



St. Mary's University

Faculty of Informatics

Department of Computer Science

Online Shopping System for Showa Supermarket

*A project submitted in partial fulfillment of the requirements for the
degree of B.Sc. in Computer Science (Regular)*

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As partial fulfillment of the requirements for degree of

Bachelor of Science (BSc)

In

Computer Science

From

St. Mary’s University

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Acronyms and Abbreviations

ID	Identification
RCD	Computer Science Student
BSc.	Bachelor of Science
ER	Entity Relationship
OOSAD	Object Oriented System Analysis and Design
SDLC	Software Development Life Cycle
QA	Question and Answer
SQL	Structured Query Language
IDE	Integrated Development Environment
HTML	Hypertext Markup Language
CSS	Cascading Style Sheets
PHP	Hypertext Preprocessor
GDPR	General Data Protection Regulation
CCPA	California Consumer Privacy Act
IT	Information Technology

Chapter 1: Introduction

1.1. Introduction about the Project

Online shopping has become a ubiquitous part of everyday life, offering individuals the convenience of purchasing goods and services from anywhere with an internet connection. With the growth of technology, more and more businesses are conducting their operations online, including the selling and purchasing of products. The system that integrates these transactions is known as online shopping. [1]

In Ethiopia, most shopping malls currently offer their products in a manual, in-person manner. However, as technology continues to advance, there is an opportunity to streamline the shopping process through the use of an online platform. The purpose of this project is to develop an online shopping system for Showa Supermarket that integrates the transaction process for buying and selling goods. Our system will allow customers to browse and purchase products online, adding them to a virtual shopping cart checkout by cash when the product is delivered to them. The system will also include features such as the ability to view and modify the contents of the shopping cart, as well as bulk additions and automatic calculation of total prices.

In addition to the benefits mentioned above, the online shopping system we are proposing has the potential to bring numerous additional advantages to Showa Supermarket and its customers. For example, it could potentially reduce the cost of manual transactions, as well as increase the efficiency and accuracy of the shopping process. It could also provide valuable data on customer behavior and preferences, which could be used to improve the shopping experience and inform marketing and business decisions.

There are, of course, potential challenges and drawbacks to implementing an online shopping system. One concern is the issue of security, as online transactions involve the exchange of personal information. To address this issue, we will ensure that the system includes robust security measures to protect the privacy and security of both customers and sellers. Another potential challenge is the need for sufficient internet infrastructure and access, which may not

be available in all areas of Ethiopia. However, as internet adoption continues to grow in the country, we believe that these challenges can be overcome.

In conclusion, the online shopping system we are proposing has the potential to bring significant benefits to Showa Supermarket and its customers. By streamlining the shopping process and leveraging the power of technology, we hope to make the experience of buying and selling goods more convenient, efficient, and secure. Through the use of structured, modular techniques and a menu-oriented interface, we aim to create a system that is easy to use and capable of future expansion.

1.2. Background of the Organization

Unlike many modern supermarkets that rely heavily on automation and technology, Showa manual supermarket operates using primarily manual processes. This includes everything from the handling of inventory and stock management, to the checkout process and customer service. The store has a dedicated team of employees who are responsible for these tasks, and who work to ensure that the shopping experience is as smooth and enjoyable as possible for customers.

Despite the challenges posed by the competitive nature of the retail industry, Showa supermarket has managed to maintain its position as a leading supermarket in Ethiopia. The company's success can be attributed to its commitment to offering high-quality products and services, as well as its focus on customer satisfaction. Showa supermarket has a reputation for having a wide selection of products, including fresh produce, meats, dairy, and household goods, as well as a friendly and helpful staff who are always willing to assist customers. [3]

Overall, Showa manual supermarket is a well-respected and trusted supermarket in the community, known for its commitment to providing high-quality products and excellent customer service. Despite the challenges posed by the modern retail landscape, the company has remained a strong and successful business, thanks to its focus on meeting the needs of its customers.

1.3. Statement of Problem

The overall actions in the Showa supermarket are fully manual. The customer is fully reliant on the manual method for purchasing the merchandise. The manual method is time-intensive. And when a consumer approaches a store for manual shopping, he or she has no idea about things like price range, objects, and so on. The client's manual shopping time may equate to multiple shopping trips. As clients can sit at home and see things in a matter of seconds using our app Thus, we need to convert to a system like online shopping. Some of the problems exist in the system: -

Inefficiency and waste: Without the aid of automation or technology, the supermarket is likely to be slower and less efficient in performing tasks such as inventory management and pricing. This can lead to long lines and wait times for customers, as well as unnecessary labor and resource usage.

Data accuracy and consistency: Maintaining accurate and consistent data can be a challenge in the supermarket, as it requires manual entry and tracking of information such as pricing, inventory levels, and customer transactions. This can lead to errors and inconsistencies, which can impact customer satisfaction and operational efficiency.

Customer service and satisfaction: Without the use of technology to facilitate customer interactions, the supermarket may struggle to provide high levels of customer service and satisfaction. For example, it may be more difficult to provide personalized recommendations or handle special requests, and customers may have a harder time finding the products they need or getting timely assistance.

Competition and market dynamics: In an increasingly digital and interconnected world, the supermarket may struggle to keep up with the pace of change and competition from more modern and automated competitors. This can impact the supermarket's ability to attract and retain customers, as well as its overall market position and viability.

In conclusion, the Showa supermarket is likely to face a range of challenges and problems that can impact its efficiency, effectiveness, and competitiveness. To address these issues, the supermarket may need to consider implementing technology and automation to streamline its operations and improve its performance.

1.4. The objective of the project

1.4.1. General objective

The general objective of this project is to develop web-based online shopping system for Showa supermarket.

1.4.2. Specific objective

In order to fulfill the general objectives, we need to accomplish the following specific objectives.

Specific Objectives

- Assess the requirement elicitation of Online shopping system through different data gathering methodologies.
- Analysis requirement specification of the system after assessing the requirement elicitation.
- Design user interface specification of the system.
- Design a database specification of the system.
- Design the Software Requirement Specification of the system.
- To design an attractive user-friendly and understandably graphical user interface.
- To offer a wide range of products and categories to customers, including a variety of options for each product type.
- To offer additional features and functionality to enhance the customer experience, such as personalized recommendations, wish lists, saved items, and product reviews and ratings.
- To integrate the website with other systems and processes, such as inventory management, order processing, and customer communication.
- To gather data and insights about customer behaviors and preferences, in order to improve the app's functionality and user experience.
- To continuously update and improve the mobile app based on customer feedback and changing market conditions.

1.5. Scope and Limitation

1.5.1. Scope

This System will be deployed at Showa supermarket. The system proposes a capacity to receive the orders 24*7 and a home delivery system for customers which may make clients delighted. If they give an internet gateway where their clients can experience convenient purchasing from anyplace in Addis Ababa, the shops won't be losing any more customers. Since the website is present on the internet it is immediately accessible and always available.

The scope of the project is limited to:

Login: The system authenticates the user

Searching: Fast search engine so that customers can search and find location of items

Signup: Register new customers

Display: Customer can view products, his/her cart with total price of the product and expire date of the product

Managing products: the admin and customers can add, delete, and update items based on their Authority.

Generating reports: the system displays ordered item information and display total sales

Other Functionality:

- Online ordering systems
- Advertisement for items which price is discount and when new item is registered.
- The users could subscribe for price alerts which would enable them to receive messages when price for products fall below a particular level.

1.5.2. Limitation

- We could not connect our system with the real bank system.
- The payment system is on cash because in the case of Ethiopia credit card is not usual.

1.6. Methodology

1.6.1. Data Gathering Methodology

Data gathering methodology refers to the specific methods and approaches used to collect and analyze data for a project study. In the context of studying online shopping, a number of different methods can be used to gather data, we chose questionnaires and interviews. Here is a description of how these methods might be used in an online shopping study: [4]

Questionnaires: A questionnaire is a structured survey that asks a set of predetermined questions to a group of respondents. Questionnaires can be administered in a variety of formats, including online, paper-based, or by phone. When studying online shopping, a questionnaire might be used to gather data on consumer demographics, attitudes and behaviors towards online shopping, and the factors that influence online purchase decisions. Some potential advantages of using questionnaires in an online shopping study include their ability to reach a large number of respondents quickly and inexpensively, and their ability to gather quantitative data that can be easily analyzed and compared. However, questionnaires can also have some limitations, such as the potential for response bias or low response rates. [4]

Interviews: Interviews are one-on-one conversations between a researcher and a respondent, in which the researcher asks a series of open-ended questions to gather in-depth information and insights. Interviews can be conducted in person, by phone, or online, and can be either structured (using a set of predetermined questions) or unstructured (allowing for more open-ended exploration of the topic). When studying online shopping, interviews might be used to gather more in-depth and qualitative data on consumer experiences and attitudes towards online shopping, as well as to explore the motivations and barriers to online shopping in more detail. Some potential advantages of using interviews in an online shopping study include the ability to gather rich, nuanced data that can provide deeper insights into the research topic, and the ability to probe and clarify responses in real time. However, interviews can also be time-consuming and resource-intensive to conduct, and may be subject to bias or subjectivity on the part of the researcher or respondent. [4]

1.6.2. System Analysis and Design Methodology

We chose object oriented system analysis and design (OOSAD) for the reasons listed below.

Object-oriented system analysis and design (OOSAD) is a software development approach that is based on the use of objects, or modular units of code, to represent and model real-world entities and processes. OOSAD involves the use of object-oriented techniques and principles, such as encapsulation, inheritance, and polymorphism, to analyze and design software systems. There are several potential benefits of using OOSAD on a project, including: [5]

Modularity and flexibility: OOSAD promotes the use of modular, reusable objects that can be easily combined and modified to meet the needs of different projects. This can make it easier to change or update the system over time, as well as to reuse components in multiple projects.

Maintainability and extensibility: OOSAD encourages the use of clear and consistent coding practices, as well as the separation of concerns and modularization of code. This can make it easier to maintain and modify the system over time, as well as to extend it to meet new requirements or challenges.

Reusability: OOSAD promotes the reuse of objects and code across different projects, which can reduce development time and cost, as well as improve the quality and reliability of the system.

Collaboration and communication: OOSAD encourages the use of clear and consistent design patterns and practices, which can facilitate collaboration and communication among team members, as well as with stakeholders.

Adaptability: OOSAD allows for the creation of flexible and adaptable systems that can be easily modified to meet changing requirements or needs.

Scalability: OOSAD enables the development of systems that are designed to scale and handle large amounts of data and users. [5]

1.6.3. System Development Model

We chose Agile because the Agile SDLC model is a blend of iterative and incremental process models with an emphasis on process flexibility and customer satisfaction via speedy delivery of a functioning software product. Agile methods split the product into tiny incremental builds. These builds are offered in iterations. Each cycle normally lasts from roughly one to three weeks. Every iteration comprises cross-functional teams working concurrently on multiple topics, including

- Planning
- Requirements Analysis
- Design
- Coding
- Unit Testing and
- Acceptance
- Testing. [6]



Figure 1 Illustration of Agile SDLC

1.6.4. Implementation Methodology

The agile lifecycle is a structured series of stages that a product goes through. It consists of five phases:

Requirements

Team leader conduct an overall project assessment to determine the time and resources required for the development process.

Design

With the information acquired, we will list the criteria for producing software, following which the group will debate the order for introducing functions and identifying the essential tools: the Application Ming language, syntactic libraries, and fundamental frameworks. Software development teams may prototype the intended user interface at the team builds the product after obtaining an agreement on the strategy. The product is provided in phases, with each sprint aiming at enhancing the current version of the product. The first version will very definitely undergo multiple updates in order to offer greater functionality and additional features. Each cycle requires testing, and the end product must also be tested. For this step, the static analysis testing approach is employed.

Implementation and deployment

The Application is now completely deployed and accessible to users. This action puts him in the maintenance phase. During this phase, the software development team offers continuing assistance to keep the system functioning properly and resolve any new defects. Over time, more iteration is feasible to enhance a current product or add further functions.

Integration and testing

At this stage, the product becomes accessible to consumers, so the team must undertake a series of tests to confirm that the Application is completely working. If any issues or weaknesses are uncovered, the developers will repair them quickly. At this point, they also gathered user input.

Review

That is the final step of the agile development cycle. After finishing all the previous phases of development, we will present to the advisor the outcome achieved in satisfying the criteria. After then, the agile software development stages start afresh, either with a new iteration or by going to the next step and growing Agile. [7]

1.6.5. System Testing Methodology

Static Analysis

Static analysis includes no dynamic execution of the software under test and may uncover any faults at an early stage, before executing the Application. Static analysis is done during or after coding and before conducting unit tests. It may be run by a code analysis engine to automatically "walk through" the source code and find non-complying rules, lexical, syntactic, and even semantic problems.

System Testing

System testing evaluates the system as a whole when it is regarded as a black box, and there is no need to comprehend the inner workings of the system under test. After all of the components have been integrated, system testing is performed, and the application as a whole is thoroughly tested to ensure that it meets the criteria. This sort of testing is conducted by the quality assurance testing team.

- System testing is where the system or application has been fully implemented and to be tested as a whole.
- The application is tested thoroughly to verify that it meets functional requirements, quality of service requirements and business requirements.
- The application is tested in the final production environment or one that is very close to the production environment where the application will be deployed.
- System testing enables organizations to gain a sense of time-to-market when passing results are achieved.

Compatibility Testing

Compatibility testing is done to determine how a Application or piece of software will operate in diverse contexts. It is used to confirm that your product is compatible with numerous operating systems, platforms, browsers, and resolution settings. The objective is to guarantee that your software's functionality is consistently supported throughout whatever environment you anticipate your end users to be utilizing.

Acceptance Testing

Acceptance testing is the last step of functional testing and is used to determine whether or not the final piece of software is ready for distribution. It entails verifying that the product is in accordance with all of the original business requirements and that it fits the end user's demands. This necessitates the product be tested both internally and externally, meaning you'll need to get it into the hands of your end customers for beta testing along with those of your QA team. Beta testing is crucial to receiving genuine input from future clients and helping fix any remaining usability difficulties [7]

1.6.6. Development Environment and Programming Tools

Table 1.1: Development Environment and Programming

Development Environment and programming Tools	
Server	Xampp phpMyAdmin
Database technologies	MySQL
IDE	Visual studio
Hardware tools for development	Windows 10 Laptop
Front-end	HTML,CSS
Back-end	PHP,JavaScript
Documentation	Word(Software), Draw.io (Website)

1.6.7. Data Processing and Analysis

Upon gathering the data, it was examined as a method of analysis to prepare the report, utilizing Rapid Miner in creating tables, graphs, and figures. Data from the field was processed and examined qualitatively using basic statistics in the form of tables and bar graphs.

1.7. Findings of the Study

The project issued 30 questionnaires and successfully got responses from 29, but one of the respondents ignored our questionnaires. Data were entered into a www.rapidtables.com to calculate the frequency, percentages and generated graphs for responses from each of the relevant questions.

1.7.1. Statistical Distribution of Questionnaires and Interviews

Table 2 Sample Questions for Supermarket Users

Sample Question For 25 Supermarket Users				
Question	Very Satisfied	Satisfied	OK	Dissatisfied
How satisfied were you with your shopping experience in supermarket store?	10	6	4	5
How likely are you to recommend supermarket store to your friends and family?	12	10	5	3
How was your experience when you visited Supermarket store?	9	7	4	5
How satisfied were you with the product information provided from supermarket shelf?	5	6	8	6
Is supermarket conveniently located from your home?	4	3	6	11
Is supermarket opening hours appropriate for your needs?	7	8	6	4
How would you describe your experience in supermarket store?	11	4	6	4
Do you comfortable manually shop at supermarket store?	5	7	4	9
Is fair time spending when you manually shop in supermarket?	5	4	6	10
Do you like shopping on online?	11	4	6	4

How satisfied were you with your shopping experience in supermarket store?

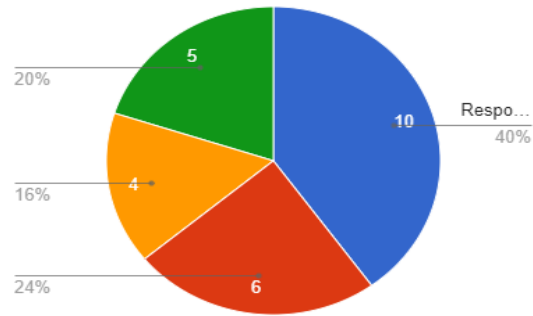


Figure 2 User question in Pie Chart Representation for Question 1

Do your comfortable manually shop at supermarket store?

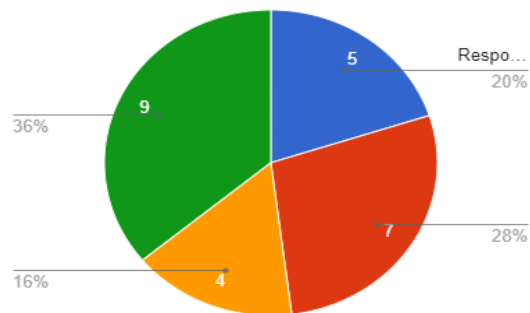


Figure 3 User question in Pie Chart Representation for Question 8

How would you describe your experience in supermarket store?

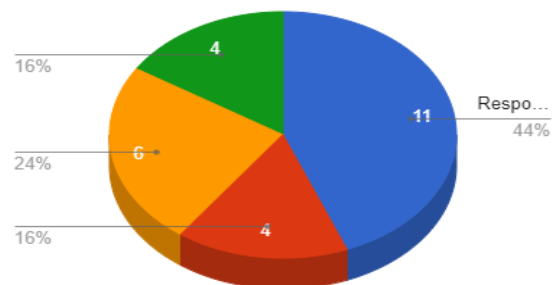


Figure 4 User question in Pie Chart Representation for Question 7

Do you like shopping on online?

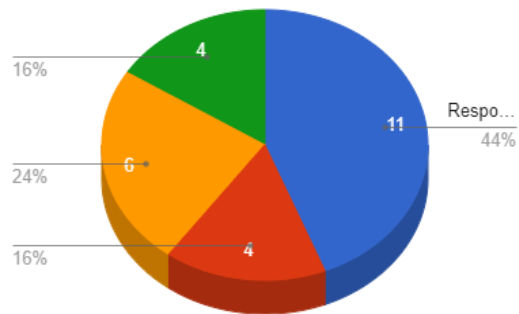


Figure 5 User question in Pie Chart Representation for Question 10

Is supermarket opening hours appropriate for your needs?

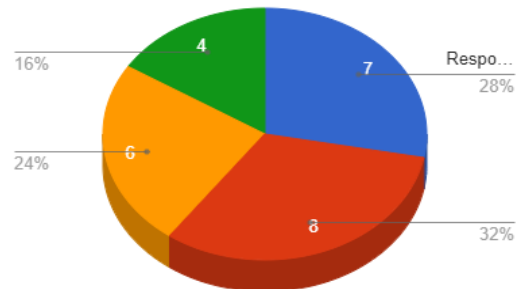


Figure 6 User question in Pie Chart Representation for Question 6

Is supermarket conveniently located from your home?

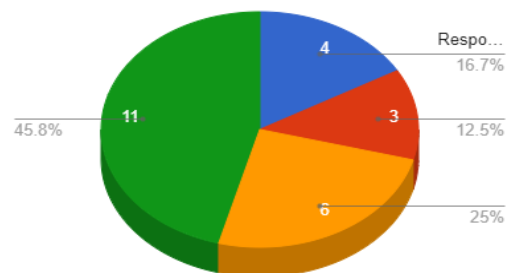


Figure 7 User question in Pie Chart Representation for Question 5

How satisfied were you with the product information provided from supermarket shelf?

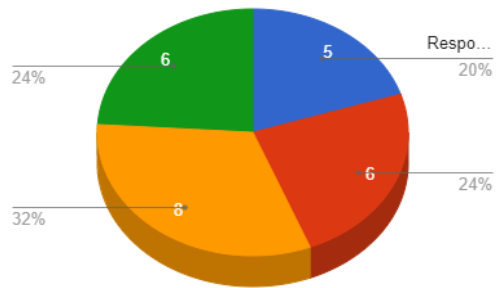


Figure 8 User question in Pie Chart Representation for Question 4

How likely are you to recommend supermarket store to your friends and family?

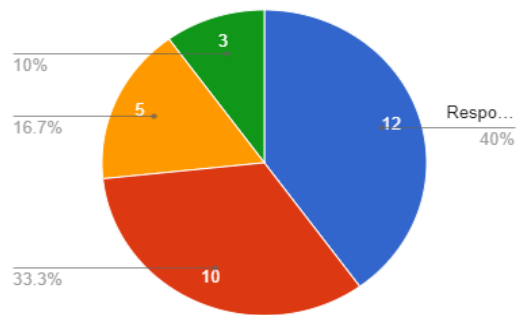


Figure 9 User question in Pie Chart Representation for Question 2

supermarket?

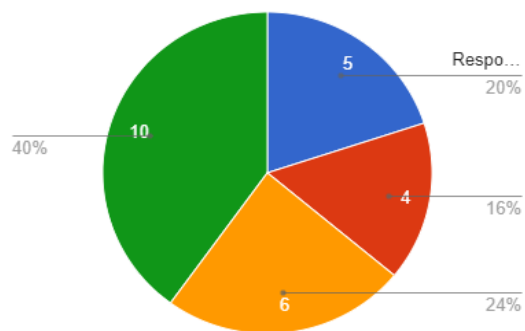


Figure 10 User question in Pie Chart Representation for Question 9

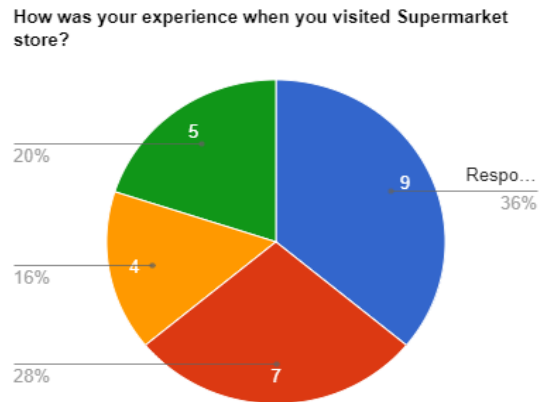


Figure 11 User question in Pie Chart Representation for Question 3

Table 3 Questioner for Supermarket Staff

Sample Question For 5 Supermarket Manger				
Question	Very Satisfied	Satisfied	OK	Dissatisfied
How you are satisfied to manage supermarket store?	1	0	2	3
How you satisfied communication with your customer?	2	1	1	1
How your experience when you visited Supermarket item?	1	1	0	3
How you satisfied when you add category in supermarket?	0	2	1	2
How you satisfied when you manage Brand?	1	2	0	2
How you satisfied when you add Promotion in supermarket?	1	0	2	2

How you satisfied communication with your customer?

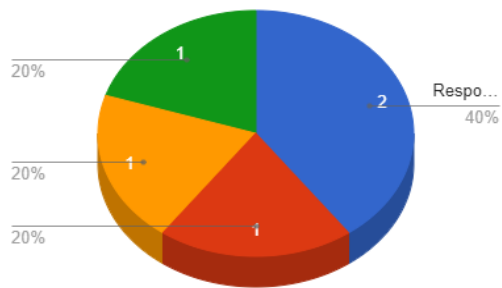


Figure 12 Manager Question in Pie Chart Representation for Question 2

How you satisfied when you manage Brand?

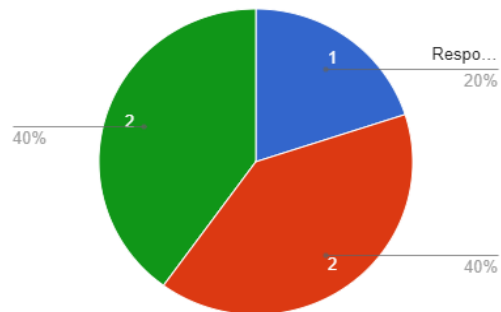


Figure 13 Manager Question in Pie Chart Representation for Question 5

How you satisfied when you add category in supermarket?

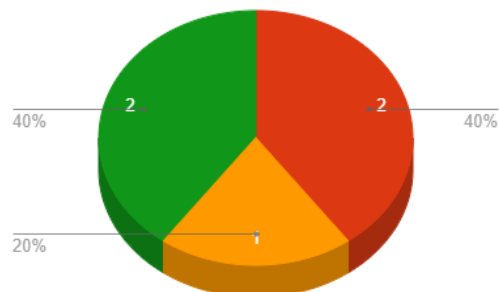


Figure 14 Manager Question in Pie Chart Representation for Question 4

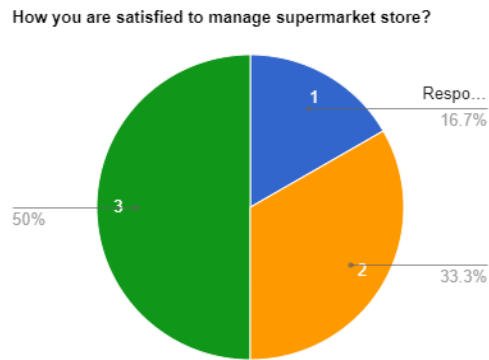


Figure 15 Manager Question in Pie Chart Representation for Question 1

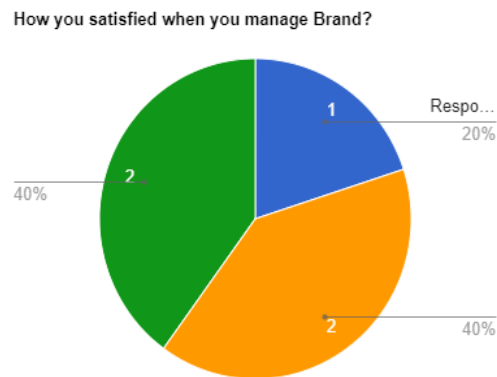


Figure 16 Manager Question in Pie Chart Representation for Question 6

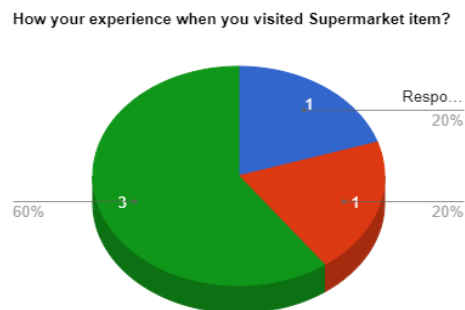


Figure 17 Manager Question in Pie Chart Representation for Question 3

The above charts show that over 75.75% of the respondents are aware of the challenge of wasting a lot of time when getting shopping items at the supermarket. Furthermore, it shows that 66.66% of the respondents are not aware that the previously mentioned challenge can be managed through the application of information technology through automated systems or online shopping. These respondents are not aware of such systems. It also show that only 33.33% of the respondents are aware of online shopping what it does. And 84.84% of all respondents suggested the implementation of an online shopping platform. This made us see the true need for having this system in place and hence developing it so as to eliminate the shopper's time when purchasing actual items in person at the supermarket and make it comfortable and easy to purchase and order anything at home.

1.8. Feasibility Study

The feasibility study phase is a very significant phase since it is the one that enables the software engineer to see the negative aspects of his project and helps him improve the software process. In reality, the feasibility study may make any project successful if it is done in a suitable manner. This deliverable is the feasibility analysis for the project we will be working on for our capstone, "Showa Supermarket Online Shopping."

1.8.1. Product feasibility

The system that will be implemented in the supermarket will assist the supermarket owners in reaching their goals. Which are extending their company and opening up to the web market. This will be done owing to the website that will allow access to the firm's goods, allow customers to order them, and make connecting with the company exceedingly simple. Talking about communication, the website with the "push" function will enable the administrator to posts messages to the website about new goods, promotions, or merely promoting the store's products.

1.8.2. Technical and Operational Feasibility

For this project, we will be utilizing JavaScript, HTML and CSS for the website using visual studio since it is the official IDE for website creation. For the backend, we will be utilizing MYSQL as a database engine, since it is recognized for its high reliability, full feature set, and

self-contained nature. More than that, it is the ideal database engine to employ with an Android application.

1.8.3. Social & Market Feasibility

Since internet are being used by nearly everyone, we feel that a website for our customer, "Showa supermarket" would be of tremendous advantage. Also, as there are no equivalent websites for other supermarket shops, this project will be one of a kind, and it is predicted to become the leader of supermarket store website for online shopping.

1.8.4. Behavioral Feasibility

The website needs no specific technical assistance, and all the views offered in the application are self-explanatory. The customers are properly directed with a nice and engaging user interface, so when they readily access the client, Showa Supermarket goods are easily sold in the online store.

After approaching the client, "Showa Super Market," for how they want their product to be developed and what are the minimum functions the product must perform, we decided that the project is feasible to develop and materialize in terms of "implementation, contribution of the project to the organization, cost constraints, and as per the values and objectives of the organization."

Our online shopping website on Showa Supermarket has spoken about many elements that impact the behavior of Ethiopian people by utilizing our online shopping system. It infers that quick usage of technology permits people to shop anytime from anywhere and, along with this, supports economic growth by promoting excellent Showa Supermarket items. Online commerce, like that of our nations, has demonstrated remarkable development.

1.9. Significance of the project

Online shopping has become an increasingly popular and important part of the shopping landscape in Ethiopia in recent years. It offers a range of benefits for society, customers, and supermarkets, and has the potential to significantly impact the way people shop and do business in the country.

For society: online shopping has the potential to greatly expand access to goods and services, especially in rural areas where physical stores may not be present. This is particularly important in a country like Ethiopia, where there are significant disparities in access to resources and economic opportunities between urban and rural areas. By allowing people in rural areas to shop online and have products delivered to them, Online shopping can help to bridge this gap and provide greater access to a wider range of products and services.

Online shopping can also create new job opportunities in the supermarket sector, such as mobile application development and online marketing. This can help to stimulate economic growth and development, and provide new opportunities for employment and income generation.

For customers: online shopping offers a range of benefits and conveniences. It allows people to shop from anywhere at any time, without the need to physically visit a store. This is especially useful for people who are busy or have limited mobility, or for those living in areas with limited access to physical stores.

Online shopping also allows customers to easily compare prices and products from different retailers, this can help to drive competition and lower prices, leading to more affordable and accessible products for consumers.

In addition, online shopping can help to streamline the shopping experience for customers. It allows them to easily browse and purchase products online, and to have them delivered directly to their doorstep. This can save time and effort, and make the shopping process more convenient and efficient.

For supermarkets: online shopping can also provide a range of benefits and opportunities. It can help to increase sales and reach a wider customer base, as it allows retailers to sell their products to customers anywhere in the country. This can be especially useful for smaller retailers, who may not have the resources or infrastructure to operate physical stores in multiple locations.

Online shopping can also streamline the shopping experience for customers, by allowing them to easily browse and purchase products online, and to have them delivered to their doorstep. This can help to attract and retain customers, and make the shopping process more convenient and efficient for both retailers and customers.

Additional significance of online shopping

Usability for customer and society: -

- Saves time: -Online shopping provides the facility to shop from their office or home, so it saves traveling time
- To fulfill what customers need: online shopping meets the want and need of customers through the products and services that a business offers. This can include providing high-quality products and services that meet the expectations and preferences of customers, as well as offering a convenient and efficient shopping experience.
- Item deliver on time: - the product can be delivered easily and prompt and timely delivery of a purchased item to the customer.
- Be reliable and honest: - consistently providing accurate and trustworthy information about products and services, and fulfilling orders in a timely and reliable manner.
- The society able to get fast and better service.
- In online shopping, it is easy to compare and research products and their prices.

Usability for business owner: -

- Decrease the work load: - easily sell products through online
- 24hour working time: - that mean the customer can be buying anytime and anywhere and the sales of the supermarket will increase
- To describe detail information of the item: -expired date, price of a product etc.
- Safety way of data storage.
- Well organize administration easy to access information about the shop.

Overall, online shopping has the potential to bring significant benefits to society, customers, and supermarkets in Ethiopia. It can expand access to goods and services, create new job opportunities, and streamline the shopping experience. As such, it is an important and increasingly significant part of the country's economy and society.

1.10. Risks Assessment

An online shopping website in Ethiopia may face a number of specific risks that are unique to the country's market and regulatory environment. The risks that we consider in a risk assessment for an online shopping website in Ethiopia are:

Limited access to payment systems: In Ethiopia, access to payment systems such as credit cards and online payment platforms may be limited, which could make it difficult for customers to make purchases on the website.

Limited infrastructure: Internet connectivity and infrastructure may be limited in some parts of Ethiopia, which could impact the website's ability to reach potential customers and process orders efficiently.

Security risks: Online shopping websites handle sensitive customer information such as phone numbers and addresses. It is important to ensure that this information is secure and not vulnerable to hackers or other forms of cybercrime.

Legal risks: Online shopping websites need to comply with various laws and regulations, such as data protection laws, consumer protection laws, and antitrust laws. Failure to comply with these laws can result in legal action and financial penalties.

Reputation risks: A poorly designed or unreliable online shopping website can damage the reputation of a company. Customers may avoid shopping on the website and spread negative reviews, which can lead to lost sales and a decline in the company's reputation.

Competition risks: There may be many other online shopping websites offering similar products or services. It is important to differentiate the website and offer a unique value proposition in order to attract and retain customers.

Supply chain risks: Online shopping websites rely on a supply chain to source and deliver products to customers. If there are disruptions to the supply chain, it can affect the ability of the website to fulfill orders and satisfy customers.

Chapter 2: Existing System

2.1. Introduction

Showa Supermarket has been a staple in the local community for over 50 years. Despite its success, Showa Supermarket has continued to rely on a manual system for its operations. This system involves the use of paper documents, manual data entry, and manual processes for tasks such as inventory management, customer service, and employee management.

One of the main drawbacks of the manual existing system at Showa Supermarket is the lack of efficiency and accuracy. With the use of paper documents, there is a higher risk of errors, lost documents, and miscommunication. For example, if an employee needs to access a customer's order history, they would need to manually search through physical records, which can be time-consuming and prone to mistakes.

In addition to efficiency issues, the manual existing system at Showa Supermarket also limits the ability to collect and analyze data. Without the use of electronic systems, it is difficult to track sales trends, customer preferences, and employee performance. This lack of data can hinder decision-making and prevent Showa Supermarket from adapting to changing market conditions.

Another challenge of the manual existing system is the lack of security. With paper documents, there is a higher risk of unauthorized access, tampering, and loss. This can lead to privacy breaches, financial losses, and legal issues for Showa Supermarket.

Despite these challenges, Showa Supermarket has managed to maintain its reputation as a reliable and trusted grocery store. This is due in part to the dedication and hard work of its employees, who have adapted to the manual existing system and found ways to make it work effectively. However, as the grocery industry becomes increasingly competitive and technology-driven, it is important for Showa Supermarket to consider upgrading to a more efficient and modern system. [3]

2.2. Description about the Existing System

The system at Showa Supermarket involves a series of paper-based processes and manual data entry to track and manage inventory, sales, and customer information. This includes the use of physical inventory sheets to keep track of stock levels, and paper-based customer loyalty programs.

To begin with, Showa supermarket typically has a storefront with a display of various products for sale, including food, household goods, and personal care items. Customers can browse the selection of products and make their purchases directly at the store.

Inside the supermarket, there is usually a counter where customers can pay for their purchases and a cash register where the storekeeper can record the transaction. The storekeeper may also use a ledger to keep track of sales and inventory. In Showa supermarkets, the storekeeper is also responsible for restocking the shelves and organizing the products.

In terms of product selection, the Showa supermarket typically carries a wide range of basic necessities, such as rice, beans, flour, cooking oil, and other pantry staples. They may also have a small selection of fresh produce, including vegetables and fruits. In addition, the store may carry household goods, such as cleaning supplies, laundry detergent, and other household essentials. Personal care items, such as soap and shampoo, furniture, may also be available.

One feature of a Showa supermarket is that it operates without the use of modern technology, such as computerized registers or automated inventory systems. This means that the storekeeper must keep track of inventory and sales manually, using a ledger or other manual system. This can make it more challenging to manage the store, but it also allows the storekeeper to have a close relationship with their customers and to offer personalized service.

One of the challenges of operating a manual Showa supermarket is keeping track of inventory and ensuring that products are always available for customers. In many cases, the storekeeper must rely on their own knowledge and experience to anticipate demand and order the right amount of products. This can be especially challenging in times of high demand or when there are unexpected shortages of certain products.

Another challenge of operating a manual Showa supermarket is managing the financial aspects of the business. In many cases, the storekeeper must rely on their own knowledge and experience to set prices and manage their finances. This can be especially challenging in times of economic instability or when there are fluctuations in the cost of goods.

Generally Showa supermarket is a type of store that uses a manual system for its operations. This means that much of the work is done by hand and without the use of automation or computerization.

2.3. Forms and Other Documents of the Existing Systems



ሸዋ ሱፐርማርኬት

ከዋና መጋዘን ምርት መቀበያ ፎርም

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የቅርንጫፍ ስፕሮግራኬቶች ታላቋ ፊርማ_____

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ϕ _____

47 _____

Figure 18 Showa Supermarket Product Receiving Form from the store

 <h1>ከአከፋፋይ ምርት መቀበያ ፎርም</h1>	ምርት አቅራቢ ቁጥር	
	EXTERNAL SUPPLIER	

SUPPLIER INFORMATION

ምርት አቅራቢው		የክፍያ አድራሻ	
የድርጅቱ አይነት			
ምርት አቅራቢ ድርጅት ስም		ታክስ ቁጥር	
		ባንክ ስም	ባንክ ቁጥር
የአድራሻ ስም	የድርጅቱ ተወካይ ስም	የክፍያ ጊዜ ስምምነት	<input type="checkbox"/> 15 days <input type="checkbox"/> 30 days <input type="checkbox"/> Others :
ምርቱ የመጣበት ቦታ	ምርቱ የቀረበበት ቦታ	የክፍያ ዓይነት	<input type="checkbox"/> TT <input type="checkbox"/> Cheque <input type="checkbox"/> Others :
የአቅራቢ ድርጅት አድራሻ			
የተመዘገበ አድራሻ			
ክልል/ከተማ			
ስልክ			
Website/Email			

DOCUMENT CHECKLIST

	የምርቱ ዓይነት	ምርቱ አገልግሎት ሚዛን ቁጥር	ምርመራ
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The undersigned hereby stated that the information provided herein is true, valid and correct on the date of submission.	Requested by,	Approved by,
Name:	Name:	Name:
Date:	Date:	Date:
Signature:	Signature:	Signature:

Figure 19 Showa supermarket product receiving form from the supplier.

2.4. Model of Existing System

The model portrays a supermarket as a functional system for doing business. As a system, the sequence of work performed in bringing products from remote suppliers to local customers involves certain discrete business entities. Each of these entities provides a critical link in the supermarket supply chain. In the Figure identifies these business entities as subsystem layers of the model, and defines the functional activities they perform.

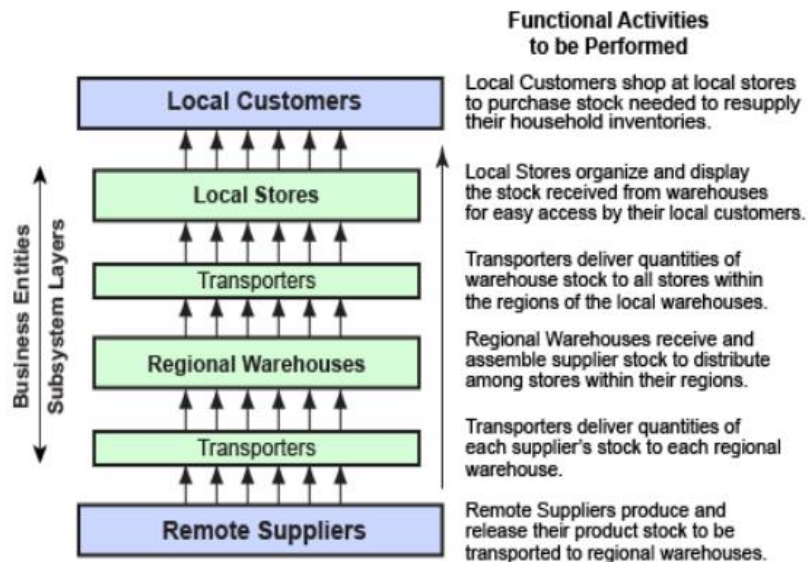


Figure 20 business entities of Showa supermarket

Showa supermarket enterprise has a large and very complex structure, involving many component entities:

- An array of repeat customers grouped in various local areas.
- A chain of retail stores.
- A set of warehouse distribution centers.
- An array of product suppliers under contract.

The next task is to interpret the Basic Functional Steps as business subsystems, which portray the supply chain in terms of business structural requirements. In Figure the terminology shifts from action steps to the state of supplier stock at each subsystem level. For each step in the supply chain, this indicates which business entity owns or is responsible for the stock, its physical location, and how it is being accessed.

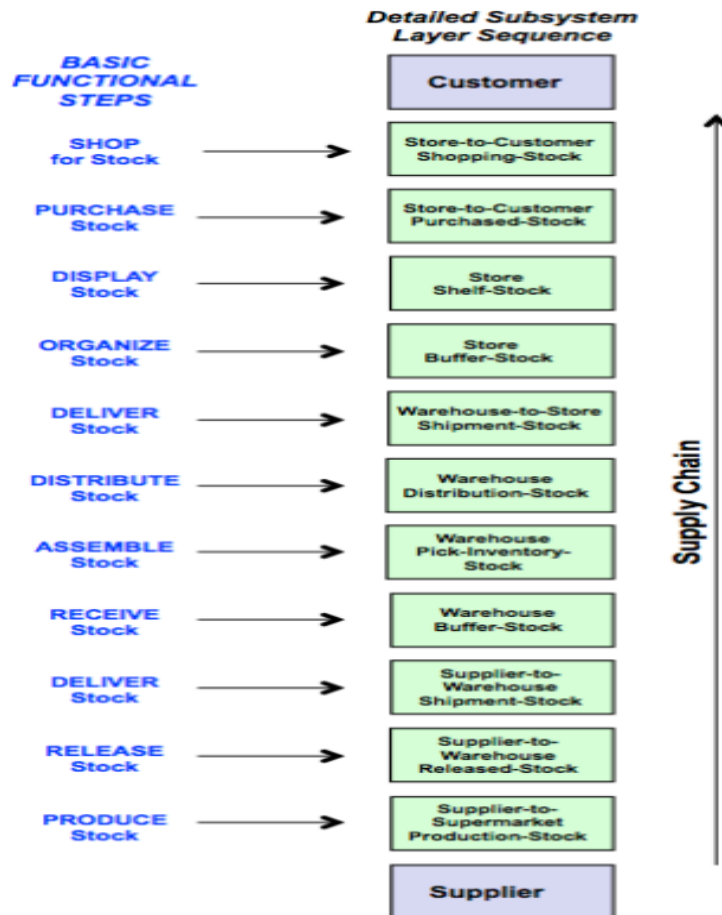


Figure 21 Supply Chain

2.4.1. Actors

In Showa supermarket system, there are several actors or participants who play a role in the functioning of the Existing system. Some of the main actors in a manual supermarket system include:

- **Owner (Administrator):** -The person who manage, controlling and coordinating the overall activity of the supermarket and responsible for assign cashier, manage the store/stock, analyze cash report, buy product from the suppliers.
- **Cashier (staff):** -The person who assigned by the business owner to work on the supermarket duty. They are selected from the family members or hired for a payment and they are responsible for shopping clerk.

- **Customer (Buyer):** -The customers are the peoples who can get the service from the supermarket, which are capable of select their preference, visit the available product, view item, purchase and make payment.
- **Suppliers:** Suppliers provide the supermarket with the goods and products that are available for sale to customers.
- **Delivery drivers:** These are individuals who are responsible for transporting orders from the supermarket to the customers' homes.

2.4.2. Essential Use Cases

Showa supermarket system is a type of system that relies on manual processes and procedures rather than automated or computerized ones. Some potential use cases for a manual supermarket system could include:

- **Manage Products:** Allows the owner/admins to manage products from the store's inventory.
- **Manage Employees:** Allows owners/admins to manage assign roles and responsibilities, and track employee performance.
- **Analyze Cash Report:** Allows owners/admins to view and analyze financial reports, including cash flow, sales, and expenses.
- **Welcome Customers:** Cashiers greets customers as they enter the store and assists them with their shopping needs.
- **Sell Products:** Allows Cashiers to ring up purchases and process payments from customers.
- **Check Available Products:** Allows Cashiers and customers to check the availability of products in the store.
- **Receive Orders via Phone:** Allows customers to place orders over the phone, which can be picked up at the store or delivered.
- **Give Receipts for Customers:** Allows Cashiers to print and provide receipts for customer purchases.
- **Receive Payment:** Allows Cashiers to process payments in various forms

- **Visit the Supermarket:** Allows customers to browse and shop at the store.
- **View Products:** Allows customers to view products available for purchase in the store.
- **Select Products:** Allows customers to select and add products to their shopping carts.
- **Checkout:** Allows customers to pay for their purchases and complete their shopping experience.

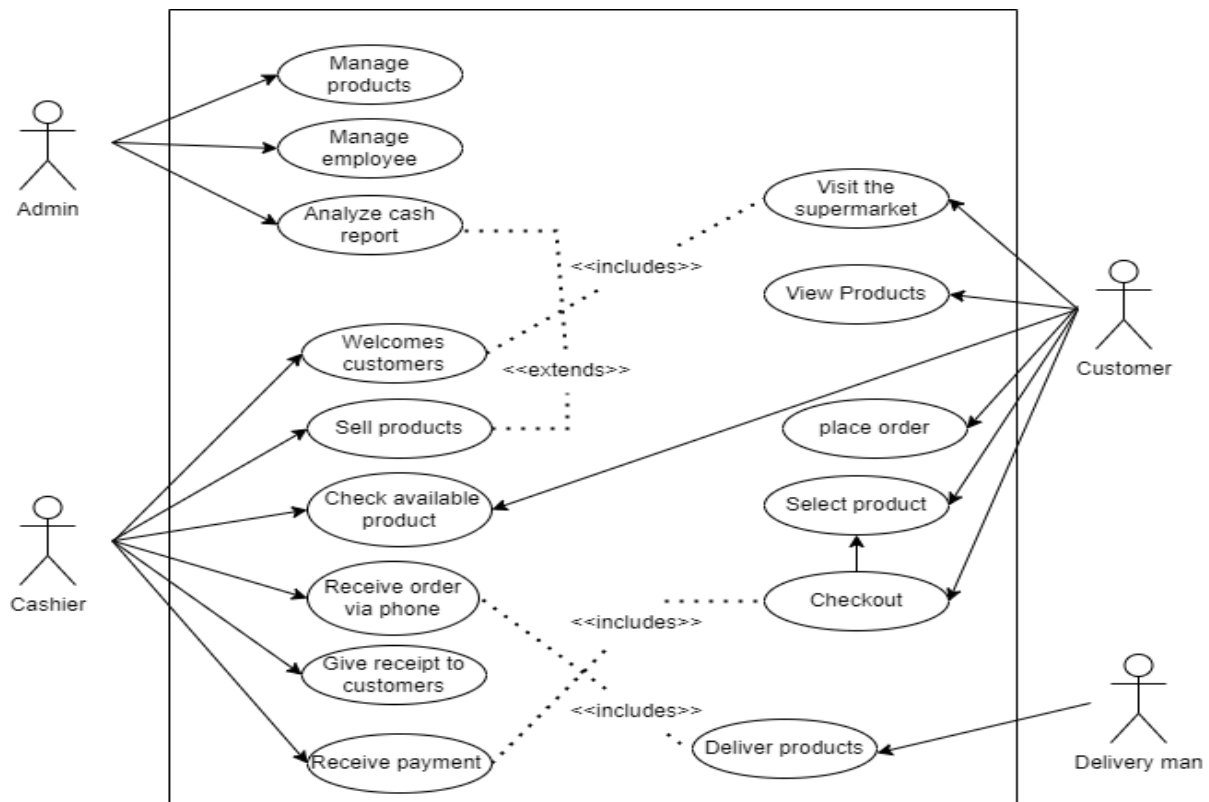


Figure 22 Use Case Diagram of Existing System

2.5. Business Rule

Here are the business rules that are applied in Showa supermarket:

Employee rule:

- Employees must arrive at their shift on time and dressed in appropriate attire.
- Employees must maintain a clean and orderly work environment, including regularly cleaning and sanitizing surfaces and equipment.
- Employees must handle and store food products in a safe and hygienic manner, following all relevant food safety guidelines.

- Employees must handle all customer complaints and issues in a professional and timely manner, and escalate any unresolved issues to a manager as needed.
- Employees must follow all cash handling procedures and policies, including accurately recording and reconciling sales transactions.
- Employees must follow the store's cleaning and sanitation protocols.
- Employees must not engage in any non-essential conversations with customers.

Customer rule:

- Customers must not handle products unless they intend to purchase them.
- Customers must not bring pets or animals into the store, with the exception of service animals.
- Customers must not consume food or beverages while shopping in the store.
- Customers must not engage in any disruptive or inappropriate behavior while in the store.
- Customers must follow the directional arrows and signs while in the store.
- Customer must pay with cash.
- Customers must place their own items in their own cart.

Other rules:

- All products must be accurately priced and labeled.
- All products must be regularly restocked and rotated to ensure freshness and quality.
- All products with expiration dates must be removed from the shelves and discarded before the expiration date.
- All hazardous or potentially dangerous products must be clearly labeled and stored in a safe and secure manner.
- The store must maintain a sufficient supply of necessary items, such as hand sanitizer and personal protective equipment, for use by employees and customers.
- All transactions will be monitored for fraud and theft prevention.
- All returned items must be quarantined in a designated area for 24 hours.
- All items must be scanned before they are placed in a customer's bag.
- All items must be placed in a bag before the customer leaves the store.

2.6. Limitation of the Existing System

Here are the limitations of existing system at Showa supermarket:

- **Time-Consuming:** The manual Showa supermarket requires more time to process orders and payments as compared to automated supermarkets.
- **Human Error:** The manual Showa supermarket is more prone to human error, resulting in incorrect orders or payments.
- **Labor Intensive:** The manual Showa supermarket requires more labor to handle each order, increasing operational costs.
- **Limited Product Range:** The manual Showa supermarket typically have a limited range of products compared to automated supermarkets.
- **Limited Stock Capacity:** The manual Showa supermarket has limited stock capacity, requiring frequent restocking and allocation of resources.
- **Stock Outage Issues:** The manual Showa supermarket may experience stock outages due to manual errors in stock tracking and allocation.
- **Limited Updating Capabilities:** The manual Showa supermarket has limited updating capabilities, making it difficult to make changes or add new products.
- **Customer Satisfaction:** The manual Showa supermarket often lack customer satisfaction due to long wait times, incorrect orders, and limited product selection.
- **Limited Promotional Opportunities:** The manual Showa supermarket often has limited promotional opportunities, making them less competitive with automated supermarkets.
- **Difficult to Scale:** The manual Showa supermarket is difficult to scale due to limited resources and lack of automation.
- **Poor Inventory Management:** The manual Showa supermarket has poor inventory management, making it difficult to keep track of stock levels.
- **Low Customer Retention:** The manual Showa supermarket often has low customer retention rates due to long wait times and limited product selection.
- **Lack of Flexibility:** The manual Showa supermarket lacks the flexibility of automated supermarkets, making them less able to adapt to changing customer demands.

Chapter 3: Proposed System

3.1. Overview of the Proposed System

Online shopping, also known as e-commerce, refers to the buying and selling of goods and services over the internet. It has become a popular way for consumers to purchase items from the comfort of their own homes, and for businesses to reach a wider market.

The history of online shopping can be traced back to the early days of the internet, when a small number of pioneering retailers began offering products for sale online. In the 1990s, online shopping began to gain mainstream acceptance, and by the 2000s, it had become a common way for consumers to shop for a wide range of products, from clothing and electronics to home goods and groceries.

One of the key advantages of online shopping is the convenience it offers. Consumers can shop from any location with an internet connection, and do not have to worry about physical store hours or transportation. Online retailers also often offer a wider selection of products than brick-and-mortar stores, and can provide more detailed product information and customer reviews to help consumers make informed purchasing decisions.

Another advantage of online shopping is the ability to compare prices and find the best deals. Many online retailers offer discounts and sale prices, and consumers can easily compare prices from different retailers to find the best deal. Additionally, online shopping sites often offer coupon codes and other promotions to save consumers even more money.

Online shopping is also a more environmentally friendly option, as it reduces the need for physical stores and the associated energy consumption and greenhouse gas emissions. It also allows for more efficient use of resources, as retailers can use data analytics to better forecast consumer demand and reduce waste.

However, online shopping does have some drawbacks. One concern is the risk of fraud or identity theft, as consumers must provide sensitive personal and financial information in order to make purchases. To mitigate this risk, it is important for consumers to shop only on secure application and to use strong passwords and other security measures.

Another concern is the lack of physical interaction with the product. When shopping online, consumers cannot touch or try on the products, which can make it more difficult to gauge the quality or fit. Online retailers often have return policies in place to address this issue, but it can still be a drawback for some consumers.

Despite these potential drawbacks, online shopping continues to grow in popularity. In recent years, the rise of mobile devices and the widespread adoption of fast, reliable internet connections have made it even easier for consumers to shop online. Many retailers now offer mobile apps and other features specifically designed for mobile shopping, further increasing the convenience and accessibility of online shopping. [9]

3.2. Requirement specification

A requirement specification for an online shopping platform should outline the functional and non-functional requirements for the system, as well as any constraints and assumptions. The specification should be comprehensive, covering all aspects of the system, including user experience, security, and order fulfillment.

3.2.1. Functional Requirements

- The system should allow users to browse and search for products by category or brand easily and quickly.
- Users should be able to view detailed product information, including images, descriptions, and specifications.
- The system should allow users to add items to their shopping cart and specify quantities.
- Users should be able to view and update their shopping cart at any time.
- The system should allow users to create and manage their own accounts, including the ability to save shipping information for future purchases.
- The system should support order tracking and allow users to view the status of their orders.
- The system should have strong security measures in place to protect against fraud and identity theft, including secure authentication and encryption of sensitive data.
- The system should allow users to leave product reviews and ratings.

- The system should provide detailed shipping and delivery information, including tracking numbers and estimated arrival dates.
- The system should have a returns and exchanges policy in place, and allow users to easily initiate a return or exchange if needed.
- The system should allow customers to receive special offers and discounts.
- The system should allow customers to save items in their shopping cart for later.

3.2.2. Non-Functional Requirements

Responsive Design: The system should have a responsive design, meaning it should be able to adapt to the device it is being accessed on. This includes adjusting the layout and functionality to fit different screen sizes and resolutions. This is important because it allows users to access the platform from any device, such as tablets and smartphones.

User-Friendliness: The system should be easy to use and navigate, with clear and intuitive controls. This includes having a logical structure and layout, as well as clear and concise instructions. By making the system user-friendly, it will be more appealing to users and encourage them to return to the platform.

Reliability: The system should be reliable, with a high uptime and low latency. This means the system should be available for use most of the time and should not experience delays or errors when processing requests. This is important because users rely on the system to make purchases and access information, and any downtime or delays can be frustrating and lead to lost business.

Security: The system should have strong security measures in place to protect against fraud and identity theft. This includes secure authentication and encryption of sensitive data, as well as measures to prevent unauthorized access to the system. By ensuring the security of the system, users will feel more confident in using it and will be more likely to make purchases.

Scalability: The system should be scalable, meaning it should be able to handle a large volume of traffic and transactions without experiencing performance issues. This is important because the number of users and transactions on the system may fluctuate, and it is important that the system can handle increased demand without slowing down or experiencing errors.

Language and Currency Support: The system should be able to handle multiple languages and currencies. This means users should be able to select their preferred language and currency, and the system should be able to display prices and other information in the correct format. This is important for expanding the reach of the platform to international markets.

Fast Loading Time: The system should have a fast loading time, meaning it should take minimal time to load pages and process requests. This is important because users have short attention spans and may become frustrated if they have to wait too long for the system to load.

Search Functionality: The system should have a robust search function, allowing users to easily find products by keyword, category, or brand. This is important because it helps users find the products they are looking for more quickly and makes the shopping experience more efficient.

Customizable User Interface: The system should have a customizable user interface, allowing users to personalize their shopping experience. This could include features such as the ability to change the color scheme or layout of the platform, or to save and organize items in a wish list or favorites list.

Customer Service: The system should have a customer service platform, allowing users to easily contact the retailer with questions or concerns. This could include features such as a live chat function or a contact form. By providing good customer service, retailers can build trust and loyalty with their customers.

3.2.3. Constraints

When designing an online shopping mobile application, it is important to consider the constraints that will help create the best user experience. Some of the main constraints to consider are:

Legal and Regulatory Compliance: The mobile application must adhere to all relevant laws and regulations, including those related to privacy, data protection, and e-commerce. This includes complying with the General Data Protection Regulation (GDPR) in the European Union, the California Consumer Privacy Act (CCPA) in the United States, and any other

applicable laws and regulations. Failure to comply with these laws and regulations could result in fines, legal action, and damage to the reputation of the organization.

Compatibility with Existing Infrastructure: The mobile application must be compatible with the existing infrastructure and technology of the organization. This includes compatibility with the hardware and software used by the organization, as well as any existing systems and processes that the mobile application will need to integrate with. Ensuring compatibility with the existing infrastructure is important to minimize disruption and ensure smooth deployment and operation of the mobile application.

Network Connectivity: The mobile application must be able to function in a variety of network environments, including both Wi-Fi and cellular networks. The application must be able to handle changes in connectivity and adapt to different network speeds and signal strengths. Ensuring that the mobile application can function effectively in different network environments is important to ensure that users can access the application regardless of their location or connectivity.

User Permissions: The mobile application must respect the user's permissions and settings on their device. This includes requesting permission to access certain features or data on the device, such as the camera or location, and respecting the user's privacy preferences. Failing to respect user permissions can lead to poor user experience and may result in users uninstalling the application.

Device Compatibility: The mobile application must be compatible with a range of devices, including different models and operating systems. The application should be tested on a variety of devices to ensure that it functions correctly and has a consistent user experience across different devices.

Performance and Memory: The mobile application must be optimized for performance and memory usage, as mobile devices have limited resources compared to desktop computers. The application should be designed to minimize resource usage and should be tested to ensure that it performs well and does not crash or freeze.

User Experience: The mobile application should have a positive user experience, with a well-designed interface and intuitive controls. The application should be easy to use and navigate, and should provide users with the information and functionality they need in a clear and concise manner. Ensuring a good user experience is important to retain users and encourage them to use the application.

By considering these constraints when designing an online shopping mobile application, you can ensure that the user experience is optimized for the best results.

3.2.4. Assumptions

Considering we are developing an online shopping mobile application for customers, here are a few assumptions we should consider:

Target Audience: It is assumed that the target audience for the mobile application will be individuals who regularly shop online and are comfortable using mobile devices. This may include a wide range of ages and demographics, but it is important to consider the specific needs and preferences of this audience when designing the application.

Primary Use Case: It is assumed that the primary use case for the mobile application will be shopping for and purchasing products. This includes browsing and searching for products, adding items to the shopping cart, and completing the checkout process.

Functionality: It is assumed that the mobile application will provide a range of functionalities to support the primary use case, including search and browse features, product information and reviews, payment processing, and order tracking.

Integration with Other Systems: It is assumed that the mobile application will need to integrate with other systems, such as the retailer's inventory management and fulfillment systems. This is necessary for the application to be able to provide accurate information about products and to process orders efficiently.

3.3. User Interface Specification and Description

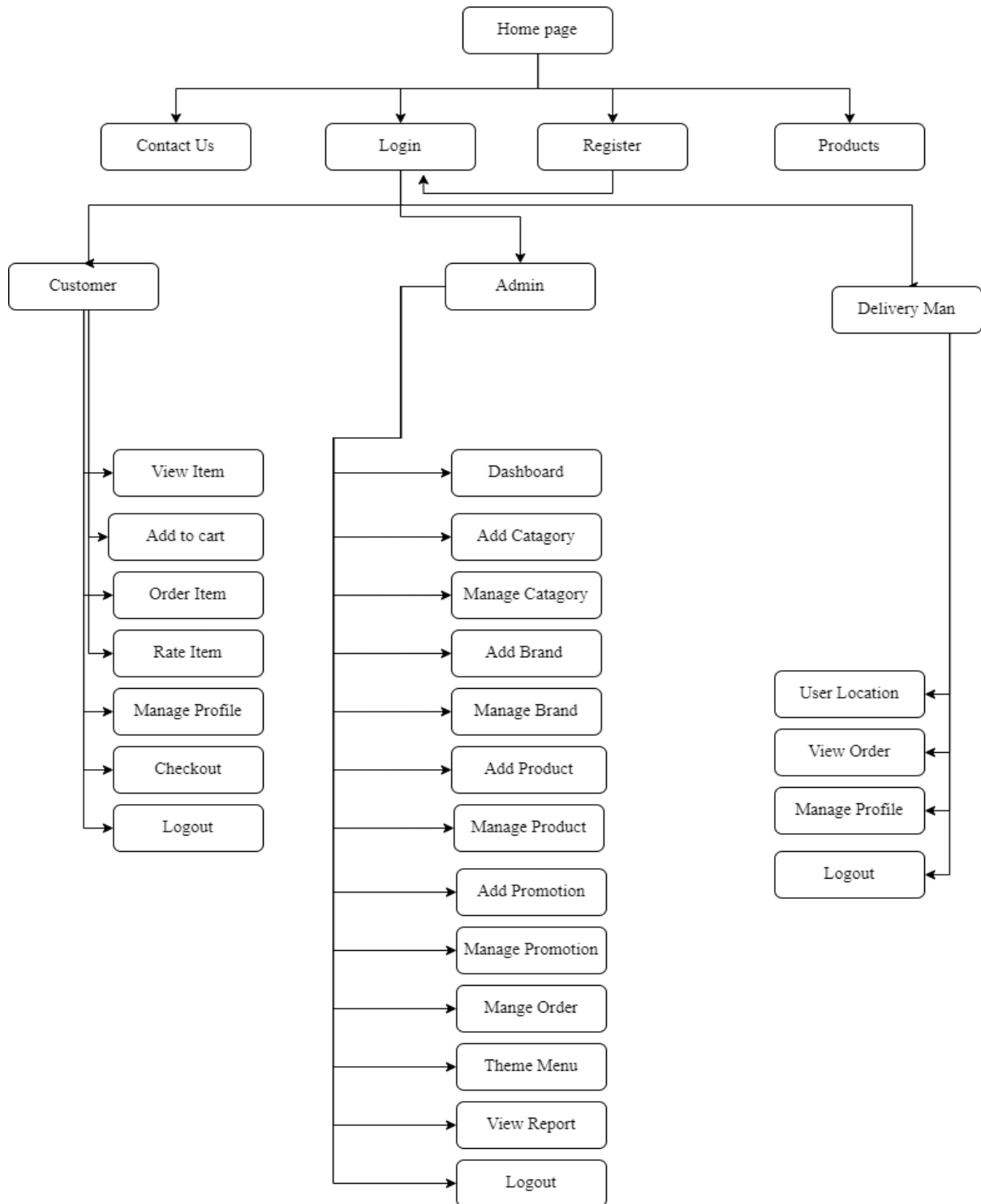


Figure 23 User Interface Specification

Chapter 4: System Modeling

4.1. Introduction

System modeling is an important part of designing a successful online shopping project. It allows us to map out the system requirements, identify potential areas of improvement, and build a model that is both efficient and effective. To this project we chose to use Object-Oriented System Analysis and Design (OOSAD), it is possible to create a comprehensive model for an online shopping system.

At its core, OOSAD is a methodology that uses object-oriented programming to analyze and design software systems. It allows us to model the behavior of a system and its components, as well as identify any potential issues or areas of improvement. By breaking down the system into smaller, manageable components, we can better understand how they interact with each other, and how they will work together to achieve the desired outcome.

When building a system model for an online shopping system, it is important to first identify the core components of the system. These components can include the user interface, the shopping cart, and inventory management. Once the core components are identified, it is possible to model how they interact with each other. This helps us to identify how the system should be structured and how it should be designed.

It is also important to consider how the system should interact with external components, such as delivery services, and other third-party services. This helps us to ensure that the system is secure and reliable, and can be easily integrated with external services.

Once the system model has been created, it is possible to use OOSAD to create a detailed design document. This document outlines the structure and functionality of the system, and provides a roadmap for development. By following this roadmap, it is possible to create a reliable, secure, and efficient online shopping system. [10]

4.2. Functional Model

4.2.1. System use case Diagram

A use case is a description of a specific way in which a user or system interacts with a software application or system. It outlines the steps that are taken and the actions that are performed in order to achieve a specific goal or task. Use cases are typically used in software development as a way to understand and document the functional requirements of a system. They can also be used to create user stories, test cases, and other development artifacts. Use cases are often written in a specific format that includes a title, actors, preconditions, post-conditions, and a step-by-step description of the interactions that take place.

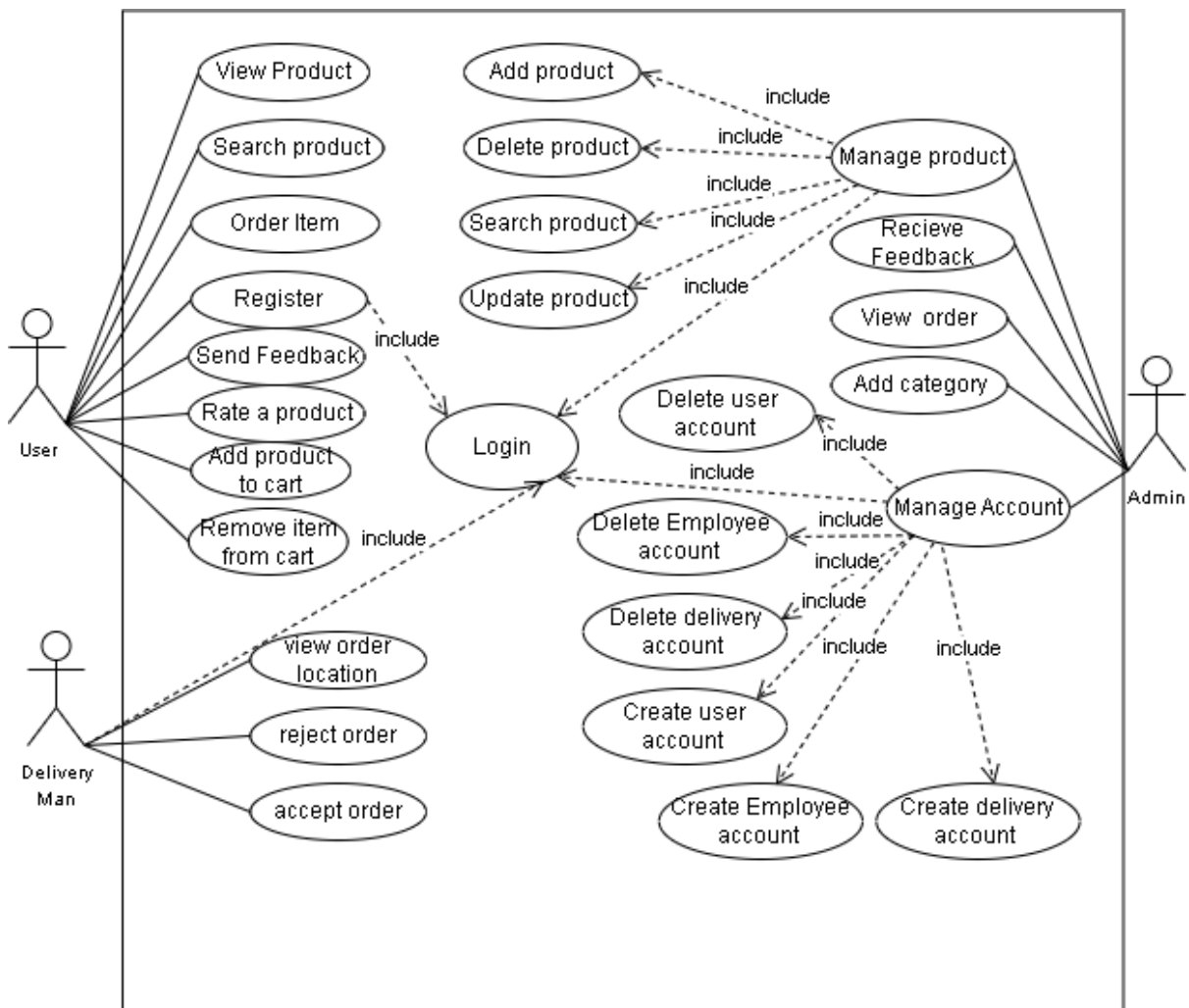


Figure 24 System Use case Diagram

4.2.2. System Use Case Description

Table 4 Register Description

Use case name	Register
Participating Actor	Customer
Description	New Customer of the site is registered here
Precondition	New Customer of site is registered here.
Flow of events	<ol style="list-style-type: none"> 1. The customer wants to register 2. The customer click on registration button 3. The system displays a registration form 4. The customer enters all required inputs 5. The system validates the data entered 6. The customer clicks on Register button. 7. The system send data to validate 8. The systems establish connection 9. The system return massage 10. The system performs the query 11. The system return massage 12. The system displays successfully registered message and login page. 13. The use case end. <p>Alternate Course A: Invalid data entered.</p> <ol style="list-style-type: none"> A.5. The system displays error massage A.6. The system asks to re-enter valid data A.7. The use case end <p>Alternate Course B: If the customer already registered</p> <ol style="list-style-type: none"> B.12. The system displays already registered messageB.13. The system displays login pageB.14. The use case end
Post condition	The customer is registered.

Table 5 Login Description

Use case name	Login
Participating Actor	Customer, Administrator
Description	Only the registered users will login, it may be the customer, Administrator
Precondition	The user have to be already register
Flow of events	<p>Basic Action:</p> <ol style="list-style-type: none"> 1. The user wants to login 2. The user clicks on login button 3. The system displays a login form 4. The user enters user name and password 5. The system validates the data entered 6. The user clicks on Login button. 7. The system send data to validate based on <p>Business Rule 1</p> <ol style="list-style-type: none"> 8. The system establish connection 9. The system return message 10. The system performs the query 11. The system return message 12. The system displays successfully logged in message. 13. The use case end <p>Alternate Course A: Invalid data entered.</p> <ol style="list-style-type: none"> A.5. The system displays error message A.6. The system asks to re-enter valid data A.7. The use case resume to step 4 <p>Alternate Course B: If the user is not having an account</p> <ol style="list-style-type: none"> B.12. The system displays your user name and password is incorrect B.13. The use case resumes to step 4 <p>Alternate Course C: If the user forgot password</p>

	C.12. The system displays your user name and password is incorrect C.13. The user must have to click on forgot password button C.14. The system asks to fill username and email address C.15. The customer clicks on Change button C.16. The system sends the password to his/her email account C.17. The use case end
Post condition	A user is logged into the system

Table 6 Order Product Description

Use case name	Order product
Participating Actor	Customer
Description	The Customer Orders the products what he wants to buy and it includes login before order
Precondition	The customer must add an items before ordering
Flow of events	<p>Basic Action:</p> <ol style="list-style-type: none"> 1. The customer wants to order products 2. The customer clicks on products button 3. The system displays product list form 4. The customer add an items to cart 5. The customer click on Order button based on <p>Business Rule 6</p> <ol style="list-style-type: none"> 6. The system displays a login form 7. The customer enters user name and password 8. The system validates the data entered 9. The customer clicks on Login button. 10. The system send data to validate 11. The systems establish connection 12. The system return message 13. The system perform the query

	<p>14. The system return message and display on cart page</p> <p>15. The customer click on Order button</p> <p>16. The system send data to the controller</p> <p>17. The system check the customer Coupon account</p> <p>18. The system Return message</p> <p>19. The system deduct from customer Coupon account</p> <p>20. The system return message</p> <p>21. The system execute save to order table</p> <p>22. The system return message</p> <p>23. The system display successfully ordered products.</p> <p>Alternate Course A: If the customer not added products</p> <p>.A. 14. The system display your cart is empty message</p> <p>A.15. The system ask to add items</p> <p>A.16. The customer click on product button</p> <p>A.17. The system display product list page</p> <p>A.18. The customer added an item to his/her cart</p> <p>A.19. The use case resume to step 14</p> <p>Alternate Course B: If the customer wants to cancel order.</p> <p>B.20. The customer clicks on cancel order button based on</p> <p>Business Rule 2</p> <p>C.21. The system cancel the customer ordered product.</p> <p>C.27. The use case end</p>
Post condition	The customer get the product

Table 7 Remove Item From Cart Description

Use case name	Remove items from cart
Participating Actor	Customer
Description	The customer removes the product from the cart
Precondition	The customer added a product to the cart.

Flow of events	Basic Action: <ol style="list-style-type: none"> 1. The customer wants to remove an items from his/her cart 2. The customer clicks on cart button 3. The system display customer cart with items information. 4. The customer selects item to remove from the cart. 5. The customer clicks on the Remove item link. 6. The system asks the user for the confirmation. 7. The customer confirms the removal 8. The system removes the item from the customer cart. 9. The system displays the products is removed successfully 10. The use case end Alternate Course A: If The user not confirms to remove the item A7. The use case go to step 3.
Post condition	The products is successfully removed

Table 8 Add New Product Description

Use case name	Add new product
Participating Actor	Administrator
Description	The Administrator creates the product category list
Precondition	The Administrator must be logged in
Flow of events	Basic Action: <ol style="list-style-type: none"> 1. The Administrator wants to add new product based on Business Rule 4 2. The Administrator clicks on add new product button. 3. The system displays add new product form 4. The Administrator fills all required inputs 5. The system validates the data entered 6. The Administrator clicks on add button. 7. The system send data to validate

	<p>8. The system established connection</p> <p>9. The system return message</p> <p>10. The system execute the query</p> <p>11. The system return message</p> <p>12. The system displays successfully added message.</p> <p>13. The use case end</p> <p>Alternate Course A: Invalid data entered.</p> <p>A.7. The system displays error message</p> <p>A.8. The system asks to re-enter valid data</p> <p>A.9. The use case resume to step 6</p> <p>Alternate Course B: If the product already available.</p> <p>B.14. The system displays the product already available message</p> <p>B.15. The system displays add new product page</p> <p>B.8. The use case end</p>
Post condition	The category list of the product is created.

Table 9 Update product Description

Use case name	Update product
Participating Actor	Administrator
Description	The Administrator updates the product category list
Precondition	The Administrator must be logged in
Flow of events	<p>Basic Action:</p> <p>1. The administrator wants to update product based on</p> <p>Business Rule 4</p> <p>2.The administrator enter product code in the search form</p> <p>3. The administrator clicks on search button.</p> <p>4. The system send data</p> <p>5. The system established</p>

	6. The system return message 7. The systems execute the query 8. The system return message 9. The system displays searched product 10. The administrator click on Edit button 11. The system display product information 12. The administrator update the product information 13. The system validate the data entry 14. The administrator clicks on update link button 15. The system send data 16. The system established connection 17. The system return message 18. The system executes the query 19. The system return message 20. The system display successfully updated message 21. The use case end Alternate Course A: Invalid data entered. A.13. The system displays error message A.14. The system asks to re-enter valid data A.15. The use case resume to step 12
Post condition	The category of the product is updated.

Table 10 Delete Employee Description

Use case name	Delete Delivery man Account
Participating Actor	Administrator
Description	The Administrator wants to delete Delivery man Account
Precondition	The Administrator is logged in
Flow of events	Basic Course of Action:

	<p>1. The Administrator wants to delete Delivery man Account based on</p> <p>Business Rule 5</p> <p>2. The Administrator clicks on Delivery man Account button.</p> <p>3. The system displays Delivery man page. The Administrator enter Delivery man name in the search form</p> <p>5. The Administrator clicks on search button.</p> <p>6. The system send data to fetch Delivery man</p> <p>7. The system displays searched Delivery man.</p> <p>8. The Administrator clicks on delete link button</p> <p>9. The system asks for confirmation</p> <p>10. The administrator confirms the deletion.</p> <p>11. The system display successfully deleted account.</p> <p>12. The use case end.</p> <p>Alternate Course A: If the administrator enters incorrect Delivery man name</p> <p>A.7. The system displays there is no Delivery man with this name message</p> <p>A.8. The system asks to re input the Delivery man information.</p> <p>A.9. The use case resume to step 3</p> <p>Alternate Course B: If the Delivery man is does not exist</p> <p>B.7. The system display the Delivery man is doesn't exist</p> <p>B.8. The system resume at step 3</p> <p>Alternate Course C: If the administrator confirms not to delete</p> <p>B.10. The system resume at step 7</p>
Post condition	The Delivery man is deleted

Table 11 Check product expired date Description

Use case name	Product rating
Participating Actor	Customer
Description	The Customer rate a product according to their satisfy
Precondition	The Customer is logged in
Flow of events	<p>Basic Course of Action:</p> <ol style="list-style-type: none"> 1. The Customer wants to rate a product based on 2. The Customer enter product name in the search form 3. The Customer clicks on search button. 4. The system send data 5. The system established 6. The system return message 7. The systems execute the query 8. The system return message 9. The system displays searched product and Rate button. 10. The user click on rate button 11. The system display rate level 12. The user rate the product according to satisfy 13. the system display the product rated. <p>Alternate Course A: Invalid data entered.</p> <ol style="list-style-type: none"> A.13. The system displays error message A.14. The system asks to re-enter valid data A.15. The use case resume to step 2

Post condition	The product is rated
-----------------------	----------------------

Table 12 Password change description

Use case name	Password change
Participating Actor	Administrator, User
Description	Administrator and User change password
Precondition	The Administrator and User must be logged in
Flow of events	<p>Basic Action:</p> <ol style="list-style-type: none"> 1. The Administrator and User wants to change password. <p>Business Rule 4</p> <ol style="list-style-type: none"> 2. The user clicks on profile picture. 3. The system displays Edit profile picture 4. The user fills all required inputs 5. The system validates the data entered to profile picture 6. The user clicks on edit button. 7. The system send data to validate 8. The system established connection 9. The system return message 10. The system execute the query 11. The system return message 12. The system displays successfully edited. 13. The use case end <p>Alternate Course A: Invalid data entered.</p> <ol style="list-style-type: none"> A.7. The system displays error message A.8. The system asks to re-enter valid data A.9. The use case resume to step 4
Post condition	The password is changed.

4.3. Dynamic Model

4.3.1. Sequence Diagram

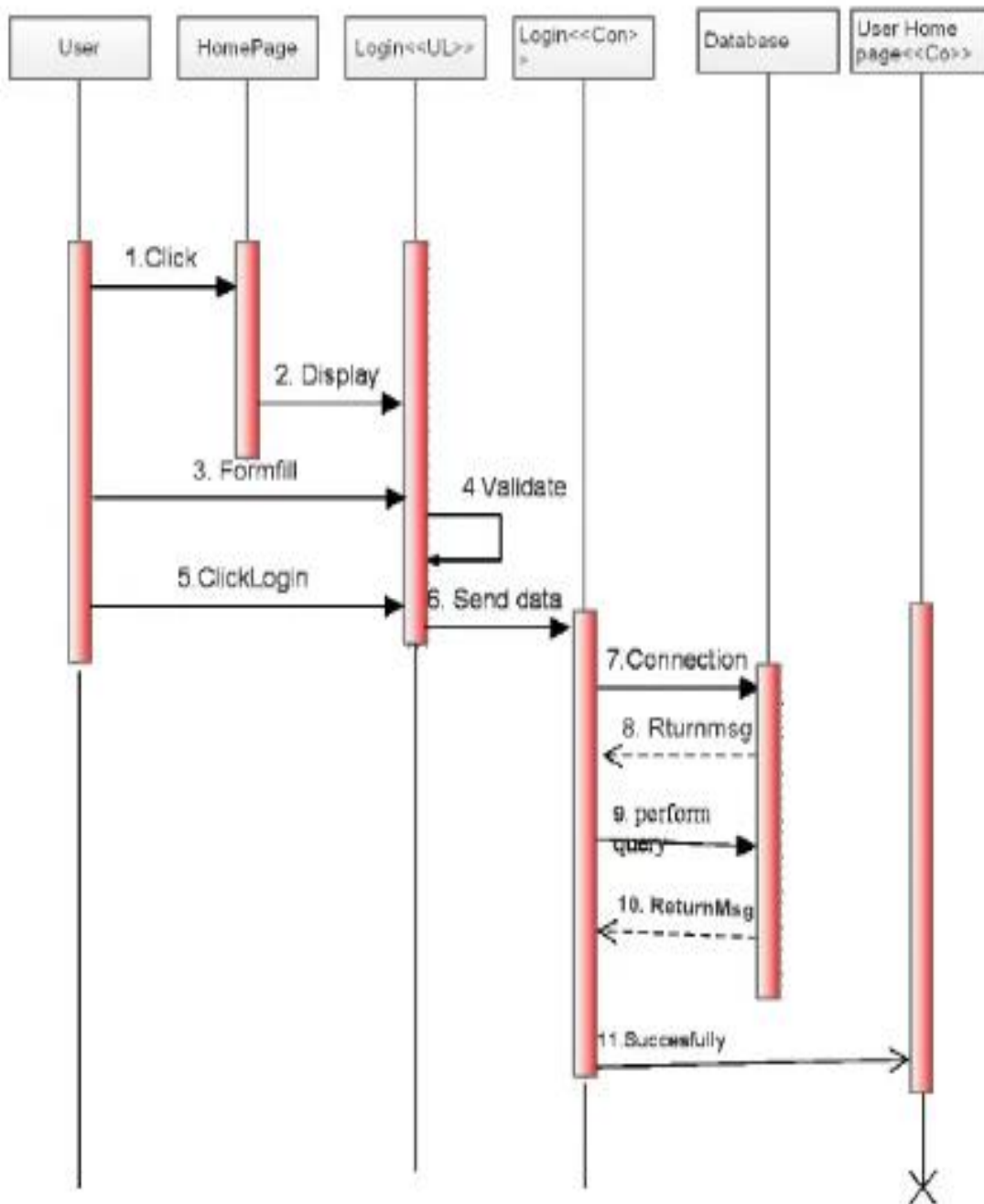


Figure 25 Sequence Diagram for Login

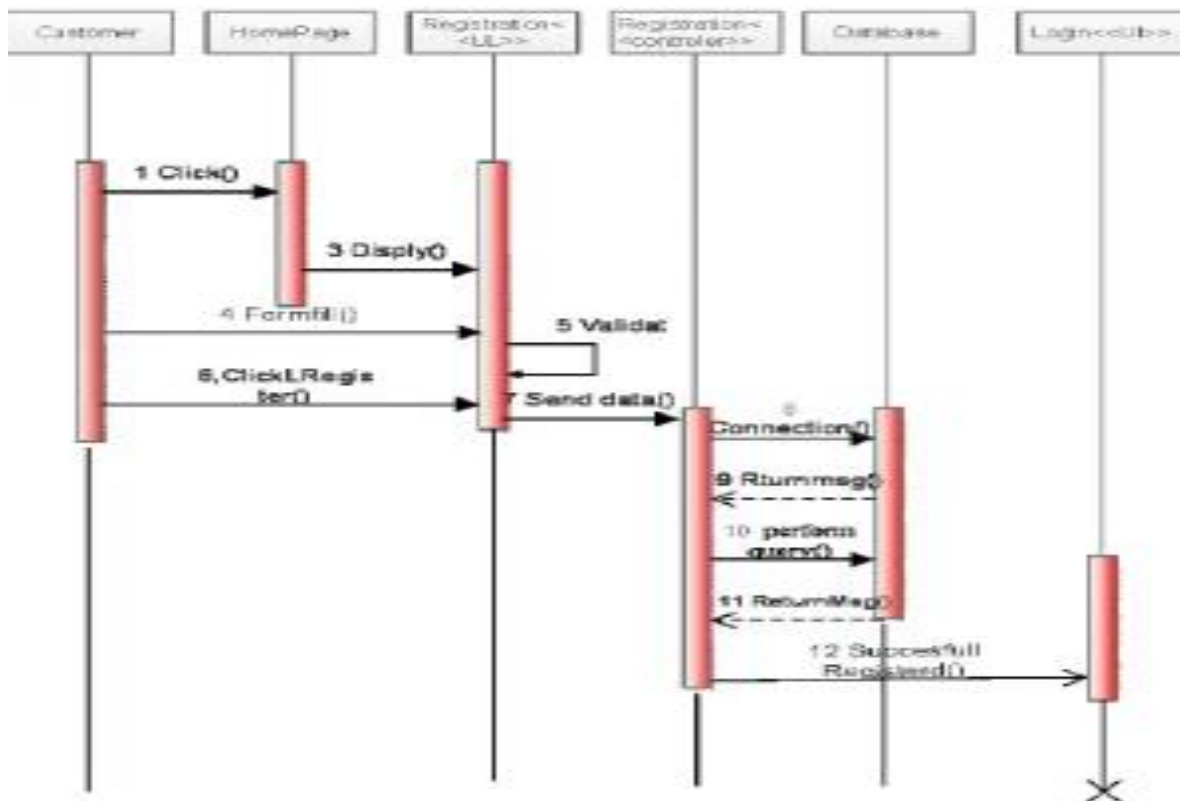


Figure 27 Sequence Diagram for Registration

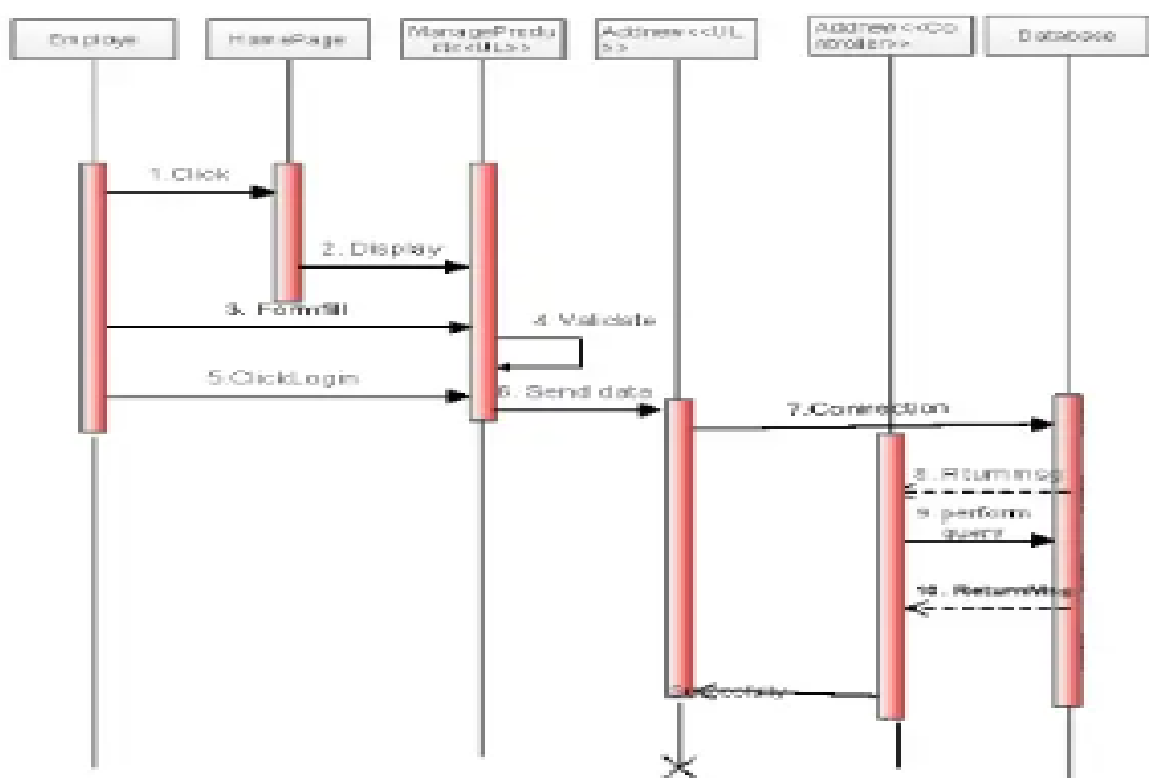


Figure 26 Sequence Diagram for Add Product

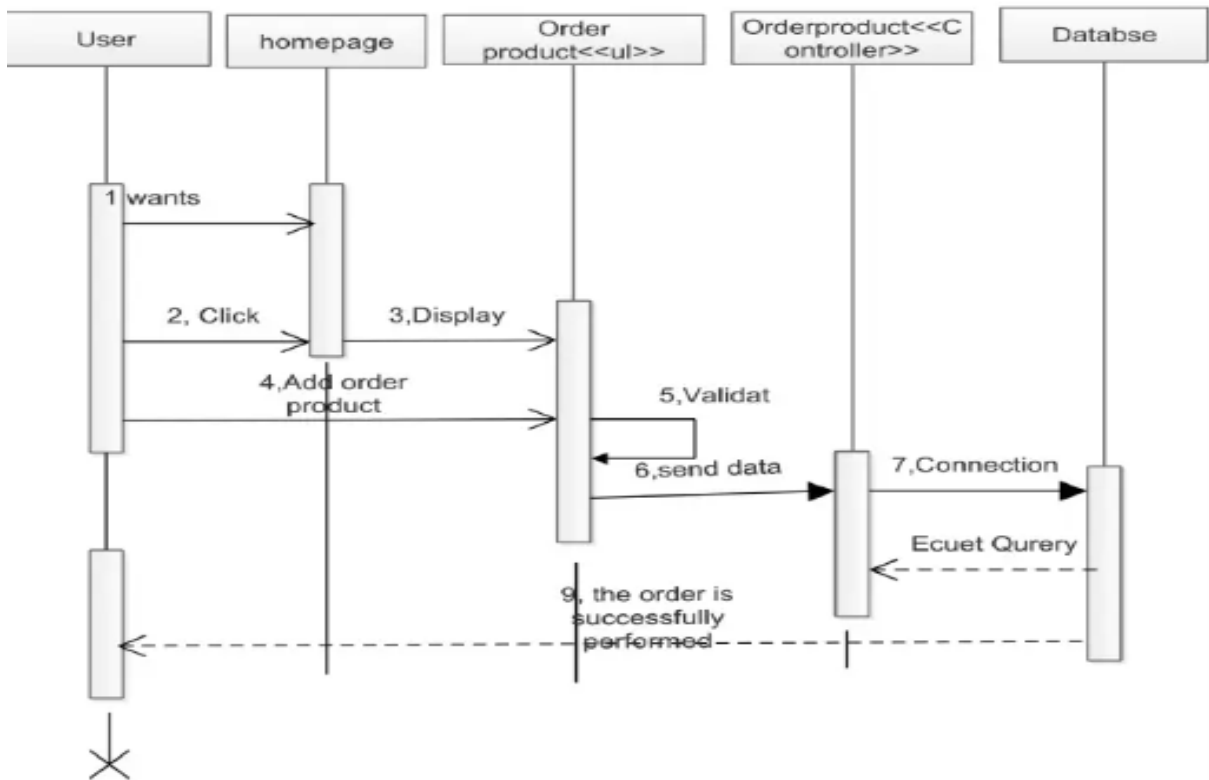


Figure 29 Sequence Diagram for Order Product

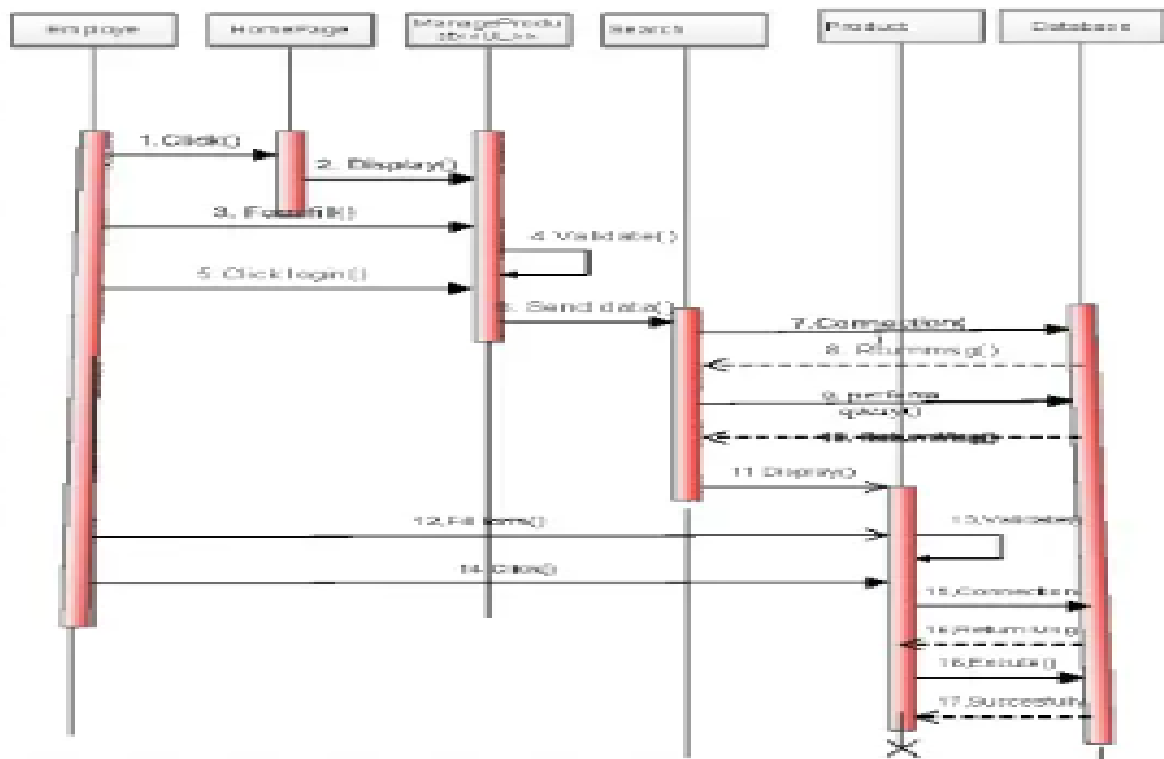


Figure 28 Sequence Diagram for Update Product

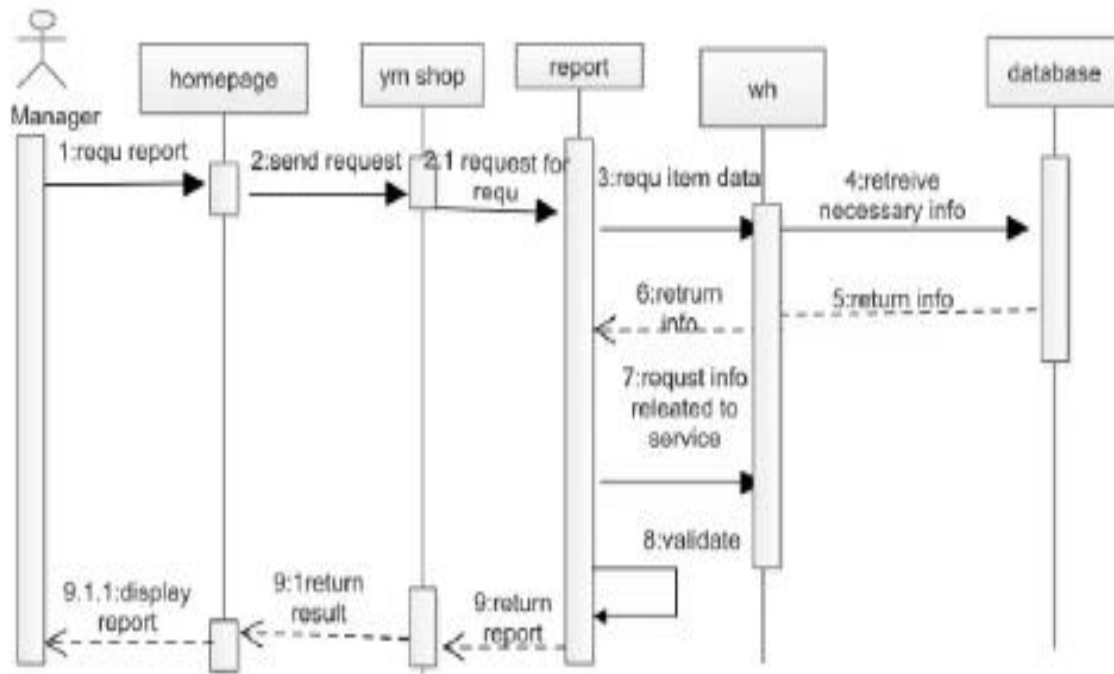


Figure 30 Sequence Diagram for Generate Report

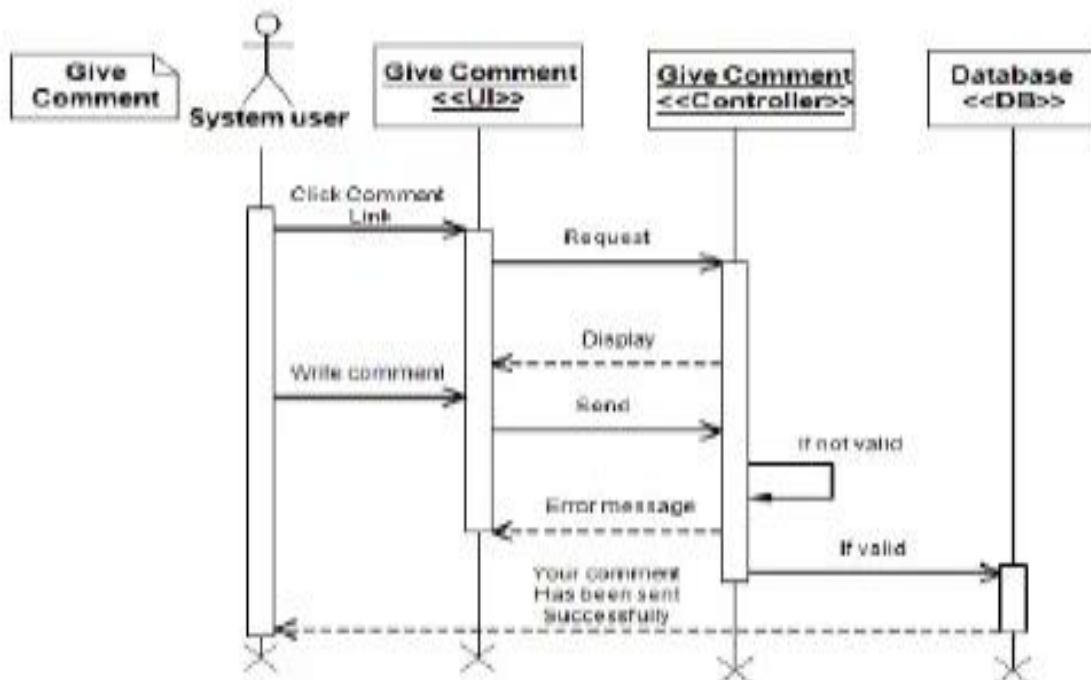


Figure 31 Sequence Diagram for Give Feedback

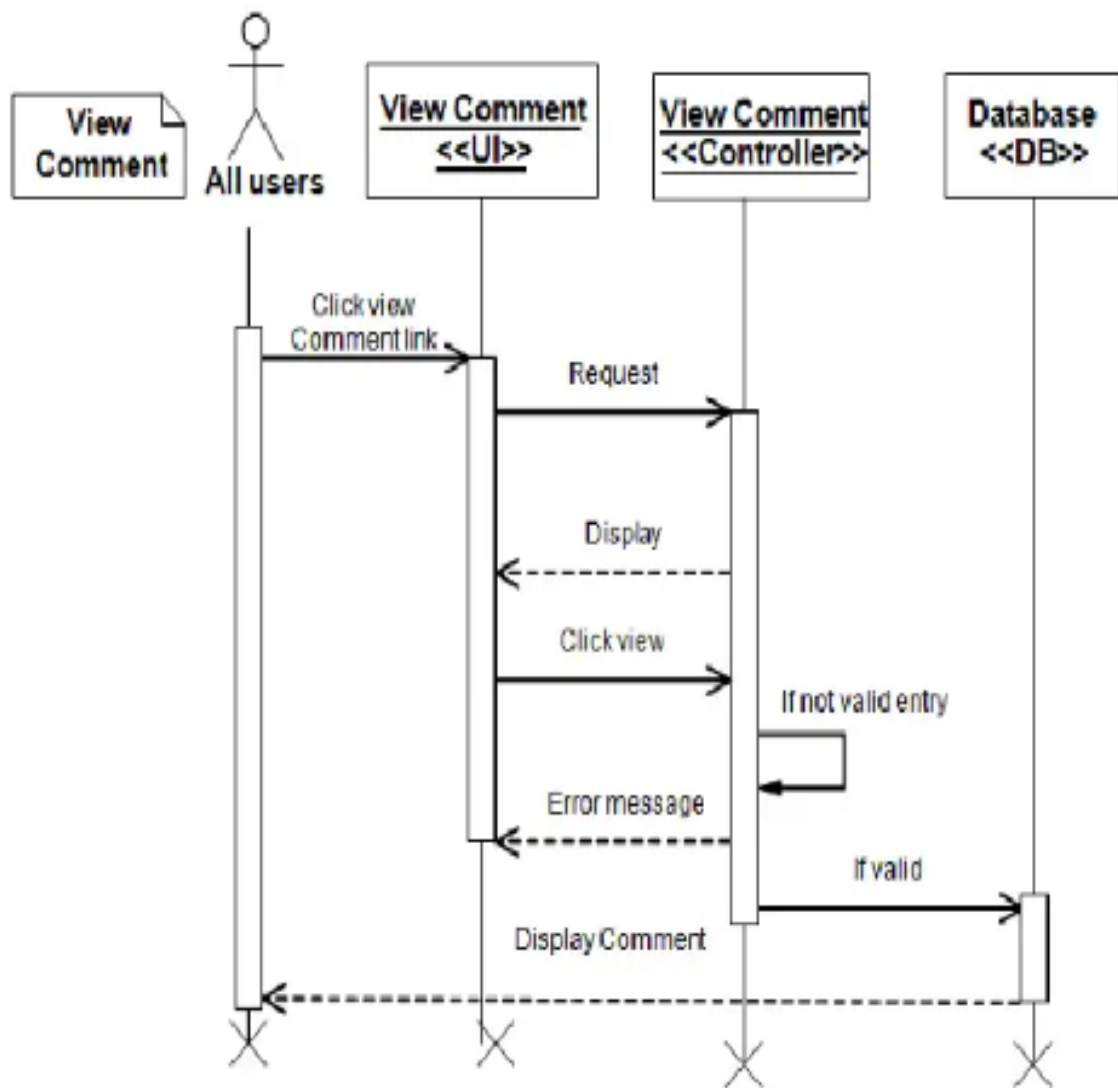


Figure 32 Sequence Diagram for View Feedback

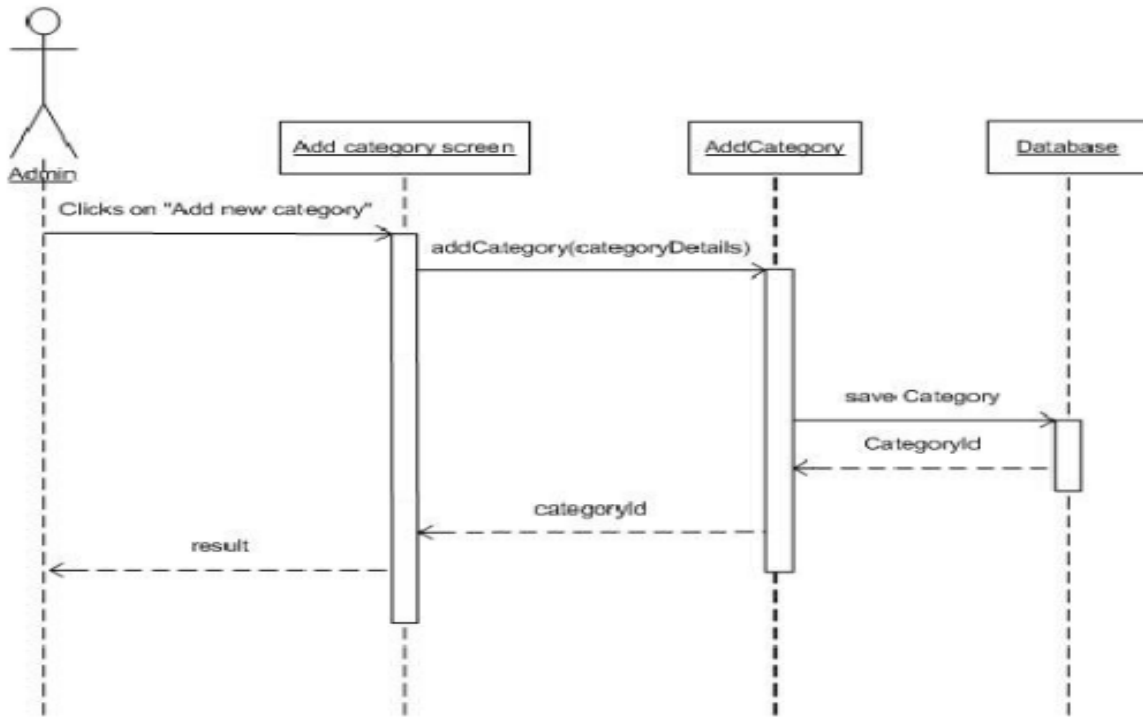


Figure 33 sequence diagram for add new category

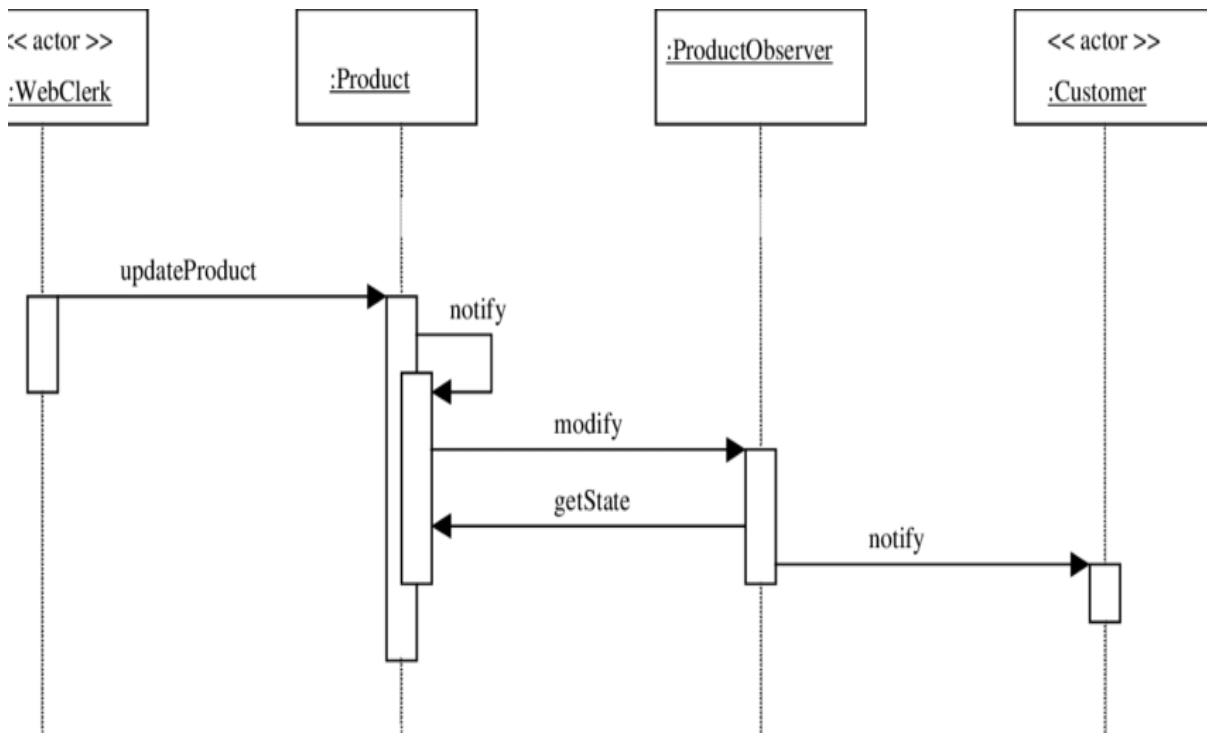


Figure 34 sequence diagram for update product

4.3.2. Activity Diagram

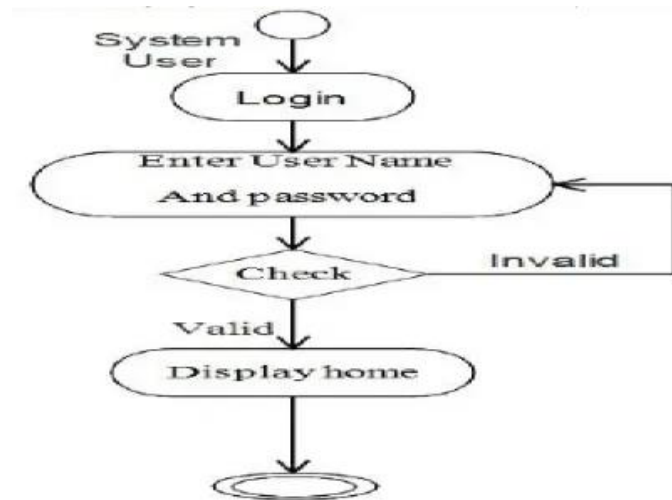


Figure 35 Activity Diagram for Login

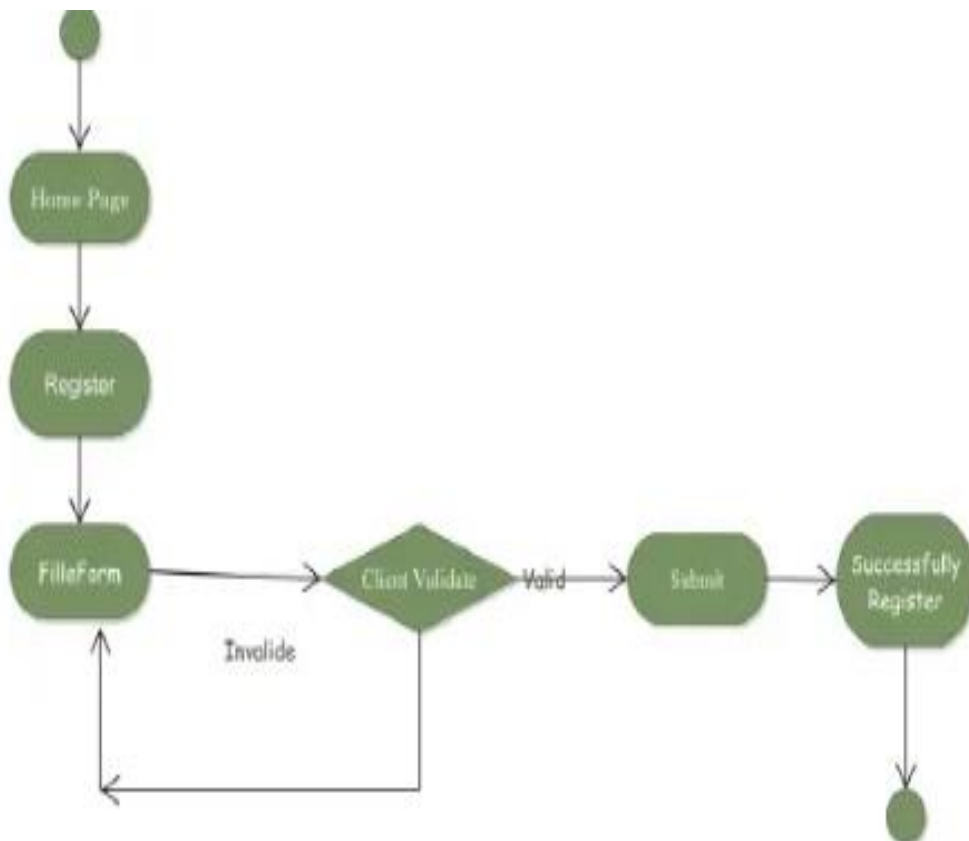


Figure 36 Activity Diagram for Registration

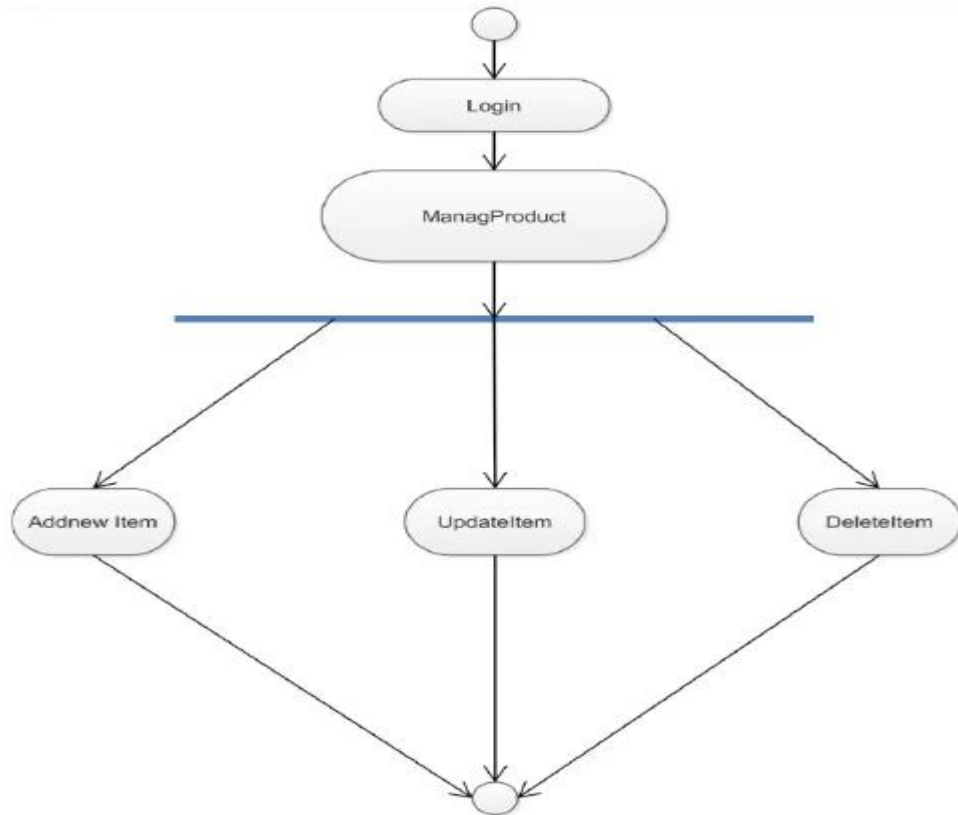


Figure 38 Activity Diagram For Manage Product

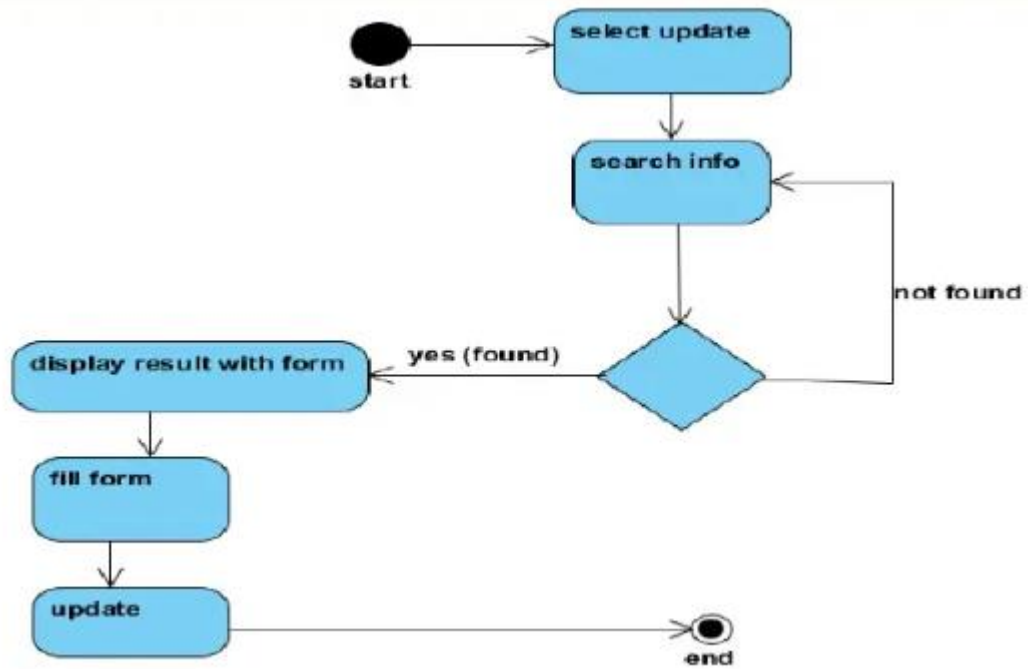


Figure 37Activity Diagram for Update Product

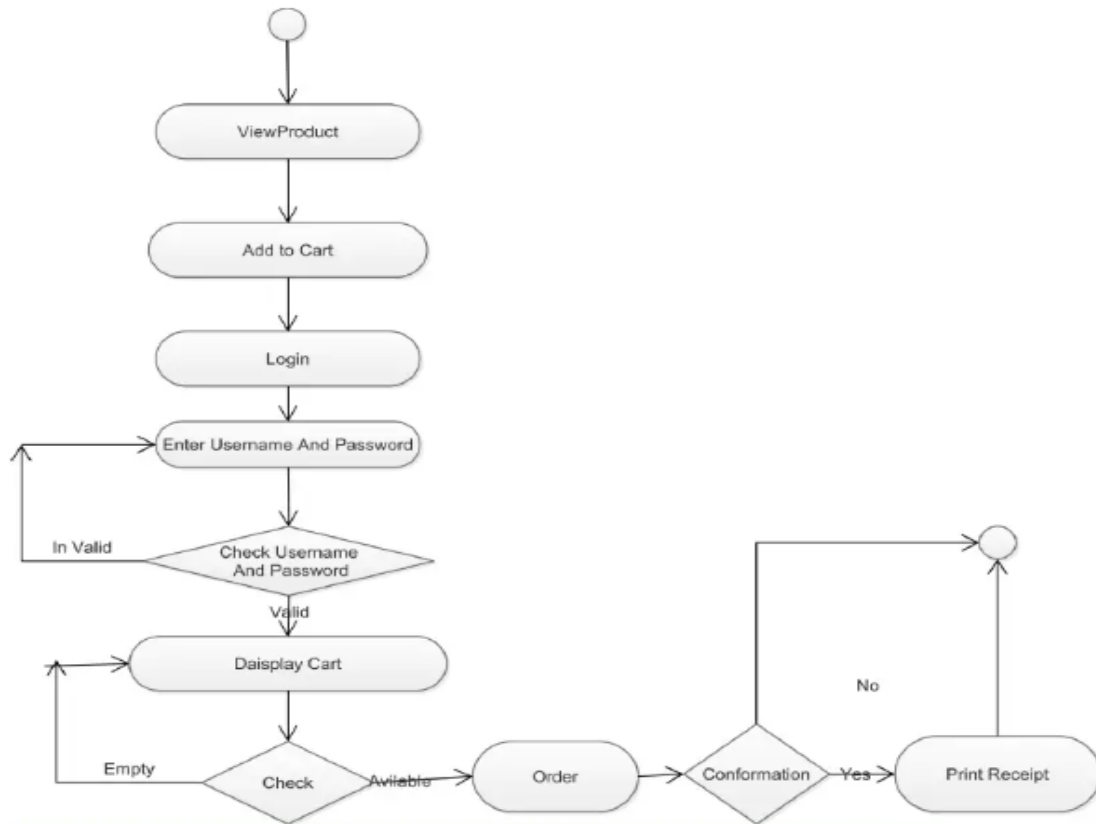


Figure 40 Activity Diagram for Order Product

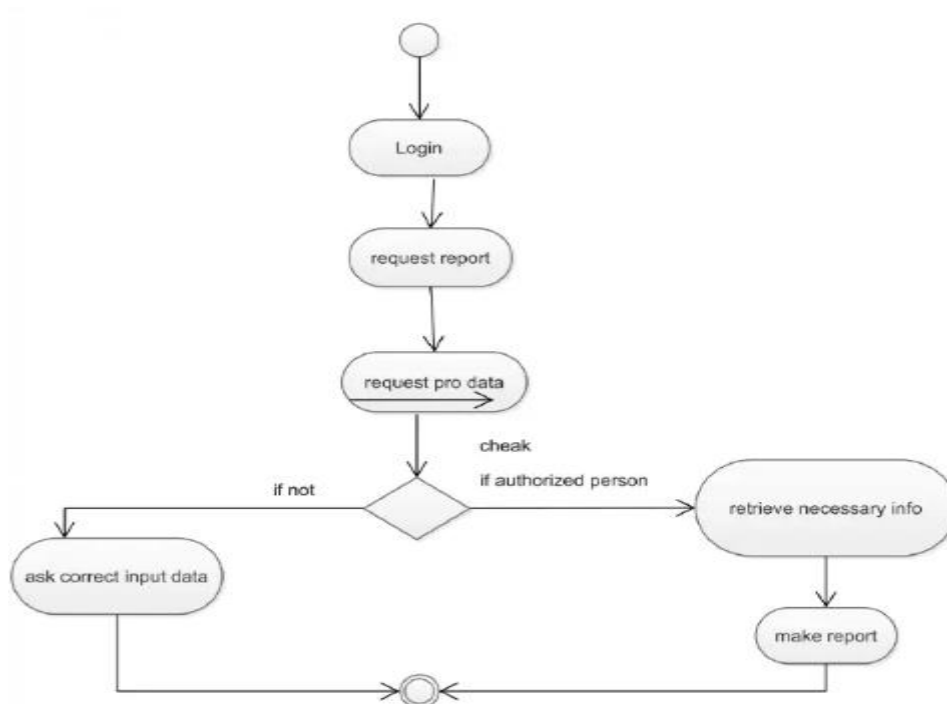


Figure 39 Activity Diagram for Generate Report

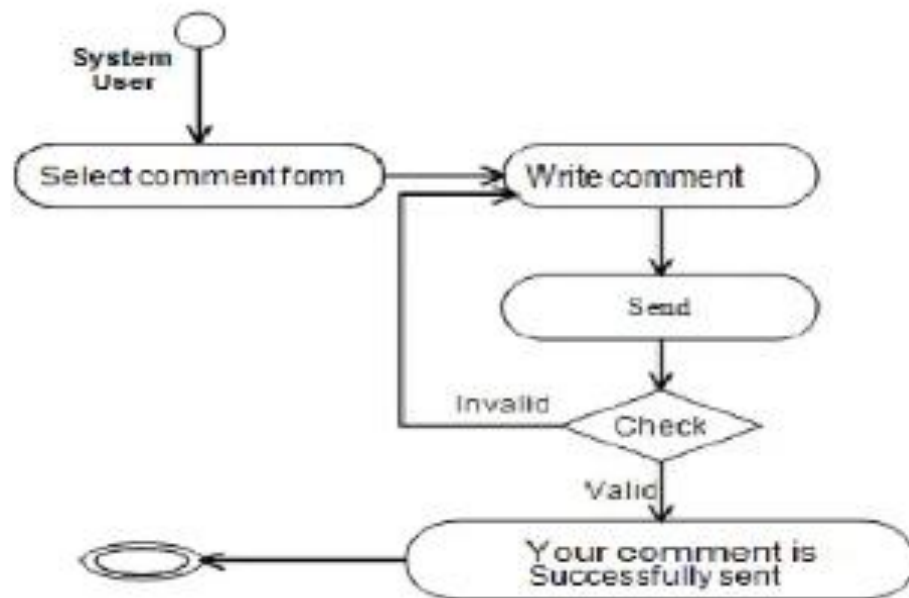


Figure 41 Activity Diagram for Give Feedback

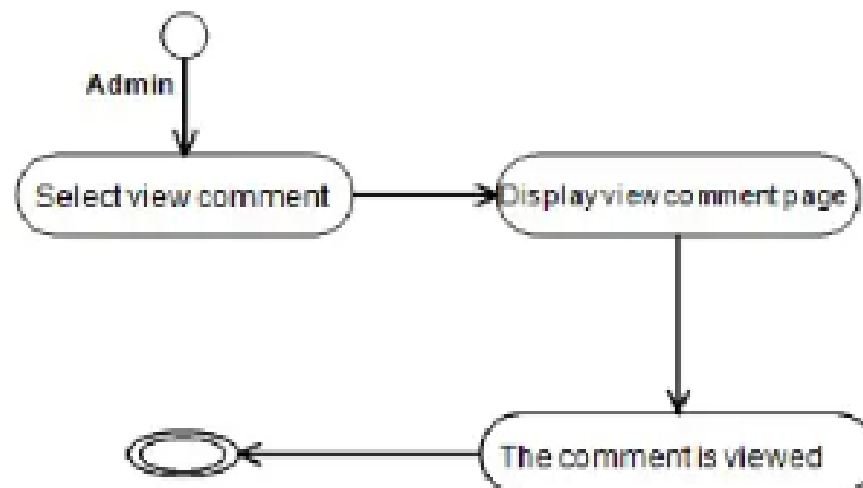


Figure 42 Activity Diagram for See Feedback

4.3.3. State Chart Diagram

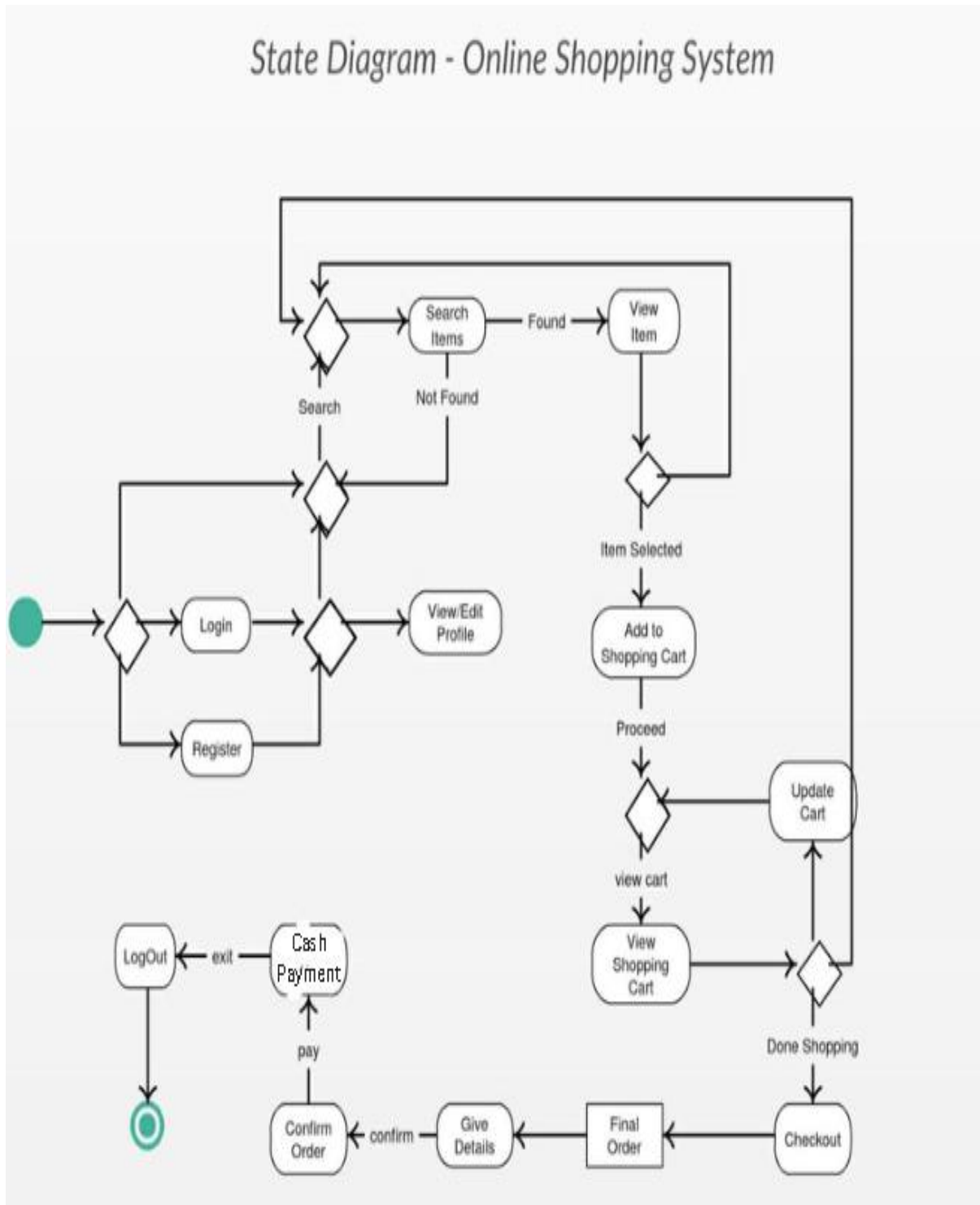


Figure 43 State Chart Diagram

4.4. Object Model

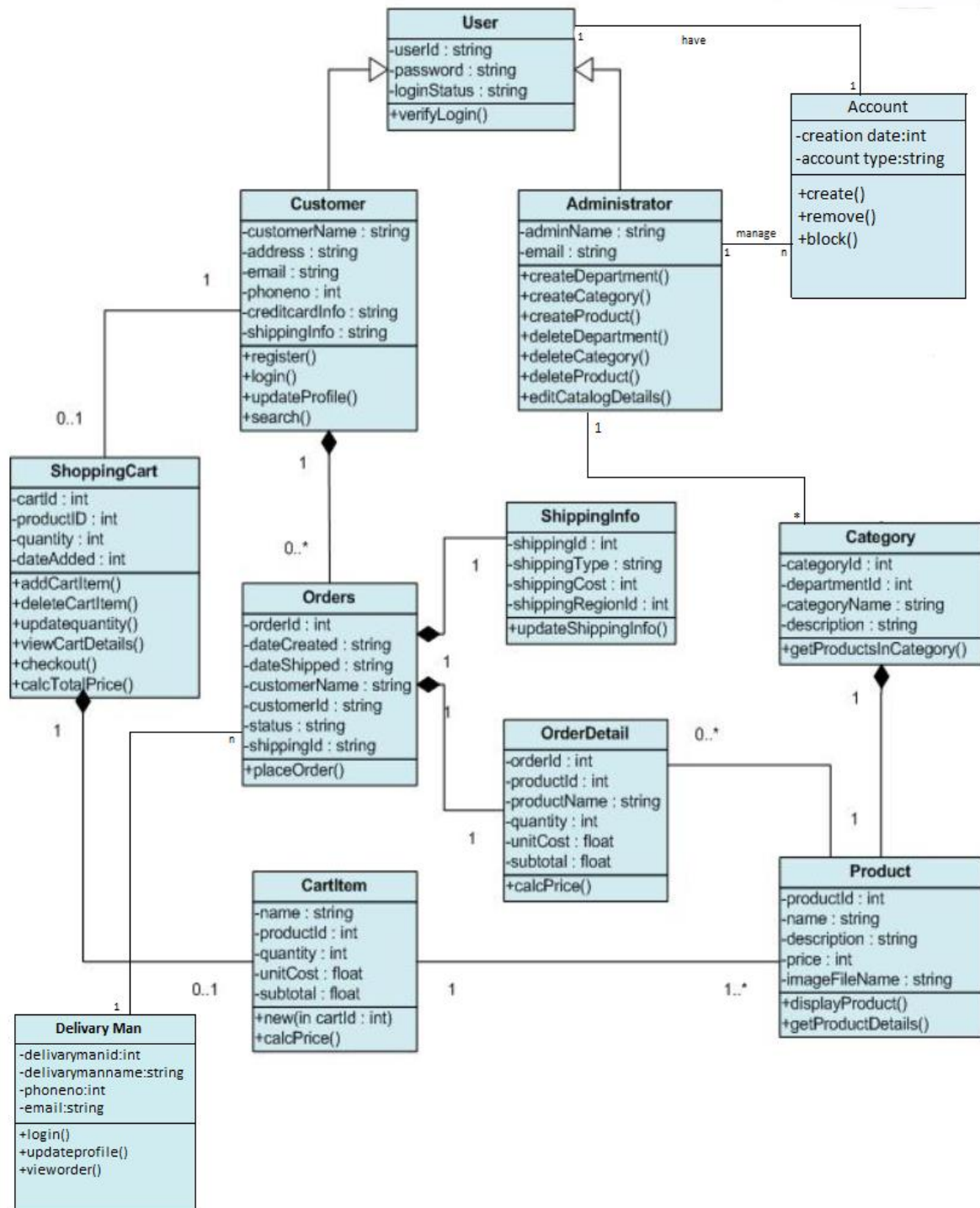


Figure 44 Class Diagram

4.5. User Interface Flow Diagram

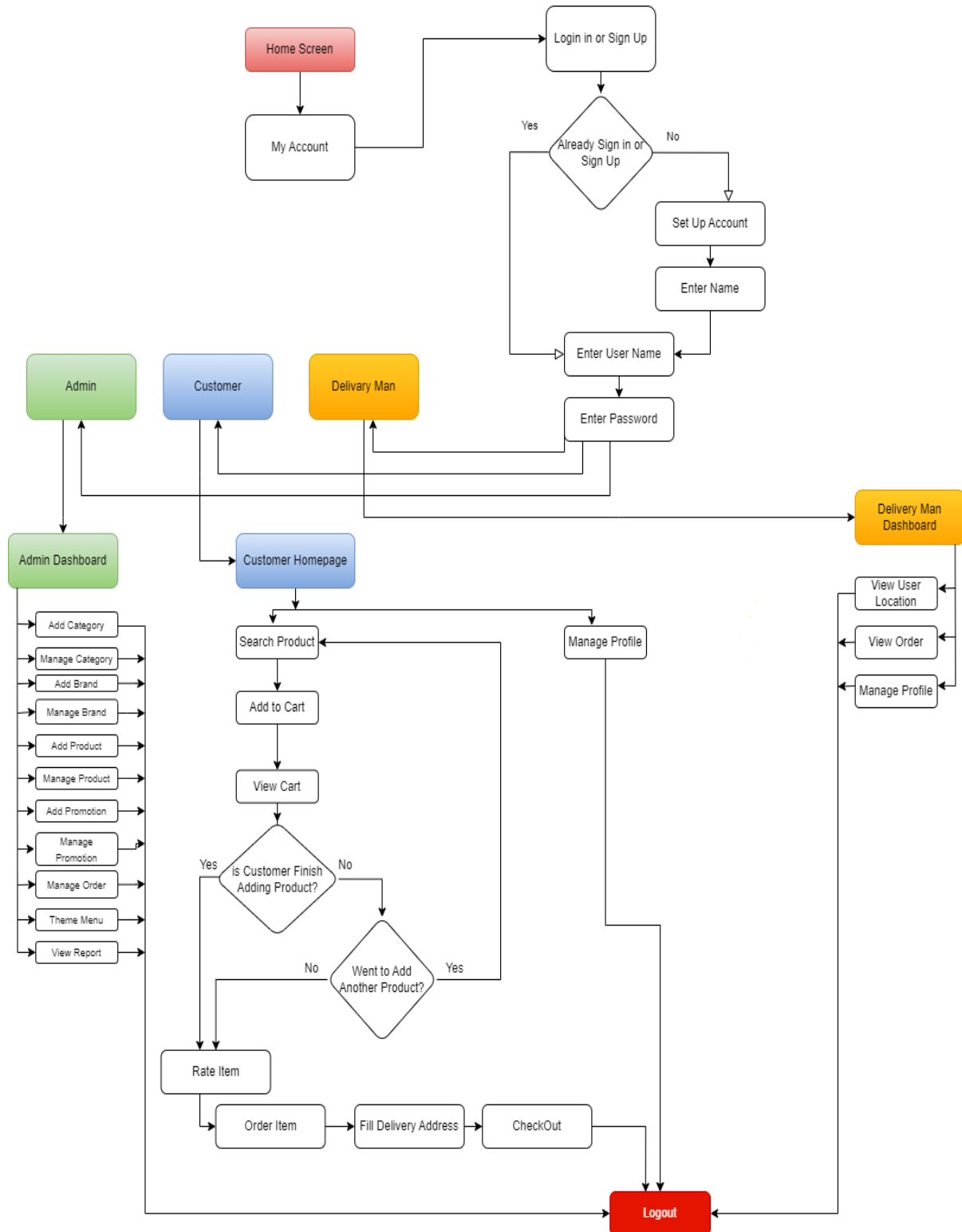


Figure 45 User Interface Flow Diagram

Chapter 5: System Design

5.1. ER Diagram

An Entity Relationship (ER) Diagram is a sort of flowchart that displays how “entities” such as people, things or ideas link to each other inside a system. ER Diagrams are most typically used to develop or troubleshoot relational databases in the disciplines of software engineering, corporate information systems, education and research. Also known as ERDs or ER Models, they employ a predetermined set of symbols such as rectangles, diamonds, ovals and connecting lines to illustrate the interconnectivity of entities, connections and their properties. They replicate grammatical structure, with items as nouns and relationships as verbs.

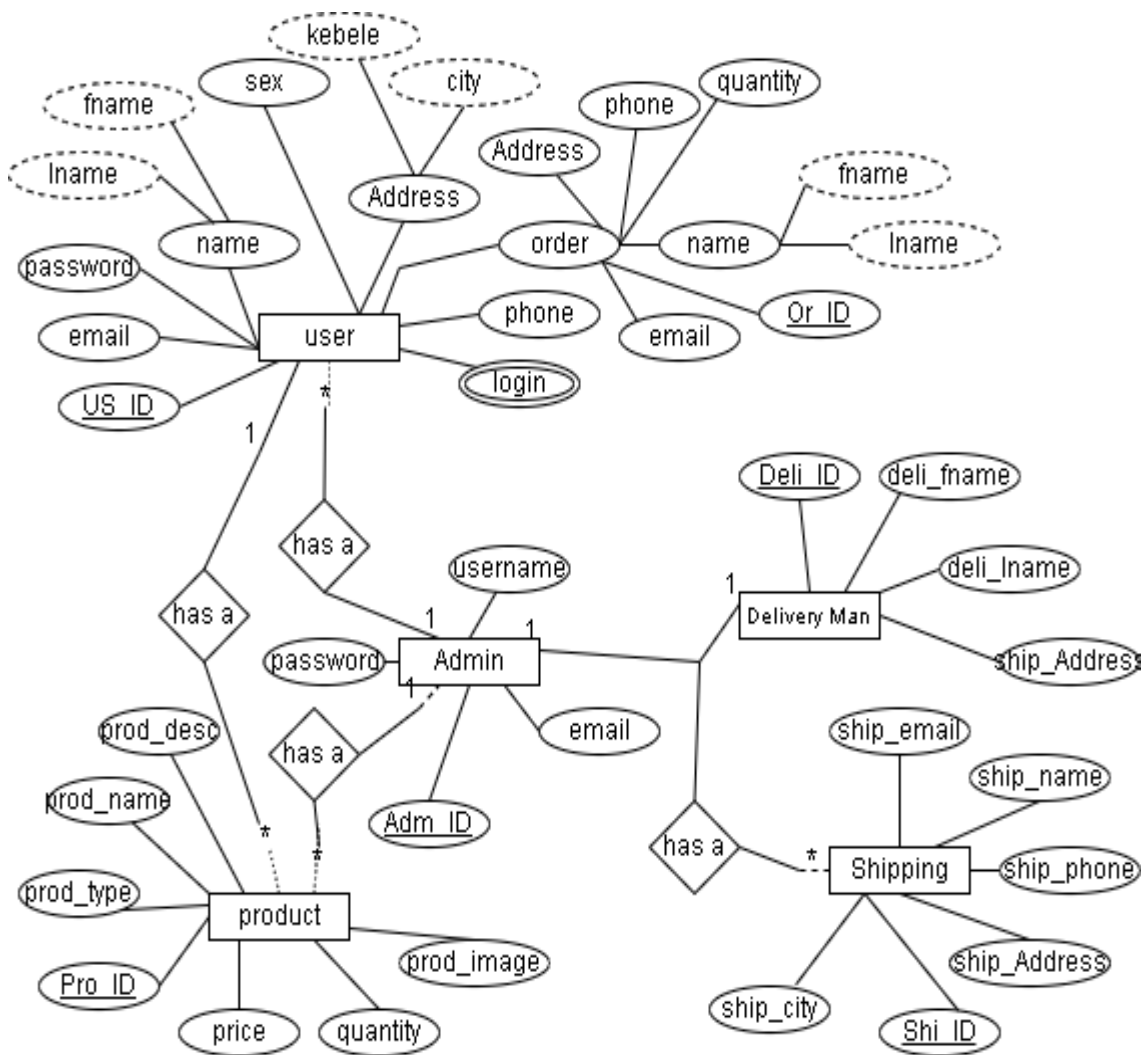


Figure 46 ER Diagram system

5.2. Database Normalization

What is Database Normalization?

Database normalization is a technique of structuring the columns (attributes) and tables (relations) of a relational database to decrease data redundancy and increase data integrity. Normalization includes reducing huge tables into smaller, more manageable tables and identifying connections between them. The purpose of normalization is to remove data redundancy, prevent undesirable update, insertion, and deletion behaviors, and guarantee data is kept in a fashion that complies with a set of norms and principles known as normalization rules.

There are various degrees of normalization, with the most generally used being the first three normal forms (1NF, 2NF, and 3NF) (1NF, 2NF, and 3NF). Each normal form has particular rules and criteria that must be followed in order to be called normalized. In general, normalization helps to guarantee that data is kept in a consistent and ordered way, which makes it simpler to manage, maintain, and query.

5.2.1. First Normal Form

If a relation has a composite or multi-valued attribute, it violates the first normal form, or the relation is in first normal form if it does not contain any composite or multi-valued property. A connection is in first normal form.

Table 13 User Table

US_ID	fname	lname	sex	password	city	phone	email	username	state	kebele
1	Ephrem	Debissa	M	12345	Bole	0911282207	eph@gmail.com, eph1@gmail.com	EphD	AA	04,06
2	Eyouel	Tariku	M	12345	Asko	0911001100	eyuT@gmail.com, Eyu@gmail.com	Eyu	Mekele	11,12
fullname		Address								
EphremDebissa		Kolfe								
EyouelTariku		Mexico								

Let's take this table from the ER - diagram this table is not in 1st normal form to accomplish that first let's look at the rules that the table has to meet.

Rules 1st Normal form

- Unique column name
- Same type values in one column
- There are only Single Valued Attributes.

This specific table meets the first and second conditions to be in 1st normal form we have unique column names with the same data types in a column we have also segregated the composite attributes into distinct attributes. When we look at the 3rd rule all the columns don't store a single value login columns are multivalued characteristics.

Table 14 User Table with Redundant Data

US_ID	fname	lname	sex	password	city	phone	email	username	state	kebele
1	Ephrem	Debissa	M	12345	Bole	0911282207	eph@gmail.com	EphD	AA	04
1	Ephrem	Debissa	M	12345	Bole	0911282207	eph1@gmail.com	EphD	AA	06
2	Eyouel	Tariku	M	12345	Asko	0911001100	eyuT@gmail.com	Eyu	Mekele	11
2	Eyouel	Tariku	M	12345	Asko	0911001100	Eyu@gmail.com	Eyu	Mekele	12
fullame			Address							
EphremDebissa			Kolfe							
EyouelTariku			Mexico							

1st NF does not decrease redundancy, but rather, it's that it eliminates repeated groupings. And to identify a row uniquely we have to utilize composite keys as a primary key. A composite key is the DBMS key containing two or more qualities that combined may uniquely identify a tuple in a database. Our main id can't identify uniquely thus composite keys are needed in order to differentiate them we may utilize US ID, login as composite key together

In the following table all values are single there is no multi value hence this table is in first normal form which is ready to be in 2nd NF.

5.2.2. Second Normal Form

Second Normal Form (2NF) is based on the concept of full functional dependency. Second Normal Form applies to relations with composite keys.

Rules

- To be in second normal form, a relation must be in first normal form.
- Relation must not contain any partial dependency.

First let's understand **Fully Functional Dependency**:

If X and Y are an attribute set of a relation, Y is fully functional dependent on X, if Y is functionally dependent on X but not on any proper subset of X.

Partial Dependency

It is the reverse of Fully Functional Dependency. A functional dependency $X \rightarrow Y$ is a partial dependency if Y is functionally dependent on X and Y can be determined by any proper subset of X.

When we come to our table the user table have partial dependency

Composite Key: {US_ID, login} this attributes are the primary keys when we look at login attribute it can be identified uniquely with just the US_ID (i.e. proper subset of the composite key).

So to solve this partial dependency we can split the table into 2 tables and use the US_ID as a foreign key in the login tables instead of using the composite key.

Table 15 User Table

US_ID	fname	lname	sex	password	city	phone	username	state
1	Ephrem	Debissa	M	123	Bole	0911282207	EphD	AA
2	Eyouel	Tariku	M	1234	Asko	0911001100	Eyu	Mekele
fullame		Address						
EphremDebissa		Kolfe						
EyouelTariku		Mexico						

Table 16 Login Table

US_ID	email
1	eph@gmail.com
1	eph1@gmail.com
2	eyuT@gmail.com
2	Eyu@gmail.com

Therefore the above tables are in First Normal Form and every non-primary-key attribute is fully functionally dependent on the primary key, then the relation is in Second Normal Form (2NF).

5.2.3. Third Normal Form

Second Normal Form (2NF) relations have less redundancy than those in 1NF, they may still suffer from update anomalies. If we update only one tuple and not the other, the database would be in an inconsistent state. This update anomaly is caused by a transitive dependency. We need to remove such dependencies by progressing to Third Normal Form (3NF).

Transitive dependency: Whenever some indirect relationship happens to cause functional dependency (FC), it is known as Transitive Dependency. Thus, if $A \rightarrow B$ and $B \rightarrow C$ are true, then $A \rightarrow C$ happens to be a transitive dependency.

Rules:

- To be in 3rd normal form 1st and 2nd NF must be fulfilled
- Relation must not contain any Transitive Functional Dependency

In our user table there is a partial dependency in the order section which is $US_ID \rightarrow ID$, or $ID \rightarrow \{fullname, Address\}$ so

$US_ID \rightarrow \{fullname, Address\}$ therefore to solve this we can create a new table order table

Table 17 User Table

US_ID	fname	lname	sex	password	city	phone	username	state
1	Ephrem	Debissa	M	123	Bole	0911282207	EphDG	AA
2	Eyouel	Tariku	M	1234	Asko	0911001100	EyuT	Mekele

Table 18 Login Table

Pid	Crime committed
1	eph@gmail.com
1	eph1@gmail.com
2	eyuT@gmail.com
2	Eyu@gmail.com

Table 19 Order Table

fullame	Address
EphremDebissa	Kolfe
EyouelTariku	Mexico

The other tables that don't have a partial or transitive property which are in 3rd NF are as follows

Table 20 Product Table

Pro_ID	Prod_type	Prod_code	Prod_name	price	Prod_image	Prod_desc	quantity
--------	-----------	-----------	-----------	-------	------------	-----------	----------

Table 21 Admin Table

Adm_ID	email	password	username
--------	-------	----------	----------

Table 22 Delivery Table

Deli_ID	deli_fname	Ship_Address	deli_lname
---------	------------	--------------	------------

Table 23 Category Table

Cat	Cat_name	Cat_description	Prod_name
-----	----------	-----------------	-----------

Table 24 Shipping Table

Shi_ID	ship_name	ship_email	ship_city	Ship_Address	Ship_phone
--------	-----------	------------	-----------	--------------	------------

5.3. Database Table Structure

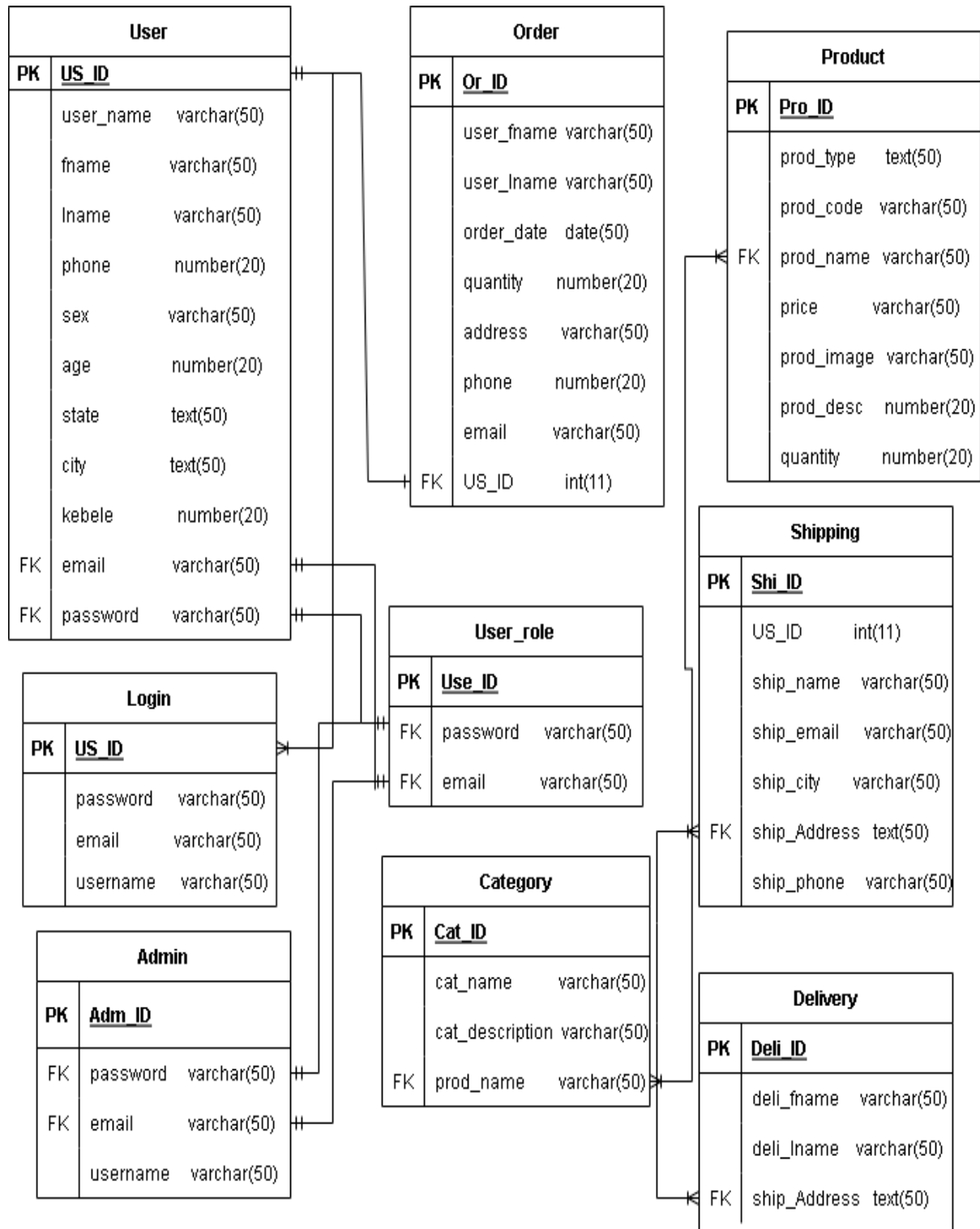


Figure 47 Database table structure of the system

5.4. Deployment Diagram

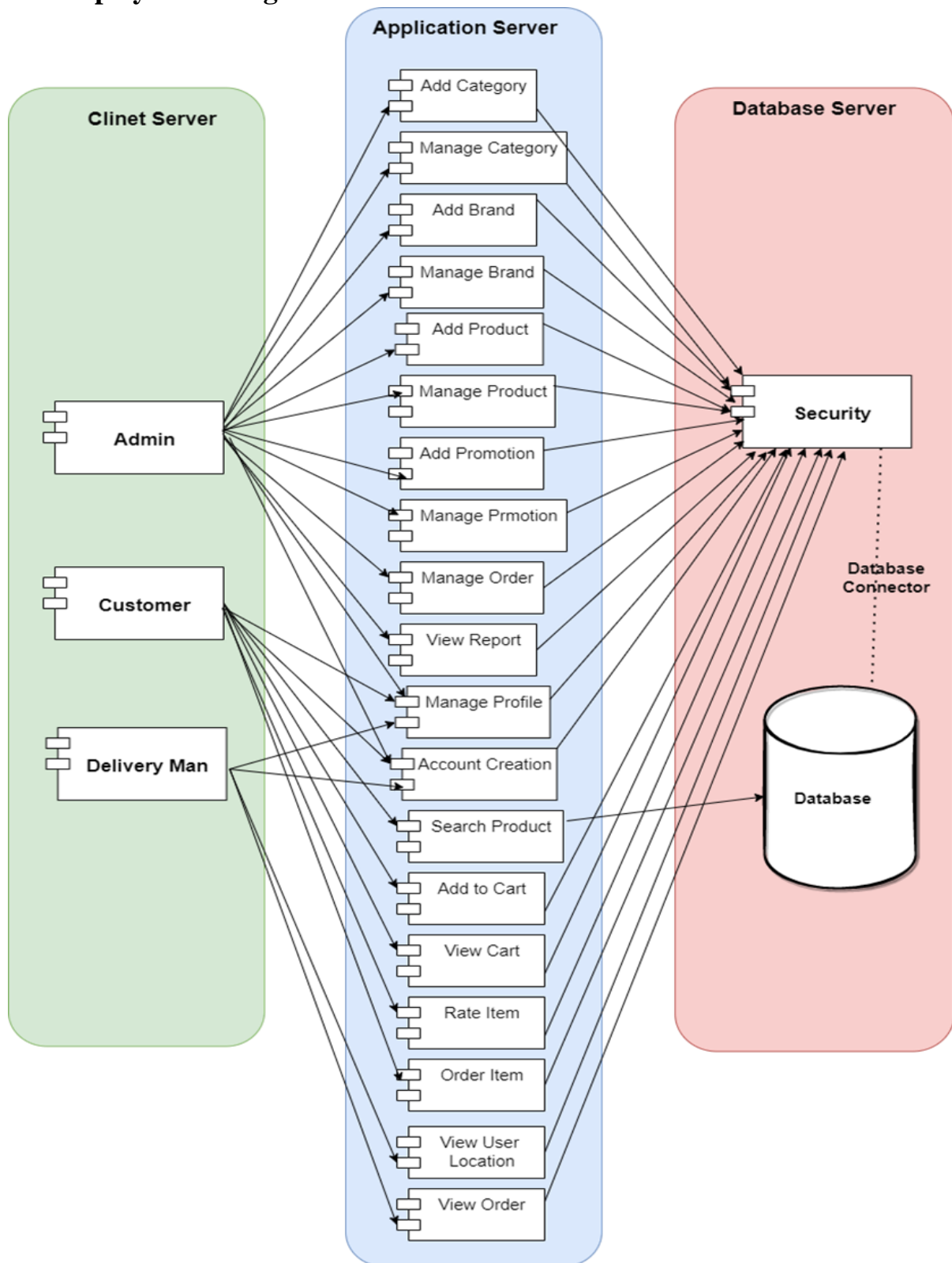


Figure 48 Deployment Diagram

5.5. Interface Design

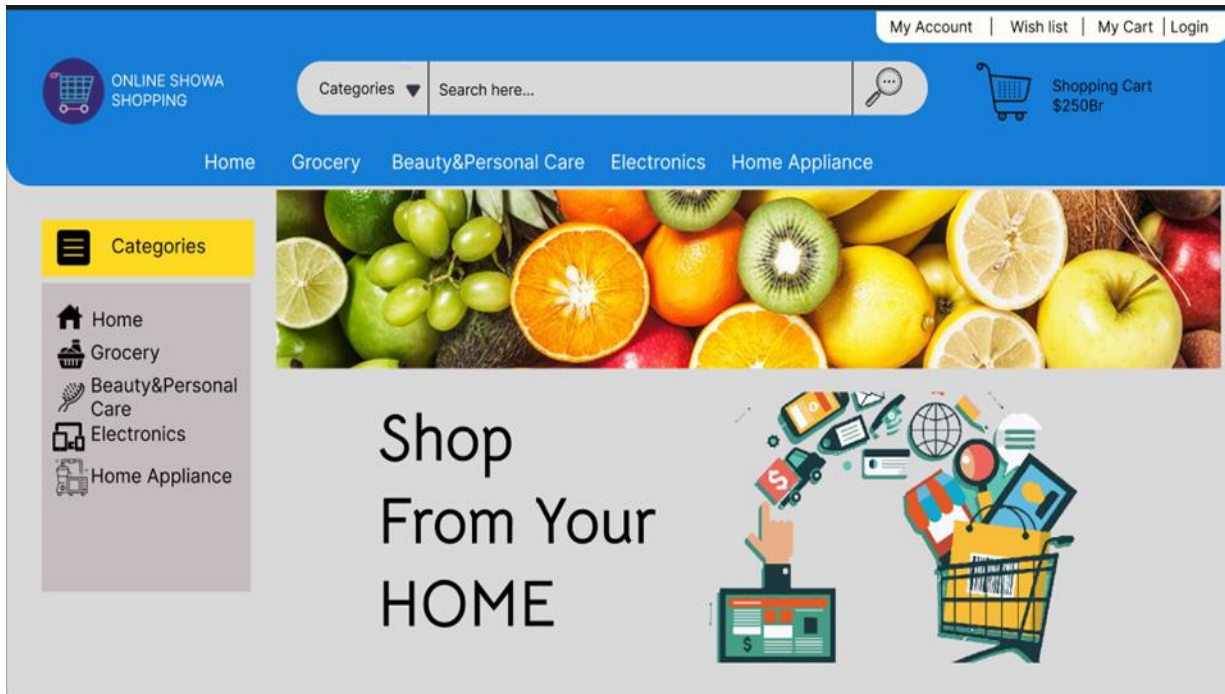


Figure 49 Home Page Design

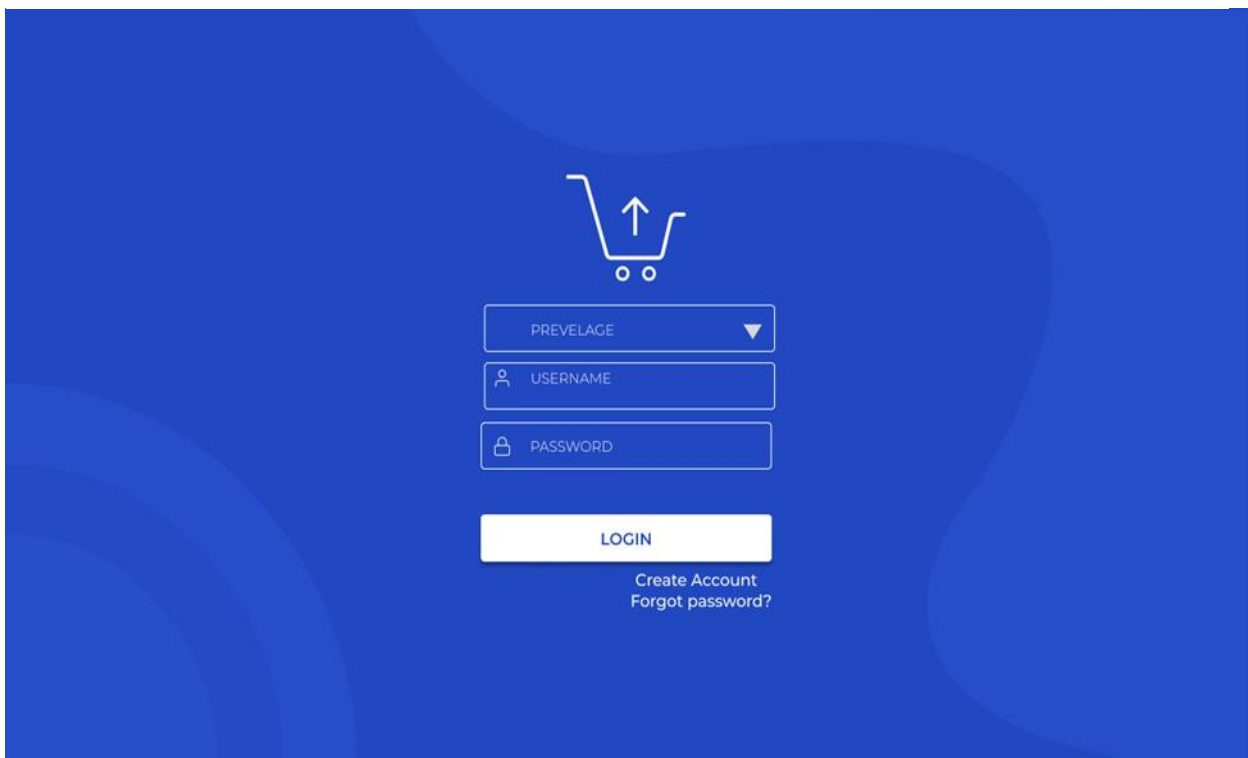


Figure 50 Login Page Design

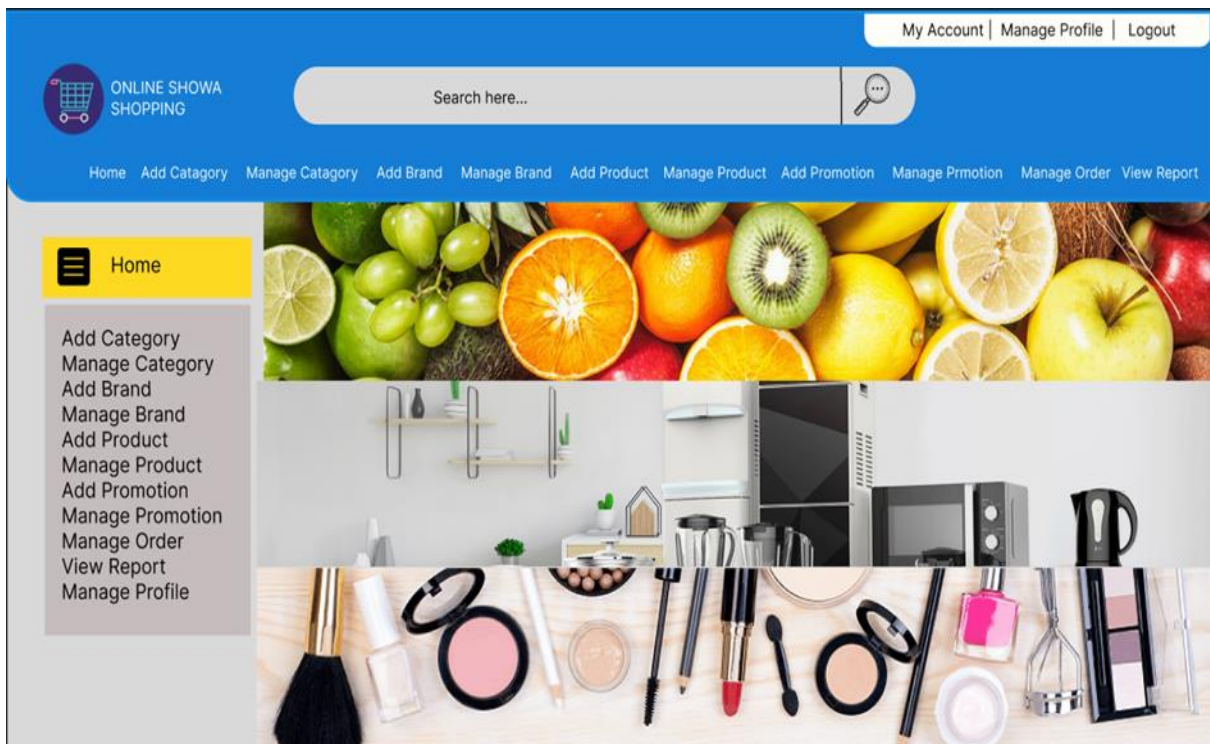


Figure 51 Admin Dashboard Design

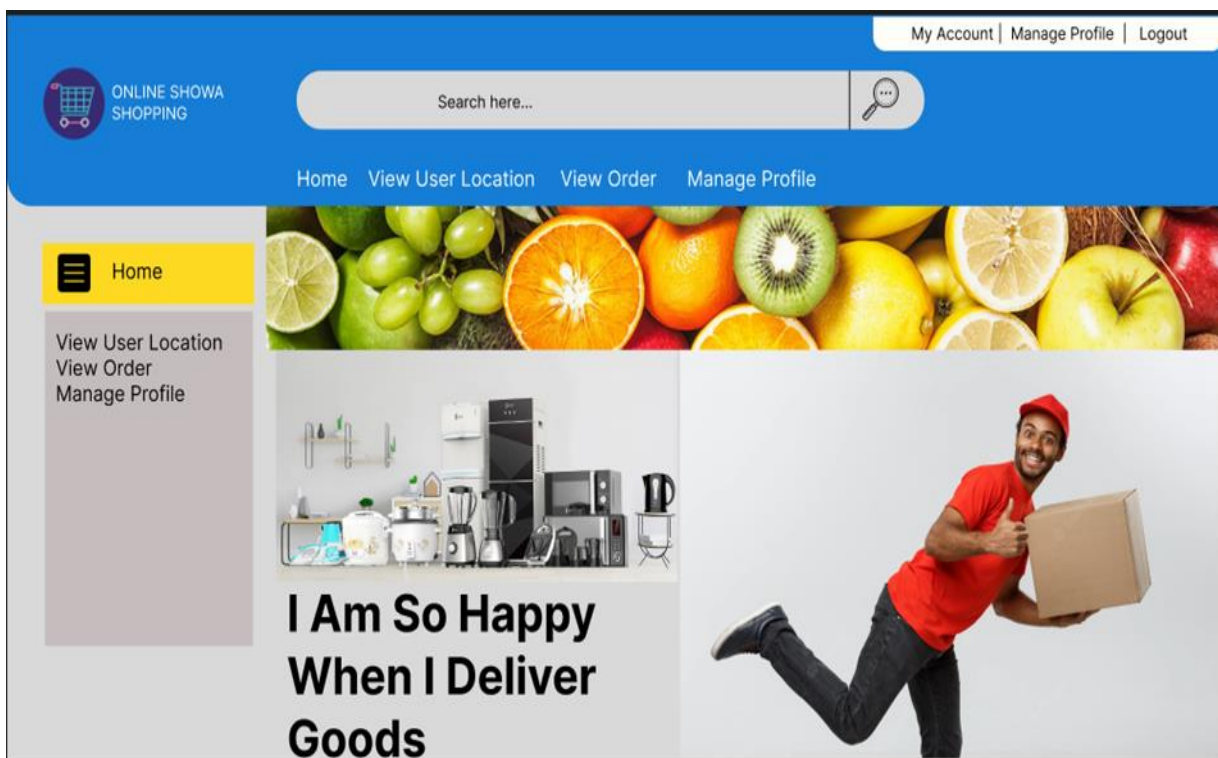


Figure 52 Delivery Man Dashboard Design

Chapter 6: Conclusion and Recommendation

6.1. Conclusion

In conclusion, the online shopping website project has been a tough but gratifying experience. Through the course of this project, we were able to establish an online platform that enables users to explore and buy items from Showa Supermarket with simplicity and comfort. The system we designed contains features such as the ability to examine and alter the contents of the shopping cart, as well as bulk additions and automated computation of total pricing.

We feel that our online shopping system has the potential to offer considerable advantages to Showa Supermarket and its consumers. By simplifying the shopping process and using the power of technology, we aspire to make the experience of purchasing and selling things more convenient, efficient, and safe. The system was designed utilizing organized, modular methodologies and a menu-oriented interface, which makes it simple to use and adaptable of future extension.

However, there are also potential challenges and drawbacks to implementing an online shopping system. One concern is the issue of security, as online transactions involve the exchange of personal information. To address this issue, robust security measures were implemented to protect the privacy and security of both customers and sellers. Another potential challenge is the need for sufficient internet infrastructure and access, which may not be available in all areas of Ethiopia. However, as internet adoption continues to grow in the country, it is believed that these challenges can be overcome.

Overall, the online shopping website project has been a tremendous learning experience for all members of the team. We feel that this initiative has the potential to deliver considerable advantages to Showa Supermarket and its consumers, and we look forward to seeing it implemented and utilized in the near future.

6.2. Recommendation

Here are some recommendations for future work:-

Implementing a mobile-responsive design: With the rising use of smartphones and tablets, it is crucial to guarantee that the online shopping website is adapted for mobile devices. A mobile-responsive design would enable visitors to quickly explore and make purchases on the website using their mobile devices, which would enhance the user experience and boost the odds of converting visits into sales.

Implementing a customized recommendation system: By evaluating the browsing and purchase history of users, a personalized recommendation system may deliver unique product suggestions to each client. This will not only enhance the shopping experience for consumers, but also raise the possibilities of them making subsequent purchases.

Implementing a safe online payment gateway: is crucial for any online shopping website, as it is the primary means by which customers can make payments for their purchases. Without a reliable and secure payment gateway, customers will be hesitant to make transactions on the website, ultimately leading to a decrease in sales and revenue.

Implementing a live chat support: Implementing a live chat support system would enable consumers to swiftly and easily get in contact with customer care, which would enhance the user experience and boost the odds of converting visits into purchases.

Implementing a loyalty program: Implementing a loyalty program would encourage consumers to make repeat purchases, which would boost the odds of turning visits into sales.

Implementing a social media integration: Integrating the website with prominent social media platforms such as Facebook and Instagram will boost the exposure of the website and increase the odds of consumers discovering and making purchases on the website.

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APPENDIX

Please answer the following question it helps our Project in **ONLINE SHOPPING Platform**

Instruction: Check ☒ in Check Box when you agree

1) How satisfied were you with your shopping experience in supermarket store?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

2) How likely are you to recommend supermarket store to your friends and family?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

3) How was your experience when you visited Supermarket store?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

4) How satisfied were you with the product information provided from supermarket shelf?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

5) Is supermarket conveniently located from your home?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

6) Is supermarket opening hours appropriate for your needs?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

7) How would you describe your experience in supermarket store?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

8) Do you comfortable manually shop at supermarket store?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

9) Is fair time spending when you manually shop in supermarket?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

10) Do you like shopping on online?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

Please answer the following question it helps our Project in ONLINE

SHOPPING Platform

Instruction: Please tell us your feeling free and write in the blank space.

1) What are the main reasons you buy manually in supermarket?

2) What did you like best about your experience when shopping in supermarket?

3) What qualities do you look for in a supermarket shopping?

4) What should improve in manual supermarket shopping system?

5) What are your top priorities when it comes to online shopping?

6) How long did it take you to complete your shopping in supermarket?

7) What challenges are you facing at shopping?

Please answer the following question it helps our Project in
ONLINE SHOPPING Platform

Instruction: Check ☒ in Check Box when you agree

1) How you are satisfied to manage supermarket store?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

2) How you satisfied communication with your customer?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

3) How your experience when you visited Supermarket item?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

4) How you satisfied when you add category in supermarket?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

5) How you satisfied when you manage Brand?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

6) How you satisfied when you add Promotion in supermarket?

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Ok	<input type="checkbox"/>	Dissatisfied	<input type="checkbox"/>
----------------	--------------------------	-----------	--------------------------	----	--------------------------	--------------	--------------------------

እባክዎ የሚከተለውን ጥያቄ ይመልሱ የእኛን ፕሮጀክት Nonline ላይ የግዢ

መድረክ ለመስራት ይረዳናል

መመሪያ: ሲስማሙ ✓ በሰጥን ውስጥ ምልክት ያረጋግጡ

1) በሱፐርማርኬት መደብር ውስጥ ባለው የግዢ ልምድዎ ምን ያህል ረከተዋል?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
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2) ከሱፐርማርኬት መደብር መግዛት ለጓደኞቻችን እና ለቤተሰብዎ የመምከር እድልዎ ምን ያህል ነው?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
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3) የሱፐርማርኬት ሱቅን ሲጎበኙ ልምድዎ እንዴት ነበር?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
------------	--	--------	--	----	--	--------	--

4) ከሱፐርማርኬት መደርደሪያ በቀረበው የምርት መረጃ ምን ያህል ረከተዋል?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
------------	--	--------	--	----	--	--------	--

5) የሚገዙበት ሱፐርማርኬት ምቹ በሆነ ሁኔታ ከቤትዎ ርቀት ላይ ይገኛል?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
------------	--	--------	--	----	--	--------	--

6) የሱፐርማርኬት የመክፈቻ ሰዓቶች ለእርስዎ ፍላጎት ተስማሚ ናቸው?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
------------	--	--------	--	----	--	--------	--

7) የሱፐርማርኬት የመክፈቻ ሰዓቶች ከእርስዎ ፍላጎት ጋር ተስማሚ ናቸው?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
------------	--	--------	--	----	--	--------	--

8) በሱፐርማርኬት ሱቅ ውስጥ በአካል ተገኝቶ መግዛት ይመችዎታል?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
------------	--	--------	--	----	--	--------	--

9) በሱፐርማርኬት ውስጥ እቃ ሲገዙ የሚያሳልፉት ጊዜ ደስተኛ ኖት?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
------------	--	--------	--	----	--	--------	--

10) ከኢንተርኔት ላይ መግዛት ይወዳሉ?

በጣም እስማማለው		እስማማለው		አዎ		አልስማማም	
------------	--	--------	--	----	--	--------	--

እባክዎ የሚከተለውን ጥያቄ ይመልሱ የእኛን ፕሮጀክት በኢንተርኔት ላይ የግዢ መድረክ
ለመስራት ይረዳናል

መመሪያ፡ እባክትን በነጻነት ስሜትዎን ይንገሩን እና ባዶ ቦታ ላይ ይፃፉልን።

1) በሱፐርማርኬት ውስጥ በእጅ የሚገዙ ዋና ዋና ምክንያቶች ምንድን ናቸው?

2) በሱፐርማርኬት ውስጥ እቃ ሲገዙ ስለነበረዎት ልምድ በጣም የወደዱት ምንድነው?

3) በሱፐርማርኬት ግብይት ውስጥ ምን አይነት ባህሪያትን ይፈልጋሉ?

4) በአካል ሱፐርማርኬት ውስጥ የግብይት ሥርዓት ምን መሻሻል አለበት?

5) በኢንተርኔት ላይ ግብይትን በተመለከተ ቅድሚያ የሚሰጧቸው ነገሮች ምንድን ናቸው?

6) በአካል በሱፐርማርኬት ግዢዎን ለማጠናቀቅ ምን ያህል ጊዜ ፈጅቶብሃል?

7) በሱፐርማርኬት ገበያ ላይ ምን ችግሮች እያጋጠሙዎት ነው?
