

Bahauddin Zakariya University, Multan

Faculty of Computer Science

Lahore Campus



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Final Documentation for “Hyper-Mart”

STATEMENT OF SUBMISSION

This is to certify that **Amaan Azhar** Roll No. **BSCS-14-F-137**, **Bilal Arshad** Roll No. **BSCS-14-F-121**, **Kamran Amjad** and Roll No. **BSCS-14-F-138** have successfully completed the **Final Year Project** named as: **Hyper-Mart Online Shopping**, at the BZU Lahore Campus, to fulfill the partial requirement of the degree of **bachelor's in computer science**.

Project Management Committee
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Project Primary Advisor

Project Examiner

Proofreading Certificate

It is to certify that we have read the document meticulously and circumspectly. I am convinced that the resultant project does not contain any spelling, punctuation or grammatical mistakes as such. All in all, I find this document well organized and I am in no doubt this its objectives have been successfully met.

Business Communication and Technical Writing,
Lecturer, BZU

Acknowledgement

We truly acknowledge the cooperation and help make by **Mr. Zeeshan Khalid**, lecturer of **BZU Lahore Campus**. He has been constant of guidance throughout the course of this project. We would also like to thanks **Mr. Shahid Rasool** from lecturer, **BZU Lahore Campus** for this help and guidance throughout this project. We are also thankful to our friends and families whose silent support led us to complete our project.

- 1- Mr. Amaan Azhar
- 2- Mr. Bilal Arshad
- 3- Mr. Kamran Amjad

Date:

December 15, 2018

Abstract

This is a project for **Hyper-Mart** Online shopping system. The basic idea for this project customer buys products using online system. The user can enter the name and password and can create an account and then can search for desired products and purchases products.

The **Hyper-Mart** Online Shopping system enables vendors to set up online shop, customers to browse through the shop, and a system administrator to approve and reject requests for new shops and maintain lists of shop categories. Also, on the agenda is designing an online shopping site to manage the items in the shop and also help customers to purchase online without having visit the shop physically. Our online shopping system will use the internet as sole method for selling goods to its customers. Shopping will highly personalized and the system will provide lower prices than most competitors.

It is an online store that enables website owners to sell their products online. It is a web shopping cart that web enables the day by day sales functions. It includes product and customer management modules. This website will be useful to anyone who wants to purchase items using internet.

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CHAPTER 1

INTRODUCTION

1 Introduction

Online Shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser. Consumers find a product of interest by visiting the website of the retailer directly or by searching by alternative vendors using a shopping search engine, which displays the same product's availability and pricing at different e-retailers. As of 2018, customers can shop online using a range of different computers and devices, including desktop computers, laptops, tablet computers and smart phones.

Online Shipping is the process whereby consumers directly buy goods, services etc. from a seller interactively in real time without an intermediary service over the internet. Online shopping is the process of buying goods and services from merchants who sell on the Internet. Consumers buy a variety of items from online stores.

- Online Shopping website for retail sales direct to consumers
- Providing or participating in an online marketplace, which process third-party business-to-consumer or consumer-to consumer sales
- Business-to-business buying and selling
- Business-to business electronic data exchange
- Engaging in retail for launching new products and services

1.1 Project Objective

- To shop while in the comfort of your own home, without having to step out of the door.
- Sell at lower rate due to less overhead.
- Provide home delivery free of cost.
- Cash on Delivery
- Secured Transaction

1.2 Project Scope

Online shopping system developed on and for the Windows and later versions environments and Linux OS. This project also provides security with use of Login-id and Password, so that any unauthorized user can't use your account. The only Authorized that will have proper access authority can access the website.

The Online Shopping System enables vendors to set up online shop, customers to browse through the shop, and a system administrator to approve and reject requests for new shops and maintain lists of shop categories. Also, on the agenda is designing an online shopping site to manage the items in the shop and also helps customers to purchase online without having to visit the shop physically, our online shopping system will use the internet as the sole method for selling goods to its consumers. Shopping will be highly personalized, and the system will provide lower process than most competitors.

It is an online store that enables website owners to sell their product online. It is a web shopping cart that web enables the day-day sales function.

CHAPTER 2

PROJECT ANALYSIS

2 PROJECT ANALYSIS

2.1 PROJECT REQUIREMENT

- Operating Systems: - Windows 7/8/10
- Required Software: - Visual Studio Code / Sublime Text
- Web Browser: - Internet Explorer / Google Chrome / Mozilla Firefox / Opera
- Web Page Style Sheet: - Html5, Css3, Bootstrap, PHP, JavaScript, Ajax
- Program Code: - PHP or Laravel Framework.

2.2 HARDWARE REQUIREMENT

- Minimum 1 GB Main Ram Memory
- CPU Speed 2.6 GHZ or Equivalent
- Monitor Display, LED, LCD
- Standard Keyboard: 106 keys with separate Function keys & Numeric Pad
- Mouse: PS/2 Optical Mouse

2.3 Project Instructions

- Based on the given requirements conceptualize the Solution Architecture. The various architectural components show interactions and connectedness and show internal and external elements. Design the web services, web methods and database infrastructure needed both on client and server.
- Provide an environment for up gradation of application for newer version that are available in the same domain as web service target.

CHAPTER 3

FEASIBILITY REPORT

3 FEASIBILITY REPORT

Feasibility is an important phase in the Web Development process it enables the developers to have the assessment of the product being developed. It refers to feasibility study of the products in term of outcomes of the product. Feasibility study should be performed on the basis of various criteria and parameters. The various feasibility studies are: -

- Economic Feasibility
- Operational Feasibility
- Technical Feasibility
- Schedule Feasibility

3.1 Economic Feasibility

It refers to benefits or outcomes we are deriving from the product as compared to the total cost we are spending for developing the benefits are the same as the older system then it is not feasible to develop the product. The product is economical feasible.

3.2 Operational Feasibility

It refers to the feasibility of the product to be operational. Some products may work very well at the design and implementation, but many fails in the real-time environment. It introduces the study of human resources required and technical resources expertise.

The product is operational feasible as it is designed specifically for E-Governance. This provides consistent and integrated data management. It also provides information at all levels of people.

3.3 Technical Feasibility

The system is self-explanting and does not need any entire sophisticated training. A system has been built concentrating on the graphical user interface concepts, the application can also be handled very easily with a beginner user. The overall time that a user needs to get trained is less than 15 minutes. The system has been added with features of menu devices and button interaction methods, which makes him the master as he starts working through the environment

3.4 Schedule Feasibility

No.	Activity	Duration	Deliverable
1	Proposal Formation	3.2 weeks	Proposal
2	Requirement Gathering and Analyzing	3.2 weeks	Requirement Documents
3	Hardware Assembly	6.0 weeks	Hardware
4	1 st Module frontend development	2.6 weeks	1 st Module
5	2 nd Module development of backend & database connectivity	4.2 weeks	2 nd Module
6	Compilation of all modules	1.8 weeks	Compiled Project
7	Testing & Debugging	2.6 weeks	Testing of Project
8	Final Documentation	2.4 weeks	Final Project

CHAPTER 4

WORK PLAN

4 WORK PLAN

This project divide into five deliverable and total time for this project is 224 days about 29-30 weeks.

Following is the schedule of this project

Date	Details
Jan-Feb 2018	Phase: Gathering & Analyzing Requirement Deliverable: SRS Document Description: Describes the scope of the project, function & non-functional requirements use case diagrams.
Mar-May 2018	Phase: Planning Phase Deliverable: Method & Work Plan Description: Schedule of the project
Jun-Aug 2018	Phase: Analysis & Design Phase Deliverable: Design Document 1 Description: Sequence Diagram, Data Flow Diagram (DFD), Entity Relation Diagram (ERD) and UML Diagrams
Sep – Oct 2018	Phase: Analysis & Design Deliverable: Design Document 2 Description: Class Diagram, Interface Diagram, Database Design
Nov – Dec 2018	Phase: Final Deliverable Deliverable: Final Deliverable Description: Complete Project (Code & Database)

Following is the Phase Schedule of this project

Phase-1	Predicated Completion	Actual Completion	Name of Students
SRS plan first draft	01-01-2018	20-01-2018	Mr. Kamran Amjad
The Scope of the project	22-01-2018	10-02-2018	Mr. Amaan Azhar
Functional & Non-Functional Requirements	12 -02-2018	24-02-2018	Mr. Bilal Arshad
Phase-2	Predicated Completion	Actual Completion	Name of Students
Method	03-03-2018	30-03-2018	Mr. Kamran Amjad
Work Plan	02-04-2018	21-04-2018	Mr. Amaan Azhar
Schedule of the Project	05-05-2018	25-05-2018	Mr. Bilal Arshad
Phase-3	Predicated Completion	Actual Completion	Name of Students
Design Document 1	02-06-2018	30-06-2018	Mr. Kamran Amjad
Activity Diagram, Sequence Diagram	02-07-2018	28-07-2018	Mr. Amaan Azhar Or Mr. Bilal Arshad
Design Diagram, DFD and UML	30-07-2018	31-08-2018	
Phase-4	Predicated Completion	Actual Completion	Name of Students
Design Document 2	Sep-Oct 2018		Mr. Kamran Amjad
Class Diagram, Database Design and Interface design			/ Mr. Amaan Azhar
Use Cases			/ Mr. Bilal Arshad
Phase-5	Predicated Completion	Actual Completion	Name of Students
Final Deliverable Complete Project (Code & Database)	Nov-Dec 2018		Mr. Kamran Amjad / Mr. Amaan Azhar / Mr. Bilal Arshad

CHAPTER 5

SOFTWARE REQUIREMENT AND SPECIFICATION

5 SOFTWARE REQUIREMENT SPECIFICATION

5.1 Visual Studio Code

Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript, TypeScript and Node.js and has a rich ecosystem of extensions for other languages (such as C++, C#, Java, Python, PHP, Go) and runtimes (such as .NET and Unity).

5.2 Laravel Framework

Laravel is a free, open-source **PHP** web **framework**, created by Taylor Otwell and intended for the development of web applications following the model–view–controller (MVC) architectural pattern and based on Symfony.

5.3 Xampp Server

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

5.4 Common Language Runtime (CLR)

The common language runtime (CLR) is responsible for run-time services such as language integration; security enforcement; and memory, process and thread management. In additions, it has a roll at development time when features life cycle management strong type naming, cross-language exception handling, dynamic binding and so on, reduce the amount of code that a developer must write to turn the business logic the reusable component. The runtime can be hosted by performance, server-side applications, such as Microsoft internet Information Services (IIS) for building web applications with ASP.NET and the next release of Microsoft SQL Server. This infrastructure enables you to us code “managed” the Laravel Framework to write your business logic, while still enjoying the superior performance of the industry’s best enterprises servers that support runtime hosting.

CHAPTER 6

COCOMO MODEL

(Constructive Cost Model)

6 Cocomo Model (Constructive Cost Model)

Cocomo (Constructive Cost Model) is a regression model based on LOC, i.e. **number of Lines of Code**. It is a procedural cost estimate model for software projects and often used as a process of reliably predicting the various parameters associated with making a project such as size, effort, cost, time and quality. It was proposed by Barry Boehm in 1970 and is based on the study of 63 projects, which make it one of the best-documented models.

The key parameters which define the quality of any software products, which are also an outcome of the Cocomo are primarily Effort & Schedule:

- **Effort:** Amount of labor that will be required to complete a task. It is measured in person-months units.
- **Schedule:** Simply means the amount of time required for the completion of the job, which is, of course, proportional to the effort put. It is measured in the units of time such as weeks, months.

Boehm's definition of organic, semidetached, and embedded systems:

1. **Organic** – A software project is said to be an organic type if the team size required is adequately small, the problem is well understood and has been solved in the past and also the team members have a nominal experience regarding the problem.
2. **Semi-detached** – A software project is said to be a Semi-detached type if the vital characteristics such as team-size, experience, knowledge of the various programming environment lie in between that of organic and Embedded. The projects classified as Semi-Detached are comparatively less familiar and difficult to develop compared to the organic ones and require more experience and better guidance and creativity. E.g.: Compilers or different Embedded Systems can be considered of Semi-Detached type.
3. **Embedded** – A software project with requiring the highest level of complexity, creativity, and experience requirement fall under this category. Such software requires a larger team size than the other two models and also the developers need to be sufficiently experienced and creative to develop such complex models.

All the above system types utilize different values of the constants used in Effort Calculations.

Types of Models: COCOMO consists of a hierarchy of three increasingly detailed and accurate forms. Any of the three forms can be adopted according to our requirements. These are types of COCOMO model:

1. Basic COCOMO Model
2. Intermediate COCOMO Model
3. Detailed COCOMO Model

The first level, **Basic COCOMO** can be used for quick and slightly rough calculations of Software Costs. Its accuracy is somewhat restricted due to the absence of sufficient factor considerations.

Intermediate COCOMO takes these Cost Drivers into account and **Detailed COCOMO** additionally accounts for the influence of individual project phases, i.e. in case of Detailed it accounts for both these cost drivers and also calculations are performed phase wise henceforth producing a more accurate result. These two models are further discussed below.

6.1 Estimation of Effort: Calculations

6.1.1 Basic Model

$$E = a(KLOC)^b$$

The above formula is used for the cost estimation of for the basic COCOMO model, and also is used in the subsequent models. The constant values a and b for the Basic Model for the different categories of system:

Basic COCOMO	Effort	Schedule
Organic	PM= 2.4 (KLOC) ^{1.05}	TD= 2.5(PM) ^{0.38}
Semi Detached	PM= 3.0 (KLOC) ^{1.12}	TD= 2.5(PM) ^{0.35}
Embedded	PM= 2.4 (KLOC) ^{1.20}	TD= 2.5(PM) ^{0.32}

PM = person-month (effort)

KLOC = lines of code, in thousands

TD = number of months estimated for software development (duration)

Intermediate COCOMO

Type	Effort
Organic	PM= 2.4 (KLOC) ^{1.05} x M
Semi-Detached	PM= 3.0 (KLOC) ^{1.12} x M
Embedded	PM= 2.4 (KLOC) ^{1.20} x M

PM= person-month

KLOC= lines of code, in thousands

M.- reflects 15 predictor variables, called cost drivers

The schedule is determined using the Basic COCOMO schedule equations.

People Required = Effort / Duration

6.1.2 Intermediate Model

The basic Cocomo model assumes that the effort is only a function of the number of lines of code and some constants evaluated according to the different software system. However, in reality, no system's effort and schedule can be solely calculated on the basis of Lines of Code. For that, various other factors such as reliability, experience, Capability. These factors are known as Cost Drivers and the Intermediate Model utilizes 15 such drivers for cost estimation.

Classification of Cost Drivers and their attributes:

1. Product attributes

- Required software reliability extent
- Size of the application database
- The complexity of the product

Cost Drivers	Very Low	Low	Normal	High	Very High	Total
Products Attributes						
Required Software Reliability	0.75	0.88	1.00	1.15	1.40	5.18
Size of Application Database		0.94	1.00	1.08	1.16	4.18
Complexity of Database	0.70	0.85	1.00	1.15	1.30	5.00

2. Hardware attributes

- Run-time performance constraints
- Memory constraints
- The volatility of the virtual machine environment
- Required turnabout time

Hardware Attributes	Very Low	Low	Normal	High	Very High	Total
Runtime Performance Constraints			1.00	1.11	1.30	3.41
Memory Constraints			1.00	1.06	1.21	3.27
Volatility of the virtual machine environment		0.87	1.00	1.15	1.30	4.32
Required turnabout time		0.94	1.00	1.07	1.15	4.16

3. Personnel attributes

- Analyst capability
- Software engineering capability
- Applications experience
- Virtual machine experience
- Programming language experience

Personal Attributes	Very Low	Low	Normal	High	Very High	Total
Analyst capability	1.46	1.19	1.00	0.86	0.71	5.22
Software Engineering Capability	1.29	1.13	1.00	0.91	0.82	5.15
Applications Experience	1.42	1.17	1.00	0.86	0.70	5.15
Virtual Machine Experience	1.21	1.10	1.00	0.90	1.10	5.31
Programming Language Experience	1.14	1.07	1.00	0.95	1.00	5.16

4. Project attributes

- Use of software tools
- Application of software engineering methods
- Required development schedule

Project Attributes	Very Low	Low	Normal	High	Very High	Total
Use of Software Tools	1.24	1.10	1.00	0.91	0.82	5.10
Application of Software Engineering Methods	1.24	1.10	1.00	0.91	0.83	5.11
Required Development Schedule	1.23	1.08	1.00	1.04	1.00	5.35

The project manager is to rate these 15 different parameters for a particular project on a scale of one to three. Then, depending on these ratings, appropriate cost driver values are taken from the above table. These 15 values are then multiplied to calculate the EAF (Effort Adjustment Factor). The Intermediate COCOMO formula now takes the form:

$$E = (a(KLOC)b) * EAF$$

Basic COCOMO	Effort	Schedule
Organic	3.2	1.05
Semi Detached	3.0	1.12
Embedded	2.8	1.12

6.1.3 Detailed Model

Detailed COCOMO incorporates all characteristics of the intermediate version with an assessment of the cost driver's impact on each step of the software engineering process. The detailed model uses different effort multipliers for each cost driver attribute. In detailed Cocomo, the whole software is divided into different modules and then we apply COCOMO in different modules to estimate effort and then sum the effort.

The Six phases of detailed COCOMO are:

1. Planning and requirements
2. System design
3. Detailed design
4. Module code and test
5. Integration and test
6. Cost Constructive model

The effort is calculated as a function of program size and a set of cost drivers are given according to each phase of the software lifecycle.

6.2 CPM - Critical Path Method

In 1957, DuPont developed a project management method designed to address the challenge of shutting down chemical plants for maintenance and then restarting the plants once the maintenance had been completed. Given the complexity of the process, they developed the Critical Path Method (CPM) for managing such projects.

CPM provides the following benefits:

- Provides a graphical view of the project.
- Predicts the time required to complete the project.
- Shows which activities are critical to maintaining the schedule and which are not.

CPM models the activities and events of a project as a network. Activities are depicted as nodes on the network and events that signify the beginning or ending of activities are depicted as arcs or lines between the nodes. The following is an example of a CPM network diagram:

Steps in CPM Project Planning

1. Specify the individual activities.
2. Determine the sequence of those activities.
3. Draw a network diagram.
4. Estimate the completion time for each activity.
5. Identify the critical path (longest path through the network)
6. Update the CPM diagram as the project progresses.

6.2.1 Specify the Individual Activities

From the work breakdown structure, a listing can be made of all the activities in the project. This listing can be used as the basis for adding sequence and duration information in later steps.

6.2.2 Determine the Sequence of the Activities

Some activities are dependent on the completion of others. A listing of the immediate predecessors of each activity is useful for constructing the CPM network diagram.

6.2.3 Draw the Network Diagram

Once the activities and their sequencing have been defined, the CPM diagram can be drawn. CPM originally was developed as an activity on node (AON) network, but some project planners prefer to specify the activities on the arcs.

6.2.4 Estimate Activity Completion Time

The time required to complete each activity can be estimated using past experience or the estimates of knowledgeable persons. CPM is a deterministic model that does not take into account variation in the completion time, so only one number is used for an activity's time estimate.

6.2.5 Identify the Critical Path

The critical path is the longest-duration path through the network. The significance of the critical path is that the activities that lie on it cannot be delayed without delaying the project. Because of its impact on the entire project, critical path analysis is an important aspect of project planning.

Determining the following six parameters for each activity which can identify the critical path:

ES: earliest start time: the earliest time at which the activity can start given that its precedent activities must be completed first.

$$ES(K) = \max [EF(J): J \text{ is an immediate predecessor of } K]$$

EF: earliest finish time: equal to the earliest start time for the activity plus the time required to complete the activity.

$$EF(K) = ES(K) + Dur(K)$$

LF: latest finish time: the latest time at which the activity can be completed without delaying the project.

$$LF(K) = \min [LS(J): J \text{ is a successor of } K]$$

LS: latest start time: equal to the latest finish time minus the time required to complete the activity.

$$LS(K) = LF(K) - Dur(K)$$

TS: Total Slack: the time that the completion of an activity can be delayed without delaying the end of the project

$$TS(K) = LS(K) - ES(K)$$

FS: Free Slack: the time that an activity can be delayed without delaying both the start of any succeeding activity and the end of the project.

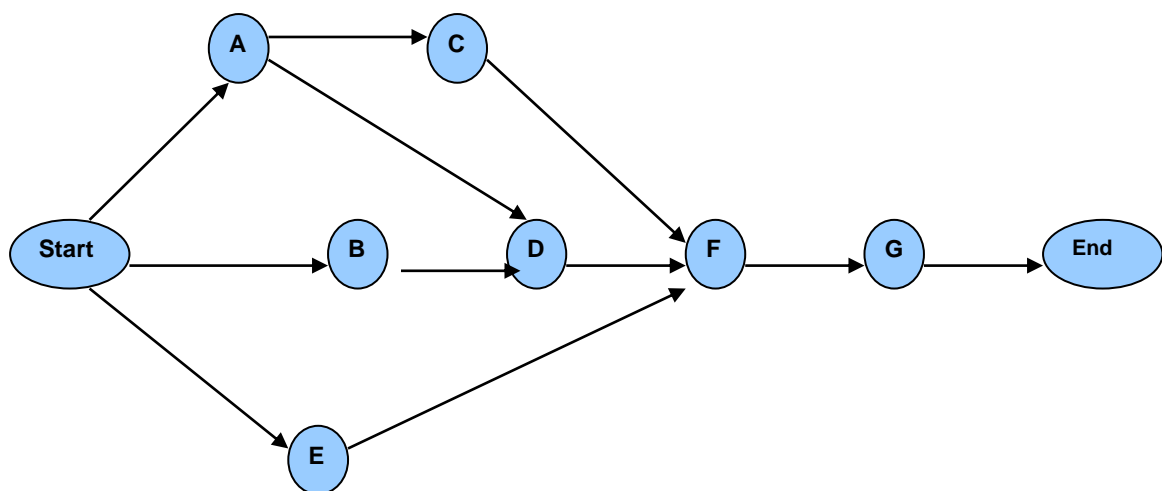
$$FS(K) = \min [ES(J): J \text{ is successor of } K] - EF(K)$$

6.2.6 Update CPM Diagram

As the project progresses, the actual task completion times will be known, and the network diagram can be updated to include this information. A new critical path may emerge, and structural changes may be made in the network if project requirements change.

Example:

Activity	Immediate Predecessor	Duration (Weeks)
A	None	5
B	None	3
C	A	5
D	A, B	4
E	None	4
F	C, D, E	4
G	F	5



Activity	Duration	ES	EF	LS	LF	TS	FS
A	5	0	5	0	5	0	0
B	3	0	3	3	6	3	2
C	8	5	13	5	13	0	0
D	7	5	12	6	13	1	1
E	7	0	7	6	13	6	6
F	4	13	17	13	17	0	0
G	5	17	22	17	13	0	0

The parameters and slacks are calculated as follows:

The critical path is:

A- > C-> F-> G

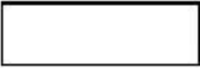

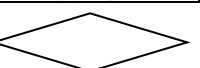
CHAPTER 7

ENTITY RELATIONSHIP DIAGRAM

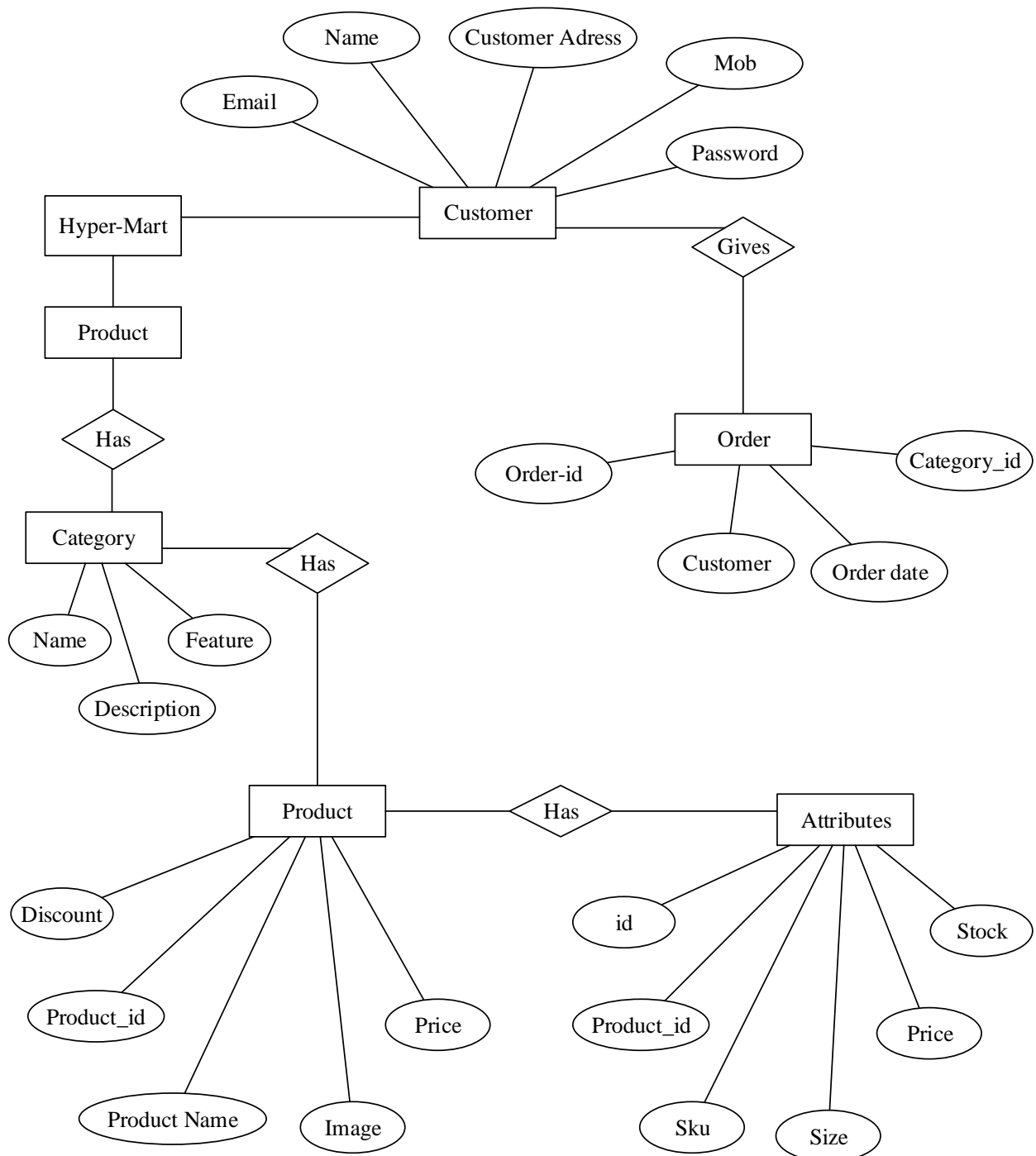
7 ENTITY RELATIONSHIP DIAGRAM

An entity relationship diagram (**ERD**) shows the relationships of entity sets stored in a database. An entity in this context is an object, a component of data.

7.1 Symbols of an ER diagram

Symbols	Descriptions
	Entity: The specify the real-life object.
	Attributes: They specify the properties of entities.
	Relationships: These Connects entities & establish meaningful dependence between them.

7.2 ER Diagram



CHAPTER 8

DATA FLOW DIAGRAM

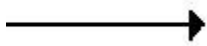

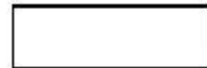

8 DATA FLOW DIAGRAMS

A **Data Flow Diagram (DFD)** is a graphical representation of the "flow" of data through an information system, modelling its *process* aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great detail, which can later be elaborated. DFDs can also be used for the visualization of data processing (structured design).

A DFD shows what kind of information will be input to and output from the system, how the data will advance through the system, and where the data will be stored. It does not show information about process timing or whether processes will operate in sequence or in parallel, unlike a traditional structured flowchart which focuses on control flow, or a UML activity workflow diagram, which presents both control and data flows as a unified model.

Four basic symbols are used to construct data flow diagrams. They are symbols that represent data source, data flows, and data transformations and data storage. The points at which data are transformed are represented by enclosed figures, usually circles, which are called nodes.

8.1 DATA FLOW DIAGRAMS SYMBOLS:

Symbol	Description
	Data Flow: Data Flow are pipelines through the packets of information flow.
	Process: A Process or task performed by the system.
	Entity: Entity are object system. A source or destination data of a system
	Data Store: A place where data to be stored.

Steps to Construct Data Flow Diagram

Four Steps are commonly used to construct a DFD

- Process should be named and membered for easy reference. Each name should be representative of the process.
- The destination of flow is from top to bottom and from left to right
- When a process is exploded into lower level details, they are membered.
- The names of data stores, sources and destinations are written in capital letters.

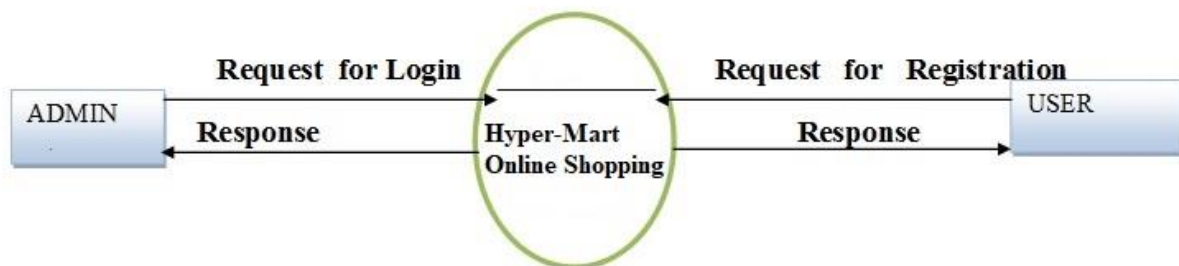
Rules for Constructing Data Flow Diagram

- Arrows, should not cross each other
- Squares, circles and files must bear names
- Decomposed data flow squares and circles can have same names.

Draw all data flow around the outside of the diagram

8.2 Context level DFD

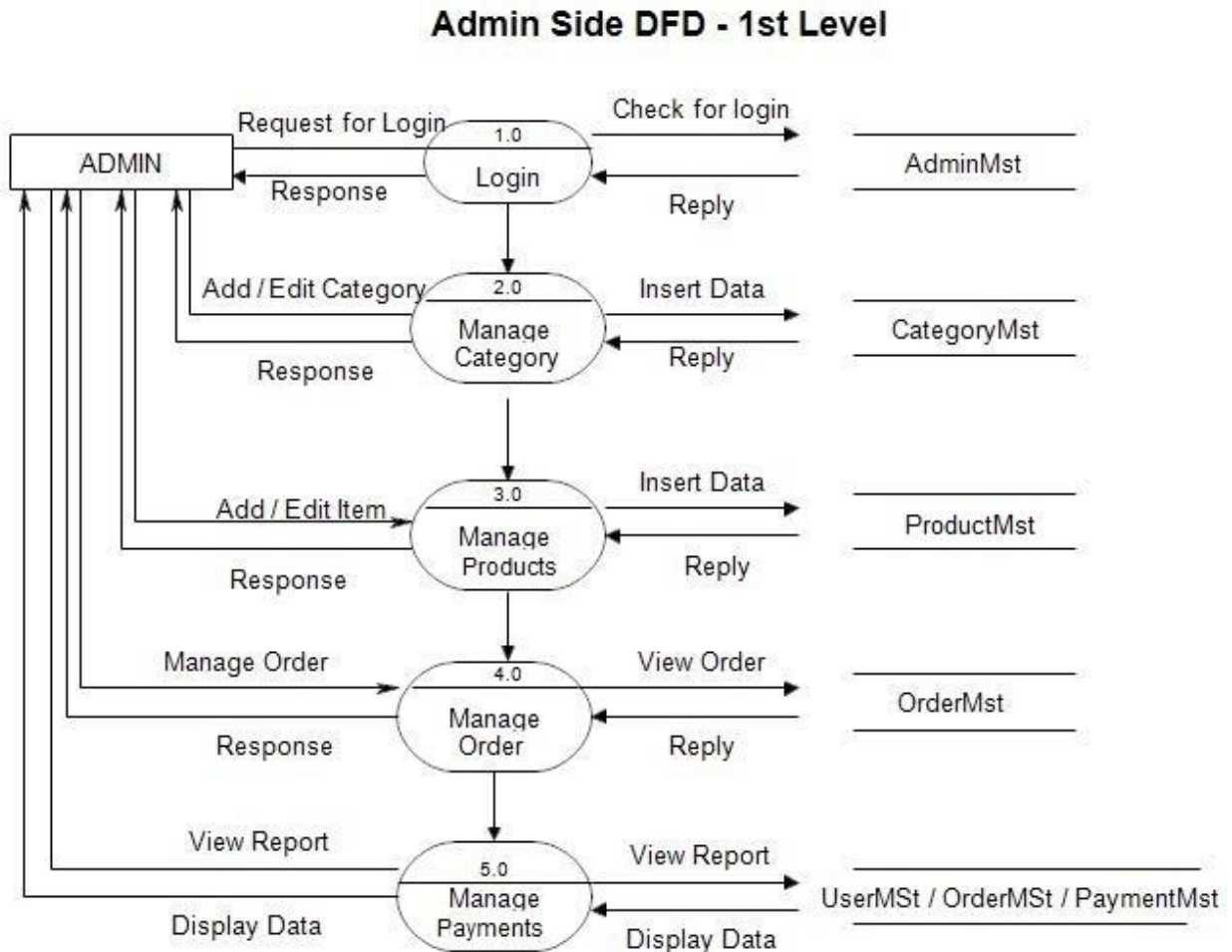
The context level data flow diagram (DFD) is describe the whole system. The (o) level dfd describe the all user module who operate the system. Below data flow diagram of online shopping site shows the two users can operate the system Admin and Member user.



8.3 Admin Side Data Flow Diagrams

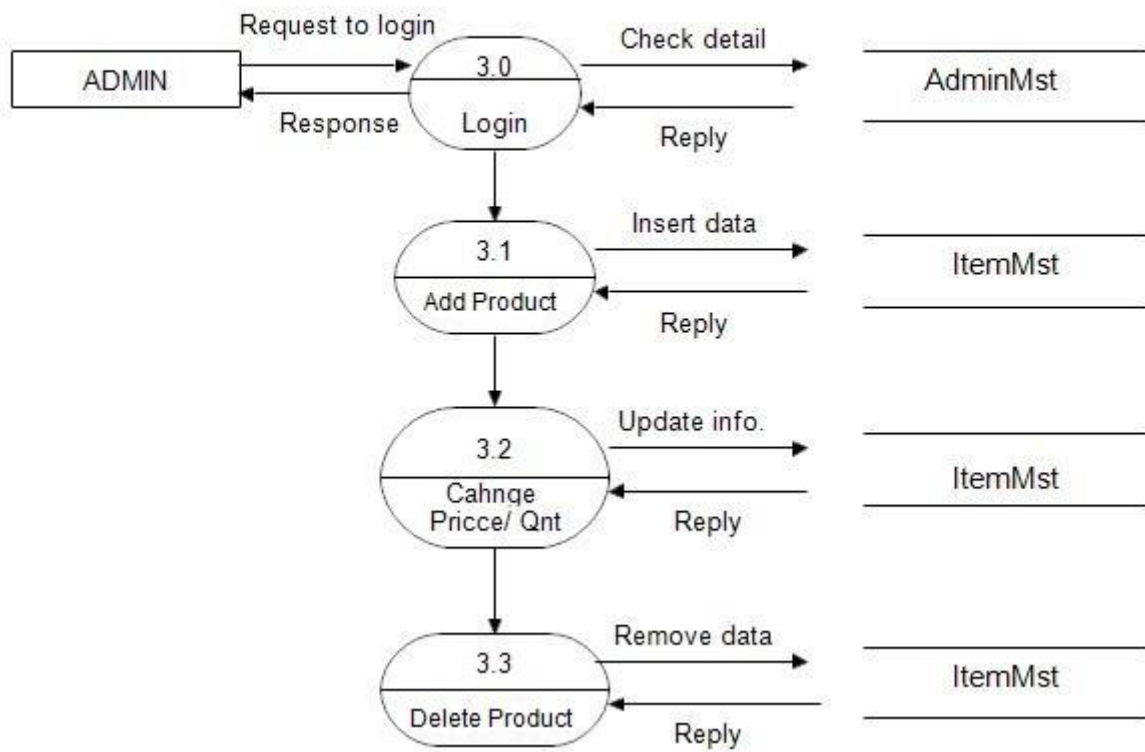
8.3.1 1st Level Admin DFD

The Admin side DFD describe the functionality of Admin, Admin is an owner of the website. Admin can first add category of item and then add items by category wise. and admin can manage order and payment detail.



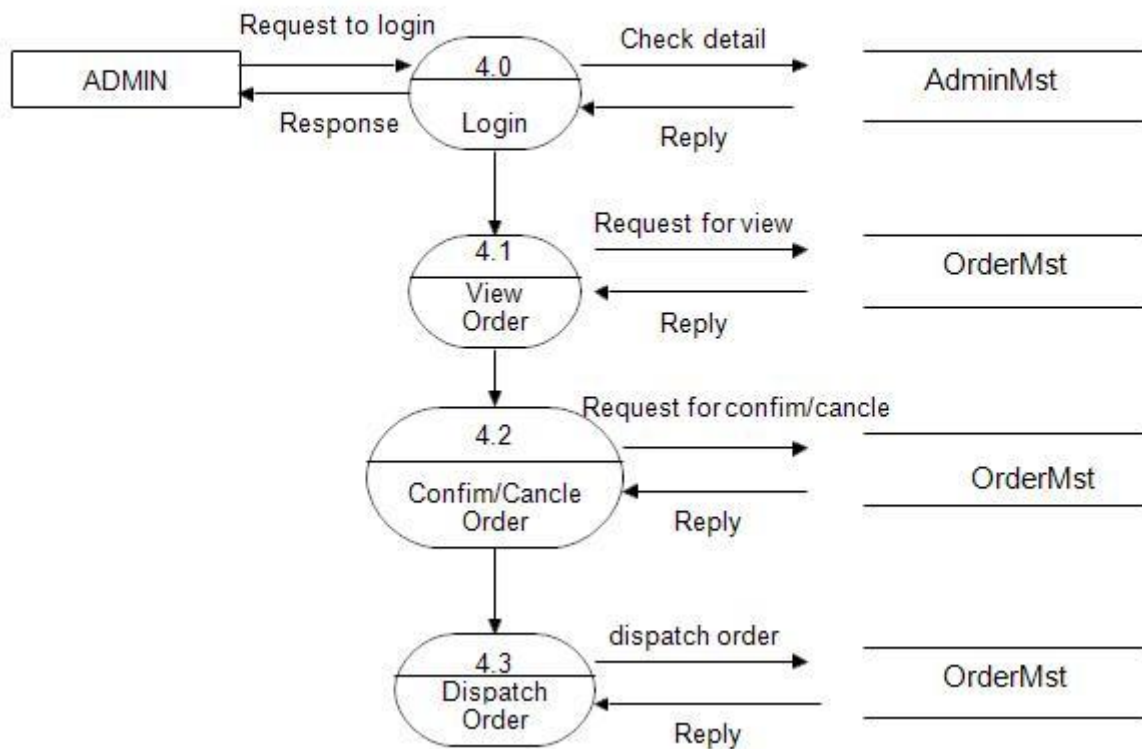
8.3.2 2nd Level Admin DFD (3.0)

2nd Level Admin DFD - (3.0)



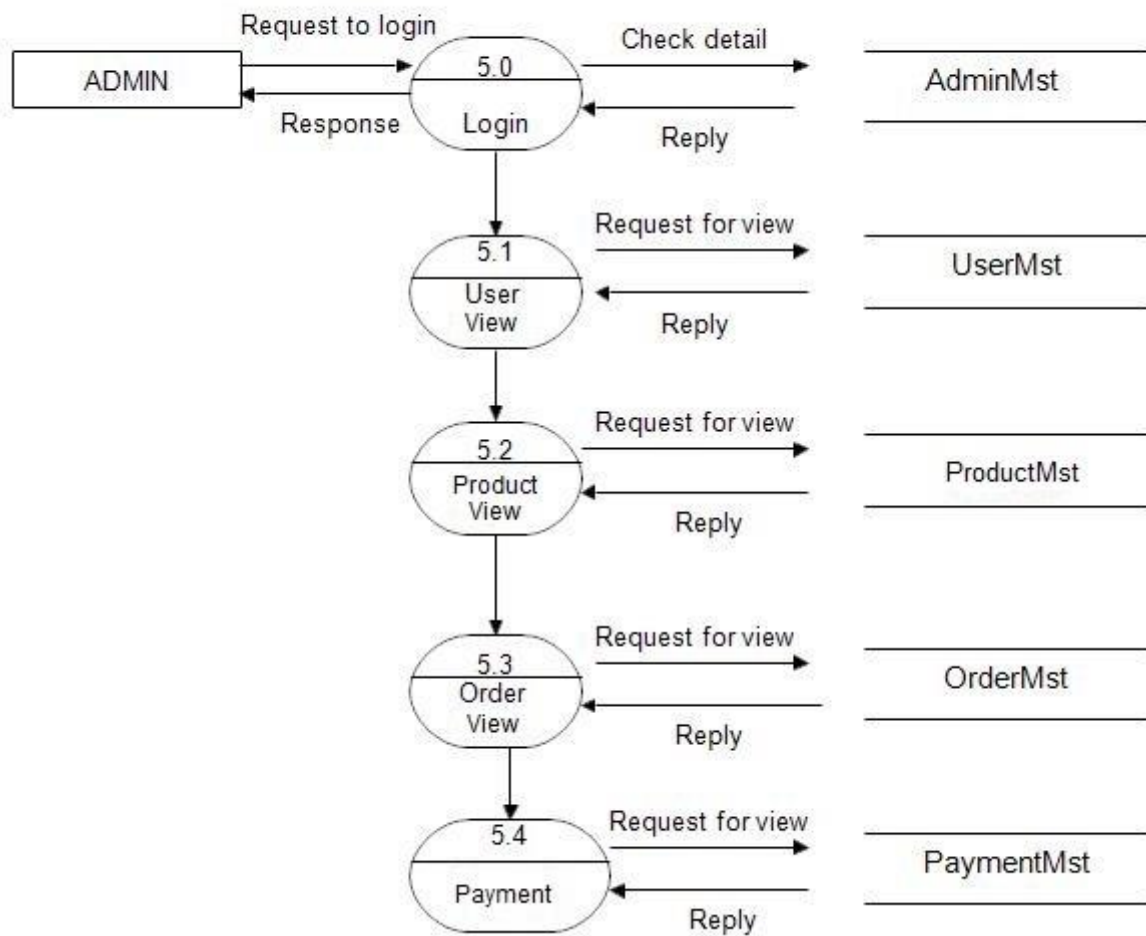
8.3.3 2nd Level Admin DFD (4.0)

2nd Level Admin DFD - (4.0)



8.3.4 2nd Level Admin DFD (5.0)

2nd Level Admin DFD - (5.0)

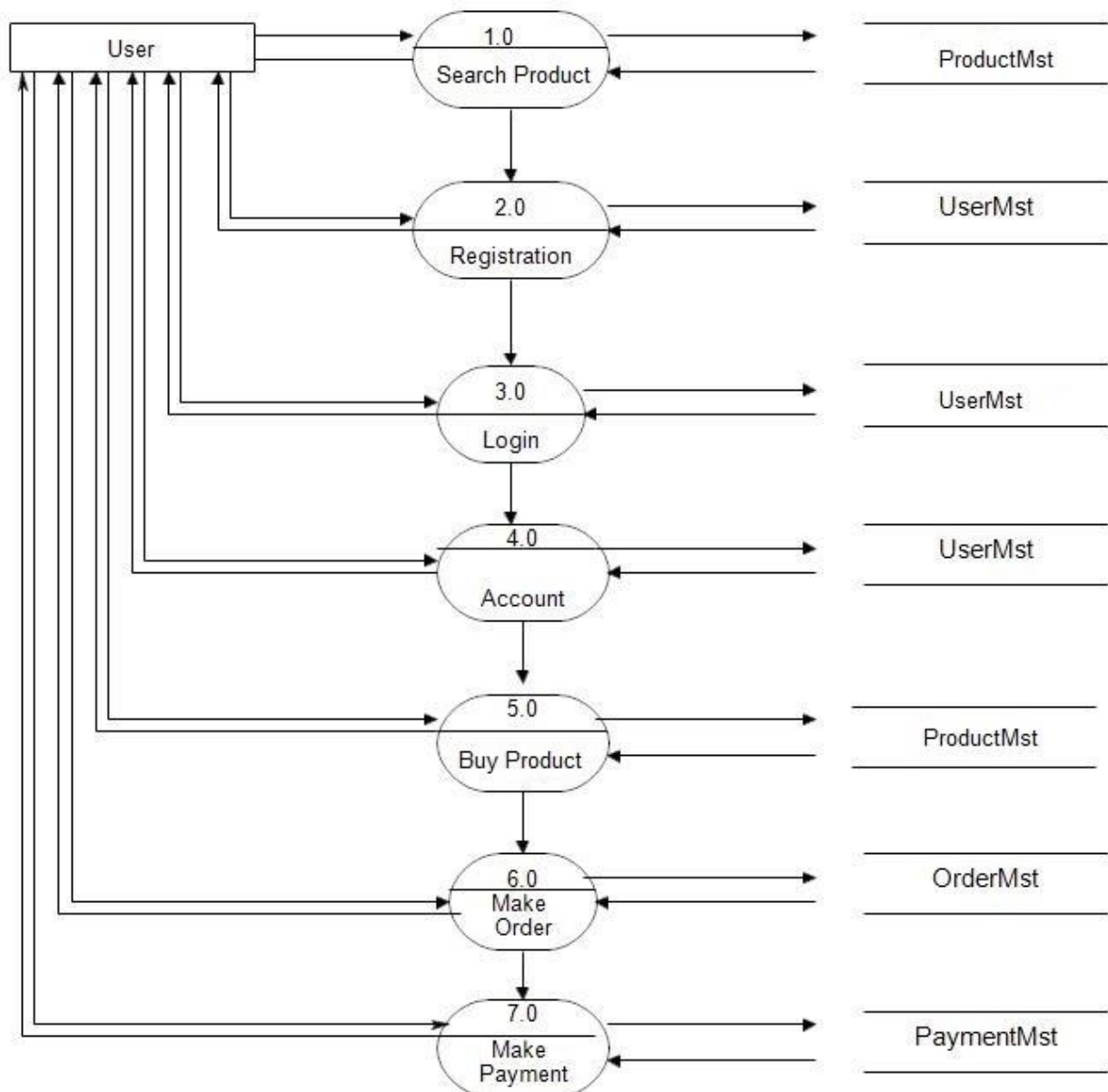


8.4 User side Data flow Diagram

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.

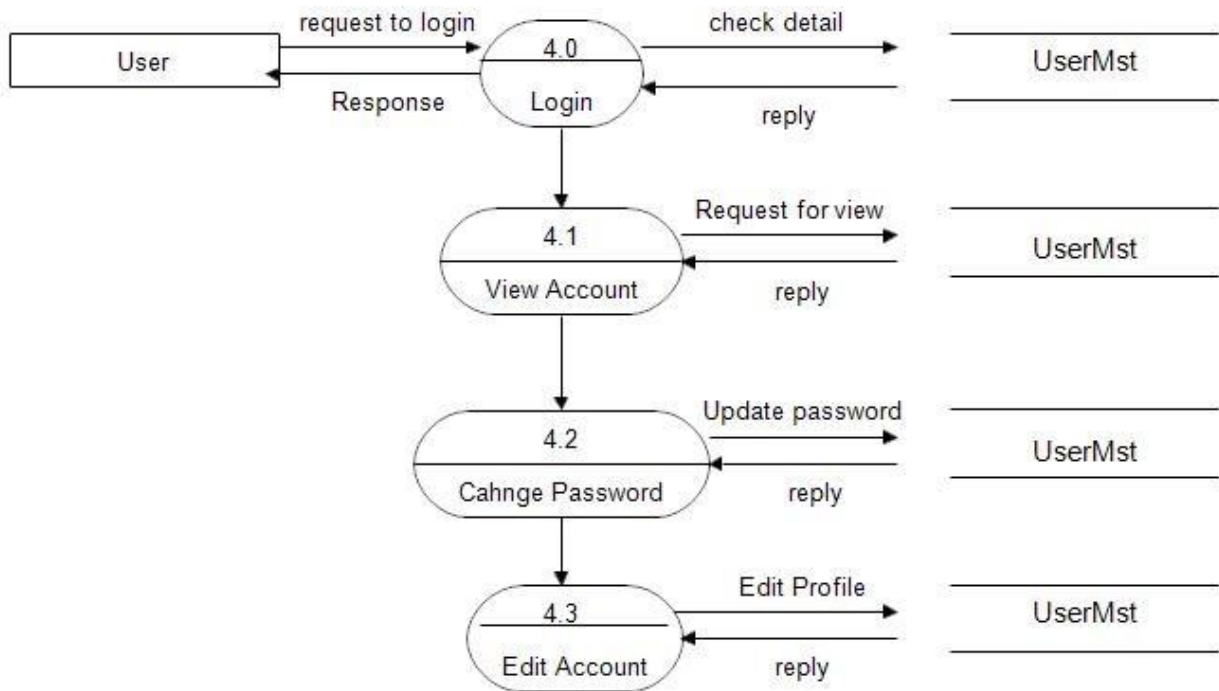
8.4.1 1st Level User DFD

1st Level User side DFD



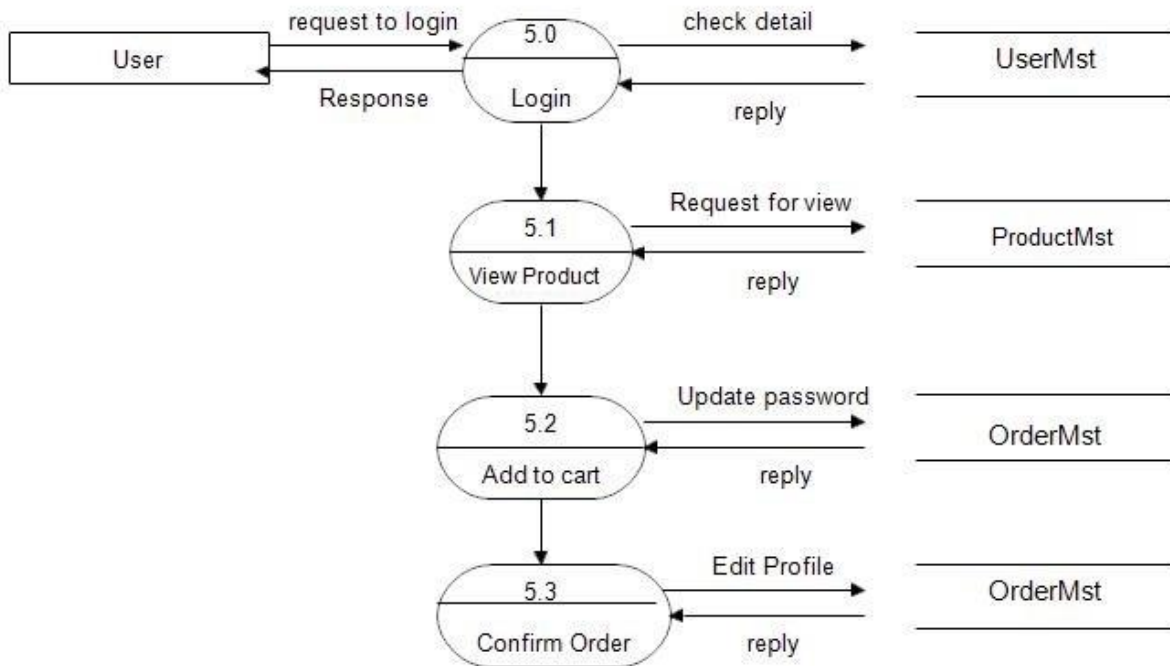
8.4.2 2nd Level User DFD (4.0)

2nd Level User DFD - (4.0)



8.4.3 2nd Level User DFD (5.0)

2nd Level User DFD - (5.0)



CHAPTER 9

USE CASE DIAGRAM

9 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. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses.

Structural Model View

- In this model the data and functionality are arrived from inside the system.
- This model view models the static structures

Behavioral Model View

It represents the dynamic of behavioral as parts of the systems, depicting the instructions of collection between various structural elements described in the user model and structural model view

Implementation Model View

In this structural and behavioral as parts of a system are represented as they are to be built.

Environmental Model View

In this, the structural and behavioral aspects of the environment in which the system is to be implemented are represented

UML is specifically constructed through two different domains they are

- UML analysis modeling, which focuses on the user model and structural model views of the system
- UML design modeling, which focuses on the behavioral modeling, implementation modeling and environmental model views.

Preconditions

Conditionals that must be true before the use case can begin to execute. Note that this means the author of the use case document does not need to check these conditions during the basic flow, as they must be true for the basic flow to begin.

Basic Flow:

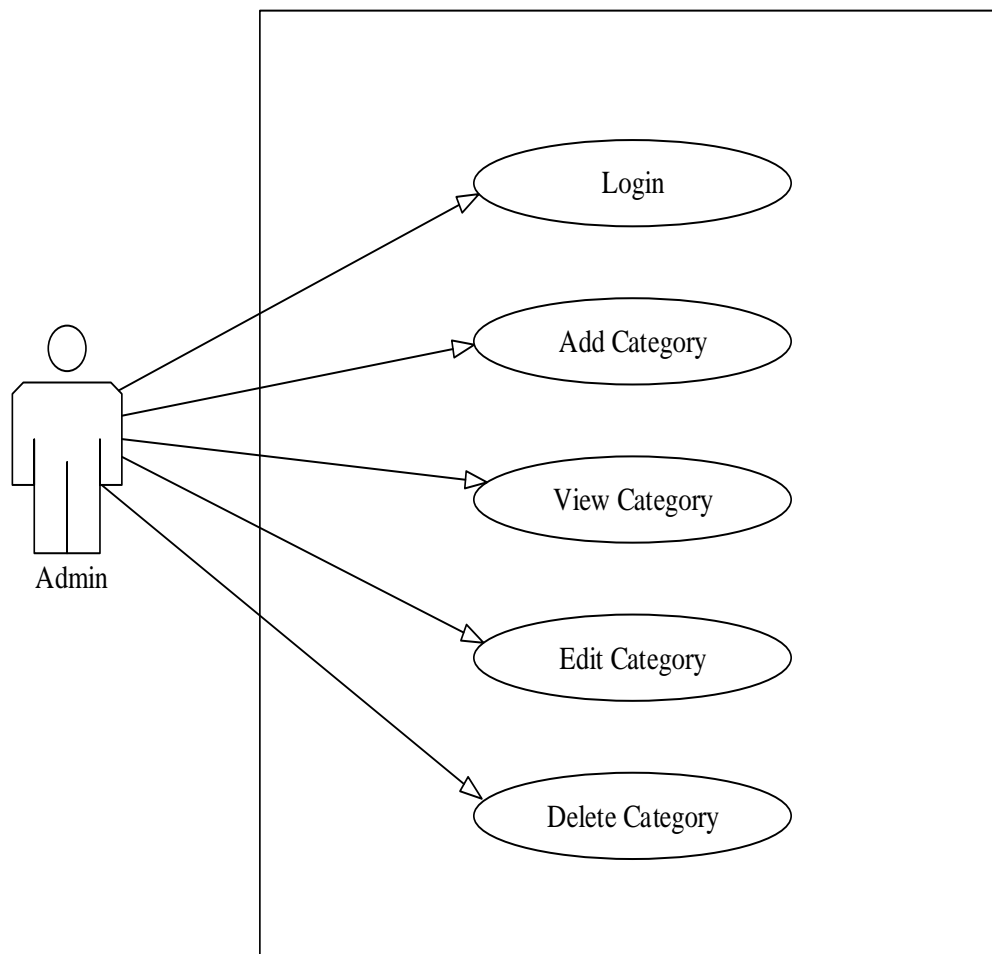
Used to capture the normal flow of execution through the use case. The basic flow is often represented as a numbered list that describes the interaction between an actor and the system. Decision points in the basic flow branch off to alternate flows. Use case extension points and inclusions are typically documented in the basic flow.

Alternate Flow

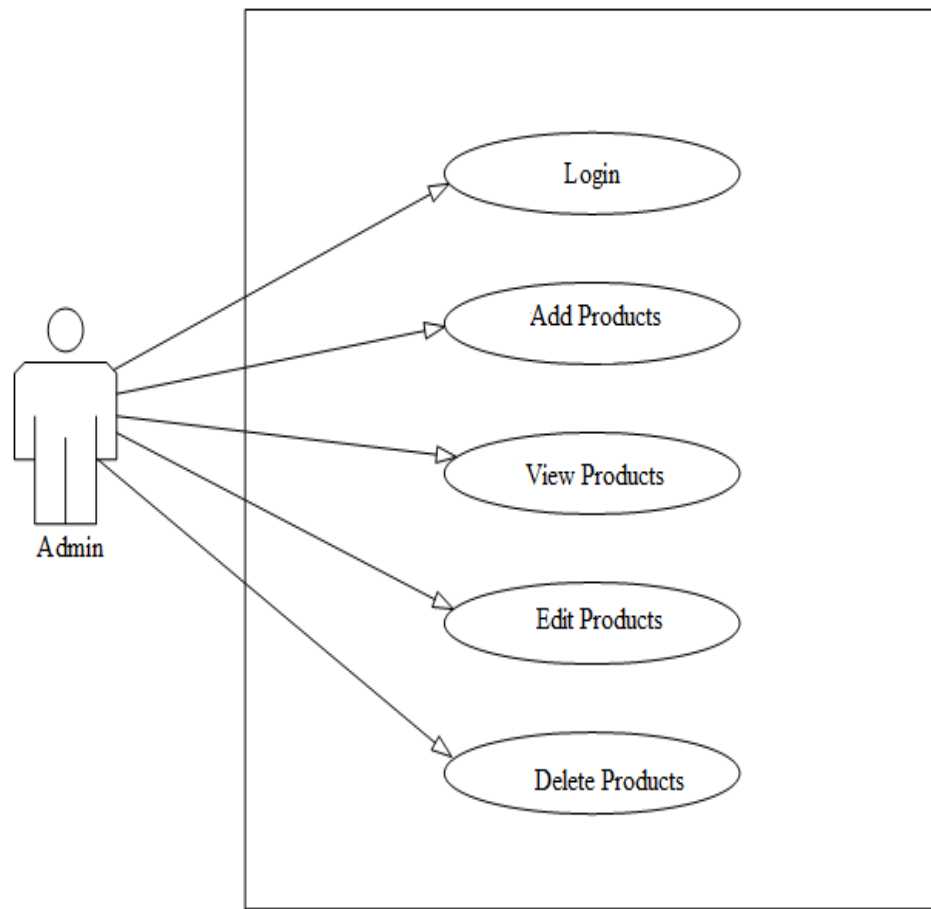
Used to capture variations to the basic flows, such as user decisions or error conditions. There are typically multiple alternate flows in a single use case. Some alternate flows rejoin the basic flow at a specified point, while others terminate the use case.

9.1 Use Case Diagrams

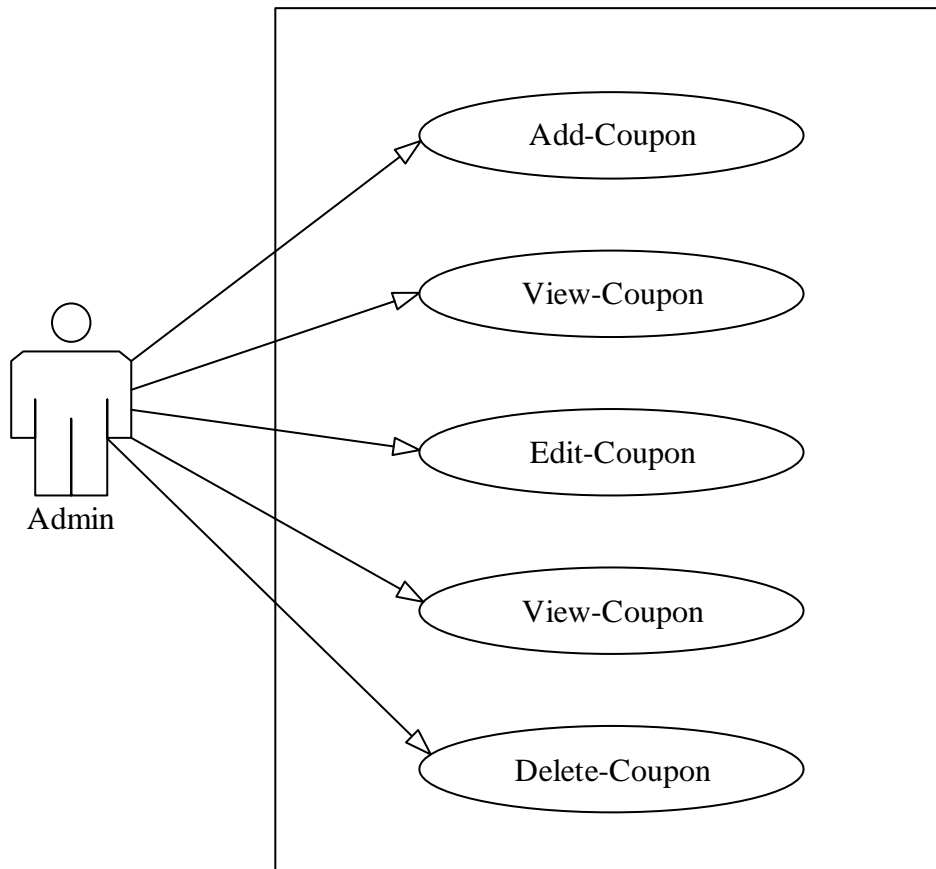
9.1.1 Use Case for Admin Module Level 1



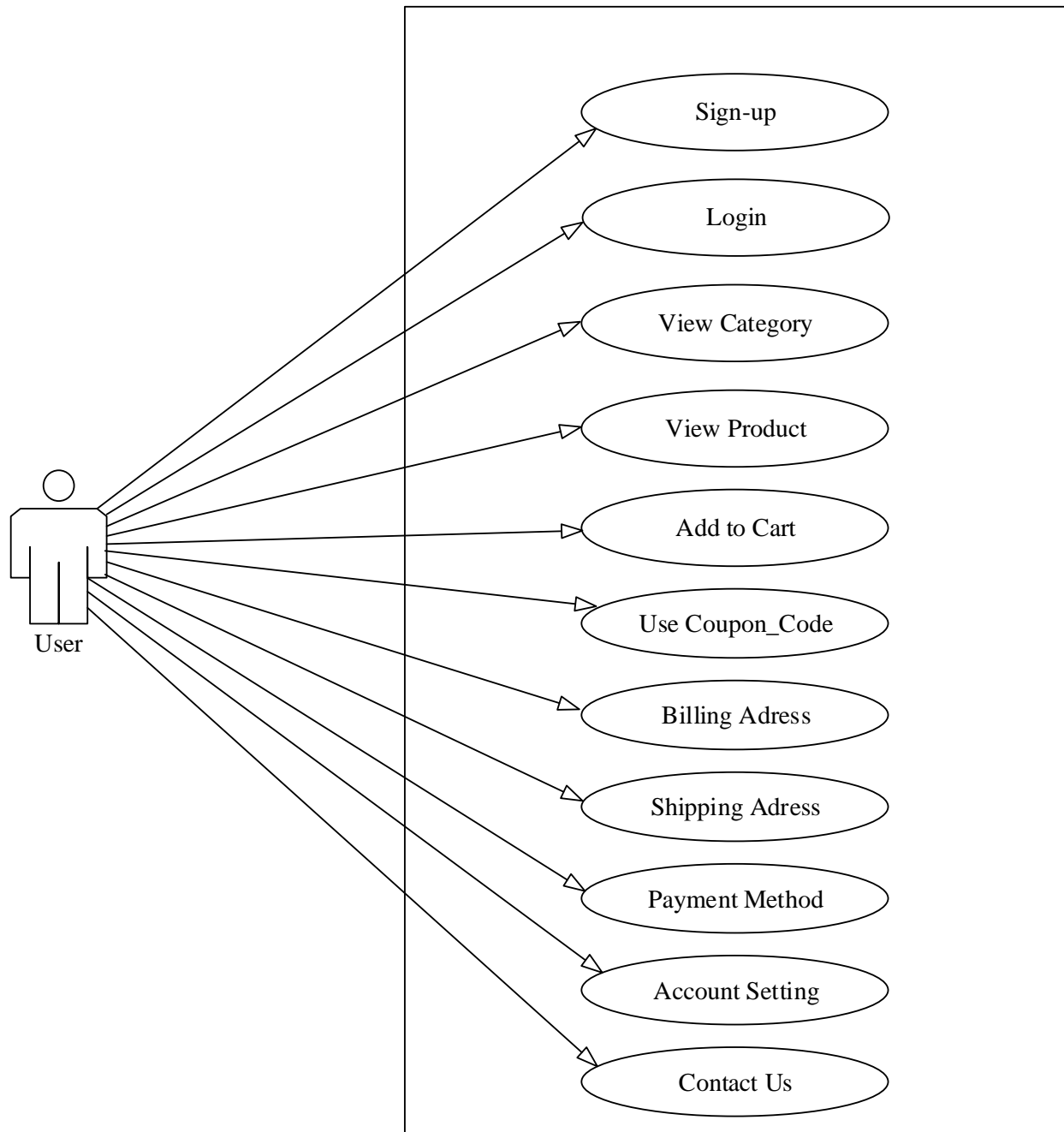
9.1.2 Use Case for Admin Module Level 2



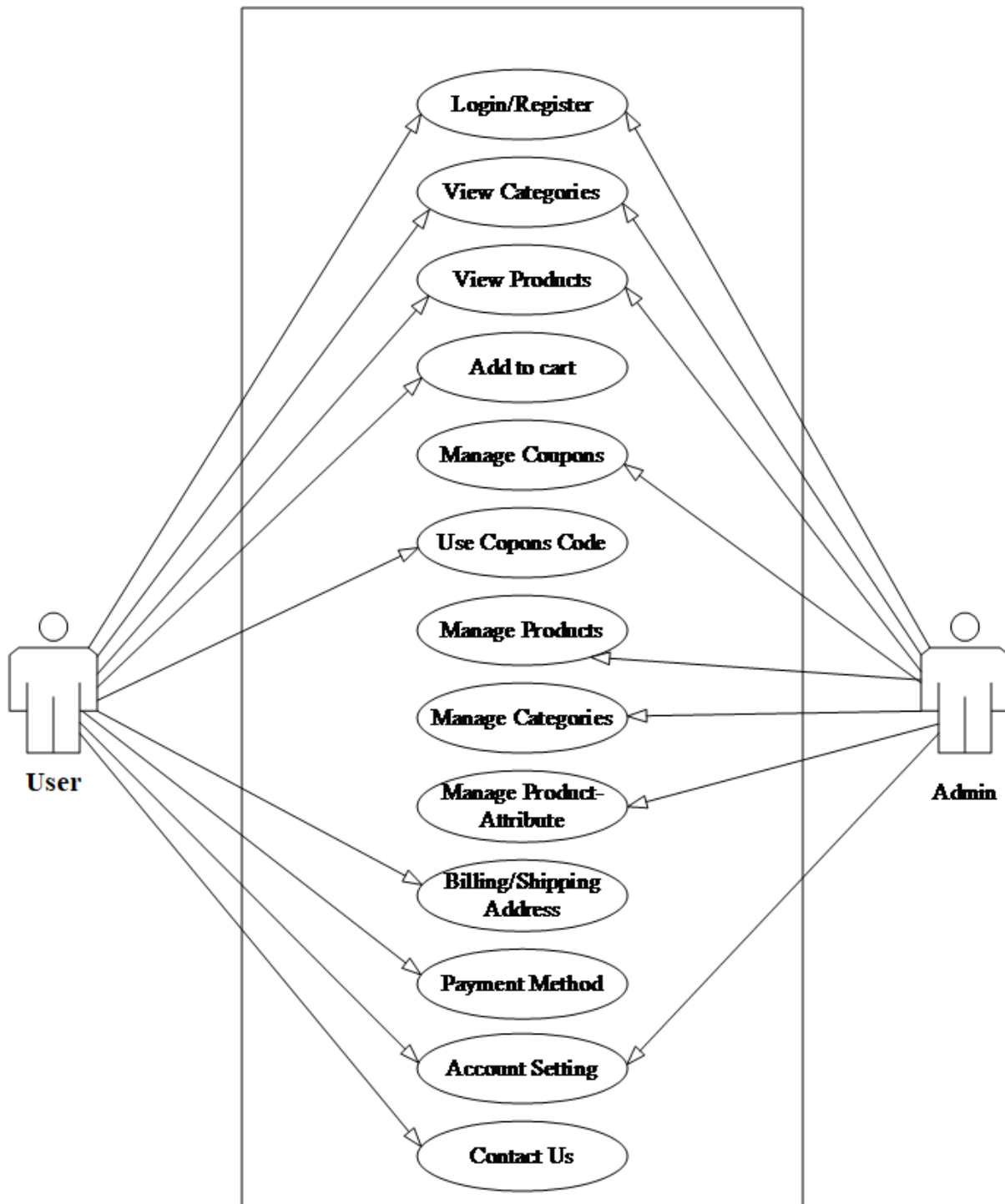
9.1.3 Use Case for Admin Module Level 3



9.1.4 Use Case for User Module



9.1.5 Use Case Diagram (Overview Complete)



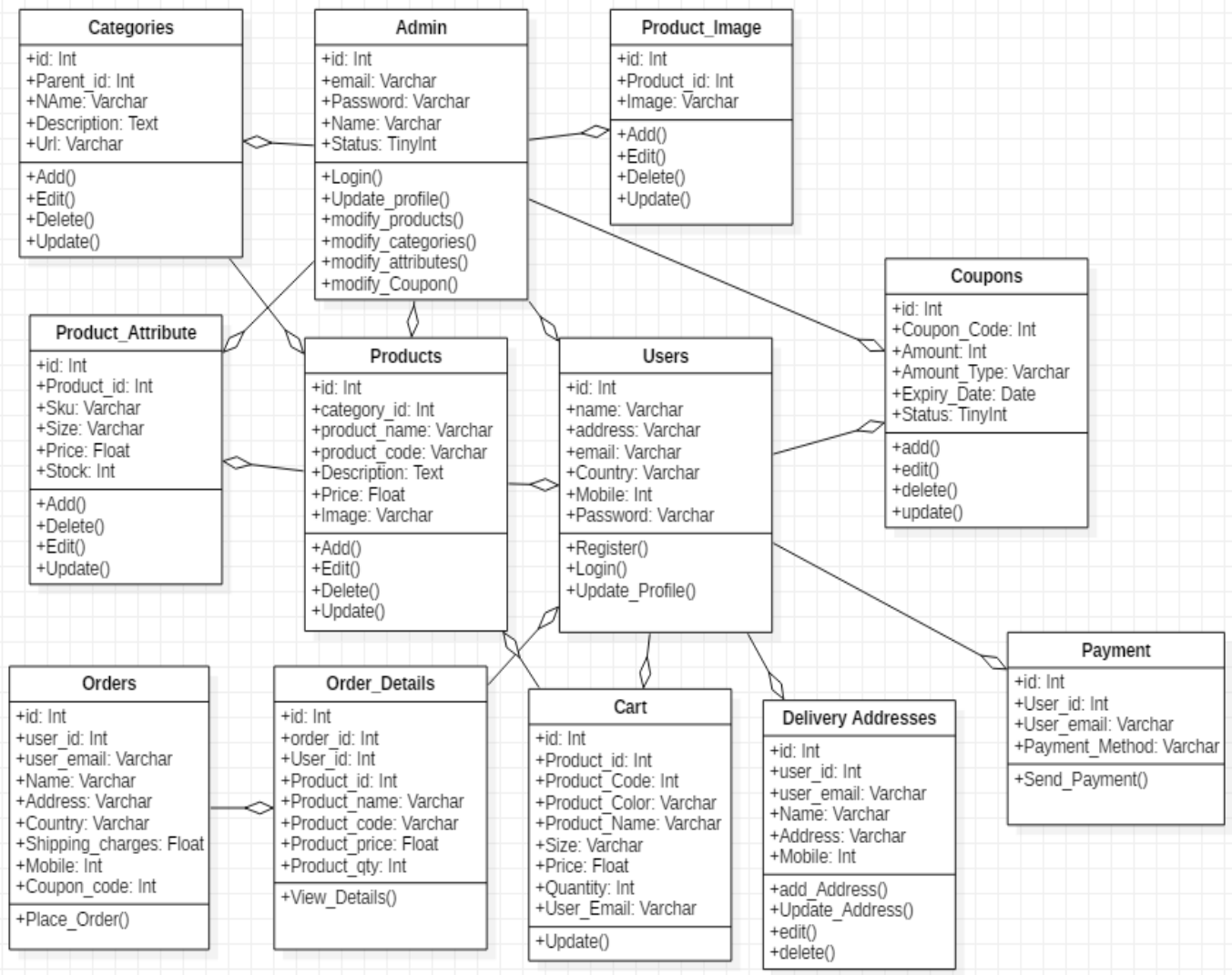
Use Case Name	Login
Participating actors	Admin, Customer, Organization
Flow of Events	The actor will give the user name and password to the system, the system will verify the authentication.
Entry Condition	The actor will enter the system by using username and password
Exit Condition	If un authenticated should be exited
Quality Requirements	Password must be satisfying the complexity requirements

Use Case Name	Admin Registration
Participating actors	Admin
Flow of Events	The admin will submit all the details and place in the application
Entry Condition	Must Satisfy all the forms given by the customer
Exit Condition	Successfully or Un successfully completion of creation of account
Quality Requirements	All fields are mandatory

CHAPTER 10

CLASS DIAGRAM

10 Class Diagram



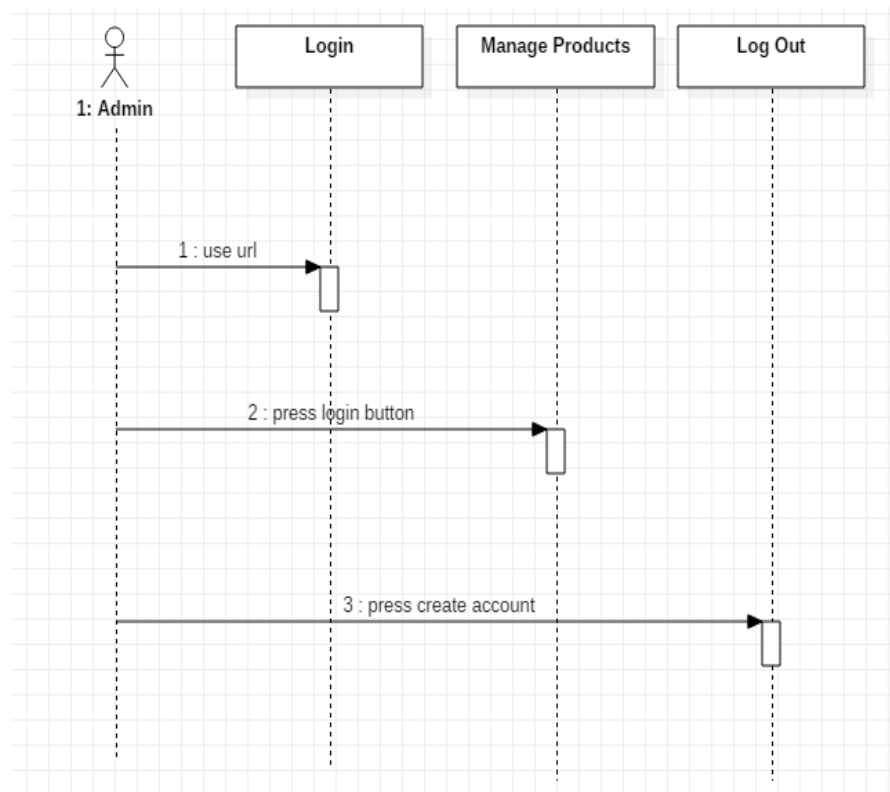
CHAPTER 11

SEQUENCE DIAGRAM

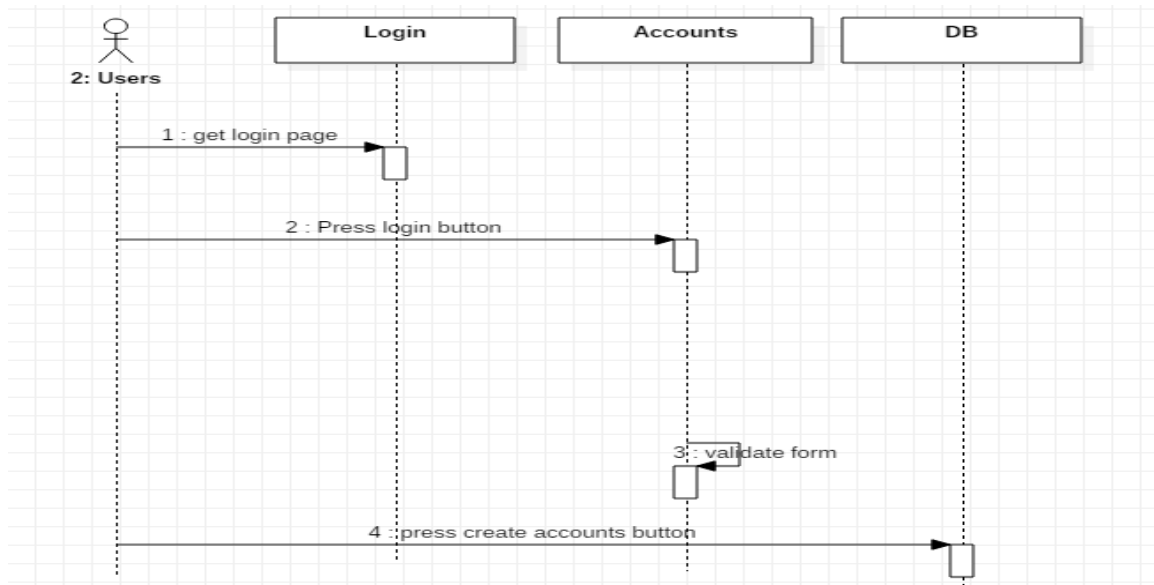
11 Sequence Diagram

Sequence Diagram Represent the objects participating the interaction horizontally and time vertically.

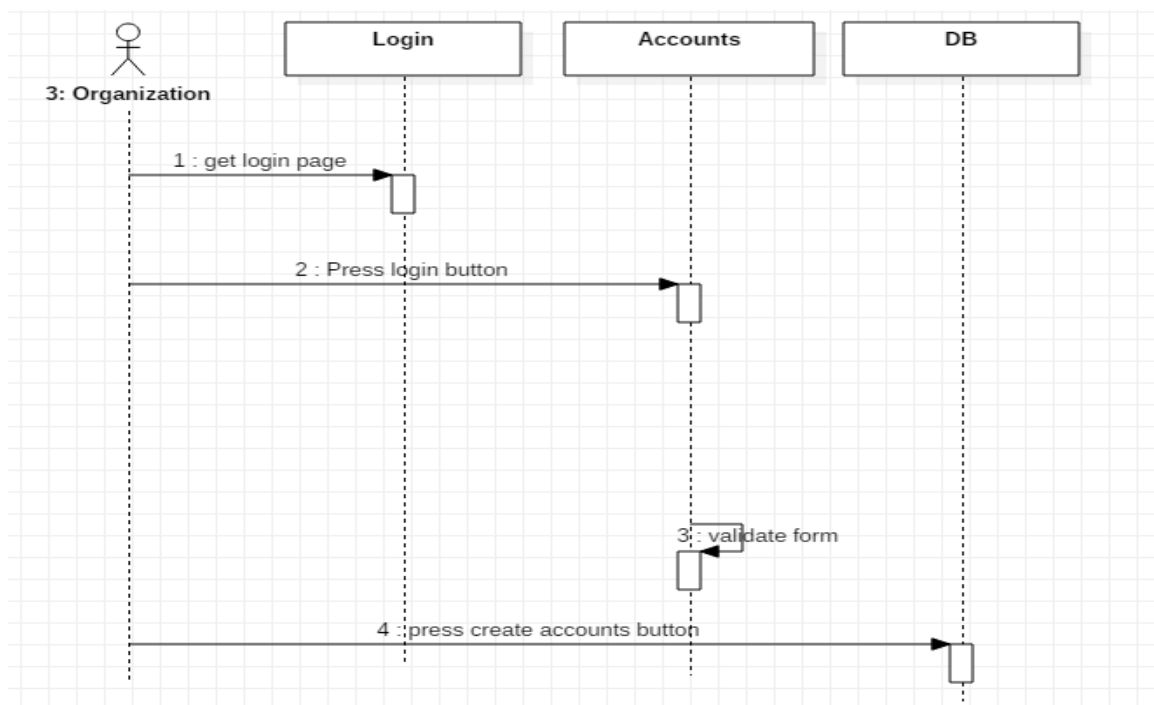
11.1 Sequence Diagram for Admin



11.2 Sequence Diagram for User



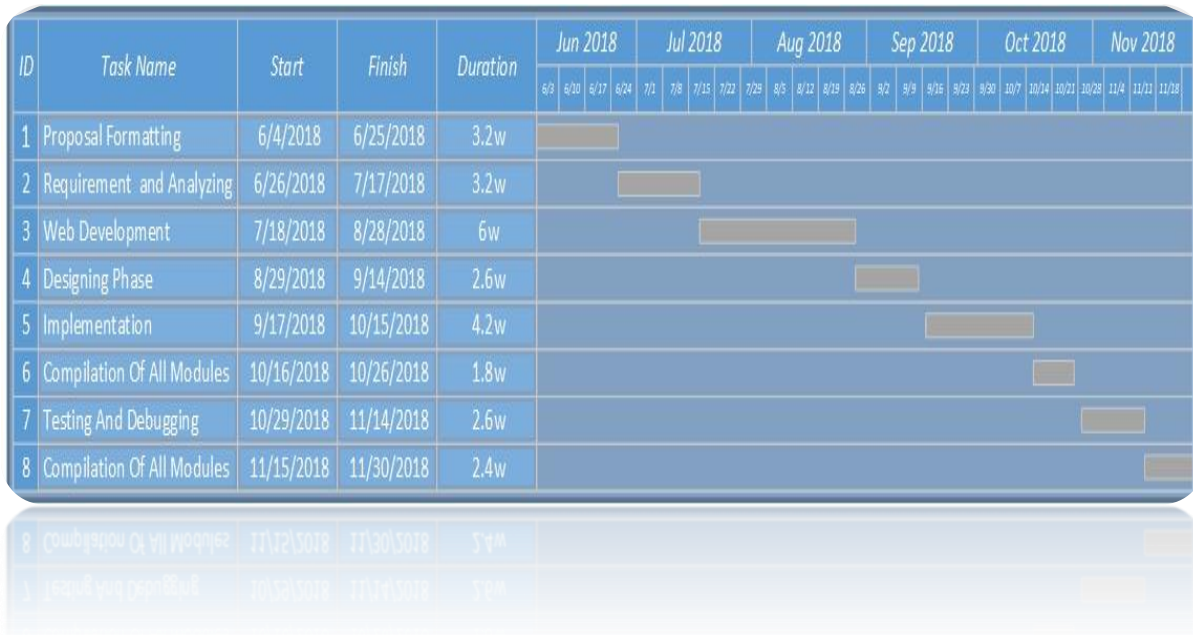
11.3 Sequence Diagram for Organization



CHAPTER 12

GANTT CHART

12 GANTT CHART



CHAPTER 13


SCREEN SHOTS



13 SCREEN SHOTS / Home / Index

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< T-Shirts For Sale >

● ● ●


CATEGORY

MEN +

WOMAN +


ACCESSORIES +

ALL ITEMS




PKR 1500
Men Belt
[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)




PKR 3000
Blue Denim
[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)




PKR 1200
Green T-Shirts
[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)




PKR 2500
Sports Shoes
[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)



PKR 3000
Black Shoes
[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)



PKR 1800
Black Tops
[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)

Home / Products

CATEGORY

- MEN +
- WOMAN +
- ACCESSORIES +

ALL ITEMS



PKR 1500

Men Belt

[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)



PKR 3000

Blue Denim

[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)



PKR 1200

Green T-Shirts

[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)



PKR 2500

Sports Shoes

[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)



PKR 3000

Black Shoes

[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)



PKR 1800

Black Tops

[Detail Page](#)

[Add to wishlist](#) [Add to compare](#)

Home / Product-Detail

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Contact

Search

Q

<

Sale on Tops

>

●

●

●

CATEGORY

MEN

+

WOMAN

+

ACCESSORIES

+

NEW

Green T-Shirts

Product Code: GTS001

Small

▾

★★★★☆

PKR 1150

Quantity:

1

Add to cart

Availability: In Stock

Condition: New

Like

Tweet

Pin It

Share

1.7M

DESCRIPTION


MATERIAL & CARE

DELIVERY OPTIONS

Cotton is the most popular fabric for T-shirts. Cotton is soft, sturdy, and breathable.

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Subject

Your Message Here

Submit

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Shop
Contact
Search

Login to your account

Email Address
Password

☐ Please provide your Password Keep me signed in

Login

OR

New User Signup!

Name
Email Address

Email already exists!

Password

Please provide your Password

Signup

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★ Wishlist

➦ Checkout

🛒 Cart



👤 Account

➦ Logout

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[Shop](#)
[Contact](#)

Search


[Home](#) > Shopping Cart

Item	Price	Quantity	Total
 Green T-Shirts Product Code: GTS001-XL Size: XLarge	PKR 1100	+ 2 -	PKR 2200 

What would you like to do next?

Choose if you have a Coupon code you want use.

Coupon Code

Apply

Sub Total

PKR 2200

Coupon Discount

PKR 220

Grand Total

PKR 1980

Update

Check Out

Home / Checkout

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Search 🔍

Home Check Out

Bill To

BZU Lahore

Town Ship

Lahore

Punjab

Pakistan ▾

54000

+923202425525

☒ Shipping Address Same As Billing Address

Ship To

BZU Lahore

Town Ship

Lahore

Punjab

Pakistan ▾

54000

+923202425525

CheckOut

Home / Order-Review

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f t in @ S+



★ Wishlist ✕ Checkout 🛒 Cart 👤 Account 🚪 Logout

[Home](#) [Shop](#) ▾ [Contact](#)

[Home](#) > Order Review


Bill Address

BZU Lahore
 Town Ship
 Lahore
 punjab
 Pakistan
 54000
 +923202425525

Shipping Details

BZU Lahore
 Town Ship
 Lahore,
 punjab
 Pakistan
 54000
 +923202425525

Review & Payment

Item	Price	Quantity	Total
 Green T-Shirts Product Code: GTS001-XL Size: XLarge	PKR 1100	2	PKR 2200
			Cart Sub Total
			PKR 2200
			Shipping Cost (+)
			PKR 0
			Discount Amount (-)
			PKR 220
			Grand Total
			PKR 1980

Select Payment Method: ☒ Cash on Delivery (COD) ☐ Paypal

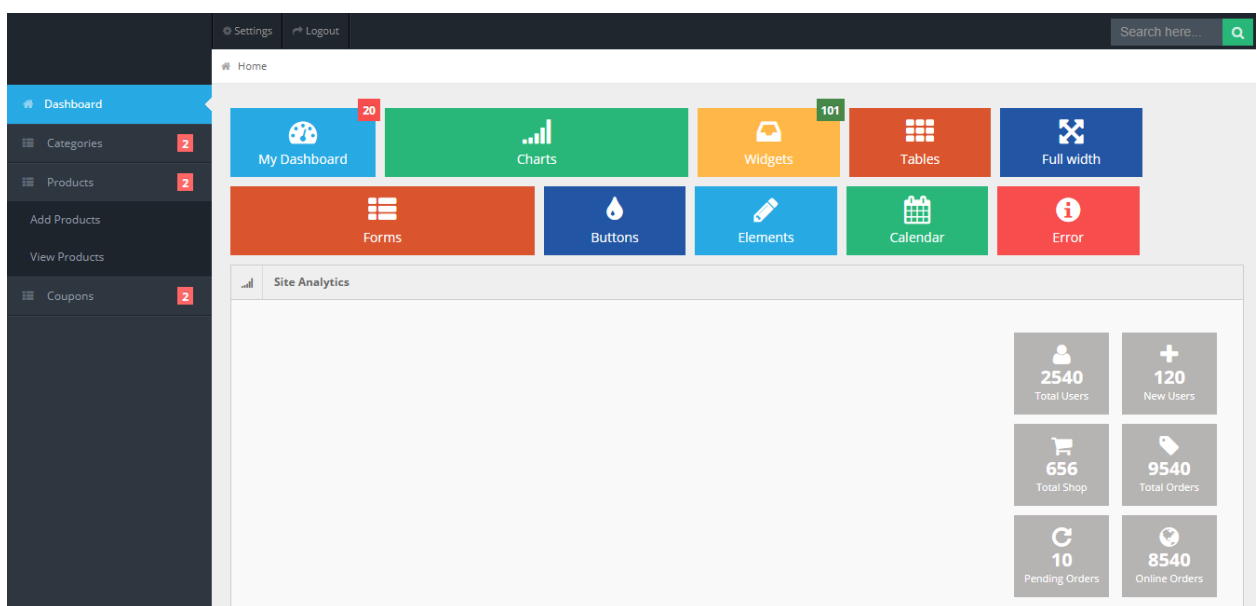
Place Order

Admin / login



The Admin Login form is displayed on a dark blue background. At the top center is a circular profile picture of a man with orange hair and glasses. Below the picture, the text "Admin Login" is centered. There are two input fields: "Username" with a green border and "Password" with an orange border. At the bottom, there are two buttons: "Lost password?" in a light blue box and "Login" in a green box.

Admin / Dashboard



The Admin Dashboard is a complex interface with a dark sidebar on the left and a main content area. The sidebar contains a "Dashboard" menu item and several other options: "Categories" (2), "Products" (2), "Add Products", "View Products", and "Coupons" (2). The main content area has a top navigation bar with "Settings" and "Logout" links, and a search bar. Below the navigation bar, there is a "Home" section with a grid of widgets: "My Dashboard" (20), "Charts", "Widgets" (101), "Tables", "Full width", "Forms", "Buttons", "Elements", "Calendar", and "Error". The bottom section is titled "Site Analytics" and displays six key metrics in a grid: "2540 Total Users", "120 New Users", "656 Total Shop", "9540 Total Orders", "10 Pending Orders", and "8540 Online Orders".

/Admin /Add-Category

[Settings](#)
[Logout](#)

[Home](#) > [Categories](#) > [Add Category](#)

[Dashboard](#)

[Categories](#) 2

[Add Category](#)

[View Categories](#)

[Products](#) 2

[Coupons](#) 2

Add Category

Add Category

Category Name

Category Level

Main Category

Description

URL

Enable

☐

Add Category

/Admin / View-Category

[Settings](#)
[Logout](#)

[Home](#) > [Categories](#) > [View Categories](#)

[Dashboard](#)

[Categories](#) 2

[Add Category](#)

[View Categories](#)

[Products](#) 2

[Coupons](#) 2

Categories

View Categories

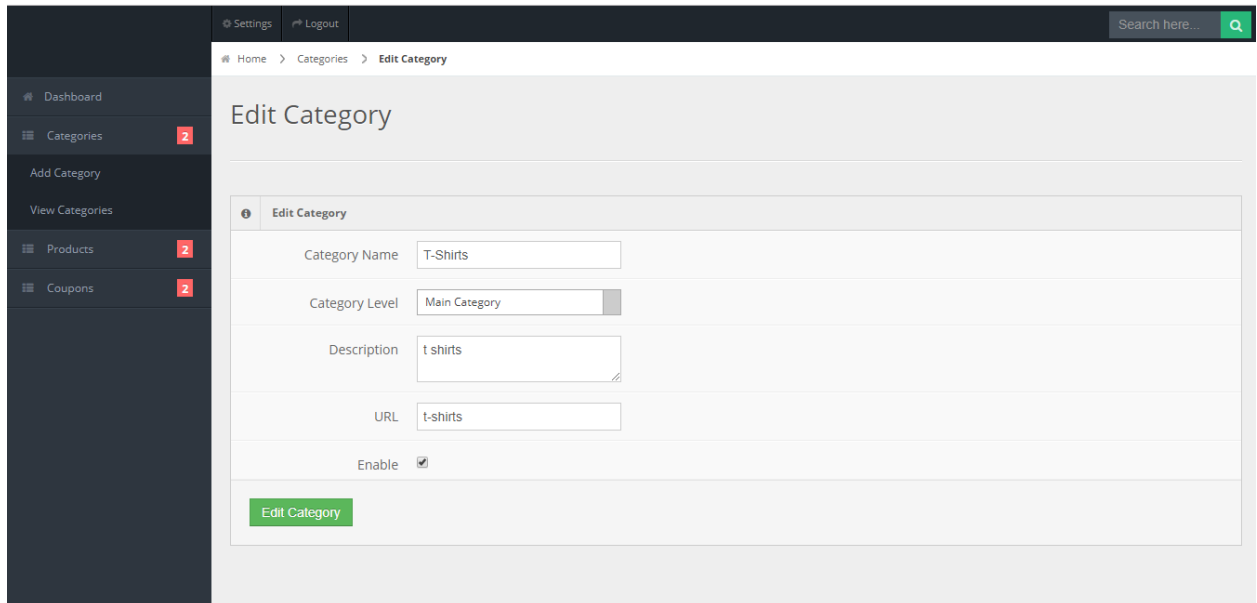
Show 10 entries

Search:

Category ID	Category Name	Category Level	Category URL	Actions
1	T-Shirts	0	t-shirts	Edit Delete
2	Shoes	0	shoes	Edit Delete
3	Formal T-Shirts	1	formal-t-shirts	Edit Delete
4	Causal T-Shirts	1	causal-t-shirts	Edit Delete
5	Causal Shoes	2	causal-shoes	Edit Delete
6	Sports Shoes	2	sports-shoes	Edit Delete

First
Previous
1
Next
Last

/Admin / Edit-Category

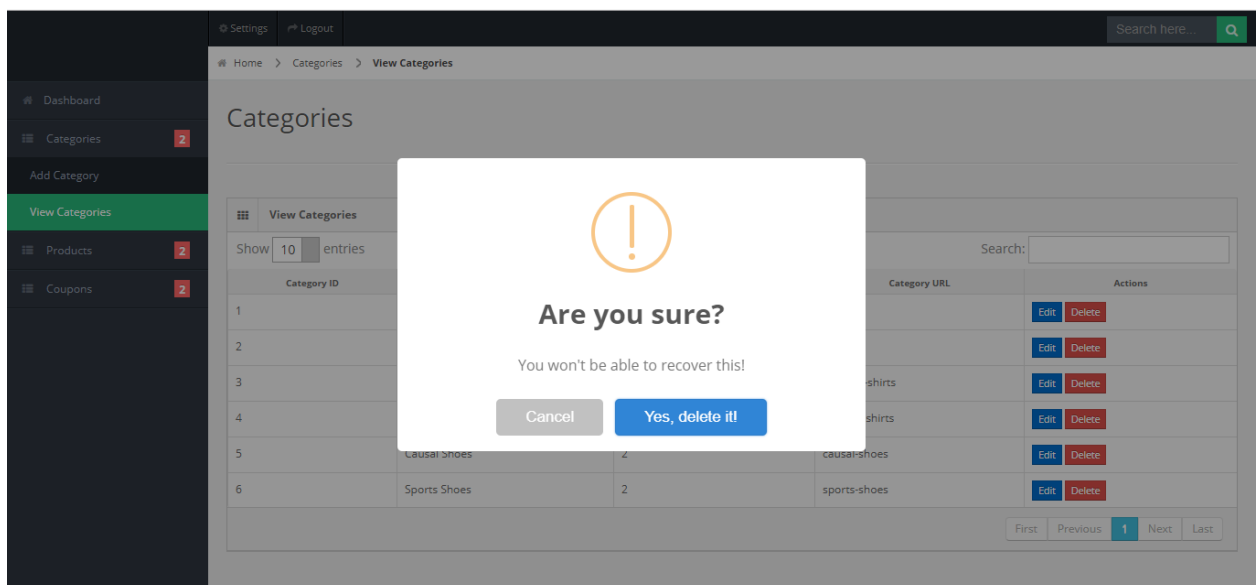


The screenshot shows the 'Edit Category' page in the Hyper-Mart admin interface. The left sidebar contains navigation links: Dashboard, Categories (with a red '2' badge), Add Category, View Categories, Products (with a red '2' badge), and Coupons (with a red '2' badge). The top header includes 'Settings', 'Logout', and a search bar. The breadcrumb trail is 'Home > Categories > Edit Category'. The main content area is titled 'Edit Category' and contains a form with the following fields:

- Category Name: T-Shirts
- Category Level: Main Category
- Description: t shirts
- URL: t-shirts
- Enable: ☒

At the bottom of the form is a green 'Edit Category' button.

/Admin / Delete-Category



The screenshot shows the 'View Categories' page in the Hyper-Mart admin interface. The left sidebar is the same as in the previous screenshot. The top header includes 'Settings', 'Logout', and a search bar. The breadcrumb trail is 'Home > Categories > View Categories'. The main content area is titled 'Categories' and shows a table of categories. A confirmation dialog is overlaid on the table, asking 'Are you sure?' and stating 'You won't be able to recover this!'. The dialog has two buttons: 'Cancel' and 'Yes, delete it!'. The table in the background has the following columns: Category ID, Category Name, Category URL, and Actions. The table contains 6 rows of data:

Category ID	Category Name	Category URL	Actions
1			Edit Delete
2			Edit Delete
3			Edit Delete
4			Edit Delete
5	Causal Shoes	causal-shoes	Edit Delete
6	Sports Shoes	sports-shoes	Edit Delete

At the bottom of the table are pagination controls: First, Previous, 1, Next, Last.

/Admin / Add-Product

Settings Logout Search here...

Home > Products > Add Product

Add Products

Add Product

Under Category

Product Name

Product Code

Product Color

Description

Material & Care

Price

Image No file selected Choose File

Add Product

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/Admin / Edit-Product

Settings Logout Search here...

Home > Products > Edit Product

Edit Product

Edit Product

Under Category

Product Name


Product Code

Product Color

Description

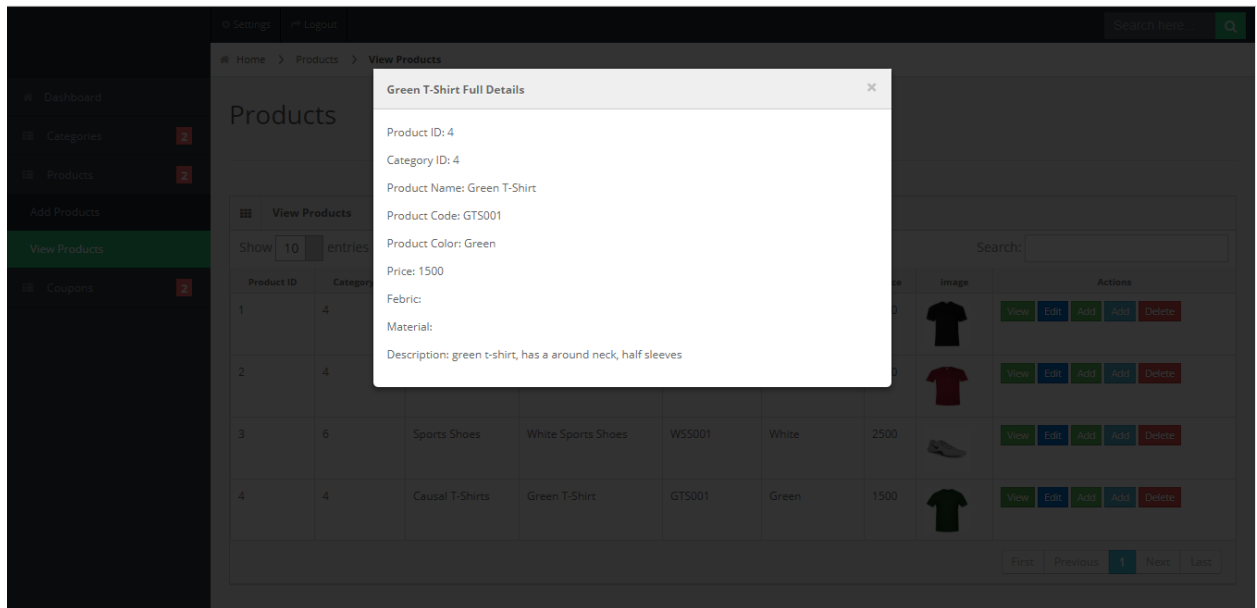
Material & Care

Price

Image No file selected Choose File  Delete

Edit Product





/Admin / View-Product



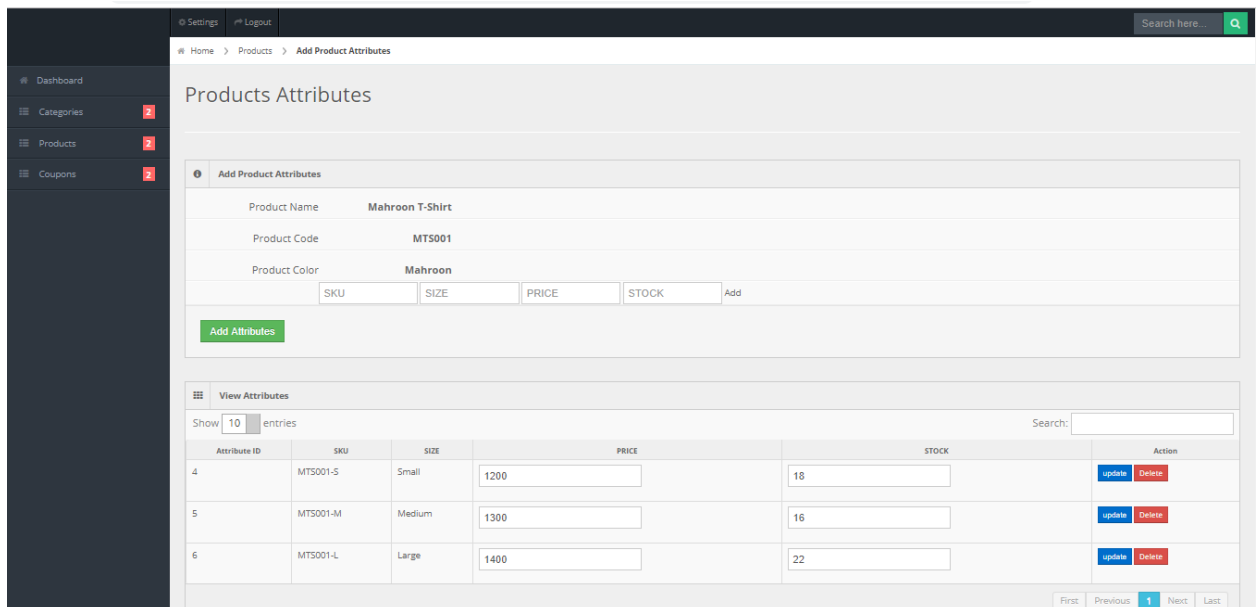
The screenshot shows the Admin View-Product interface. A modal titled "Green T-Shirt Full Details" is open, displaying the following information:

- Product ID: 4
- Category ID: 4
- Product Name: Green T-Shirt
- Product Code: GTS001
- Product Color: Green
- Price: 1500
- Febric:
- Material:
- Description: green t-shirt, has a around neck, half sleeves

The background shows the "View Products" table with the following data:

Product ID	Category	Product Name	Product Code	Product Color	Price	Image	Actions	
1	4						View Edit Add Add Delete	
2	4						View Edit Add Add Delete	
3	6	Sports Shoes	White Sports Shoes	WSS001	White	2500		View Edit Add Add Delete
4	4	Causal T-Shirts	Green T-Shirt	GTS001	Green	1500		View Edit Add Add Delete

/Admin / Add-Attribute



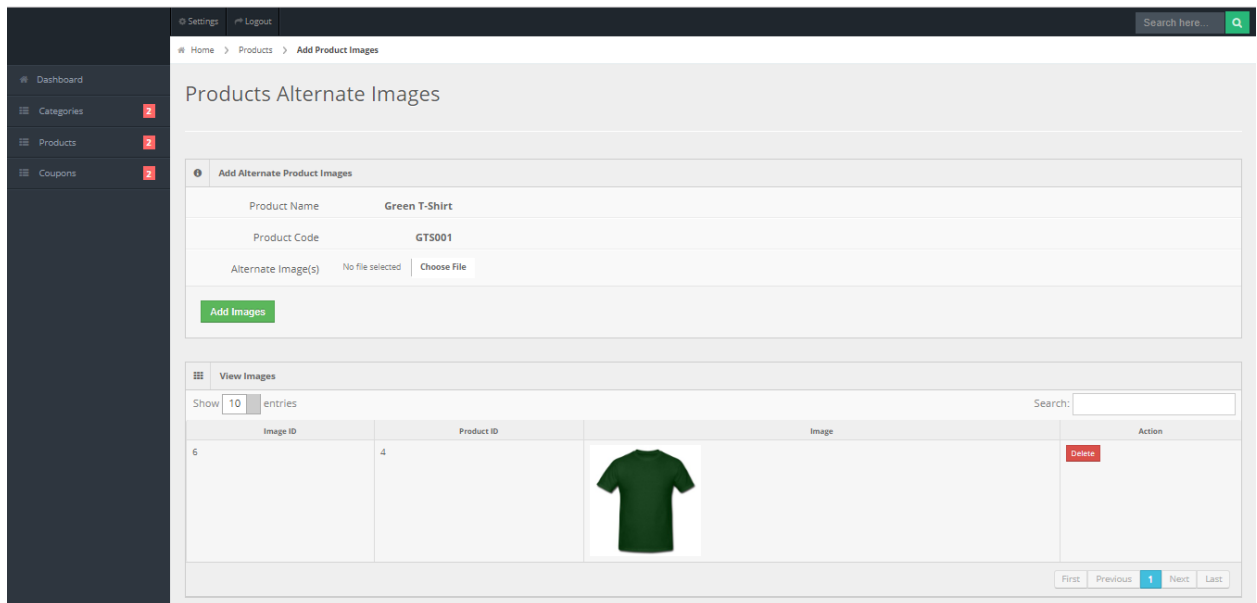
The screenshot shows the Admin Add-Attribute interface. The "Add Product Attributes" form is visible, with the following details:

- Product Name: Mahroon T-Shirt
- Product Code: MTS001
- Product Color: Mahroon
- Attributes: SKU, SIZE, PRICE, STOCK
- Action: Add
- [Add Attributes](#)

The "View Attributes" table shows the following data:

Attribute ID	SKU	SIZE	PRICE	STOCK	Action
4	MTS001-S	Small	1200	18	update Delete
5	MTS001-M	Medium	1300	16	update Delete
6	MTS001-L	Large	1400	22	update Delete

/Admin / Add-Image




The screenshot shows the 'Add Alternate Product Images' page in the Hyper-Mart admin dashboard. The page has a dark sidebar with navigation links: Dashboard, Categories (2), Products (2), and Coupons (2). The main content area is titled 'Products Alternate Images' and contains two sections: 'Add Alternate Product Images' and 'View Images'.

Add Alternate Product Images Section:

- Product Name: Green T-Shirt
- Product Code: GT5001
- Alternate Image(s): No file selected | Choose File
- Buttons: Add Images

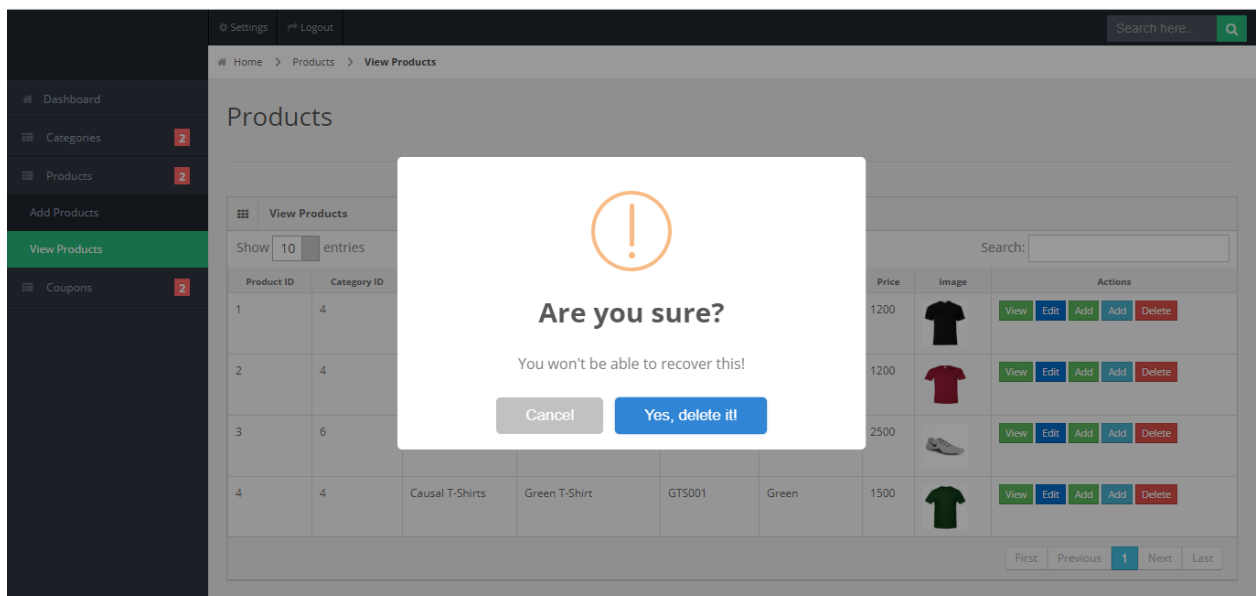
View Images Section:

- Show: 10 entries
- Search: [Search bar]

Image ID	Product ID	Image	Action
6	4		Delete

Page navigation: First Previous 1 Next Last





/Admin / Delete-Product



The screenshot shows the 'View Products' page in the Hyper-Mart admin dashboard. A confirmation dialog is displayed in the center of the screen, asking 'Are you sure?' and stating 'You won't be able to recover this!'. The dialog has two buttons: 'Cancel' and 'Yes, delete it!'.

View Products Section:

- Show: 10 entries
- Search: [Search bar]

Product ID	Category ID	Price	Image	Actions
1	4	1200		View Edit Add Add Delete
2	4	1200		View Edit Add Add Delete
3	6	2500		View Edit Add Add Delete
4	4	1500		View Edit Add Add Delete

Page navigation: First Previous 1 Next Last

/Admin / Add-Coupon

[Settings](#)
[Logout](#)

Search here...

[Home](#) > [Coupons](#) > [Add Coupons](#)

Coupons

Add Coupons

Coupon Code

Amount

Amount Type

Expiry Date

Enable

Add Coupon

/Admin / View-Coupon

[Settings](#)
[Logout](#)

Search here...

[Home](#) > [Coupons](#) > [View Coupons](#)

Coupons

View Coupons

Show 10 entries

Search:

Coupon ID	Coupon Code	Amount	Amount Type	Expiry Date	Created Date	Status	Actions
1	abc123	10 %	Percentage	2018-12-31	2018-10-27 09:47:57	Active	Edit Delete
2	abc125	125 PKR	Fixed	2018-12-31	2018-10-27 09:49:03	Active	Edit Delete
3	test123	10 PKR	Fixed	2018-12-31	2018-10-28 08:04:13	Active	Edit Delete

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CHAPTER 14

IMPLEMENTATION

14 IMPLEMENTATION

Implementation is the stage of the project when the theoretical design turned into a working system. At this stage, the main workload, the up heal and the major impact on the existing practices, shift to user department. If the implementation stage is not carefully planned and controlled, it can cause chaos. Thus, it can be considered to be the most crucial stage in achieving a new successful system and in giving the users confidence that the users confidence that the new system will work and the effective.

The implementation view of the software requirements presents the real worlds manifestation of processing function and information structures. In some cases, a physical representation is developed as the first step in software design. However, most computer-based systems are specified in a manner that declares accommodation of certain implementation details.

Implementation involves careful planning, investigation of current system and constraints on implementation design of methods to achieve the changeover, training of staff in the changeover procedures and evaluation of change over methods. The first task is the implementation planning i.e. deciding the methods and time scale to be adopted.

Once the planning has been completed, the major effort in the computer department is to ensure that the programs in the system are working properly. At the same time the user department must concentrate on training user staff. What the staff have been trained, a full system test can carry out, involving both the computer and clerical procedures.

The main steps of implementation include:

1. Activating Data Servers
2. Installing the system in the server
3. Training the operational staff

CHAPTER 15

TESTING PHASE

15 TESTING PHASE

E-commerce stands for Electronic commerce. Electronic commerce normally written as e-com. It is the process of trading of products or services using computer networks, such as the Internet.

E-commerce business also applies with the online shopping web sites for retail sales direct to customer. It is participating in online marketplaces, which process third party business-to-consumer (B2C) or consumer-to-consumer (C2C).

15.1 Importance of E-Commerce Testing

E-commerce is a software and business process which permits businesses to work through Internet that is digitally. E-commerce provides the digitally business market where business process has done through digitally basically through internet. Testing is the process of evaluation a software item to remove the difference between given input and expected output. E-commerce testing software is testing e-commerce website features are properly working or not, is customers receiving their expect result or not, is the customer felling the best experience after using the E-commerce website.

E-commerce testing is software of testing process. In this testing process E-commerce website test by the tester and evaluate the performance of E-commerce website. E-commerce applications have various business processes like fund transfer, marketing, supply chain management, Inventory management. Developing E-commerce website, we need to find out designs and features which are customer friendly. It is Important that these features are properly working and does not have any bug in it; to give the customer enjoyable experience, Thus E-commerce website testing is an essential part of the development of E-commerce website. Testing can also help to gauge the performance of sites and experience of customers.

To maintain the integrity of the E-commerce system, testing becomes compulsory.

E-commerce testing helps to prevention of errors and adds value to the products by ensuring conformity to client requirements.

15.2 Main Objectives of E-Commerce Testing are to Ensure

- Reliability of software
- Quality of software
- Assurance of software
- Optimum performance and capacity utilization

15.3 Requirements for E-Commerce Website Testing

E-commerce websites testing requires web testing techniques knowledge and the E-commerce domain.

Most E-commerce websites share a general common theme and structure such as:

15.3.1 MAIN PAGE

- Home page
- Features of product
- Special offer
- Page information such as: information related to Shipping; return policy, privacy policy etc.

15.3.2 PRODUCT DETAIL PAGE

- Title of product
- Description of product
- Products Images
- About product such as product information, Sizes, Colors etc.

15.3.3 SHOPPING CART

- Add or Remove product from cart
- Change quantities
- Select delivery option
- Check detail about Coupon and delivery cost

15.3.4 CHECKOUT

- Check all detail information such as price of the product, Coupon, delivery and other charges
- Final amount to pay- make sure value is correct

15.3.5 PAYMENT SYSTEM

- Payment method such as Debit cards, Credit cards, PayPal and many more.
- Payment detailed

15.4 Tools for Testing of E-Commerce Websites:

- **Usability Testing:** Usability testing tools is use for the test customer behavior. Under this testing there are many types of keyword is use like:
- **Concept feedback:** With the help of concept feedback a tester gets expert feedback from designs, usability, and strategies professionals.
- **Google Analytics content experiments:** Through this experiment you can test how well different versions of your pages work in getting your visitors to achieve their specific goal.

16 CONCLUSION

- ❖ The project has been appreciated by all the users in the organization.
- ❖ It is easy to use, since it uses the GUI provided in the user dialog.
- ❖ User friendly screens are provided.
- ❖ The usage of website increases the efficiency, decreases the effort.
- ❖ It has been efficiently employed as a site management mechanism.
- ❖ It has been thoroughly tested and implemented.

17 REFERENCES

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