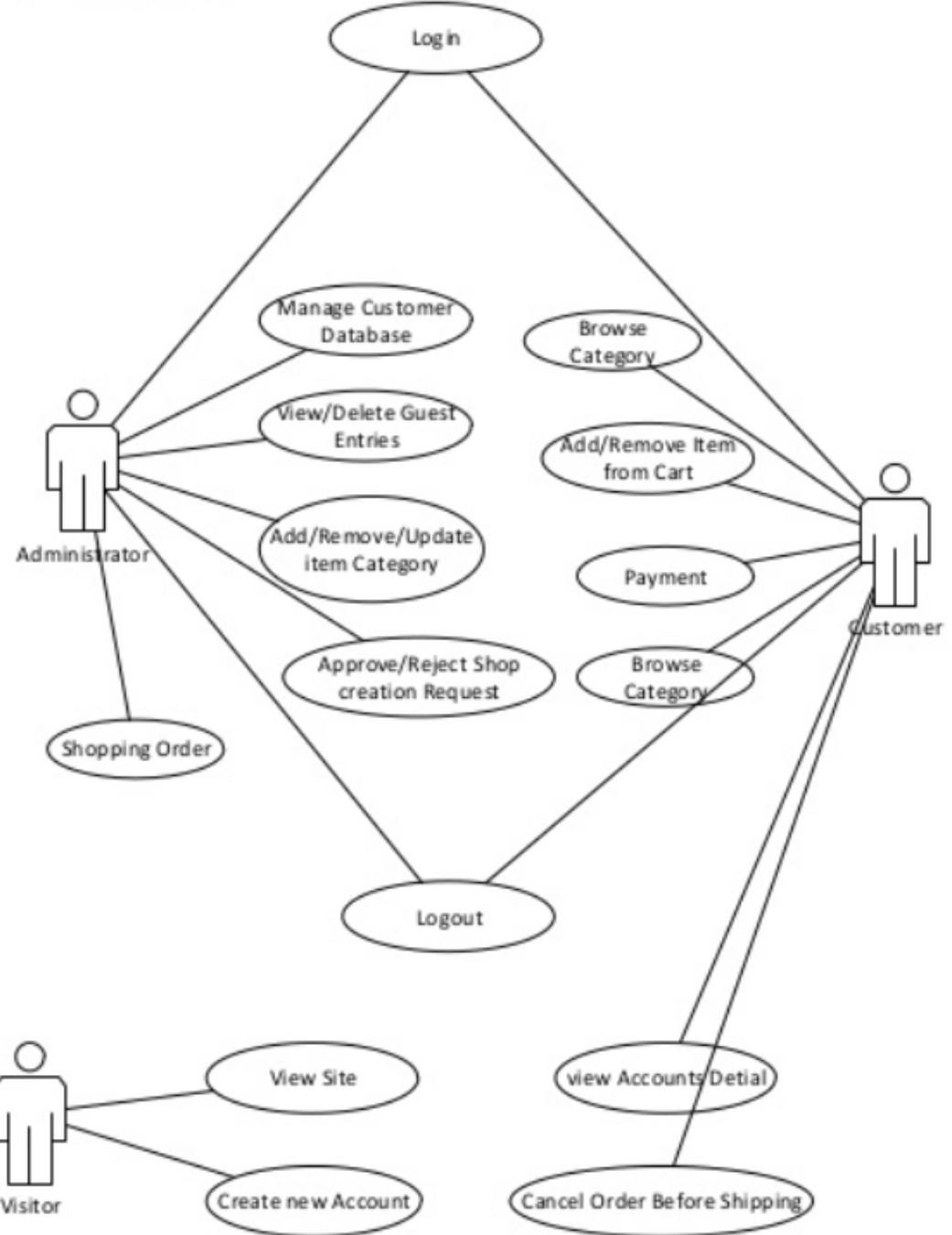
1.4.1 ER Diagram



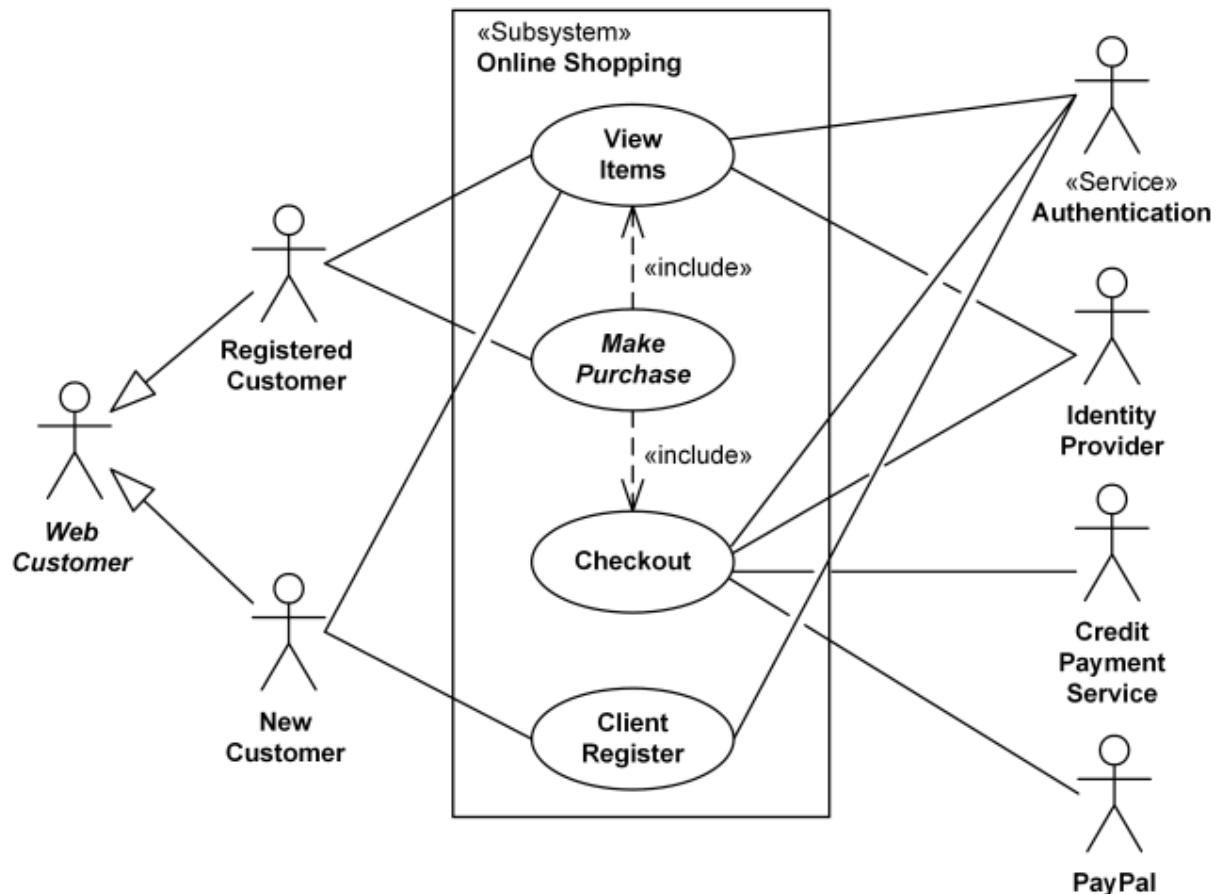
1.4.2 Workflow



1.4.3 Use Case Diagram



1.4.4 User Login Diagram



1.5 System Features

1.5.1 System Feature

Functional Requirements:

This section provides a requirement overview of the system. Various functional modules that can be implemented by the system will be:

1. Registration

If a user has registered only then he may be able to use and buy products.

2. Login

User has to login with his valid credentials to use the service he has to enter the proper Username and Password.

3. Changes in cart

Changes to the cart can be made as desired by the user but he needs to login to perform actions on the Cart. Storing the items selected by the customer in the temporary storage.

4. Deals of the day

Keeping the daily deals.

5. Customer Feedback

Storing the feedback given by the customer

6. Order Details

Keeping details about the product whether it is delivered or not. etc.

7. Product Details

Keeping records of the products.

8. Payment

This system mainly deals with cash and other features can be expected to be added.

9. Logout

After ordering and performing desired actions on the cart the user is expected to logout and once that is done further changes can not be made.

10.Bill

The user will get a bill of the products he has purchased which is basically the cost he is required to pay

Client Registration:

1. Name should be given
2. A secured password is expected
3. Other details like phone number, mail id is expected
4. Address is required to be entered

1.6 Other Non - Functional Requirements

Following Non-Functional Requirements will be there in the insurance to the internet:

1. Secure access to consumer's confidential data.
 2. 24X7 availability.
 3. Better component design to get better performance at peak time.
 4. Flexible service based architecture will be highly desirable for future extension.
- Non-Functional Requirements define system properties and constraints.

1.6.1 Performance Requirements

In order to maintain an acceptable speed at maximum number of uploads allowed from a particular customer as any number of users can access to the system at any time. Also the connections to the servers will be based on the attributes of the user like his location and server will be working 24X7 times.

1.6.2 Interface Requirements

Various interfaces for the product could be-

1. Login Page
2. Registration Form
3. There will be a screen displaying information about products that the shop has.
4. If the customers select the buy button then another screen of the shopping cart will be opened.
5. After ordering for the product, the system will send one copy of the bill to the customer's Email address.

Appendix A: Glossary

Appendix B: Field Layouts

Sample sheet with information required to register a new user.

Field	Length	Data Type	Description	Is Mandatory?
Full Name	20	String	Full name of the user	Yes
Username	15	Alpha-numeric	Unique username to identify user account	Yes
Password	20	Alpha-numeric	Password to authenticate the user	Yes

Appendix C : Requirement Traceability Matrix

Sl. No	Requirement ID	Brief Description of Requirement	Architecture Reference	Design Reference	Code File Reference	Test Case ID	System Test Case ID
1	FR_1	Registration	3.1	3.5	Product_Management	-	ST_01
2	FR_1	Registration	3.1	3.5	Product_Management	-	ST_02
3	FR_2	Login	3.1	3.4	Product_Management	-	ST_03
4	FR_2	Login	3.1	3.4	Product_Management	-	ST_04
5	FR_9	Logout	3.1	3.4	Product_Management	-	ST_05
6	FR_1	Registration	3.1	3.5	Product_Management	-	ST_06
7	FR_1	Registration	3.1	3.5	Product_Management	-	ST_07
8	FR_2	Login	3.1	3.4	Product_Management	-	ST_08
9	FR_2	Login	3.1	3.4	Product_Management	-	ST_09
10	FR_9	Logout	3.1	3.4	Product_Management	-	ST_10
11	FR_7	Product Details	3.1	3.2	User_Cart	UT_01	-
12	FR_7	Product Details	3.1	3.2	User_Cart	UT_02	-
13	FR_7	Product Details	3.1	3.2	User_Cart	UT_03	-
14	FR_7	Product Details	3.1	3.2	User_Cart	UT_04	-
15	FR_7	Product Details	3.1	3.2	User_Cart	UT_05	-
16	FR_7	Product Details	3.1	3.2	User_Cart	UT_06	-
17	FR_7	Product Details	3.1	3.2	User_Cart	UT_07	-
18	FR_7	Product Details	3.1	3.2	User_Cart	UT_08	-
19	FR_3	Changes in cart	3.1	3.4	User_Cart	UT_09	-
20	FR_7	Product Details	3.1	3.2	User_Cart	UT_10	-
21	FR_7	Product Details	3.1	3.2	User_Cart	UT_11	-

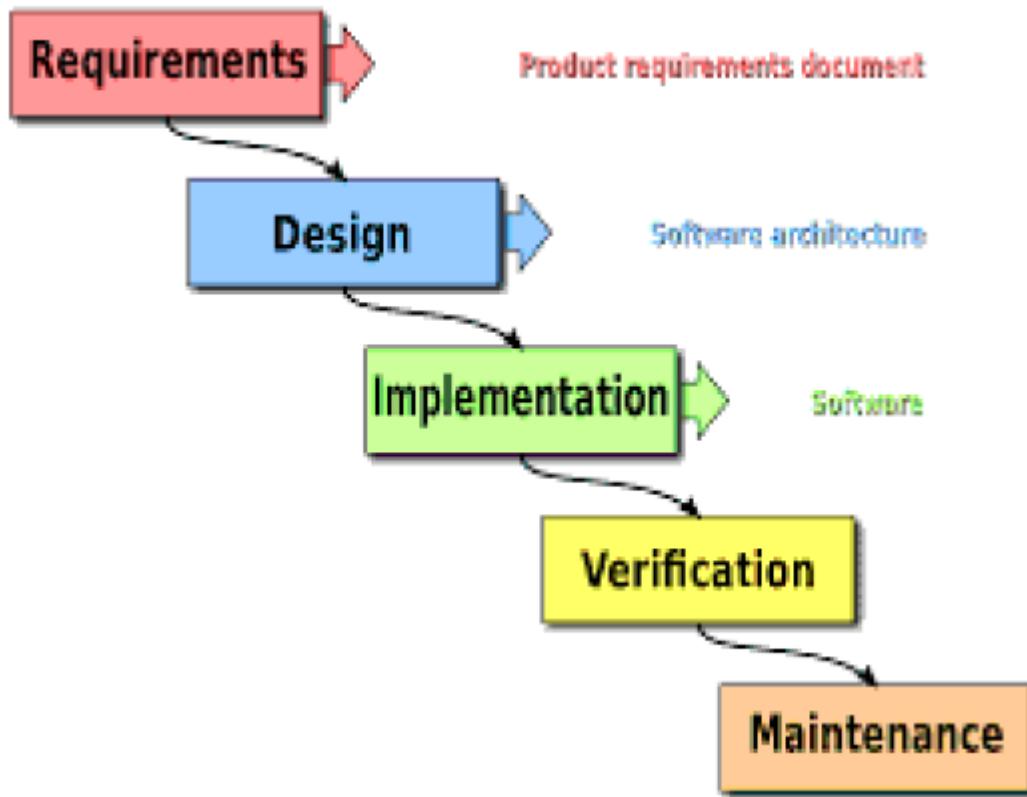
22	FR_3	Changes in cart	3.1	3.3	User_Cart	UT_12	-
23	FR_3	Changes in cart	3.1	3.3	User_Cart	UT_13	-
24	FR_3	Changes in cart	3.1	3.3	User_Cart	UT_14	-
25	FR_3	Changes in cart	3.1	3.3	User_Cart	UT_15	-
26	FR_3	Changes in cart	3.1	3.3	User_Cart	UT_16	-
27	FR_10	Bill	3.1	3.2	User_Cart	IT_01	-
28	FR_6	Order Details	3.1	3.2	User_Cart	IT_02	-
29	FR_6	Order Details	3.1	3.2	User_Cart	IT_03	-
30	FR_6	Order Details	3.1	3.2	User_Cart	IT_04	-

CHAPTER 2

PROJECT PLAN

2.1 SDLC Model

Waterfall model will be the best choice to show the steps in our planning as we already know the steps in advance. There may be changes in the technical part but the steps are not ambiguous. The waterfall model gives us an idea about the software development process in a linear sequential flow.



These listed stages are performed sequentially, and the obtained results are documented.

Requirements : During this phase the requirements of the project are gathered and clarified by a particular team and its documented.

Analysis: After the requirements are gathered it will be processed for analysis. The aim of this part is to remove any inconsistency. Finally after being processed and analysed it is documented.

Design: In this stage the specifications are studied and prepared. Then the system design is prepared. This phase helps in defining the system architecture.

Coding/Implementation: With inputs from the system design, the system is first developed in small programs called units. Each unit is developed and tested for its functionality.

Integration and Testing: The output of the previous phase is integrated here. The testing team tests the application for defects in the application. Those defects will be fixed by the coding team. Finally the developed units are integrated after which they are tested for faults and failures.

Deployment of the system / Operations: After the tests are done the product is deployed to the customer as it will be released to the market. This phase includes installation, migration supporting the user environment.

Maintenance: When issues are faced by the user patches are released. And as per the user requirements better versions will be released. This phase helps to deliver users a better experience.

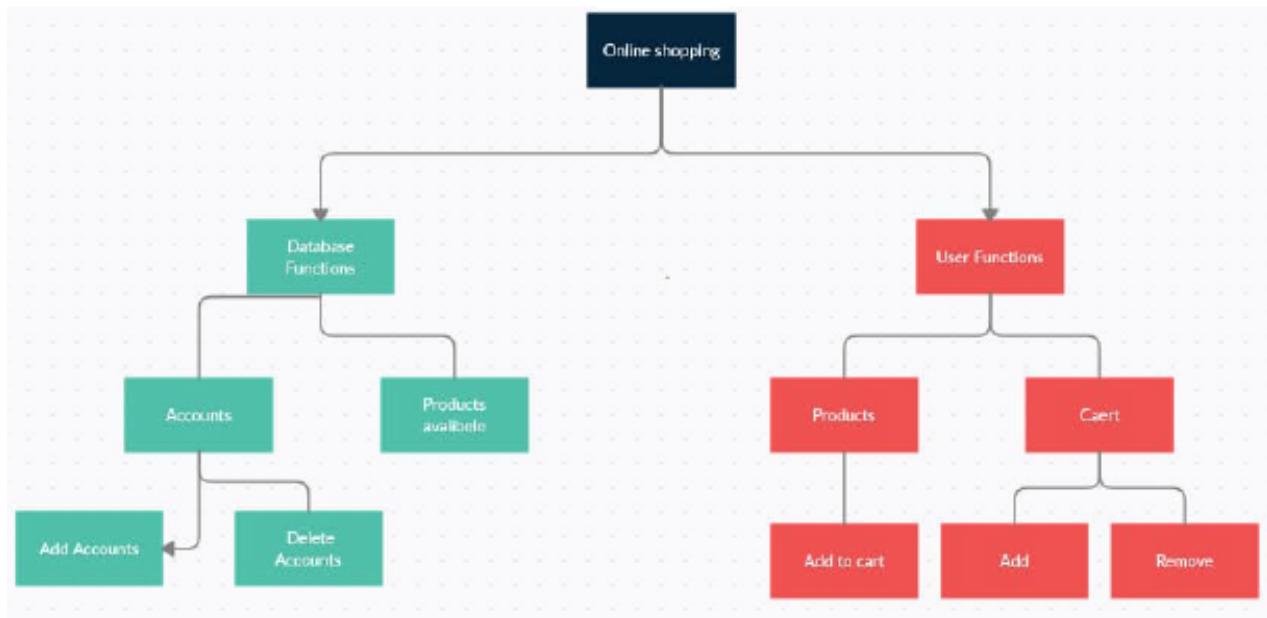
2.2 Development Tools

- Planning Tool: GanttProject, a project management software has been used to create the Gantt Chart and the Work Breakdown Structure (WBS). It is a free software that has a GPL-License (GNU General Public License). It has been used to create the Gantt Chart along with the resource allocation for the project.

StarUML has been used to create a flowchart for the Work Breakdown Structure. It is a UML tool by MKLab which is running under a modified version of GNU-GPL , although it now runs on a proprietary license.

- Design Tool: The designing involves firstly drawing the use case diagrams and also the class diagrams besides some UI designs. For this purpose the tool that is used is StarUML.
- Version Control: Tracking versions of the project and reverting back to older versions and redoing some parts is a crucial aspect in an iterative model. For the purpose of version control, GitHub would be used. GitHub is open source and hence it is the preferred version control tool.
- Development Tool: The application would be developed using python. Python development would be done using the Anaconda tool.
- Tool for Bug Tracking: Tracking and fixing bugs is a crucial aspect for any project. For tracking bugs, BugZilla would be used. The reason for this is that BugZilla is open source which meets our aim to use open source software.
- Tool for Testing: For testing purposes, Selenium would be used which provides a wide range of testing tools. For server testing, the popular open source tool APACHE JMeter would be used. Another tool that could potentially be used is Multi-mechanize which is an open-source framework of performance and loading tests that runs concurrent Python scripts to generate load. It is used to test performance and scalability.

2.3 Work Breakdown Structure



2.4 Deliverables

- SRS Document - The SRS document contains all the functionalities, the scope and basically the end to end details regarding this project. This is a reuse component as it is bound to be updated many times during the course of this project.
- Design and Analysis - This component comprises all the use case diagrams, work breakdown structure and other visual aids that help in analysis and design. This is a build component.
- Providing better Customer Service - Delivering better customer service is one of the main goals of this project. This would be a build component.
- Faster Response Time - Slick and fast response times are crucial when building an application. A faster response time is one of the deliverables. This would be a build component.

- Product Prototype - A rudimentary prototype would be provided for customer feedback as this project involves an iterative model. This is a reuse component as each prototype would vary at each iteration.
- Website/User Interface - A good user interface is crucial for any application. One of the deliverables in this project would be a user interface or command line tool. This would be a build component.
- Product/Tool - The final product comprising backend and frontend would be one of the key deliverables in this project. This is a build component.
- Project Report - A report elaborating on the various technologies used and the implementation would be presented in a report format upon completion of the project. This would be a build component.

2.5 Effort Distribution

The project falls under the organic model. A software project is said to be an organic type if the team size required is small, the problem is well understood and has been solved in the past and also the team members have a nominal experience regarding the problem.

Formula:

$$\text{Effort} = a * (\text{KLOC})^b$$

$$\text{Time} = c * (\text{Effort})^d$$

For our project we will assume Kilo lines of code = 1.6

For basic COCOMO model

$$a=2.4, b=1.05, c=2.5, d=0.38$$

$$\text{Effort} = 3.93 \text{ person months}, \text{Time} = c(\text{Effort})^d$$

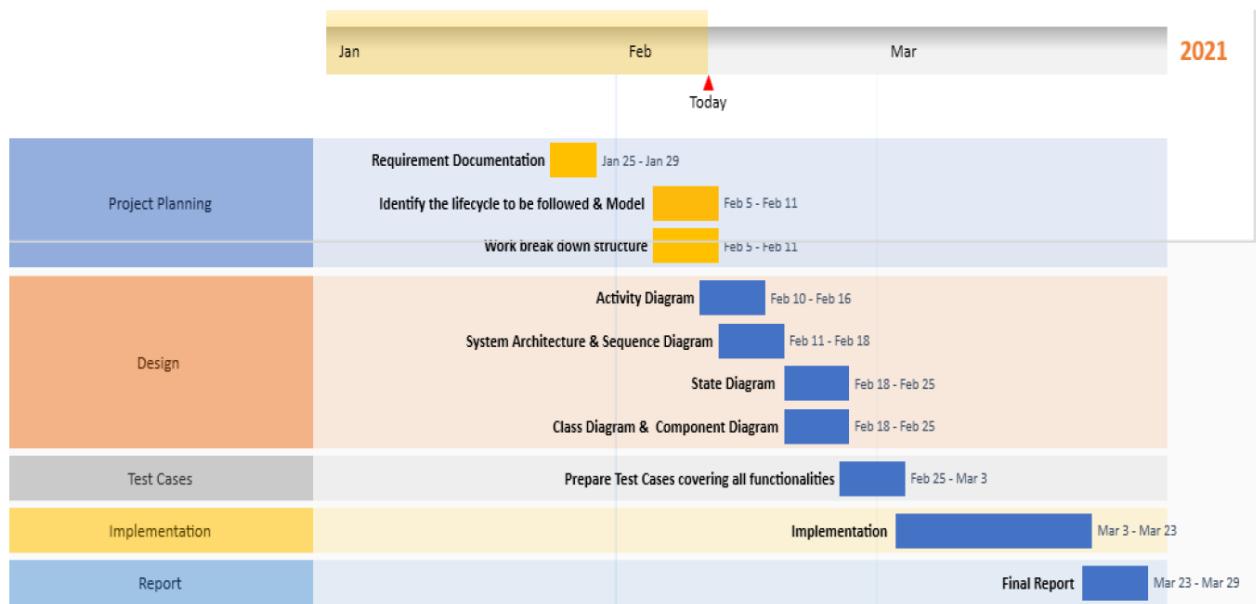
$$\text{Therefore, Time} = 4.21 \text{ months}$$

PROJECT DELIVERABLES	CONTRIBUTIONS
SRS Documentation	All 3 Team Members
Design And Analysis	All 3 Team Members
Interface	Team Members 2 & 3
Model Building (i.e Coding)	All 3 Team Members (Each member would be working on a particular iteration)
Improvement Based On Customer Feedback	All 3 Team Members (Each member would be working on a particular iteration)
Final Integration And Testing	All 3 Team Members
Project Report Documentation	All 3 Team Members

TASKS	TEAM MEMBER 1	TEAM MEMBER 2	TEAM MEMBER 3
SRS Documentation	2	2	2
Design And Analysis	5	5	5
Interface Development	-	15	15

Model Coding	30	30	30
Feedback-Based Improvement	10	10	10
Integration And Testing	20	20	20
Report Documentation	4	4	4

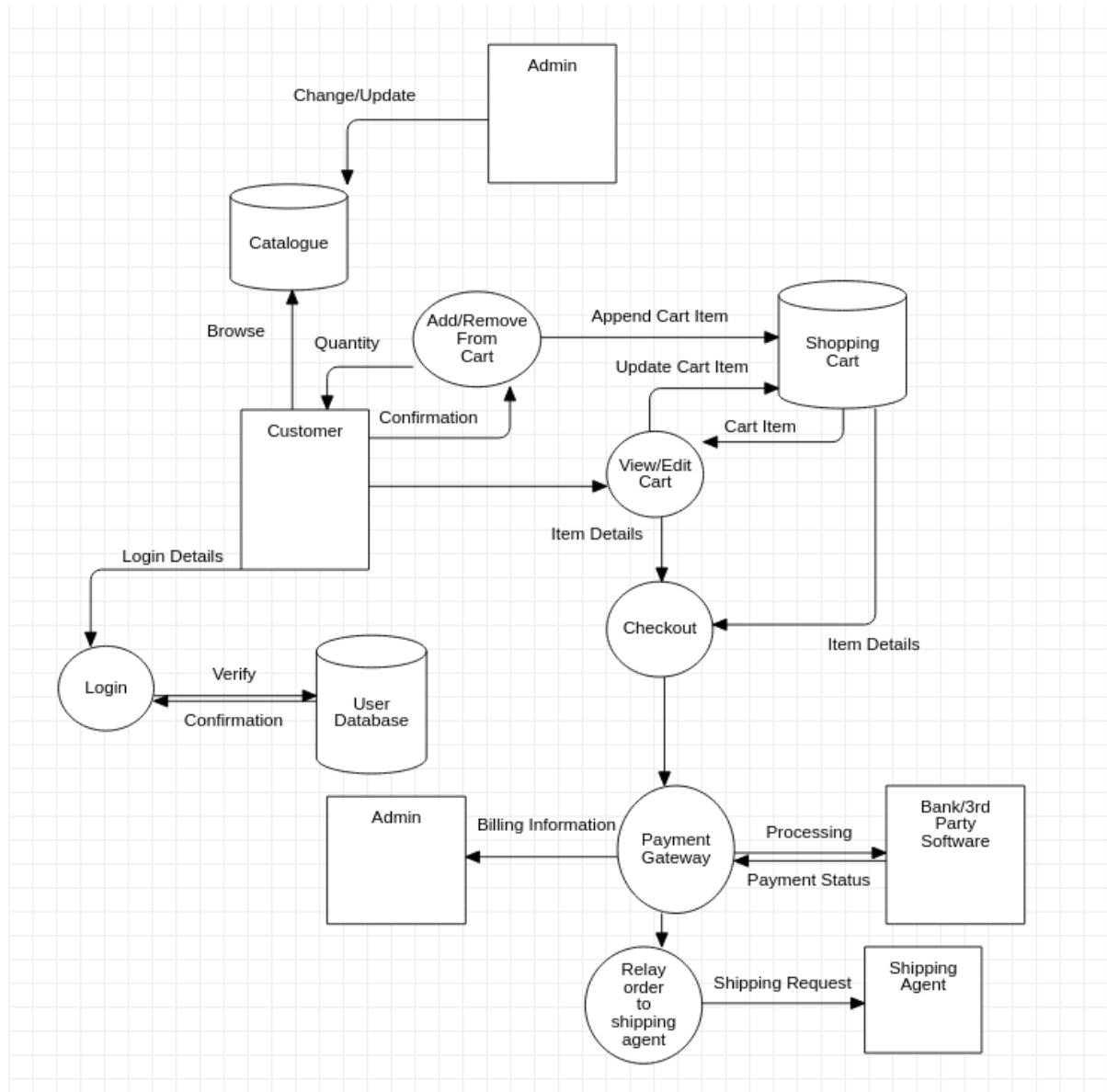
2.6 Gantt Chart



CHAPTER 3

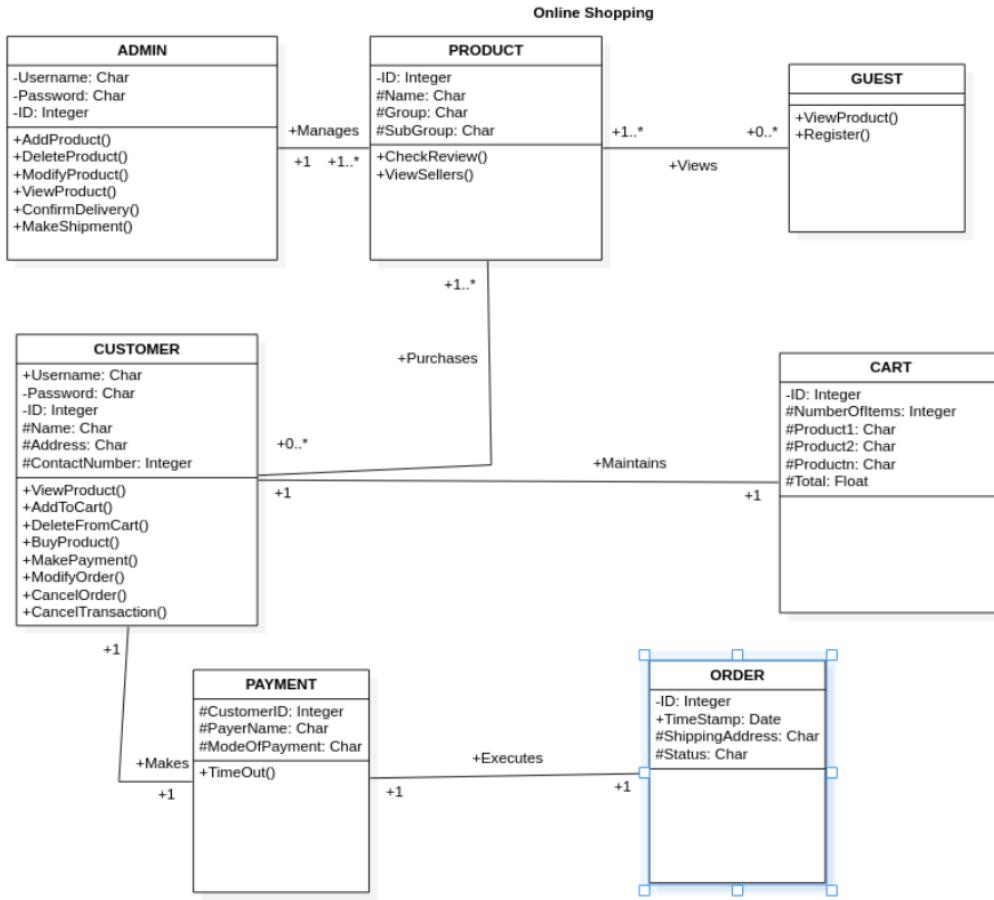
DESIGN DIAGRAMS

3.1 Generic System Architecture



This is a general modular overview of the Online Shopping Application that is to be implemented. Entities are represented in quadrilaterals, storage databases as cylinders and interfaces as circles.

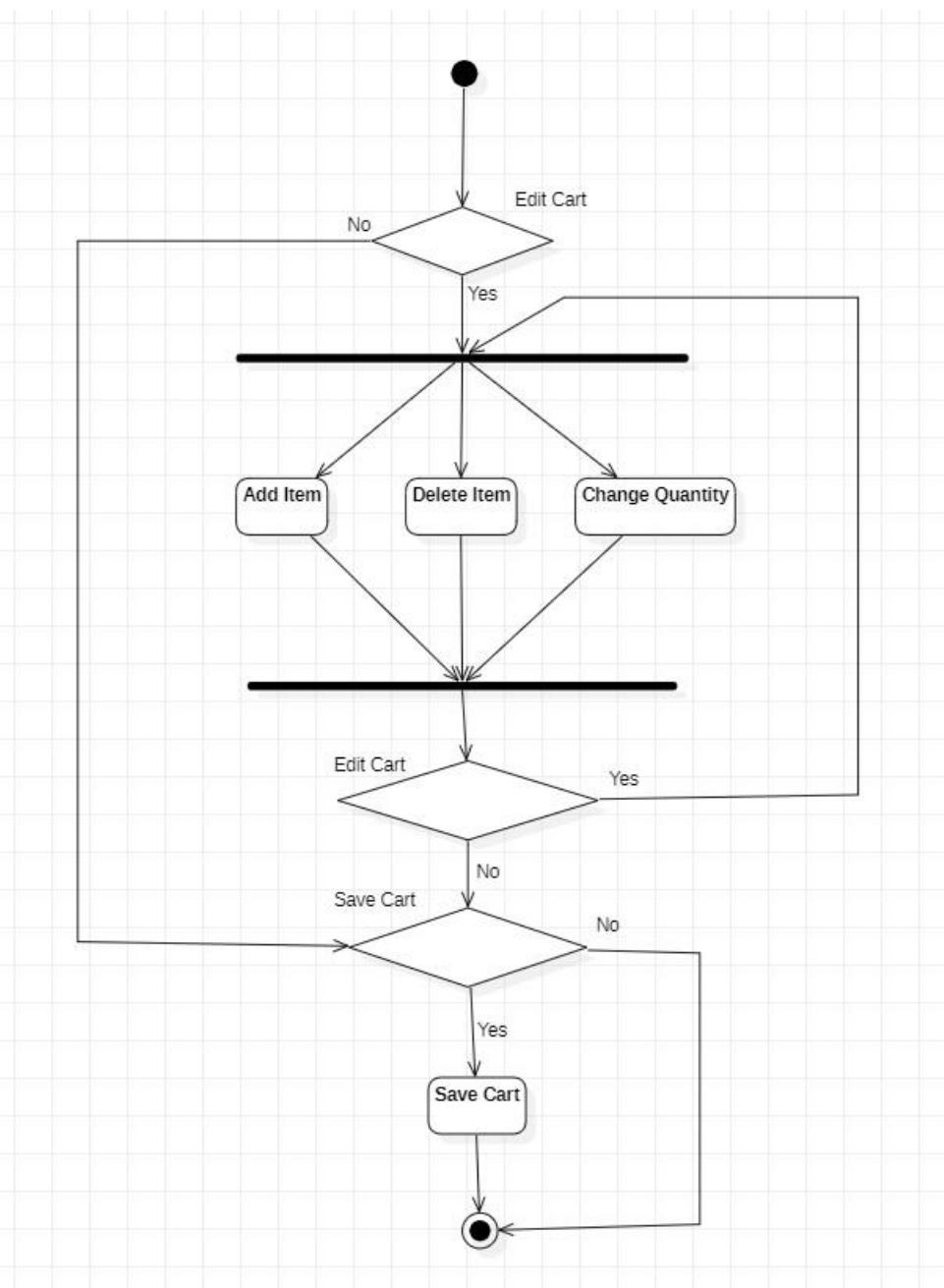
3.2 Class Diagram



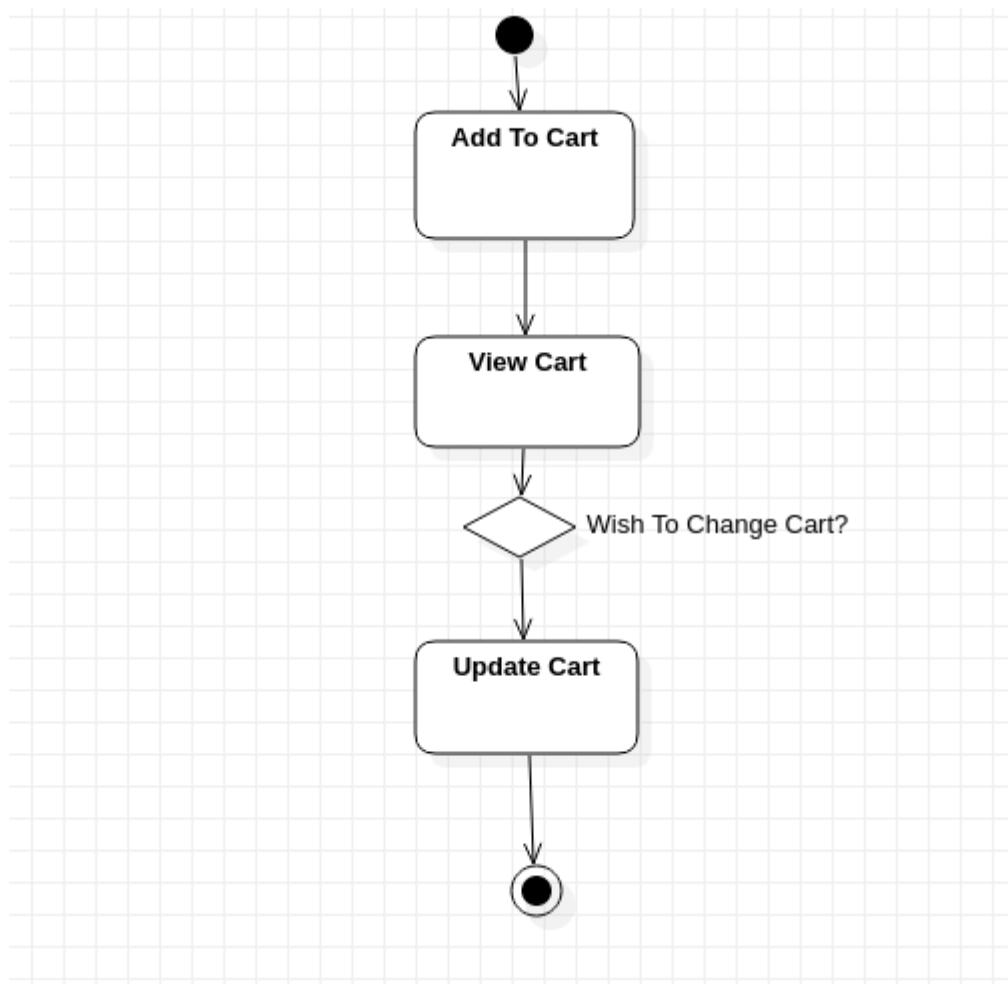
The Class Diagram gives a clear picture of all the classes (entities) that constitute the application. The upper half of the class consists of its attributes whereas the lower half includes all the methods that every class instance can invoke and implement.

3.3 Activity Diagram

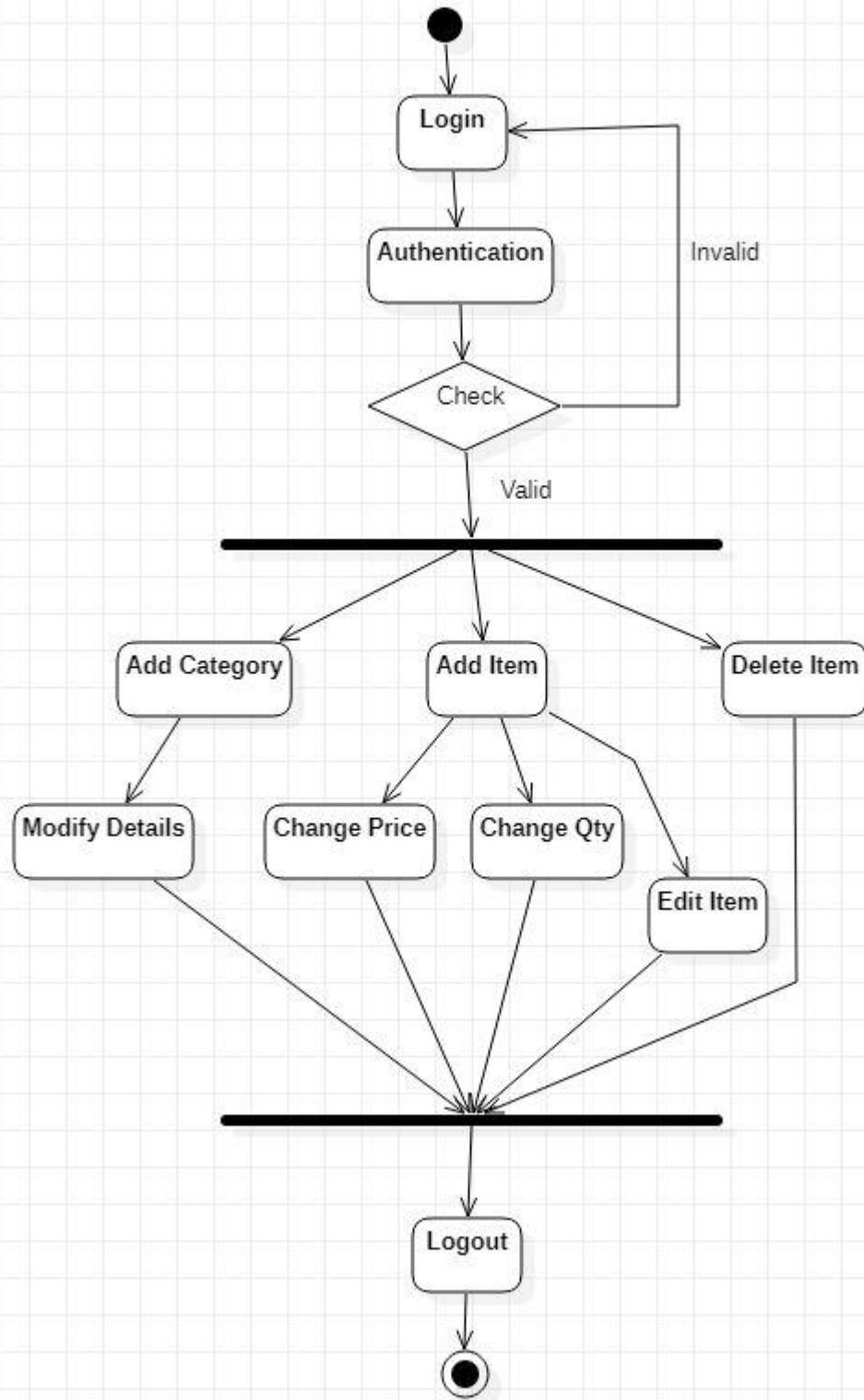
Activity Diagram is a series of action or flow of control describing how the platform would work. Start states and end states are represented by circles. Decision steps are represented by triangles whereas functionalities are represented by quadrilaterals. A fork is a situation wherein the flow can go to either one of the functionalities among many and join is when many functionalities after execution combine to a single output interface.



The above activity diagram describes the flow of managing an online shopping cart.



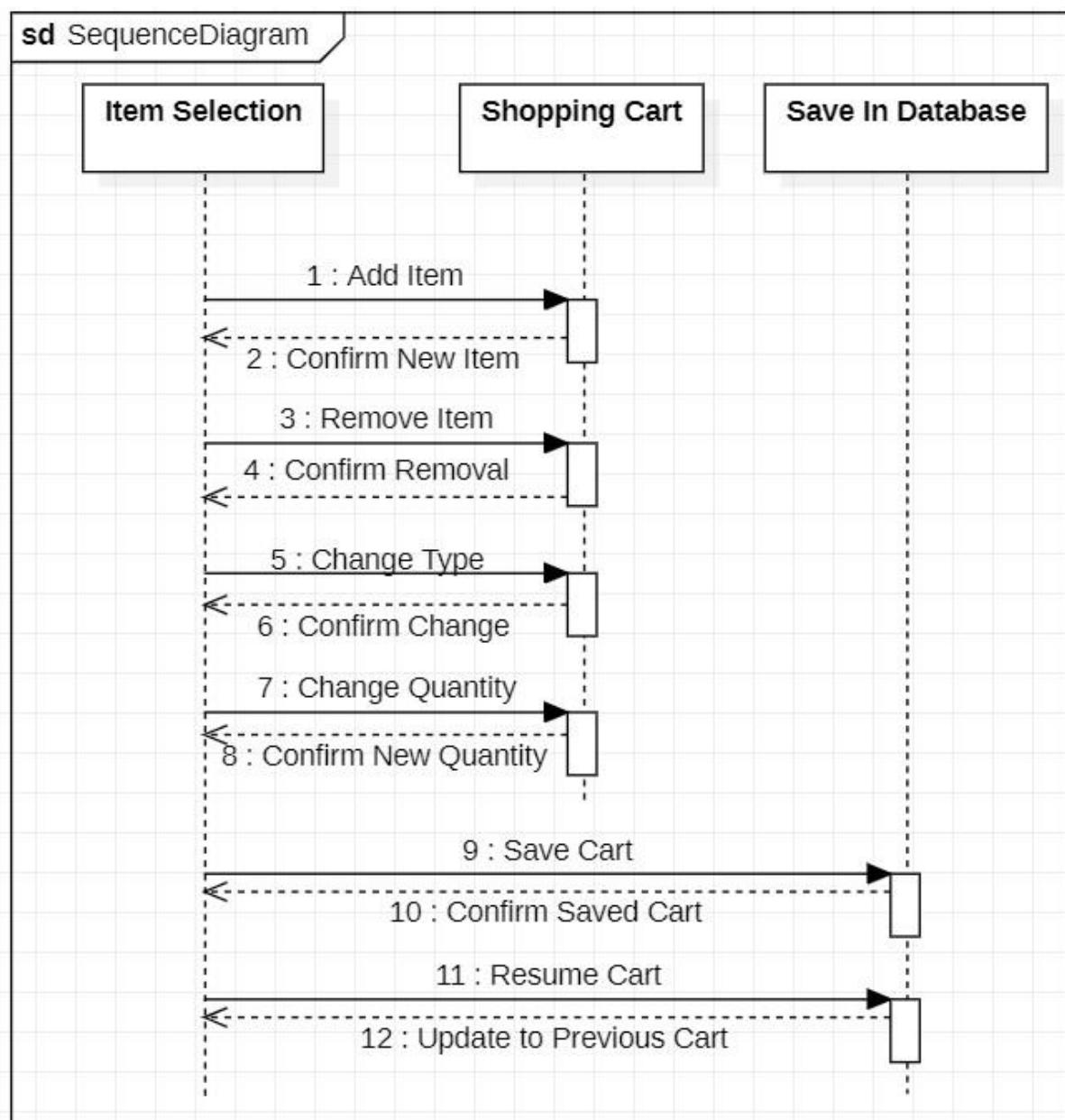
The above activity diagram gives an overview of how to view the cart and modify it if needed.



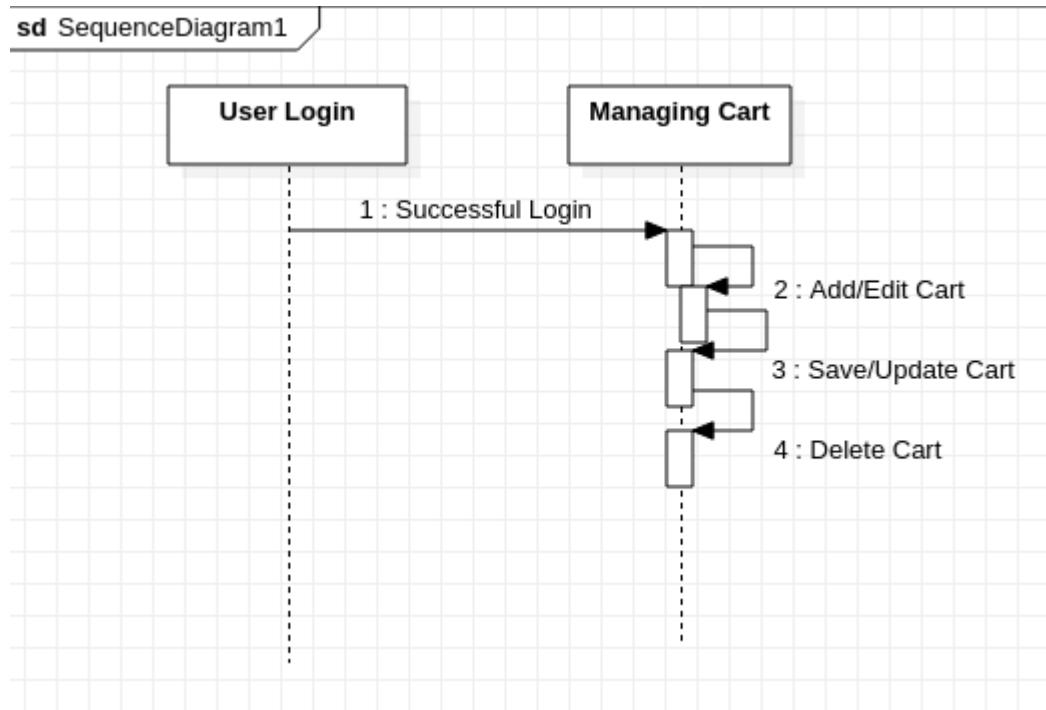
The above activity diagram is represented from the view of the admin who has the access to modify/add/delete the product catalog depending on the inventory.

3.4 Sequence Diagrams

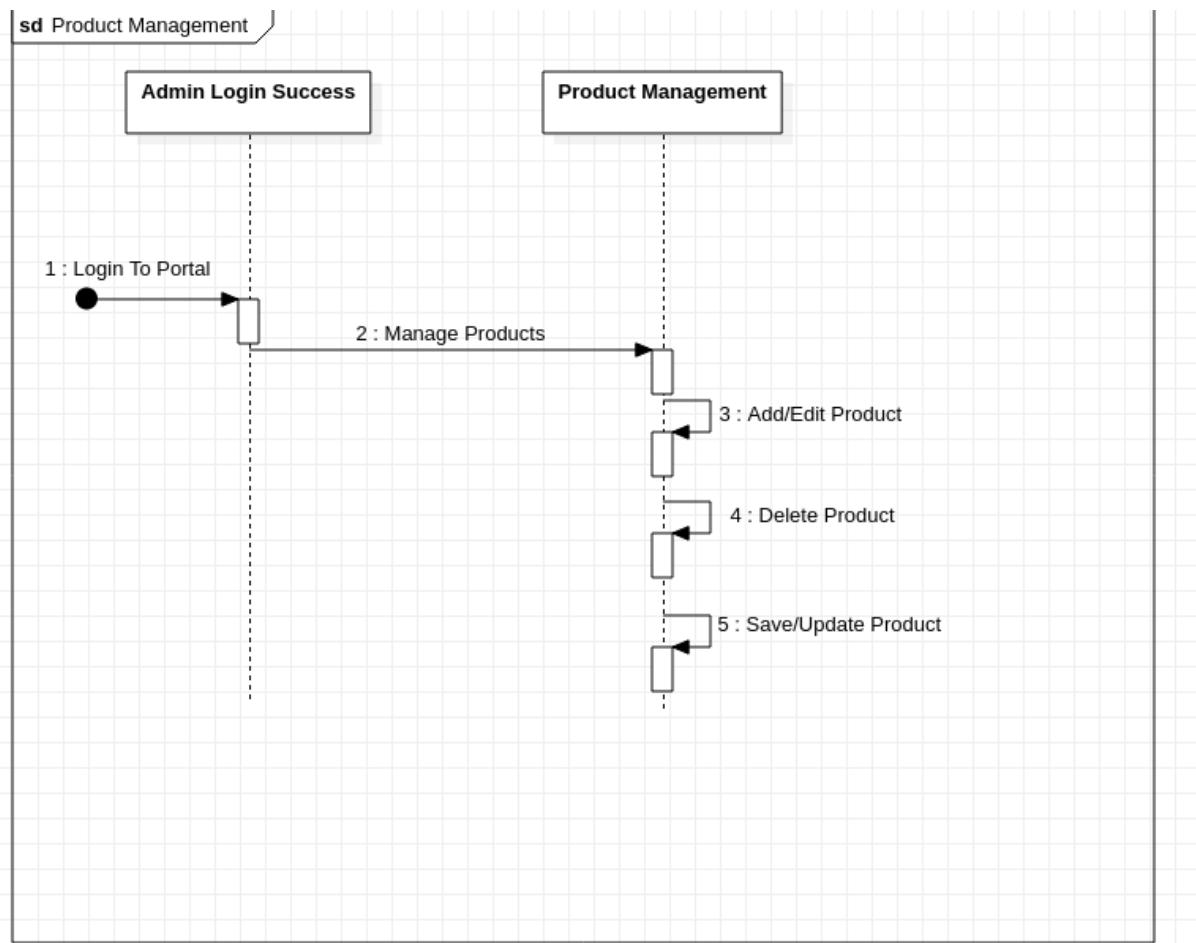
These are interaction diagrams that give a clear picture as to how the operations will be carried out.



The above sequence diagram is for item selection and adding to cart use case



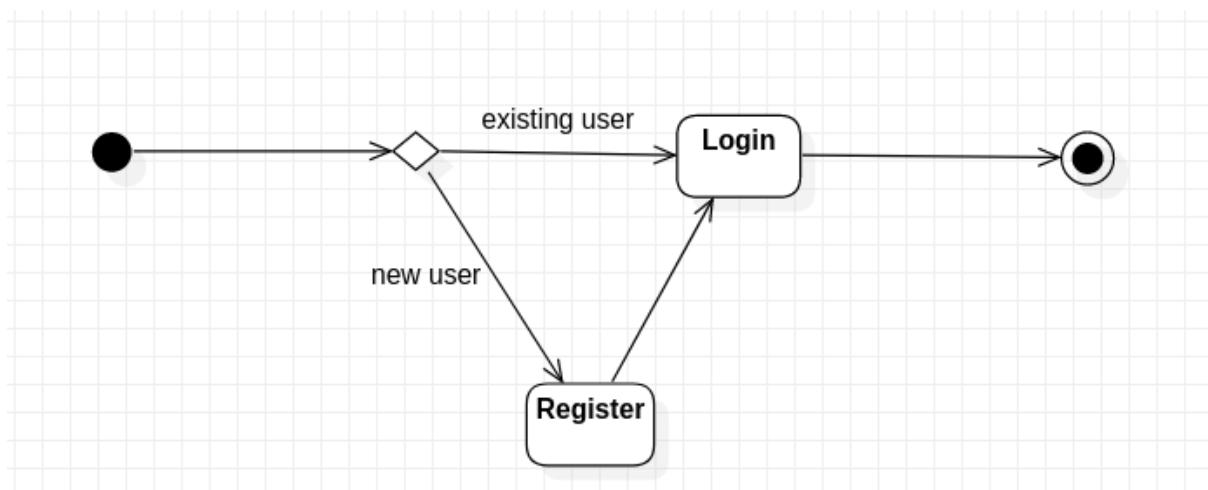
The above sequence diagram is for managing cart use case, and doing operations such as adding to cart, editing the cart, updating the cart and finally deleting the cart.



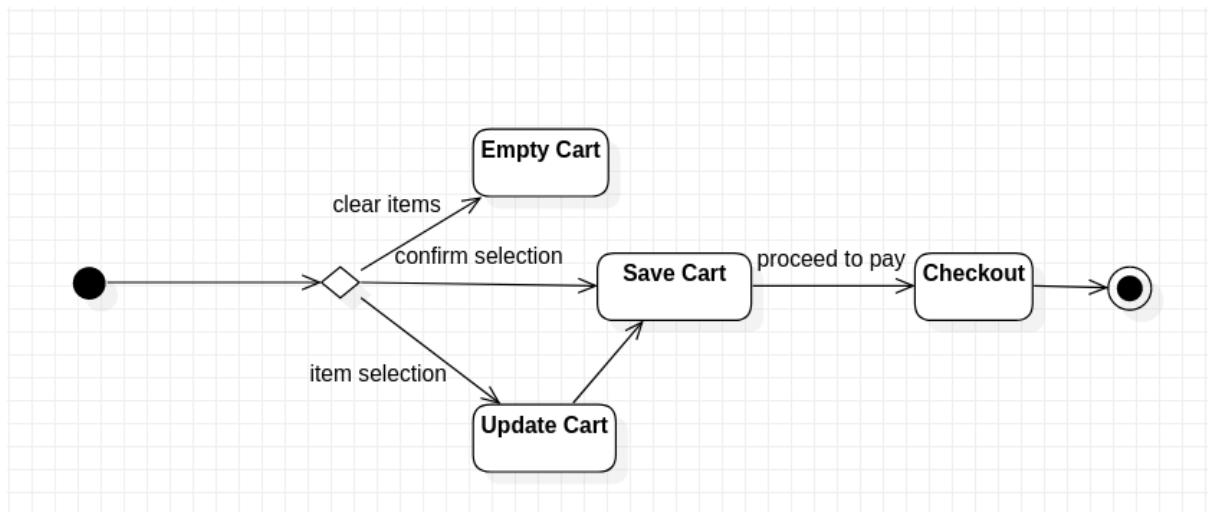
The above sequence diagram is for an admin-enabled product management use case. It shows the sequence of operations to be performed by the admin to perform various operations.

3.5 State Diagrams

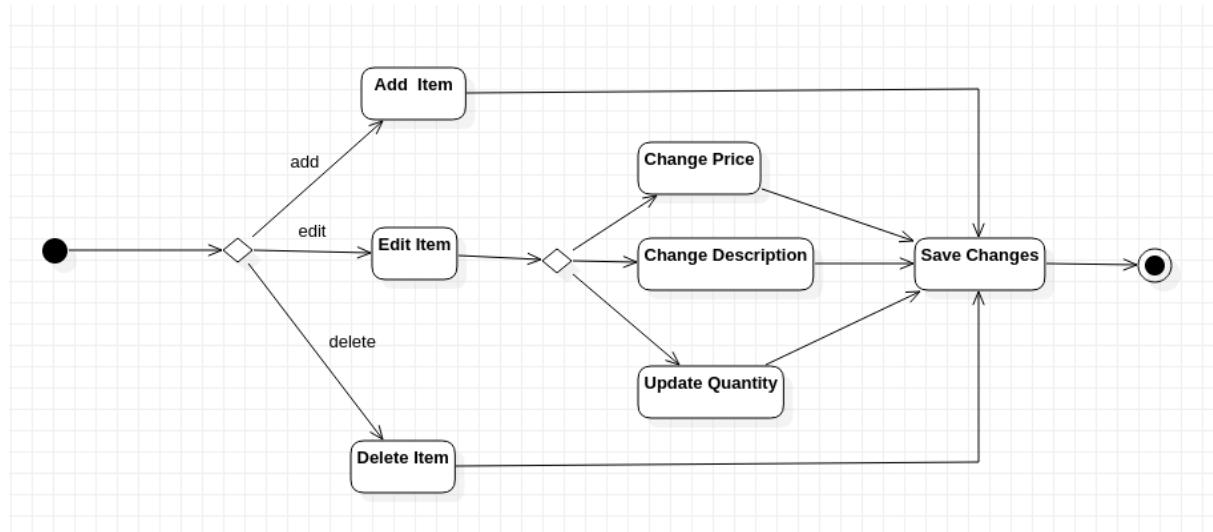
A state diagram is used to represent the condition of the system or part of the system at finite instances of time. Basically it's a diagram that shows temporal behaviour of the system.



The above is a sequence diagram for the user login module. If not already registered, the user needs to register before logging in.



The above is a sequence diagram for managing cart and checkout modules. The cart can be updated and then saved or saved directly before proceeding to the checkout to make the payment. In case the items are cleared, the empty cart state is reached from where one cannot proceed to checkout successfully.



The above is a sequence diagram for the product management module. This is from the admin perspective. The admin can add, edit and delete items in the catalogue and make the changes visible to the customer upon saving them. While editing the items, the admin can change price, quantity and description.

CHAPTER 4

MODULE DESCRIPTION

4.1 Item Selection and adding to cart

This module includes user login/registration and subsequent creation of cart and adding items to said cart. A user needs to register before logging in. The user can select how many of a particular product have to be added to the cart. It has to be ensured that the user is registered before he/she can access their cart.

4.2 Managing Cart

This module includes adding to cart, modifying items in cart, deleting items of cart and final checkout, billing and payment. The user can delete items in the cart, modify the quantity of one or more products in the cart and also proceed to checkout once satisfied with the added products. It is checked that quantity of a product does not exceed the quantity available in the stocks before proceeding to payment.

4.3 Product Management

This module includes the updation of product catalogue based on orders executed and the inventory capacity available. This module is to be implemented on the admin side. The admin can make changes to the product catalogue based on new stock that comes in or based on stock that gets depleted. Other operations that the admin can perform using this module is changing the various vital parameters of the various products being sold on the platform.

CHAPTER 5

TEST CASES

Test Case ID	Name of Module	Test case description	Pre-conditions	Test Steps	Test data	Expected Results	Actual Result	Test Result
ST_01	Admin Registration Module	To test the admin registration functionality	Access to OS Command Prompt, backend files and python files	1. Start Application 2. Enter Choice 2(Register) 3. Enter details	Username: user1 Password: pass_user1	Registration Successful, Proceed to login. Display login portal	Registration Successful, Proceed to login. Login Portal is displayed	Pass
ST_02	Admin Registration Module	To test alert when admin username already taken	Access to OS Command Prompt, backend files and python files	1. Start Application 2. Enter Choice 2(Register) 3. Enter details	Username : user1	Message Prompt 'Username Already Taken' should be displayed	Message Prompt 'Username Already Taken' is displayed	Pass
ST_03	Admin Login Module	To test admin login functionality	Access to OS Command Prompt, backend files and python files and admin already registered	1. Start Application 2. Enter Choice 1(Login) 3. Enter details	Username: user1 Password: pass_user1	Message Prompt 'Admin Login Successful!' should be displayed and product catalogue and associated options to be displayed	Message Prompt 'Admin Login Successful!' is displayed and product catalogue and associated options are displayed	Pass
ST_04	Admin Login Module	To test incorrect credentials alert during admin login	Access to OS Command Prompt, backend files and python files	1. Start Application 2. Enter Choice 1(Login) 3. Enter details	Username: user1 Password: pass_user2	Message prompt 'Incorrect Credentials. Try Again!' should be displayed and ask	Message prompt 'Incorrect Credentials. Try Again!' is displayed and admin is asked to	Pass

						admin to re enter details	re enter details	
ST_05	Admin Exit Module	To test whether admin is able to exit application successfully	Access to OS Command Prompt, backend files and python files and admin must be logged in	1.Start Application 2. Enter Choice 1(Login) 3. Enter correct details 4.Enter choice 5(Exit)	Username: user1, Password: pass_user1	Admin should exit the application successfully	Admin exits the application successfully	Pass
ST_06	User Registration Module	To test the user registration functionality	Access to OS Command Prompt	1.Open CMD/Terminal 2.Enter 2 (Register) 3.Enter Required Details	Username: aaa Password: pass123	Registration should be successful	Registration is successful	Pass
ST_07	User Registration Module	To test alert when username already taken	Access to OS Command Prompt	1.Open CMD/Terminal 2.Enter 2 (Register) 3.Enter Required(Repeated) Details	Username: aaa	Message Prompt 'Username Already Taken' should be displayed	Message Prompt 'Username Already Taken' is displayed	Pass
ST_08	User Login Module	To test user login functionality	Access to OS Command Prompt or Terminal	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details	Username: aaa Password: pass123	Message Prompt 'User Login Successful' should be displayed	Message Prompt 'User Login Successful' is displayed	Pass
ST_09	User Login Module	To test user incorrect password functionality	Access to OS Command Prompt	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required	Username: aaa Password: pass124	Message Prompt 'Incorrect Credentials. Try Again!' should be displayed	Message Prompt 'Incorrect Credentials. Try Again!' is displayed	Pass

				(Wrong)Details				
ST_10	User Logout Module	To test whether user can logout successfully	Access to OS Command Prompt and User has logged in	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4. Enter 6 (Logout)	Username: aaa Password: pass123	Message Prompt 'Logged Out Successfully' must be displayed	Message Prompt 'Logged Out Successfully' is displayed	Pass
UT_01	Admin Product Catalog Module	To test whether admin can access the backend product catalog after logging in	Access to OS Command Prompt, backend files and python files and admin must be logged in	1.Start Application 2. Enter Choice 1(Login) 3. Enter correct details 4. Enter choice 1(View Products)	Username: user1 Password: pass_user1	Backend Product Catalog must be displayed with each product having the details serial number, product ID, product name, current quantity, price and seller's name	Backend Product Catalog is displayed with each product having the details serial number, product ID, product name, current quantity, price and seller's name	Pass
UT_02	Addition to Product Catalogue Module	To test whether admin can add new products to backend product catalog	Access to OS Command Prompt, backend files and python files and admin must be logged in	1.Start Application 2. Enter Choice 1(Login) 3. Enter correct details 4. Enter choice 2(Add Product) 5. Enter product details 6. Enter choice	Username: user1, Password: pass_user1, Product name: Dell Inspiron, Product quantity: 100 Product Price: 55000, Seller: Cloudtail	Message Prompt "Product Added Successfully" should be displayed and product should be present in product catalogue upon verification	Message Prompt "Product Added Successfully" is displayed and product is present in product catalogue upon verification	Pass

				1(View products) to verify addition				
UT_03	Deletion of Product from Catalogue Module	To test whether admin can delete a product from backend product catalogue	Access to OS Command Prompt, backend files and python files and admin must be logged in	1.Start Application 2. Enter Choice 1(Login) 3. Enter correct details 4. Enter choice 3>Delete Product) 5. Enter product serial to be deleted 6. Enter choice 1(View products) to verify deletion	Username: user1, Password: pass_user1, Serial Number: 5	Message Prompt "Successfully deleted product from catalogue" should be displayed and product should not be present in product catalogue upon verification	Message Prompt "Successfully deleted product from catalogue" is displayed and product is not present in product catalogue upon verification	Pass
UT_04	Product Catalogue Modification Module	To test whether admin can modify details of a product in the catalogue	Access to OS Command Prompt, backend files and python files and admin must be logged in	1.Start Application 2. Enter Choice 1(Login) 3. Enter correct details 4. Enter choice 4>Modify Product) 5. Enter product serial to be modified 6. Enter choice 3 to modify price 7. Enter updated price	Username: user1, Password: pass_user1, Serial Number: 4, Modified Price: 17000	Message Prompt "Modification Successful" should be displayed and updated details of product should be present in product catalogue upon verification	Message Prompt "Modification Successful" is displayed and updated details of product is present in product catalogue upon verification	Pass

				8. Enter 5 to confirm modification 9. Enter choice 1(View products) to verify modification				
UT_05	Admin Product Management Module	To test alert when data entered in wrong format (Eg. while adding product enter quantity as 'a')	Access to OS Command Prompt, backend files and python files and admin must be logged in	1.Start Application 2. Enter Choice 1(Login) 3. Enter correct details 4. Enter choice 2(Add Product) 5. Enter product details with 'a' as quantity	Username: user1, Password: pass_user1	Message Prompt 'Incorrect Format' should be displayed and admin should be directed to options menu	Message Prompt 'Incorrect Format' is displayed and admin is directed to options menu	Pass
UT_06	Admin Product Management Module	To test alert when admin enters invalid option	Access to OS Command Prompt, backend files and python files and admin must be logged in	1.Start Application 2. Enter Choice 1(Login) 3. Enter correct details 4. Enter choice 6(invalid choice)	Username: user1, Password: pass_user1	Message Prompt 'Incorrect Choice' should be displayed and admin should be directed to options menu	Message Prompt 'Incorrect Choice' is displayed and admin is directed to options menu	Pass
UT_07	Admin Product Management Module	To test alert when admin enters string characters instead of choice number	Access to OS Command Prompt, backend files and python files and admin must be	1.Start Application 2. Enter Choice 1(Login) 3. Enter correct details 4. Enter	Username: user1, Password: pass_user1	Message Prompt 'Incorrect Format' should be displayed and admin should be directed to options menu	Message Prompt 'Incorrect Format' is displayed and admin is directed to options menu	Pass

			logged in	choice 'one' (invalid choice)		options menu		
UT_08	Product Catalog Module	To test whether user can access product catalog	Access to OS Command Prompt and User has logged in	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4. Enter 1 (View Products)	Username: aaa Password: pass123	Product catalog must be displayed with name, quantity, price and seller	Product catalog is displayed with necessary attribute details	Pass
UT_09	Cart Addition Module	To test whether user can add items to cart	Access to OS Command Prompt and and User has logged in and has viewed Product Catalog	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4.Enter 1 (View Products) 5.Enter 3(Add Cart)	Username: aaa Password: pass123 Enter The Name Of Product You Wish To Add: Vivo Enter The Quantity You Wish To Add : 1	Message Prompt 'Successfully Added Item To Cart' should be displayed	Message Prompt 'Successfully Added Item To Cart' is displayed	Pass
UT_10	Cart Addition Module	To test whether the added changes are persisted	Access to OS Command Prompt and and User has logged in	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4.Enter 1 (View Products) 5.Enter 2(View Cart)	Username: aaa Password: pass123	Updated cart with {'Vivo':1} must be displayed	Updated cart with {'Vivo':1} must be displayed	Pass
UT_11	Cart Addition Module	To test whether addition of pre-existing product	Access to OS Command Prompt and and User	1.Open CMD/Terminal 2.Enter 1 (Login)	Username: aaa Password: pass123 Enter The	Updated cart with {'Vivo':3} must be displayed	Updated cart with {'Vivo':3} is displayed	Pass

		makes any change in quantity	has logged in	3.Enter Required Details 4.Enter 1 (View Products) 5.Enter 3(Add Cart)	Name Of Product You Wish To Add: Vivo Enter The Quantity You Wish To Add : 2			
UT_12	Cart Addition Module	To test whether a negative number of products can be added	Access to OS Command Prompt and User has logged in	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4.Enter 1 (View Products) 5.Enter 3(Add Cart) 6.Enter Product name and quantity	Username: aaa Password: pass123 Enter The Name Of Product You Wish To Add: Vivo Enter The Quantity You Wish To Add : -10	Request to user of the sort, "Please Enter A Quantity Greater than 0"	Request to user of the sort, "Please Enter A Quantity Greater than 0"	Pass
UT_13	Cart Addition Module	To test whether an item not present in product list can be added	Access to OS Command Prompt and User has logged in	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4.Enter 1 (View Products) 5.Enter 3(Add Cart) 6.Enter Product name and quantity	Username: aaa Password: pass123 Enter The Name Of Product You Wish To Add: Oppo Enter The Quantity You Wish To Add : 5	Request to user of the sort, "Item Not Present in Catalogue Try Again"	Request to user of the sort, "Item Not Present in Catalogue Try Again"	
UT_14	Cart Addition Module	To test whether a non-number quantity	Access to OS Command Prompt and	1.Open CMD/Terminal 2.Enter 1	Username: aaa Password: pass123	Request to user of the sort, "Please"	Request to user of the sort, "Please"	Pass

		can be added	and User has logged in	(Login) 3.Enter Required Details 4.Enter 1 (View Products) 5.Enter 3(Add Cart) 6.Enter Product name and quantity	Enter The Name Of Product You Wish To Add: Oppo Enter The Quantity You Wish To Add : xqd	Enter a Number Greater than 0"	Enter a Number Greater than 0"	
UT_15	Cart Modification Module	To test whether the modified product is not repeated or added	Access to OS Command Prompt and and User has logged in	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4.Enter 1 (View Products)(item:Vivo-5) 5.Enter 4(Modify Cart) 6.Enter Product name and quantity 7.Enter 1 (View Products)	Username: aaa Password: pass123 Enter The Name Of Product You Wish To Modify: Vivo Enter The Quantity You Wish To Add : 5	A singular item 'Vivo' is present in quantity 10	A singular item 'Vivo' is present in quantity 10	Pass
UT_16	Cart Modification Module	To test whether an item not present in the cart can be modified	Access to OS Command Prompt and and User has logged in	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4.Enter 1 (View Products)-ensure it is empty	Username: aaa Password: pass123 Enter The Name Of Product You Wish To Modify: Vivo Enter The Quantity You Wish	Alerts the user that item is not present in cart	Alerts the user that item is not present in cart	Pass

				5.Enter 4(Modify Cart) 6.Enter Product name and quantity	To Add : 5			
IT_01	Checko ut Module	To test whether cart is emptied after checkout	Access to OS Command Prompt and and User has logged in	1.Open CMD/Termin al 2.Enter 1 (Login) 3.Enter Required Details 4.Enter 1 (View Products) 5.Enter 6(Checkout) 7 Enter 2 (View Cart	Username: aaa Password: pass123	Lists items in Cart and deletes cart. Cart when viewed is Now Empty	Lists items in Cart and deletes cart. Cart when viewed is Now Empty	Pass
IT_02	Checko ut Module	To test whether stock limit is breached during checkout	Access to OS Command Prompt and and User has logged in	1.Open CMD/Termin al 2.Enter 1 (Login) 3.Enter Required Details 4.Ensure Products currently present in cart are out of stock as they are checked out by another user 5.Enter 6(Checkout) 7 Enter 2 (View Cart	Username: aaa Password: pass123 Username: bbb Password: bbb	Mentions to the user that current Stock of the item in cart is less than in the inventory	Mentions to the user that current Stock of the item in cart is less than in the inventory	Pass
IT_03	Checko ut Module	To test whether an empty cart	Access to OS Command	1.Open CMD/Termin al	Username: aaa Password:	Mentions to the user that checkout is	Mentions to the user that	Pass

		can be checked out	Prompt and and User has logged in	2.Enter 1 (Login) 3.Enter Required Details 4.Ensure no products present in cart 5.Enter 6(Checkout) 7 Enter 2 (View Cart)	pass123	not possible when no items are present in the cart	checkout is not possible when no items are present in the cart	
IT_04	Checkout Module	To test whether multiple inconsistencies in cart are displayed	Access to OS Command Prompt and and User has logged in	1.Open CMD/Terminal 2.Enter 1 (Login) 3.Enter Required Details 4.Ensure Items over stock are present and Items not in stock present in cart 5.Enter 6(Checkout) 7 Enter 2 (View Cart)	Username: aaa Password: pass123	Alerts the user that multiple items are not in stock or are over stock and does not generate bill and does not reduce checkout successfully	Alerts the user that multiple items are not in stock or are over stock and does not generate bill and does not reduce checkout successfully	Pass

CHAPTER 6

OUTPUT SCREENSHOTS

Admin View (Product_Management.py):-

1. Administrator Login

```
Enter your choice
1. login
2. register
3. exit
Choice:1
-----Admin Portal-----
Enter username: aa
Enter password: aa
Admin Login Successful!

Serial number 1
Product ID -> 1
Product Name -> pen
Current Product Quantity -> 200
Product Price -> 10
Product Seller -> cloud

Serial number 2
Product ID -> 2
Product Name -> book
Current Product Quantity -> 25
Product Price -> 60
Product Seller -> vidya

Serial number 3
Product ID -> 3
Product Name -> One Plus
Current Product Quantity -> 100
Product Price -> 47000
Product Seller -> OP

Serial number 4
Product ID -> 4
Product Name -> Samsung
Current Product Quantity -> 474
Product Price -> 10000
Product Seller -> SM

Serial number 5
Product ID -> 5
Product Name -> Vivo1
```

2. Invalid User Attempt

```
Enter your choice
1. login
2. register
3. exit
Choice:1
-----Admin Portal-----
Enter username: a
Enter password: a
Incorrect Credentials. Try Again!
-----Admin Portal-----
Enter username: aa
Enter password: aa
Admin Login Successful!
```

3. Add Product to Catalogue

```
1. View Products
2. Add Product
3. Delete Product
4. Modify Product
5. Exit
Enter your choice: 2

----Add Product----
Enter product name: Micromax
Enter product quantity: 10
Enter product price: 150000
Enter seller name: BharatBhej
Product Added successfully!
```

4. New Item Present in Catalogue

```
Serial number 6
Product ID -> 6
Product Name -> Micromax
Current Product Quantity -> 10
Product Price -> 150000
Product Seller -> BharatBhej
```

```
Enter serial number of product to be modified: 6
```

5. Modify Existing Product

```
-----
1. Modify Product name
2. Modify Product Quantity
3. Modify Product Price
4. Modify Seller name
5. Confirm Modifications
Enter your choice:2
Enter updated value:15_
```

6. Confirm Modification

```
-----
1. Modify Product name
2. Modify Product Quantity
3. Modify Product Price
4. Modify Seller name
5. Confirm Modifications
Enter your choice:5
Modification Successful
```

7. View Changes

```
Serial number 6
Product ID -> 6
Product Name -> Micromax
Current Product Quantity -> 15
Product Price -> 150000
Product Seller -> BharatBhej
```

User View (User_Cart.py) :-

8. User Catalogue View

```
Enter your choice
1. Login
2. Register

Choice:1
-----User Login Portal-----
Enter username: aaa
Enter password: pass123
User Login Successful!

What Do You Wish To Do?
-----
1. View Products
2. View Cart
3. Add Cart
4. Modify Cart
5. Delete Cart
6. Checkout
7. Logout
Enter your choice: 1
Serial number 1
Product ID -> 1
Product Name -> pen
Current Product Quantity -> 200
Product Price -> 10
Product Seller -> cloud

Serial number 2
Product ID -> 2
Product Name -> book
Current Product Quantity -> 25
Product Price -> 60
Product Seller -> vidya

Serial number 3
Product ID -> 3
Product Name -> One Plus
Current Product Quantity -> 100
Product Price -> 47000
Product Seller -> OP
```

9. Add Product to Cart

```
What Do You Wish To Do?  
-----  
1. View Products  
2. View Cart  
3. Add Cart  
4. Modify Cart  
5. Delete Cart  
6. Checkout  
7. Logout  
Enter your choice: 2  
    Product   Quantity   Price   Amount  
                           Total =>      0  
  
What Do You Wish To Do?  
-----  
1. View Products  
2. View Cart  
3. Add Cart  
4. Modify Cart  
5. Delete Cart  
6. Checkout  
7. Logout  
Enter your choice: 3  
Enter The Name Of The Product You Wish To Add:pen  
Enter The Quantity You Wish To Add:15  
Successfully Added Item To Cart!  
  
What Do You Wish To Do?  
-----  
1. View Products  
2. View Cart  
3. Add Cart  
4. Modify Cart  
5. Delete Cart  
6. Checkout  
7. Logout  
Enter your choice: 2  
    Product   Quantity   Price   Amount  
          pen           15        10       150  
                           Total =>      150
```

10.View Item in Cart

```
Enter your choice: 4
Enter The Name Of The Product You Wish To Modify:pen
Enter The Changed Quantity:45
Item Present
Successfully Modified Item In Cart!

What Do You Wish To Do?
-----
1. View Products
2. View Cart
3. Add Cart
4. Modify Cart
5. Delete Cart
6. Checkout
7. Logout
Enter your choice: 2
    Product   Quantity   Price   Amount
        pen           45       10      450
                           Total =>      450

What Do You Wish To Do?
-----
1. View Products
2. View Cart
3. Add Cart
4. Modify Cart
5. Delete Cart
6. Checkout
7. Logout
Enter your choice: 5
Successfully Deleted Cart!

What Do You Wish To Do?
-----
1. View Products
2. View Cart
3. Add Cart
4. Modify Cart
5. Delete Cart
6. Checkout
7. Logout
Enter your choice: 2
    Product   Quantity   Price   Amount
                           Total =>      0
```

11. Checkout Cart and Bill Production

```
What Do You Wish To Do?  
-----  
1. View Products  
2. View Cart  
3. Add Cart  
4. Modify Cart  
5. Delete Cart  
6. Checkout  
7. Logout  
Enter your choice: 2  
Product    Quantity    Price    Amount  
Samsung        3      10000     30000  
                           Total =>   30000  
  
What Do You Wish To Do?  
-----  
1. View Products  
2. View Cart  
3. Add Cart  
4. Modify Cart  
5. Delete Cart  
6. Checkout  
7. Logout  
Enter your choice: 6  
This is the address specified in user details  
Would you like to continue with the address specified for delivery?(Y/N)  
Y  
  
-----BILL-----  
Product    Quantity    Price    Amount  
Samsung        3      10000     30000  
                           Total =>   30000  
-----  
Successfully Deleted Cart!  
  
What Do You Wish To Do?  
-----  
1. View Products  
2. View Cart  
3. Add Cart  
4. Modify Cart  
5. Delete Cart  
6. Checkout  
7. Logout  
Enter your choice: 2  
Product    Quantity    Price    Amount  
                           Total =>       0
```

12. Logout

```
What Do You Wish To Do?  
-----  
1. View Products  
2. View Cart  
3. Add Cart  
4. Modify Cart  
5. Delete Cart  
6. Checkout  
7. Logout  
Enter your choice: 7  
User Logged Out Successfully
```

Storage Files :-

13. Admin Details

```
 admins.csv
 1 id,username,password
 2 1,aa,aa
 3 2,bb,bb
 4 3,cc,cc
```

14. Saved User Cart

```
 cart.csv
 1 ID,username,cart_items
 2 1,aaa,"{""Samsung"": 3}"
 3 2,user1,{}
```

15. Item Checked Out

```
 checkout.csv
 1 username,address,contact,status,items
 2 a,abc,9,Unshipped,{'Vivo': 1}
 3 aaa,banashankari,9999999999,Unshipped,"{'Vivo': 5, 'Samsung': 3}"
```

16. Product Catalogue

```
 products.csv
 1 id,name,quantity,price,seller
 2 1,pen,100,10,cloud
 3 2,book,25,60,vidya
 4 3,One Plus,100,45000,OP
 5 4,Samsung,491,10000,SM
 6 5,Vivo,195,15000,OZ
```

17. User Details

```
 users.csv
 1 ID,username,password,name,address,contact,email
 2 1,aaa,pass123,aaa,banashankari,9999999999,aaa@yahoo.com
 3 2,user1,pass_user1,user1,malleshwaram,9000990009,user1@gmail.com
```