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**Abstract**

This project concern about masiyas electronic shopping system, masiyas electronic shopping is found Debre Brihan town. Today the overall activities of the Masiyas Electronic Shopping are under taken manually. There repetitive and bulky activities like registering users, reservation, updating records periodically, generating reports and Difficult to integrate data from different individual records, unable to interest different user request. Based on the above problem this project is to automate the existing manual system and producing an automated or electronic (online) product distribution and commercial system throughout the country for the given organization. This project works on User registration, Electronic material registration. It will generate report in easy way online payment. The administrator updates periodical information. The customer order Item online. The system allow to the customers, to search Item in a fast mechanism. Customers should be able to post comments to the system about the items.

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# CHAPTER ONE

# 1. Proposal

# 1.1. Introduction

Currently the World is going to be come in once. The introduction of modern computers since1940’s changing the way people live, learning their environment and the way they gather information, process, and store data and communicate accurate and timely information in their daily activities. Therefore without using recently technological products especially computers, it is impossible to think about social, cultural and economic development. So in this century using information and communication technology especially the sophisticated and amusing machine known as computer and modern information handling in any aspect is a question of survival.

Therefore the system we planned to analyze in this project is about Masiyas Electronic Shopping management system. We will try the best way to make the complicated process of Masiyas Electronic Shopping Management System as simple as possible using Structured & Modular technique & Menu oriented interface. We are going to design the website in such a way that customer may not have any difficulty in using this package & further expansion is possible without much effort. Even though we cannot claim that this work to be entirely exhaustive, the main purpose of this project is to make each customers and workers activity in computerized way rather than manually which is time consuming.

# 1.2. Background

The establishment of Masiyas electronic shop was on 1999 E.C. It is located North part of the country in Debre Berhan City, which is 130km far away from Addis Ababa. The owner of the Shop is Ato TewodrosMamo. In this time the Shop gives different services to customers such as Laptops, TV, Refrigerators and other shopping goods. For the future, the owner of the shop has an idea to build a wide store for the shopping material.

# 1.3. Statement of the Problem

The overall activities of the Masiyas Electronic Shopping are under taken manually. There repetitive and bulky activities like registering users, reservation, updating records periodically and generating reports. Due to these the store is facing a lot of problems that need much improvement in order to assist in realizing organizational objectives.

# 1.4 .Objectives of the Project

## 1.4.1 General Objectives

The general objective of the project is to automate the existing manual system and producing an automated or electronic (online) product distribution and commercial system throughout the country for the given organization.

## 1.4.2 Specific Objectives

The specific objectives of the project are:

* To manage the records of customers, item Details, employees.
* To Secure data
* To create user friendly environment
* Enables to generate reports periodically

# 1.5. Significance of the Project

Some of the significances of the project are:

* Enables the customer’s to get fast access and help to the organization in service giving operations.
* Contributes in realizing organizational goals and objectives by supporting for employees in up grading and updating their careers, which provides good store service.
* Protect unauthorized access(by secured the data base , password encryption)
* Avoiding improper resource consumption
* Avoiding data loss because of improper data storage

# 1.6. Scopes and Limitation of the Project

## 1.6.1 Scope of the Project

The scope of this project is clearly stated below as a result of what the system is expected to perform. The proposed system will cover the following main tasks:

* User register
* Register electronic material
* Administration process
* Online payment
* Maintaining Employee and user detail information
* Shopping cart
* Generate report( about sold electronic material and not sold )
* Customer ordered electronic material online

## 1.6.2 Limitation of the Project

It would have been of paramount importance if the entire e-shopping for Electronic of the city under investing action was thoroughly analyzed however ,as it has restriction in relation to time and finance ,this project is limited to e-shopping of the Electronic and facilitating the system in line with addressing the problems that are stated understatement of problem area. Our project is also May vulnerable to the following obstacles.

* The project may be difficult to apply at the end i.e. our society is most illiteracy and most live in rural area.

# 

# 1.7. Feasibility Analysis

## 1.7.1. Operational Feasibility

The entire team member, expect that the system which is in development is to be operational. That is once the system is deployed, it can operate on any of the operating systems. Therefore, the system will be designed to be operationally feasible that if it is deployed, the system will operate in any kind of platforms without any mal functionalities.

## 1.7.2. Technical Feasibility

The entire group members are expected the system to be technically feasible. The system is going to be developed by technological development technique such as PHP, java script, CSS. And the team has the ability to develop this system without any difficulty since the team has studied the required methodologies and tools. So the system will be technically feasible.

## 1.7.3. Economic Feasibility

To identify the economic feasibility of the project the team has done cost-benefit analyses which enable the team to specify the benefits and costs associated with the project. The following work sheets specify the costs as well as benefits associated with the project.

**Intangible benefits:** The following worksheet lists the intangible benefits associated with the project.

Intangible Benefit

1. Increase Employee Morale
2. Reduce Resource Consumption
3. Increase Management flexibility
4. Provides more timely information

**Tangible benefits:** The team calculated the corresponding tangible benefits based on the technique called the Time Value of Money (TVM).

**1. Cost Reduction and Avoidance**: - To calculate these following things will be considered. Total Number of Employee in existing system= **10**

Average Salary of each Employee per month = **1000.00Birr**

Total money required for payment per year= **10\*1000\*12= 120,000Birr**

Average Number of Employee needed when the new system is deployed= 5

Average salary of each of them per month = **1200.00Birr**

Total money required for payment per year= 5\*1200\*12= **72,000.00Birr**

Difference b/n before and after deployment money required for payment

Cost Reduction and Avoidance= 120,000.00**Birr-72,000.00Birr= 48,000.00Birr**

# 1.8. Methodology

## 1.8.1. Data collecting Methods

**1.8.1.1. Interview**

The other most important method that helps us to get most important and critical information about the general view of the Shop is by interviewing manager of the Shop, seller of the Shop and some customers.

We ask some questions for Example:-

* How do you work currently?
* Have you any computerized system?
* What is the problem of the current system?

We get responses from the persons and they also say that, the current system is used manual system that means all activates performed by agenda. So that the system is complex, more time consuming and redundant activity.

**1.8.1.2. Observation**

We have observed physically by going to the place. Also the team has seen that there is no any computerized system in the Shop and also information about the Shop and the service that the Shop provides were not available easily. The team also observes that reservation is only by face to face.

**1.8.1.3. Document Analysis**

This technique provides information on how the existing system works .There for documents related to the existing system of the organization will be assessed.

# 1.9. System Analysis and Design Techniques

In this project the team will use object oriented system development methodology (OOSD).

This has two phases.

## 1.9.1. Object Oriented Analysis (OOA)

During this phase the team used to model the function of the system (use case modeling), find and identify the business objects, organize the objects and identify the relationship between them and finally model the behavior of the objects.

## 1.9. 2. Object Oriented Design (OOD)

During this phase the team uses rational rose software to refine the use case model, and to reflect the implantation environment, model object interactions and behavior that support the use case scenario, and finally update object model to reflect the implementation environment.

# 1.10. Development Environment and Programming tools

## 1.10.1. Back End Design tool

PHP MYSQL (Xampp), apache software data base system will be used in developing and managing the database at back end.

## 1.10.2. Front End design tool

The user interface will be developed using HTML, CSS, JavaScript integrated development environment since it easily designing the front end and connected in to data base realizing rapid application development with constraints on the hand.

# 1.11. Cost Schedule

The project is economically viable since its expected benefits outweigh the expected cost. The project has a total return on investment of within seven months estimated software life cycle.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Quantity | Unit | Birr | Cent | in Birr total |
| 1.paper | 2 | Dozen | 200 | 00 | 200 |
| 2.pen | 10 | Single | 50 | 00 | 50 |
| 3.flush | 2 | Single | 360 | 00 | 360 |
| 4.CD -RW | 2 | Single | 50 | 00 | 50 |
| 5.CD | 2 | Single | 10 | 00 | 10 |
| 6.Laptop | 1 | Single | 13000 | 00 | 13,000 |
| Total | | | | | 13,670 |

Table 1: The overall cost of the project

# 

# 1.12. Time Schedule

All the team members expect that the project will be completed within the time frame stated, so that the system will be feasible regarding schedule.

|  |  |  |
| --- | --- | --- |
| Task name | Starting date | Finishing Date |
| 1.project title submission | Nov-1-2006 | Nov-5-2006 |
| 2.proposal submission | Nov -15-2006 | Nov-30-2006 |
| 3.requirment specification | Dec-1-2006 | Dec-15-2006 |
| 4.design document | Dec-16-2006 | Dec-29-2006 |
| 5.implementation of the project | Feb-20-2006 | May-20-2006 |
| 6.final project submission | - | Jun-10-2006 |

Table 2: time schedule for the project

# 

# 1.13. Team Organization

The project team composed of 5 members, one team leader, one deputy leader, one secretary, and 2 members .Problem solving is group activity. Decision on problem and approach are made by group agreement, which is much better than individual decision.

|  |  |
| --- | --- |
| GROUP MEMBERS | TASKS |
| Akberet G/Slassie | Requirement Gathering/ Testing |
| Seid Mohammed | Analysis/ Requirement Gathering |
| GizeworkAmare | Analysis/ Requirement Gathering |
| KibromTsegay | Implementation/ Testing |
| SerkalemBantie | Design/Testing |

Table 3: team composition

# 

# CHAPTER TWO

# 2. Description of the Existing System

2. 1. Introduction

It is necessary to know the existing system of a given organization to develop a better system. Existing system currently performs different activities includes registering new users, reservation, maintain and update records, prepare report in manually. The shop is located at distance about 2KM from the Debre Berhan University and to the east-west direction of the Debre Berhan city. The target area of this proposed system is online electronic shopping system (i.e. change manual system in to computerized system.

# 2.2. Player of the Existing System

This illustrates the actors involved in the current system. Those actors in the existing system are:-

1. Shop manager comes with the following activities:-

* Plan in the Shop
* Organize the sellers
* Control on a daily basis activities
* Make decision
* Control the bill
* Generate report

2. The seller comes with the following activities

* Activate in the customer service
* Keep materials properly
* Obtain customer order
* Check availability
* Show items for the customer
* Tells the price of the item
* Give the items to the customers
* Receive pay from customer
* Submitted total payment to the cashiers

3. Customers come with the following activities:-

* Ask information
* Order item as they want
* Asking price of the item
* Take items from the seller
* Pay the cost of item

4. Cashiers come with the following activities:-

* Collect bill from the sellers
* Calculate the total bill
* Submitted the bills to manager

Generally, in the current system customers cannot gain access from the Shop by means of online. There are many services in the Shop and they are done by contact with face to face to the Shop seller.

# 2.3. Work flows in the Existing System

The work flow in the existing system is performed starting from the top shop manager to lower the seller person. The shopping devices imports from the main office at Addis Ababa monthly or weekly based on which types of shopping device were sold first these shopping devices received by the head store of the branch office.

The store head administered all the shopping devices and lead the other employee’s .The seller sell the electronic devices based on their price that is specified on dimension of the shopping and the accountant gives receipt to the customers who bought the electronic devices that is the seller do two activities at the same time simultaneously. In the following diagram we will try to put the work flow in the existing system.

Generate report

Shop manager:

Leads to

Checks

Check availability Item

Cashiers:

Seller:

Cut cost from

Sells devices to

The customer

Customer or buyer

Figure 2.1: work flow of existing system

# 2.4. Report Generating in the Existing System

The manager generates report weekly what activities are performed, the report is manual and it takes time to reach the main office .This report which includes about selling of the Electronic material, and about the market requirement of the Electronic material, about the not selling Electronic material.

# 2.5. Business Rules in the Existing System and Proposed System

A business rule is effectively and working principle or polices that we try to specify for both the existing system and the new system must satisfy. The business rule is a principle or a policy in which the proposed system works accordingly. It deals with access control issues.

It often concerns to access control issues, working policies and principles of the organization. The organization has the following principles in the existing system which includes:

* It does not reach electronic devices to customers to their address.
* The organization prepares reports to the higher officials monthly or weekly.
* The organization does not functional on holiday.

Our proposed system includes the following working principles or rules:

* Business Rule1:Customer should have valid credit card number
* Business Rule2: the customer fills the form properly.
* Business Rule3: the system gives fast responses to the customer.
* Business Rule4: the system should work 24 hours and 7 days per a week.
* Business Rule5: the system helps to arrive the electronic devices to the customer place.
* Business Rule6: the Shop should give services to the registered customer only.
* Business Rule7:do not try to registered again within the same user name

# 2.6. Problems in the Existing System

The existing system actually faces to a lot of problems, and these problems results due to the manual system of accomplishing its operations. Such as:

**Report generation**

The store head generates report on weekly or monthly. The store condense general information about the activates performed within the members. This is difficult to integrate the various information’s to generate the report.

**Reservation**

Records about any activity in the store are kept manually. Records about Item, user, and senders are also kept manually on registers and records which are alphabetically arranged in a wooden box. This may result in the data lost.

**Storage**

Since all records kept physically on shelves and file cabinets the Masiyas Electronic shop record keeping system is poor and subjects to number of problem:

* There is no means of keeping backup
* Use more space
* There is also loose of physical recordings through times
* Helpless to misplacement of the record

**Registration related problems**

Registering users and newly acquired information source is manual and not well organized .This in turn will result in poor techniques handling information related. Such as

* Difficult to integrate data from different individual records
* Unable to interest different user request.

# 2.7. Alternative Solution

As we try to describe above the existing system faces some problems and the problem’s primarily resulted from the manual system of running the activities and we try to put an alternative solution to the problems which are described in the above problem identifying in the existing system section.

* The best alternative solution to the existing system is to change the existing manual system and producing an electronic (online) system.

# 2.8. The Proposed System

## 2.8.1. Functional Requirement

These requirements which are the basic for the system or simply functional requirements that the system must satisfy. These groups of requirement stress functionality that the system should support for the user.

* User registration
* Electronic material registration.
* It will generate report in easy way.
* Online payment.
* The administrator updates periodical information.
* The customer order Item online.
* The system allow to the customers, to search Item in a fast mechanism.
* Customers should be able to post comments to the system about the items.
* Customers use a Shopping cart.

## 2.8.2. Nonfunctional Requirement

A Non-functional requirement defines the overall qualities or attributes of the resulting system. It place restrictions on the system being developed, the development process, and specify external constraints that the system must meet.

**User Interface**

The system has own functionality that needs interaction with users. The system provides different categories of users of different level. The users of the system vary from novice to experts. Apart from this, the system entertains different information types in different formats. Thus to address the above requirement the interface shall be user friendly.

**Hardware Considerations**

The system should run on a pc with a dedicated server to contain the database and other server components.

**Security issues**

This system should have a mechanism to restrict some resources to unauthorized users. The system requires the user to provide his identifications before allowing accessing a secure resource.

**Performance**

The performance of the system should be reliable and the response time of the system should be short.

**Maintainability**

The system must be easily maintainable. In order to accommodate future demands of system users, the system should be easy to understand and maintain.

# CHAPTER THREE

# 3. Analysis Deliverables of the New System

# 3.1. Introduction

Model is an abstraction of the real world. It allows us to deal with the complexity current in a real-world problem by focusing on the essential and interesting features of an application. The techniques and associated notation used for object oriented analysis and design in incorporated in to a standard object – oriented language called unify Modeling language (UML). An important goal of requirement modeling is come to an understanding of the useless problem that the new system is to address. This chapter focuses on developing the requirement and analysis models for the new system using the UML use case model, sequence diagram, activity diagram and class diagram and interface prototyping are also included.

# 3.2 .Use Case Diagram

A use case is a sequence of action that provides a measurable value to an actor another way to look at it is that a use case describes a way to which a real world to interacts with the system. An essential use case sometimes called a business the case is simplified, abstract, generalized use case that captures the intention of the user in a technology and implementation independent manner. The case models are used to document the behavioral (functional) requirement of a system or the “what “of the system (Scott W. Ambler 2001)

* A use case describes a sequence of action that provides a measurable value to an actor and draw as a horizontal ellipse.
* An actor is a person, organization, or external system that plays a role in one or more interactions with the system and draw as stickman figure.

Relationship between actors and use cases exists whenever an actor is involved with an interaction described by a use case and modeled as a line connecting use cases and actors.

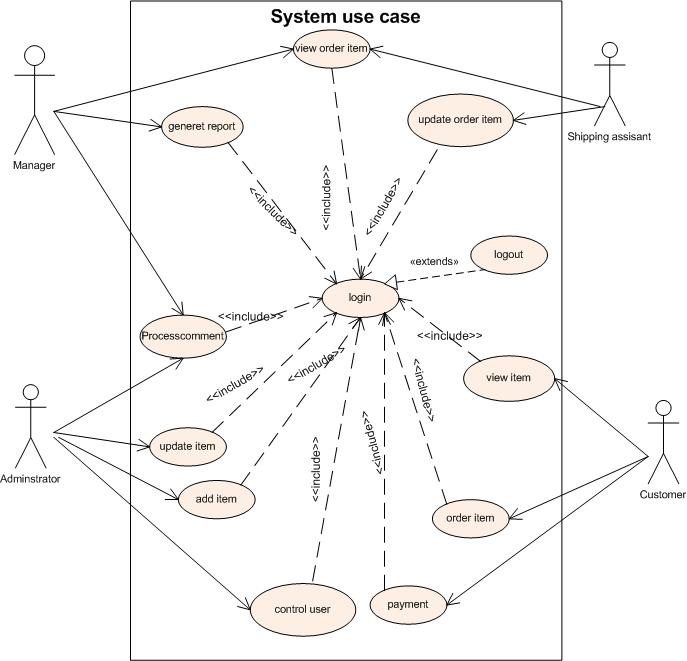


Figure 3.1: Use Case diagram

## 3.2.1. Actor Description

**Applicant:** the applicant performs only applied to be registered.

**Manager:** performs activities login and generate report.

**Customer:** performs activities login, Use shopping cart, payment, manage profile and order Item.

**Administrator:** performs activities login, add Item, update item, delete item, viewitem.

**Shipping assistant:** performs login and view order item.

## 3.2.2. Use Case Textual Description

**Use case name**: Login use case

**Identification**: UC01

**Description:** use case to ensure security in system usage

**Actor:** user: (customer, manager and Administrator)

**Precondition:** the user must have username and password.

**Post condition**: user get access to the system according to their predefined system privilege and finally he/she logout or turn off the page.

Basic course of action:

1. User activates the system.
2. System response by displaying the login interfaces and prompts the user for the user ID and password.
3. User fills his or her user ID and password and click login button.
4. System verifies user ID and Password.
5. User authenticated and gets access to the system.
6. System displays its main window.
7. Use case ends.

Alternative course of action (if user enters wrong user ID and / or password)

1. User is not authenticated and is denied access to the system.

2. System displays an incorrect user ID and password message.

3. The system informs the user to reenter username and/or password

4. The use case resumes at step 3 of flow of events.

5. Use case ends.

**Use case name**: generate report

**Identifier**: UC03

**Description**: use case to generate report.

**Actor**: manager

**Precondition:** the manager he/she an employee and have managerial skill about human resource and should have skill to integrate different information.

**Post condition**: System has successfully shown the reports to the administrator or printed the reports.

Basic course of action:

1. Manager can view the reports. Manager clicks the “View report” button.

2. The system loads the sales data from database and displays it as a report.

3. Managers can print these reports

4. Use case ends.

Alternative course of action

1. When there is there no sale record in the database, “No Sale Record Found” message will be displayed.
2. When there is select Search report with respect to specific time and date, the message“Invalid dates Entered” will be displayed.

**Use case name**: view item

**Identifier**: UC04

**Description**: use case to view item.

**Actor**: manager and administrator

**Precondition:** register, order item.

**Post condition**: view all item with full information.

Basic course of action:

1 manager or administrator clicks the View button.

2 The system loads the item information from the data base.

3. Use case ends.

**Use case name**: Search item

**Identifier**: UC05

**Description**: use case to retrieve an item from the data base.

**Actor**: customer

**Precondition:** the customer must be a member must be an employee.

**Post condition: System** display information about the item its holding.

Basic course of action:

1. Include login use case.
2. Customer clicks the search link.
3. Customer enters the item id in the search area.
4. System consults the database and displays the collection matching the search key word.
5. Use case ends.

Alternative course of action (user entered a search key word that doesn’t exist in the system)

1. System responds stating there is no resource matching the search in its result display.

2. System responds “not found” message.

**Use case name:** update item

**Identifier:** UCO6

**Description**: use case to edit or update the existing item information.

**Actor:** administrator

**Precondition**: administrator he/she must be an employee and have a certificate in DBMS.

**Post condition**: system updates the item information.

Basic course of action

1. Administrator selects item detail.
2. Administrator clicks the search button from item detail interface.
3. Use displays the search form.
4. Administrator enters item id on the search forms and click search.
5. System retrieves the item particulars.
6. Administrator edits the item particulars or information.
7. Administrator clicks update button.
8. Use case ends.

Alternative course of action (if administrator enters wrong ID)

1. This ID is not authenticated and is not exist in the data base.

2. System displays an item is not exist message.

3. System enables administrator to try again.

**Use case name**: Order Item

**Identifier**: UC07

**Description**: use case to order Item to browse from store collection.

**Actor**: customer

**Precondition:** the customer must be a member.

**Post condition**: system displays information about the Item its holding.  
Basic course of action:

1. Customer views product catalogue to select products.

2. Customer selects a product by clicking “Add to cart” button and enters the quantity of the products in the cart or clicks the “Add to cart” button as many times as the required quantity.

3. The system adds the products to the cart.

4. Now customer can view his selected products. To view the selected items, the customer clicks the “View cart” button.

5. The system displays the selected products along with the aggregated total at the end of the cart.

6. Customer can delete a product(s) from the cart. To delete product(s) from the cart, the customer checks the checkboxes (given with each product) of the product(s) to delete and clicks the “Remove”.

7. The system removes the product(s) from cart.

8. After selecting product(s), customer clicks the “Checkout” button to complete his order.

9. The system asks the credit card information from customer.

10. Customer enters the credit card information to pay the bill and clicks the “Pay” button.

11. The system deducts the total bill amount from the credit card amount.

12. Now the order is complete. The system shows an “Order ID” and “Delivery Time” on the screen.

13. Customer receives an email of order details.

Alternative course of action (user entered an order key word that doesn’t much in the system)

Alternative course of action

1. Customer orders a quantity of the product that is not available, “Sorry, The item is

Not available” message will be displayed.

1. Customer clicks “Checkout” button, when there is no item in the cart, the message

“Your cart is empty” will be displayed

1. When there is not enough money in the customer payment account, the message

“Sorry, amount is too low.” will be displayed.

**Use case name**: add item

**Description***:* UC08

**Actor**: Administrator

**Precondition**: Administrator wants to add item to the data base.

**Post condition**: system adds the item to the data base.

Basic course of action:

1. Include login use case.
2. Administrator selects record link.
3. Administrator clicks the add button from displayed record link.
4. System displays the add item form.
5. Administrators fill the form and upload the image of the item.
6. Administrator clicks the add button.
7. Systems save the item information in data base.
8. End use case.

**Use case name**: process comment

**Identifier**: UC09

**Description**: use case to view and delete comment.

**Actor**: manager and administrator

**Precondition:** view.

**Post condition**: Systems delete the comment from data base.

Basic course of action:

1. Manager or administrator clicks the View comment link.

2 .The system loads the comment from the data base.

3. Manager or administrators view the comment.

4. Manager or administrator deletes the comment.

5. The system deletes the comment from data base.

6. Use case ends.

# 3.3 Analysis Level of Class Diagram

Diagrams are used to represent the structure of the system in terms of objects, their notes and nature of relationship between classes. It shows the static features of the objects and do not represent any particular processing.

Have the following classes

It is an abstraction of the real environment class of seller, patron (user) and Administrator.

**Shipping assistant**: is the representation of the real world class or seller which interacts with system to accomplish the seller activity.

**Customer**: is the representation of the real world user.

**Administrator**: is an administrator which uses the automated system to add item, update item, delete item and to control user interface.

**Manager**: is an administrator which uses the automated system to retrieve report, view item.

**Item**: it is the representation of the real world class of items.



Figure 3.2: Class Diagram Analyses

# 3.4 Sequence Diagram

A **sequence diagram** is a UML interaction diagram. It represents the chronology of the passing of messages between system objects and actors. It may be used to illustrate a possible scenario of a use case, the execution of an operation, or simply an interaction scenario between classes of the system.

You can use one or more sequence diagrams to pass a use case or to identify all the possibilities of a complex behavior. A sequence diagrams conveys the same kind of information it concentrates on the chronology of messages passing between the objects in place of their structure.

A sequence diagram shows actors, objects (instances of classes) and the messages sent between them. By default, Power Designer provides an "interaction frame", which surrounds the objects in the diagram. Messages can originate from or be sent to any point on the interaction frame, which acts as the exterior of the system being modeled, and these gates can be used in place of actor objects.

Login form

User

Main

Window (UI)

Login controller

Database

Login link

Login use

Case# 01

Customer

1. Customer activates UI.

2. Select the login link.

4. Fill user name and

Password

5. Submit.

System

3. Display the login form.

6. Validate the data

7. Return to step 4. Unless

Follow step 5.

9. Check.

10. Response

1: customer activates UI ()

4. Fill user name and password ()

3: Display the login form ()

10. Response ()

8. Step 5 continue ()

7. Try again ()

9. Check ()

5. Submit ()

6. Validate ()

2. Select the login link ()

Figure 3.3: Sequence diagram for login



Figure 3.5: Sequence diagram for generate report



Figure 3.6: Sequence diagram for search item



Figure 3.7: Sequence diagram for update item



Figure 3.8: Sequence diagram for add item



Figure 3.9: Sequence diagram for order item

****

Figure3.10: Sequence diagram for payment

# 3.5 Activity Diagram

An activity diagram illustrates the dynamic nature of a system by modeling the flow of control from activity to activity. An activity represents an operation on some class in the system that results in a change in the state of the system. Typically, activity diagrams are used to model workflow or business processes and internal operation. Because an activity diagram is a special kind of state chart diagram, it uses some of the same modeling conventions. Activity diagrams are mainly used as a flow chart consists of activities performed by the system. But activity diagram are not exactly a flow chart as they have some additional capabilities. These additional capabilities include branching, parallel flow etc.



Figure3.11: Activity diagram for login use case



Figure 3.13: Activity Diagram for Generate Report



Figure3.14: Activity Diagram for Search item



Figure3.15: Activity diagram for update Item



Figure3.16: Activity Diagram for Add Item



Figure3.17: Activity Diagram for order item



Figure3.18: Activity Diagram for payment

# CHAPTER FOUR

# 4. Design Deliverable of the New System

# 4.1 Introduction

The purpose of designing is to show the direction how the web page is built and to obtain clear and enough information needed to drive the actual implementation of web page. It is based on understanding of the model the web page built on system design also focuses on decomposing the system in to manageable parts.

During system design we concentrate on the process of data structures and software and hard ware components necessary to implement it.

## 4.1.1. Design Goals and Objectives

The objectives of designing are to model a system with high quality. Implementing of high quality system depends on the nature of the design created by the designer .If one wants to make changes to the system after it has been put in to operation depends on the quality of the system design. So if the system is designed perfectly, it will be easy to make changes to it.

The goal of the system design is to manage complexity by dividing the system in to manageable pieces.

Some of the goals are listed below.

* **Security**: The system should be secured from unauthorized user.
* **Modifiability**: The system should be modifiability to modify different services depending on the need of the institute.
* **Flexibility:** The system able to change to suit new condition or situation.
* **Efficiency:** The system must do what it is supposed to do efficiently without the problem.

# 4.2. Design the Class Diagram

Diagrams are used to represent the structure of the system in terms of objects, their notes and nature of relationship between classes. It shows the static features of the actors and do not represent any particular processing. It is an abstraction of the real environment class of seller, patron (user) and Administrator.

**Shop assistant**: is the representation of the real world class or Shop assistant who interacts with system to accomplish the Shop assistant’s activity.

**Actor (customer):** is the representation of the real world store customer.

**Administrator:** is an administrator which uses the automated system to retrieve report.

**Item**: it is the representation of the real world class of items.

**Reserve**: it is an associate class that contains information about data of reserve with respective item.



Figure 4.1: class diagram

# 4.3. Collaboration Diagram

A collaboration diagram is an illustration of the relationships and interactions among objects in the unified modeling language.

: Customer

Login form

User

Interface (UI)

Database

Login

Controller

9: 9.check ()

6: 6.validate ()

1: 1: customer activates UI ()

4: 4.fill user name and password ()

3: 3: Display the login form ()

5: 5.submit ()

2: 2.select login form ()

10: 10.response ()

8: 8.step 4 continues ()

7: 7.try again ()

Figure 4.2: Collaboration diagram for login.



Figure 4.3: Collaboration diagram for register.



Figure 4.4: Collaboration diagram for Generate report.



Figure 4.5: Collaboration diagram for Search item.



Figure 4.6: Collaboration diagram for update item.



Figure 4.7: Collaboration diagram for add item.



Figure 4.8: Collaboration diagram for order item.



Figure 4.9: Collaboration diagram for payment.

# 4.4. State Chart Diagram

The state chart diagram used to show the sequence of states that an object goes through the events that cause the transition from one state to the other and the actions that result from a state change.

Idle

Initial state

Login

Activate

Verify login

Normal exit

Confirm

Login

Evaluation

Final state

Un normal exit

Complete state

Fail

Figure 4.10: state chart diagram for login



Figure 4.11: State chart diagram for register



Figure 4.12: State chart for update item



Figure 4.13: State chart diagram for report generate

# 4.5. Database Design

Database Design is the database structure that will be used as plan to Store and manage the data. The database management system (DBMS) is the software used to implement a database design. Modern database and applications development software is so easy to use that many people can quickly learn to implement a simple database and Develop simple applications within a week or so, without giving design.

Much thought, as data and reporting requirements become more complex, those same people will simply and produce the required data by incorrectly adding more columns of tables to the database.

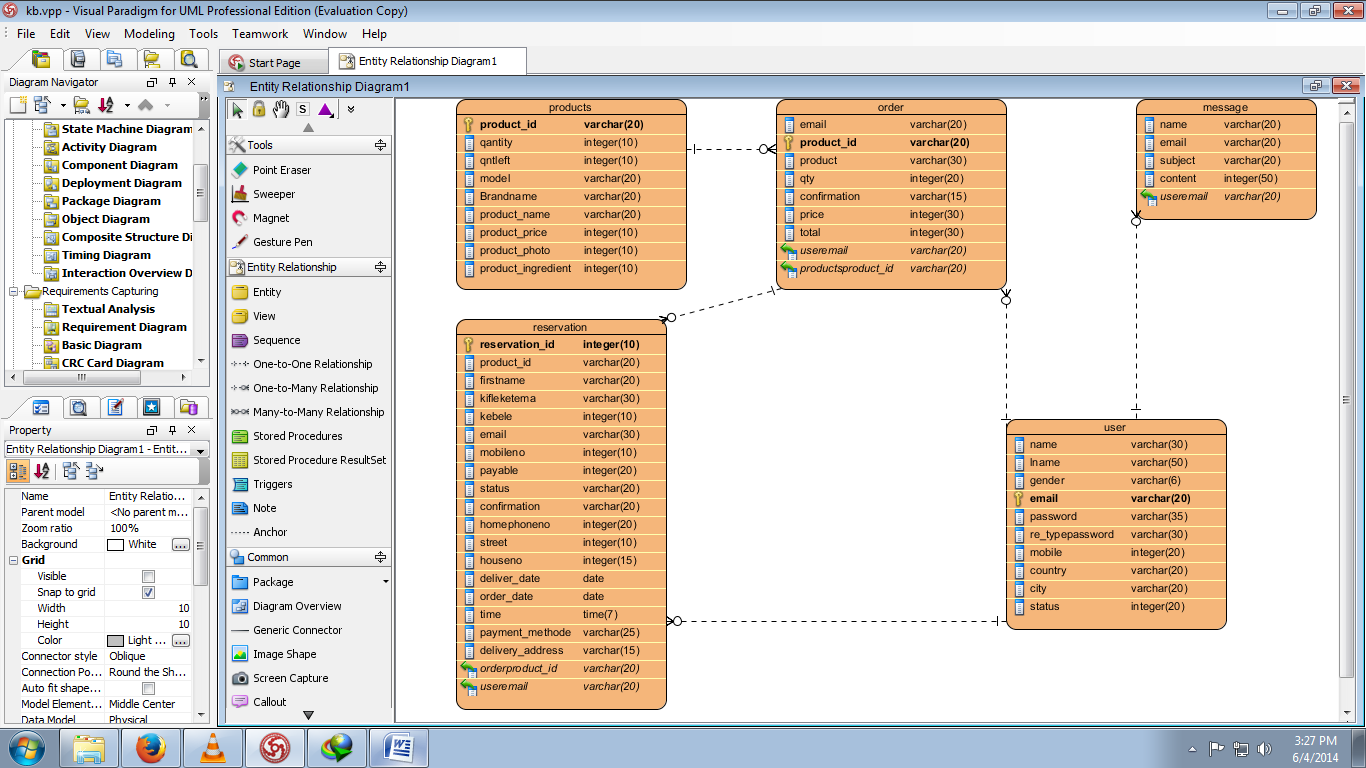


Figure 4.14 Organizational Database design

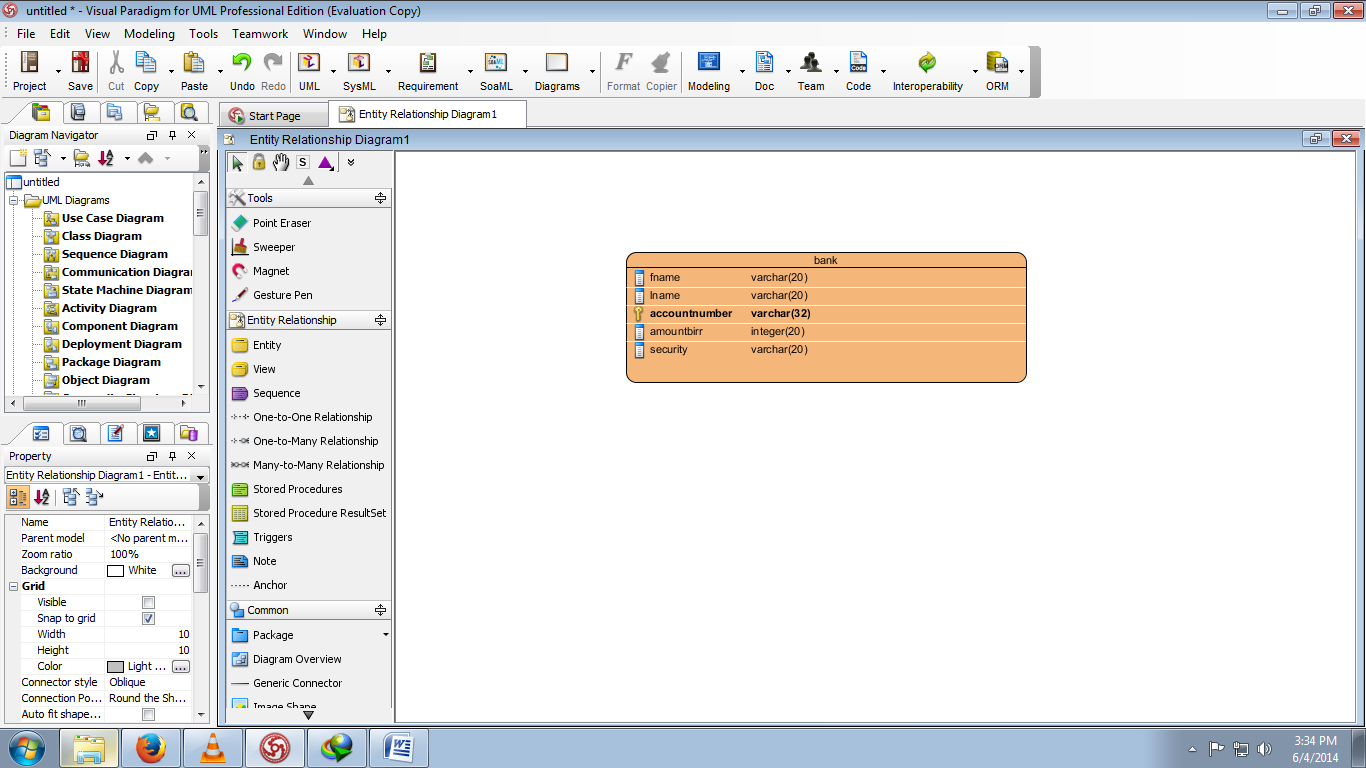


Figure 4.15 Bank Database design

# CHAPTER FIVE

# 5. Implementation deliverable of the new system

## 5.1 Introduction

Implementation refers to the Coding of the all documents gathered starting from requirement analysis to Design phase. So now the team is in a position of converting all documents gathered and designed into the code so that the system will be implemented for the user to be used for the purpose it developed. To implement it the user must have a server on which the system will be hosted because this system can run on intranet site with connection available or on internet connection.

## Component diagram

In this Diagram components of the system will be wired showing that there is relation among components, management of the system, database and operations performed on databases such security issue. This in some extent shows which component or objects will be accessed by whom and what type of security infrastructures it is using. The diagram is simulated below.

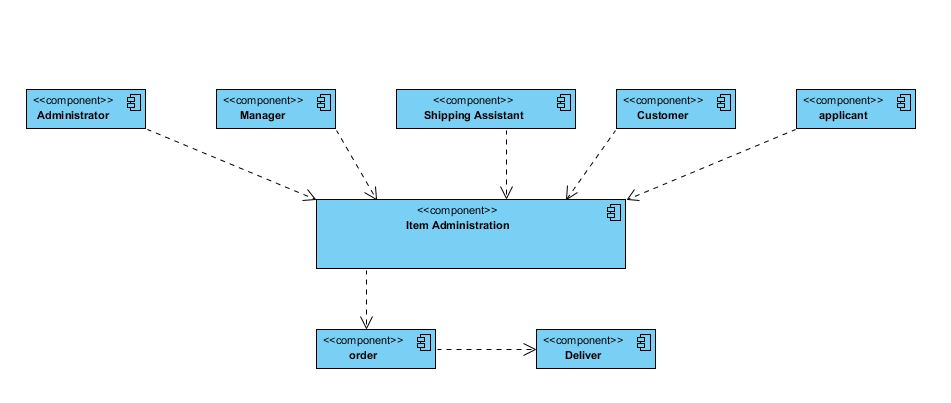


Figure 5.1 Component diagram

## Deployment diagram

Deployment modeling is used to show the hardware of the system, the software that is installed in the hardware and also the middleware that is used to connect the disparate machines to one and other. It also shows how the software and the hardware components work together.

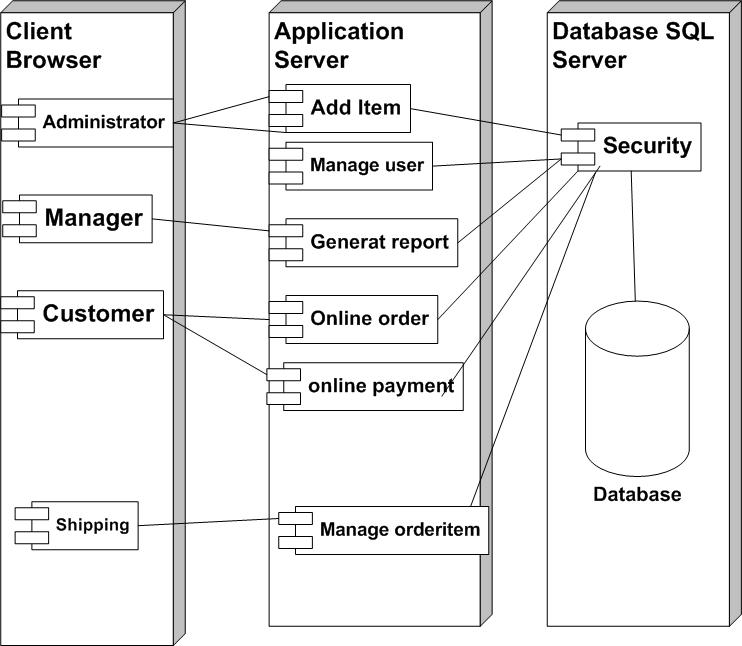


Figure 5.2 Deployment diagram

## User interface design

In this system users will communicate with the system through the following user interfaces.

**Home Page**: This form appears on the site in which the system deployed is opened and contains some links which lead the user to other page according to his privilege, and if the user is authorized user or has an account, he/she will directly go to the page that he want by entering correct username ,password and role.



Figure 5.3 User interface design for Home Page



Figure 5.4 User interface design for Register user



Figure 5.5 User interface design for Login



Figure 5.6 User interface design for Order

# CHAPTER SIX

# 6. Prototype development

Prototype development can be defined it is the sample code of the given project. These are some of the sample codes that we have done it.

**Sample code for Register**

<?php

if(isset($\_POST['submitMain']) )

{

$fname=$\_POST['fname'];

$date=$\_POST['lname'];

$month=$\_POST['gender'];

$year=$\_POST['mail'];

$pass=$\_POST['pass'];

$rpass=$\_POST['rpass'];

$mo=$\_POST['mobile'];

$cou=$\_POST['cou'];

$cit=$\_POST['city'];

$role=$\_POST['role'];

if($pass==$rpass){

$query="INSERT INTO user(Name,Lname,gender,email,password,re\_typepassword,Mobile,country,city,status)";

$query.="VALUES ('{$fname}','{$date}','{$month}','{$year}','{$pass}','{$rpass}','{$mo}','{$cou}','{$cit}','{$role}');";

$result=mysql\_query($query);

if(!$result){

echo"<p class='wrong'> This E-Mail Is Ordey Existing!!!</p>";

}

else{

echo"<p class='success'> congratulations </p>";

echo'meta content="5;login.php" http-equiv="refresh"/>';

}}

else{

echo"<p class='wrong'> Password Not Match</p>";

echo'<meta content="5;singup.php" http-equiv="refresh" />';

}

mysql\_close($conn);

}

?>

**Sample code for Login**

<?php

if(isset($\_POST['submitMain']))

{

$user =$\_POST['mail'];

$\_SESSION['mail']=$\_POST['mail'];

$password=$\_POST['pass'];

$\_SESSION['pass']=$\_POST['pass'];

$query = "SELECT \* FROM user WHERE email= '{$user}' AND password= '{$password}';";

$result = mysql\_query($query);

// TO check that at least one row was returned

$rowCheck = mysql\_num\_rows($result);

$row=mysql\_fetch\_array($result);

if($row['status']==1){

$\_SESSION['SESS\_MEMBER\_ID']=$confirmation;

echo"<script>window.location='http://localhost/masiyasonlineshopping/admin/product.php';</script>";

} else if($row['status']==2){

$\_SESSION['SESS\_MEMBER\_ID']=$confirmation;

echo"<script>window.location='http://localhost/masiyasonlineshopping/admin/manager/manager.php';</script>";

}

else if($row['status']==3){

$\_SESSION['SESS\_MEMBER\_ID']=$confirmation;

echo"<script>window.location='http://localhost/masiyasonlineshopping/admin/shop.php';</script>";

}

else if($row['status']==4){

$\_SESSION['SESS\_MEMBER\_ID']=$confirmation;

echo'<meta content="1;order.php" http-equiv="refresh" />';

}

else {

echo"<p class='wrong'>User Name & Password Not Match !!</p>";

echo'<meta content="5;login.php" http-equiv="refresh" />';

}}

mysql\_close($conn);

?>

**Sample code for order Item**

<?php

$result = mysql\_query("SELECT \* FROM products");

while($row=mysql\_fetch\_assoc($result))

{

echo '<a rel="facebox" href="orderpage.php?product\_id='.$row['product\_id'].'&trnasnum='.$transnum.'">

<img src="images/upload/'.$row['product\_photo'].'" title="'.$row['BrandName'].'" width="110" height="110" class="pngfix" /></a>';

}

?>

<div id="orderlist">

<table width="80%" border="1" cellpadding="2" cellspacing="2" align=center>

<tr><td width="25"><div align="center"><strong ><font color=black>Action</strong></div></td>

<td width="25"><div align="center"><strong ><font color=black>Qty</strong></div></td>

<td width="100"><div align="left"><strong><font color=black>Name</strong></div></td>

<td width="100"><div align="left"><strong><font color=black>Price</strong></div></td> <td width="25"><div align="center"><strong><font color=black>Amount</strong></div></td>

</tr>

<?php

$i=1;

$result3 = mysql\_query("SELECT \* FROM orders WHERE confirmation='$transnum'");

while($row3 = mysql\_fetch\_array($result3))

{

echo '<tr>';

echo '<td><a href="deleteorder.php?id='.$row3['id'].'" class="delbutton" ><img src="images1/delete.png" title="Click To Delete" onclick="isdelete();"></img></a></td>';

echo '<td><div align="center">'.$row3['qty'].'</div></td>';

echo '<td>'.$row3['product'].'</td>';

echo '<td>'.$row3['price'].'</td>';

echo '<td><div align="center">'.$row3['total'].'</div></td>';

echo '</tr>';

}

?><tr>

<td colspan="4"><div align="right"><span style="color:black; font-size:13px; font-weight:bold; font-family:Arial, Helvetica, sans-serif;">Total </span></div></td>

<td><div align="center">

<?php

$result5 = mysql\_query("SELECT sum(total) FROM orders WHERE confirmation='$transnum'");

while($row5 = mysql\_fetch\_array($result5))

{

echo $row5['sum(total)'];

$sfdddsdsd=$row5['sum(total)'];

}

?>

**Sample code for order Item**

<?php

$x=1;

if(isset($\_POST['submitMain'])){

$transnum=$\_POST['transnum'];

$na=$\_POST['fname'];

$bank=$\_POST['lname'];

$tra=$\_POST['transfer'];

$a=$\_POST['account'];

$amount=$\_POST['price'];

$card=$\_POST['secu'];

$query = "SELECT \* FROM bank where accountnumber= '{$a}' AND fname='{$na}' AND security='{$card}';";

$result\_set=mysql\_query($query,$conn1);

$count=mysql\_num\_rows($result\_set);

if(!$result\_set){

die("query is failed".mysql\_error());

}

if($count==0)

{

$del = mysql\_query("DELETE from reservation WHERE confirmation='$transnum'",$conn2) or die(mysql\_error());

$dl = mysql\_query("DELETE from orders WHERE confirmation='$transnum'",$conn2) or die(mysql\_error());

echo '<div align="center"><strong><font color="#FF0000">You Have No Account On This Branch!!!</font></Strong></div>';

echo'<meta content="10;order.php" http-equiv="refresh" />';

}

else{

if(mysql\_num\_rows($result\_set))

{$result ="SELECT \* FROM bank where accountnumber= '{$a}' AND security='{$card}';";

$re=mysql\_query($result,$conn1);

while($row = mysql\_fetch\_array($re))

{

if($row['amountbirr']<=$amount){

$del = mysql\_query("DELETE from reservation WHERE confirmation='$transnum'",$conn2) or die(mysql\_error());

$de = mysql\_query("DELETE from orders WHERE confirmation='$transnum'",$conn2) or die(mysql\_error());

echo'<strong><center><font color="#FF0000">Your account balance is low</font></center></Strong>';

echo'<meta content="10;order.php" http-equiv="refresh" />';

} else{

$value = mysql\_query("UPDATE bank set amountbirr='{$row['amountbirr']}'-'{$amount}' where accountnumber= '{$a}';",$conn1);

echo "<script>window.location='print.php?id=$transnum';</script>";

if($x==1) {

$query1 = "SELECT \* FROM bank where fname= '{$tra}';";

$result\_set=mysql\_query($query1,$conn1);

if(!$result\_set){

die("query is failed".mysql\_error());

}

if(mysql\_num\_rows($result\_set)>0)

{

$result1 = mysql\_query("SELECT \* FROM bank where fname= '{$tra}';",$conn1);

while($row1 = mysql\_fetch\_array($result1))

{

$value = mysql\_query("UPDATE bank set amountbirr='{$row1['amountbirr']}'+'{$amount}' where fname= '{$tra}';",$conn1);

} }}}}}

else { echo'<strong><center><font color="#FF0000">Please Try Aging!!</font></center></Strong>';

} }

mysql\_close($conn1);mysql\_close($conn2);

}?>

**CHAPTER SEVEN**

# 7. Conclusion and Recommendation

## Conclusion

This is a system development project which two phases; the first phase deals with the analysis phase of the life cycle, and the next phase addresses the Design phase. As the end of the first phase, we need to review that we have covered in accordance with what we have planned at the beginning. We began our work by identifying the significance of automated system for the store and the overall techniques to be used in the development process. This involved defining the system development methodology, identifying process. This involved defining the system development methodology, identifying resource and cost requirements, and setting the deliverable and scheduled for the project.

The business area Analysis helps the team to truly understand the major functional areas and processes of the system. Through this we evaluate the existing system weakness and strength.

After that, we performed requirements elicitation to discover user and system requirements. This phase consisted of drawing the functional as well as non-functional requirements of the system. Then we have undertaken a major phase in system development process: object oriented Analysis. Here, we tried to model the new system we proposed using UML diagrams: Use case, sequence, and activity and class diagrams Also, we designed the new system user interface prototype.

## Recommendation

The system that we are trying to develop is not a fully electronic shopping system. Because card, tax and functional of other banking system of the store are not integrated in the system. This is mainly due to limited development capacity and time.

Therefore, we suggest the following features need to be incorporated in any further revision and extension attempt.

* Not only functional for in commercial bank of Ethiopia but also apply other banking system like Dashen bank , Abay bank, Absiniya bank etc for the future.
* Integration with other section of the store.
* The system should develop the card payment system for the future.

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# Appendix

TV………………..Television

PHP………………..Hypertext Preprocessor

CSS…………………….Cascading Style Sheet

TVM………………….Time Value of Money

OOA ……………………Object Oriented Analysis

OOD ………………………….Object Oriented Design

MYSQL ………………….MY Structural Query Language

HTML…………………..Hypertext Markup Language

UML. …………………..unify Modeling language

UC………………………use case

DBMS ………………….database management system