A Report on

E-Commerce Website for Computer Components & Accessories

Submitted for partial fulfillment of award of

BACHELOR OF TECHNOLOGY

degree

In

Computer Science & Engineering

By

VIKAS SINGH (1503010243)
TARUN KUMAR KESARWANI (1503010235)
SWAPNIL SINGH (1503010232)

Name of Guide
Dr. DIKSHA DANI

INDERPRASTHA ENGINEERING COLLEGE, GHAZIABAD,

Dr. A P J ABDUL KALAM TECHNICAL UNIVERSITY
LUCKNOW
DECEMBER   2018

<u>Certificate</u>

Certified that **<u>Vikas Singh, Tarun Kumar Kesarwani, Swapnil Singh</u>** has carried out the project work presented in this report entitled **<u>"E-Commerce Website for Computer Components & Accessories"</u>** for the award of **<u>Bachelor of Technology</u>** from Inderprastha Engineering College, Ghaziabad, under my supervision. The report embodies result of original work and studies carried out by Student himself/herself and the contents of the report do not form the basis for the award of any other degree to the candidate or to anybody else.

Dr. Diksha Dani

Designation: Professor

Address:

Date:

Acknowledgement

We take this opportunity to thank our teachers and friends who helped us throughout the project.

First and foremost I would like to thank my guide for the project **Dr. Diksha Dani , Professor, Computer Science Department** for her valuable advice and time during development of project.

We would also like to thank **Dr. Rekha Kashyap (HOD, Computer Science Department**) for her constant support during the development of the project.

Vikas Singh   Tarun Kumar Kesarwani

1503010243   1503010235

Signature: Signatue:

Swapnil Singh

1503010232

Signature:

Declaration

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

Signature:-

Vikas Singh (1503010243):

Tarun Kumar Kesarwani (1503010235):

Swapnil Singh (1503010232):

Date:

Abstract

Electronic Commerce is process of doing business through computer networks. A person sitting on his chair in front of a computer can access all the facilities of the Internet to buy or sell the products.

Unlike traditional commerce that is carried out physically with effort of a person to go & get products, ecommerce has made it easier for human to reduce physical work and to save time.   E-Commerce which was started in early 1990's has taken a great leap in the world of computers, but the fact that has hindered the growth of e-commerce is security. Security is the challenge facing e-commerce today & there is still a lot of advancement made in the field of security.

The main advantage of e-commerce over traditional commerce is the user can browse online shops, compare prices and order merchandise sitting at home on their PC.

For increasing the use of e-commerce in developing countries the B2B e-commerce is implemented for improving access to global markets for firms in developing countries. For a developing country advancement in the field of e-commerce is essential. The research strategy shows the importance of the e-commerce in developing countries for business applications.

TABLE of CONTENTS

LIST of TABLES

LIST of FIGURES

1. INTODUCTION

Procomp.com is an e-commerce website allows consumers to electronically exchange goods and services with no barriers of time or distance. Electronic commerce has expanded rapidly over the past five years and is predicted to continue at this rate, or even accelerate. The demand for the computers is also very high in almost all the sections of society like education, home & offices etc.

1.1 Problem Definition

The purpose of the document is to collect and analyze all assorted ideas that have come up to define the system, its requirements with respect to consumers. The purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. Developing an online platform is a job that requires equal share of technological expertise and sound decision making. Principally built on PHP, this website offers human experience which makes the shopping experience as satisfying as in a real store. Programming engineers make it sure that the site is high on responsiveness and low on tech errors, which is the most favorable selling point of this online store.

1.2 Objective

Procomp.com will provide door to door delivery of all the computer components, accessories and other digital products in almost all the parts of the nation. It will support various payment systems like COD (Cash On Delivery), Debit/Credit cards, Net-banking etc. It will also have support for EMI facility.
This document aims to describe the Functionality, External Interfaces, Attributes and Design Constraints imposed on Implementation of the software system described throughout the rest of the document. Throughout the description of the software system, the language and terminology used should unambiguous and consistent throughout the document.

1.3 Overview

E-commerce is a term for any type of business, or commercial transaction that involves the transfer of information across the Internet. It covers a range of different types of businesses, from consumer based retail sites, through auction or music sites, to business exchanges trading goods and services between corporations. It is currently one of the most important aspects of the Internet to emerge.

1.3.1 Functional Requirements

a) External Interface Requirement

a.1) User Interface

- Login or Signup Page
- Homepage containing products according to customer's interest.
- There will be a screen displaying information about all products that user searches. If the customers select any product then it will open another tap about the product information.

a.2) Hardware Interface Requirements

Since the application must run over the internet, all the hardware shall require to connect internet will be hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable. The system require Database also for the store the any transaction of the system like MYSQL etc.

a.3) Software Interface Requirements

Specify the use of other required software products and interfaces with other application systems. For each required software product, include:

❖ **XAMPP:** XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages.
Version- 7.0.9
Size- 120 MB
OS- MacOS 7.1+, Windows XP or above
* Web browser with HTML5 support.

❖ **WordPress:** WordPress is a free and open-source content management system based on PHP & MySQL. Features include a plugin architecture and a template system. It is most associated with blogging but supports other types of web content including more traditional mailing lists and forums, media galleries, and online stores.
Version- 5.0.3
Size- 90MB
* PHP 5.2.4 or above, MySQL 5.0.15 above or MariaDB.

a.4) Communication Interface

The e-store system shall use the HTTPS protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite. The user must have SSL certificate licensing registered web browser.

b) Memory Constraints

Specify any applicable characteristics and limits on primary and secondary memory. Don't just make up something here. If all the customer's machines have only 128K of RAM, then your target design has got to come in under 128K so there is an actual requirement. You could also cite market research

here for shrink-wrap type applications "Focus groups have determined that our target market has between 256-512M of RAM, therefore the design footprint should not exceed 256M." If there are no memory constraints, so state.

c) Site Adaption Requirements

In this section:
(1) Define the requirements for any data or initialization sequences that are specific to a given site, mission, or operational mode.
(2) Specify the site or mission-related features that should be modified to adapt the software to a particular installation.

c.1) Computer Hardware Requirements

All the customer's machines have only 128K of RAM, then your target design has got to come in under 128K so there is an actual requirement. You could also cite market research here for shrink-wrap type applications "Focus groups have determined that our target market has between 256-512M of RAM, therefore the design footprint should not exceed 256M." If there are no memory constraints, so state.

c.2) Peripheral Requirements

There are many different peripheral devices, but they fall into three general categories:

Input devices- such as a mouse and a keyboard
Output devices- such as a monitor and a printer
Storage devices- such as a hard drive or flash drive

1.3.2 Non-Functional Requirements:

a) Performance Requirements:

The product shall be based on web and has to be run from a web server. The product shall take initial load time depending on internet connection strength which also depends on the media from which the product is run. The performance shall depend upon hardware components of the client/customer.

b) Reliability:

The system provides storage of all databases on redundant computers with automatic switchover. The reliability of the overall program depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes.

c) Availability:

Specify the factors required to guarantee a defined availability level for the entire system such as checkpoint, recovery, and restart. This is somewhat related to reliability. Some systems run only infrequently on-demand (like MS Word). Some systems have to run 24/7 (like an e-commerce web site). The required availability will greatly impact the design. What are the requirements for system recovery from a failure? "The system shall allow users to restart the application after failure with the loss of at most 12 characters of input".

d) Security:

• Data Transfer -
The system shall use secure sockets in all transactions that include any confidential customer information. The system shall automatically log out all customers after a period of inactivity. The system shall confirm all transactions with the customer's web browser. The system shall not leave any cookies on the customer's computer containing the user's password or confidential information.

• Data Storage -
The customer's web browser shall never display a customer's password. It shall always be echoed with special characters representing typed characters. The customer's web browser shall never display a customer's credit card number after retrieving from the database. It shall always be shown with just the last 4 digits of the credit card number. The system's back-end servers shall never display a customer's password. The customer's password may be reset but never shown. The system's back-end servers shall only be accessible to

authenticated administrators. The system's back-end databases shall be encrypted and within company's perimeter.

e) Maintainability:

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the program will be done. Also the software design is being done with modularity in mind so that maintainability can be done efficiently.

f) Portability:

Specify attributes of software that relate to the ease of porting the software to other host machines and/or operating systems. This may include:

o   Percentage of components with host-dependent code
o   Percentage of code that is host dependent
o   Use of a proven portable language
o   Use of a particular compiler or language subset
o   Use of a particular operating system.

2. LITERATURE REVIEW

2.1 Existing System:

Recent research clearly indicates that electronic commerce, commonly referred to as e- commerce, presently shapes the manner in which people shop for products. The GCC countries have a rapidly growing market and characterized by a population that becomes wealthier. As such, retailers have launched Arabic-language websites as a means to target this population. Secondly, there are predictions of increased mobile purchases and an expanding internet audience The growth and development of the two aspects make the GCC countries to become larger players in the electronic commerce market with time progress. Specifically, research shows that e-commerce market is expected to grow to over $20 billion by the year 2020 among these GCC countries. The e-commerce market has also gained much popularity among the western countries, and in particular Europe and the U.S. These countries have been highly characterized with consumer-packaged-goods (CPG). However, trends show that there are future signs of a reverse. Similar to the GCC countries, there has been increased purchase of goods and services in online channels rather than offline channels. Activist investors are trying hard to consolidate and slash their overall cost and the governments in western countries continue to impose more regulation on CPG manufacturers. In these senses, CPG investors are being forced to adapt e-commerce as it is effective as a well as a means for them to thrive.

2.2 Proposed System:

E-commerce brings convenience for customers as they do not have to leave home and only need to browse website online, especially for buying the products which are not sold in nearby shops. It could help customers buy wider range of products and save customers' time. Consumers also gain power through online shopping. They are able to research products and compare prices among retailers. Also, online shopping often provides sales promotion or discounts code, thus it is more price effective for customers. Moreover, e-commerce provides products' detailed information; even the in-store staff cannot offer such detailed explanation. Customers can also review and track the order history online. E-commerce technologies cut transaction costs by allowing both manufactures and consumers to skip through the intermediaries.

This is achieved through by extending the search area best price deals and by group purchase. The success of e-commerce in urban and regional levels depend on how the local firms and consumers have adopted to e-commerce.

However, e-commerce lacks human interaction for customers, especially who prefer face-to-face connection. Customers are also concerned with the security of online transactions and tend to remain loyal to well-known retailers. In recent years, clothing retailers such as Tommy Hilfiger have started adding Virtual Fit platforms to their e-commerce sites to reduce the risk of customers buying the wrong sized clothes, although these vary greatly in their fit for purpose. When the customer regret the purchase of a product, it involves returning goods and refunding process. This process is inconvenient as customers need to pack and post the goods.

If the products are expensive, large or fragile, it refers to safety issues. E-commerce helps create new job opportunities due to information related services, software app and digital products. It also causes job losses. The areas with the greatest predicted job-loss are retail, postal, and travel agencies. The development of e-commerce will create jobs that require highly skilled workers to manage large amounts of information, customer demands, and production processes. In contrast, people with poor technical skills cannot enjoy the wages welfare. On the other hand, because e-commerce requires sufficient stocks that could be delivered to customers in time, the warehouse becomes an important element. Warehouse needs more staff to manage, supervise and organize, thus the condition of warehouse environment will be concerned by employees.

2.3 Feasibility Study:

E-commerce or Electronic commerce is the buzzword of the modern day. In simple terms, it's just buying and selling of product and services through internet. But in a broad sense, it includes the entire online process of developing, marketing, selling, delivering, servicing and paying for products and services. With the widespread usage of internet, the sphere of ecommerce has widened dramatically.

Today Ecommerce is an integral part of business because of various reasons like:

• Ease of use.
• Accessibility all across the globe.
• Great variety & easy compassion of products from different vendors.
• Trusted payment channels.
• Shopping can be done sitting in the convenience of home shopping, hence it is less time consuming.

It is therefore very important for any new entrepreneur to understand the significance of E- Commerce and should know how to utilize this tool for the growth and development of business. So, whether you have an existing business or launching a brand new business, whether the volume of your business is large or small, you can always generate profit by demonstrating your products or services online, thereby acquiring a large amount of viewer exposure. In concise, buying and selling will result in profits and returns.

3. SOFTWARE REQUIREMENT ANALYSIS

3.1 Modules and Analysis-

a) Search:

User to enter the search text on the screen and display matching products based on the search. Enable user to select multiple options on the screen to search. Display only 10 matching result on the current screen. Enable user to navigate between the search results. Notify the user when no matching product is found on the search.

b) Add Items:

Provide an interface to all the sellers to add product description and price through their account. List all the sellers for a common product they offer to sell and prioritize them based on percent of discount.

c) Cart:

The system shall provide shopping cart during online purchase. The system shall allow user to add/remove products in the shopping cart. Later customer can confirm orders for purchase.

d) Payment Methods:

The system shall display available payment methods for payment. The system shall allow user to select the payment method for order. Allow user to select any of the desired payment method available.

e) Tracking:

The system shall allow user to enter the order information for tracking. The system shall display the current tracking information about the order. The system notifies seller about delivery of product to the consumer.

f) Return & Exchange:

The system allows customers to return the item back to the seller in case he or she doesn't like the product and get the feedback of customer. The system allows customer to exchange the product with seller in case of delivery of any defective item and get feedback from customer. Notify seller about the customer's reason and feedback about the product.

g) Support:

The system shall provide online help, FAQ's customer support, and sitemap options for customer support. The system shall allow user to select the support type he wants. The system shall allow user to enter the customer and product information for the support. The system shall display user contact of seller and Procomp support desk. The system shall display the online help upon request. The system shall display the FAQ's upon request.

3.2 Use Case Diagram

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved.
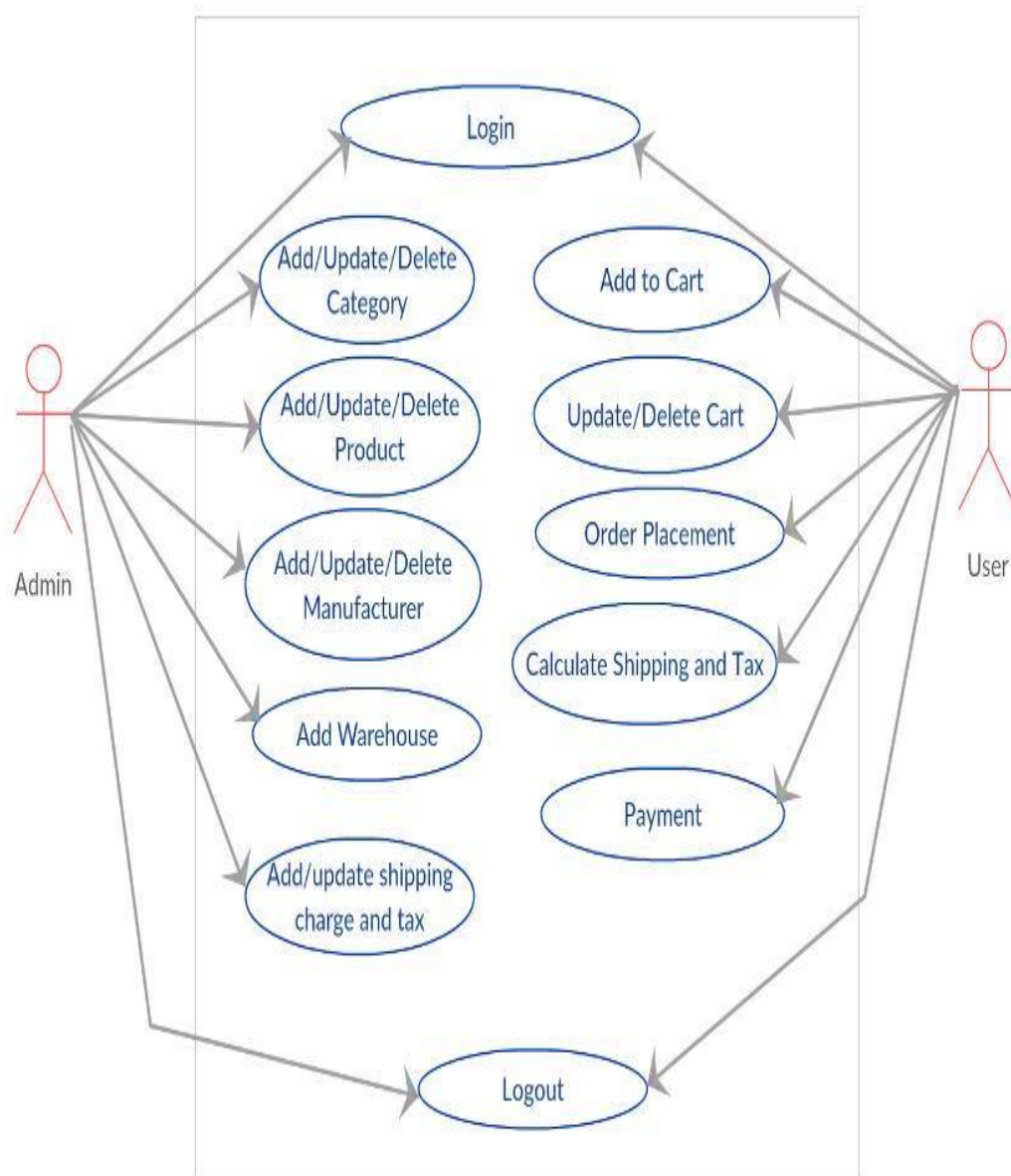
b) State Chart Diagram

- It illustrates the in-trusting events and state of an object and behaviours of an object is reaction to an event. Transaction shows as allows labelled with theirs event. It is included with initial pseudo state and final end state.
- The state chart diagram of Online shopping website has 5 stages: Idle, New sale, Get specification, Prompt Error and generate receipt. In each state the system interacts with the user and gets desired output based on the given inputs.
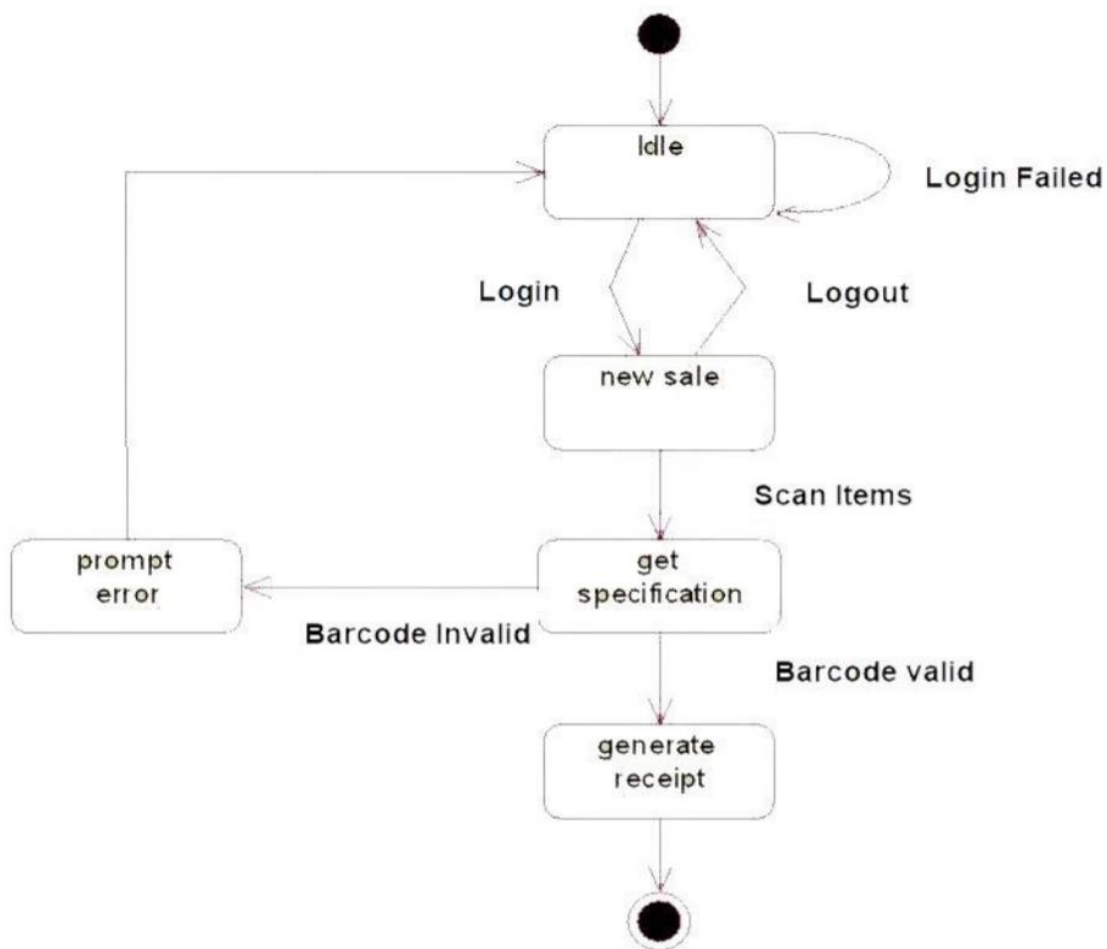
4. SYSTEM ANALYSIS & DESIGN –

4.1 Class Diagram:

- Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

- Class diagram shows a collection of classes, interfaces, associations, collaborations, and constraints. It is also known as a structural diagram.
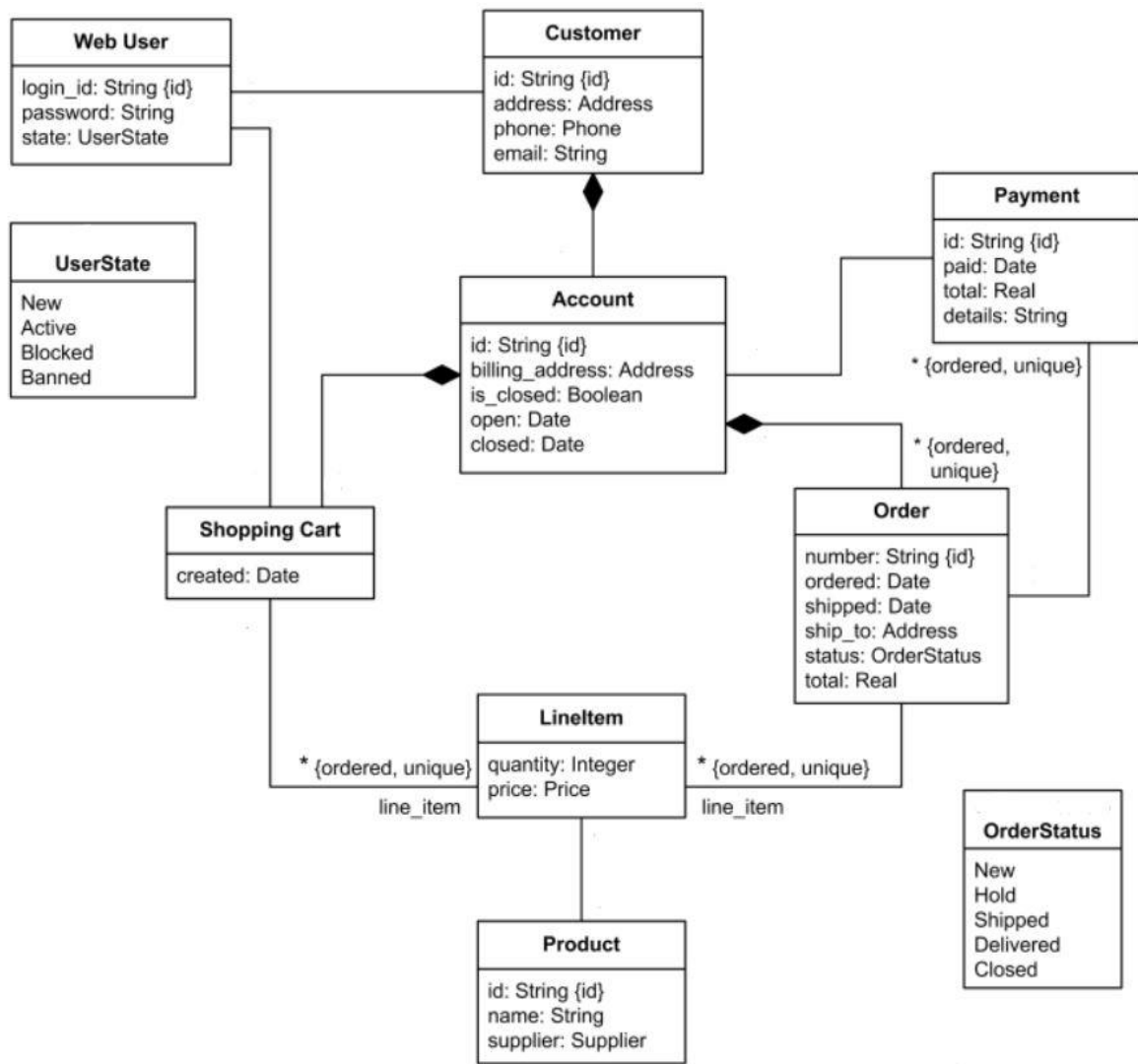
4.2 Sequence Diagrams:

- A sequence diagram illustrates in a kind of format in which each object interacts via messages. It is generalization between two or more specification diagram.
- Sequence diagram is an interaction over view diagram. It provides a big picture over view of now a set of interaction is related in terms of logic and process flow.

a) User Login Sequence Diagram
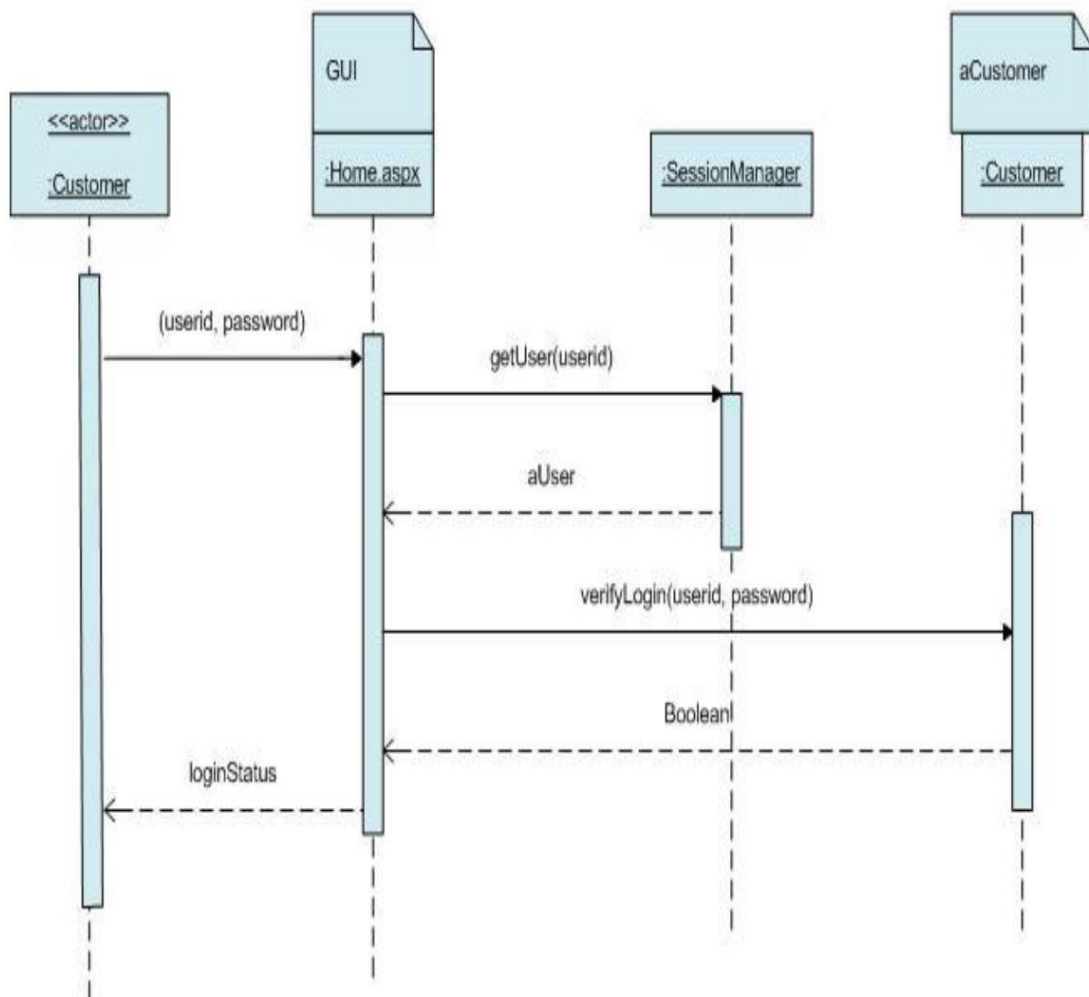
b) Search sequence Diagram
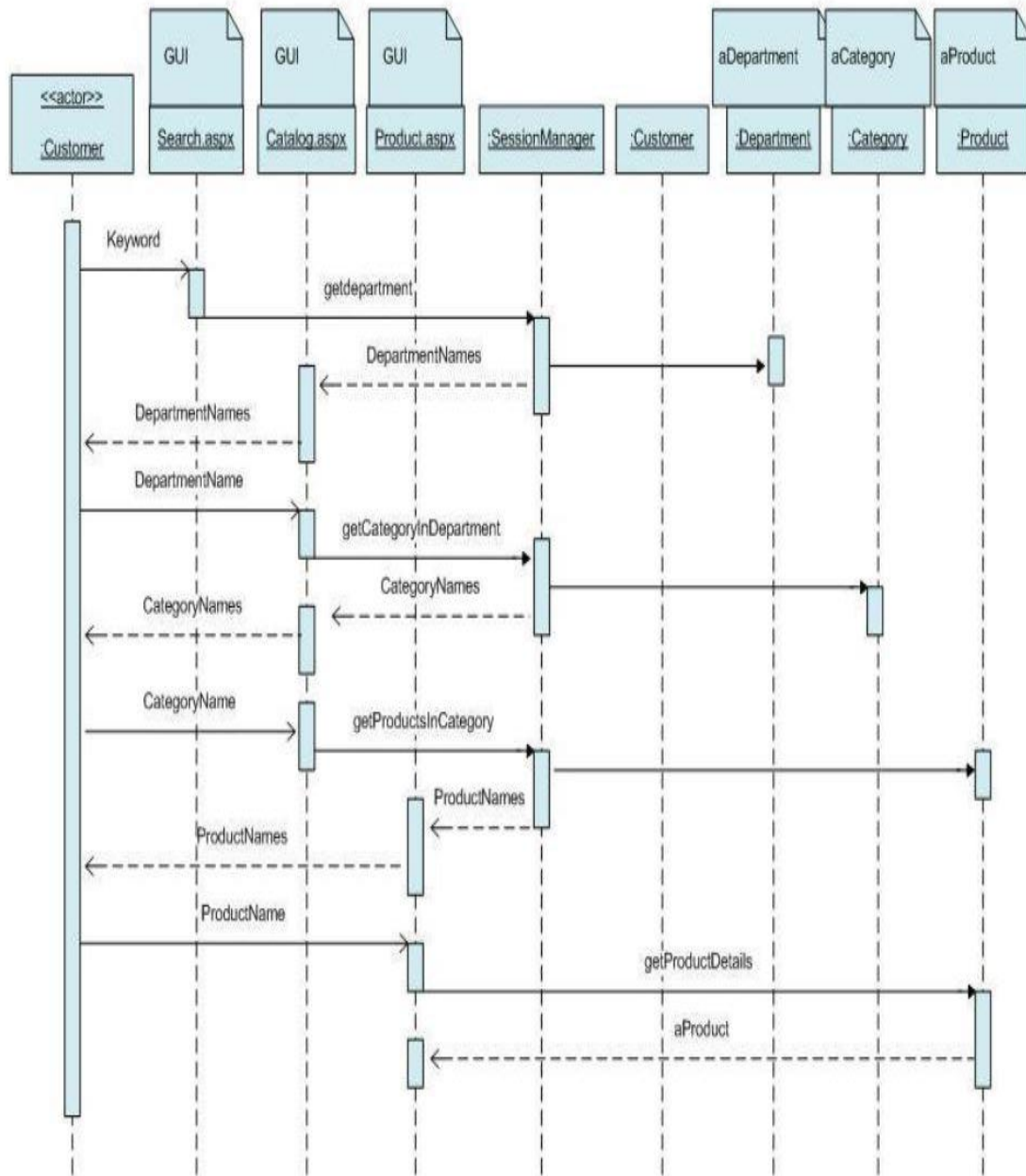
c) Buying Or Add Product Sequence Diagram
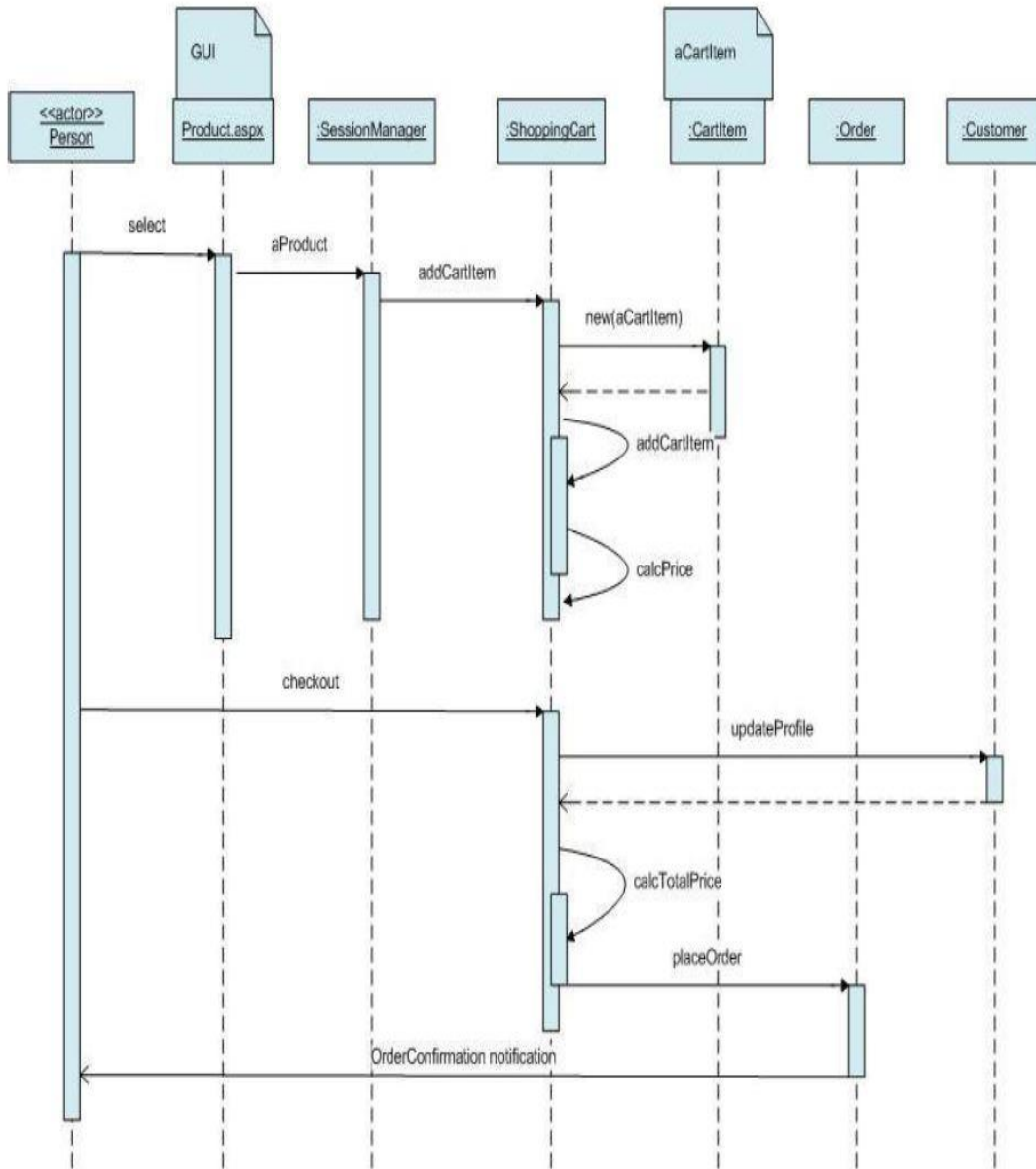
d) Place Order Sequence Diagram
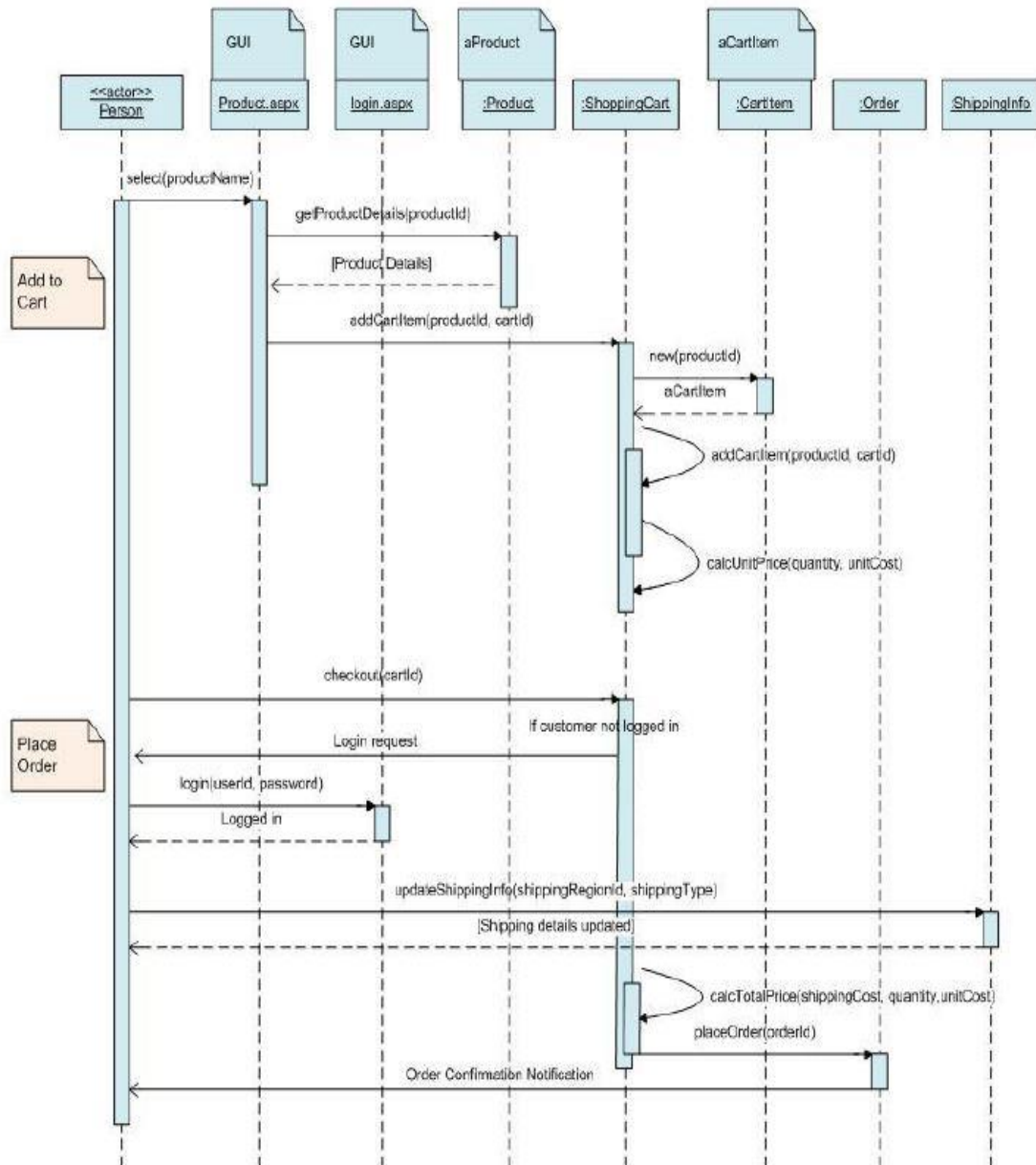
4.3 Activity Diagram

The activity diagram used to describe flow of activity through a series of actions. Activity diagram is an important diagram to describe the system. The activity described as an action or operation of the system.

- Activity diagram shows sequential and parallel activities in a process. They are useful for modeling business, workflows, the data flows and complex algorithm.
- A UML activity diagram offers rich notation to flows a sequential of activities. It may be including parallel activities. It may be applied to any purpose, but it is popular for visualization of business workflows and use case.

a) Activity Diagram for User Side
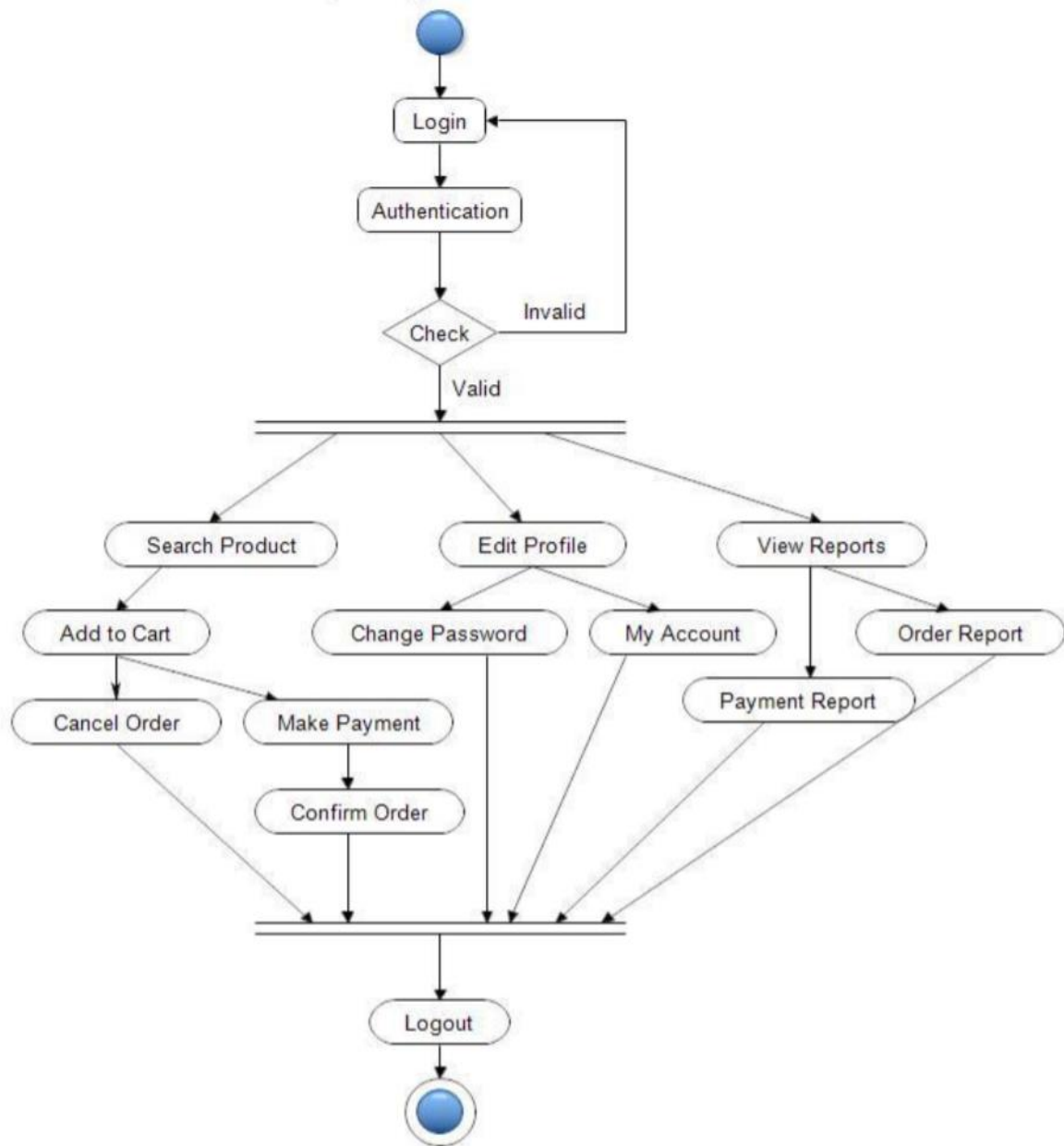
b) Activity Diagram for Seller Side
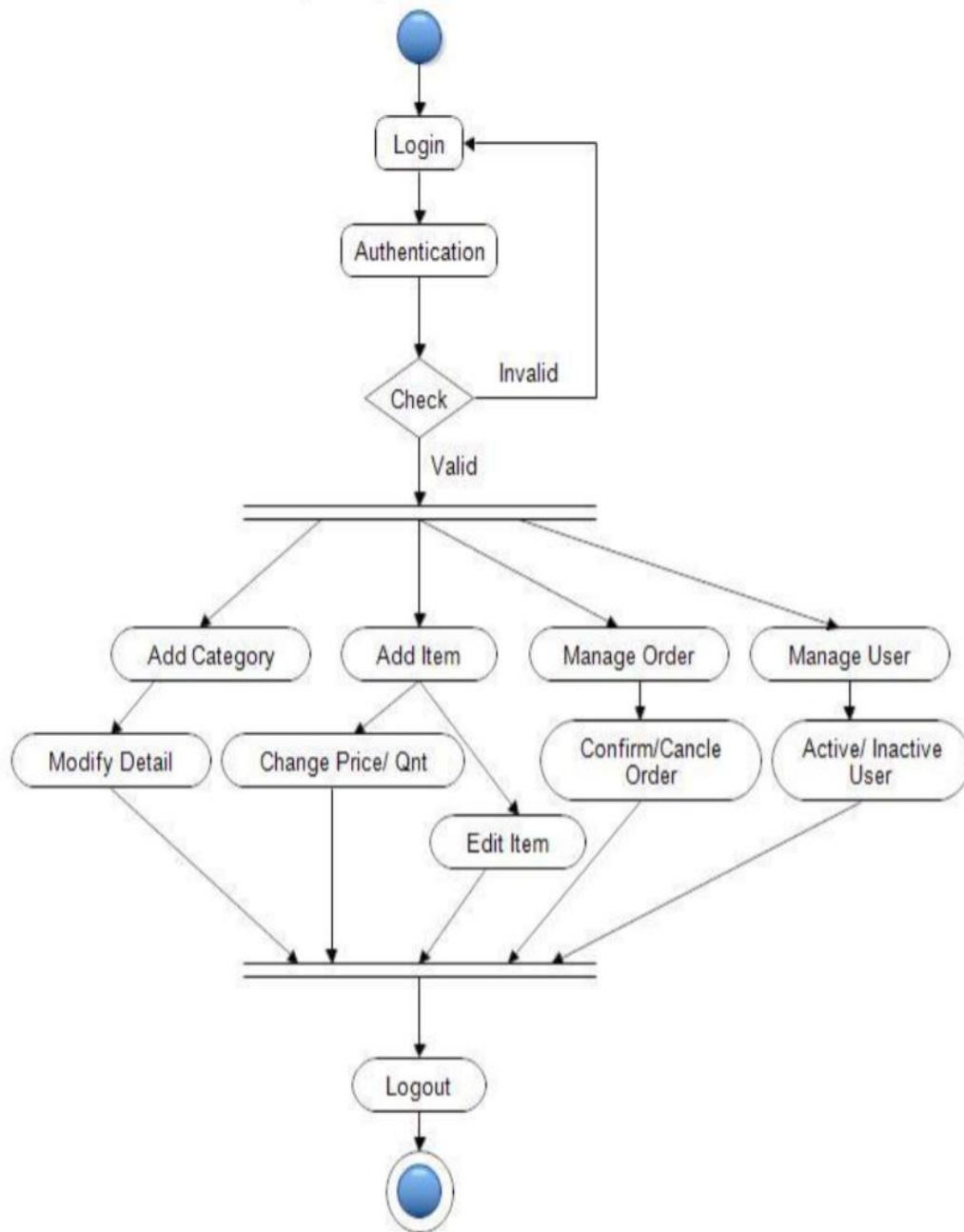
4.4 Data Flow Diagram

A Data Flow Diagrams is a structured analysis and design tool that can be used for flowcharting in place of, or in association with, information-oriented and process-oriented systems flowcharts. A DFD is a network that describes the flow of data and the processes that change, or transform, data throughout a system. This network is constructed by using a set of symbols that do not imply a physical implementation.

a) Context level (0-level DFD)

o – Level DFD for Online shopping website project

b) 1-Level Seller Side DFD

The Seller side DFD describe the functionality of Seller. Seller can first add category of item and then add items by category wise and he can manage order and payment detail.
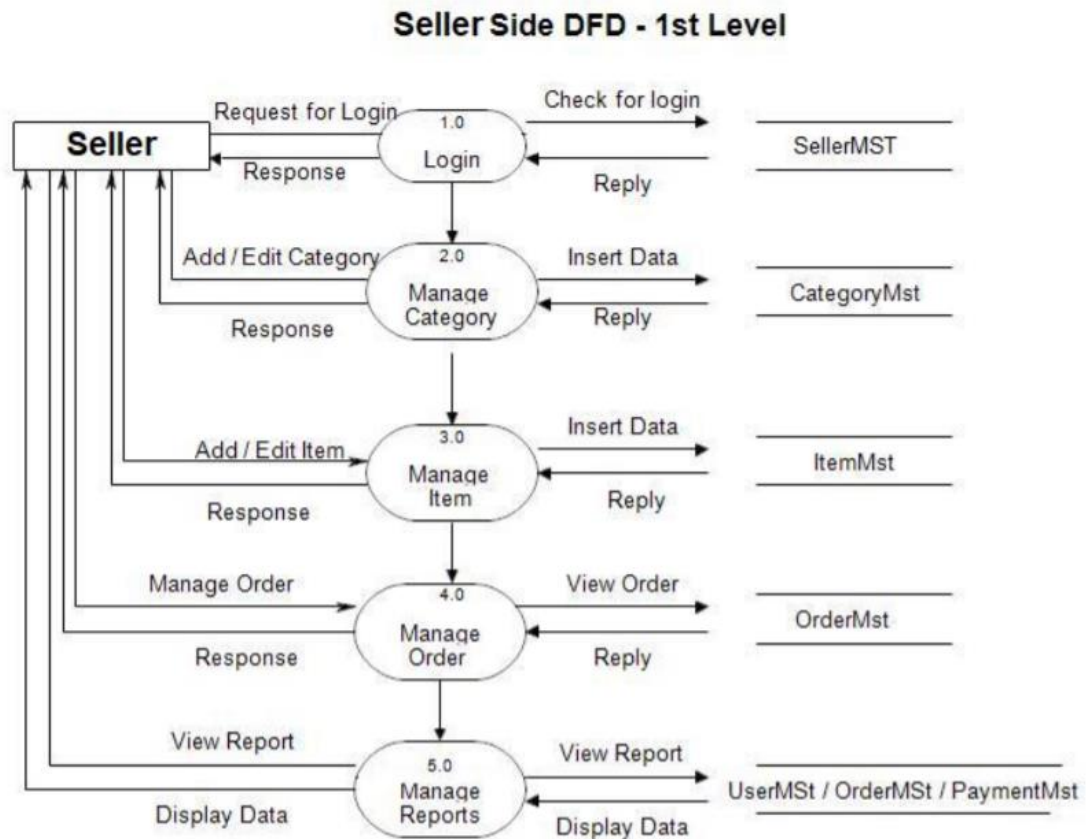
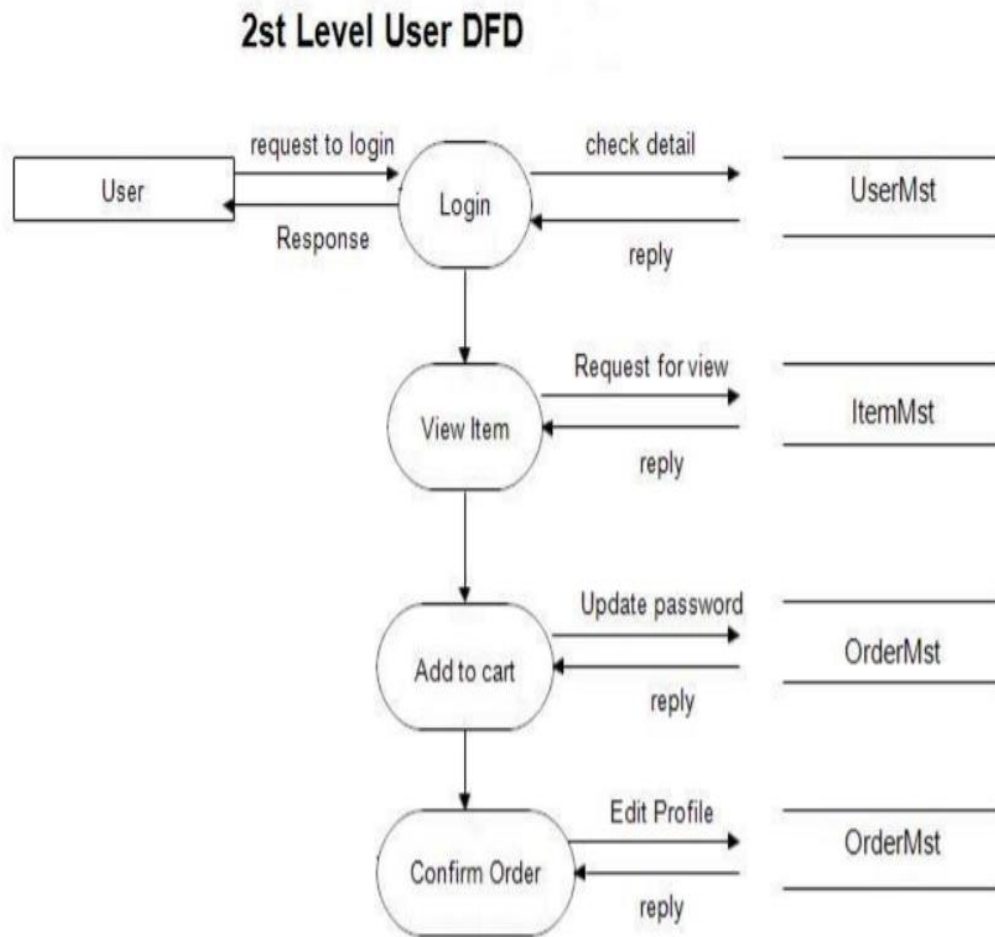1st Level – Seller Side Data Flow Diagram

c) Level-2 Seller Side DFD
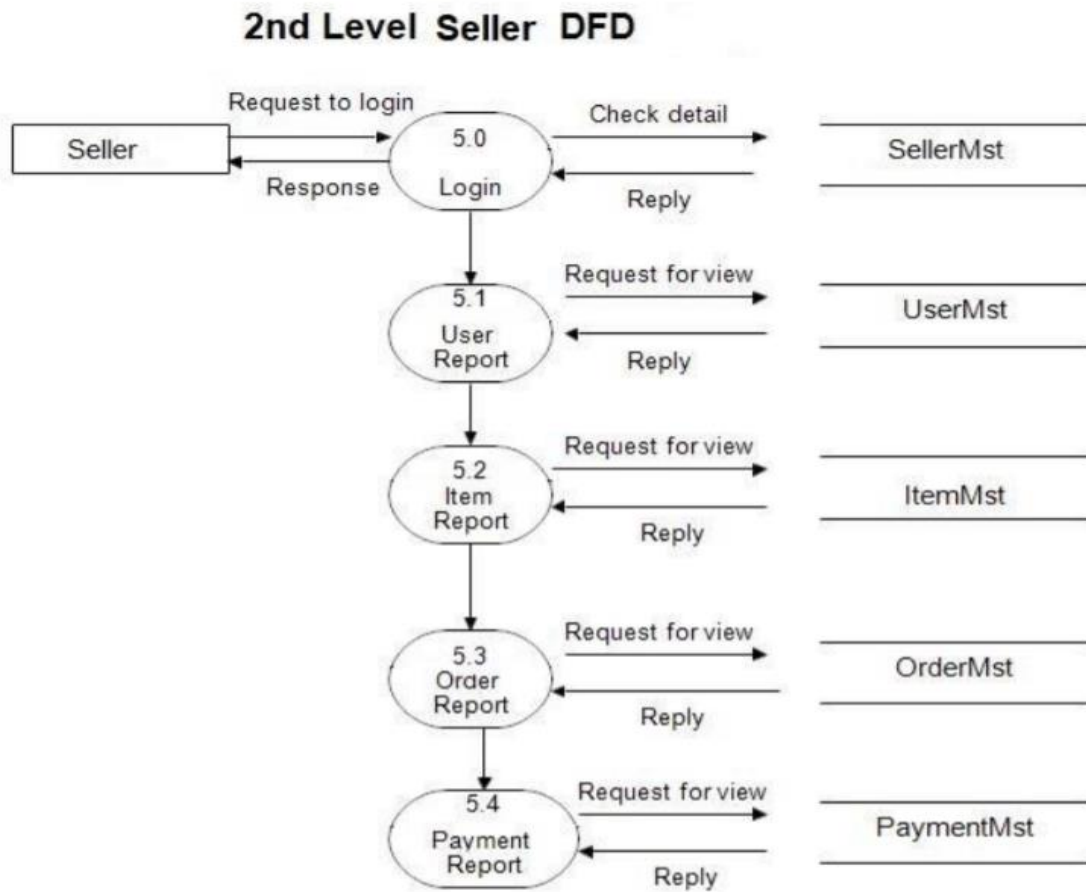
Seller side DFD for online shopping website project

d) 1-Level User Side DFD

The user is all people who operate or visit our website. User is a customer of a website. User can first select product for buy, user must have to register in our system for purchase any item from our website. After register he can login to site and buy item by making online payment through any bank debit card or credit card.

1st Level User side DFD

e) Level-2 User Side DFD

2st Level User DFD

request to login — check detail

User → Login → UserMst

Response — reply

View Item — Request for view — ItemMst — reply

Add to cart — Update password — OrderMst — reply

Confirm Order — Edit Profile — OrderMst — reply
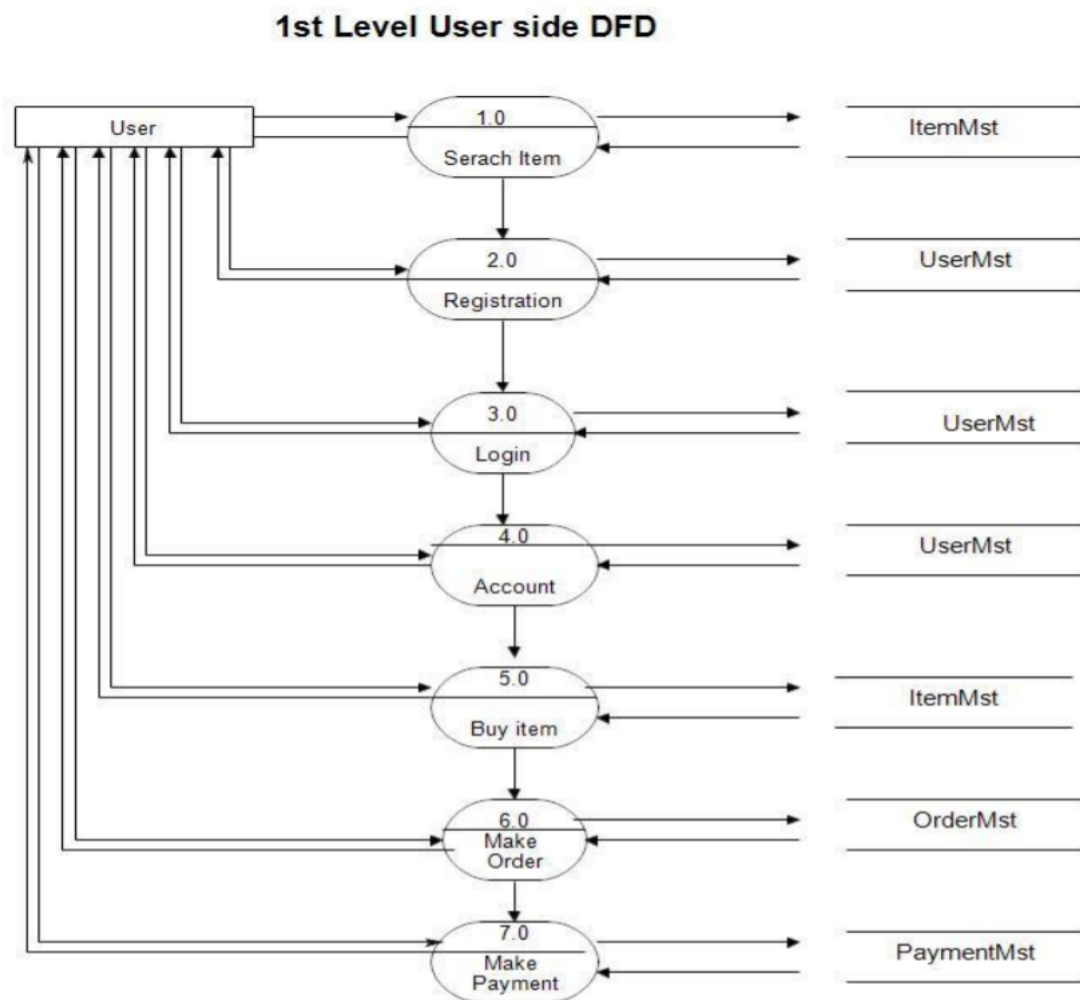
DFD for online shopping website project

4.5 Database Design

A database design is a collection of stored data organized in such a way that the data requirements are satisfied by the database. The general objective is to make information access easy, quick, inexpensive and flexible for the user. There are also some specific objectives like controlled redundancy from failure, privacy, security and performance. A collection of relative records make up a table. To design and store data to the needed forms database tables are prepared.

Two essential settings for a database are:

1. Primary key: - The field that is unique for all the record occurrences.
2. Foreign key: - The field used to set relation between tables. Normalization is a technique to avoid redundancy in the tables.

4.5.1 ER- Diagram:

The purpose of draw this diagram to show the relationship among the objects and personal attributes that belong to them.

a) User ER-Diagram:-

- Customer can place many order (one to one relationship) as they wish when in Procomp Online Shopping Store and vice versa. In order to have a list of order, we must have at least one customer. There may be situation in which placement order action is not necessary from the customer.
- Order can contains many order items details in the list and vice versa is part of the order. In order to have an order items details, we must have at least one order taken from the customer.
- Visitors can view many categories as they wish in Procomp Online Shopping Store. (many to many relationship).
- Each category will contain many product (one to many relationship).
- The product will have the order items details.
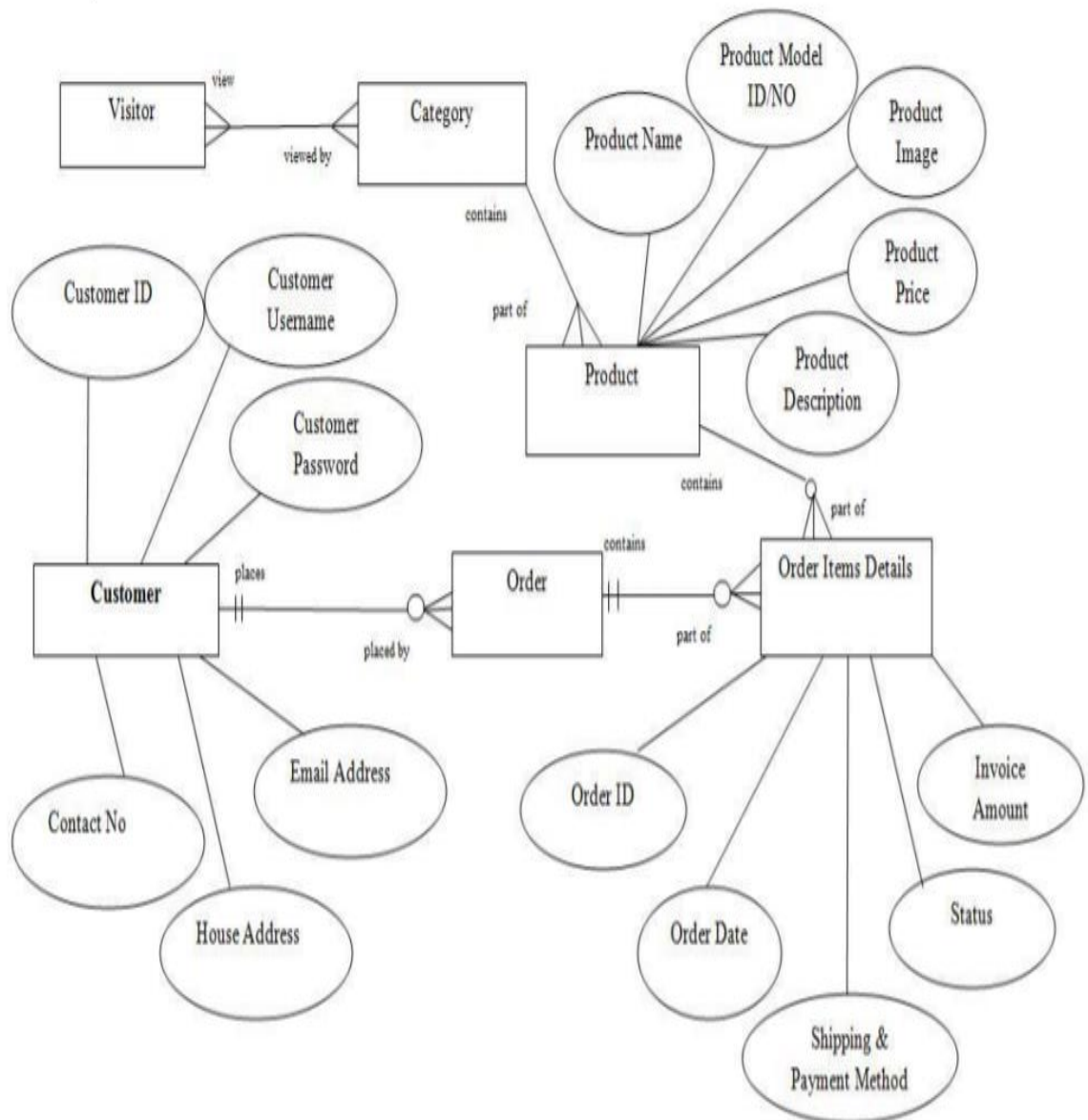
ER Diagram for User

4.5.2 Seller ER-Diagram:-

- Seller is provided with a control panel page at the Procomp Online Shopping Store with series of functions.
- The Control Panel contains edit file functions and website application functions.(Assumption : In order to have Edit File & Website Application functions, we must have a control panel first)s. There may be a situation in which the function is not necessary to implement.
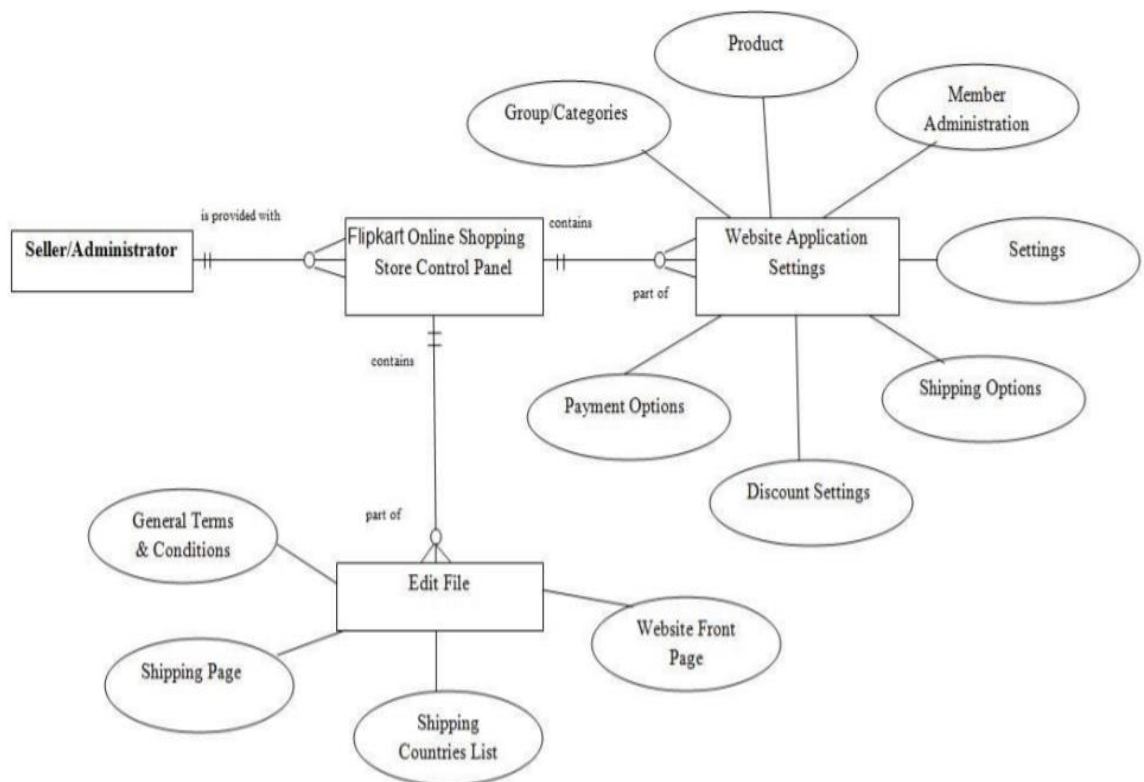
ER Diagram for Seller

5. CORE MODULES

5.1 Database Tables Design

a) Category Table

Column name	Data type	Key contraints
Cat_id	**Int**	**Primary key**
Cat_name	**Char (20)**	**Not NULL**

b) Product Table

Column name	Data type	Key constraints	Extra
Prod_id	Int	**Primary key**	**Auto Increment**
Cat_id	**Int**	**Foreign key**	
Prod_name	**Char(20)**	**Not NULL**	
Prod_desc	**Char(100)**		
Price	**Double**	**Not NULL**	
Available	**Int**		
Add_date	**Date**	**Not NULL**	

c) Seller Login Table

Column name	Date type	Key constraints
Sellier_id	**Int**	**Primary key**
Password	**Char(20)**	**Not NULL**

d) Login Table

Column name	Data type	Key constraints
User_id	**Int**	**Primary key**
Password	**Char (20)**	**Not NULL**

e) Store Table

Column name	Data type	Key constraints
Order_no	**Int**	**Primary key**
Report	**Char (20)**	

f) Temp Table

Column name	Data Type	Key constraints
Prod_id	**Int**	**Froeign key**
Prod_name	**Char(20)**	**Not NULL**
Price	**Double**	**Not NULL**
Items	**Int**	**Not NULL**
User_id	**Int**	**Not NULL**
Purchase_date	**Date**	**Not NULL**
Order_no	**Int**	

g) User Table

Column name	Data type	Key constraints	Extra
User_id	**Int**	**Primary key**	**Auto increment**
Password	**Char (20)**	**Not NULL**	
User_name	**Char(20)**	**Not NULL**	
User_name	**Char (20)**	**Not NULL**	
Sex	**Char (6)**	**Not NULL**	
Address	**Char(40)**	**Not NULL**	
Date_of_birth	**Date**	**Not NULL**	
Date_of_register	**Date**	**Not NULl**	
Email	**Char(30)**	**Not NULL**	
Phone_no	**Char(10)**	**Not NULL**	

h) Order Table

Column name	Date type	Key constraints
Prod_id	**Int**	**Not NULL**
Prod_name	**Char(20)**	**Not NULL**
Price	**Double**	**Not NULL**
Items	**Int**	**Not NULL**
User_id	**Int**	**Not NULL**
Purchase_date	**Date**	**Not NULL**
Order_no	**Int**	**Primary key**

5.2 Major / important functions of the projects -

• Using e-commerce, organizations can expand their market to national and international markets with minimum capital investment. An organization can easily locate more customers, best suppliers, and suitable business partners across the globe.

• E-commerce helps organizations to reduce the cost to create process, distribute, retrieve and manage the paper based information by digitizing the information.

• E-commerce improves the brand image of the company.

• E-commerce helps organization to provide better customer services.

• E-commerce helps to simplify the business processes and makes them faster and efficient.

• E-commerce reduces the paper work.

• E-commerce increases the productivity of organizations. It supports "pull" type supply management. In "pull" type supply management, a business process starts when a request comes from a customer and it uses just-in-time manufacturing way.

Advantages to Customers

• It provides 24x7 support. Customers can enquire about a product or service and place orders anytime, anywhere from any location.

• E-commerce application provides users with more options and quicker delivery of products.

• E-commerce application provides users with more options to compare and select the cheaper and better options.

• A customer can put review comments about a product and can see what others are buying, or see the review comments of other customers before making a final purchase.

• E-commerce provides options of virtual auctions.

• It provides readily available information. A customer can see the relevant detailed information within seconds, rather than waiting for days or weeks.

• E-Commerce increases the competition among organizations and as a result, organizations provides substantial discounts to customers.

6. USER INTERFACE SCREENS

a) Home

b) Login/ Register Screen

c) Suggestion Section

d) Track Order

e) Product Page

Description   Specification   Reviews   More Offers

GIGABYTE Gaming Mouse XM300, 6400 DPI, Multi-color adjustable light, Omron Switch, Black, 4K Ready, Black

Categories: Components, Computers & Accessories, gaming, Mice

Related Products

Components, Computers &

GIGABYTE Keyboard Xtreme Gaming XK700

Components, Computers &

GIGABYTE Keyboard Xtreme Gaming FORCE

Components, Computers &

BenQ ZOWIE P-SR Mouse Pad for e-Sports

Components, Computers &

GIGABYTE Keyboard Xtreme Gaming FORCE

7. CONCLUSION

In general, today's businesses must always strive to create the next best thing that consumers will want because consumers continue to desire their products, services etc. to continuously be better, faster, and cheaper. In this world of new technology, businesses need to accommodate to the new types of consumer needs and trends because it will prove to be vital to their business' success and survival. E-commerce is continuously progressing and is becoming more and more important to businesses as technology continues to advance and is something that should be taken advantage of and implemented. From the inception of the Internet and e-commerce, the possibilities have become endless for both businesses and consumers. Creating more opportunities for profit and advancements for businesses, while creating more options for consumers.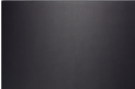 However, just like anything else, e- commerce has its disadvantages including consumer uncertainties, but nothing that cannot be resolved or avoided by good decision-making and business practices.

There are several factors and variables that need to be considered and decided upon when starting an e-commerce business. Some of these include: types of e-commerce, marketing strategies, and countless more. If the correct methods and practices are followed, a business will prosper in an e-commerce setting with much success and profitability.

8. Reference

- Reference for geeky operating environments www.w3techs.com
- Reference for user interfaces of e-commerce www.uianduxdesign.com
- Reference for functional diagram
  https://creately.com/diagram/example/hdkb50lr/SmartCart+DFD
- Reference for https://programformca.com

9. APPENDICES

9.1 Software Used

a) **WordPress-** WordPress is a free and open-source content management system based on PHP and MySQL. Features include a plugin architecture and a template system. It is most associated with blogging, but supports other types of web content including more traditional mailing lists and forums, media galleries, and online stores.

b) **Cloudflare -** Cloudflare, Inc. is a U.S. company that provides content delivery network services, DDoS mitigation, Internet security and distributed domain name server services. Cloudflare's services sit between the visitor and the Cloudflare user's hosting provider, acting as a reverse proxy for websites.

9.2 Simulator Used

- **XAMPP -** XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages.

9.3 Coding

a) Footer

```php
<?php
/**
 * The template for displaying the footer.
 *
 * Contains the closing of the #content div and all content after
 *
 * @package electro
 */
?>
            </div><!-- .col-full -->
        </div><!-- #content -->
        <?php do_action( 'electro_before_footer' ); ?>
        <footer id="colophon" class="site-footer">
            <?php
            /**
             * @hooked electro_footer_widgets - 10
             * @hooked electro_credit - 20
             */
            do_action( 'electro_footer' ); ?>
        </footer><!-- #colophon -->
        <?php do_action( 'electro_after_footer' ); ?>
</div><!-- #page -->
<?php wp_footer(); ?>
</body>
</html>
```

b) Home Header

```php
<?php
/**
 * The header for our theme.
 *
 * Displays all of the <head> section and everything up till <div id="content">
 *
 * @package electro
 */
remove_action( 'electro_before_content', 'electro_navbar', 10 );
?><!DOCTYPE html>
<html <?php language_attributes(); ?>>
<head>
<meta charset="<?php bloginfo( 'charset' ); ?>">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="profile" href="http://gmpg.org/xfn/11">
<link rel="pingback" href="<?php bloginfo( 'pingback_url' ); ?>">
<?php wp_head(); ?>
</head>
<body <?php body_class(); ?>>
<div id="page" class="hfeed site">
	<?php
	/**
	 * @hooked electro_skip_links - 0
	 * @hooked electro_top_bar - 10
	 */
	do_action( 'electro_before_header' ); ?>
	<header id="masthead" class="site-header header-v1">
		<div class="container <?php echo has_electro_mobile_header() ?
'hidden-md-down' : ''; ?>">
			<?php
			/**
```

```php
		 * @hooked electro_row_wrap_start - 0
		 * @hooked electro_header_logo - 10
		 * @hooked electro_navbar_search - 20
		 * @hooked electro_navbar_compare - 30
		 * @hooked electro_navbar_wishlist - 40
		 * @hooked electro_navbar_mini_cart - 50
		 * @hooked electro_row_wrap_end - 70
		 * @hooked electro_row_wrap_start - 80
		 * @hooked electro_vertical_menu - 90
		 * @hooked electro_secondary_nav - 95
		 * @hooked electro_row_wrap_end - 99
		 */
		do_action( 'electro_header_v1' ); ?>
	</div>
	<?php
	/**
	 * @hooked electro_handheld_header - 10
	 */
	do_action( 'electro_after_header' ); ?>
</header><!-- #masthead -->
<?php do_action( 'electro_before_content' ); ?>
<div id="content" class="site-content" tabindex="-1">
	<div class="container">
	<?php
	/**
	 * @hooked woocommerce_breadcrumb - 10
	 */
	do_action( 'electro_content_top' ); ?>
```

c) Header- 2

```php
<?php
/**
 * The header for our theme.
 *
 * Displays all of the <head> section and everything up till <div id="content">
 *
 * @package electro
 */
?><!DOCTYPE html>
<html <?php language_attributes(); ?>>
<head>
<meta charset="<?php bloginfo( 'charset' ); ?>">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="profile" href="http://gmpg.org/xfn/11">
<link rel="pingback" href="<?php bloginfo( 'pingback_url' ); ?>">
<?php wp_head(); ?>
</head>
<body <?php body_class(); ?>>
<div id="page" class="hfeed site">
    <?php
    /**
     * @hooked electro_skip_links - 0
     * @hooked electro_top_bar - 10
     */
    do_action( 'electro_before_header' ); ?>
    <header id="masthead" class="site-header<?php if ( ! apply_filters( 'electro_show_header_support_info', true ) ) { echo esc_attr( 'no-header-support-info' ); } ?>">
        <div class="container <?php echo has_electro_mobile_header() ? 'hidden-md-down' : ''; ?>">
            <?php
```

```php
        /**
         * @hooked electro_row_wrap_start - 0
         * @hooked electro_header_logo - 10
         * @hooked electro_primary_menu - 20
         * @hooked electro_header_support_info - 30
         * @hooked electro_row_wrap_end - 40
         */
        do_action( 'electro_header' ); ?>
    </div>
    <?php
    /**
     * @hooked electro_handheld_header - 10
     */
    do_action( 'electro_after_header' ); ?>
</header><!-- #masthead -->
<?php
/**
 * @hooked electro_navbar - 10
 */
do_action( 'electro_before_content' ); ?>
<div id="content" class="site-content" tabindex="-1">
    <div class="container">
    <?php
    /**
     * @hooked woocommerce_breadcrumb - 10
     */
    do_action( 'electro_content_top' ); ?>
```

d) Sidebar

```php
<?php
/**
 * The sidebar containing the main widget area.
 *
 * @package Electro
 */
if ( ! defined( 'ABSPATH' ) ) {
        exit; // Exit if accessed directly
}
?>
<div id="sidebar" class="sidebar" role="complementary">
<?php
        if ( is_active_sidebar( 'home-sidebar-widgets' ) ) {

                dynamic_sidebar( 'home-sidebar-widgets' );
        } else {
                do_action( 'electro_default_home_sidebar_widgets' );
        }
?>
</div><!-- /.sidebar-home -->
```

e) Homepage Templpate

```php
<?php
/**
 * The template for displaying the homepage.
 *
 * This page template will display any functions hooked into the `homepage`
action.
 * By default this includes a variety of product displays and the page content
itself. To change the order or toggle these components
```

```
 * use the Homepage Control plugin.
 * https://wordpress.org/plugins/homepage-control/
 *
 * Template name: Homepage v3
 *
 * @package electro
 */
remove_action( 'electro_content_top', 'electro_breadcrumb', 10 );
do_action( 'electro_before_homepage_v3' );
$home_v3          = electro_get_home_v3_meta();
$header_style     =     isset(     $home_v3['header_style']     )     &&
( $home_v3['header_style'] == 'v4' ) ? 'v4' : 'v3';
get_header( $header_style ); ?>
        <div id="primary" class="content-area">
              <main id="main" class="site-main">
                    <?php
                    /**
                     */
                    do_action( 'homepage_v3' ); ?>
              </main><!-- #main -->
        </div><!-- #primary -->
        <?php

get_footer();
```

f) Homepage Categories List

```php
<?php
/**
 * Products Carousel Tab
 *
 * @package Electro/Templates
 */
if ( ! defined( 'ABSPATH' ) ) {
	exit;
}
$section_class = empty( $section_class ) ? 'home-list-categories' : 'home-list-categories ' . $section_class;
$categories = get_terms( 'product_cat', $category_args );
if ( ! empty( $animation ) ) {
	$section_class .= ' animate-in-view';
} ?>
<section class="<?php echo esc_attr( $section_class ); ?>" <?php if ( ! empty( $animation ) ) : ?>data-animation="<?php echo esc_attr( $animation ); ?>"<?php endif; ?>>
	<header>
		<h2 class="h1"><?php echo esc_html( $section_title ); ?></h2>
	</header>
	<ul class="categories">
		<?php foreach( $categories as $category ) : ?>
		<li class="category">
			<div class="media">
				<a class="media-left" href="<?php echo esc_url( get_term_link( $category ) ); ?>">
					<?php woocommerce_subcategory_thumbnail( $category ); ?>
				</a>
				<div class="media-body">
```

```php
                            <h4 class="media-heading"><a href="<?php
echo esc_url( get_term_link( $category ) ); ?>"><?php echo
esc_html( $category->name ); ?></a></h4>
                            <?php
                                $child_category_args            =
wp_parse_args( array( 'taxonomy' => 'product_cat', 'child_of' => $category-
>term_id ), $child_category_args );
                                echo '<ul class="sub-categories list-
unstyled">' . wp_list_categories( $child_category_args ) . '</ul>';
                            ?>
                        </div>
                    </div>
                    <a class="see-all" href="<?php echo
esc_url( get_term_link( $category ) ); ?>"><?php echo esc_html__( 'See all',
'electro' ); ?></a>
                </li>
                <?php endforeach; ?>
            </ul>
</section>
```