

BEATSUM

Final Year Project

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BS in Computer Science



Department of Computer Science

Faculty of Computer Science & Information Technology

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Plagiarism Free Certificate

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Project Report

BEATSUM

Change Record

Author(s)	Version	Date	Notes	Supervisor's Signature
	1.0		<Original Draft>	
			<Changes Based on Feedback from Supervisor>	
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APPROVAL

PROJECT SUPERVISOR

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PROJECT MANAGER

Comments: _____

Date: _____ Signature: _____

HEAD OF THE DEPARTMENT

Comments: _____

Date: _____ Signature: _____

Dedication

This work is dedicated to my teachers who guided us and believed us. We learned so many new things and above all, they motivated us. After that we would like to dedicate this work to the whole department because they worked so hard to provide us best possible environment for doing do.

Acknowledgements

I am really thankful to my supervisor who has supervised our project regularly. She went through our work and helped us to improve our work. She gave her efforts to make this project possible. We have worked with her on technicalities, issues and documentation of our project. Her involvement has motivated us to work more efficiently.

I am really thankful to our department for providing us a learning environment throughout our regular studies. We have learned so much in that environment and due to that we have been able to make our work possible.

Executive Summary

BeatSum is online shopping application which brings out ease for its Customers to buy products from their smartphones. Our project is commercial based. It is Mobile Application for E-commerce (online shopping) business. It has many innovative features including Artificial intelligence. Its interface is user friendly. It is very efficient to use and accessible. This mobile application involves following basic features.

- Login/logout
- Edit/delete/update products
- catalogs
- buying/selling
- searching/recommendations
- Payment

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Chapter 1

Introduction

BeatSum is a commercial project. As this is the age of technology, so as per demand of time our project is based on those features and services which a person needs while shopping online. A user-friendly interface and usability are enhanced in this software. It has many innovative features including Artificial intelligence. It is an accessible application.

1.1. Background

IT industry is developing rapidly in our country. Every businessman wants to commercialize his/her products on digital platform. Our business plan is to create our own commercialized mobile application for our own business. Our products will get more accessible by this mean. So as per need of our industry we are opting this project.

1.2. Motivations and Challenges

There is existing system of daraz.pk which will be our main competition. Our main purpose will be to provide a better user interface to our customers and better services. Our marketing strategy will be the game changer for our project.

1.3. Goals and Objectives

The goal of our project will be based on

- More features and better user interface than our competitors i.e. Daraz
- Enhanced interaction with the user on the basis of better and accurate search quality.
- A convenient search system via voice input as well as keyboard input.
- Improved user experience and usability.

- Product availability and varieties.
- Reliable and secure services.
- Better marketing strategies to reach maximum customers.

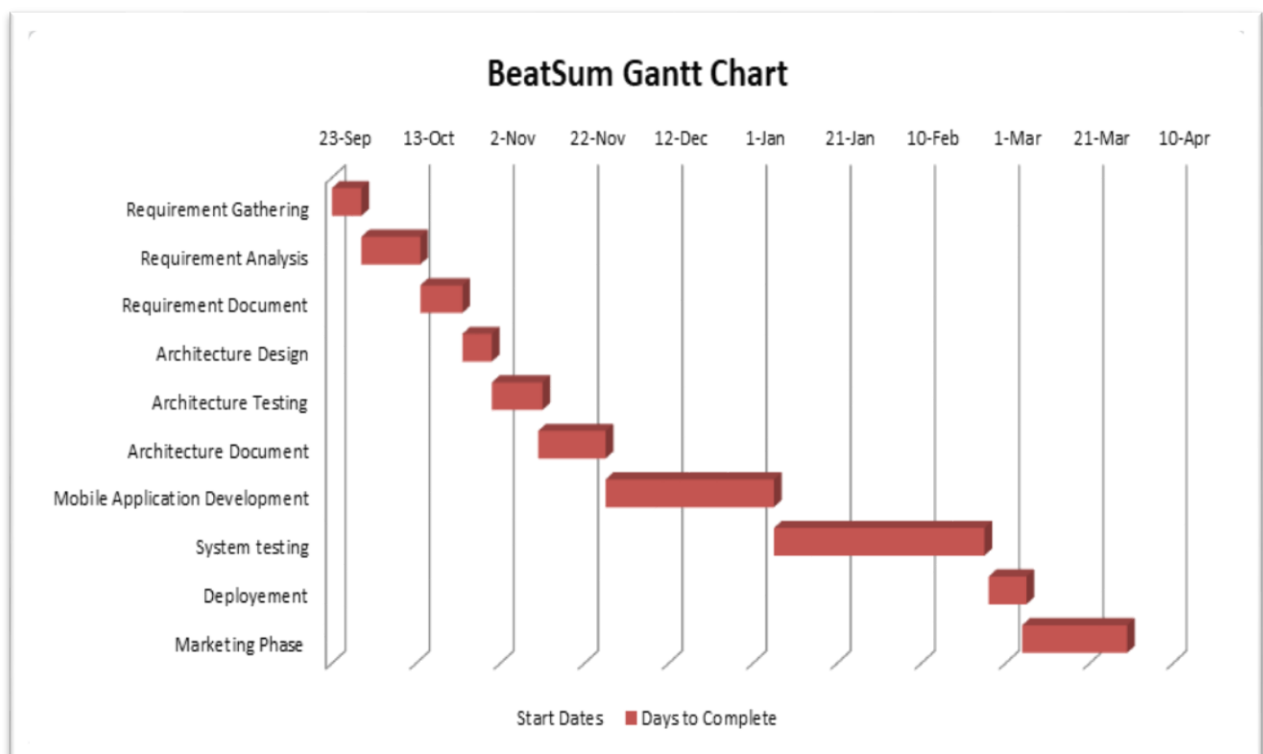
1.4. Literature Review/Existing Solutions

- Most Related Recommendations
- Catalog and Product management
- Online record/data updating
- Online payments through different methods

1.5. Proposed Solution

Our application will be an ease to our customer. Its user interface will be user-friendly. It will show recommended products to the customer on the basis of his/her search history and this will help them to buy products of their own choice from different brands also. Apart from this, our services will also be customer friendly.

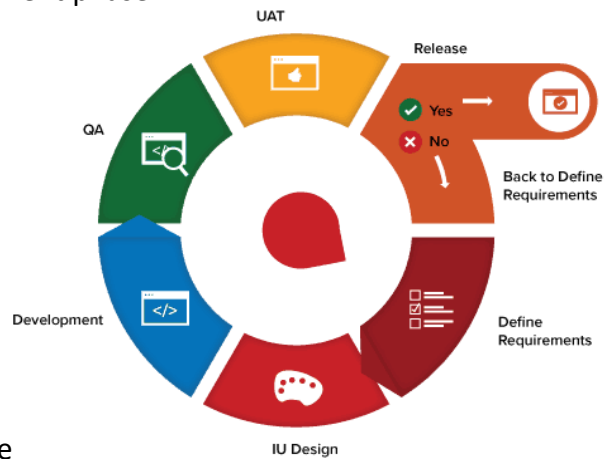
1.6. Project Plan



1.7. Proposed Methodology

The methodology that we have chosen to build our project is Agile method. The project will be divided into different phases which will complete with in specific time along with user satisfaction and short-term goals in every phase. There will be following phases;

1. Documentation phase
2. Architecture designing phase
3. Application development phase



4. System testing phase
5. Deployment phase
6. Marketing phase

Chapter 2

Software Requirement Specifications

Following are user and system requirements.

2.1 User Requirements:

The proposed system may contain the following set of user requirements;

2.1.1 Functional Requirements:

Login/sign up:

The Customer requests for the whole system to be **case sensitive**.

The first page when you open the website should be of **Sign-in/Signup** containing the following functionalities;

1. The system should consist of a **registration functionality** so that visitors new to the site should be able to easily register themselves.
2. A **login functionality** that varies differently between admin, manager and customer.
3. Customers and Managers should be able to **manage** their profiles.
4. A **forget password option** should be available allowing users to recover their accounts in case if they forget their passwords.

Users: -

1. Customer:

On Customers end, the Home page should have the following functionalities;

- **Viewing products option.**
- An option to view a well-designed product **catalogue**.

- A convenient **searching functionality** to find and retrieve a product more easily.
- A **Virtual cart functionality** which allows user to add and update their products.
- The cart functionality must also consist of an **order placement button**, which when pressed, places customers order and also a **cancel order button** which cancels the placed order.
- After order placement, Customers should be able to select a suitable **payment method** which allows customers to select from two types of payment procedures which are;
 - **Online Transaction**
 - **Cash on Delivery**
- In return, the **receipt** should be displayed on customer screen.

2. Manager:

On Managers end, the Home page should have the following functionalities;

- Proper record **maintenance option** of products.
- **Viewing products option.**
- An **adding product functionality.**
- An **updating and deleting functionality** for products based on their records.
- A convenient **searching functionality** to find and retrieve a product more easily.

3. Admin:

On Admins end, the Home page should have the following functionalities;

- Surveillance of the entire system
- Proper record **maintenance option** of managers.
- Manager records should be updated on basis of their ranks which would differ between three categories; Low, Medium, High.

Others:

On the other hand, the system should be able to perform the following functionalities automatically;

1. **Customer record maintenance.**
2. **Sorting of products.**
3. **Updation of stock** on basis of each purchase made against the total sold quantity of products.
4. **Proper organization of products.**
5. **Record maintenance of sales and profit** made per day.

2.1.2 Non-Functional Requirements:

- Reliability
- Security
- Usability
- Portability
- User-Friendly

Reliability:

- ❖ It is necessary for the system to be online 24 hours per day and 7 days per week, regardless of any time-zone.
- ❖ The proposed system which the developer designs should be reliable so it efficiently interacts with user. Secure access of confidential data.

Security:

- ❖ All users must have significant logins and must login according to them.
- ❖ To avoid unauthorized access, logins should remain protected in times of system failure.
- ❖ No customer must have more than one account.

Usability:

- ❖ Getting registered must not take more than a minute or two.
- ❖ Placing an order must not take more than a minute.
- ❖ It should be easy to use for customer and manage for admin.
- ❖ People with no training shall be able to use the system.

Portability:

- ❖ The system should be portable to various operating environments.
- ❖ If current hosting is not suitable for system, it should be moved to another one in minimum amount of time.

User-Friendly:

- ❖ The system should be user friendly in all manners.
- ❖ It should take less time for customers to get registered and for all users to login.

2.2 System Functional Requirements:

1.0 Sign-in/Signup

1.1 Registration

- 1.1.1 New customers should not be given direct access to the site.
- 1.1.2 Each new customer must have to first register themselves.
- 1.1.3 Each Customer is assigned a new Id upon registration.
- 1.1.4 Each customer should be assigned a security backup pin upon registration.

1.2 Login

- 1.2.1 Customers should login to access the features of the system.
- 1.2.2 Customers and managers should be allowed to view and update their login information.
- 1.2.3 Login functionality should vary differently among customer, manager and administrator.

1.3 Forget Password

- 1.3.1 If user forgets his/her password they would be directed to a page to enter a security pin assigned to them upon registration.
- 1.3.2 It may contain;

Variables	Constraints
Customer_id	Char/String length==13
Customer_name	Char/String (min>=3 && max <=25)
Customer_contact_number	Integer (length==11)
Customer_address	Char/String(min>=10 && max <=50)
CNIC	Integer (Length==13)
Password	Char/String(min>=3 && max <=15)
Admin_id	Char/String length==8
Password	Char/String(min>=3 && max <=15)
Manager_id	Char/String length==8
Password	Char/String (min>=3 && max <=15)
Security_Pin	Integer (Length==5)

2.0 Add Product

2.0 Should contain an adding product functionality so that manager may add products in a sorted manner whenever new products are bought.

2.2 Manager should first ask the administrators permission before adding the new stock.

- 2.0.1 Once the request is approved, then the manager should proceed to his liking.
- 2.0.2 Both Managers and Admin should be able to view products from product page after adding.
- 2.0.3 It may contain;

Variables	Constraints
Product_id	Char/String (min>=5 && max <=15)
Product_name	Char/String (min>=3 && max <=25)
Product_cat	Char/String Char/String (min>=5 && max <=15)
Product_price	Float
Product_sale_price	Float
Stock	Integer

3.0 Update/Delete Product

3.0 Should contain an updating and deleting product functionality in a sorted manner so that admin may update or delete old products whenever needed.

3.0.1 Manager should first ask the administrators permission before updating or deleting the stock.

3.0.2 Once the request is approved, then the manager should proceed.

3.0.3 It may contain

Variables	Constraints
Product_id	Char/String (min>=5 && max <=15)
Product_name	Char/String (min>=3 && max <=25)
Product_cat	Char/String (min>=5 && max <=15)
Product_price	Float
Product_sale_price	Float
Stock	Integer

4.0 Catalogue

4.1 View Catalogue

4.0 Offering customers, a well-designed catalogue containing all the products available with exclusive offers, discounts also.

4.0.1 The catalogue may contain all information regarding products etc.

4.0.2 It may contain;

Variables	Constraints
Product_id	Char/String (min>=5 && max <=15)
Product_name	Char/String (min>=3 && max <=25)
Product_cat	Char/String (min>=5 && max <=15)
Product_sale_price	Float

4.1 Search Catalogue

4.1.1 Advanced form of product searching functionality.

4.1.2 This functionality offers ease of use for both customer and manager to directly view the product they are searching for.

4.1.3 It may contain;

Variables	Constraints
Product_id	Char/String (min>=5 && max <=15)
Product_name	Char/String (min>=3 && max <=25)

5.0 Virtual Cart

5.0 Customers should be each assigned a virtual cart.

5.0.1 Providing customers with a shopping cart functionality so that they may keep their selected products in check.

5.0.2 Products will be added on basis of name with quantity also, into the cart.

- 5.0.3 Allow View and change option for cart.
- 5.0.4 Provide an option for placement of orders. Also view Receipt option.
- 5.0.5 Upon order placement, an order number is assigned to customers order with order date. These have no link with test cases.
- 5.0.6 Provide an option for cancellation of orders.

5.0.7 It may contain;

Variables	Constraints
Cart_id	Integer
Product_Name	Char/String (min>=3 && max <=25)
Quantity	Integer
Price	Float
Customer_id	Char/String length==13
Password	Char/String (min>=3 && max <=15)
Order_ID	Integer
Order_Date	Integer

5.1 Payment Method

5.1.1 After confirming order, Customer is to select the payment method.

They are of two types; Cash on Delivery, Online Transaction

5.2 Receipt generation

5.2.1 For this customer has to press confirm order for purchasing the products.

5.2.2 Once approved the bill is then calculated and receipt is showed to the customer.

It may contain;

Variables	Constraints
Product_name	Char/String (min>=3 && max <=25)
Product_sale_price	Float
Quantity	Integer
Total_Bill	Integer

6.0 Manage Users

6.0 Management of users.

6.0.1 This functionality allows administrators to view all managers.

6.0.2 This functionality allows administrators to add new managers.

6.0.3 This functionality allows administrators to update their manager records.

6.0.4 This functionality allows administrators to delete their manager records.

Variables	Constraints
Manager_id	Char/String (min>=5 && max <=15)
Manager_name	Char/String (min>=3 && max <=25)

Password	Char/String(min>=3 && max <=15)
Rank	Char/String (min>=3 && max <=6)

7.0 Check Reports

7.0 Reports maintenance.

7.0.1 Proper maintenance of reports will be conducted.

7.0.2 All sales made per day shall be recorded.

7.0.3 Report of sales made per day will be generated.

7.0.4 Profit will also be taken into account.

7.0.5 Both Manager and Admin will view reports.

7.0.6 It may contain;

Variables	Constraints
Sales	Integer
Profit	Integer

2.3 Requirements Gathering Techniques:

This is a commercial project that is completely based on e-commerce business. For that purpose, we had many already existed mobile applications, as an example to consider. We have used the following techniques;

- **Brainstorming**

Brainstorming is used in requirement gathering to get as many ideas as possible from group of people. Generally used to identify possible solutions to problems, and clarify details of opportunities.

- **Focus Group**

A focus group is a gathering of people who are representative of the users or customers of a product to get feedback. The feedback can be gathered about needs/opportunities/ problems to identify requirements, or can be gathered to validate and refine already elicited requirements. This form of market research is distinct from brainstorming in that it is a managed process with specific participants.

- **Interface analysis**

Interfaces for a software product can be human or machine. Integration with external systems and devices is just another interface. User centric design approaches are very effective at making sure that we create usable software. Interface analysis – reviewing the touch points with other external systems is important to make sure we do not overlook requirements that aren't immediately visible to users.

- **Interview**

Interviews of stakeholders and users are critical to creating the great software. Without understanding the goals and expectations of the users and stakeholders, we are very unlikely to satisfy them. We also have to recognize the perspective of each interviewee, so that, we can properly weigh and address their inputs. Listening is the skill that helps a great analyst to get more value from an interview than an average analyst.

- **Observation**

By observing users, an analyst can identify a process flow, steps, pain points and opportunities for improvement. Observations can be passive or active (asking questions while observing). Passive observation is better for getting feedback on a prototype (to refine requirements), where active observation is more effective at getting an understanding of an existing business process. Either approach can be used.

- **Prototyping**

Prototyping is a relatively modern technique for gathering requirements. In this approach, you gather preliminary requirements that you use to build an initial version of the solution - a prototype. You show this to the client, who then gives you additional requirements. You change the application and cycle around with the client again. This repetitive process continues until the product meets the critical mass of business needs or for an agreed number of iterations.

- **Survey/Questionnaire**

When collecting information from many people – too many to interview with budget and time constraints – a survey or questionnaire can be used. The survey can force users to elect from choices, rate something (“Agree Strongly, agree...”), or have open ended questions allowing free-form responses.

- **BeatSum survey for requirements:**

1. In your country, what is your favorite way to shopping?

- a) Traditional retail store
- b) Online store

2. If you shop online, what kinds of online shop do you shopping frequently?

- a) Pure online shop retailers’
- b) Both have in-store and online shop retailers’

3. Do you think the Internet changing the traditional in-store retail are in?

- a) Purchase way
- b) Product selection process
- c) Product order process
- d) Payment process
- e) The way get product
- f) The way item refund
- g) Others

4. The reasons you purchase through internet.

- a) Product price low
- b) Price transparency
- c) Price and product quality comparison easily between each company through internet
- d) Connectivity (You can buy product at any time in any place if you online)
- e) 24 hours a day/7 days a week continues working
- f) Do not need go outside
- g) Save time
- h) Quantity product information and product quality comments
- i) More product selection online
- j) Others

5. The reasons you do not purchase through internet.

- a) Lack of payment security
- b) Lack of enjoyable physical store shopping
- c) Cannot see real product and its quality online, which might lead to meet unexpected goods
- d) Delivery mistakes
- e) Item refund
- f) Others

6. These factors below were supported by internet enable technology. Which of them attract you to choose an online shop?

- | | |
|--|--|
| a) Good website performance. | g) Product received by consumer meet their expectation |
| b) Ease of placing order | h) Discount |
| c) Good production information support | i) Support value through customer loyalty card |
| d) Website has options about shipping online | j) Others |
| e) On-time delivery | |
| f) Support order tracking/information | |

7. What kind of product you purchase from online shop?

- | | |
|-----------------------|--------------|
| a) Home electrical | d) Toy |
| b) Jewelry | e) Furniture |
| c) Sports and leisure | f) Phones |

-
- g) PC and gaming
 - h) Beauty and health care
 - i) Sound and vision

- j) Food
- k) Clothes
- l) Others

8. The Internet based technology (such as e-mail, Firewalls and database) bring benefit for help your purchase online:

- a) Understand product information
- b) Communication without charge or low charge
- c) Collect information easily
- d) More selection on product
- e) Fun
- f) Keep your purchase process more security
- g) Others

9. Disadvantages of internet-based technology:

- a) Security problems
- b) Spamming advertise
- c) Bring virus
- d) Others

10. Do you think limitation of internet technology could not show “real” product quality to customers?

- a) Strong agree
- b) Strong disagree
- c) Neutrality
- d) Agree
- e) Disagree

11. Do you shopping in e-retail mobile apps store?

- a) Often
- b) Not often
- c) Never
- d) I don’t know that

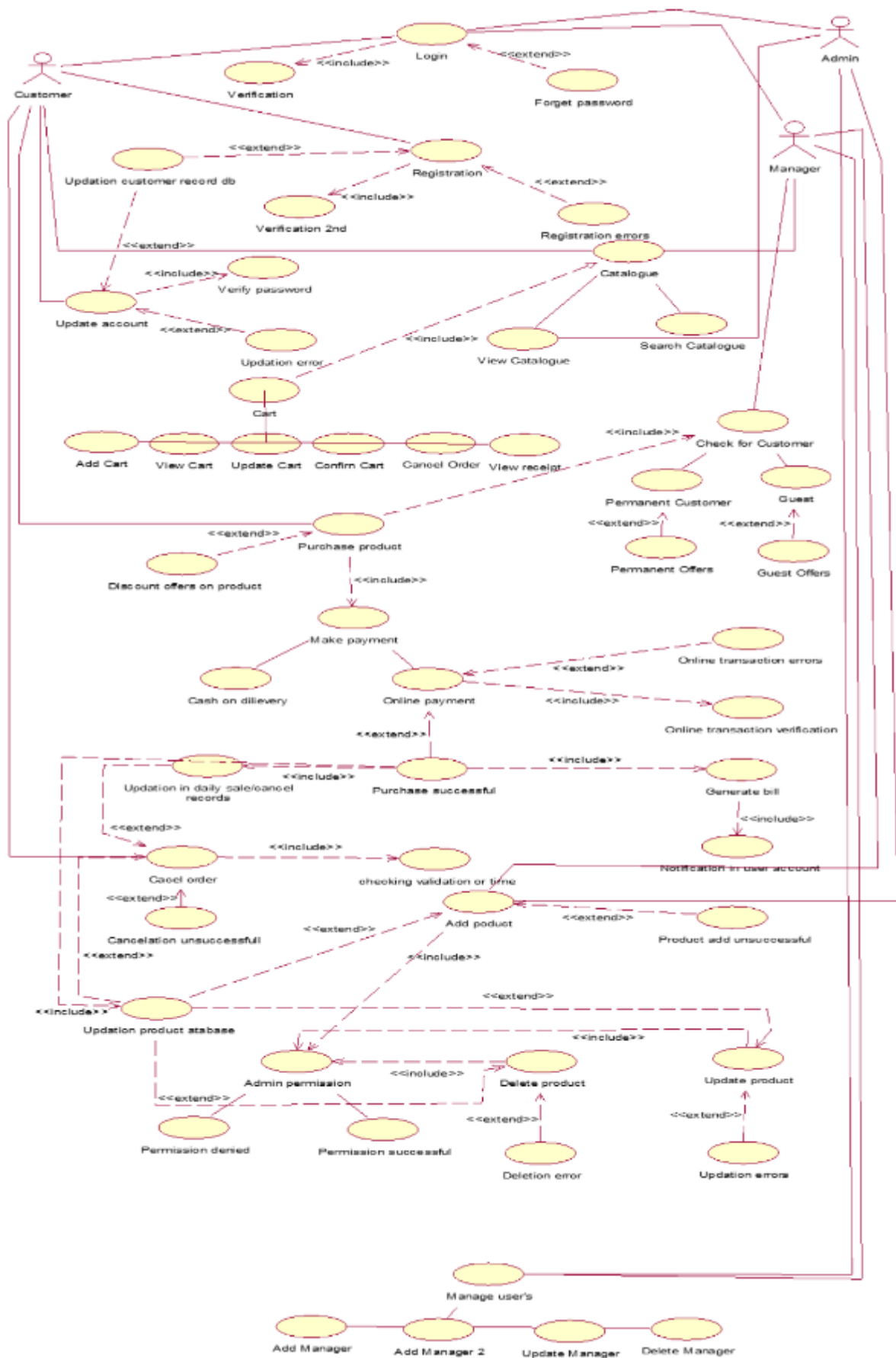
12. Do you like shopping through mobile?

- a) Strongly like
- b) Like
- c) Neutrality
- d) Dislike
- e) Strongly dislike

Chapter 3

Use Case Analysis

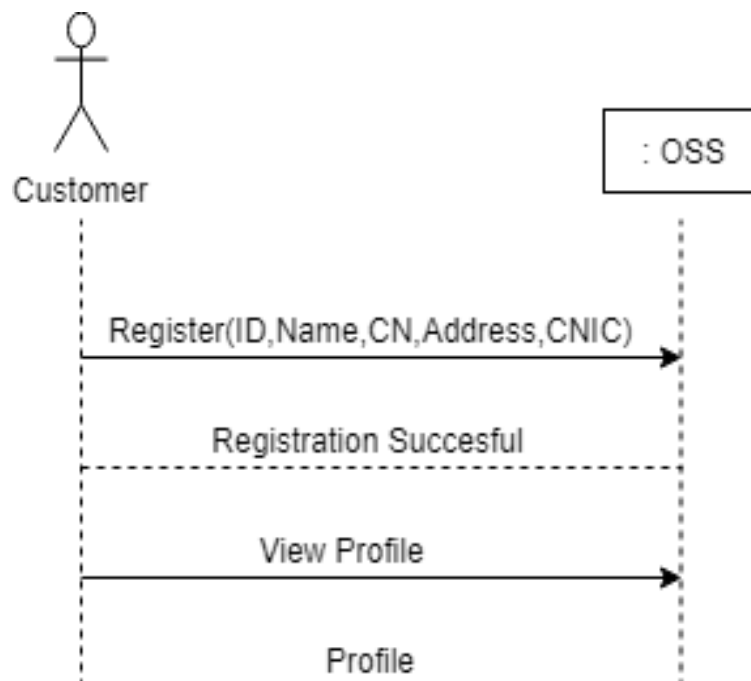
3.1 Use Case Diagram



3.2 Use case specifications:

U.C 1.0

Use case Name	Registration	
Scope	Customer uses it to register himself into the site	
Primary Actors	Customer	
Stakeholders and Interests	Customer: Customer uses it to register on the site.	
Pre-Conditions	N/A	
Post-Conditions	After registration customer is able to view profile and view products etc.	
Main Scenario	➤ Customer opens website. ➤ Customer selects Signup option ➤ Customer enters all required information. ➤ Customer registers themselves into the system.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or adding already existing information for registration.	Alternative Case The alternative would be to add non existing information.
Frequency of Occurrence	If discussed per day, Customer can use this functionality only once in a lifetime.	



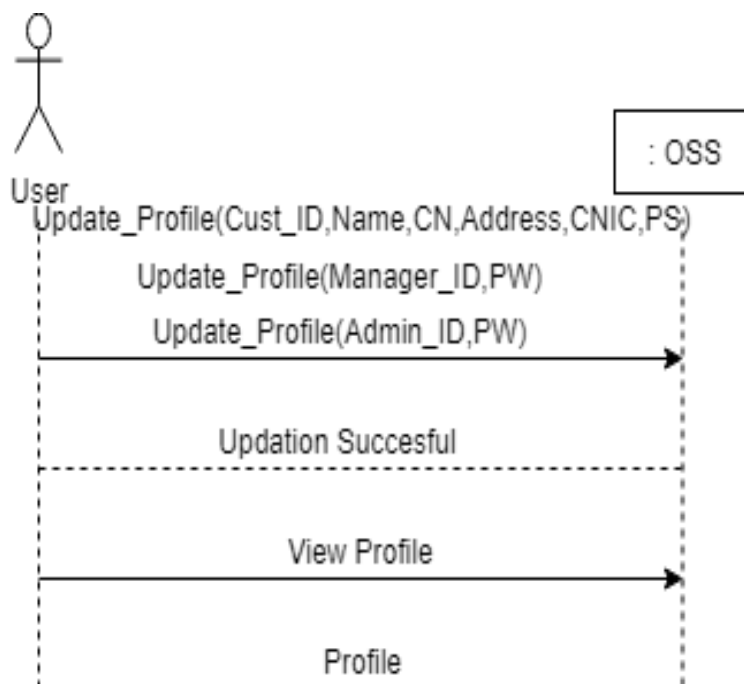
U.C 2.0

Use case Name	View Profile	
Scope	Users use it to view their profile	
Primary Actors	Customer, Admin, Manager	
Stakeholders and Interests	Customer: <u>Customer uses it to register on the system</u> and view profile.	
Pre-Conditions	<u>Users must be logged in</u> , to access their profile	
Post-Conditions	After viewing profile, users perform required tasks.	
Main Scenario	➤ Users open website. ➤ <u>Users login to the site.</u> ➤ Select view profile option. ➤ View their profile.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem.	Alternative Case
Frequency of Occurrence	If discussed per day, Users can use this functionality countless times.	

U.C 3.0

Use case Name	Update Profile	
Scope	All users use it to manage their profile	
Primary Actors	Customer, Manager, Admin	
Stakeholders and Interests	All Users: All Users uses it to update their profile on the system.	
Pre-Conditions	<u>Users must be logged in, to access and update their profile</u>	
Post-Conditions	<u>After Updating Profile users are able add ,view products etc</u>	
Main Scenario	➤ Users open website. ➤ <u>Users log into the site.</u> ➤ <u>Select view profile option.</u> ➤ Select Update profile option. ➤ Update profile. ➤ Select confirm option.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or another link set up instead of Update Profile Page.	Alternative Case

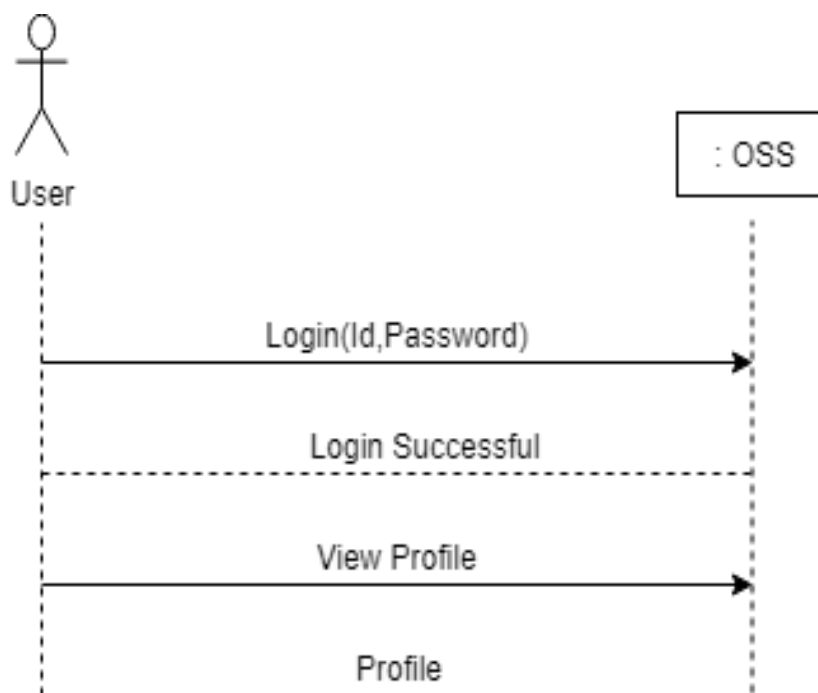
Frequency of Occurrence	If discussed per day, Customer can use this functionality only once in a lifetime.
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U.C 4.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Login	
Scope	Users use it to log in to the site	
Primary Actors	Customer, Manager, Admin	
Stakeholders and Interests	Customer: Customer uses it to login to the site. Manager: Manager uses it to login to the site. Admin: Admin uses it to login to the site.	
Pre-Conditions	N/A	
Post-Conditions	After logging in, all users can perform their specified operations	
Main Scenario	➤ Users open website. ➤ Select Sign-in option. ➤ Customer logs into the site. ➤ Admin logs into the site. ➤ Manager logs into the site.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a	Alternative Case Forget Password

	different link is set up instead of the login page.	
Frequency of Occurrence	If discussed per day admin and manager uses this functionality to login countless times.	

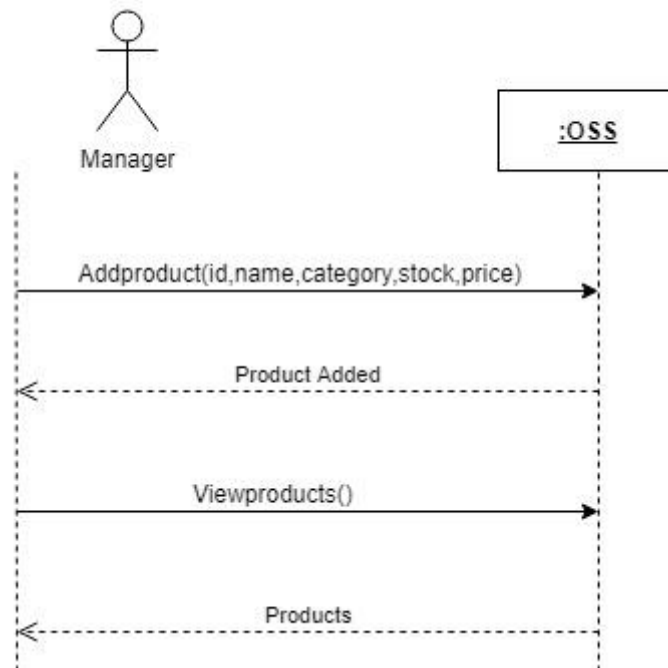


U.C 5.0

<u>Use Case Section</u>	<u>Comment</u>
Use Case Name	Add Product
Scope	Used to add new products into the system
Primary Actors	Manager
Stakeholders and interests	Manager: Manager uses it to place new products to the system. Admin: Admin permits the manager to place new products to the system. Customer: After new products are added to the system, customer is able to purchase them.
Pre-Conditions	<u>Manager should be logged in to the site.</u>
Post-Conditions	<u>After adding products Manager is able to update or delete them if required.</u>
Main Scenario	➤ Manager opens website. ➤ <u>Manager logs in to the site</u> ➤ Selects add product page option. ➤ Adds new products. ➤ <u>Views the products added.</u>

Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the add product page.	Alternative
Frequency of occurrence	If discussed per day, Manager uses this functionality to add products once.	

Add Prdoucts



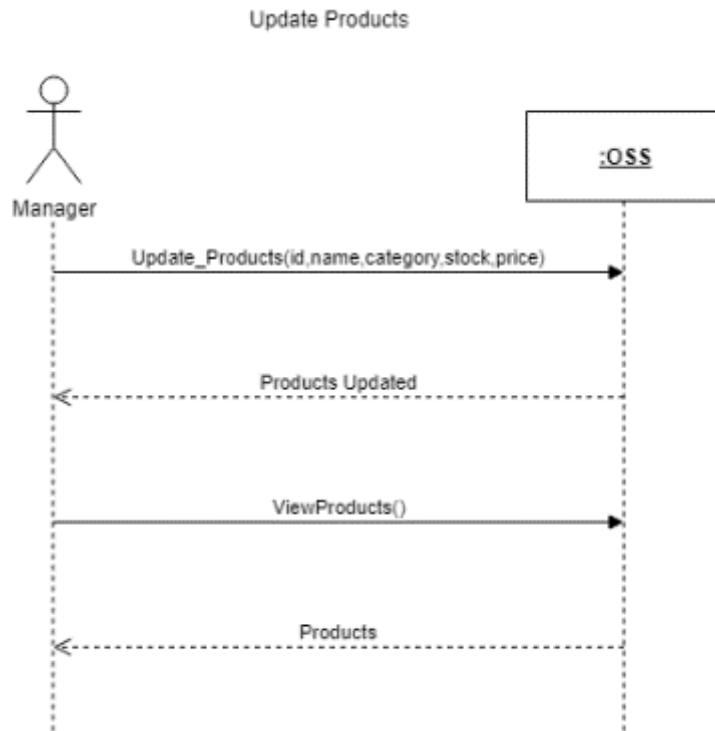
U.C 6.0

<u>Use Case Section</u>	<u>Comment</u>
Use Case Name	View Product
Scope	Used to view products available in the system
Primary Actors	Manager, Admin
Stakeholders and interests	Manager: Manager uses it to view new products added to the system. Admin: Admin views or permits the manager to view the products from the system. Customer: After new products are added to the system, customer is able to purchase them.
Pre-Conditions	<u>Manager and Admin should be logged in to the site.</u>
Post-Conditions	<u>After viewing products Manager is able to update or delete them if required.</u>
Main Scenario	➤ Manager/Admin opens website. ➤ <u>Manager/Admin logs in to the site</u> ➤ Selects view product page option. ➤ Views the products.

Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the view product page.	Alternative Search Product
Frequency of occurrence	If discussed per day, Manager and Admin use this functionality countless times.	

U.C 7.0

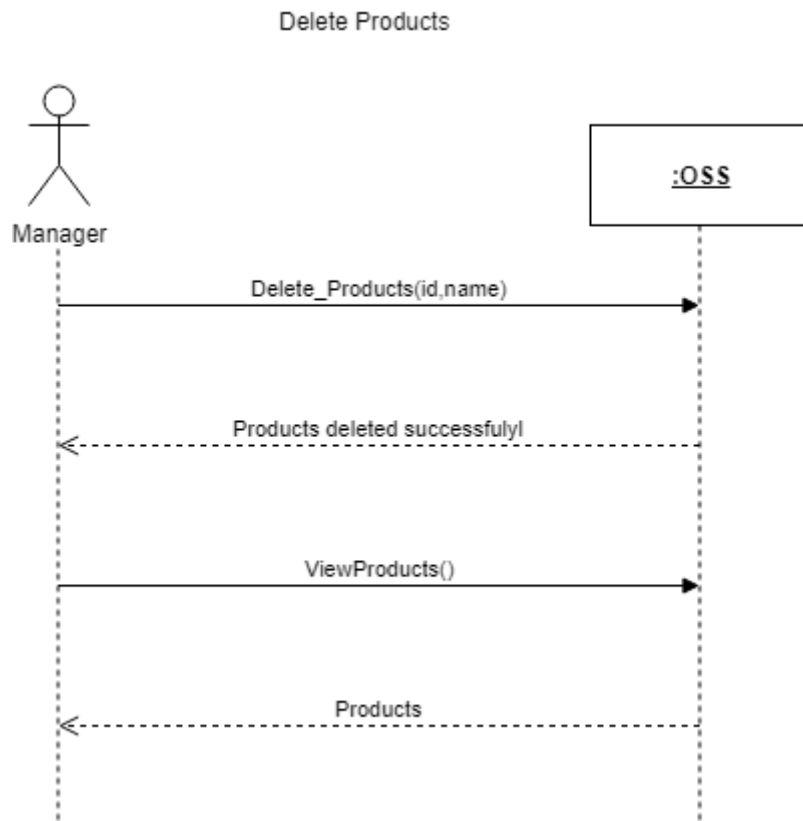
<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Update Product	
Scope	Used to update products available in the system	
Primary Actors	Manager	
Stakeholders and interests	Manager: Manager uses it to update the products part of the system. Admin: Admin permits the manager to update the products in the system. Customer: After products are updated, customer is able to purchase them.	
Pre-Conditions	<u>Manager should be logged in to the site.</u> The record of product to be updated should be available.	
Post-Conditions	<u>After updating products Manager is able to view, add or delete products if required.</u>	
Main Scenario	➤ Manager opens website. ➤ <u>Manager logs in to the site</u> ➤ Selects update product page option. ➤ Updates the products. ➤ Selects confirm option.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the update product page.	Alternative
Frequency of occurrence	If discussed per day, Manager uses this functionality countless times.	



U.C 8.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Delete Product	
Scope	Used to delete products part of the system	
Primary Actors	Manager	
Stakeholders and interests	Manager: Manager uses it to delete the products part of the system. Admin: Admin permits the manager to delete the products in the system. Customer: After products are delete, customer is not able to view or purchase them.	
Pre-Conditions	<u>Manager should be logged in to the site.</u> The record of product to be deleted should be available.	
Post-Conditions	<u>After deleting products Manager is able to view, add or update other products if required.</u>	
Main Scenario	➤ Manager opens website. ➤ <u>Manager logs in to the site</u> ➤ Selects delete product page option. ➤ Selects the products to delete. ➤ Deletes the products. ➤ Selects confirm option.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a	Alternative

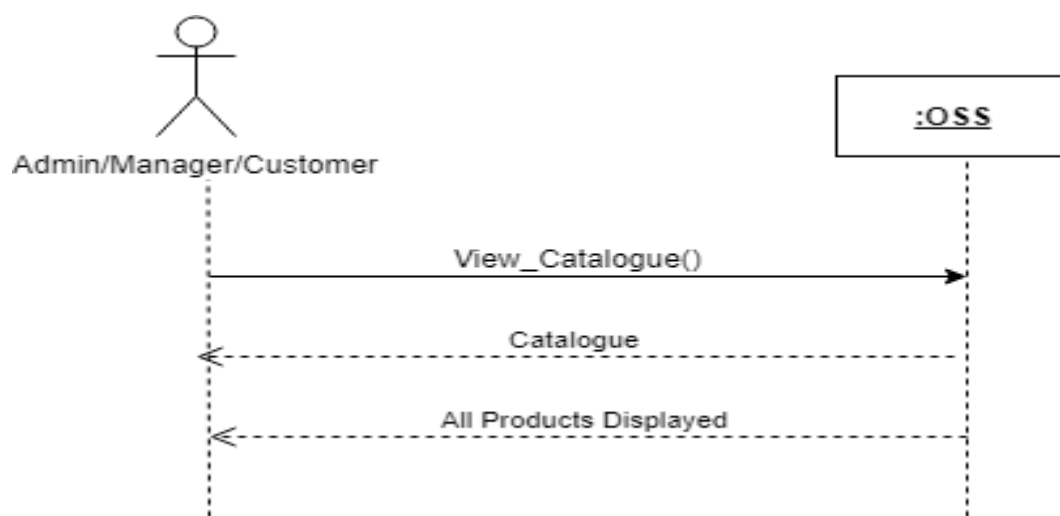
	different link is set up instead of the delete product page.	
Frequency of occurrence	If discussed per day, Manager uses this functionality countless times.	



U.C 9.0

<u>Use Case Section</u>	<u>Comment</u>
Use Case Name	View Catalogue
Scope	Used to view a catalogue containing all products
Primary Actors	Customer, Admin, Manager
Stakeholders and interests	Admin: Admin permits manager to add new products to the system. Manager: Manager adds new products to system. Customer: After products are added, customer can view all the products through catalogue. Admin: After products are added, Admin can view all the products through catalogue. Manager: After products are added, Manager can view all the products through catalogue.
Pre-Conditions	<u>Customer should be logged in to the site</u> <u>Admin should be logged in to the site</u> <u>Admin should be logged in to the site</u>

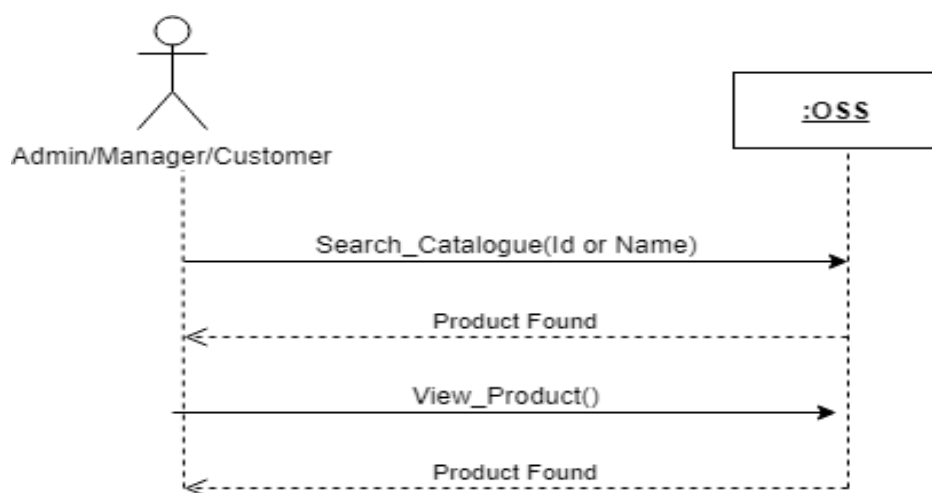
Post-Conditions	After viewing catalogue, customer will add selective products to cart and purchase them.	
Main Scenario	➤ Customer opens website. ➤ <u>Customer logs in to the site</u> ➤ <u>Selects catalogue option.</u> ➤ Views all products.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the view catalogue option.	Alternative <u>Search Product</u>
Frequency of occurrence	If discussed per day, Customer uses this functionality to view products more than once.	



U.C 10.0

<u>Use Case Section</u>	<u>Comment</u>
Use Case Name	Search Catalogue
Scope	Used to Search the catalogue containing all products
Primary Actors	Customer, Manager
Stakeholders and interests	Admin: Admin permits manager to add new products to the system. Manager: Manager adds new products to system. Customer: After products are added, customer views the products through catalogue. Customer: Customer can view specific products by selecting search catalogue option. Admin: Admin can view specific products by selecting search catalogue option.
Pre-Conditions	<u>Customer should be logged in to the site</u> <u>Admin should be logged in to the site</u>
Post-Conditions	<u>After viewing catalogue, customer will add selective products to cart and purchase them.</u>

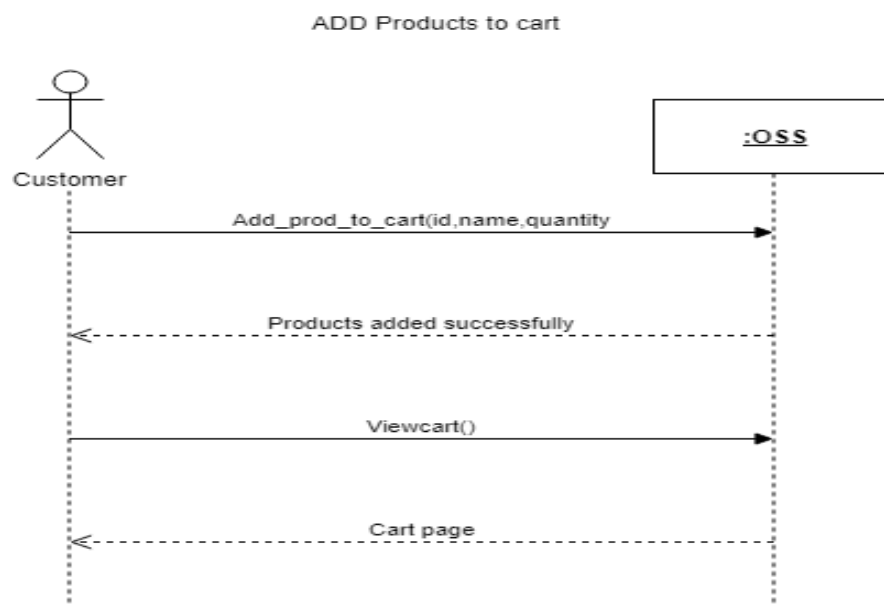
Main Scenario	➤ Customer/Admin opens website. ➤ <u>Customer/Admin logs in to the site</u> ➤ <u>Selects catalogue option.</u> ➤ Searches for a specific product.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the search catalogue option.	Alternative <u>View Catalogue</u>
Frequency of occurrence	If discussed per day, Customer/Admin uses this functionality to view products more than once.	



U.C 11.0

<u>Use Case Section</u>	<u>Comment</u>
Use Case Name	Add to cart
Scope	Used by customer so that they can add selective products to cart.
Primary Actors	Customer
Stakeholders and interests	Manager: Manager adds new products to the system. Customer: Customer uses it to add new products to the cart. Customer: After new products are added to cart, customer views cart.
Pre-Conditions	<u>Customer should be logged in to the site.</u> <u>Customer must use catalogue to add products into cart</u>

Post-Conditions	<u>After adding products to cart Customer is able to update or delete them if required.</u>	
Main Scenario	➤ Customer opens website. ➤ <u>Customer logs in to the site</u> ➤ <u>Selects products from catalogue.</u> ➤ Adds products to cart. ➤ <u>Views the products added.</u>	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the add to cart option.	Alternative
Frequency of occurrence	If discussed per day, Customer uses this functionality to add products more than once.	



U.C 12.0

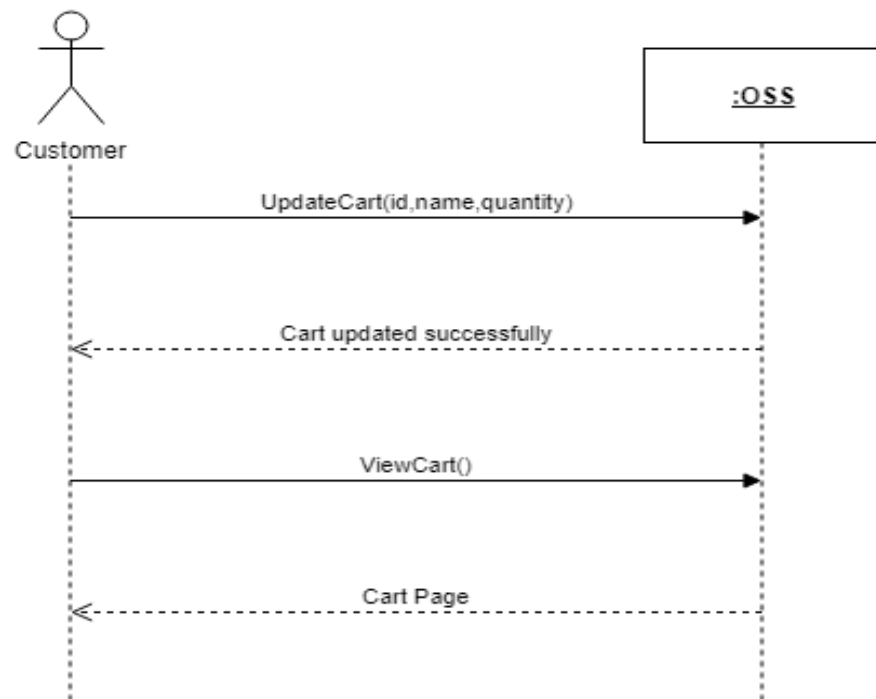
<u>Use Case Section</u>	<u>Comment</u>
Use Case Name	View Cart
Scope	Used by customer to view products added to cart
Primary Actors	Customer
Stakeholders and interests	Manager: Manager adds new products to the system. Customer: Customer adds new products to the cart. Customer: After new products are added to cart, customer views cart.
Pre-Conditions	<u>Customer should be logged in to the site.</u>

Post-Conditions	<u>After viewing products from cart Customer is able to add, update or delete products if required.</u>	
Main Scenario	➤ Customer opens website. ➤ <u>Customer logs in to the site</u> ➤ <u>Selects products from catalogue.</u> ➤ <u>Adds products to cart.</u> ➤ Views the products added.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the view cart option.	Alternative
Frequency of occurrence	If discussed per day, Customer uses this functionality to view products more than once.	

U.C 13.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Update Cart	
Scope	Used by customer to update products added to cart	
Primary Actors	Customer	
Stakeholders and interests	Manager: Manager adds new products to the system. Customer: Customer adds new products to the cart. Customer: After new products are added to cart, customer views and updates cart.	
Pre-Conditions	<u>Customer should be logged in to the site.</u> <u>Customer must add products to cart to be able to update them</u>	
Post-Conditions	<u>After updating products from cart Customer is able to add or delete products if required.</u>	
Main Scenario	➤ Customer opens website. ➤ <u>Customer logs in to the site</u> ➤ <u>Selects products from catalogue.</u> ➤ <u>Adds products to cart.</u> ➤ <u>Views the products added.</u> ➤ Updates the products.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the update cart option.	Alternative.
Frequency of occurrence	If discussed per day, Customer uses this functionality to update products more than once.	

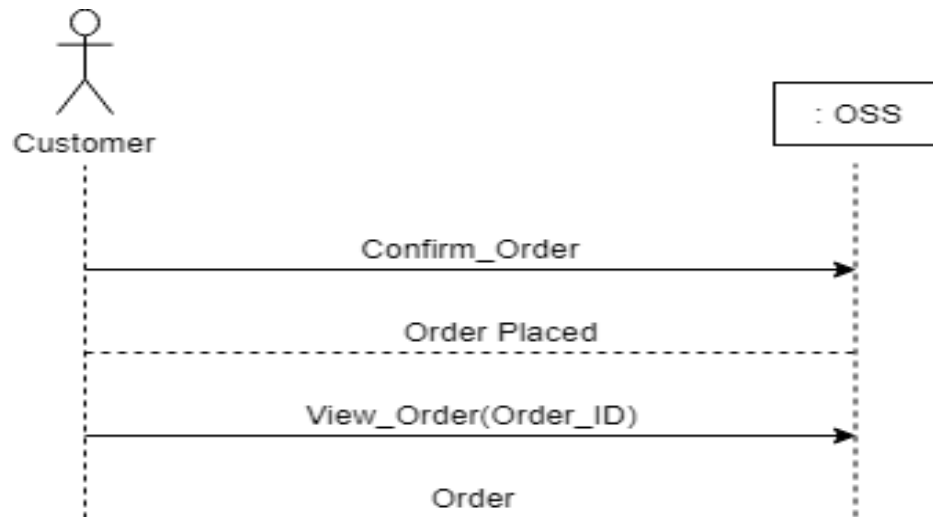
Update Cart



U.C 14.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Confirm order	
Scope	Customer uses it to confirm their order	
Primary Actors	Customer	
Stakeholders and interests	Customer: Customer uses it to confirm order of products added to cart. Tax Agencies: After order is confirmed, the tax displayed with total bill will go to tax agency.	
Pre-Conditions	<u>Customer should be logged in to the site.</u> <u>Customer must add products to cart to confirm order.</u>	
Post-Conditions	<u>When the customer confirms his order, he may purchase new product and also cancel his order.</u>	
Main Scenario	➤ Customer opens website. ➤ <u>Customer logs into the site.</u> ➤ <u>Customer searches for the product.</u> ➤ System displays the product detail. ➤ <u>Customer adds product to cart.</u> ➤ Customer confirm the order.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a	Alternative

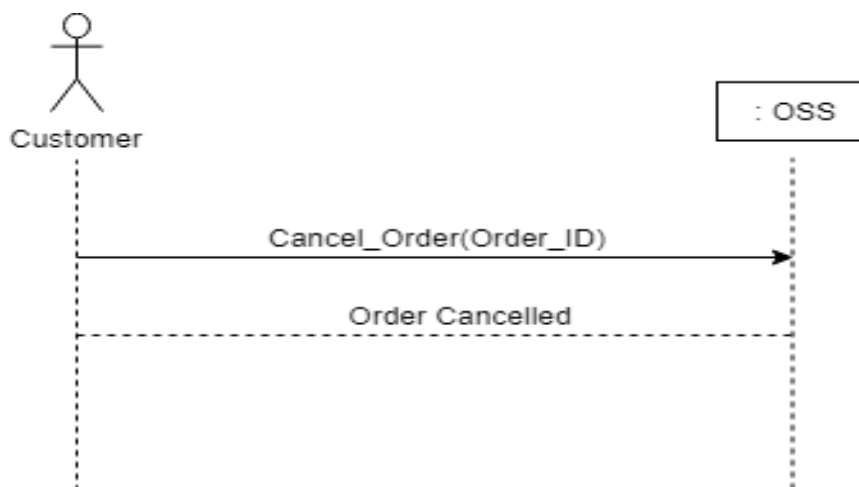
	different link is set up instead of the confirm order page.	
Frequency of occurrence	If discussed per day, Customer should use this functionality for order confirmation countless times.	



U.C 15.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Cancel order	
Scope	Customer uses it to cancel the order that was confirmed before	
Primary Actors	Customer	
Stakeholders and interests	<u>Customer: Customer first confirm his order.</u> Upon some crisis or for some reason, Customer uses this to cancel order.	
Pre-Conditions	<u>Customer should be logged in to the site.</u> <u>Customer must have placed an order if required to cancel it.</u>	
Post-Conditions	<u>When the customer confirms his order, but he likes the other product.so, he first cancels his first order and then place order for the other product.</u>	
Main Scenario	➤ Customer opens website. ➤ <u>Customer logs into the site.</u> ➤ <u>Customer should search for the product.</u> ➤ <u>Customer confirm the order.</u> ➤ But the customer doesn't have money to purchase this product. ➤ Then customer cancel his order	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the cancel order page.	Alternative

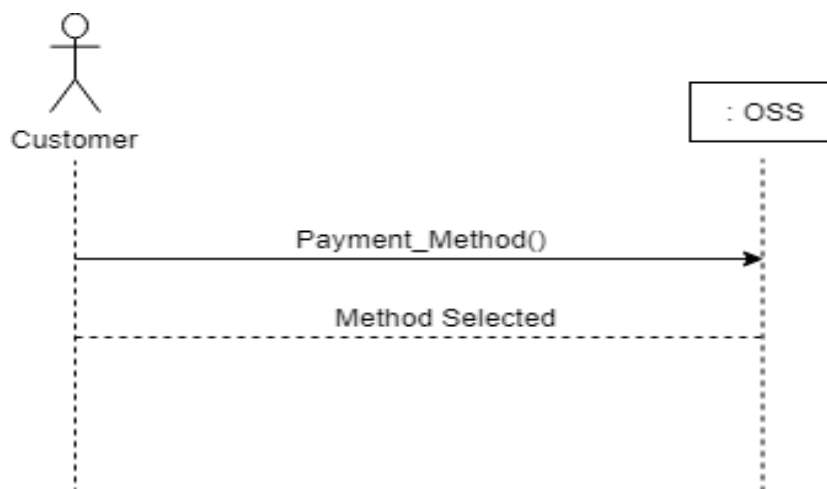
Frequency of occurrence	If discussed per day, Customer may use this functionality to cancel order more than once.
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U.C 16.0

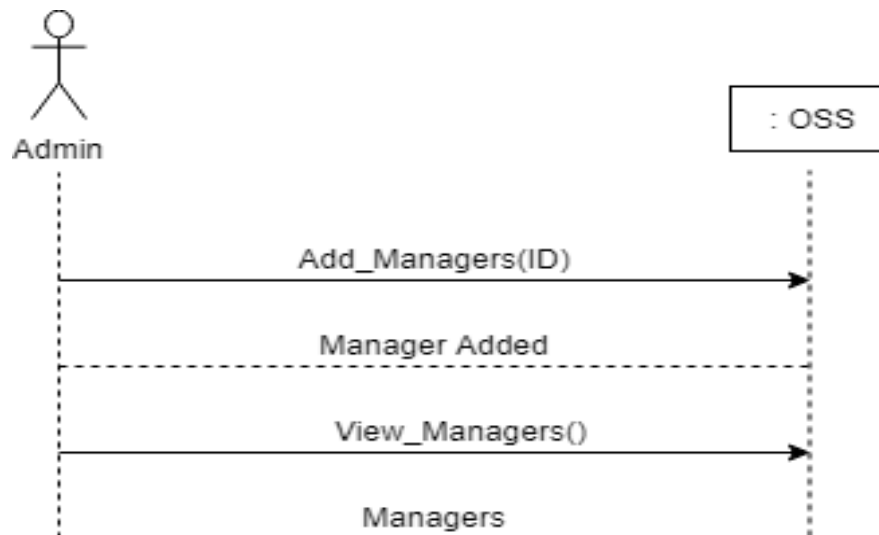
<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Payment method	
Scope	Customer uses it to select payment method	
Primary Actors	Customer	
Stakeholders and interests	Customer: Customer first confirms his order and then select the payment method. Tax Agencies: After order is confirmed, the tax displayed with total bill will go to tax agency.	
Pre-Conditions	<u>Customer should be logged in to the site.</u> <u>Customer must place an order to select payment method.</u>	
Post-Conditions	<u>When the customer selects payment method, he may view other products or log out.</u>	
Main Scenario	➤ Customer opens website. ➤ <u>Customer logs into the site.</u> ➤ <u>Customer searches for the product.</u> ➤ <u>Customer adds product to cart.</u> ➤ <u>Customer confirms the order.</u> ➤ <u>Customer views the order.</u> ➤ Customer selects payment method.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the select payment method page.	Alternative

Frequency of occurrence	If discussed per day, Customer should use this functionality of selecting payment method more than once.
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U.C 17.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Add Manager	
Scope	Used to add new managers into the system	
Primary Actors	Admin	
Stakeholders and interests	Admin: Admin adds new managers to the system. Manager: Manager manages the system. Customer: Customer uses the system.	
Pre-Conditions	<u>Admin should be logged in to the site.</u> Admin should interview a manager to hire and add their record into system.	
Post-Conditions	After adding Managers, Manager is able to manage the whole system.	
Main Scenario	➤ Admin opens website. ➤ <u>Admin logs in to the site</u> ➤ Selects add Manager page option. ➤ Adds new Employee. ➤ <u>Views the Employee added.</u>	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the add Manager page.	Alternative
Frequency of occurrence	If discussed per day, new Admins use this functionality based on how many Employees he needs to manage the system.	



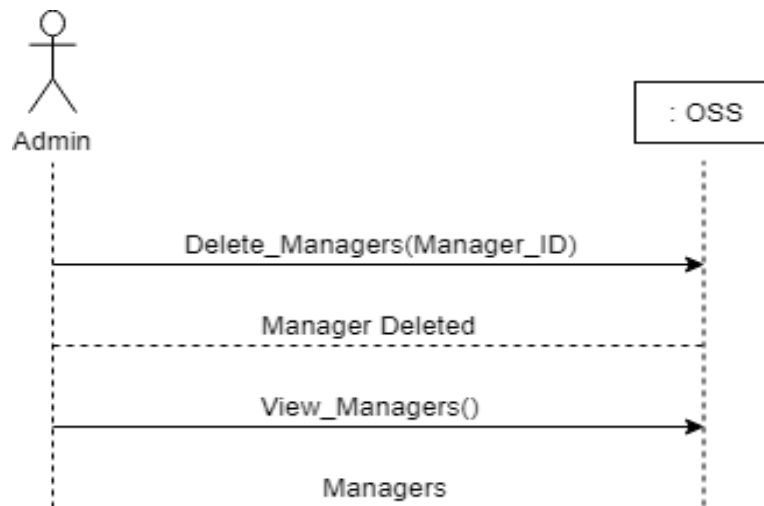
U.C 18.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Update Managers	
Scope	Used to update Managers part of the system	
Primary Actors	Admin	
Stakeholders and interests	Admin: Admin uses it to update the Managers part of the system. Manager: Manager manages the system. Customer: Customer uses the system to purchase products.	
Pre-Conditions	<u>Admin should be logged in to the site.</u> <u>Admin should add Managers to system if it is required to update their ranks</u>	
Post-Conditions	<u>After updating Managers, Admin is able to view, add or delete them if required.</u>	
Main Scenario	➤ Admin opens website. ➤ <u>Admin logs in to the site</u> ➤ Selects Manager page option. ➤ Updates the Managers. ➤ Selects confirm option.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the update Manager page.	Alternative
Frequency of occurrence	If discussed per day, Admin uses this functionality based on Employee behavior and work.	



U.C 19.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Delete Managers	
Scope	Used to delete Managers part of the system	
Primary Actors	Admin	
Stakeholders and interests	Admin: Admin uses it to delete the Managers part of the system. Manager: Manager manages the system. Customer: Customer uses the system to purchase products.	
Pre-Conditions	<u>Admin should be logged in to the system.</u> <u>Admin should add Managers to system if it is required to delete their records</u>	
Post-Conditions	<u>After deleting Managers, Admin is able to view, add or update other Managers if required.</u>	
Main Scenario	➤ Manager opens website. ➤ <u>Manager logs in to the site</u> ➤ Selects delete Manager page option. ➤ Selects the products to delete. ➤ Deletes the Managers. ➤ Selects confirm option.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the delete Manager page.	Alternative
Frequency of occurrence	If discussed per day, Admin uses this functionality based on Employee behavior and work.	



U.C 20.0

<u>Use Case Section</u>	<u>Comment</u>	
Use Case Name	Permission	
Scope	Used by manager to request permission from admin.	
Primary Actors	Manager	
Stakeholders and interests	Manager: Manager asks permission to add, update, delete products from system. Manager: Manager asks permission to check sales and profit reports. Admin: Admin permits the manager to perform above mentioned tasks.	
Pre-Conditions	<u>Manager should be logged in to the site.</u>	
Post-Conditions	<u>Manager can manage products or view reports.</u>	
Main Scenario	➤ Manager opens website. ➤ <u>Manager logs in to the site</u> ➤ Requests permission by giving ID. ➤ After being permitted performs required tasks.	
Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the permission option.	Alternative

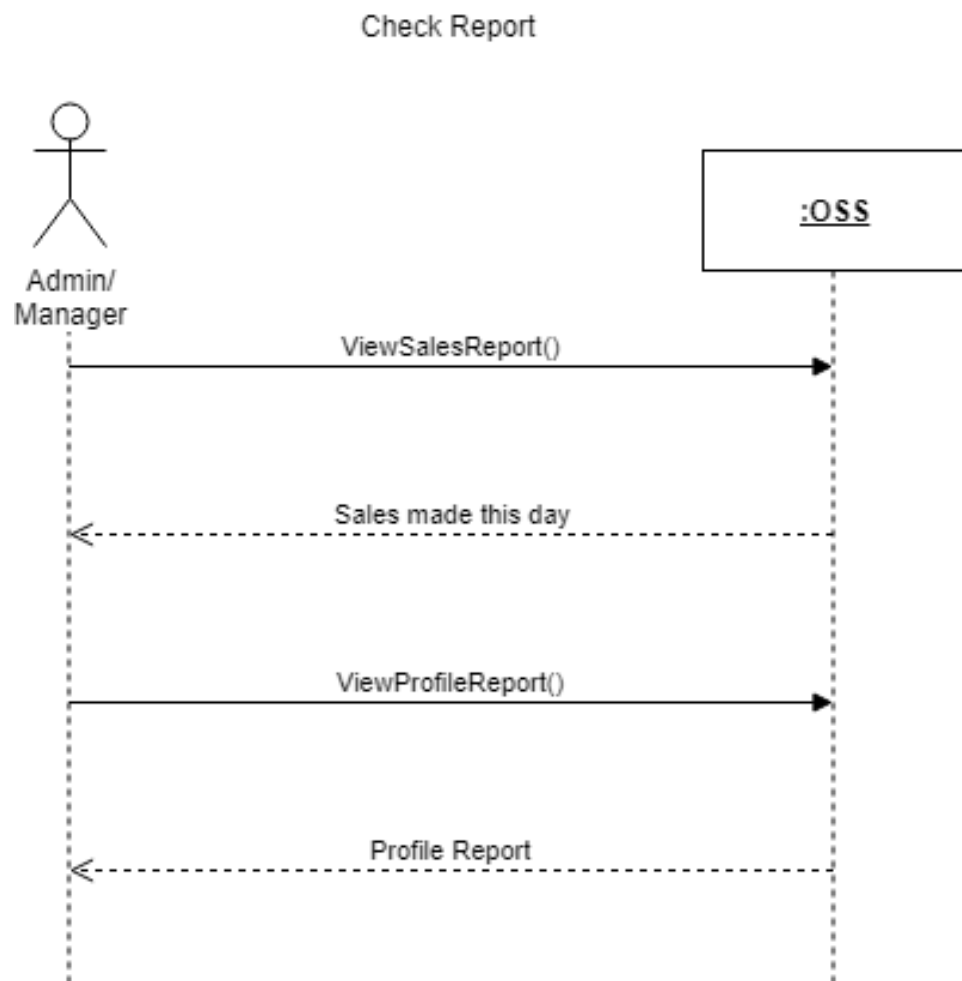
Frequency of occurrence	If discussed per day, Manager uses this functionality more than once.
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U.C 21.0

<u>Use Case Section</u>	<u>Comment</u>
Use Case Name	Check Reports
Scope	Used by both Manager and Admin to view daily sales and profit reports.
Primary Actors	Manager, Admin
Stakeholders and interests	Manager: Manager asks permission to check sales and profit reports. Admin: Admin permits the manager to perform above mentioned tasks. Admin: Admin checks reports.
Pre-Conditions	<u>Manager and Admin should be logged in to the site.</u>
Post-Conditions	
Main Scenario	➤ Manager/Admin opens website. ➤ <u>Manager/Admin log in to the site</u> ➤ Admin checks reports. ➤ Manager requests permission by giving ID. ➤ After being permitted performs checks reports.

Failure Case/ Alternative Case	Failure If the functionality fails it would be due to network problem or if a different link is set up instead of the check reports option.	Alternative
Frequency of occurrence	If discussed per day, Manager or use this functionality once.	

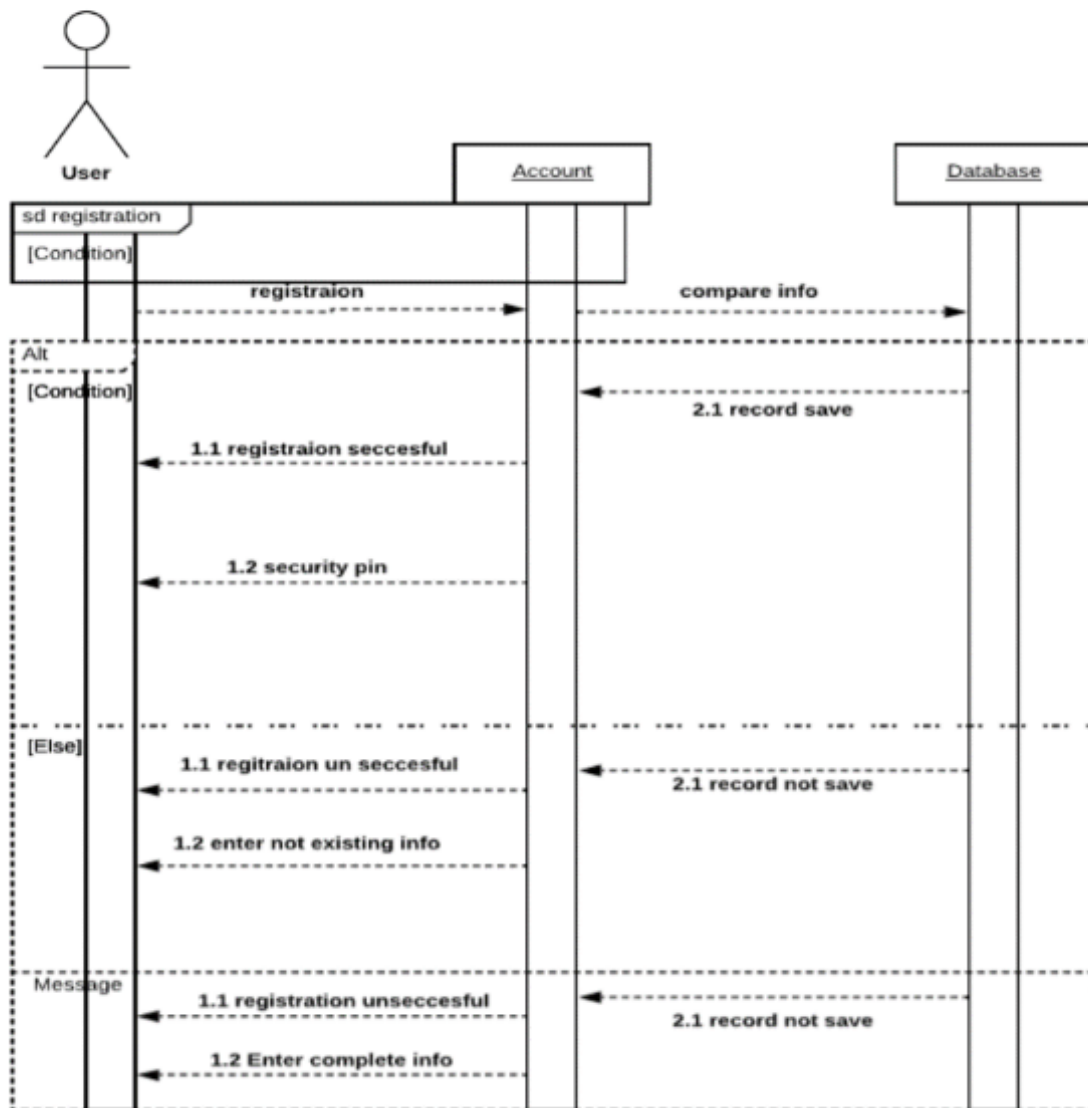


Chapter 4

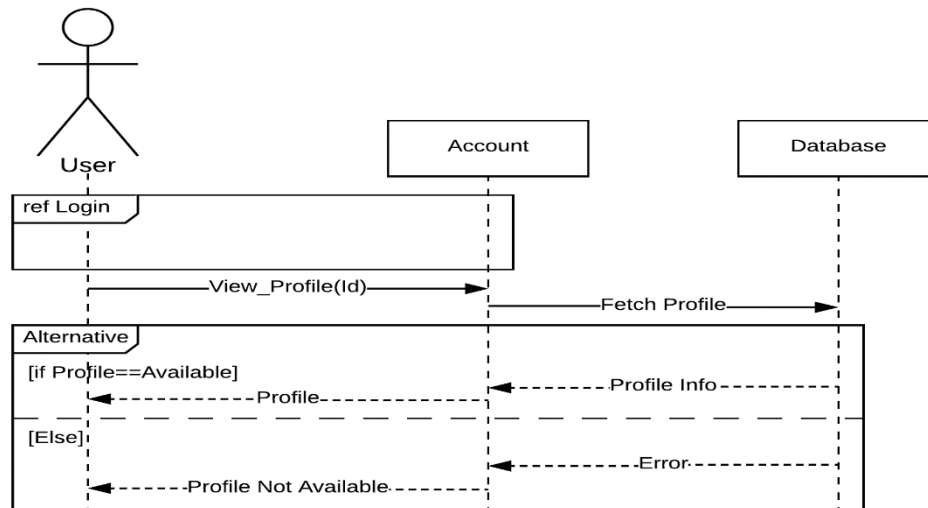
System Design

4.1 Sequence Diagrams:

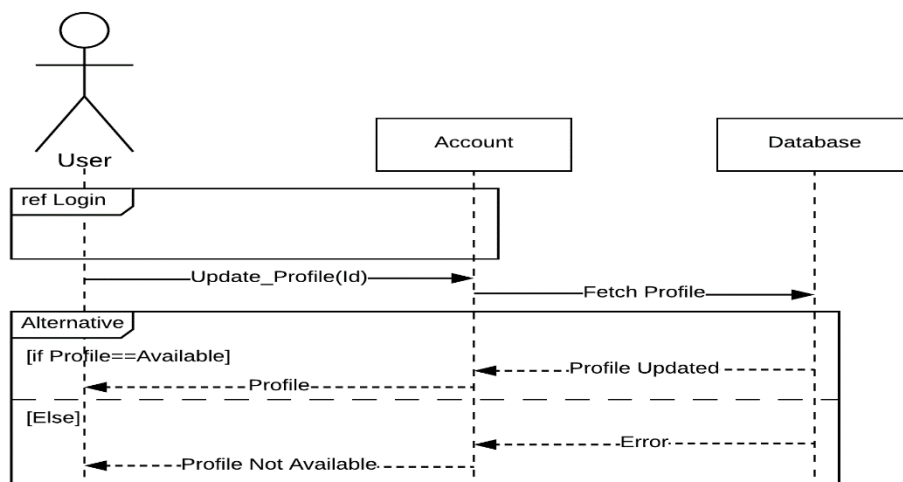
S.D 1.0



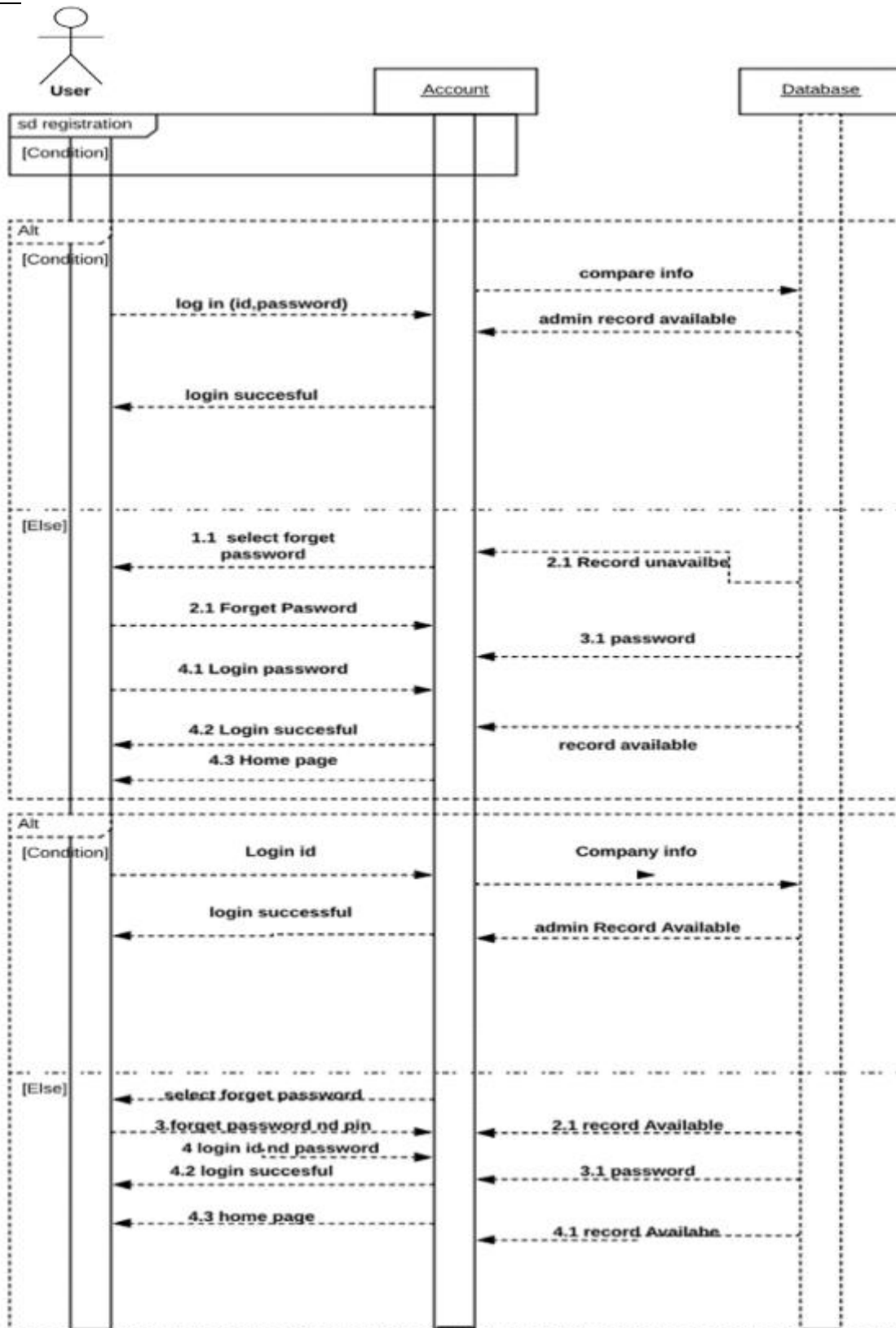
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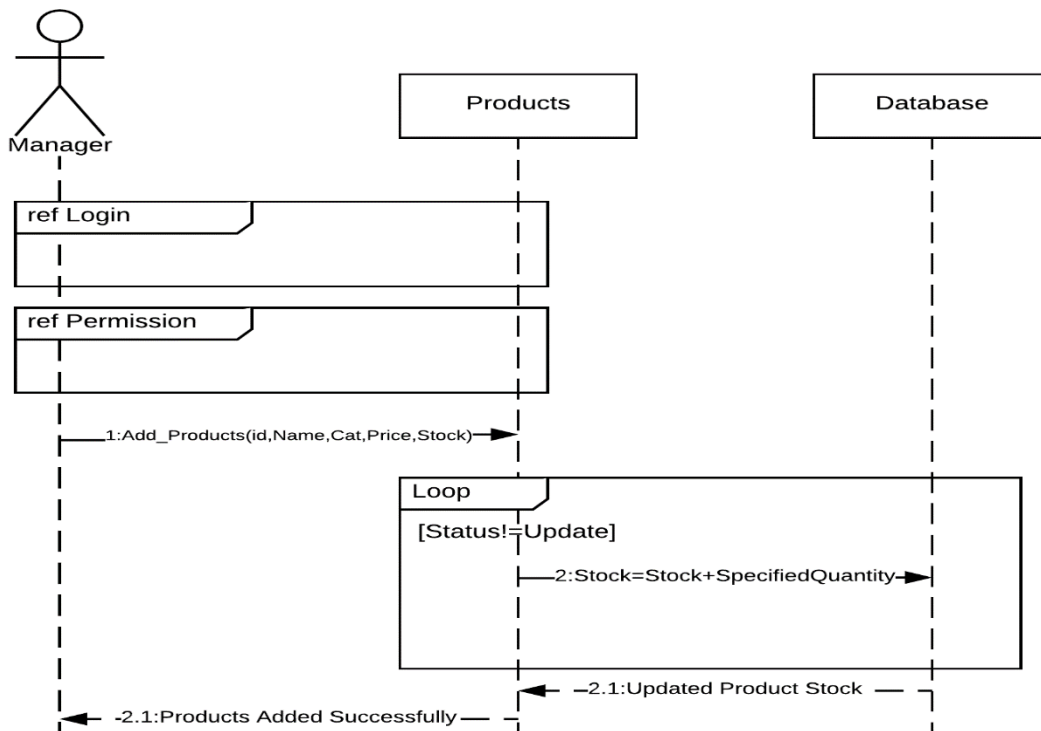
S.D 3.0



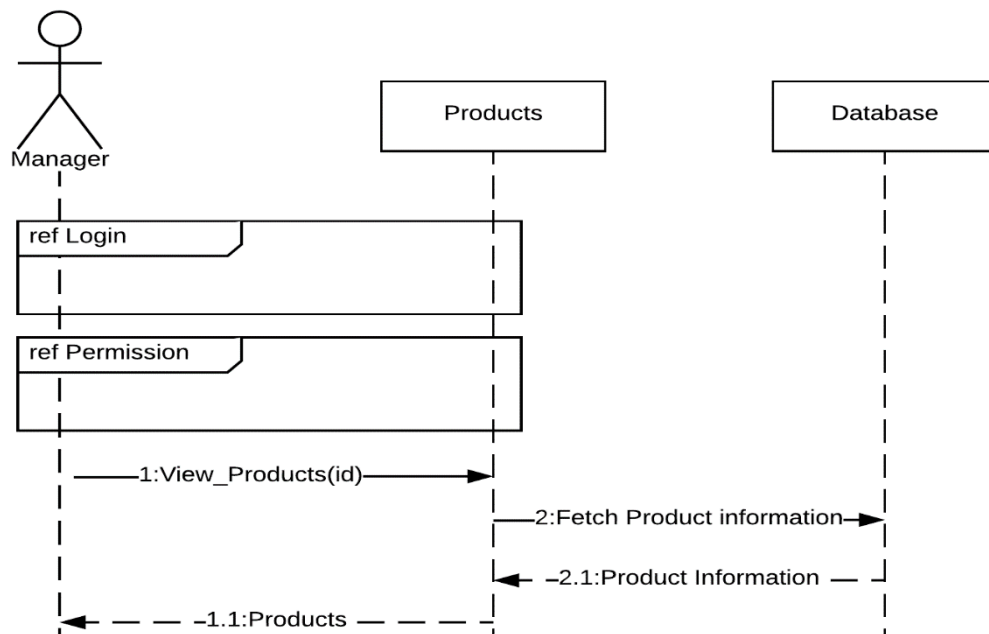
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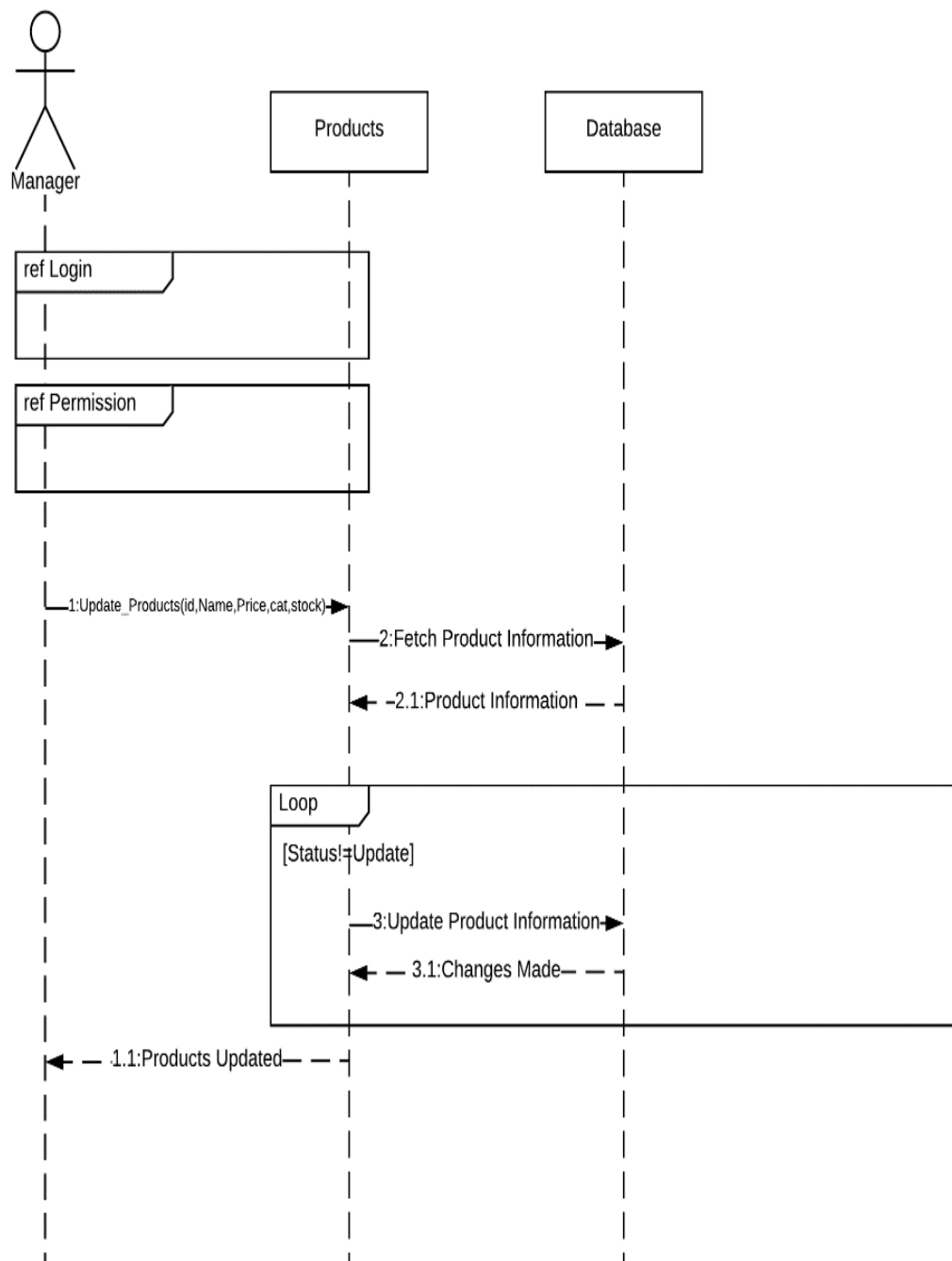
S.D 5.0



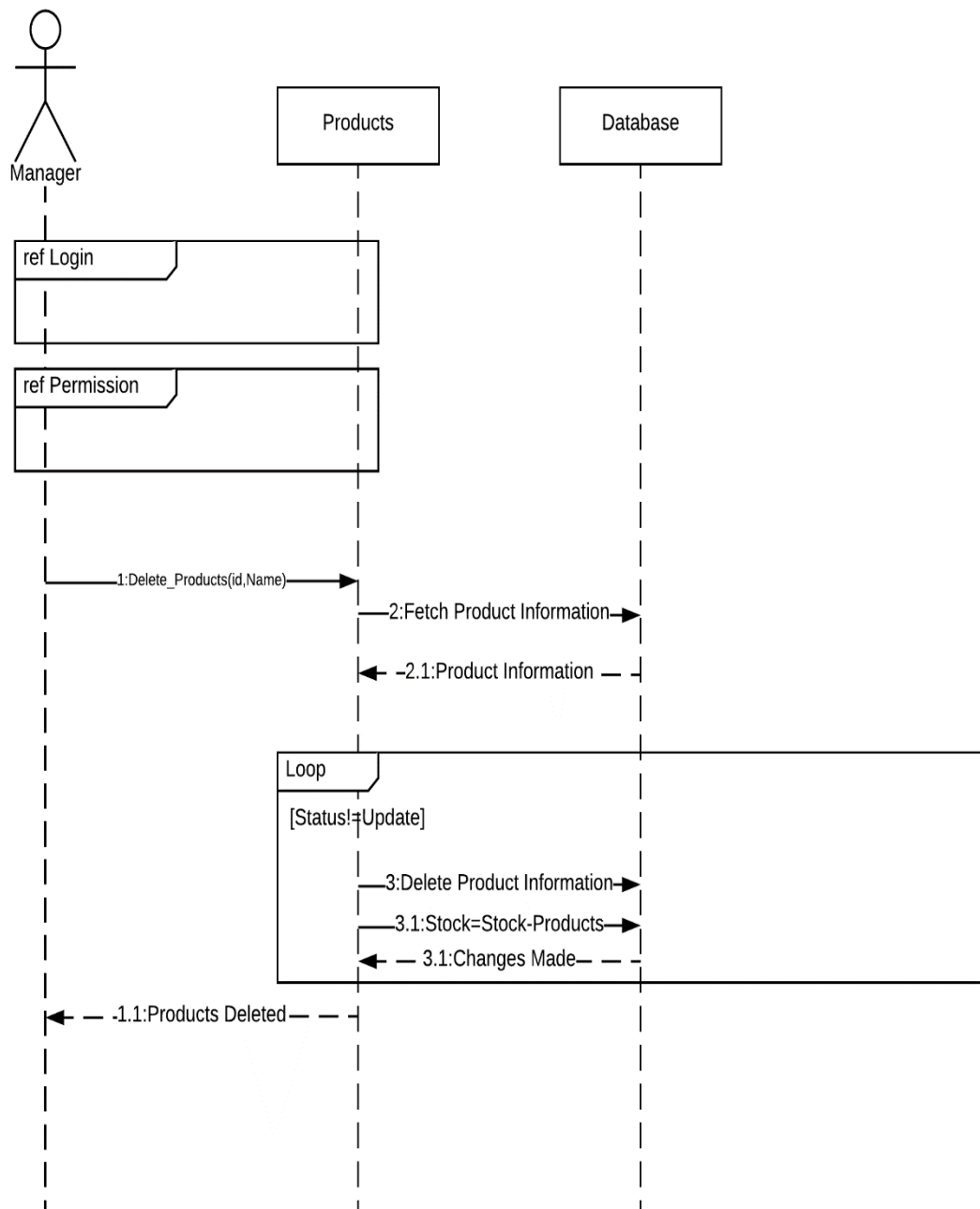
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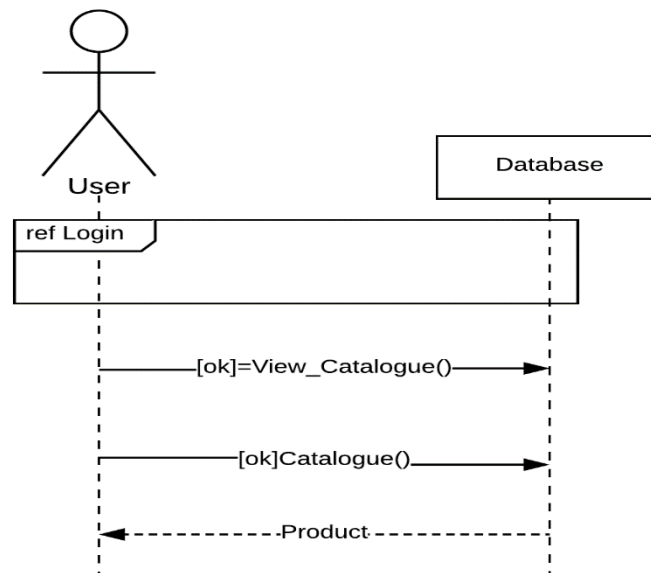
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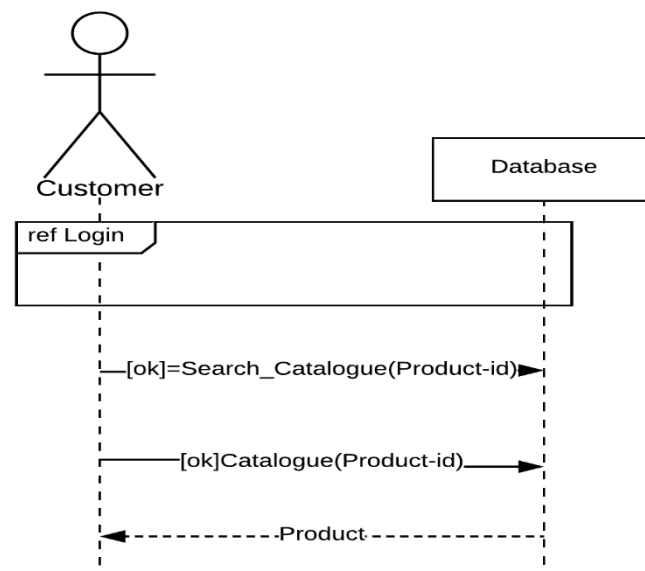
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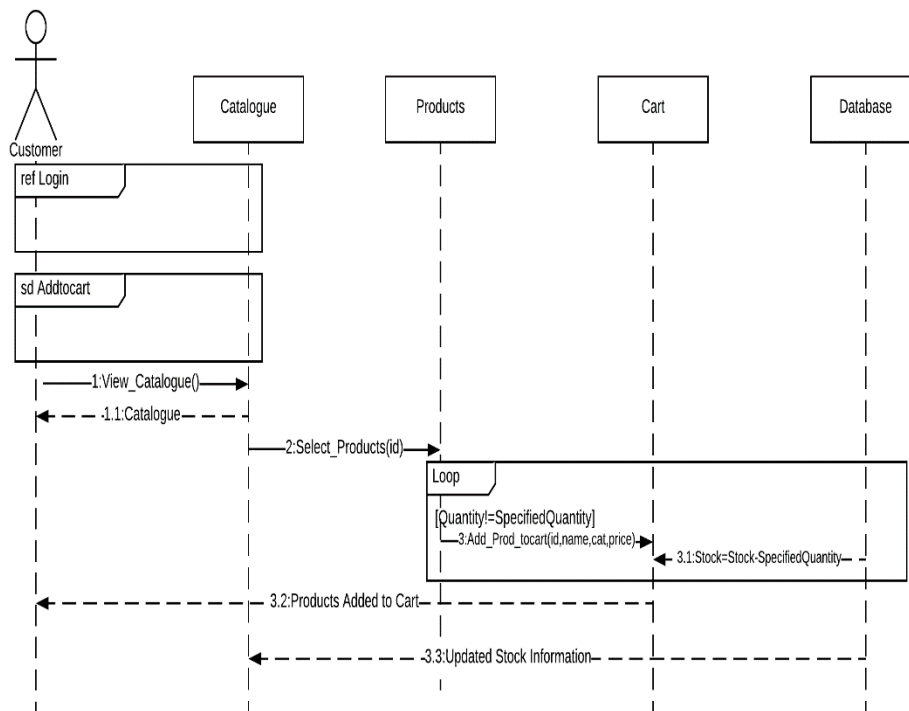
S.D 9.0



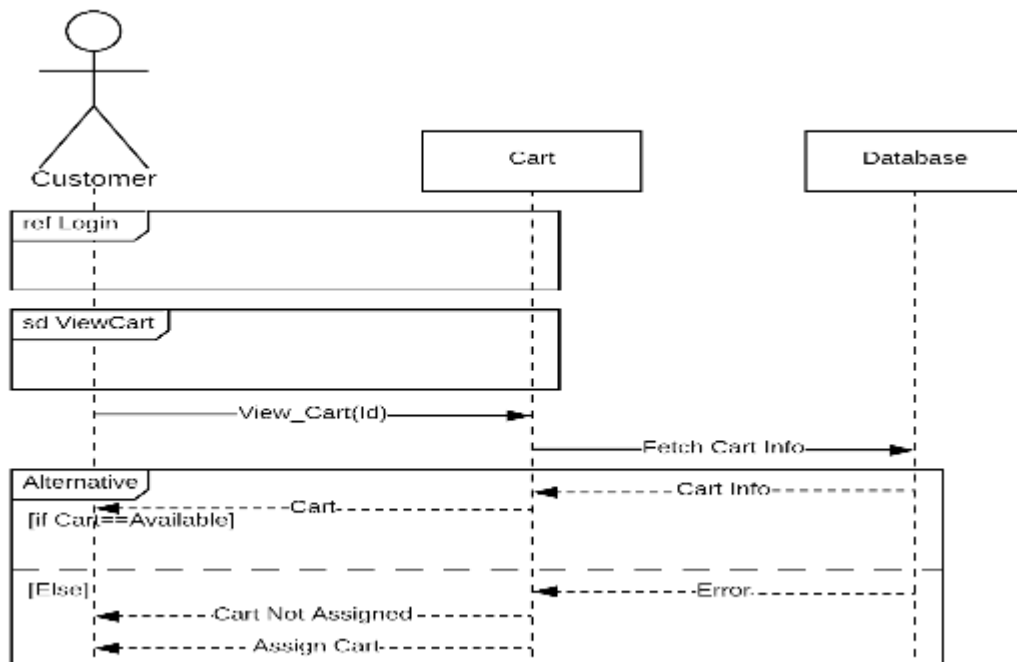
S.D 10.0



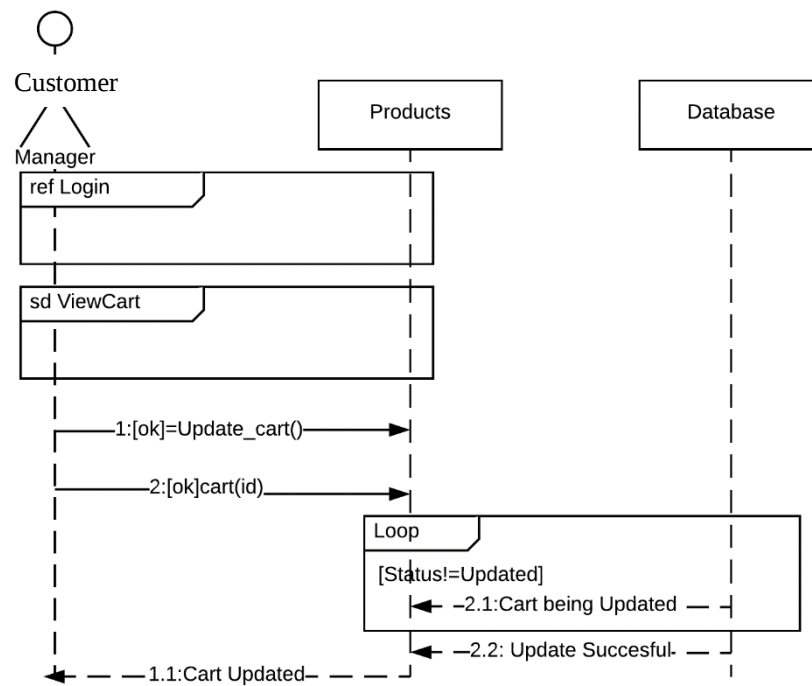
S.D 11.0



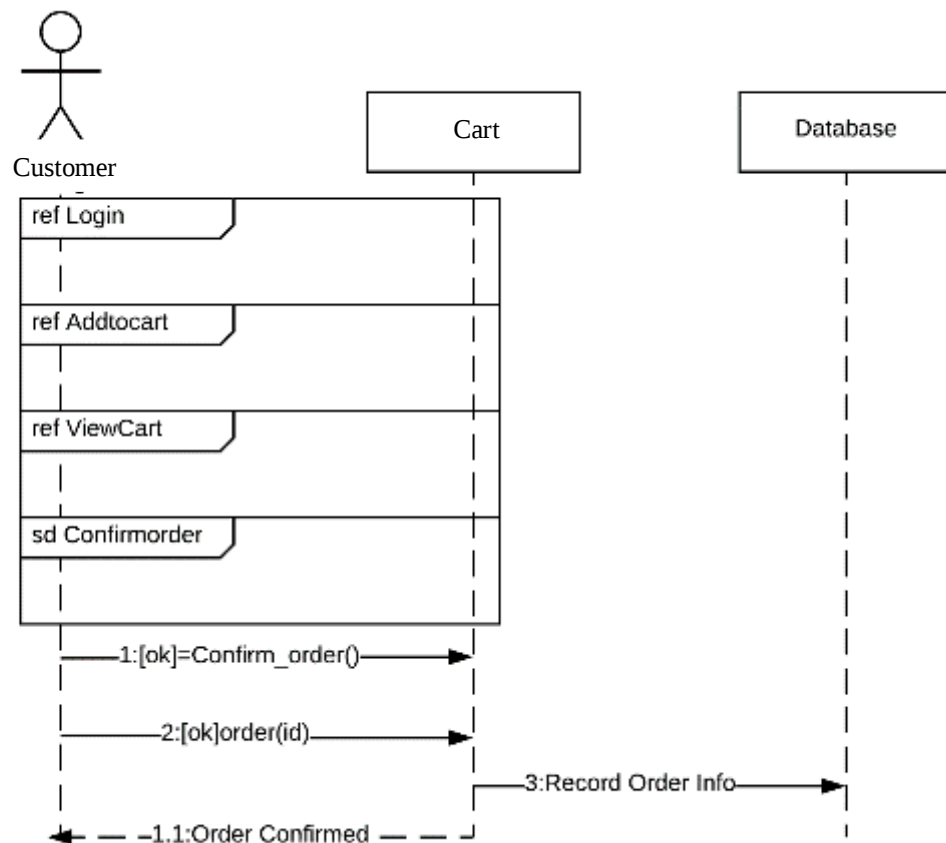
S.D 12.0



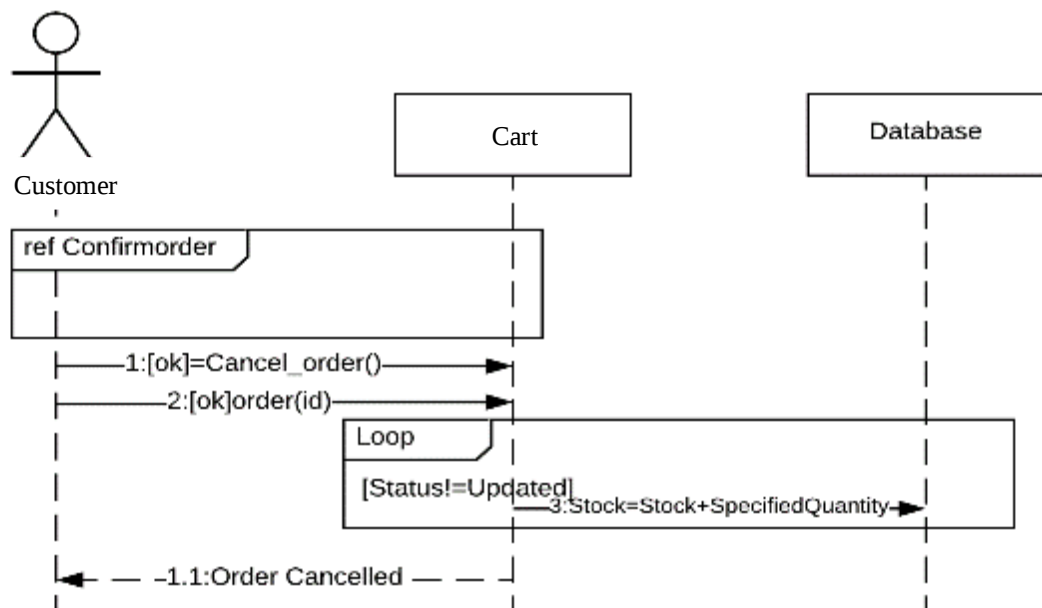
S.D 13.0



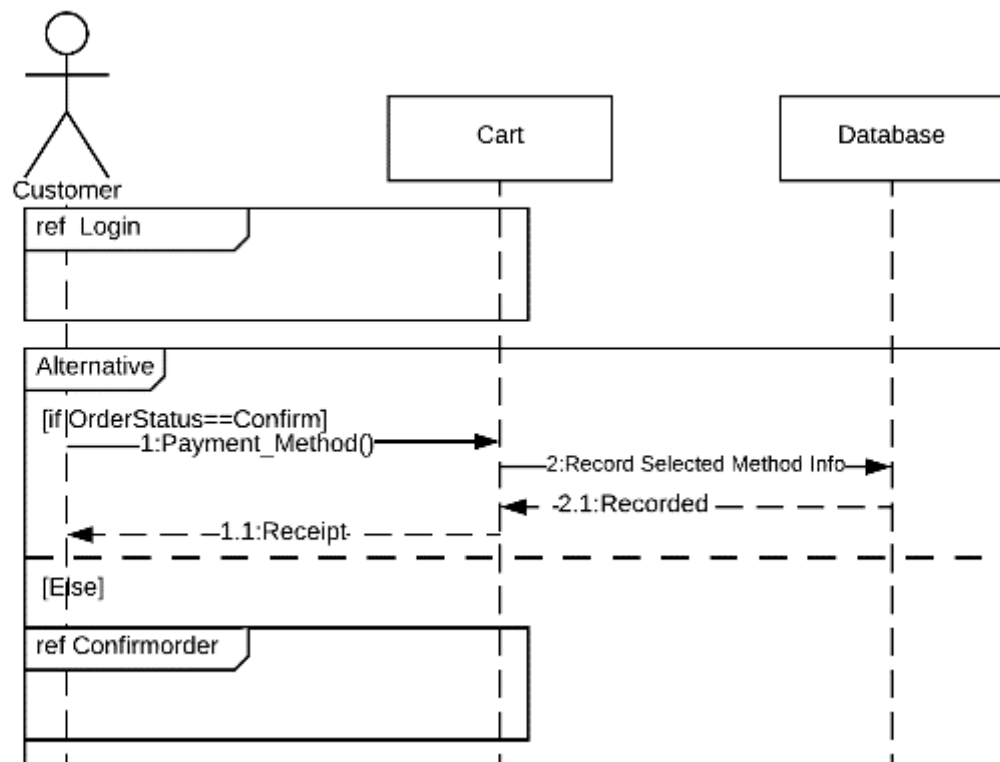
S.D 14.0



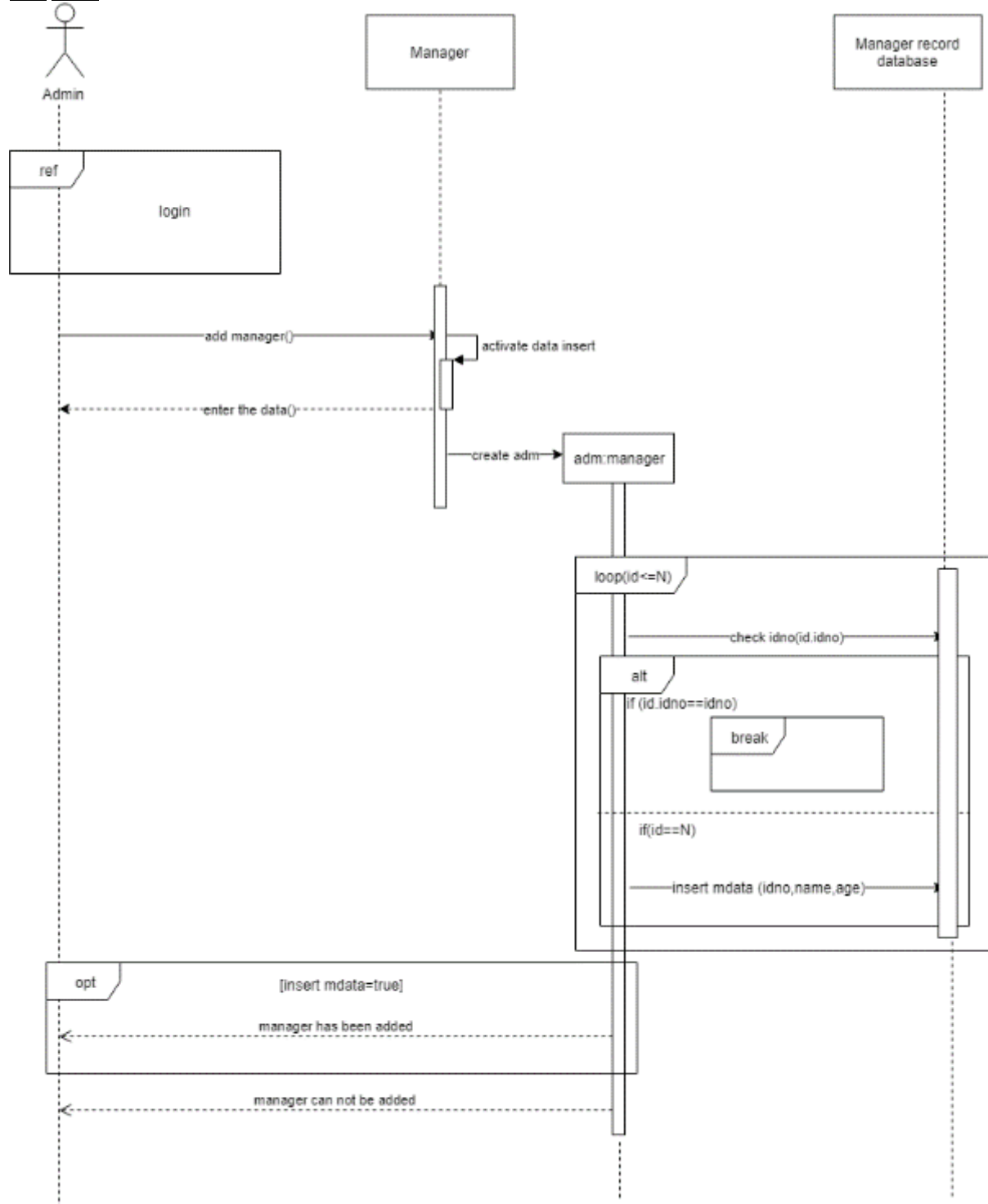
S.D 15.0



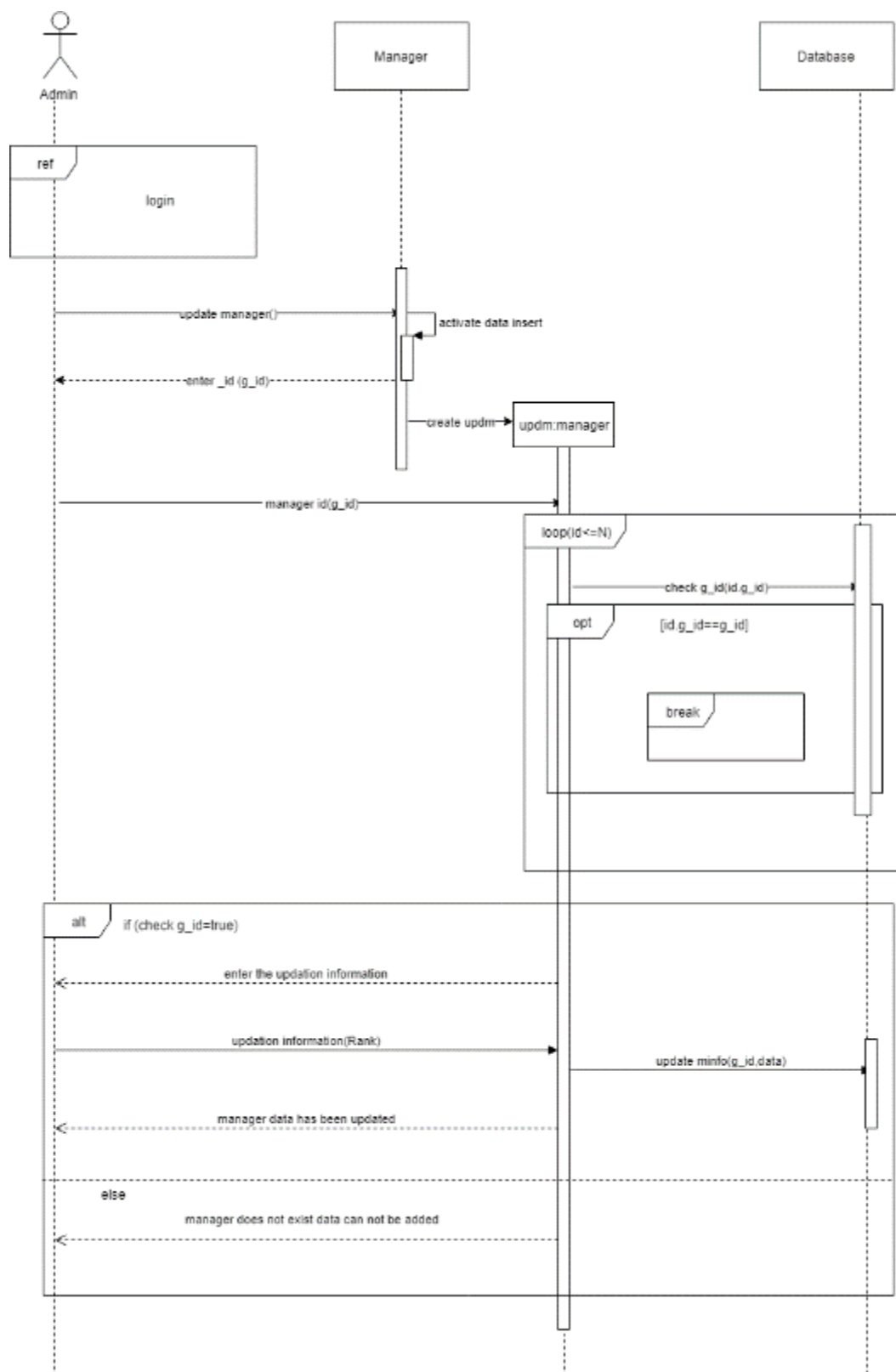
S.D 16.0



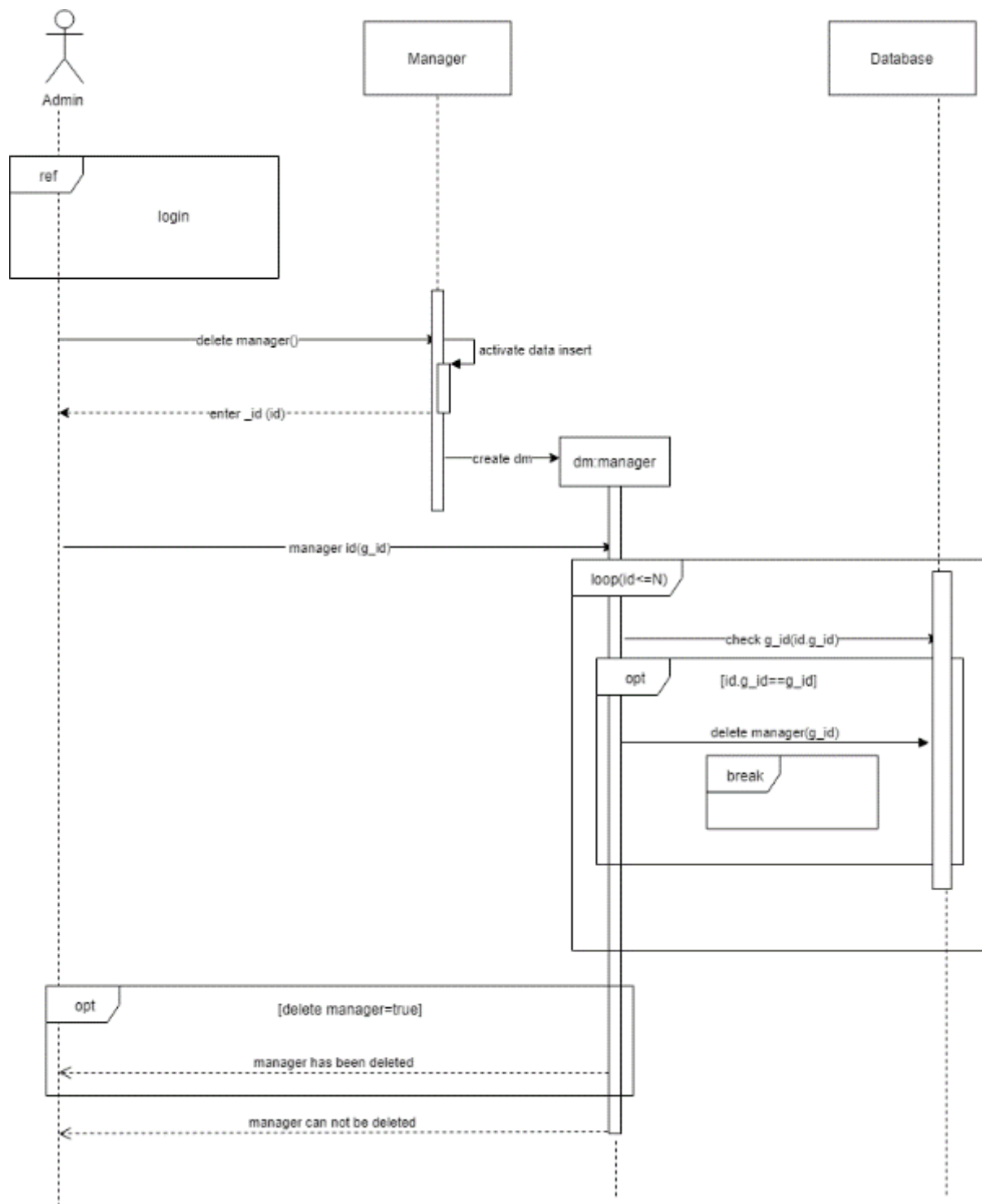
S.D 17.0



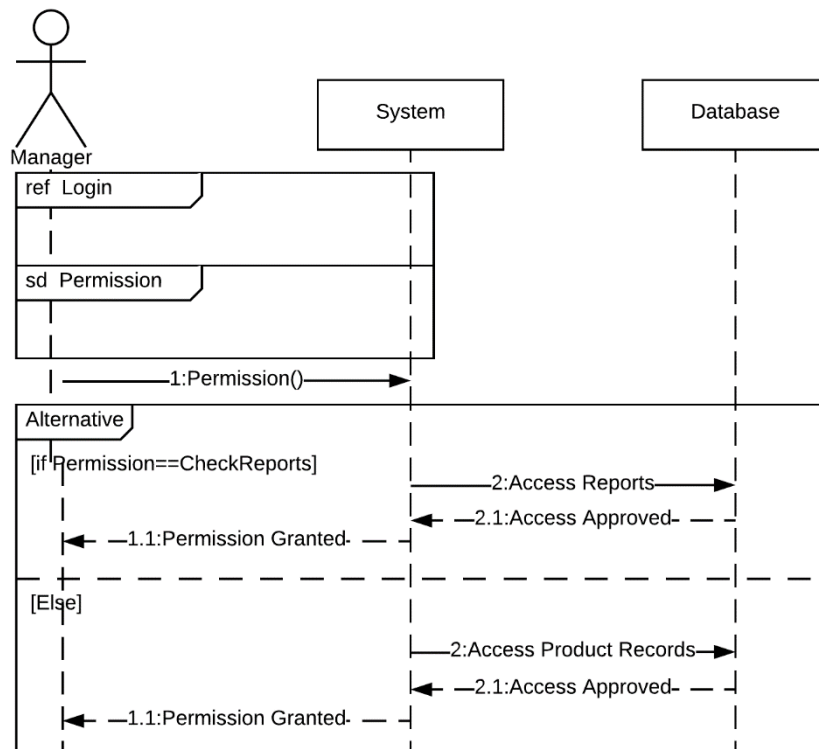
S.D 18.0



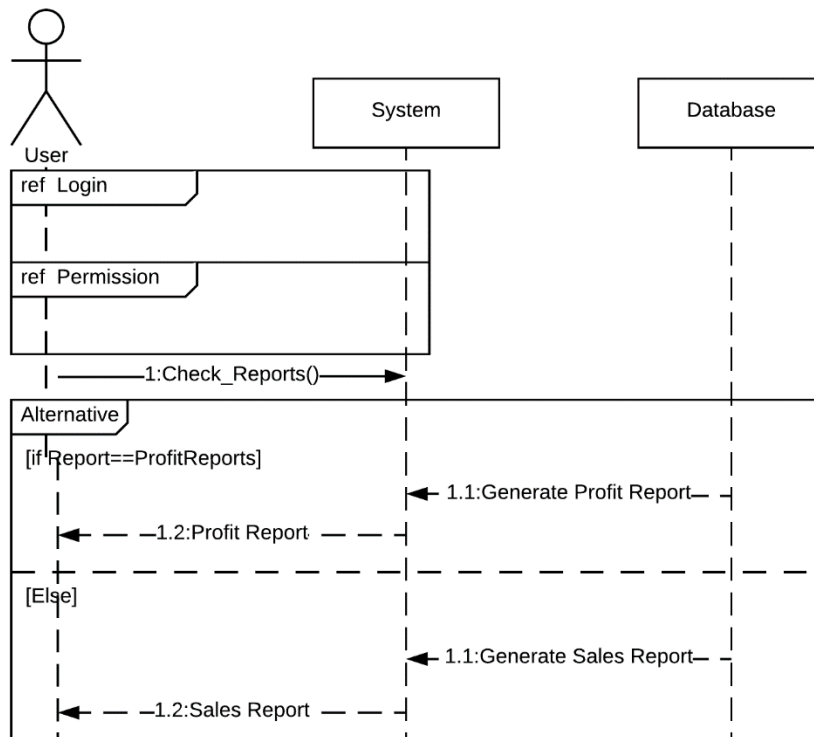
S.D 19.0



S.D 20.0

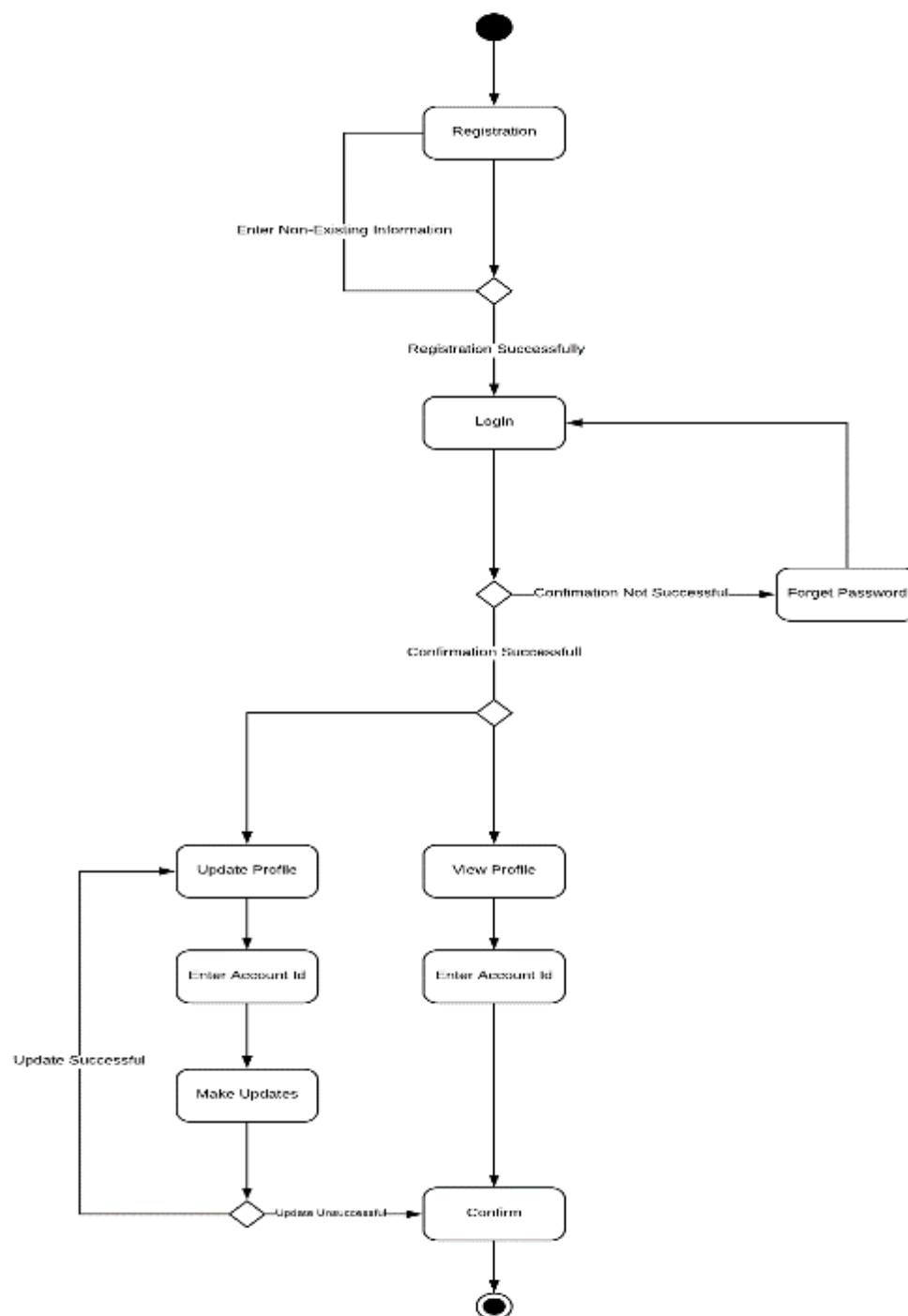


S.D 21.0

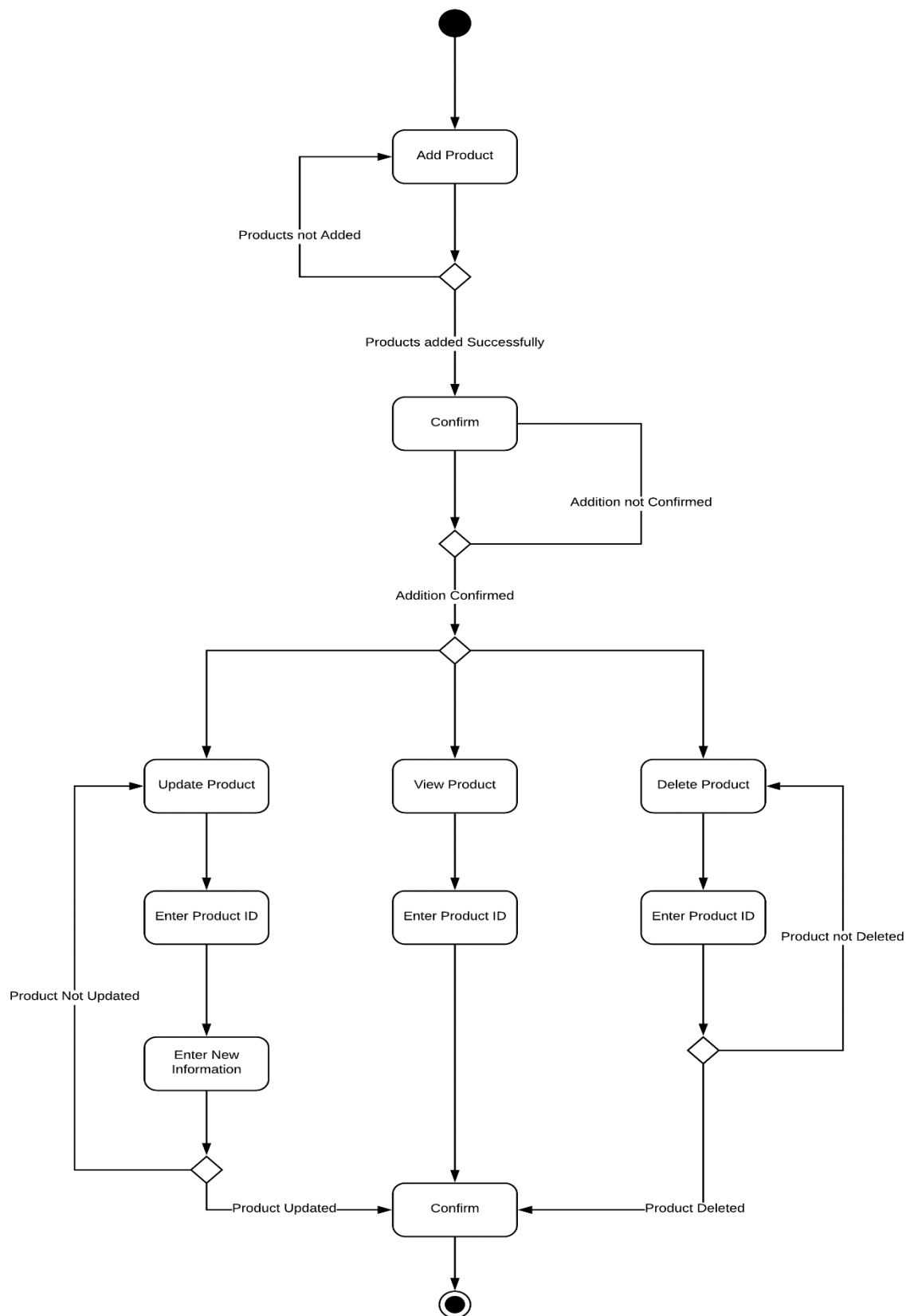


4.2 Activity Diagrams:

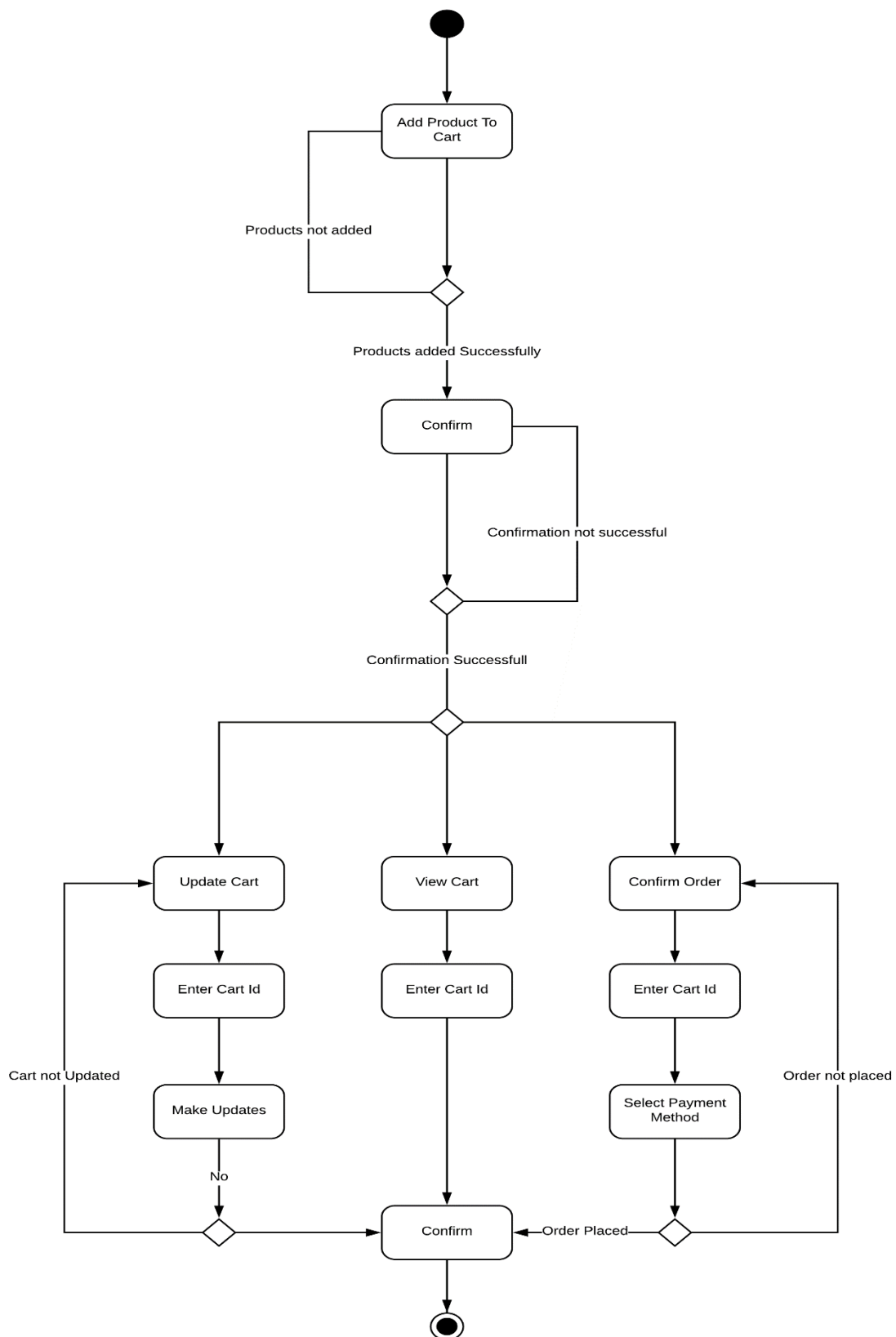
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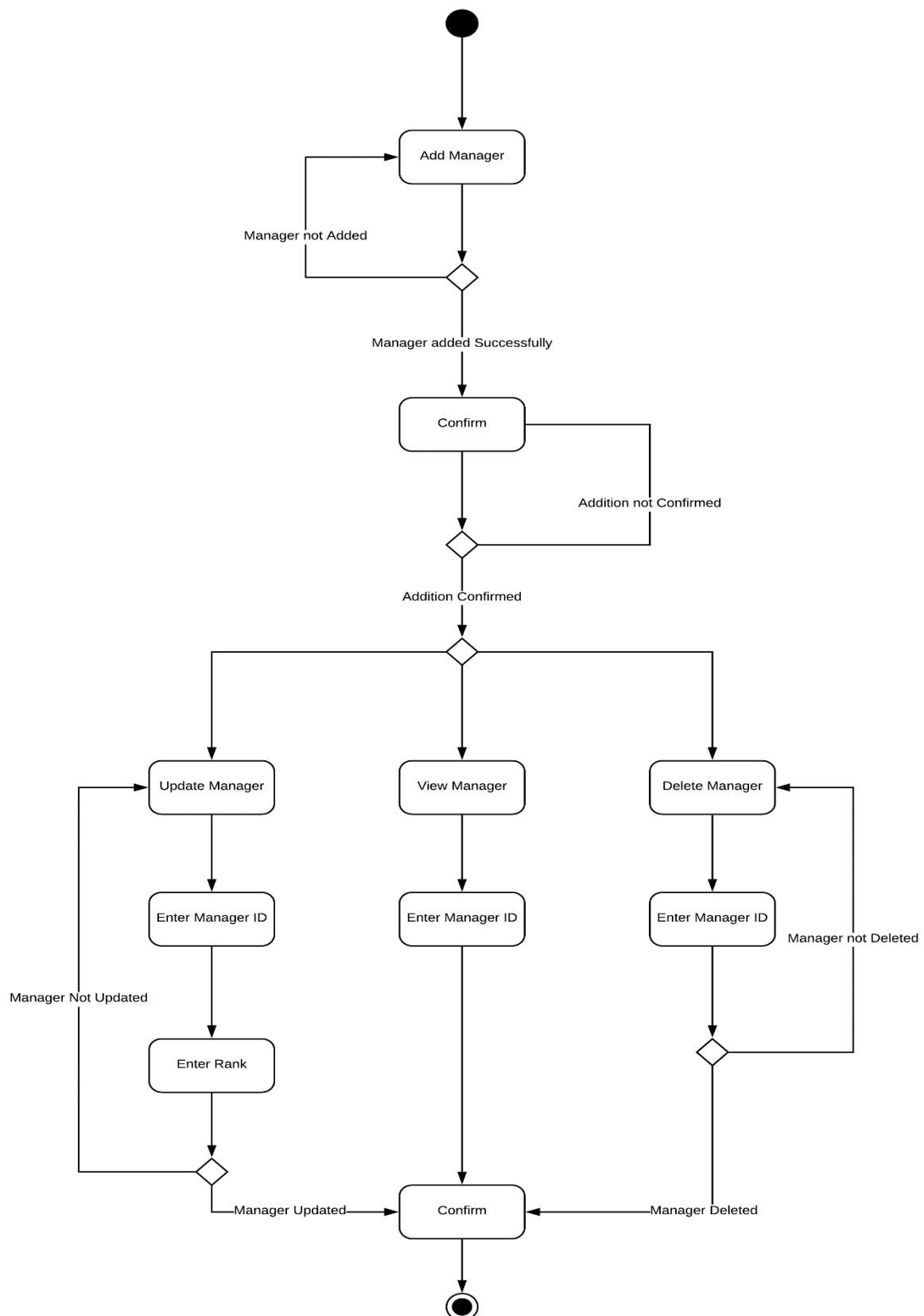
A.D 2.0



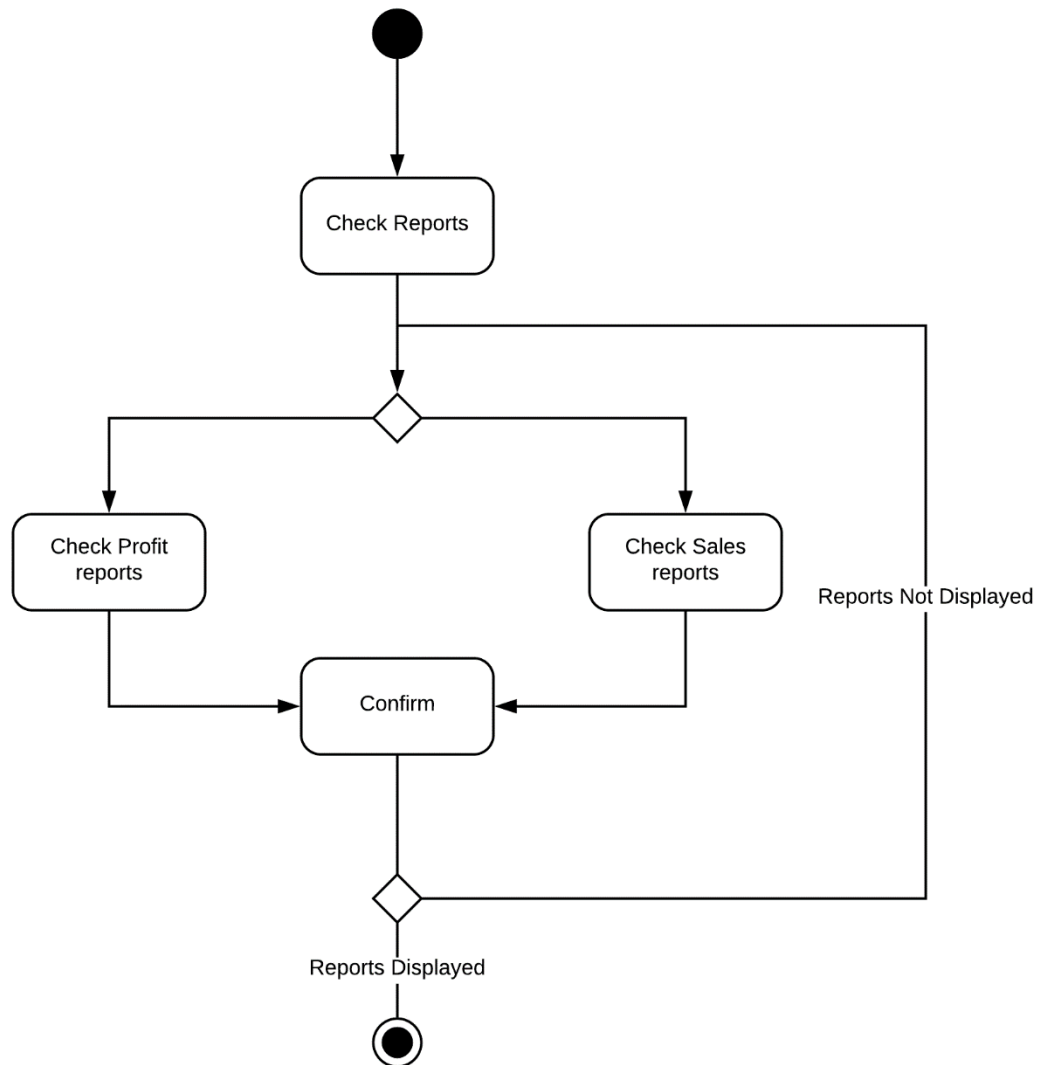
A.D 3.0



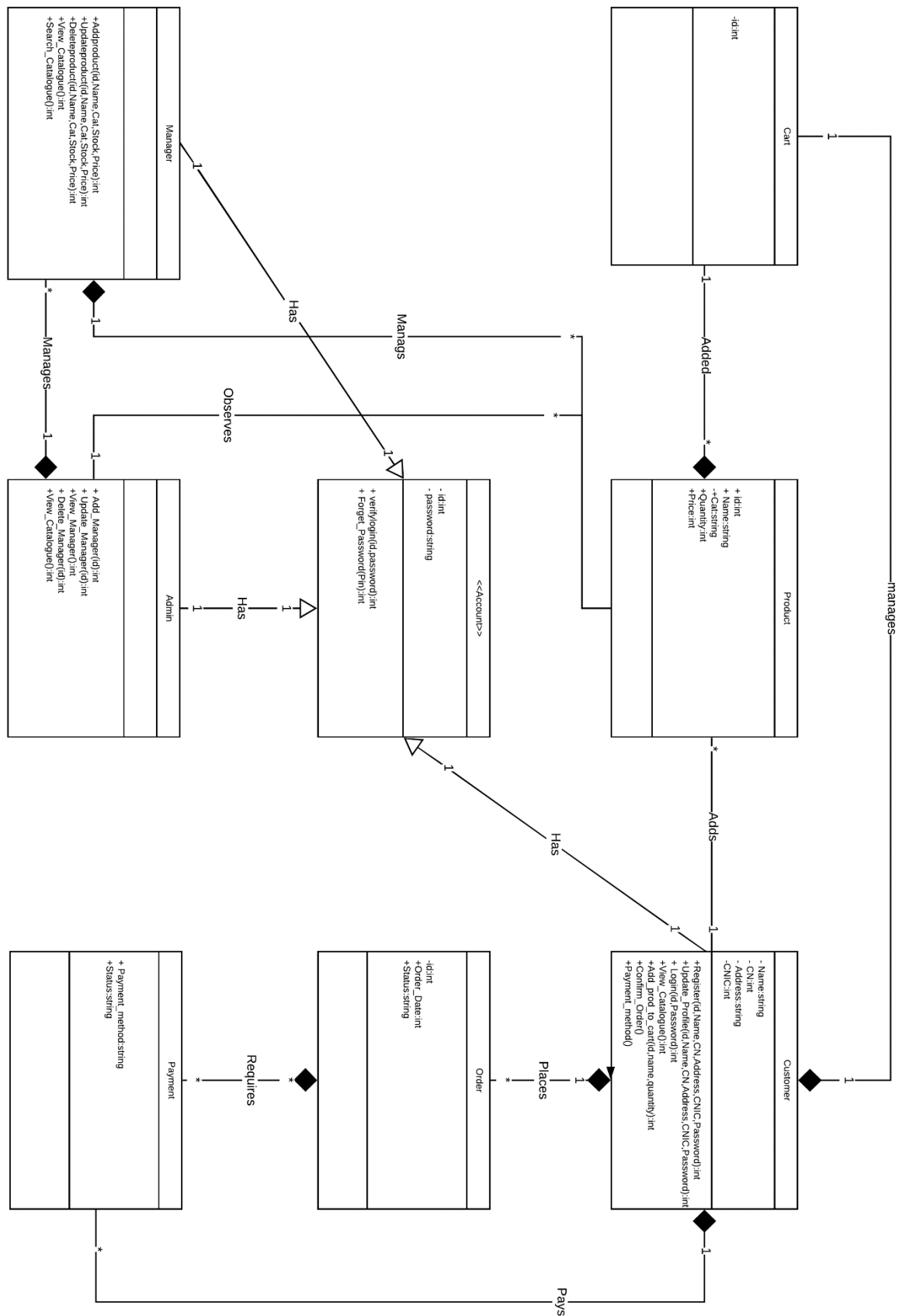
A.D 4.0



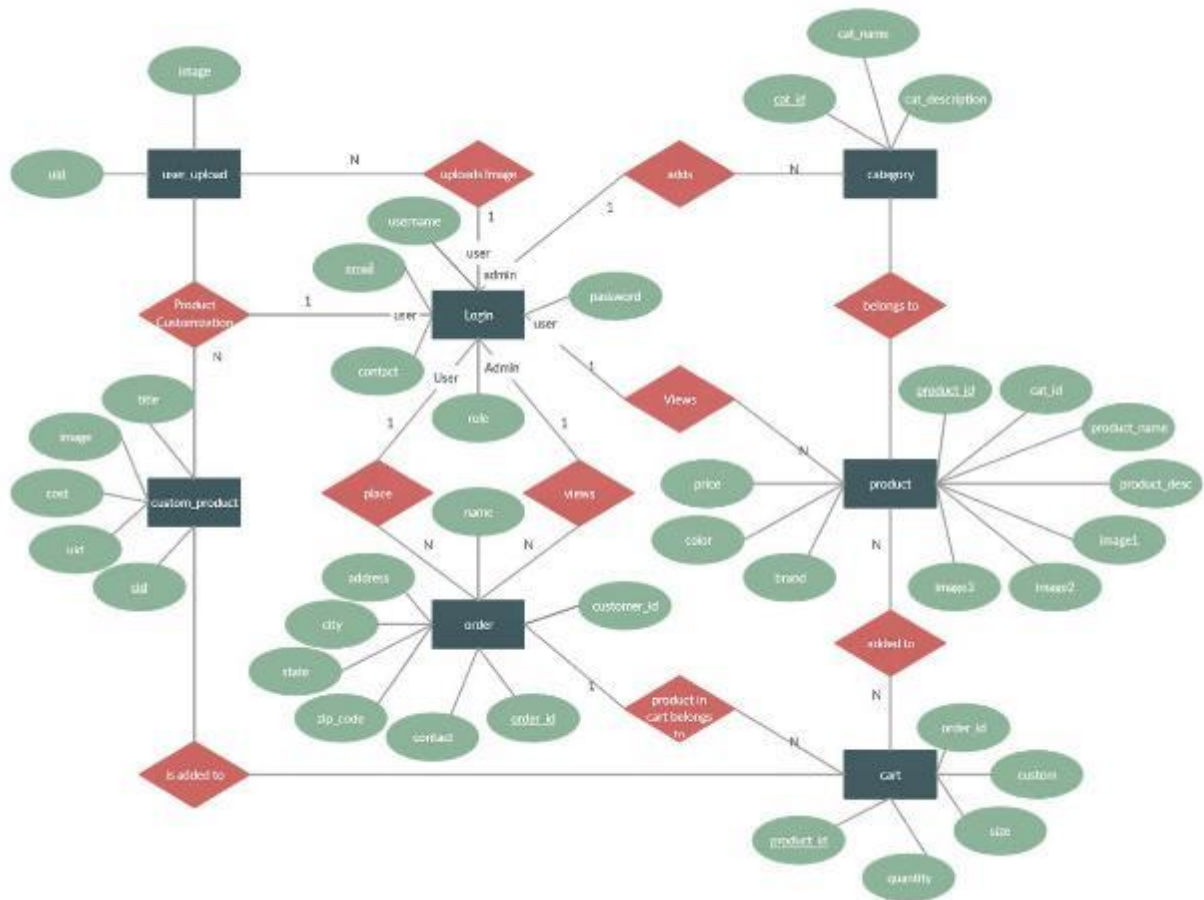
A.D 5.0



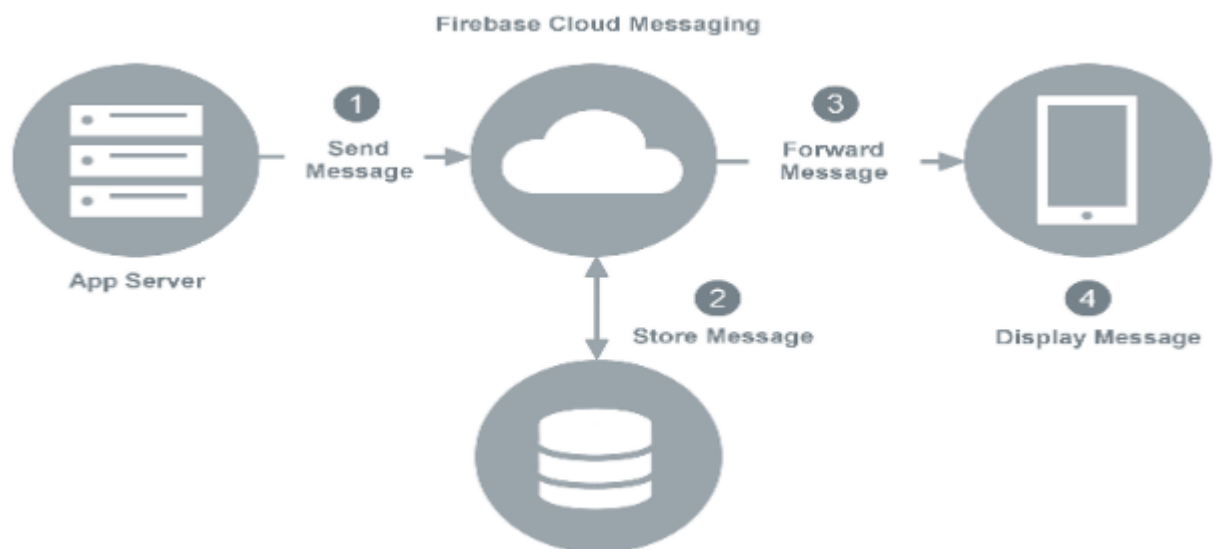
4.3 Class Diagram:



4.4 Entity Relationship Diagram:



4.5 System Architecture:



Chapter 5

Implementation

5.1 Tools and Techniques

5.1.1 Mobile Application Development Tools:

Android Studio and Android operating System.

Software Designing Tool

Microsoft Visio, Adobe Photoshop

Testing Tool

Android Studio's Testing Tool

Documentation Tools

Microsoft Office.

5.1.2 Techniques:

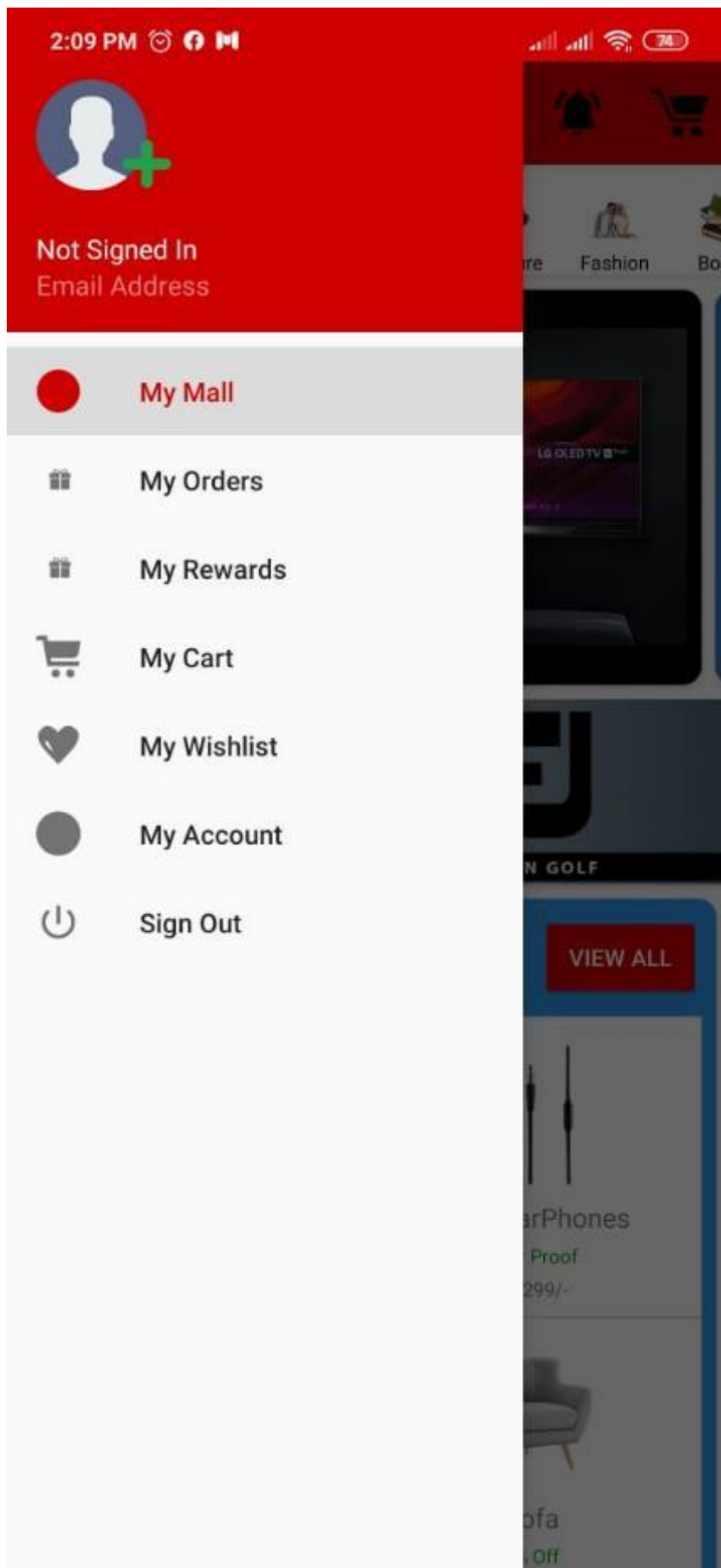
Mobile Application Techniques

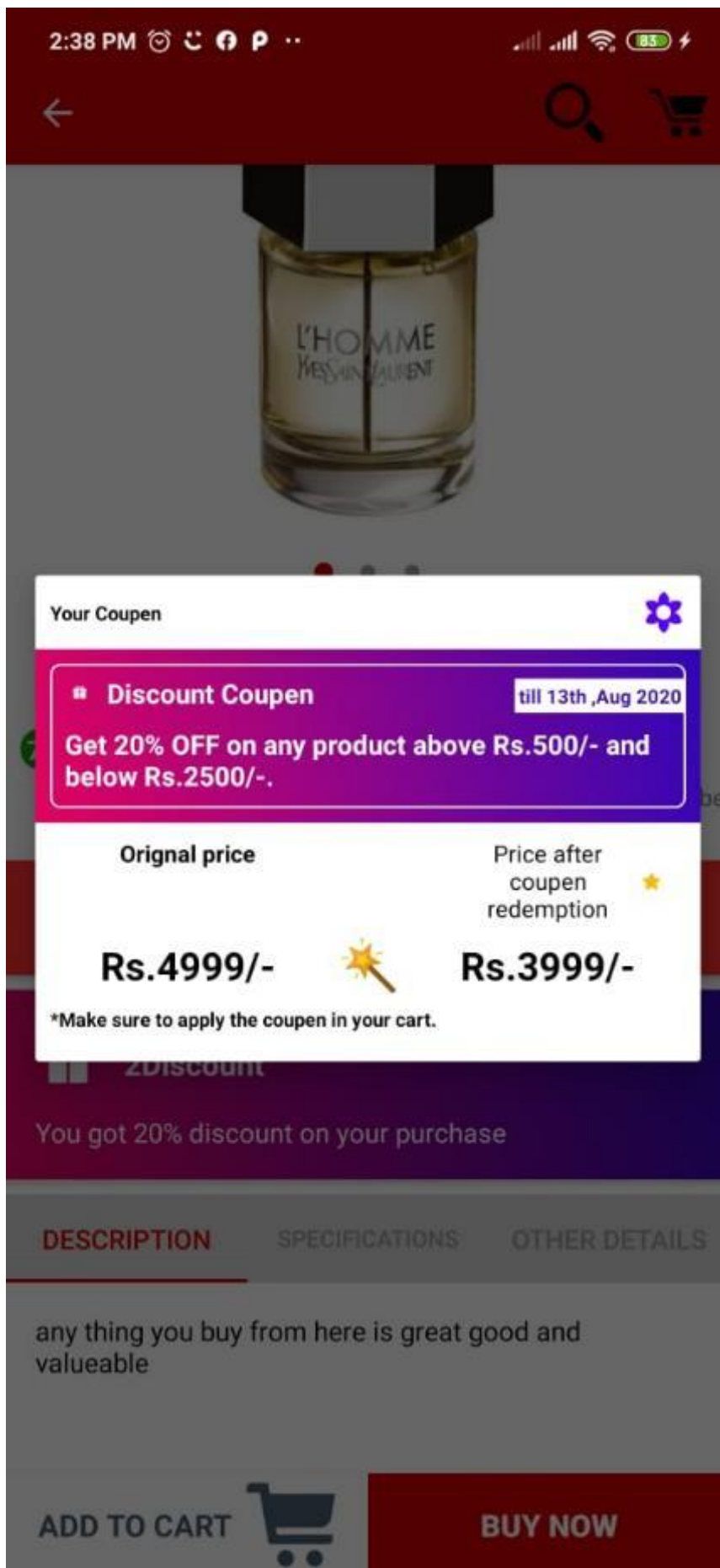
XML and Java.

Testing Techniques

Unit Testing, Integration Testing, System Testing, and Alpha & Beta Acceptance Testing

5.2 Interface Design





2:06 PM





74



Display

Resolution	1080p
color	Red

Dimensions

kuchb	kuchha
howto	idnt no

Camera

ok	nop
why	really?
where?	going

Ratings

7.0 ★

3 ratings

5 ★		3
4 ★		1
3 ★		0
2 ★		0
1 ★		2
		3

Your Ratings



ADD TO CART



BUY NOW

2:06 PM
🕒 📶 📶 📶
74

←
🔍 🛒




Google Pixle XL 2(Mirror Black,128 Gb)

7.0 ☆ (3)ratings


Cod Availabe

Rs.45999/- ~~Rs.49999/-~~

Check price after coupon redemption
REDEEM

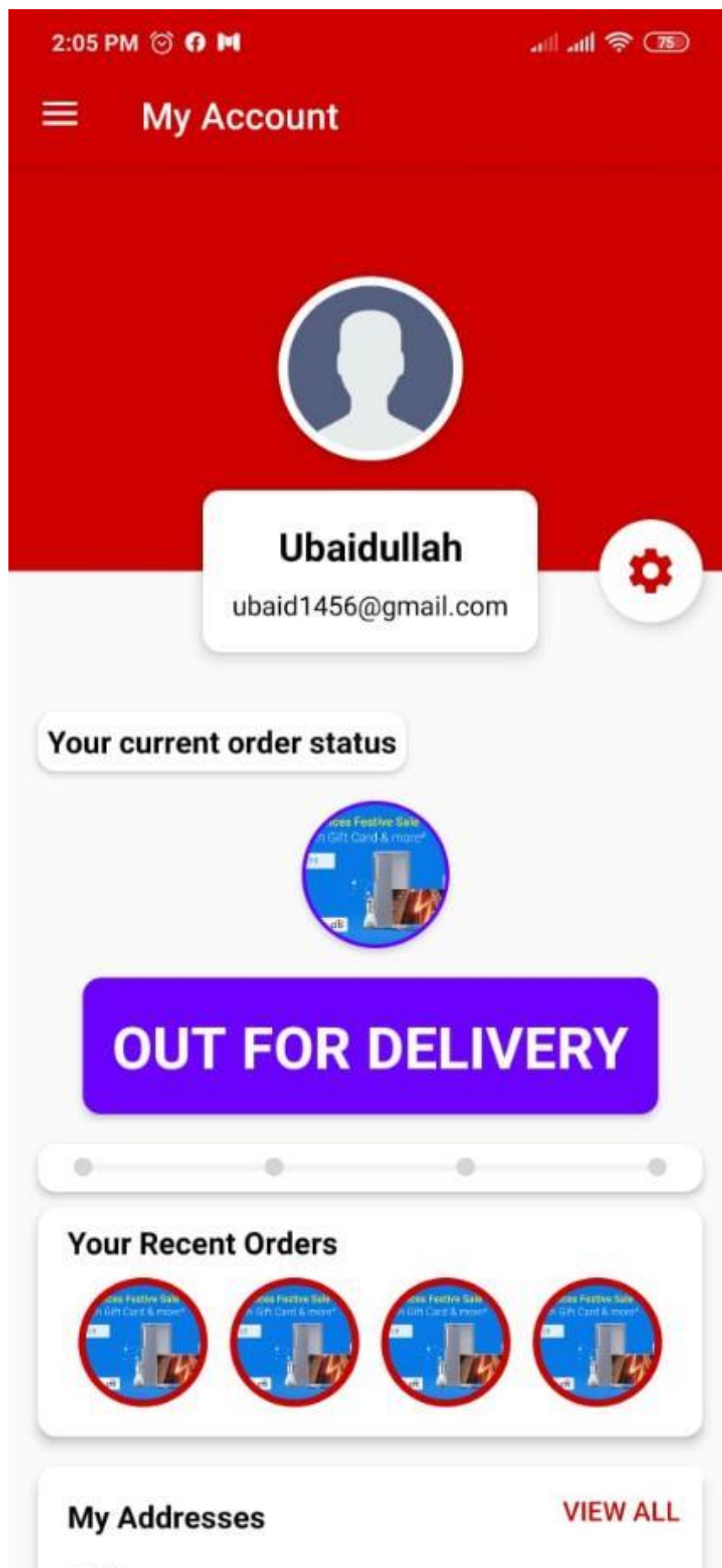

2Discount

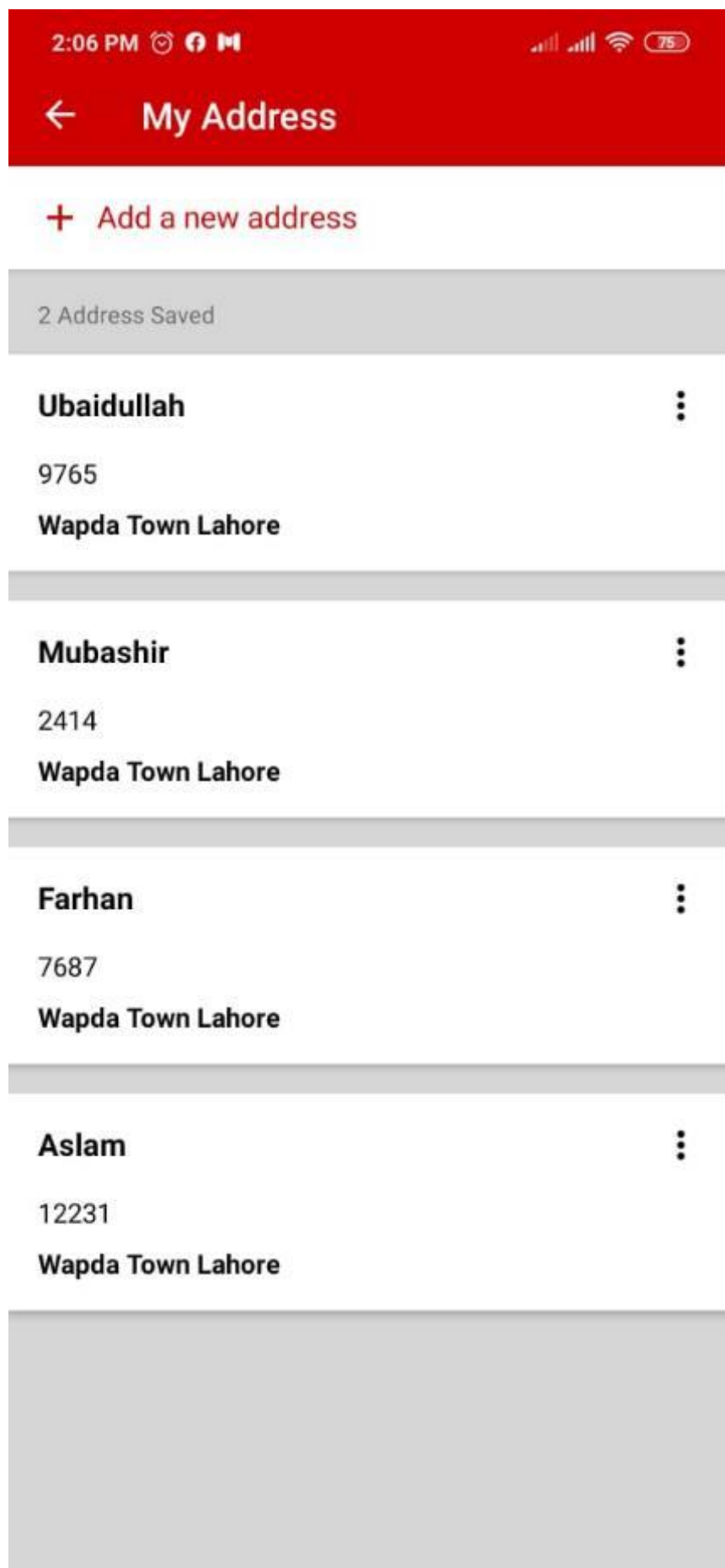
You got 20% discount on your purchase

DESCRIPTION SPECIFICATIONS OTHER DETAILS

anything you buy from here is great good and

ADD TO CART 
BUY NOW





2:06 PM



←

Delivery

PRICE DETAILS

Price (3 Items)

Rs.3255325/-

Delivery

Free

Total Amount

Rs.4332432/-

Rs.78797/-



Happy Shopping

SHIPPING DETAILS

Ubaidullah

Shipping Address

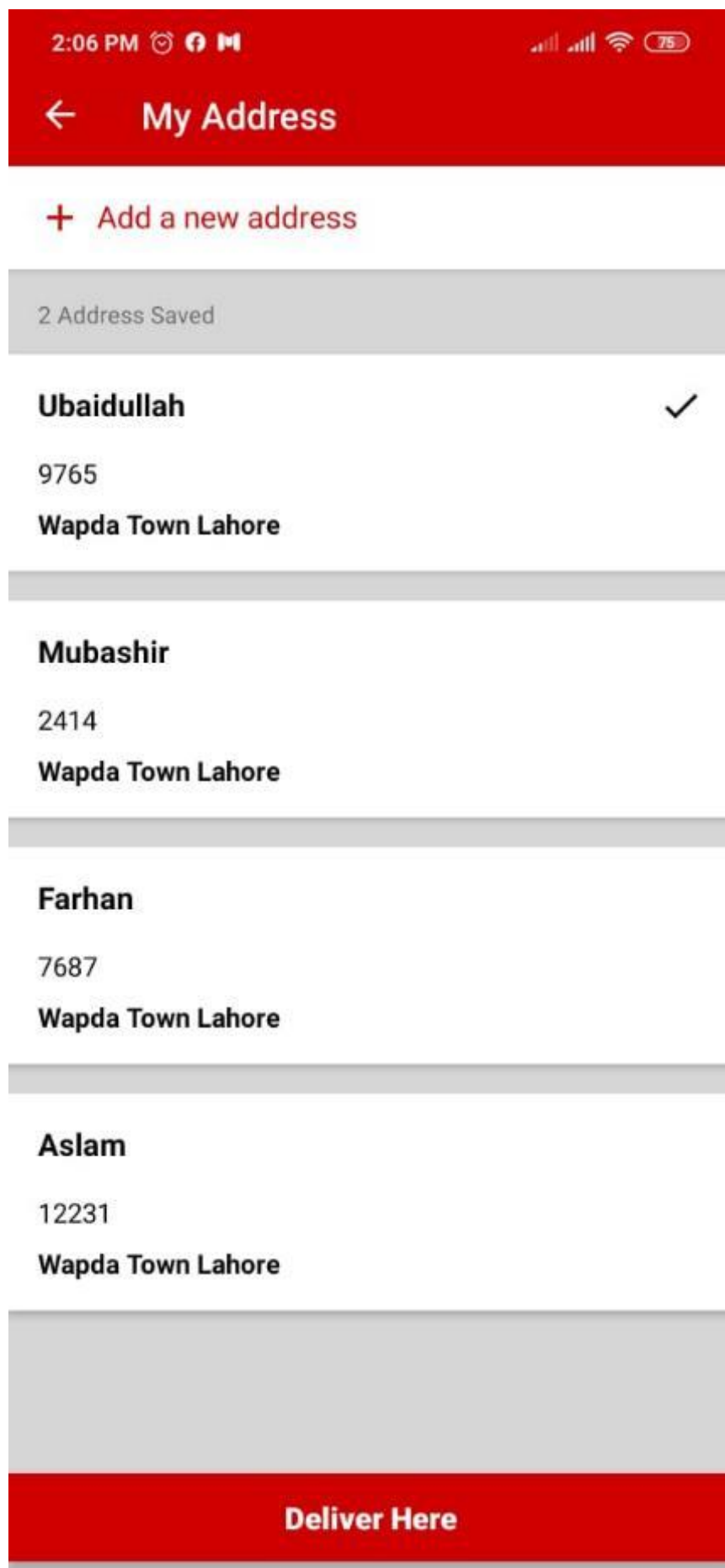
Pincode

Change or add a new address

Rs.4999/-

Total Amount

CONTINUE





Google Pixle XL 2(Mirror Black,
128 Gb)

 Free 2 coupens

7.0  (3)ratings



Rs.45999/- Rs.49999/-

Cash on Delivery Available





#trending



Huawie P20Lite Premium
version

 Free 1 coupon

4.5  (22)ratings

Rs.2323/- Rs.3332/-

Cash on Delivery Available



Huawie P20Lite Premium
version

 Free 2 coupons

3.2  (12)ratings

Rs.24267/- Rs.34234/-

Cash on Delivery Available



Huawie P20Lite Premium
version

 Free 4 coupons

2.7  (13)ratings

Rs.87989/- Rs.2123/-



Huawie P20Lite Premium
version

 Free 5 coupons

4.8  (14)ratings

Rs.121312/- Rs.5555/-

Cash on Delivery Available



Huawie P20Lite Premium
version

2:05 PM

75

My Orders

Pixel 2XI(Black)

● Delivered on Monday 15th Jan 2020

Your Ratings





Pixel 2XI(Black)

● Delivered on Monday 15th Jan 2020

Your Ratings





Pixel 2XI(Black)

● Cancelled

Your Ratings





Pixel 2XI(Black)

● Delivered on Monday 15th Jan 2020

Your Ratings





2:04 PM





75

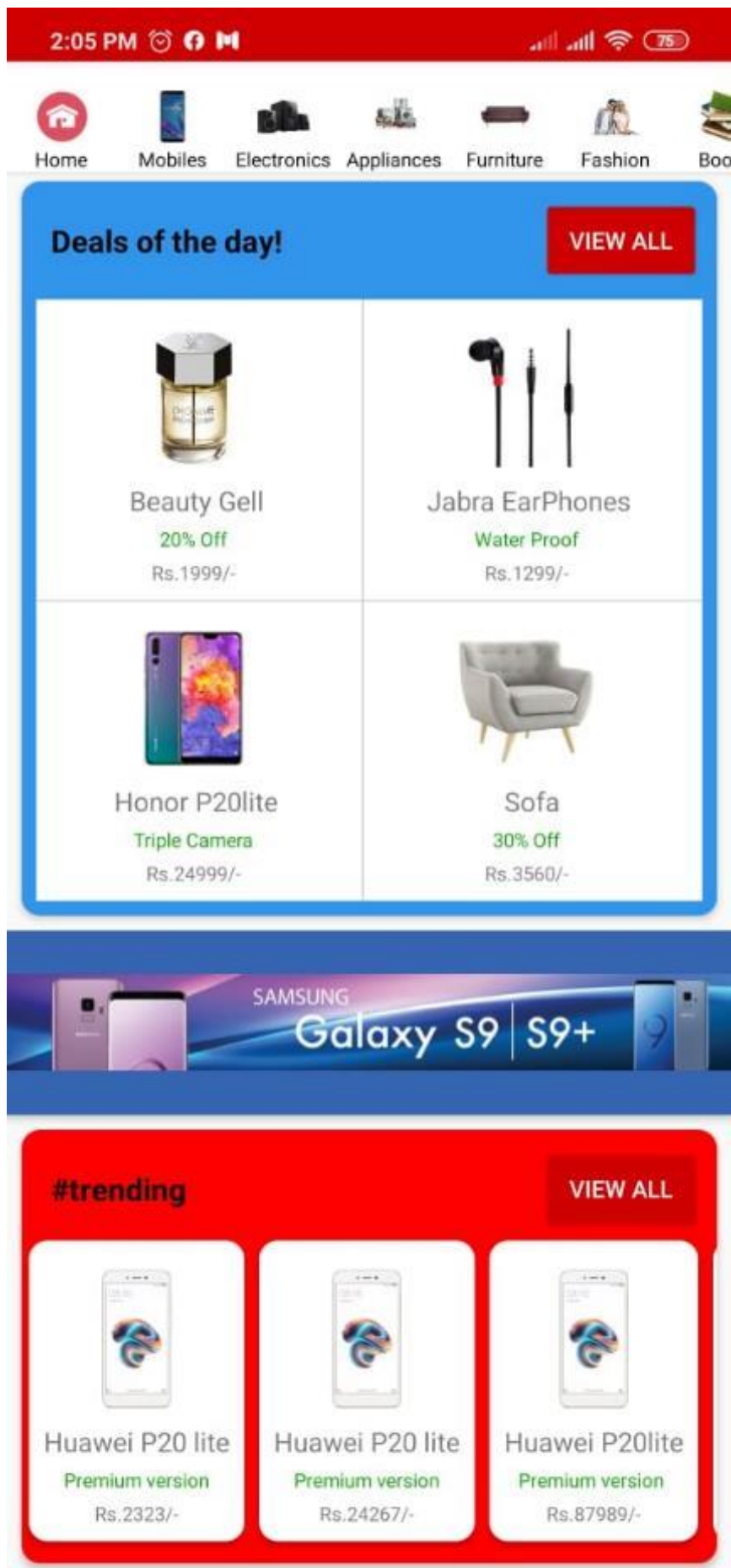


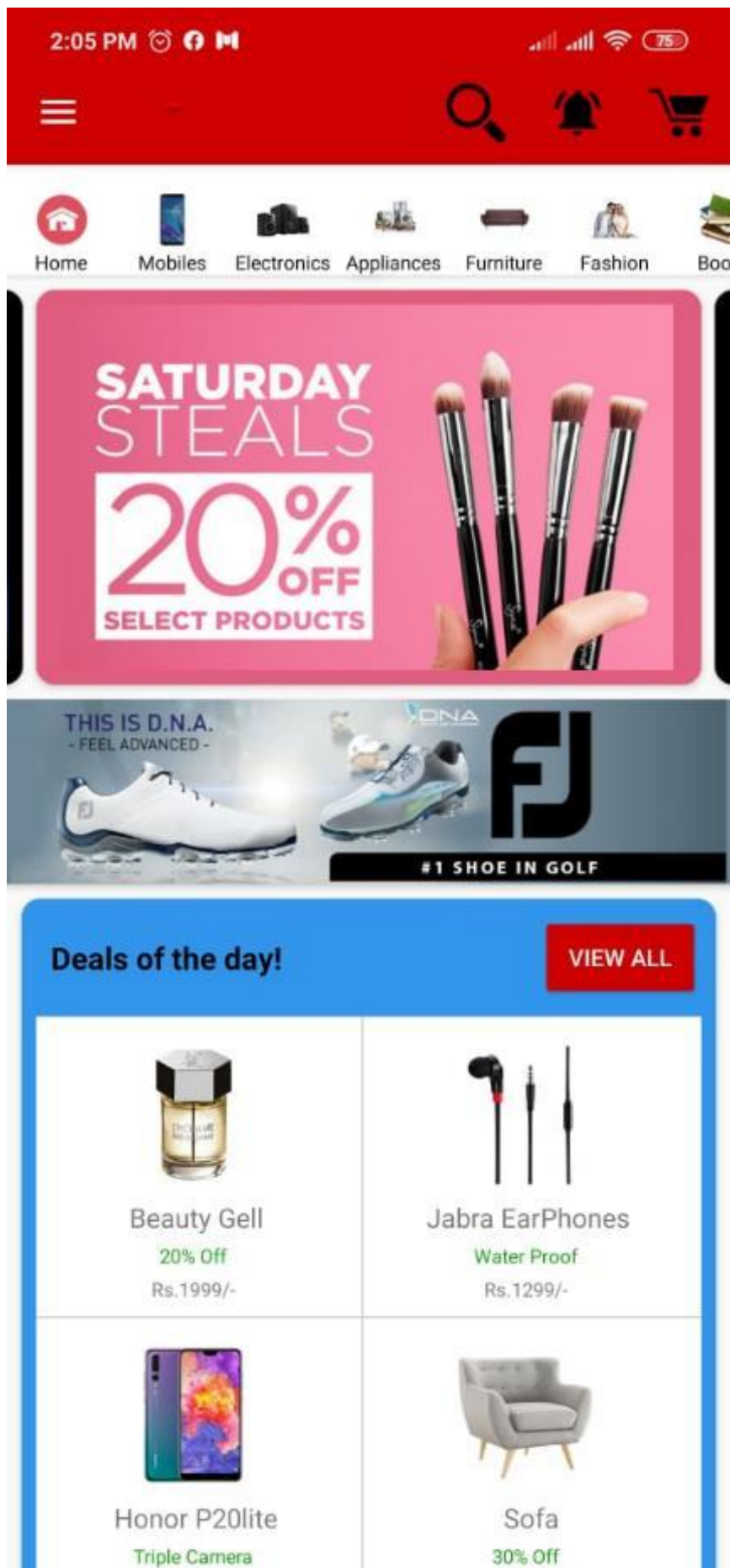
Forgot Password?

Don't worry we just need your registered email address and it's done!

Reset password

< < Go Back





2:05 PM





←

Deals of the day!



Beauty Gell

20% Off

Rs.1999/-



Jabra EarPhones

Water Proof

Rs.1299/-



Honor P20lite

Triple Camera

Rs.24999/-



Sofa

30% Off

Rs.3560/-

2:04 PM



75





Enter Email ID

Enter full name

Enter Password (at least 8 characters)

Confirm Password

Sign Up

or

Have an account?Sign in!

2:04 PM









Enter Email

Enter Password

Forgot Password?

Sign In

or

Don't have an account? Sign Up!

Chapter 6

Testing and Evaluation

6.1 Testing Case's:

TC:1.0 Registration/Login/Forget Password

TC:1.1 Registration

Description	Sample Data		Expected Result	Actual Result	Status
Registering a profile	Name/ CN/Address/CNIC/Pw				
Checking Limitations					
min>=3 && max <=25 length==11 min>=3 && max <=50 length==13 min>=3 && max <=15	Sheraz Qureshi 03104876067 55-D Pak Arab Society, Lahore 35202-1234567-1 Honda12345	Valid	Customer should be directed towards the home page of our online shopping system.		
Min<3 Length<11 Min<10 Length<13 Min<3	Mub 033541083 55 K2 Wap 35202-278441-0 Me	Invalid	As entries were invalid, user shall again be directed to registration page.		
Min>25 Length>11 Min>50 Length>13 max >15	Mubishsakfafafhasfhasfhsaddgfahf hsf 031048760672 55 K2 Wapda town lahoregdgfgfgfgfg 35202-278441-01 elly12345555555	Invalid	As entries were invalid, user shall again be directed to registration page.		
Failure Situation Select Registration Option			Opens up link to another page		

TC:1.2 Login

1.2.1 Manager

Description	Sample Data		Expected Result	Actual Result	Status
Logging in	ID/Password		Login/Home		
Checking Limitations					
Length==8 min>=3 && max <=15	MAN-1234 Honda12345	Valid	Manager will be granted access to the site.		
Length<8 Min<3	MA1 Me	Invalid	Manager will not be granted access to the site an error message will be displayed.		
Length>8 max >15	MAN-1234567897 Honda12345555555	Invalid	Manager will not be granted access to the site an error message will be displayed.		
Failure Situation Select Login Option			Opens up link to another page		

1.2.2 Admin

Description	Sample Data		Expected Result	Actual Result	Status
Logging in	ID/Password		Login/Home		
Checking Limitations					
Length==8 min>=3 && max <=15	Adm-1234 Honda12345	Valid	Admin will be granted access to the site an error message will be displayed.		
Length<8 Min<3	A1fsad Je	Invalid	Admin will not be granted access to the site.		
Length>8 max >15	Adm-1234567897 Honda12345555555	Invalid	Admin will not be granted access to the site.		
Failure Situation Select Login Option			Opens up link to another page		

1.2.3 Customer

Description	Sample Data	Expected Result	Actual Result	Status
-------------	-------------	-----------------	---------------	--------

Logging in	ID/Password		Login/Home		
Checking Limitations					
Length==13 min>=3 && max <=15	Customer-0001 Honda12345	Valid	Customer will be granted access to the site.		
Length<13 Min<3	Customer Je	Invalid	Customer will not be granted access to the site an error message will be displayed.		
Length>13 max >15	Customer-1234567897 Honda12345555555	Invalid	Customer will not be granted access to the site an error message will be displayed.		
Failure Situation Select Login Option			Opens up link to another page		

TC:1.3 Forget Password

Description	Sample Data		Expected Result	Actual Result	Status
Forget Password	Security Pin		Login/Home		
Checking Limitations					
Integer(Length==5)	12345	Valid	Site Access will be granted.		
<5	1234	Invalid	Site Access will not be granted.		
>5	123456	Invalid	Site Access will not be granted.		
Char	C1234	Invalid	Site Access will not be granted.		
Failure Situation Select Forget Password Option			Opens up link to another page		

TC:1.4 View/Update-Login

Description	Sample Data		Expected Result	Actual Result	Status
View Profile	Click Profile Option Click View Profile Option		Profile		
Failure Situation View Profile	Click Profile Option		Opens link to another page		
Update Profile	Click Profile Option Click View Profile Option		Update Profile Page		

	Click Update Option				
For Customer	Name/ CN/Address/CNIC/Pw				
Checking Limitations	Updating data from	Updating data to			
min>=3 && max <=25 length==11 min>=3 && max <=50 length==13 min>=3 && max <=15	Sheraz Qureshi 03104876067 55-D Pak Arab Society, Lahore 35202-1234567-1 Honda12345	Ali Waseem 03104876067 56 K2 Wapda Town,Lahore 35202-1234567-1 Mango12345	V a l i d	Customer profile will be updated.	
Min<3 Length<11 Min<10 Length<13 Min<3	Sheraz Qureshi 03104876067 55-D Pak Arab Society, Lahore 35202-1234567-1 Honda12345	Al 0332131 55 K2 35202- Je	I n v a l i d	Customer profile will not be updated, an error message will be displayed.	
Min>25 Length>11 Min>50 Length>13 max >15	Sheraz Qureshi 03104876067 55-D Pak Arab Society, Lahore 35202-1234567-1 Honda12345	Mubishsakfafafhasfhasfhsa ddgfahfhsf 031048760672 55 K2 Wapda town lahore hgafghagfhagsfhgashfashf asfhsa 35202-278441-01 elly12345555555	I n v a l i d	Manager record will not be updated, an error message will be displayed	
For Manager	Id/Password				
Length==8 min>=3 && max <=15	MAN-1234 Honda12345	MAN-1234 Mango12345	V a l i d	Manager will be granted access to the site.	
Length<8 Min<3	MAN-1234 Honda12345	MA1 Me	I n v a l i d	Manager will not be granted access to the site an error message will be displayed.	
Length>8 max >15	MAN-1234 Honda12345	MAN-1234567897 Honda12345555555	I n v a l i d	Manager will not be granted access to the site an error message will be displayed.	
Failure Situation Select Update Profile Option				Opens up link to another page	

TC:2.0 Add Product

Description	Sample Data	Expected Result	Actual Result	Status
Adding a Product	Id/Name/ Cat/Price/Sprice/Stock	Product Management Page		
Checking Limitations				

min>=5 && max <=15 min>=3 && max <=25 min>=5 && max <=15 Float Float Integer	Lays-001 Lays Masala Chips 8.5 Rs 10 Rs 100	Valid	Manager shall be directed towards the product management page of our online shopping system.		
min<5 min<3 min<5 Char Char Char	La La Ch Eight Rs Ten Rs Hundred	Invalid	Manager shall not be directed towards the product management page of our online shopping system, an error message will be displayed.		
max >15 max >25 max >15 Char Char Char	Lays-00102312 Lays Masala and cheese and salted Chips-Lays131 Eight Rs Ten Rs Hundred	Invalid	Manager shall not be directed towards the product management page of our online shopping system, an error message will be displayed.		
Failure Situation Select Add Product Option			Opens up link to another page		

TC:2.1 View Products

Description	Sample Data	Expected Result	Actual Result	Status
Viewing a Product				
Click View Products Option		Products Page		
Failure Situation Click View Products Option		Opens up link to another page		
Failure Situation Click View Products Option		Displays an error		
Failure Situation Select View Product Option		Opens up link to another page		

TC:3.0 Update/Delete Product

TC:3.1 Update

Description	Sample Data	Expected Result	Actual Result	Status
Updating a Product	Id/Name/ Cat/Price/Sprice/Stock	Product Management Page		

Checking Limitations	Updating product from	Updating product to			
min>=5 && max <=15 min>=3 && max <=25 min>=5 && max <=15 Float Float Integer	Lays-001 Lays Masala Chips 8.5 Rs 10 Rs 100	Lays-001 Lays Masala Chips 9 Rs 15 Rs 100	Valid	Product Record will be updated.	
min<5 min<3 min<5 Char Char Char	Lays-001 Lays Masala Chips 8.5 Rs 10 Rs 100	La La Ch Eight Rs Ten Rs Hundred	Invalid	Manager shall not be able to update product record, an error message will be displayed.	
max >15 max >25 max >15 Char Char Char	Lays-001 Lays Masala Chips 8.5 Rs 10 Rs 100	Lays-00102312 Lays Masala and cheese and salted Chips-Lays131 Eight Rs Ten Rs Hundred	Invalid	Manager shall not be able to update product record, an error message will be displayed.	
Failure Situation Select Update Product Option				Opens up link to another page	
Char Min<3 Char	01 La 5	One La Ten	Invalid	Cart will not be updated, an error message will be displayed.	

TC:3.2 Delete

Description	Sample Data		Expected Result	Actual Result	Status
Deleting a Product via ID	Id		Product Management Page		
Checking Limitations					
min>=5 && max <=15	Lays-001	Valid	Product Record will be deleted.		

min<5	Lays	Invalid	Product Record will not be deleted, an error message will be displayed.		
Max>15	Lays-001dfasfa	Invalid	Product Record will not be deleted, an error message will be displayed.		
Failure Situation Select Delete Product Option			Opens up link to another page		

TC:4.0 Catalogue

TC:4.1 View Catalogue

Description	Sample Data		Expected Result	Actual Result	Status
Product Catalogue	Id/Name/Cat/Price		Product Catalogue Page		
few Available Products by selecting catalogue option	Lays-001 Lays-Masala Chips 10		Product Catalogue shall be displayed as shown in sample data.		
Failure Situation Select Catalogue Option			Opens up link to another page		

TC:4.2 Search Catalogue

Description	Sample Data		Expected Result	Actual Result	Status
Search for products	Id/Name		Search Product option.		
Search for products for convenience and ease of use.					
Manager will search by id min>=5 && max <=15	Lays-001	Valid	The searched product will be displayed along with its price.		
Min<5	Lays	Invalid	The searched product will not be displayed, an error message will appear.		

Max>15	Lays-001123121	Invalid	The searched product will not be displayed, an error message will appear.		
Customer will search by Name min>=3 && max <=25	Lays-Masala	Valid	The searched product will be displayed along with its price.		
Min<3	La	Invalid	The searched product will not be displayed, an error message will appear.		
Max>25	Lays-Masala & Cheese & Salted	Invalid	The searched product will not be displayed, an error message will appear.		
Failure Situation Select Search Option in Catalogue			Opens up link to another page		

TC:5.0 Virtual Cart

TC:5.1 View Cart

Description	Sample Data	Expected Result	Actual Result	Status
Viewing Virtual Cart				
Click Cart Option		Virtual Cart Page		
Failure Situation Click Cart Option		Opens up link to another page		
Failure Situation Click Cart Option		Displays an error		

TC:5.2 Add To Cart

Description	Sample Data	Expected Result	Actual Result	Status
Add product to V-Cart	Id/Name /Quantity	Virtual Cart Page		
Checking Limitations				
Integer min>=3 && max <=25 Integer	01 Lays-Masala 5	Valid	Product will be added into cart.	
Char Min<3 Char	One La Five	Invalid	Product will not be added into cart, an error message will be displayed.	

Char Max>25 Char	One Lays-Masala&Cheese&Salted Five	Invalid	Product will not be added into cart, an error message will be displayed.		
Failure Situation Select Login Option			Opens up link to another page		

TC:5.3 Update Cart

Description	Sample Data			Expected Result	Actual Result	Status
Update Virtual Cart	Id/Name/Quantity			Virtual Cart Page		
Checking Limitations	Updating product from	Updating product to				
Integer min>=3 && max <=25 Integer	01 Lays-Masala 5	01 Lays Masala 10	V a l i d	Cart will be updated.		
Char max>25 Char	01 Lays-Masala 5	One Lays- Masala&Cheese&Salt ed Ten	I n v a l i d	Cart will not be updated, an error message will be displayed.		
Failure Situation Select Update Cart Option				Opens up link to another page		

TC:5.4 Confirm Order

Description	Sample Data	Expected Result	Actual Result	Status
Confirming an order				
Click Confirm order option		Order Confirmed on cart page		
Failure situation Click Confirm order option		Displays error Order is not confirmed		

TC:5.5 Cancel Order

Description	Sample Data	Expected Result	Actual Result	Status
Canceling an order				

Click Cancel order option		Order Canceled on cart page		
Failure situation Click Cancel order option		Displays error. Order is not canceled		

TC:5.6 View Receipt

Description	Sample Data	Expected Result	Actual Result	Status
Viewing the Receipt				
Click View Receipt option		Receipt		
Failure situation Click View Receipt option		Opens up link to another page		
Failure situation Click View Receipt option		Displays error Receipt will not be displayed		

TC:6.0 Manage Employees

TC:6.1 View Employees

Description	Sample Data	Expected Result	Actual Result	Status
Viewing Managers				
Click Manage User Option		Manager Profiles Pages		
Failure Situation Click Manage User Option		Opens up link to another page		

TC:6.2 Add Employees

Description	Sample Data		Expected Result	Actual Result	Status
Add new Managers	Id/Name /Password		Manage manager Page		
Checking Limitations					
min>=5 && max <=15 min>=3 && max <=25 min>=3 && max <=15	Man-1234 Ali Butt Ali12345	Valid	A new manager account will be created.		
min<5 min<3 min<3	Ma-1 Ali Five	Invalid	A new manager account will not be created, an error message will be displayed.		

max>15 max>25 max>15	Man-123456789010 Haji Ali Waseem Butt Khan Ali12345678910	Invalid	A new manager account will not be created, an error message will be displayed.		
Failure Situation Select Add User Option			Opens up link to another page		

TC:6.3 Delete Employees

Description	Sample Data		Expected Result	Actual Result	Status
Deleting an manager via ID	Id		Manage manager Page		
Checking Limitations					
min>=5 && max <=15	Man-1234	Valid	Manager Record will be deleted.		
min<5	Man-	Invalid	Manager Record will not be deleted, an error message will be displayed.		
Max>15	Lays-001dfasfa	Invalid	Manager Record will not be deleted, an error message will be displayed.		
Failure Situation Select Delete User Option			Opens up link to another page		

TC:6.4 Update Employees

Description	Sample Data		Expected Result	Actual Result	Status
Updating a manager via ID	Id/Name/Rank		Manage Manager Page		
Checking Limitations	Updating manager from	Updating manager to			
min>=5 && max <=15 min>=3 && max <=25 min>=3 && max<=6	Man-1234 Ali Butt Medium	Man-1234 Ali Butt High	Valid	Manager record will be updated.	
min<5 min<3	Man-1234 Ali Butt	Man-1234 Ali Butt		Manager record will not be updated, an	

min<3	Medium	Lo	I n v a l i d	error message will be displayed.		
max>15 max>25 max>6	Man-1234 Ali Butt Medium	Man-1234 Ali Butt Lo	I n v a l i d	Manager record will not be updated, an error message will be displayed		
Failure Situation Select Update User Option				Opens up link to another page		

TC:7.0 Check Reports

Description	Sample Data	Expected Result	Actual Result	Status
View Reports Page				
Select Sales and Profit Report Option		Reports Page		
Failure Situation Select Sales and Profit Report Option		Opens up link to another page		
Failure Situation Select Sales and Profit Report Option		Displays an error		

Chapter 7

Summary, Conclusion and Future Enhancements

Chapter 7: Summary, Conclusion & Future Enhancements

7.1. Project Summary

This is our commercial project. We have started with gathering requirements for deploying our system, after that we started to work on user-friendly interface. After finalizing the design of user interface, we started our work on development. Our first priority was to implement this system on android operating system. So, we have worked on android application and with the passage of time, we have completed our project. Now it is working properly as an e-commerce system.

7.2. Achievements and Improvements

We have successfully deployed this system and it is currently under review by Google because of their policies regarding uploading any android application.

7.3. Critical Review

There is need to make this application more user friendly through discovering out more from our audience. Moreover, we need to take this project to other platforms like website, iOS also.

7.4. Lessons Learnt

The most important lesson that we have learned is that how our IT industry is working on commercial projects. We were working coordinately with the market demands.

7.5. Future Enhancements/Recommendations

We have a plan to move this project on hybrid platform like website and iOS, so that we can reach more audiences.

Appendices

Appendix A: User Manual

Beat Sum's User Manual

Section 1: Authentication

- Signup
- Login
- Forget Password

Section 2: Shop

- Product list
- Deals of the Day
- Trending
- Banners
- Categories

Section 3: Side Bar

- My Mall
- My Orders
- My Rewards
- My Cart
- My Wish list
- My Account
- Sign-out

Section 4: Product

- Product Info (Pictures, Title, Description, Specification, Rating)
- Add to Wish list
- Remove from Wish list
- Submit Rating
- Update Rating
- Average Rating Info
- Total Number of Rating

Section 5: Cart

- Add to Cart
- Remove From cart

Section 6: Buy Now

- Continue to Buy

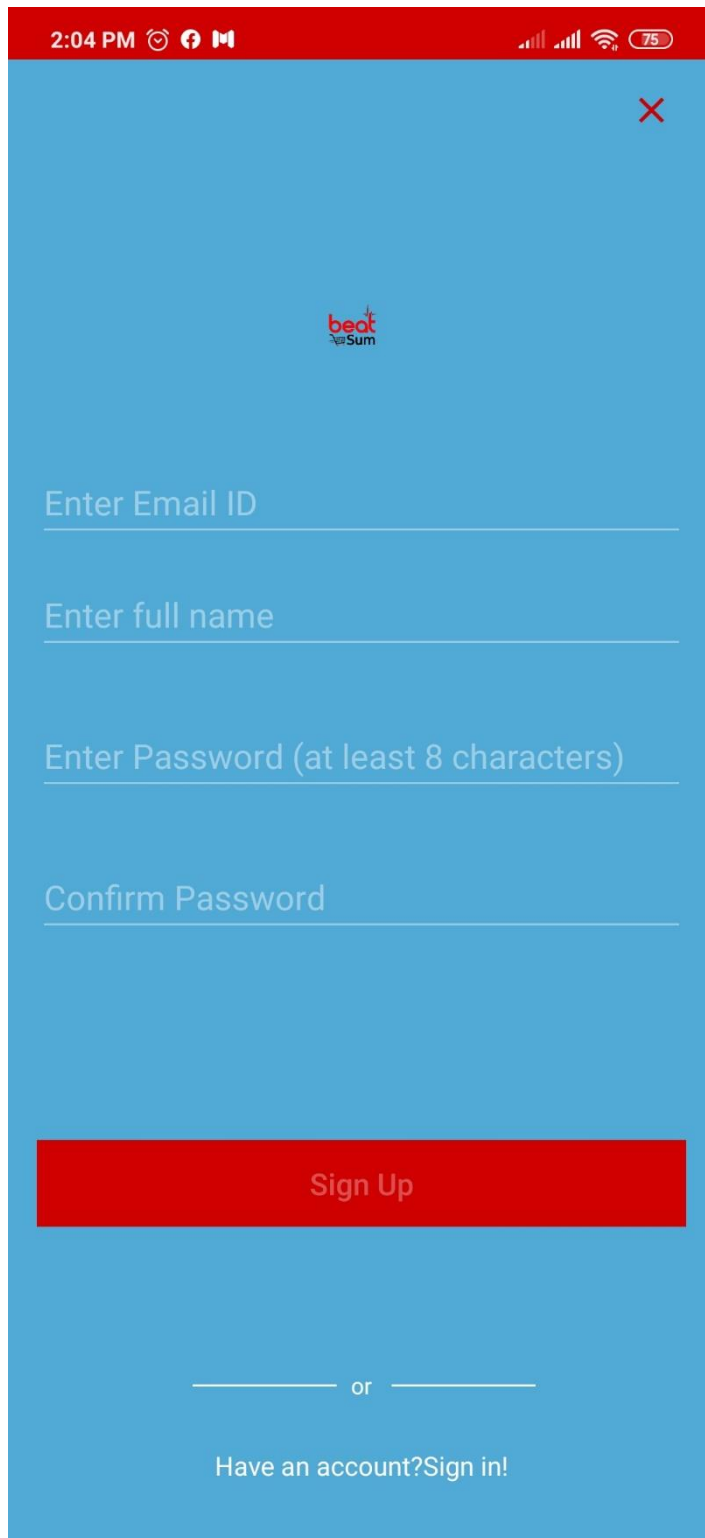
-
- Add Address
 - Select Address

Section 7: Coupon

- Coupon

Authentication

- Signup



A screenshot of a mobile application interface for a sign-up form. The app has a red status bar at the top showing the time as 2:04 PM, along with icons for alarm, location, and music. The main background is light blue. In the top right corner, there is a red 'X' icon. The 'beat Sum' logo is centered in the upper half. Below the logo are four text input fields with light blue placeholder text: 'Enter Email ID', 'Enter full name', 'Enter Password (at least 8 characters)', and 'Confirm Password'. A prominent red button with the text 'Sign Up' is located below the password fields. At the bottom, there is a horizontal line with the word 'or' in the center, and below that, the text 'Have an account? Sign in!'.

2:04 PM

beat Sum

Enter Email ID

Enter full name

Enter Password (at least 8 characters)

Confirm Password

Sign Up

or

Have an account? Sign in!

- Login

2:04 PM



75

beat

Sum

Enter Email

Enter Password

Forgot Password?

Sign In

or

Don't have an account? Sign Up!

- Forget Password

2:04 PM



 75



Forgot Password?

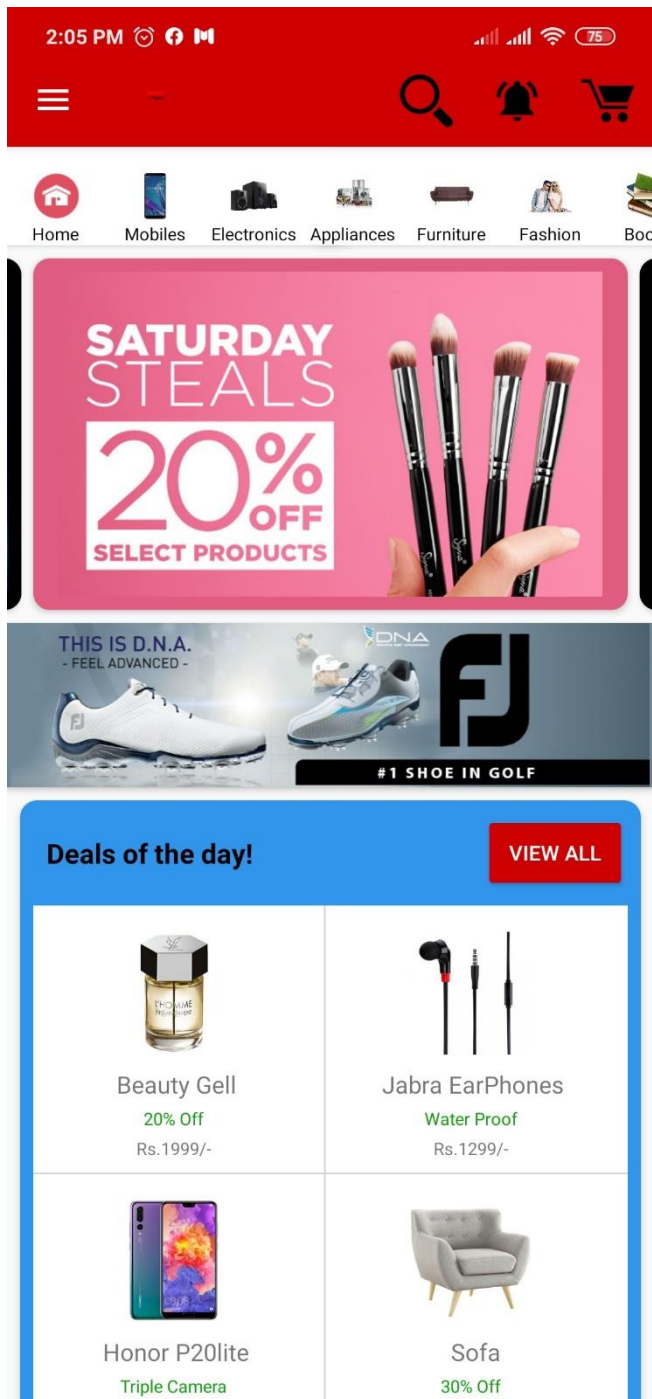
Don't worry we just need your registered email address and it's done!

Reset password

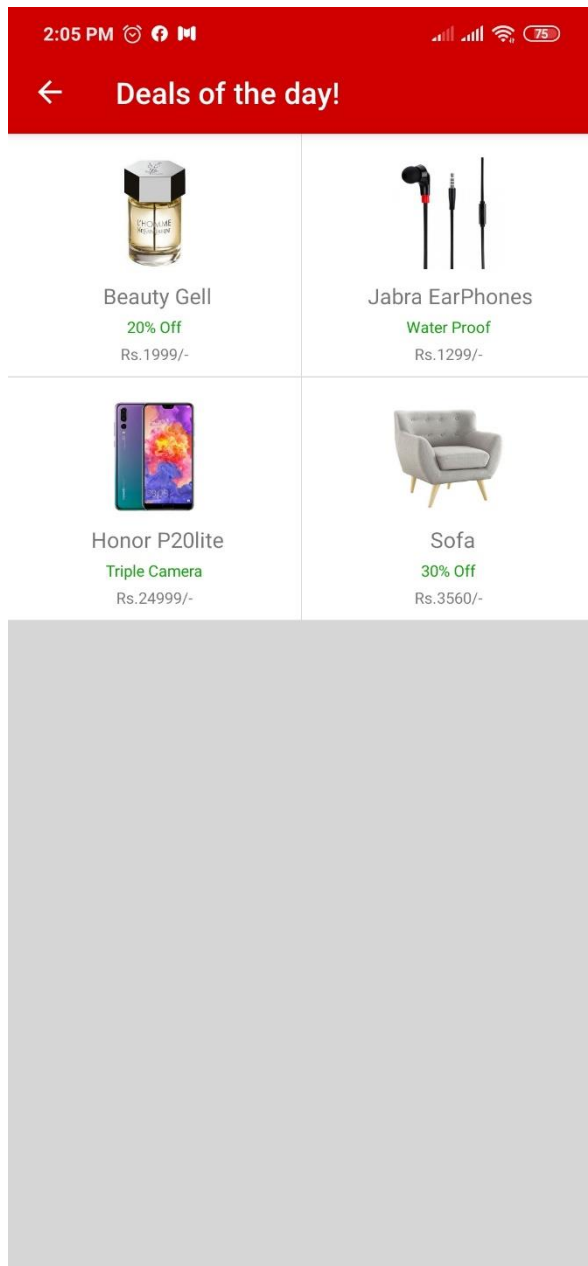
[< < Go Back](#)

Section 2: Shop

- Home Page,
- Banners,
- Categories



- Deals of Day



- Trending

2:05 PM
🕒
📶
🔋

←
#trending



Huawie P20Lite Premium version

💎 Free 1 coupon

4.5 ⭐ (22)ratings

Rs.2323/- Rs.3332/-

Cash on Delivery Available



Huawie P20Lite Premium version

💎 Free 2 coupons

3.2 ⭐ (12)ratings

Rs.24267/- Rs.34234/-

Cash on Delivery Available



Huawie P20Lite Premium version

💎 Free 4 coupons

2.7 ⭐ (13)ratings

Rs.87989/- Rs.2123/-



Huawie P20Lite Premium version

💎 Free 5 coupons

4.8 ⭐ (14)ratings

Rs.121312/- Rs.5555/-

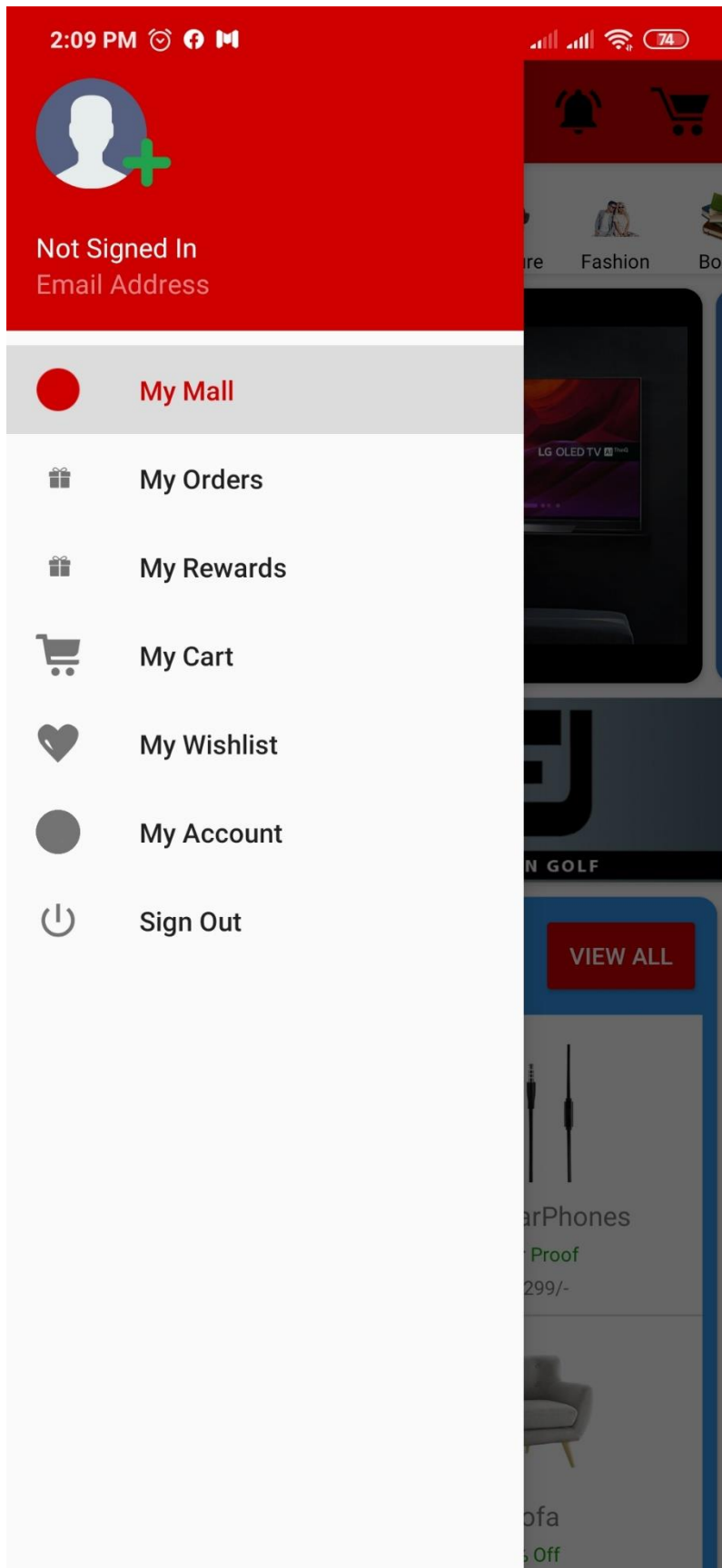
Cash on Delivery Available



Huawie P20Lite Premium version

Section 3: Side Bar

- My Mall
- My Orders
- My Rewards
- My Cart
- My Wish list
- My Account



Section 4: Product

- Product Info (Pictures, Title, Description, Specification, Rating)
- Add to Wish list

- Remove from Wish list



Google Pixle XL 2(Mirror Black,128 Gb)

7.0 ☆ (3)ratings



Cod Availabe

Rs.45999/- ~~Rs.49999/-~~

Check price after coupon redemption

REDEEM



2Discount

You got 20% discount on your purchase

DESCRIPTION

SPECIFICATIONS

OTHER DETAILS

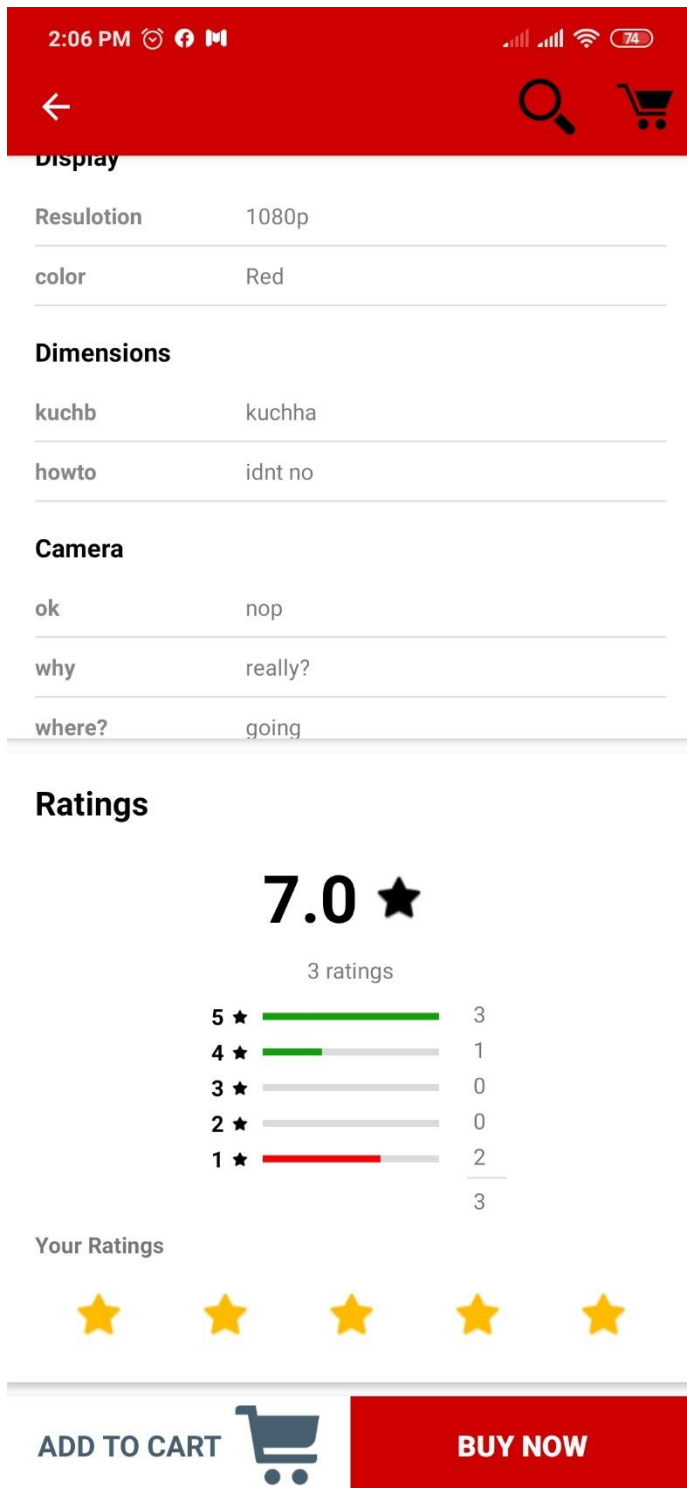
everything you buy from here is great good and

ADD TO CART



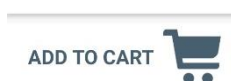
BUY NOW

- Submit Rating
- Update Rating
- Average Rating Info
- Total Number of Rating



Section 5: Cart

- Add to Cart
- Remove From cart



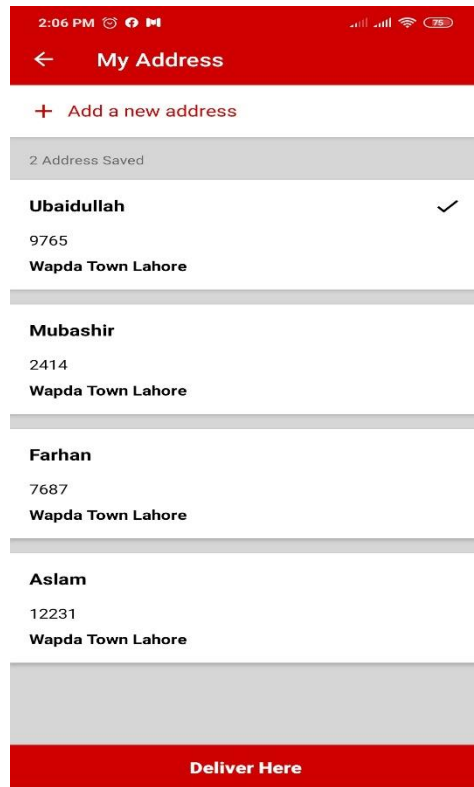
Section 6: Buy Now



- Continue to Buy



- Add Address
- Select Address



Section 7: Coupon

- Coupon

