LTOnline Store

A Major Project Report

Submitted in partial fulfillment of requirements of the degree

Of

Master of Computer Applications

By

Khushboo Sendre

EN19CA501044

Under the guidance of

Prof. Ritesh Joshi

Department of Computer Applications

Faculty of Engineering

MEDI-CAPS UNIVERSITY, INDORE- 453331

Jan-June, 2021

LTOnline Store

A Major Project Report

Submitted in partial fulfillment of requirement of the degree

Of

Master of Computer Applications

By

Khushboo Sendre

EN19CA501044

Under the guidance of

Prof. Ritesh Joshi

Department of Computer Applications
Faculty of Engineering

MEDI-CAPS UNIVERSITY, INDORE- 453331

Jan-Jun, 2021

Report Approval

The project work **"LTOnline Store"** is hereby approved as a creditable study of an engineering/computer application subject carried out and presented in a manner satisfactory to warrant its acceptance as prerequisite for the Degree for which it has been submitted.

It is to be understood that by this approval the undersigned do not endorse or approval any statement made, opinion expressed or conclusion drawn there in; but approve the "Project Report" only for the purpose for which it has been submitted.

Examiner(s)

Name(s)	Signature(s)
1. …….	…….
2. …….	…….
3. …….	…….
4. …….	…….
5. …….	…….

Date: …….

Declaration

I hereby declare that the project entitled **"LTOnline Store"** submitted in partial fulfillment for the award of the degree of Master of Computer Applications in "Khushboo Sendre" completed under the supervision of **Prof. Ritesh Joshi**, Assistant Professor, Department of Computer Application, Faculty of Engineering, Medi-Caps University Indore is an authentic work.

Further, I declare that the content of this Project work, in full or in parts, have neither been taken from any other source nor have been submitted to any other Institute or University for the award of any degree or diploma.

Signature: _____

Khushboo Sendre

Date: _____

Certificate

I, **Prof. Ritesh Joshi** certify that the project entitled **"LTOnline Store** "submitted in partial fulfillment for the award of the degree of Master of Computer Applications by **Khushboo Sendre** is the record carried out by her under my guidance.

_____	_____
Prof. Ritesh Joshi	<Name of External Guide (If any)>
Department of Computer Application	<Name of the Department>
Medi-Caps University, Indore	Name of the Organization

_____

Prof. Anil Patidar

Head of the Department

Department of Computer Application

Medi-Caps University, Indore

Acknowledgement

The success and final outcome of this project required a lot of guidance and assistance from many people and I am extremely fortunate to have got this all along the completion of project work. Whatever I have done is only due to such guidance and assistance and I would not forget to thank them.

I owe my profound gratitude to our project guide Prof. Ritesh Joshi, who took keen interest in the project work and guided, all along, till the completion of project work by providing all the necessary information, constant encouragement, sincere criticism and sympathetic attitude. The completion of this dissertation would not have been possible without such guidance and support.

I would like to express my deepest gratitude to our Honorable Chancellor, **Shri R. C. Mittal**, who has provided me with every facility to successfully carry out this project, and my profound indebtedness to **Prof. (Dr.) Sunil K. Somani**, Vice-Chancellor, Medi-Caps University, whose unfailing support and enthusiasm has always boosted up my morale. I also thank **Prof. (Dr.) D. K. Panda**, Dean, Faculty of Engineering, Medi-Caps University, for giving me a chance to work on this project. I would also like to thank my Head of the Department, **Prof. Anil Patidar** for her continuous encouragement for betterment of the project.

I would also like to thank to my team at **Kangaroo Software Private Limited** who extended their kind support and help towards the completion of this project. It is their help and support, due to which I am able to complete the design and technical report. Without their support this report would not have been possible.

I am thankful to and fortunate enough to get constant encouragement and guidance from all teaching staffs of Department of Computer Application which helped us in successfully completing our project work.

I would also like to extend our sincere regards to all the non-teaching staff of Department of Computer Application for their timely support.

Khushboo Sendre
EN19CA501044
MCA VI Semester
Department of Computer Applications
Faculty of Engineering
Medi-Caps University, Indore

Abstract

The life style of the current generation is different. People feel time consuming and uncomfortable for going into crowded markets. Thus, E-Shopping is a boon as it saves a lot of time. Online shopping or E-Shopping is a process whereby consumers directly buy goods, services etc. from a seller without an intermediary service over the Internet. The buyer can visit web stores from the comfort of their house and purchase goods/product by sitting in front of the computer. The Online store provides an easy and convenient way to search for products where the buyer can search for a product interactively and the store would refine the products available based on the buyer's input. Online stores are usually available 24 hours a day and many consumers have internet access both at work and at home. So it is very convenient for them to shop Online. One of the most enticing factors about online shopping, particularly during festival season is, it alleviates the need to wait in queue or search from a shop for a particular item. A lot of varieties of goods are available online and can be shopped easily.

Keywords:

Web Application, Admin, Customer Details, Order Details, Product Details.

Table of Contents

List of Figures

List of Tables

Abbreviations

Notations and Symbols/Nomenclatures

Chapter 1: Introduction

1. Introduction

1.1 Identity of Organization: Kangaroo Software Private Limited

Kangaroo Software Private Limited is leading Software Company in Indore with office at M6, First Floor, Kanchan Sagar, Near Industry House, Palasia, Indore, Madhya Pradesh, India. Pin code - 452001

Company Profile

Kangaroo Software is Web, Mobile, Data Analytics, ML, AI Based Application development, School ERP, College ERP, Pharmacy ERP, Hospital ERP, POS, CRM based products software provider company.

Kangaroo Software Private Limited is a Private incorporated on 01 January 2016. It is classified as Non- Govt Company and is registered at Registrar of Companies, Gwalior. Its authorized share capital is Rs. 1,000,000 and its paid up capital is Rs. 100,000. It is involved in other computer related activities [for example maintenance of websites of other firms/ creation of multimedia presentations for other firms etc.]

Kangaroo Software Private Limited's Annual General Meeting (AGM) was last held on 30 September 2019 and as per records from Ministry of Corporate Affairs (MCA), its balance sheet was last filed on 31 March 2019. Directors of Kangaroo Software Private Limited are Shivanand Gautam, Karuna Tiwari.

Kangaroo Software Private Limited's Corporate Identification Number is (CIN) U72900MP2016PTC035163 and its registration number is 35163. Its Email address is sethisudhir133@gmail.com and its registered address is 133 Kanchan Bagh Indore MP 452001.

1.2 Description of project

E-commerce solution is one place where we can get all required goods/products online. The proposed system helps in building a website to buy, sell products or goods online using internet connection. The Admin module can

- Add, edit and view the category and sub-category of the product.
- Add product to the list and can edit the details of the product and can also see and review the products.
- Can see the customer details and order history of the customer.

Chapter 2: BACKGROUND

2. Background

2.1 Description of the existing system

In day to day life, we will need to buy lots of goods or products from a shop. It may be food items, electronic items, house hold items etc. Now a day, it is really hard to get some time to go out and get them by ourselves due to busy life style or lots of works. In order to solve this, B2C E-Commerce websites have been started. Using these websites, we can buy goods or products online just by visiting the website and ordering the item online by making payments online.

This existing system of buying goods has several disadvantages. It requires lots of time to travel to the particular shop to buy the goods. Since everyone is leading busy life now a day, time means a lot to everyone. Also there are expenses for travelling from house to shop. More over the shop from where we would like to buy something may not be open 24*7*365. Hence we have to adjust our time with the shopkeeper's time or vendor's time.

2.2 Circumstances leading to the current new system

The traditional system of shopping is pretty tedious and requires consumes a lot of time. With the rise of Internet based shopping the online shopping has seen an exponential growth with a huge increase in the number of customer choosing to purchase online rather than in-store.

The functionalities and advantages of proposed system are:

- Time Savvy: We live in a world where time is precious and it's tough to pull out time to go out and do grocery and house need shopping. Therefore shopping online from the comfort of our home or office and get everything we need delivered at our doorsteps saves time.
- Conformability: One can buy products with an ease and comfort of home or workplace. Online shopping helps you find everything you need at one place, you don't need to hop onto different shops.
- Shipping and Delivery: Most of the online store provides free shipping and delivery. Thus, you don't have to worry about how heavy or big the product is, it would be delivered to you smoothly.
- Discounts and Offer: The best part about online shopping is that you get everything at a great discounted price. Today you can thing up to 70 % Off on products online.
- Rewards and Wallet Offers: Online store provides rewards and offer point which helps you to save extra.
- Sale: Almost all online stores provide Shopping sale for the festive season thus giving you to shop at cheaper rates.

2.3 Work already carried out in the project domain

- **Admin Login:** Only Admin can login to the admin page of LTOnline store where the admin would require the login id and password to enter into the web application.
- **Dashboard:** This module consists of the entire sub module at a glance and basic details about total sales, pages views and other things.
- **Category:** This module is used by admin to add, view, edit/delete category based on the requirement of the product
- **Sub Category:** This module is used by the admin to add, view, edit/delete sub category of the broader category based on the requirement of the product.
- **Product:** In this module the admin can add and edit products, can view the product list, and can see the products in cart and payment details of the product.
- **Order:** In this module the admin can see the order details of the orders which include order id, order name, order number, order date, order details.
- **Customer:** In this module the admin can see the Customer details of the orders which include customer id, fist and last name, address, phone number and email.

2.4 Objective of the project

The system helps in buying of goods, products and services online by choosing the listed products from website (E-Commerce site).

2.5 What is to be achieved and method of measuring the extent of that achievement

- Traditional Shopping can be replaced by the proposed system.
- Customer can easily purchase the product with the comfort of home or office.
- Admin can add new category, sub category and products.
- Admin can edit category, sub category and products.
- Admin can view category, sub category and products.

Chapter 3: Analysis

3. Analysis

3.1 System Requirement Analysis

3.1.1 Information Gathering:

The process of gathering information, diagnosing the problems, then interpreting facts is known as System analysis. It also includes recommending system improvements needed, based on the same data. The system is observed as a whole; the inputs need to be identified first before running them and then the system is subjected to study as a whole to identify the problem areas.

This system is all about the converting the shopping system from manual to online. Customer can buy products online after login to the site. Administrator is adding product to database. Administrator can edit or delete the products from the database. After buying and making payment the products are send to customers address that he has given. Customer can write feedback for the product or services. Admin can see daily sell and feedback given by customer. Administrator is adding the delivery report to the database. Both admin and customer can see the delivery report. This system is highly flexible and is well efficient to make easy interactions with the customer and admin.

3.1.2 Functional System Requirement:

The Application must provide the following functionalities:

- Keeping records of registration of customers.
- Keeping the records of item/product.
- Keeping the records of sale and purchase.
- Storing the feedback given by the customer.
- Keeping details about the product it is delivered or not.
- Storing the items selected by the customer in the temporary storage.

3.1.3 Non-Functional System Requirements:

Following Non-Functional requirements will be:

- Secure access of confidential data (Customer's details)
- 24*7 Availability Better
- Component design to get better performance at peak time.

3.2 System Analysis

An important objective of conducting the system analysis is the determination of the feasibility. Feasibility study is carried out to select the best system that meets the performance requirements. Feasibility study is necessary to evaluate the feasibility of a project at the earliest possible time. It is used to investigate the project and examines whether the designed system will be useful to the organization. Feasibility and risk analysis are related in many ways. If project risk is great, the feasibility of producing quality software is reduced. The different types of feasibility are:

3.2.1 Technical Feasibility:

Technical Feasibility is used to find out the necessary technology, the proposed equipment have the capacity to hold the data, which is used in the project. It is a study of function, performance and constraints that may affect the ability to achieve an acceptance system. LTOnline Sore project will be made on Java Framework as it is technical feasible to make it on JS because it provide all the functionalities that project demands and it is user friendly as well as provide interacting and easy integrated development environment.

I have developed this project using the below technology:

HTML: HTML stands for Hyper Text Markup Language.

- HTML describes the structure of a Web page.
- HTML consists of a series of elements.
- HTML elements tell the browser how to display the content
- HTML elements are represented by tags.
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on.
- Browsers do not display the HTML tags, but use them to render the content of the page.

CSS: CSS stands for Cascading Style Sheets

- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files.

Bootstrap

- Bootstrap is a free front-end framework for faster and easier web development.
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins.
- Bootstrap also gives you the ability to easily create responsive designs.

JavaScript

- JavaScript is a light-weight object-oriented programming language which is used by several websites for scripting the WebPages.
- It is an interpreter, full-fledged programming language that enables dynamic interactivity on websites when applied to an HTML document.
- It was introduced in the year 1995 for adding programs to the WebPages in the Netscape Navigator browser.
- Since then, it has been adopted by all other graphical web browsers. With JavaScript, users can build modern web applications to interact directly without reloading the page every time.
- The traditional website uses JS to provide several forms of interactivity and simplicity.

3.2.2 Economical Feasibility:

Economical feasibility deals about the economical impact faced by the organization to implement a new system. Financial benefits must be equal or exceed the cost of the existing system. The cost for implementing the proposed system including hardware and software cost should be evaluated. Economical feasibilities in this project are:

- There is no additional man power requirement.
- There is no additional cost involved maintaining the proposed system.

3.2.3 Behavioral Feasibility:

It includes how strong the reaction of staff will be towards the development of new system that involves computer's use in their daily work. So resistant to change is identified. According to this project it provide user friendly and interactive interface to the user which does not have negative impact on user work.

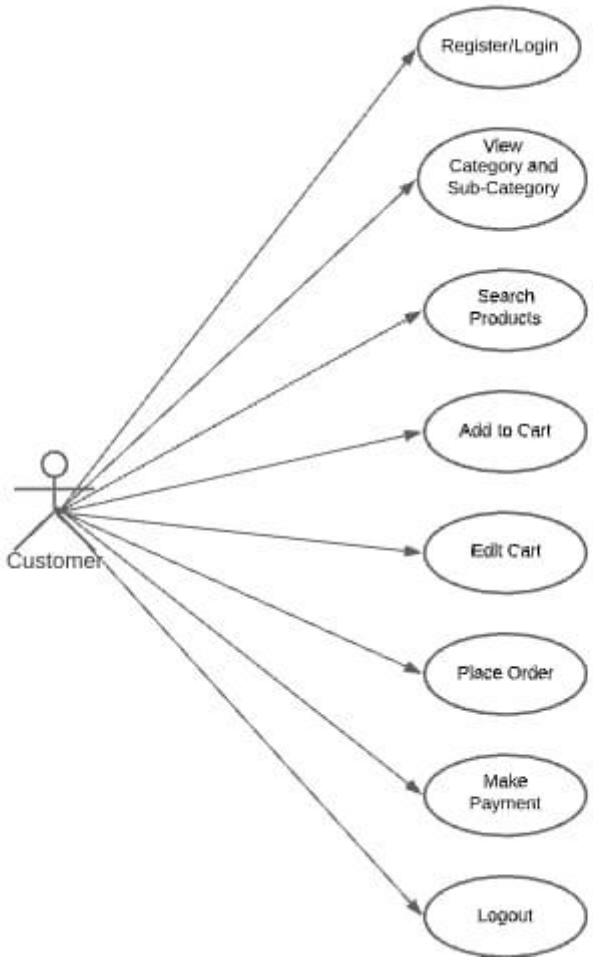
3.2.3 Operational Feasibility:

Define the urgency of the problem and the acceptability of any solution; if the system is developed, will it be used? Includes people-oriented and social issues: internal issues, such as man power problems, labour objections, manager resistance, organizational conflicts and policies; also external issues, including social acceptability, legal aspects and government regulations.

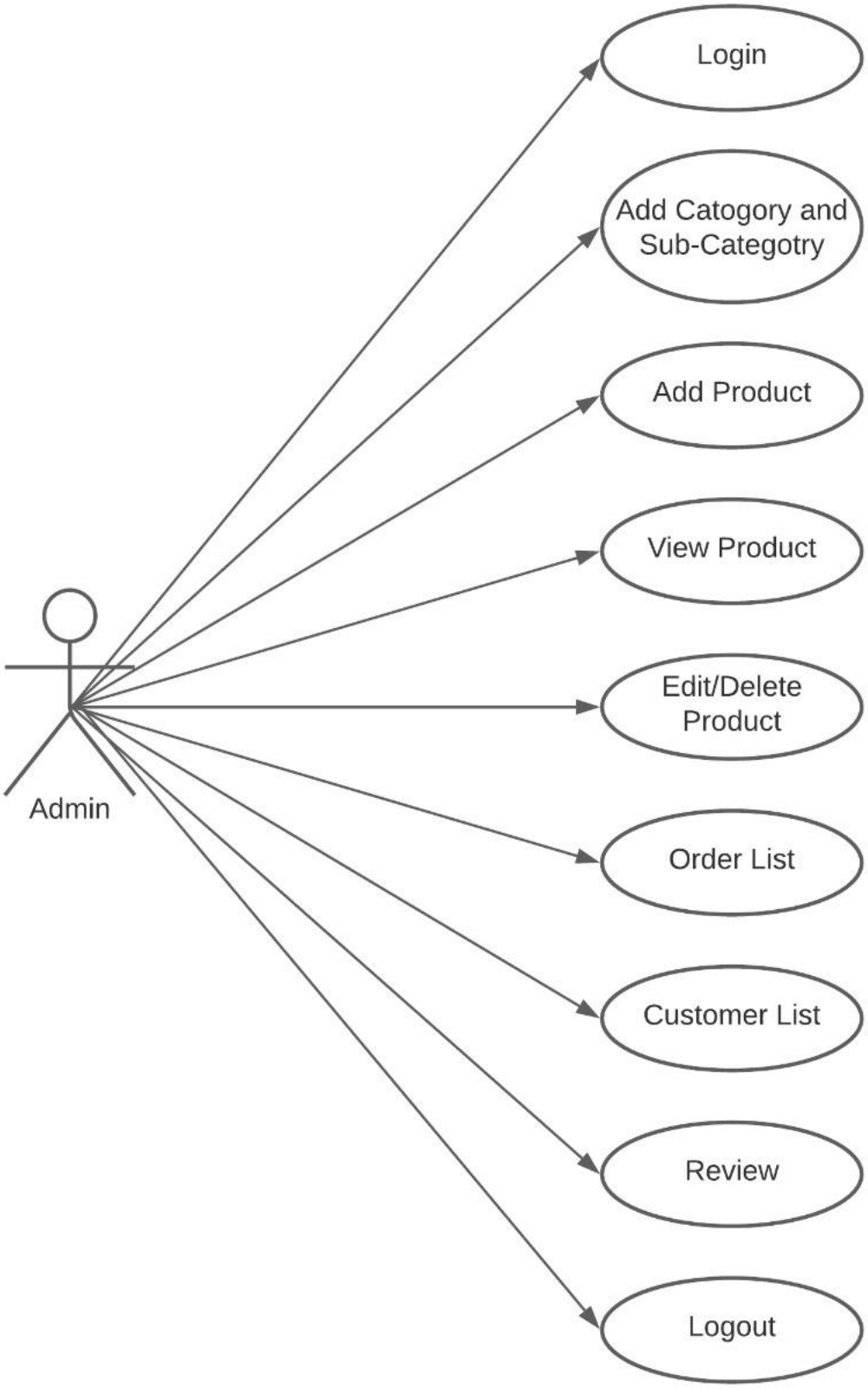
The project has been developed in such a way that it becomes very easy even for a person with little computer knowledge to operate it. This software is very user friendly and does not require any technical person to operate .Thus the project is even operationally feasible.

3.3 Information flow representation:

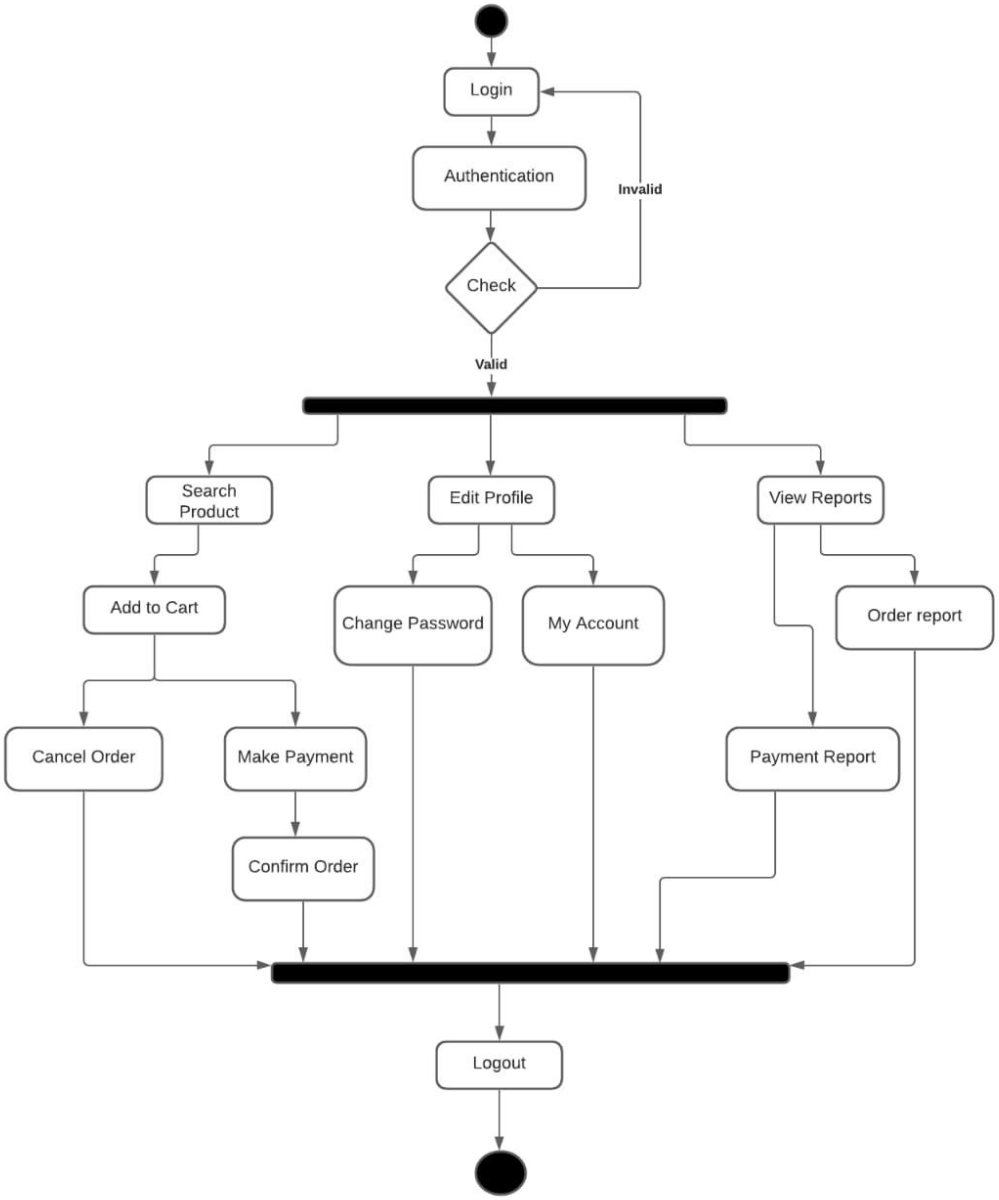
3.3.1 Use Case Diagram of User:



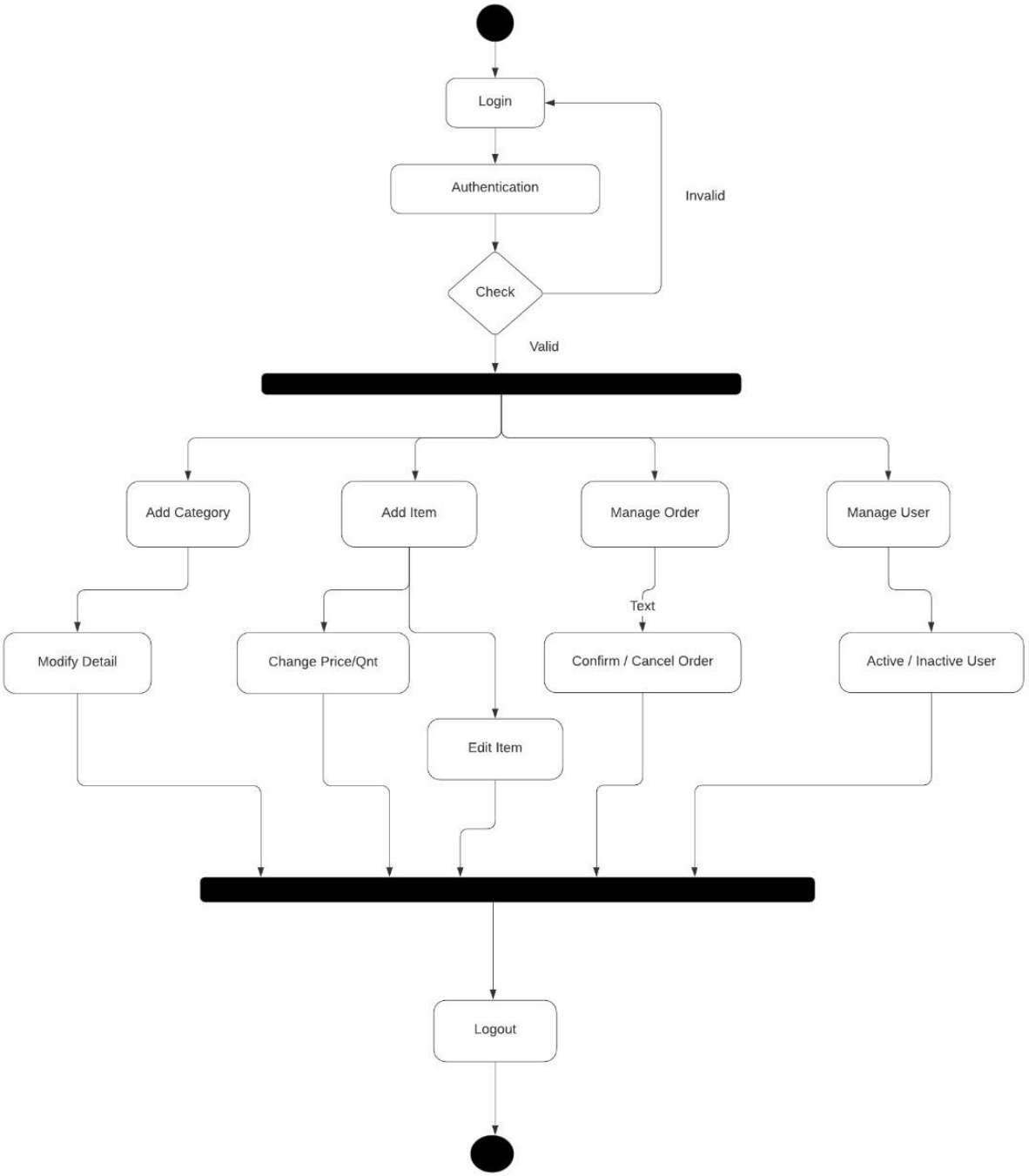
3.3.2 Use Case For Admin:



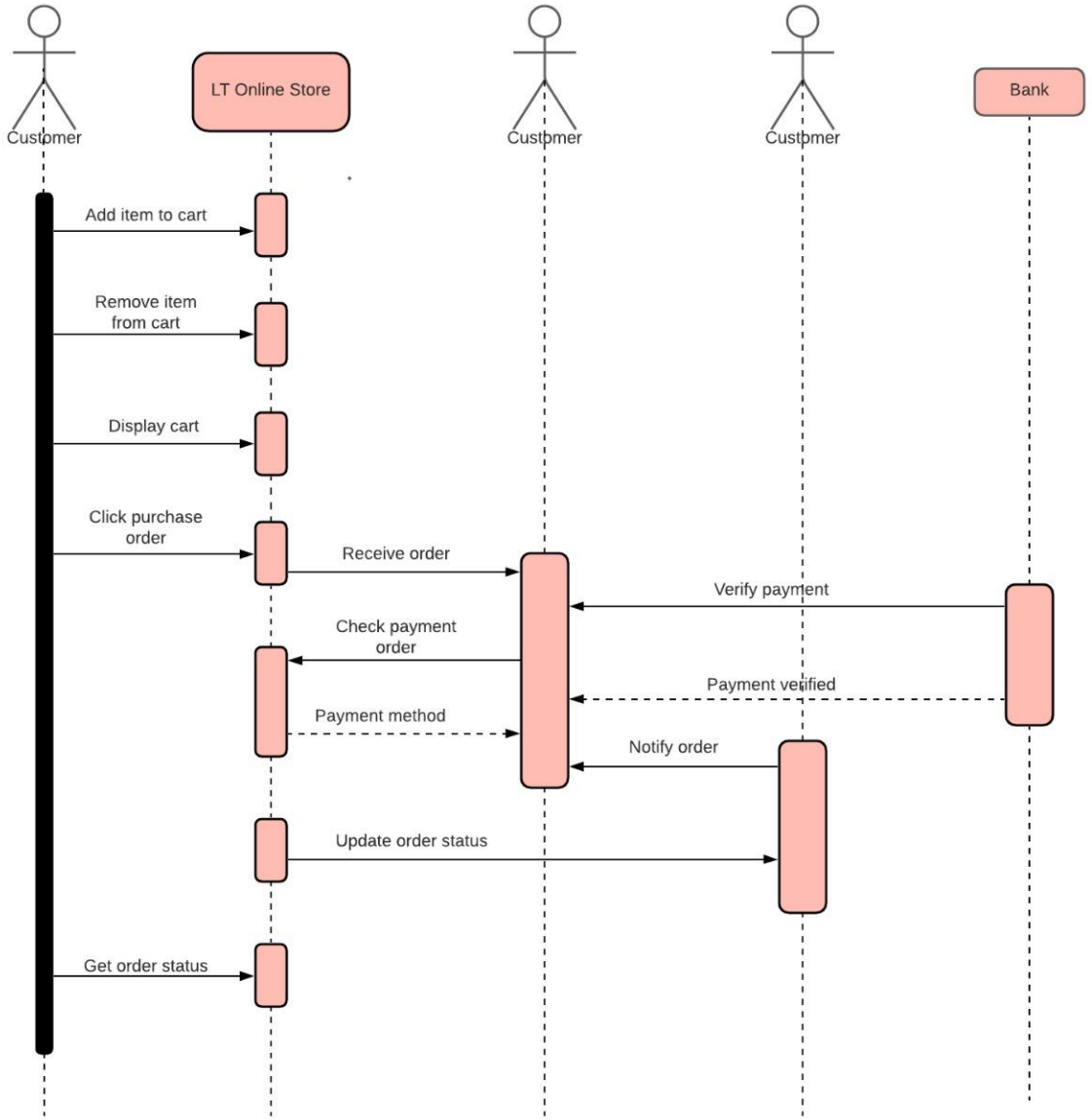
3.3.3 Activity Diagram For User:



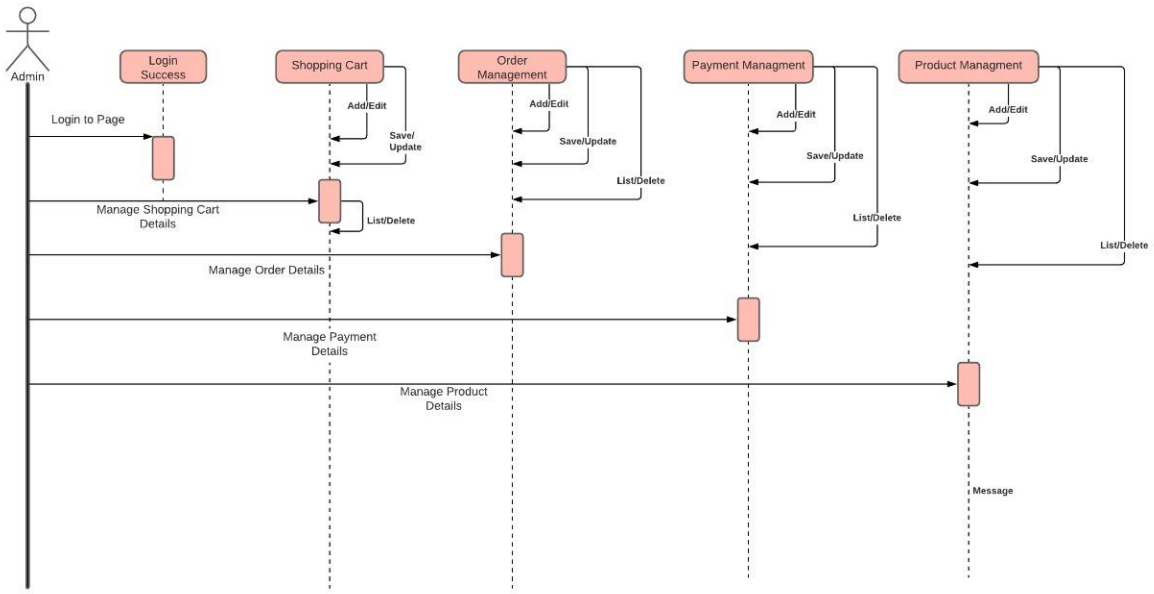
3.3.4 Activity Diagram For Admin:



3.3.5 Sequence Diagram For User:

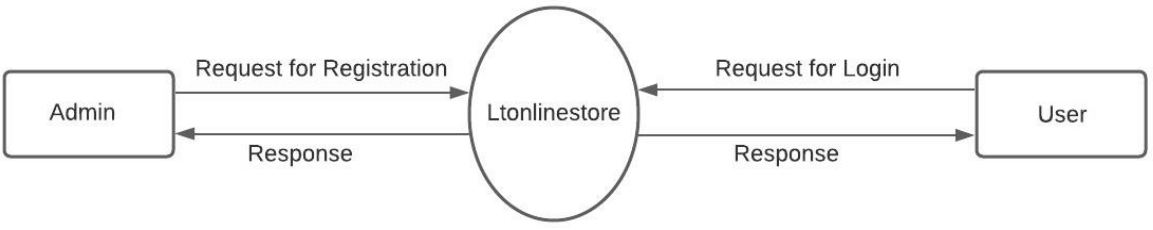


3.3.6 Sequence Diagram For Admin:

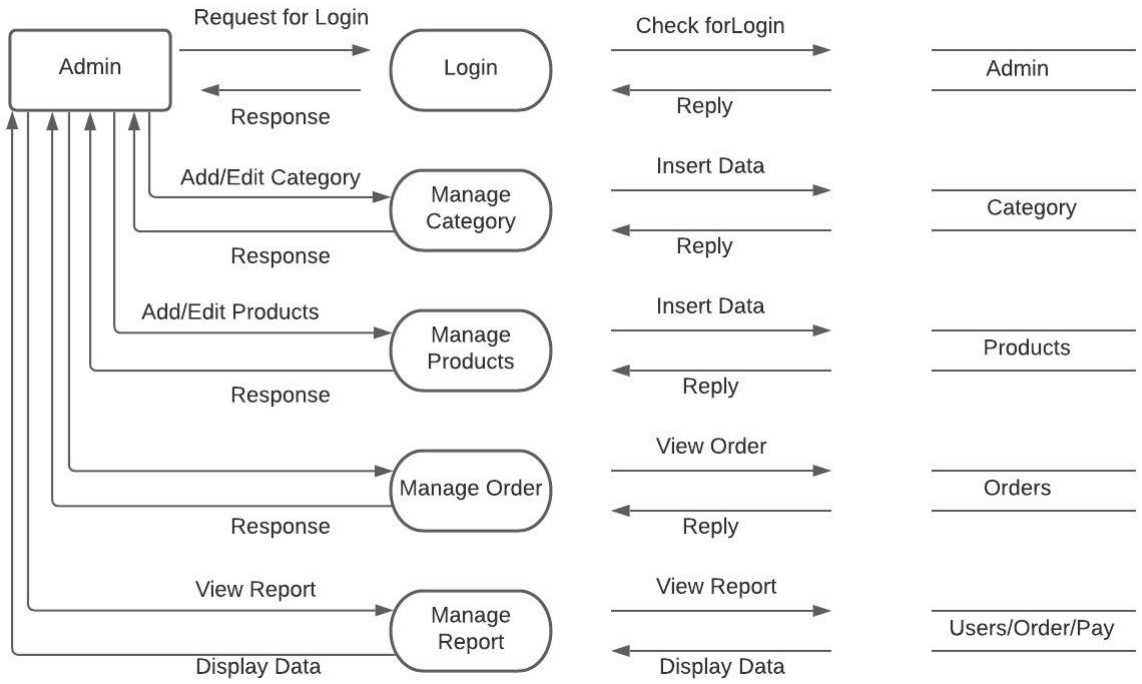


3.3.7 Data Flow Diagram:

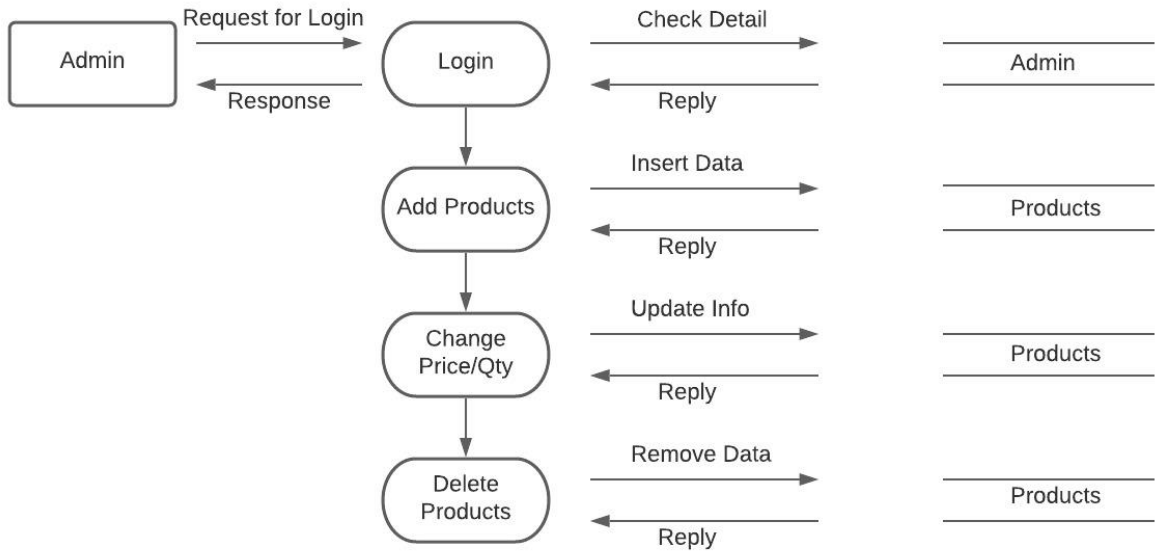
3.3.7.1 Zero level Admin DFD



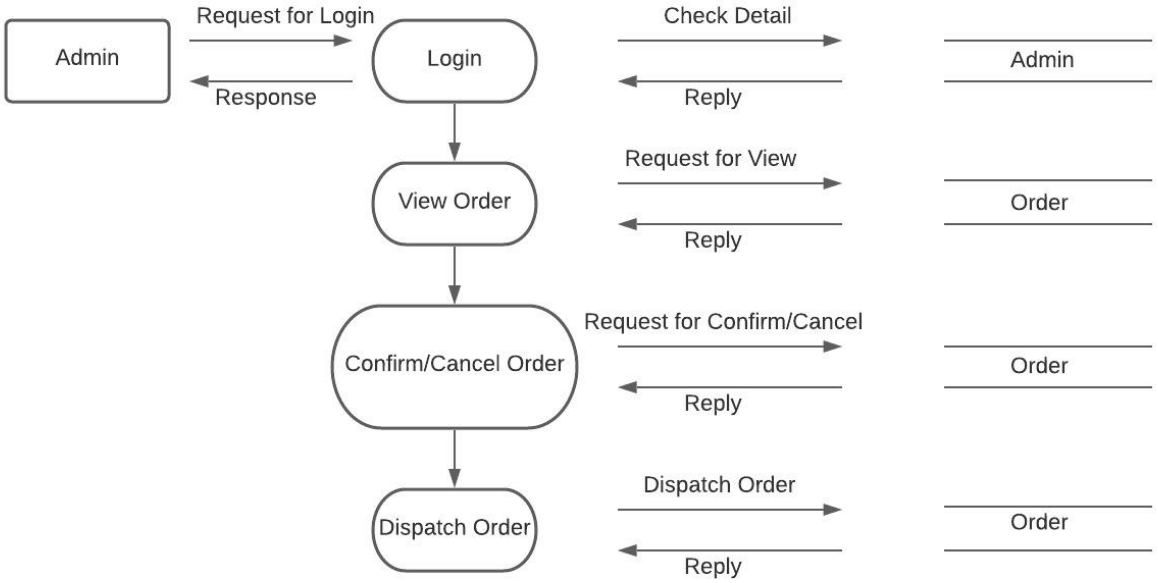
3.3.7.2 First level admin DFD



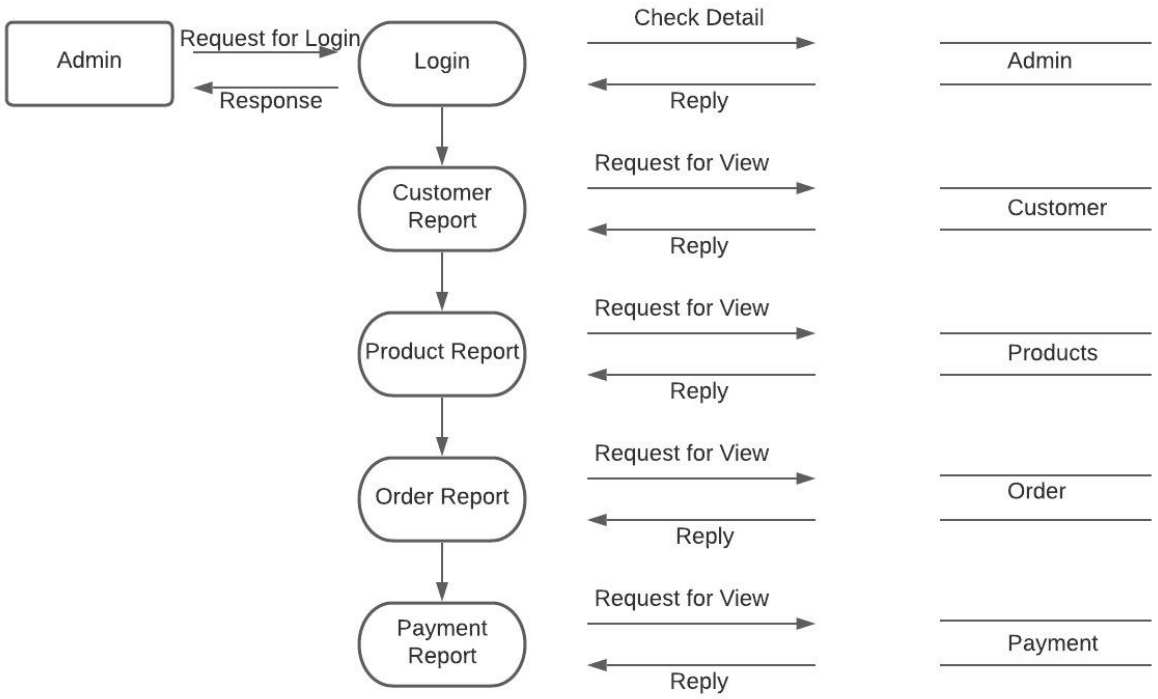
3.3.7.3 Second level admin DFD - (2.1)



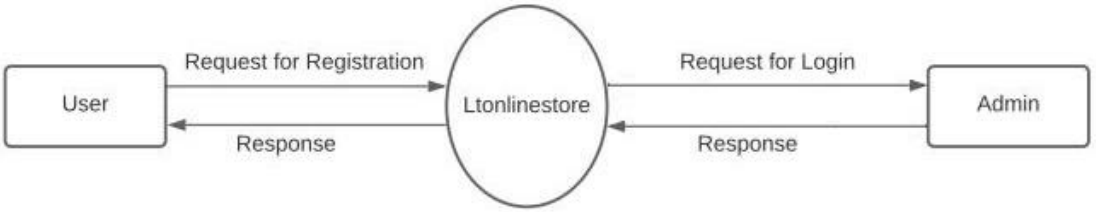
3.3.7.4 Second level admin DFD - (2.2)



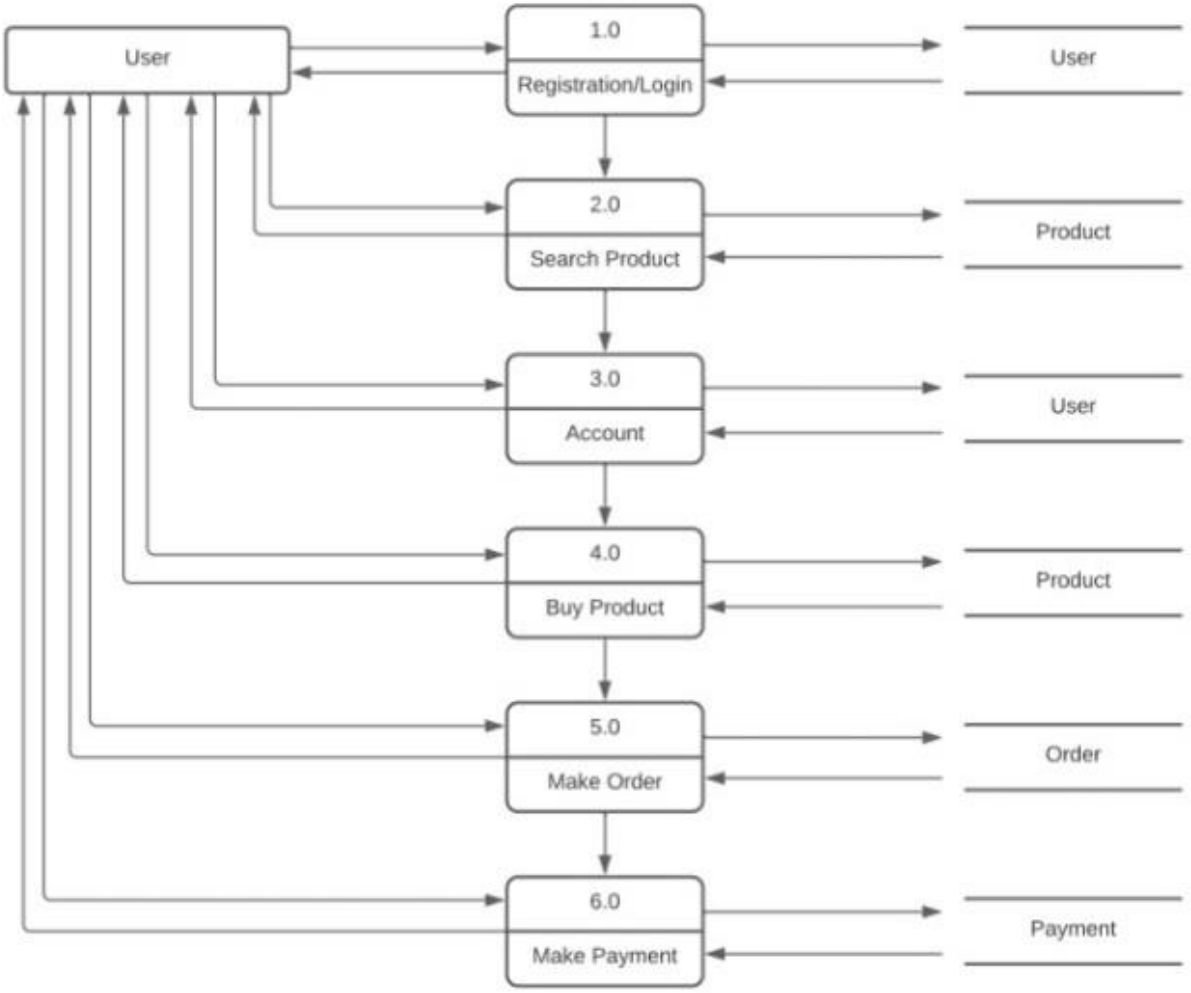
3.3.7.4 Second level admin DFD - (2.3)



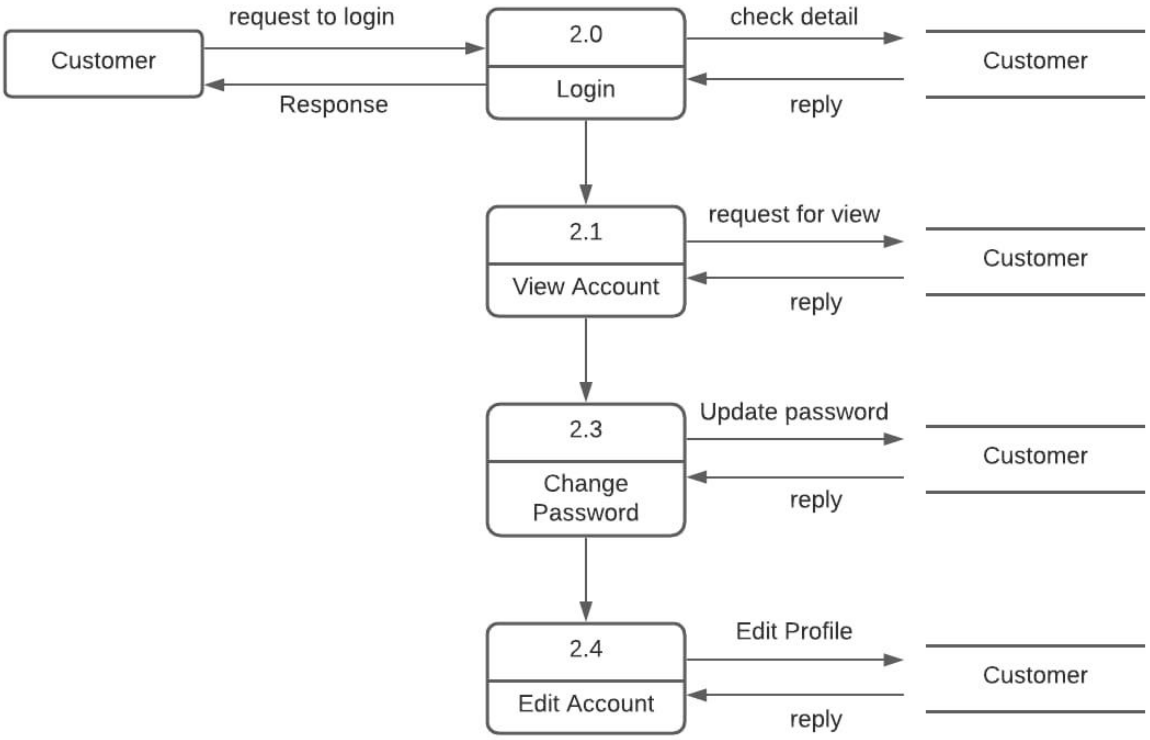
3.3.7.5 Zero level User DFD



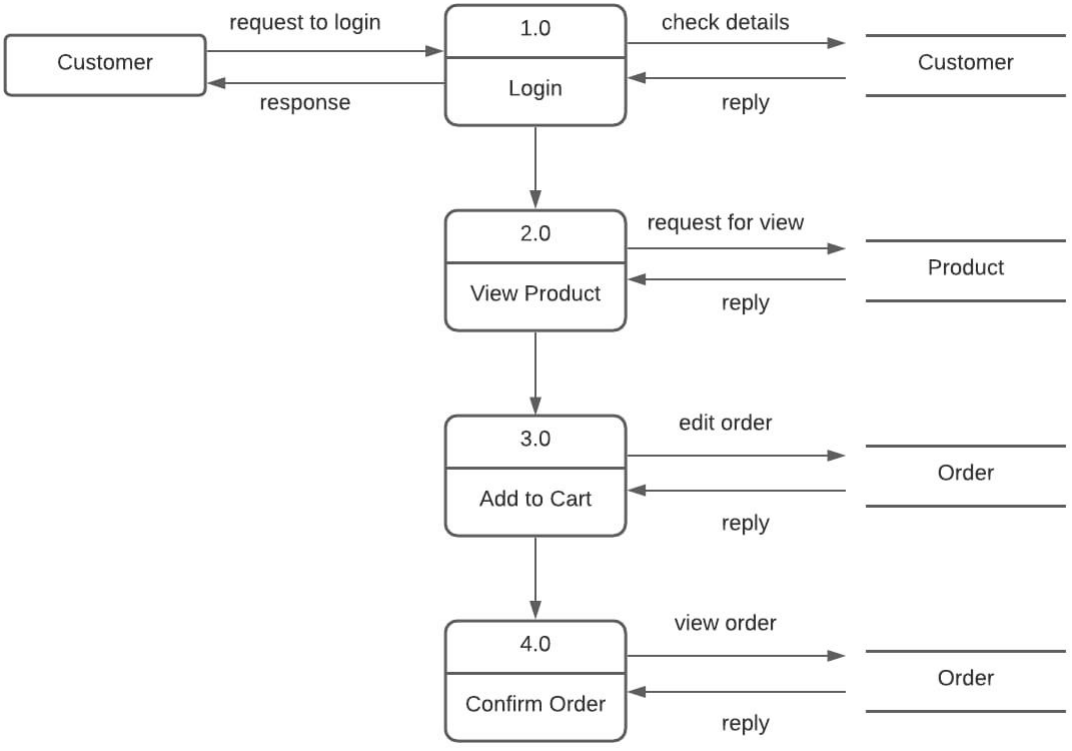
3.3.7.6 First level User DFD



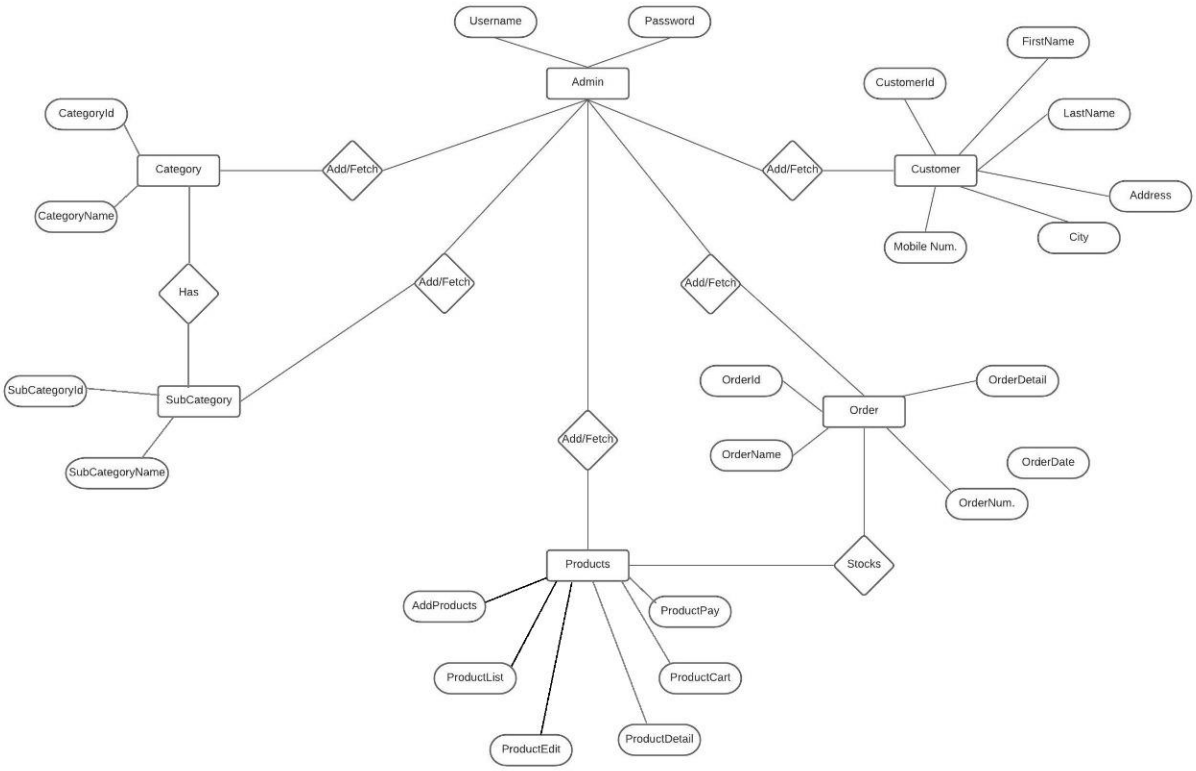
3.3.7.6 Second level User DFD (2.1)



3.3.7.7 Second level User DFD (2.2)



3.3.8 Entity-Relationship Diagram



3.4 Method/Technology to be used:

3.4.1 Hardware Configuration:

The section of hardware configuration is an important task related to the software development insufficient random access memory may affect adversely on the speed and efficiency of the entire system. The process should be powerful to handle the entire operations. The hard disk should have sufficient capacity to store the file and application.

Hardware Requirements:

- 2 GB RAM and above
- Intel Core Processor and above
- 128 GB Hard Disk Drive and above

3.4.2 Software Configuration:

A major element in building a system is the section of compatible software since the software in the market is experiencing in geometric progression. Selected software should be acceptable

by the firm and one user as well as it should be feasible for the system. This document gives a detailed description of the software requirement specification. The study of requirement specification is focused specially on the functioning of the system. It allow the developer or analyst to understand the system, function to be carried out the performance level to be obtained and corresponding interfaces to be established.

Software Requirements:

- Microsoft Windows 7 or above
- JAVA Language
- MySQL Database
- Html5,CSS3,JavaScript,JQuery,AJAX for designing
- Chrome or any other browser.

Chapter 4: Design

4. Design

System design is the process or art of defining the architecture, components, modules, interface, and data for a system to satisfy specified requirements. One could see it as the application of systems theory to product development. There is some overlap and synergy with the discipline of system analysis, system architecture and system engineering. System design is therefore the process of defining and developing a system to satisfy specified requirement of the market or a customer.

The system design document describes how to transform the requirements and the functional design in to more technical system design specification. This design involves conceiving and planning out in the mind and making a drawing, pattern, or sketch of. It includes three types of activities.

System design is the process of defining the elements of a system such as the architecture, modules and components, the different interfaces of those components and the data that goes through that system. It is meant to satisfy specific needs and requirements of a business or organization through the engineering of a coherent and well-running system.

Systems design implies a systematic approach to the design of a system. It may take a bottom-up or top-down approach, but either way the process is systematic wherein it takes into account all related variables of the system that needs to be created—from the architecture, to the required hardware and software, right down to the data and how it travels and transforms throughout its travel through the system. Systems design then overlaps with systems analysis, systems engineering and systems architecture.

4.1 System Architecture

System architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system. The architecture of a system describes its major components, their relationships (structures), and how they interact with each other. Software architecture and design includes several contributory factors such as Business strategy, quality attributes, human dynamics, design, and IT environment.

Architecture serves as a blueprint for a system. It provides an abstraction to manage the system complexity and establish a communication and coordination mechanism among components.

It defines a structured solution to meet all the technical and operational requirements, while optimizing the common quality attributes like performance and security.

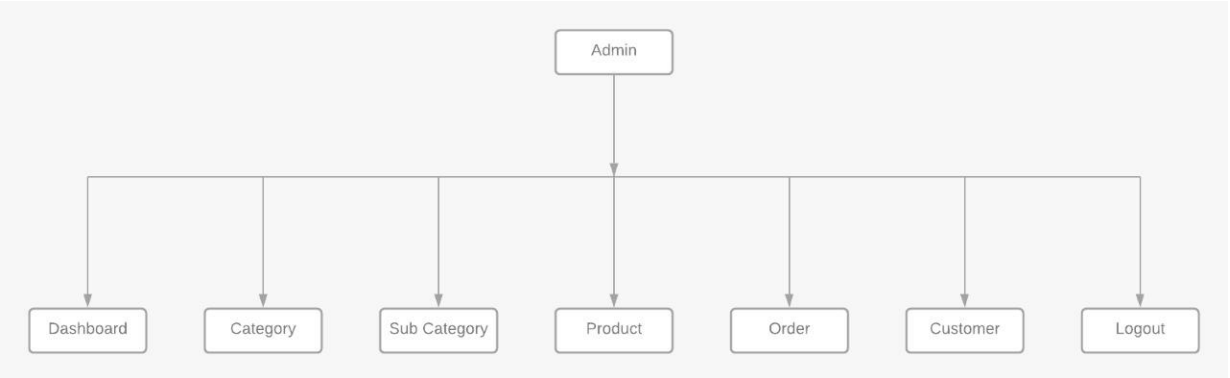
Further, it involves a set of significant decisions about the organization related to software development and each of these decisions can have a considerable impact on quality, maintainability, performance, and the overall success of the final product. These decisions comprise of −

- Selection of structural elements and their interfaces by which the system is composed.
- Behavior as specified in collaborations among those elements.
- Composition of these structural and behavioral elements into large subsystem.
- Architectural decisions align with business objectives.
- Architectural styles guide the organization.

The primary goal of the architecture is to identify requirements that affect the structure of the application. A well-laid architecture reduces the business risks associated with building a technical solution and builds a bridge between business and technical requirements.

Some of the other goals are as follows −

- Expose the structure of the system, but hide its implementation details.
- Realize all the use-cases and scenarios.
- Try to address the requirements of various stakeholders.
- Handle both functional and quality requirements.
- Reduce the goal of ownership and improve the organization’s market position.
- Improve quality and functionality offered by the system.
- Improve external confidence in either the organization or system.



4.2 Data Design

Data design is the first design activity, which results in less complex, modular and efficient program structure. The information domain model developed during analysis phase is transformed into data structures needed for implementing the software. The data objects, attributes, and relationships depicted in entity relationship diagrams and the information stored in data dictionary provide a base for data design activity. During the data design process, data types are specified along with the integrity rules required for the data. For specifying and designing efficient data structures, some principles should be followed. These principles are listed below:

- The data structures needed for implementing the software as well-as the operations that can be applied on them should be identified.
- A data dictionary should be developed to depict how different data objects interact with each other and what constraints are to be imposed on the elements of data structure.
- Stepwise refinement should be used in data design process and detailed design decisions should be made later in the process.
- Only those modules that need to access data stored in a data structure directly should be aware of the representation of the data structure.
- A library containing the set of useful data structures along with the operations that can be performed on them should be maintained.
- Language used for developing the system should support abstract data types.

The structure of data can be viewed at three levels, namely, program component level, application level, and business level. At the program component level, the design of data structures and the algorithms required to manipulate them is necessary, if high-quality software is desired. At the application level, it is crucial to convert the data model into a database so that the specific business objectives of a system could be achieved. At the business level, the collection of information stored in different databases should be reorganized into data warehouse, which enables data mining that has an influential impact on the business.

Database Design is a collection of processes that facilitate the designing, development, implementation and maintenance of enterprise data management systems. Properly designed database are easy to maintain, improves data consistency and are cost effective in terms of disk storage space. The database designer decides how the data elements correlate and what data must be stored.

4.3 Interface Design

User interface is the front-end application view to which user interacts in order to use the software. User can manipulate and control the software as well as hardware by means of user interface. Today, user interface is found at almost every place where digital technology exists, right from computers, mobile phones, cars, music players, airplanes, ships etc.

User interface is part of software and is designed such a way that it is expected to provide the user insight of the software. UI provides fundamental platform for human-computer interaction.

UI can be graphical, text-based, audio-video based, depending upon the underlying hardware and software combination. UI can be hardware or software or a combination of both.

User interface design or UI design generally refers to the visual layout of the elements that a user might interact with in a website, or technological product. This could be the control buttons of a radio, or the visual layout of a webpage. User interface designs must not only be attractive to potential users, but must also be functional and created with users in mind.

User interface design can dramatically affect the usability and user experience of an application. If a user interface design is too complex or not adapted to targeted users, the user may not be able to find the information or service they are looking for. In website design, this can affect conversion rates. The layout of a user interface design should also be clearly set out for users so that elements can be found in a logical position by the user.

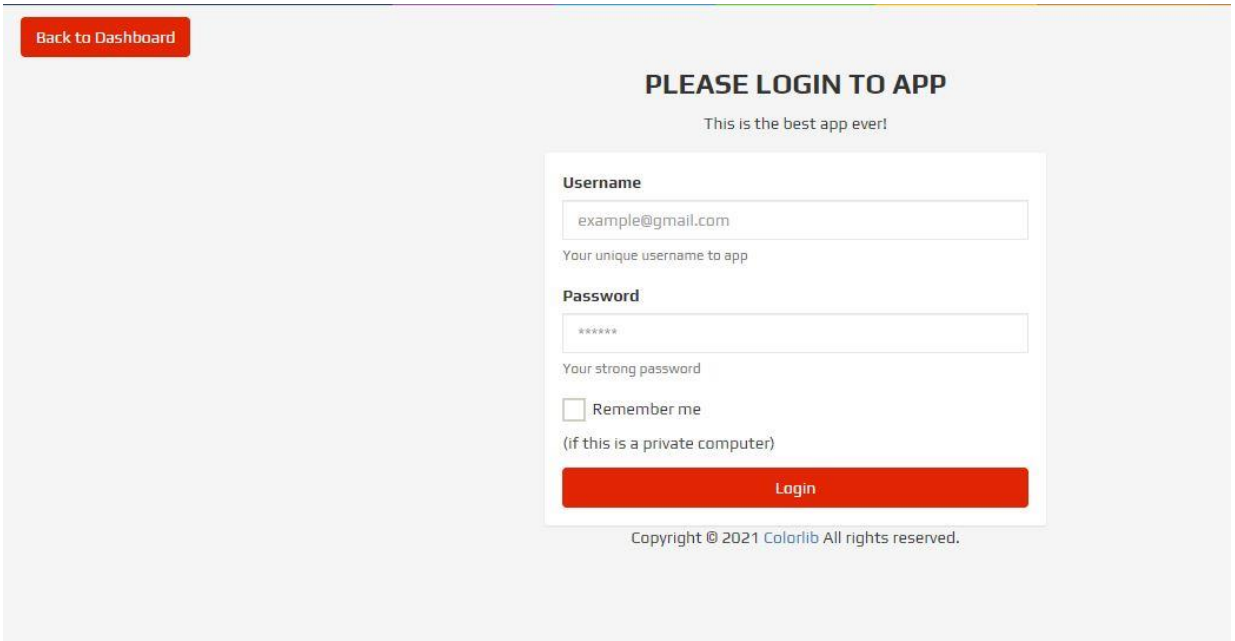
User interface designs should be optimized so that the user can operate an application as quickly and easily as possible. Many experts believe that UI design should be simple and intuitive, often using metaphors from non-computer systems. With a more intuitive user interface design, users will be able to navigate around a website easily, finding the product or service they want quickly. One way to check the intuitiveness of a user interface design is through usability testing. The feedback from usability testing can then be used to optimize the user interface design of a prototype or final product.

User interfaces are the access points where users interact with designs. They come in three formats:

- Graphical user interfaces (GUIs)—Users interact with visual representations on digital control panels. A computer’s desktop is a GUI.

- Voice-controlled interfaces (VUIs)—Users interact with these through their voices. Most smart assistants—e.g., Siri on iPhone and Alexa on Amazon devices—are VUIs.
- Gesture-based interfaces—Users engage with 3D design spaces through bodily motions: e.g., in virtual reality (VR) games.

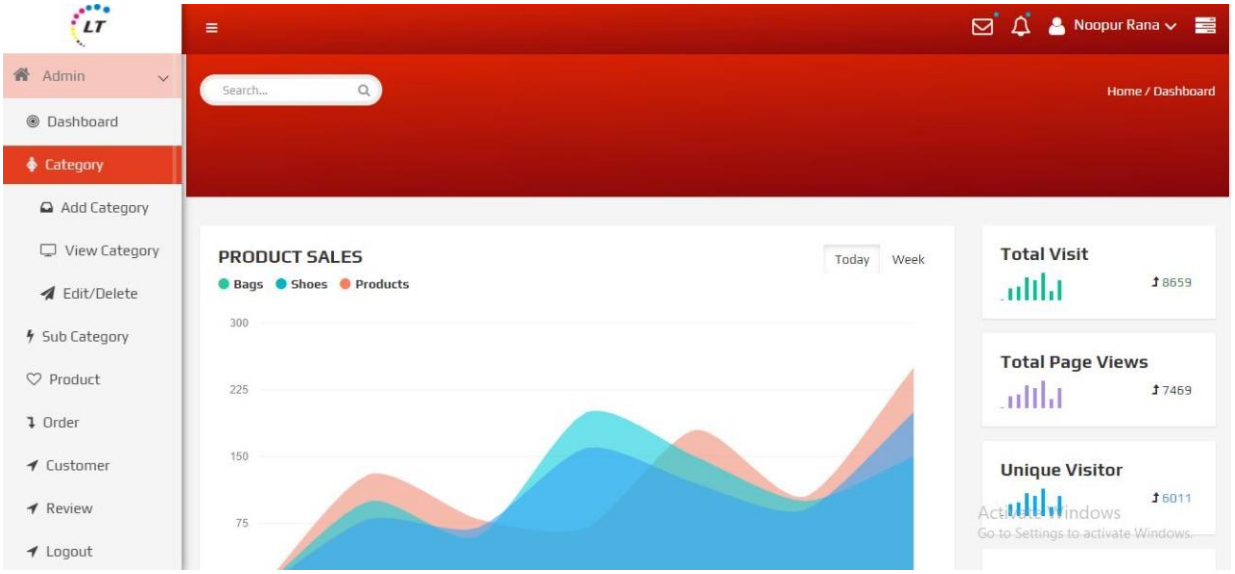
Login Page



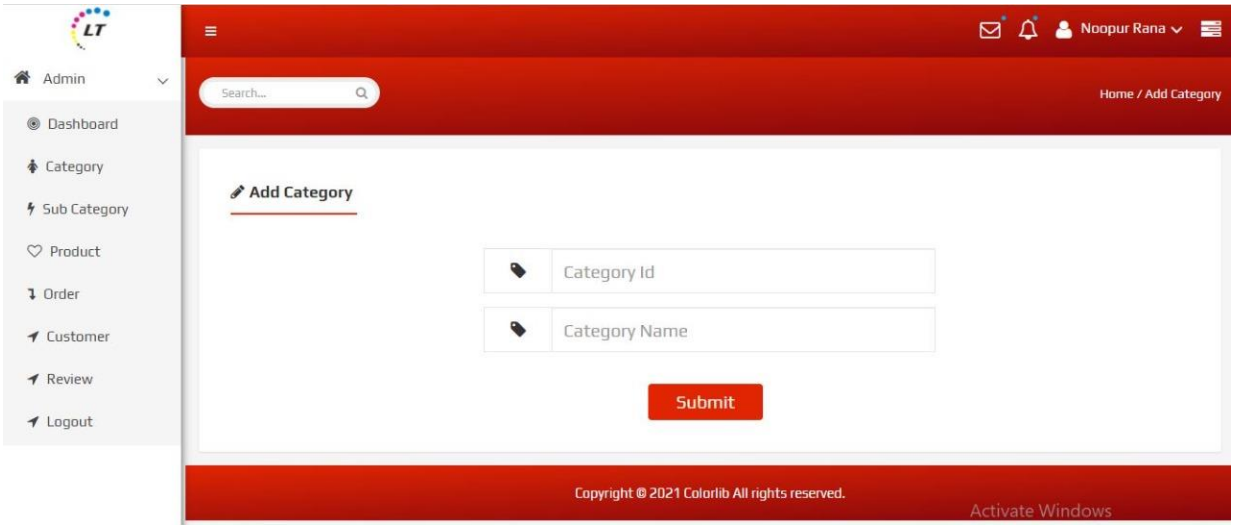
Dashboard Page (First View)

Dashboard Page (Second View)

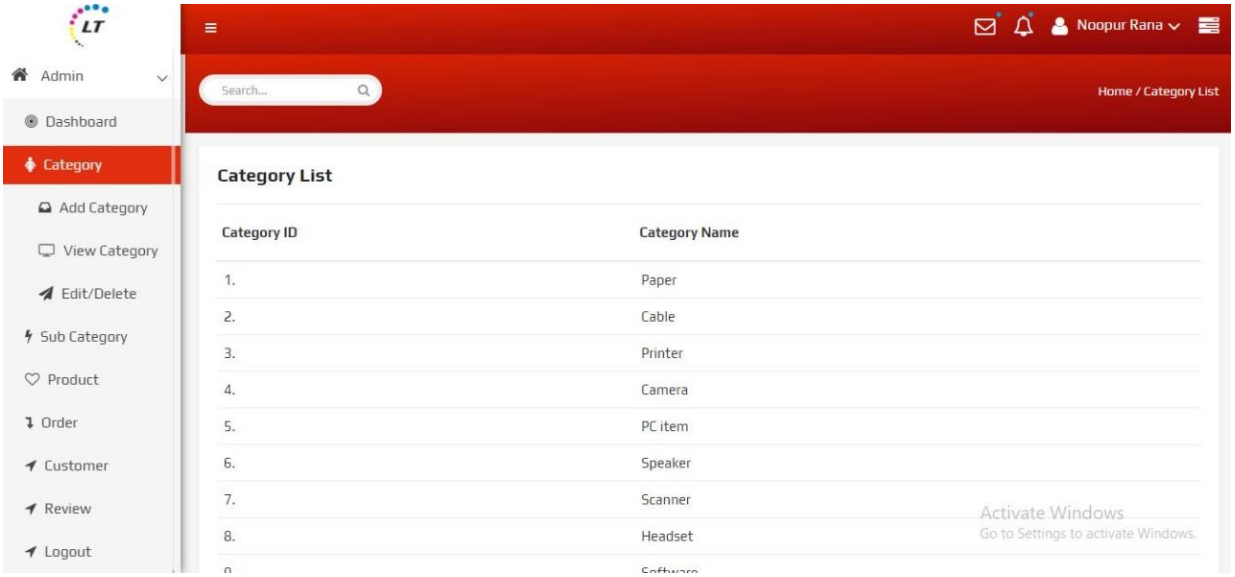
Category Page Drop Down List Page



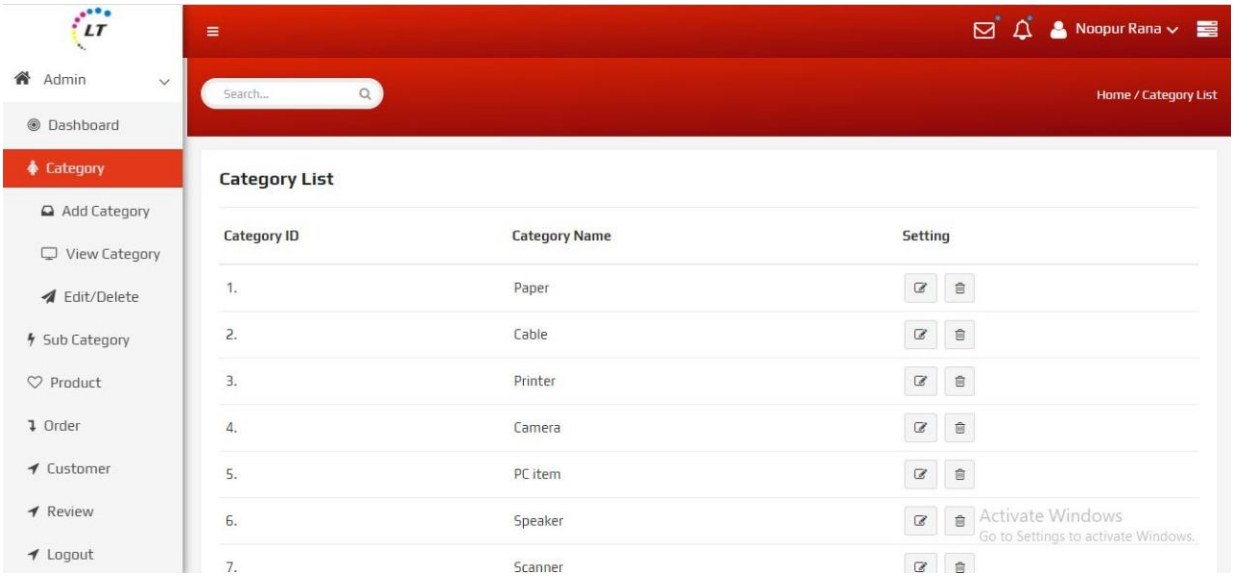
Add Category Page



View Category Page

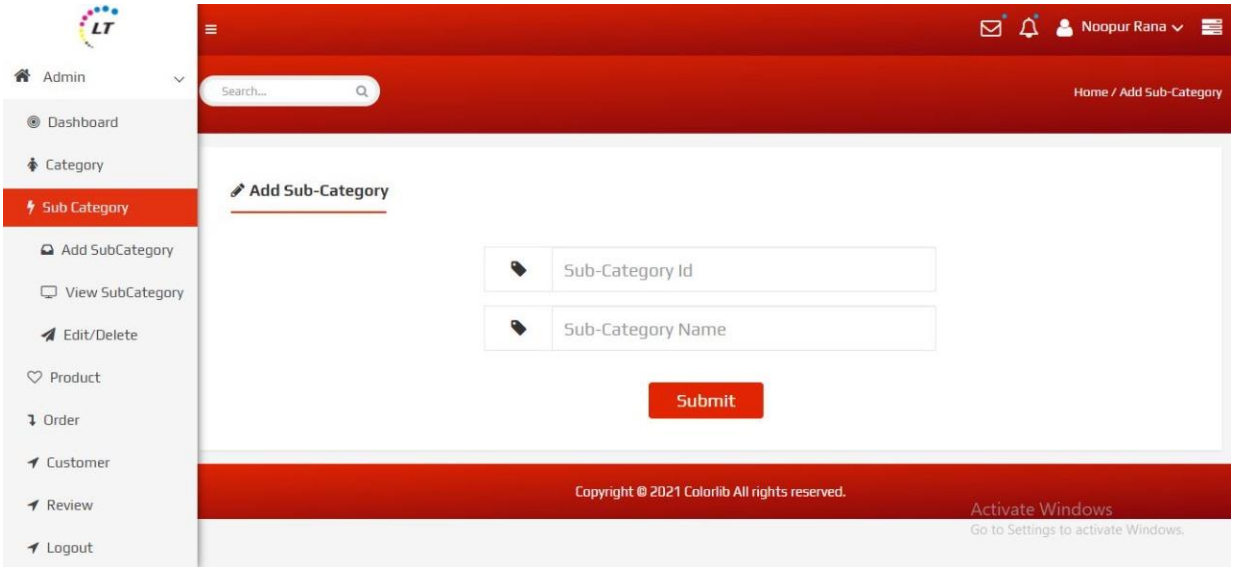


Edit/Delete Category Page

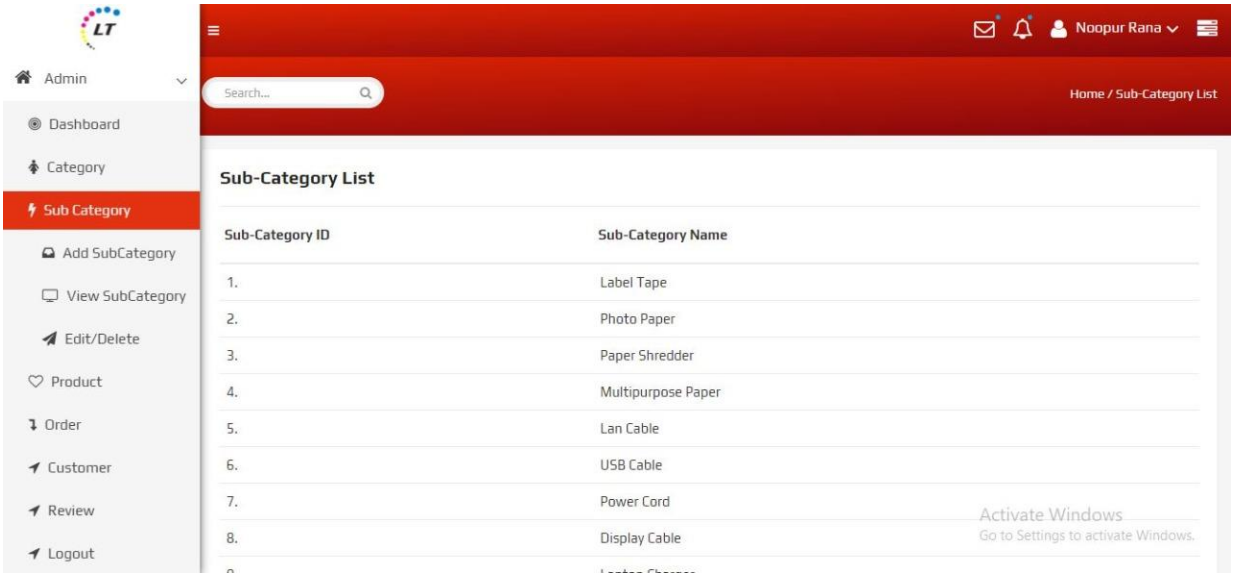


Sub Category Drop Down Page

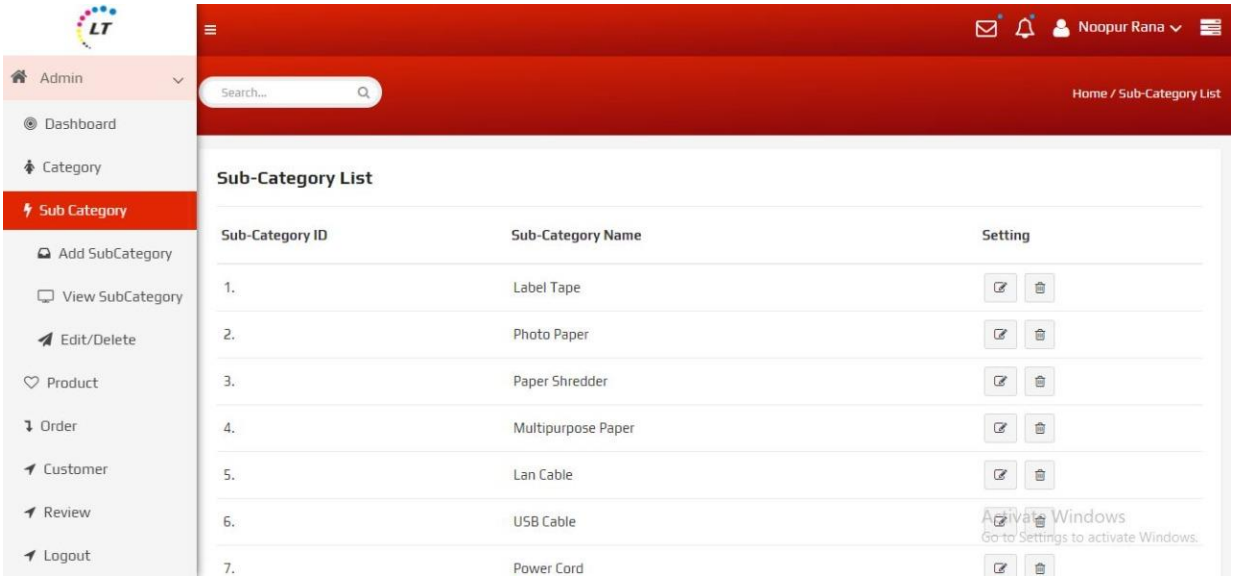
Add Sub-Category Page



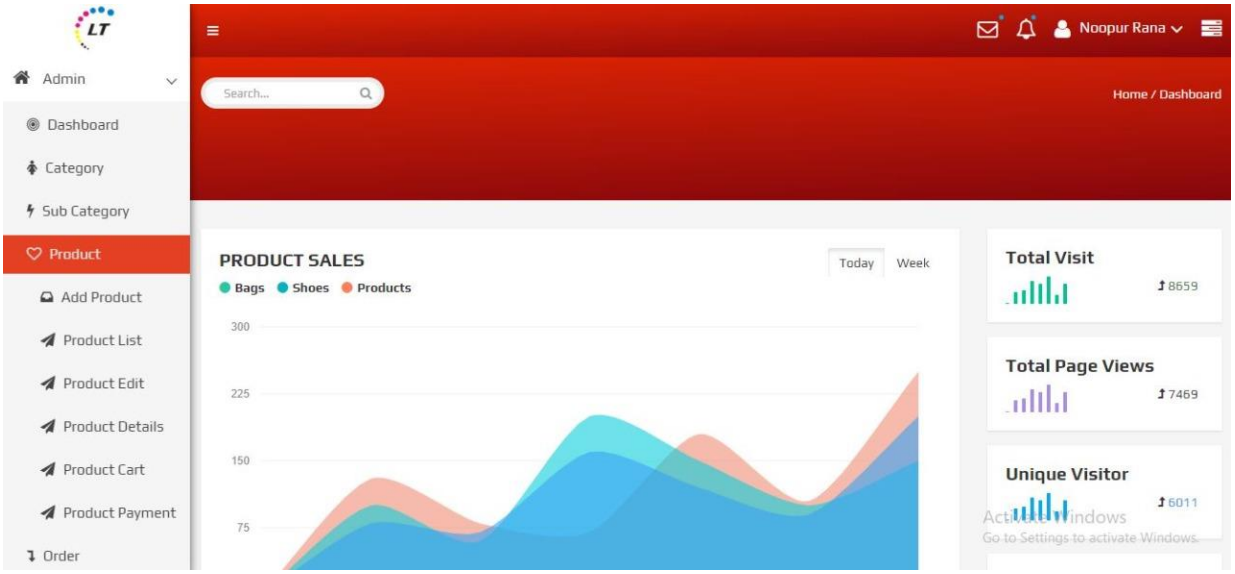
View Sub-Category Page



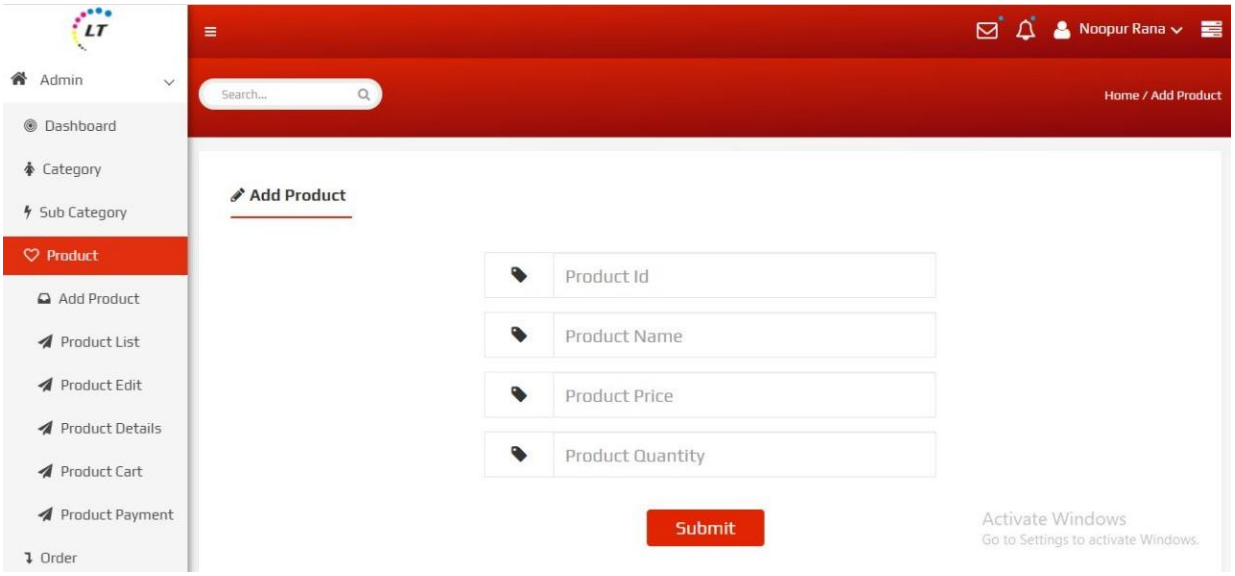
Edit/Delete Sub-Category Page



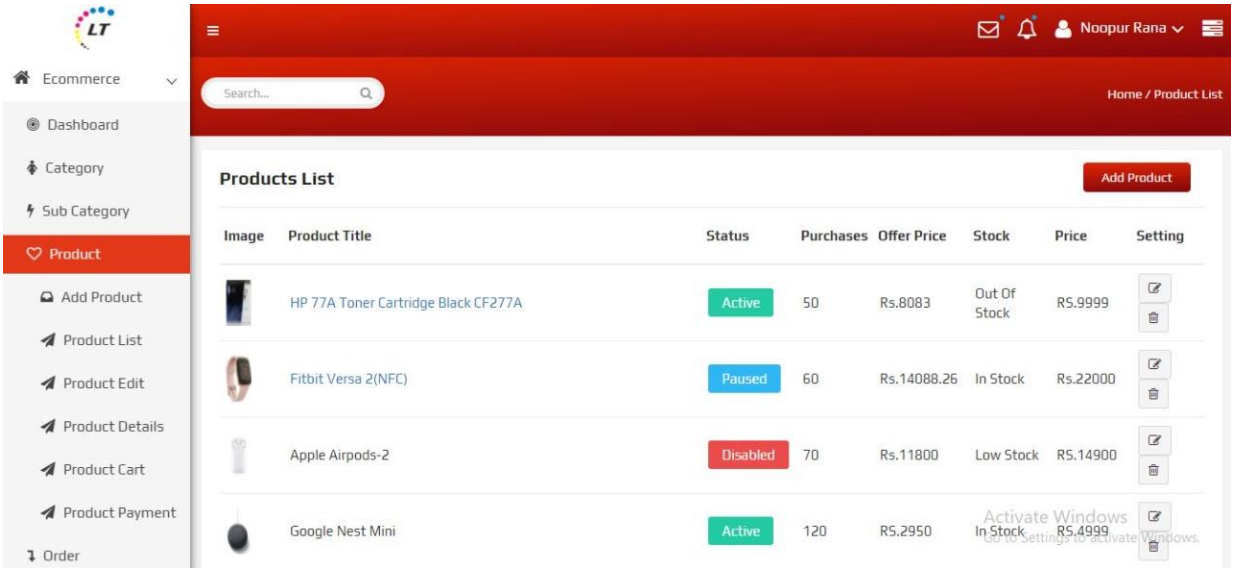
Product Drop Down Page



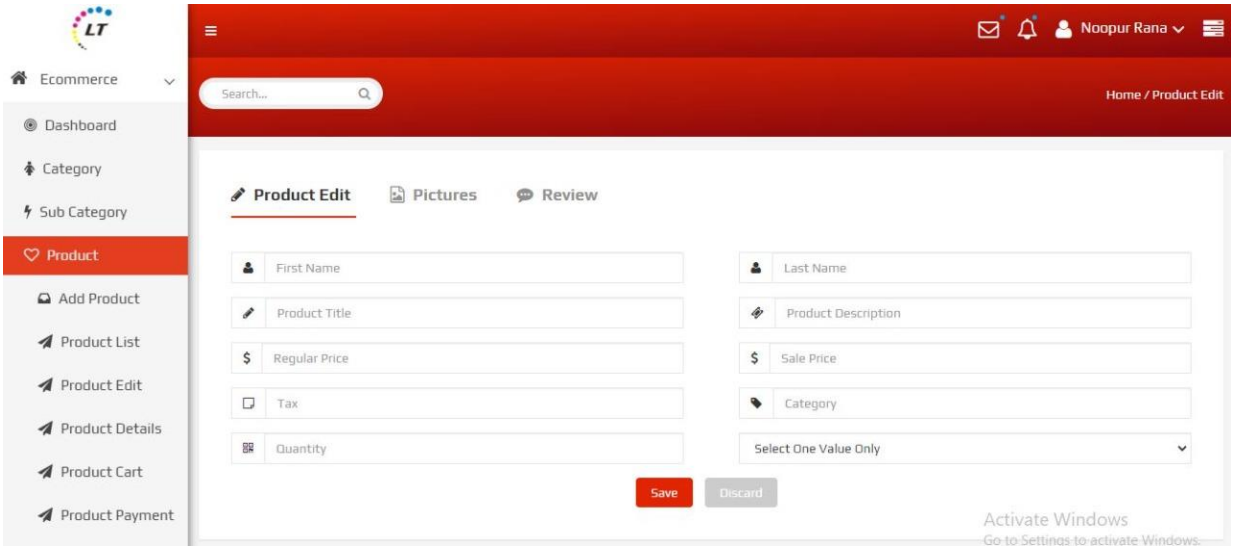
Add Product Page



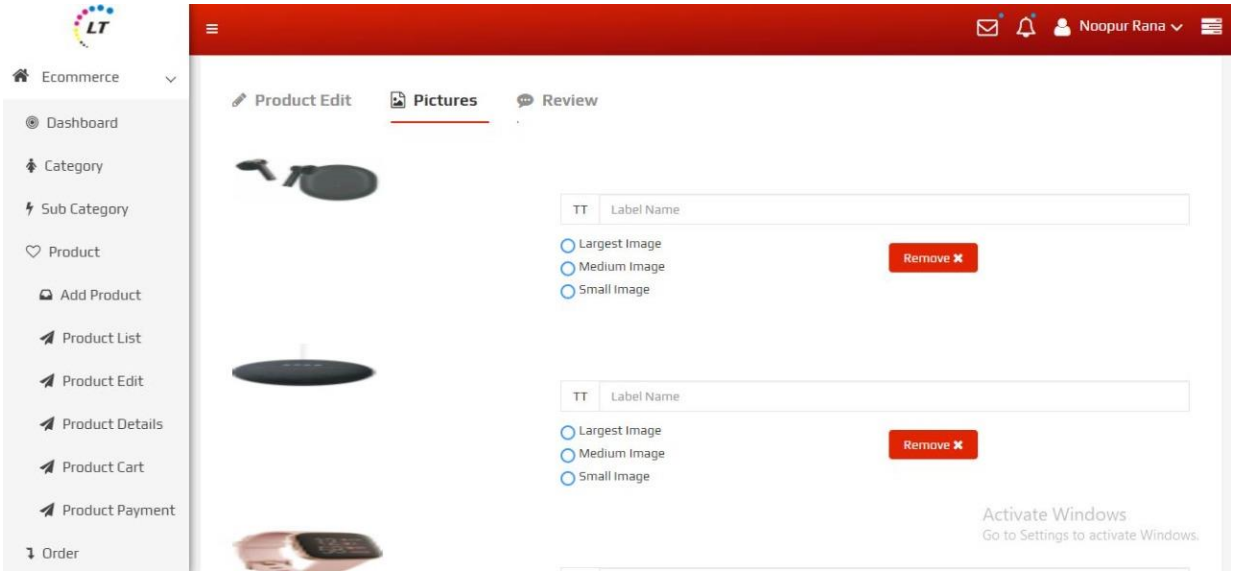
Product List Page



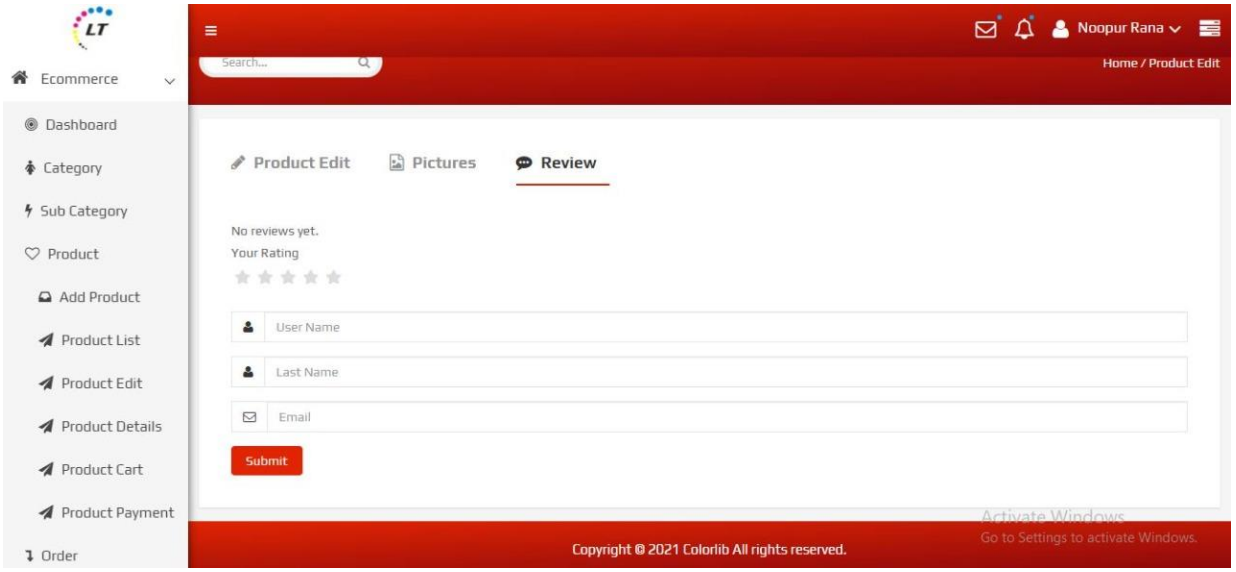
Product Edit Page (First View)



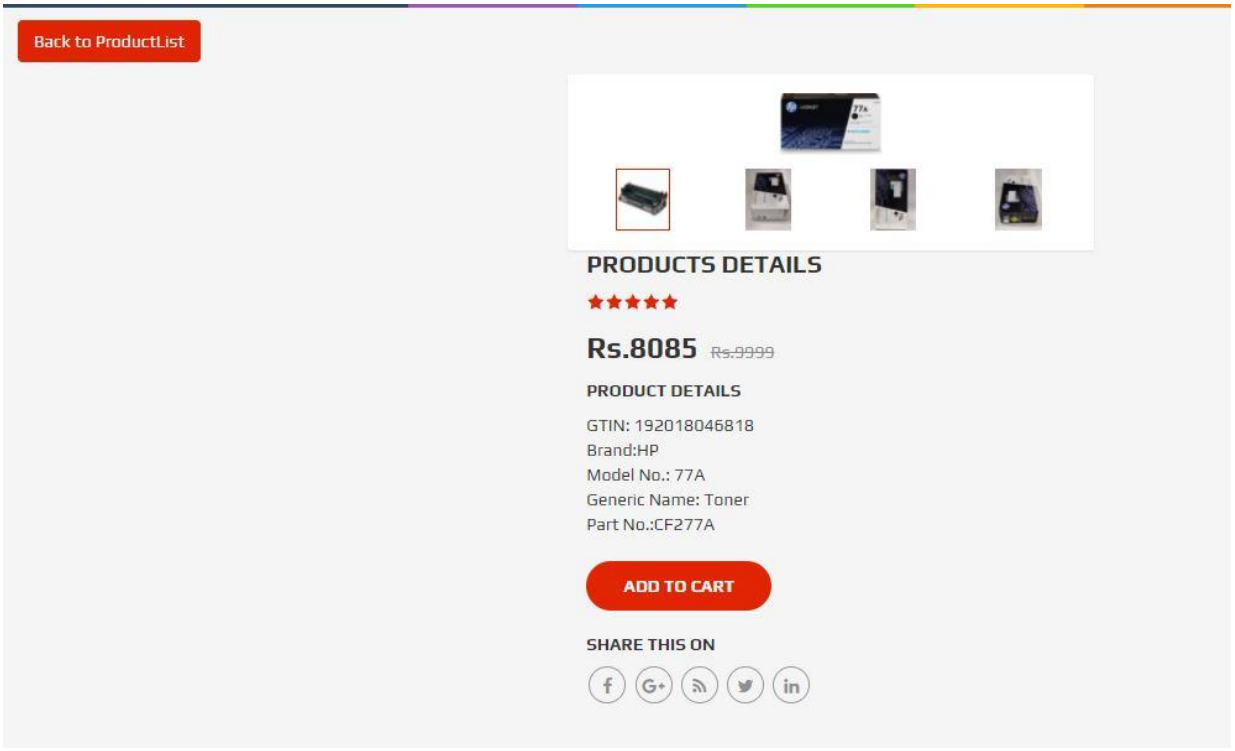
Product Edit Page (Second View)



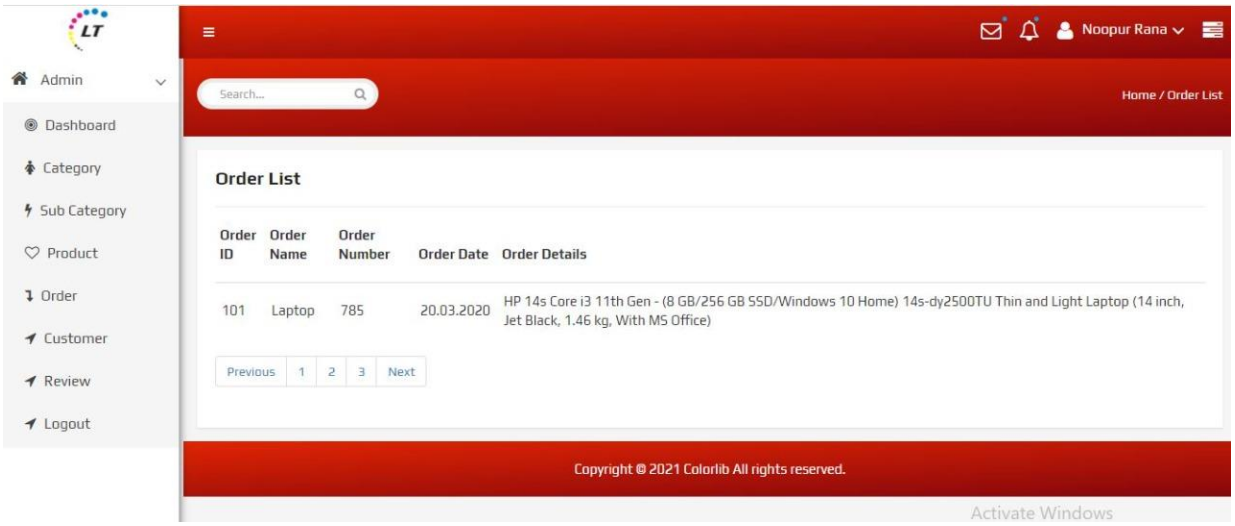
Product Edit Page (Third View)



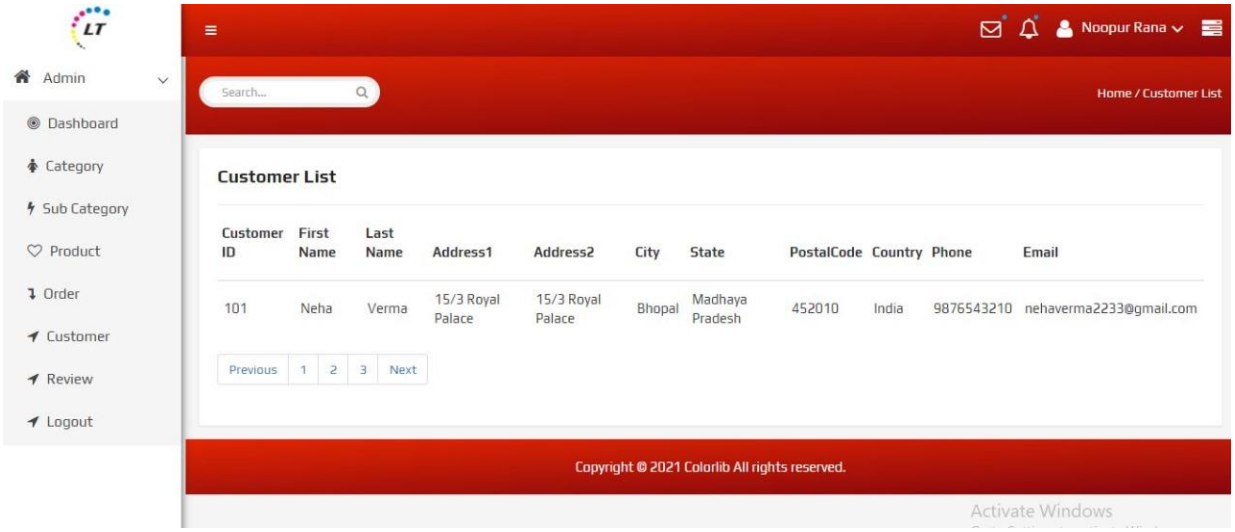
Product Details Page



Order List Image



Customer Details Page



Chapter 5: Testing

5. Testing

Software Testing is an empirical investigation conducted to provide stakeholders with information about the quality of the product or service under test, with respect to the context in which it is intended to operate. Software Testing also provides an objective, independent view of the software to allow the business to appreciate and understand the risks at implementation of the software. Test techniques include, but are not limited to, the process of executing a program or application with the intent of finding software bugs. It can also be stated as the process of validating and verifying that a software program/application/product meets the business and technical requirements that guided its design and development, so that it works as expected and can be implemented with the same characteristics. Software Testing, depending on the testing method employed, can be implemented at any time in the development process, however the most test effort is employed after the requirements have been defined and coding process has been completed.

5.1 Scope of Testing:

Testing is a process of executing a program with the intent of finding an error.

- A good test case is one that has a high probability of finding an as-yet undiscovered error.
- A successful test is one that uncovers an as-yet undiscovered error

5.2 Test Plan:

- All tests should be traceable to customer requirements.
- Test should be planned long before testing begins.
- Testing should begins “in the small” and progress towards testing “in the large.”
- Exhaustive testing is not possible
- To be most effective, testing should be conducted by an independent third party

5.3 Test Case Design:

5.3.1 Unit Testing:

The primary goal of unit testing is to take the smallest piece of testable software in the application, isolate it from the remainder of the code, and determine whether it behaves exactly as you expect. Each unit is tested separately before integrating them into modules to test the

interfaces between modules. Unit testing has proven its value in that a large percentage of defects are identified during its use. Unit testing is a software verification and validation method where the programmer gains confidence that individual units of source code are fit for use. A unit is the smallest testable part of an application. In procedural programming a unit may be an individual program, function, procedure, etc., while in object-oriented programming, the smallest unit is a class, which may belong to a base/super class, abstract class or derived/child class. Ideally, each test case is independent from the others: substitutes like method stubs, mock objects, fakes and test harnesses can be used to assist testing a module in isolation. Unit tests are typically written and run by software developers to ensure that code meets its design and behaves as intended. Its implementation can vary from being very manual (pencil and paper) to being formalized as part of build automation.

5.2 Integration Testing

Integration testing, also known as integration and testing(I&T), is a software development process which program units are combined and tested as groups in multiple ways. In this context, a unit is defined as the smallest testable part of an application. Integration testing can expose problems with the interfaces among program components before trouble occurs in real-world program execution. Integration testing is a component of Extreme Programming (XP), a pragmatic method of software development that takes a meticulous approach to building a product by means of continual testing and revision. There are two major ways of carrying out an integration test, called the bottom-up method and the top-down method. Bottom-up integration testing begins with unit testing, followed by tests of progressively higher-level combinations of units called modules or builds. In top-down integration testing, the highest-level modules are tested first and progressively lower-level modules are tested after that. In a comprehensive software development environment, bottom-up testing is usually done first, followed by top-down testing.

5.3 Validation testing:

At the validation level, testing focuses on user visible actions and user recognizable output from the system. Validations testing is said to be successful when software functions in a manner that can be reasonably expected by the customer. Two types of validation testing

- Alpha testing is simulated or actual operational testing by potential users/customers or an independent test team at the developers site. Alpha testing is often employed for off-the-shelf software as a form of internal acceptance testing, before the software goes to beta testing.

- Beta testing comes after alpha testing. Versions of the software, known as beta version, are released to a limited audience outside of the programming team. The software is released to groups of people so that further testing can ensure the product has few faults or bugs. Sometimes, beta versions are made available to the open public to increase the feedback field to a maximal number of future user's.

Gray box testing Grey box testing is the combination of black box and white box testing. Intention of this testing is to find out defects related to bad design or bad implementation of the system. it is used for web application.

Chapter 6: Limitations

6. Limitations

Following are the limitations of our application:

Delay in the delivery: In case of offline shopping, you can receive the product then and there. But, this does not happen in online shopping. Even though it hardly takes 10-15 minutes to buy the product online, by the time it reaches your hands, it would be more than 4-5 days. During the big sales, e-commerce portals may take too long to deliver the product.

You can't touch the product: The sad part of online shopping is, you cannot touch the product and feel how it is. You can just see the image and read the description. Online shopping is not suitable for people who wish to buy the product only after trying it or by touching it.

You cannot bargain: Indians are good at bargaining. You can bargain only in case of offline shopping, not in the case of online shopping. In online shopping, you get cash backs, discounts, and coupons, but this is not the same as bargaining. Trust me if one is good at bargaining, he can save a lot of money during offline shopping.

Hidden costs and shipping charges: When you first see the product on a portal, it generally looks cheaper. But when you proceed for the payment, the extra charges like shipping charges, tax and packing charges are added. These charges will make the product expensive vis-a-vis the local store. Some portals offers free shipping if you shop more than a certain amount. Sometimes just to avail free shipping, you end up shopping more than your requirement.

Lack of interaction: In case of offline shopping, sales assistants shower personal attention on customers and give complete details on the product. If you have any queries, you can ask right there. But, this does not happen in the case of online shopping. All you can do is see the picture and read the description. Some portals allow shoppers check the customer reviews.

Returning the product: There is an option to return the product, if you do not like it. But again, it is a big headache. The return policy differs from one company to other. In case of some online shopping portals, customers have to bear the cost of returning the product. If you return the product, you will not be paid shipping charges which you had paid earlier. If you are shopping for cosmetics like a lipstick, they can't be returned.

Chapter 7: Summary and Conclusions

7. Summary and Conclusions

In day to day life, we will need to buy lots of goods or products from a shop. It may be food items, electronic items, house hold items etc. Now a days, it is really hard to get some time to go out and get them by ourselves due to busy life style or lots of works.

In order to solve this, B2C E-Commerce websites have been started. Using these websites, we can buy goods or products online just by visiting the website and ordering the item online by making payments online.

Technology has made significant progress over the years to provide consumers a better online shopping experience and will continue to do so for years to come. With the rapid growth of products and brands, people have speculated that online shopping will overtake in-store shopping.

However, the availability of online shopping has produced a more educated consumer that can shop around with relative ease without having to spend a large amount of time.

In exchange, online shopping has opened up doors to many small retailers that would never be in business if they had to incur the high cost of owning a brick and mortar store. At the end, it has been a win-win situation for both consumer and sellers.

Chapter 8: Future Scope

8. Future Scope

There is a huge scope and future in E-commerce industry as this industry is growing in all over the world with great revenue. The great Ecommerce websites like Flipkart, Amazon, Myntra are among on the top.

The project made here is just to ensure that this product could be valid in today real challenging world. Here all the facilities are made and tested. Currently the system works for limited number of administrators to work. In near future it will be extended for many types of insurance policies so that efficiency can be improved.

Bibliography

Books which I referred for the reference:

- Core Java 2 Volume I and II, by Cay S. Horstmann and Gary Cornell
- The Complete Reference JSP 2.0 by Hanna
- Beginning JavaScript 2nd Edition, by Wilton
- The Complete Reference MYSQL
- The Complete Reference HTML

Websites referred:

- www.google.com for Problem Solving
- www.w3school.com for designing the forms.
- www.slideshare.com for detailing of the project