

***Software Requirement and Design
Specifications***

**E Commerce Management
System**

| | |
|------------------------|--|
| <i>Course Code</i> | CS-324 Software Design and Analysis |
| <i>Instructor</i> | Miss Syeda Rubab Jaffar |
| <i>Project Team</i> | Mubeen Kodvavi 18k-1198 Moeiz Adil 18k-0258 |
| <i>Submission Date</i> | 18/12/2020 |

Table of Contents

| | |
|---|----|
| 1. INTRODUCTION..... | 3 |
| 1.1. Purpose of Document..... | 3 |
| 1.2. Intended Audience | 3 |
| 2. OVERALL SYSTEM DESCRIPTION..... | 4 |
| 2.1. Project Background | 4 |
| 2.2. Project Scope | 4 |
| 2.3. Not In Scope..... | 4 |
| 2.4. Project Objectives..... | 4 |
| 2.5. Stakeholders..... | 4 |
| 2.6. Operating Environment | 4 |
| 2.7. System Constraints | 5 |
| 2.8. Assumptions & Dependencies | 5 |
| 3. EXTERNAL INTERFACE REQUIREMENTS..... | 5 |
| 3.1. Hardware Interfaces | 5 |
| 3.2. Software Interfaces..... | 5 |
| 3.3. Communications Interfaces..... | 5 |
| 4. FUNCTIONAL REQUIREMENTS..... | 6 |
| 4.1. FUNCTIONAL HIERARCHY..... | 6 |
| 4.2. Use Cases | 7 |
| 4.2.1. [Title of use case]..... | 7 |
| 5. NON-FUNCTIONAL REQUIREMENTS..... | 8 |
| 5.1. Performance Requirements | 9 |
| 5.2. Safety Requirements..... | 9 |
| 5.3. Security Requirements | 9 |
| 5.4. User Documentation..... | 9 |
| SDS | 10 |
| 6. SYSTEM ARCHITECTURE..... | 11 |
| 6.1. SYSTEM LEVEL ARCHITECTURE..... | 11 |
| 7. DESIGN STRATEGY | 11 |
| 8. DETAILED SYSTEM DESIGN..... | 11 |
| 8.1. DATABASE DESIGN | 11 |
| 8.2 .APPLICATION DESIGN | 12 |
| 9. REFERENCES | 12 |
| 10. APPENDICES..... | 12 |

1. Introduction

1.1. Purpose of Document

The purpose of this document is to give report of the software requirement and design specification of the semester project that is E Commerce Management System .

1.2. Intended Audience

The concerned audience that can use this software are

- Buyers who are willing to order from E Commerce Management system .
- Sellers who want to know about the details of order when the order is placed .

1.3 Definition of Terms, Acronyms and Abbreviations

| Term | Description |
|-------------|----------------------|
| ASP | Active Server Pages |
| DD | Design Specification |
| | |
| | |
| | |
| | |
| | |
| | |

1.4 Document Convention

Font : Arial

Font Size : 10

2. Overall System Description

2.1. Project Background

Due to pandemic , the business is facing problem in selling their products to offline market so the business decided to carry out its operations online aswell . For that they require E Commerce Management System so they can sell their product to online customers to improve the sales and to compensate the loss done in the pandemic .

2.2. Project Scope

A new user can register on the website.

A customer can see details of the product present in the cart .

A customer can view his order history.

A customer can add or delete a product from the cart.

Admin can view the products purchased on particular date.

Admin can view number of products sold on a particular date.

A customer can view the total price of product present in the cart unpurchased.

A customer can search for a product.

A user can change his own account information.

A customer can pay through Paypal or credit card.

Admin can manage all users on the website.

2.3. Not In Scope

This E Commerce system is not a market place so there is only one business that want to sale their products . so there will be only one seller of the products .

2.4. Project Objectives

In this modern era of online shopping no seller wants to be left behind, moreover due to its simplicity the shift from offline selling model to an online selling model is witnessing a rampant growth. Therefore, as an engineer our job is to ease the path of this transition for the seller. Amongst many things that an online site requires the most important is a database system. Hence in this project we are planning to design a database where small clothing sellers can sell their product online.

2.5. Stakeholders

- Buyer
- Seller

2.6. Operating Environment

As the software is website so it must require an internet connection with a mobile/pc device having internet browser software installed to load the website .

2.7. *System Constraints*

- Software constraints:
Minimum Operating System Requirement: Windows 7
- Hardware constraints:
Need computer system
- Cultural constraints:
The portal is in English Language
- User Constraints:
The user should be literate enough to use modern tech and can understand English .

2.8. *Assumptions & Dependencies*

NA

3. *External Interface Requirements*

3.1. *Hardware Interfaces*

The system is a web-based application; clients are required using a modern web browser such as Google Chrome, Mozilla Firefox and Enable Cookies. The computer must have an Internet connection in order to be able to access the system.

3.2. *Software Interfaces*

All pages of the system are following a consistent theme and clear structure. The occurrence of errors should be minimized using checkboxes, radio buttons and scroll down in order to reduce the amount of text input from the user. Proper Grids to display information to give a clear structure that is easy to understand by the user. Error messages should be located beside the error input which clearly highlight and tell the user how to solve it. The page should display the project process in different colors

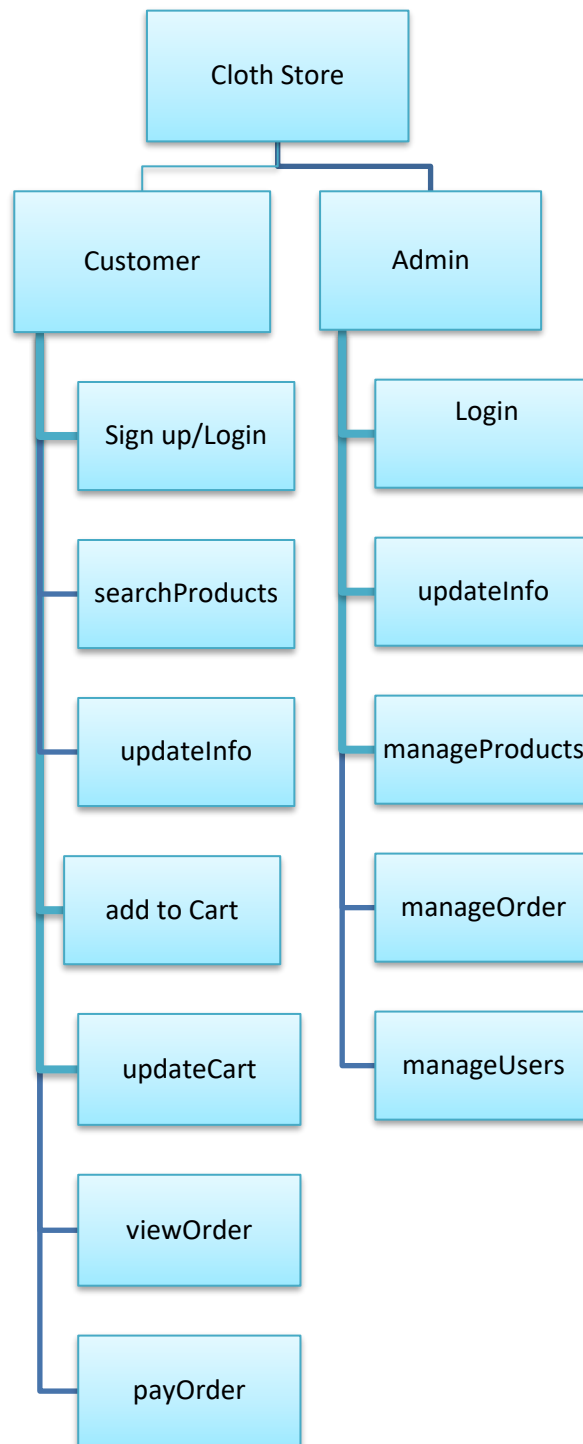
3.3. *Communications Interfaces*

The HTTP/HTTPS protocol will be used to facilitate communications between the client and server

4. Functional Requirements

4.1. Functional Hierarchy

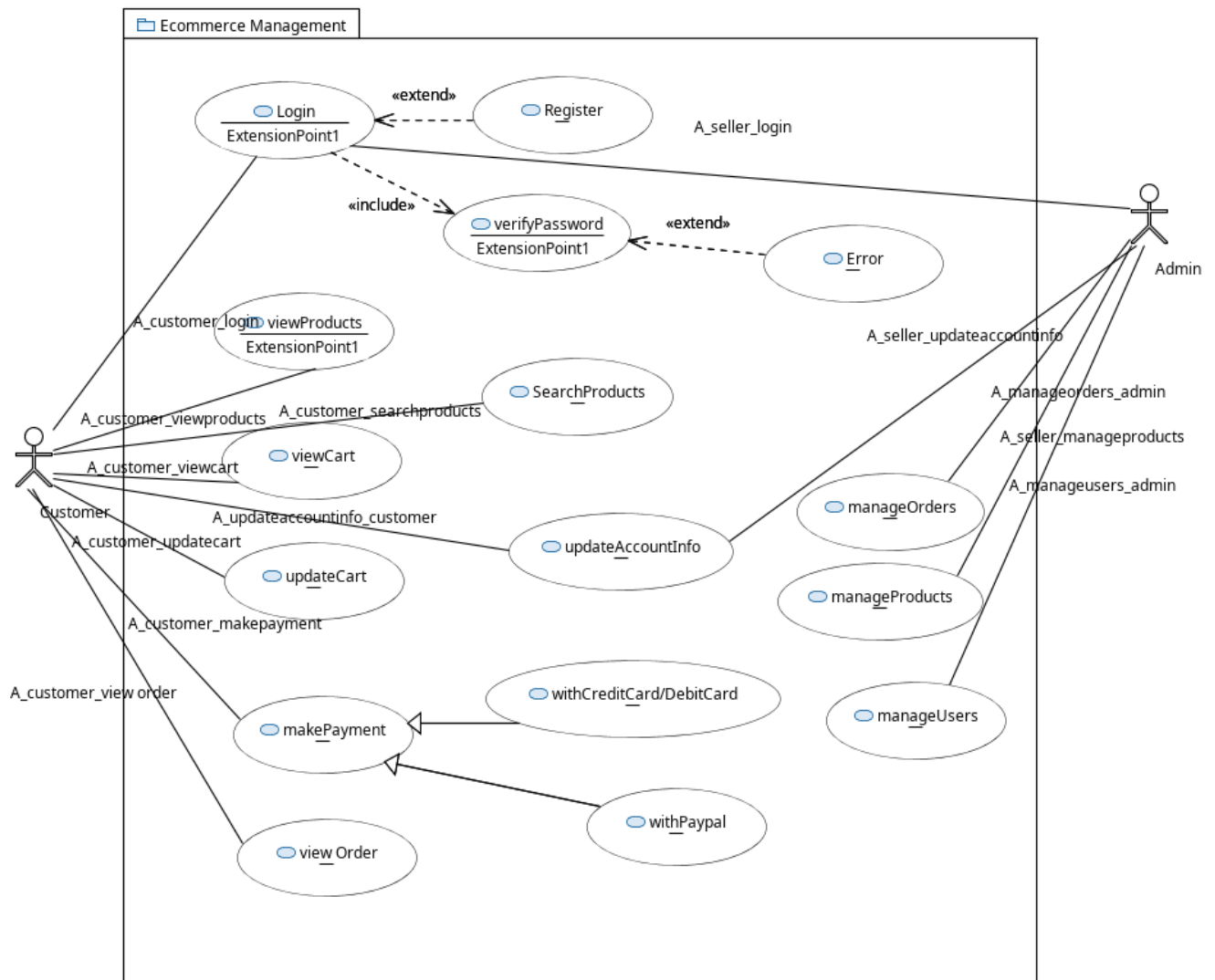
bnmk



4.2. Use Cases

4.2.1. Cloth Store

[Use Case Diagram]



Use Case Description :

| | |
|-----------------------|---|
| Use Case Name: | Cloth Store |
| Use Case Description: | This project will deliver a platform for people to purchase the products online which help the buyers saving time and getting quality products at their doorstep without any problem of going to online market . Due to Corona Virus pandemic the lockdown is imposed in many areas so this project helps buyers to purchase their desired products in this pandemic situation aswell when most of the offline markets are closed . |
| Actors: | Buyer , Seller |

| | |
|-----------------|--|
| Pre-Conditions: | <ol style="list-style-type: none"> 1. Customer can be new and existing both . 2. New Customer has to sign in to start shopping 3. The user can be buyer or seller at a time . |
| Flow of Events: | <p><u>If the user is Existing Customer</u></p> <ol style="list-style-type: none"> 1. Login 2. Add Products to Cart 3. Checkout cart for payment 4. View previous order history 5. Give Rating and comment of their purchased product <p><u>If the user is new customer</u></p> <ol style="list-style-type: none"> 1. SignUp 2. Login <p><u>If the user is Admin</u></p> <ol style="list-style-type: none"> 1. Signup 2. Login 3. View all Order details 4. View all customer accounts 5. Add new product 6. Can remove existing customer . |
| Post Conditions | <ol style="list-style-type: none"> 1. Order start processing once the order has confirmed after payment procedure . 2. Customer will get the ordered delivered at their doorstep . |

5. Non-functional Requirements

5.1. Performance Requirements

The system must be interactive, and the delays involved must be less. So, in every action-response of the system, there are no immediate delays

5.2. Safety Requirements

Payment process should be secured in the case of credit card payment .

5.3. Security Requirements

The main security concern is for users' accounts hence proper login mechanism should be used to avoid hacking. Hence, security is provided from unwanted use of recognition software.

5.4. User Documentation

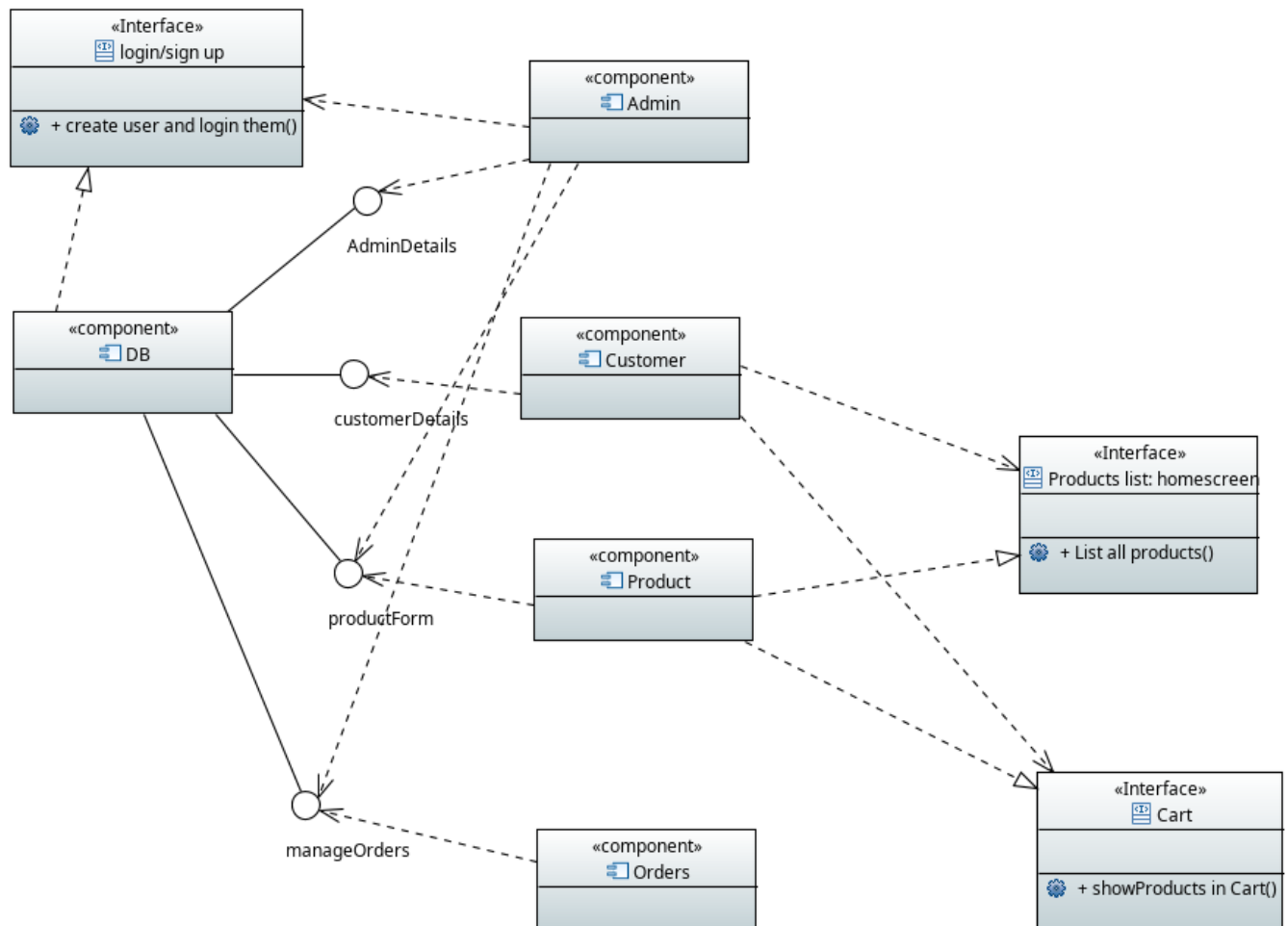
As the system provides the right tools for discussion, problem solving must be made sure that the system is reliable in its operations and for securing the sensitive details.

SDS

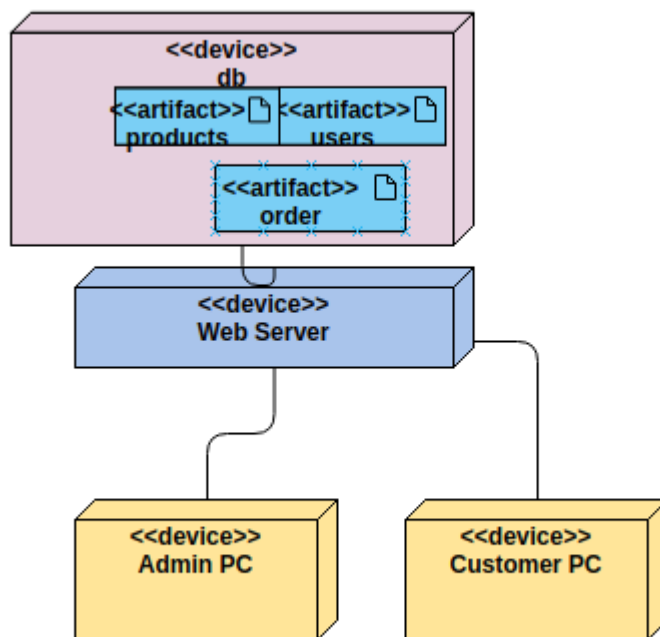
6. System Architecture

6.1. System Level Architecture

Component Diagram :



Deployment Diagram :

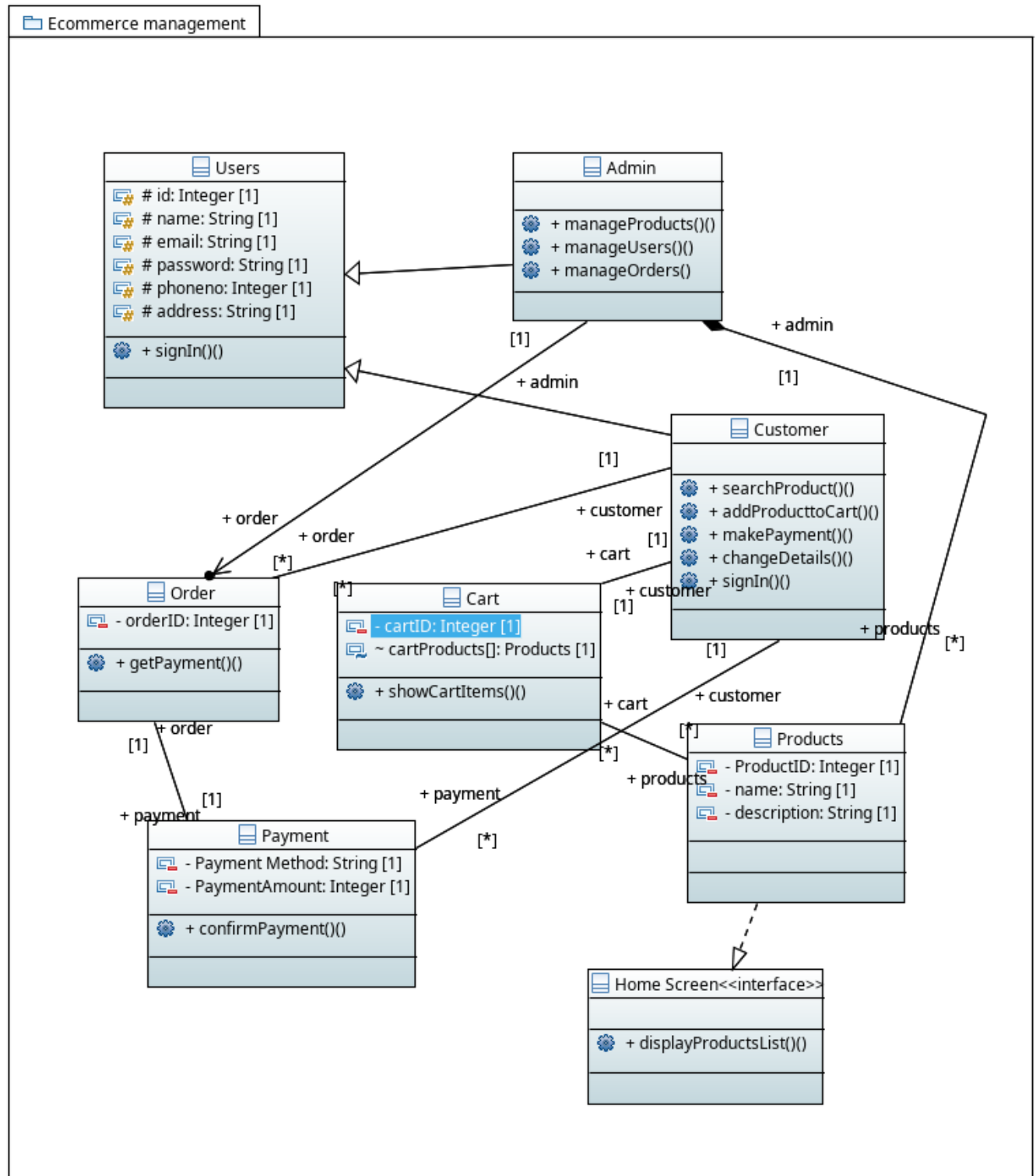


7. Design Strategy

This project is designed in a way to facilitate and encourage buyers to do online shopping . This system is beneficial for the ecommerce growth in Pakistan . In future this system can be further extended and can be made a market place so other sellers can also avail the system and sell their products to our existing customers which can lead to more profit generation of the company .

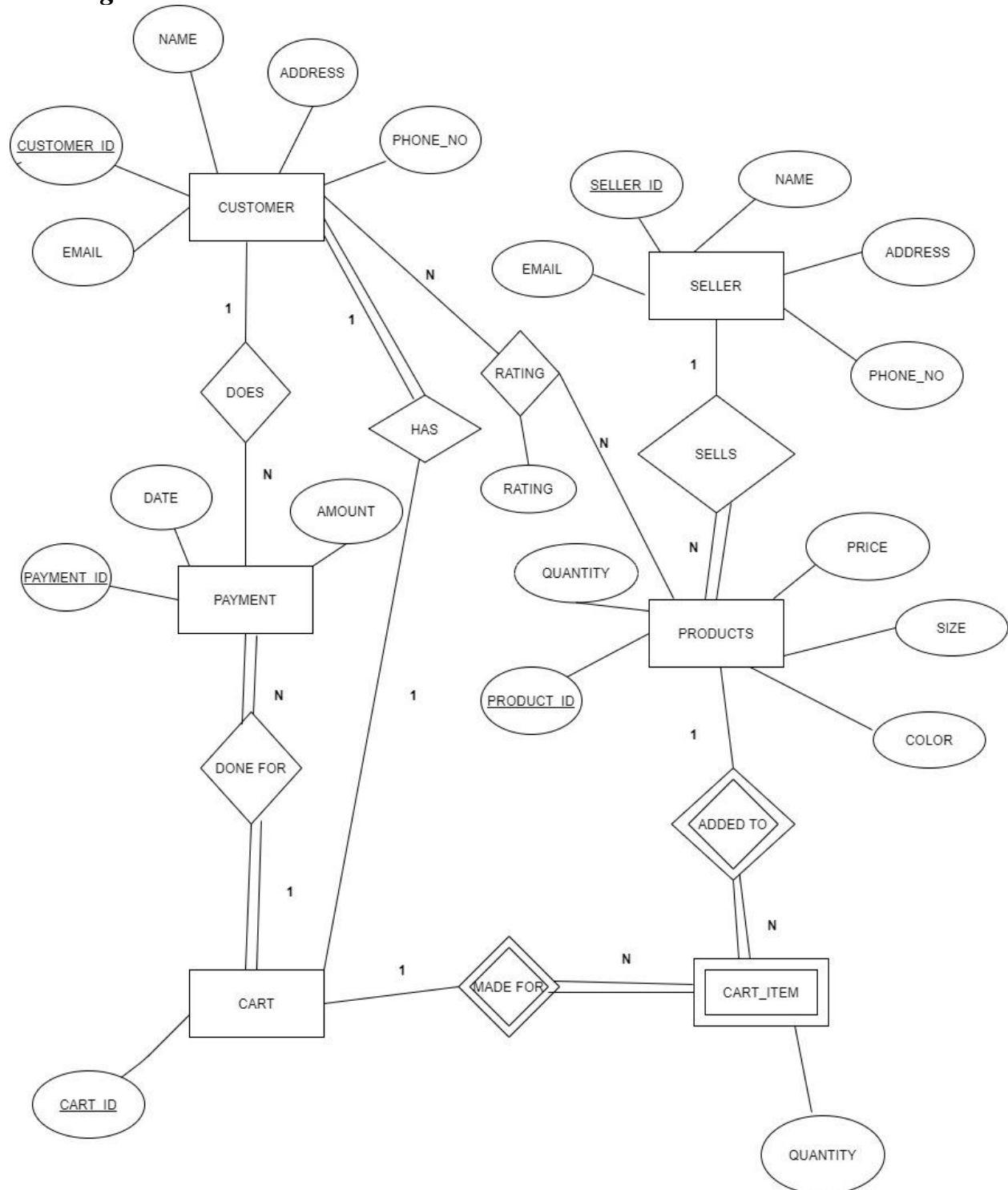
8. Detailed System Design

Class Diagram



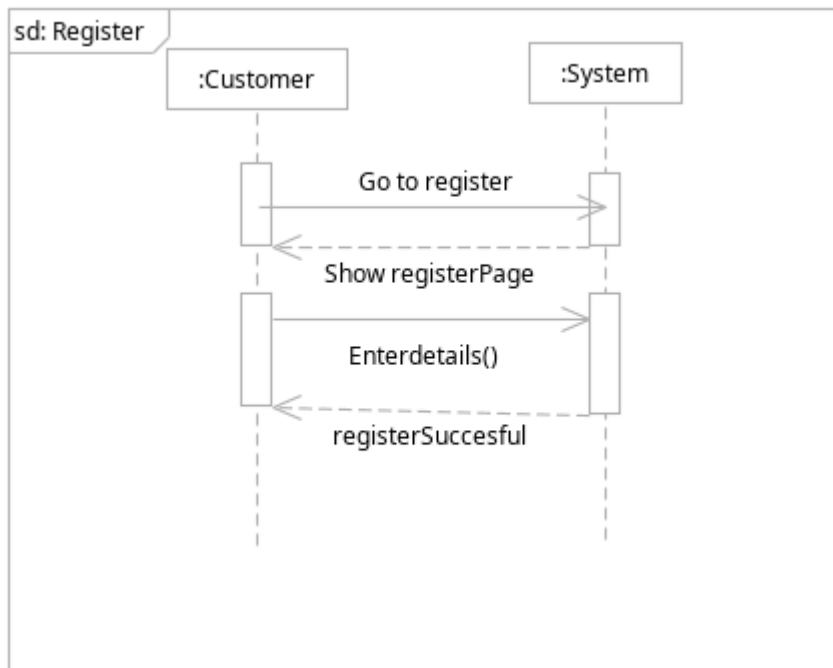
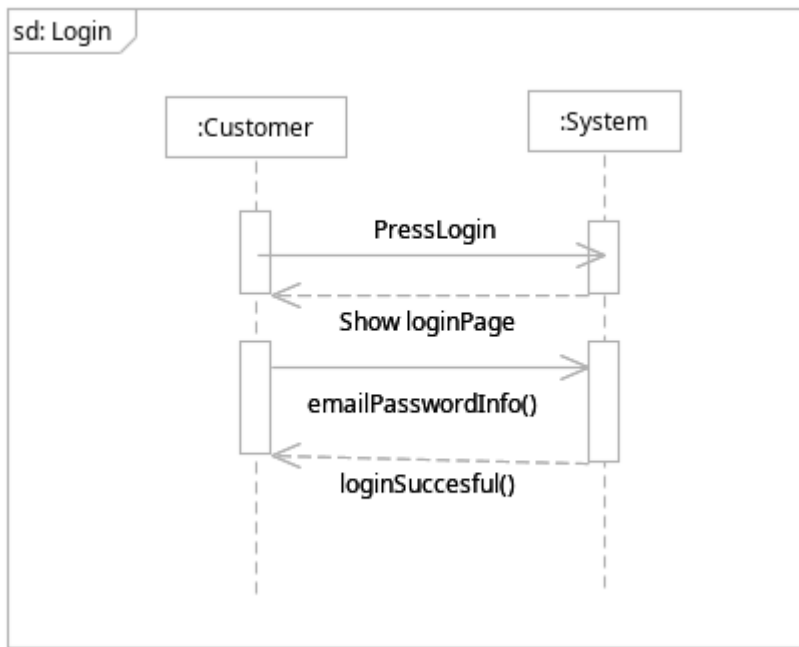
8.1. Database Design

ER Diagram

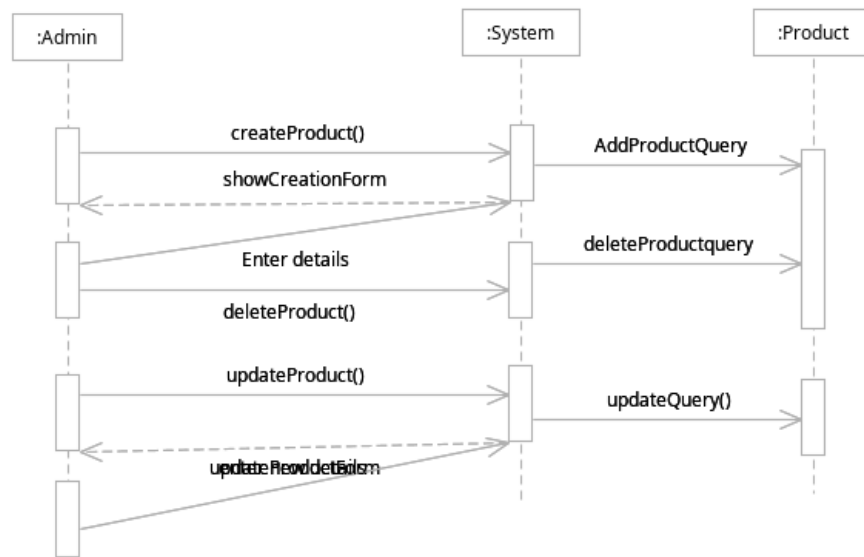


8.2. Application Design

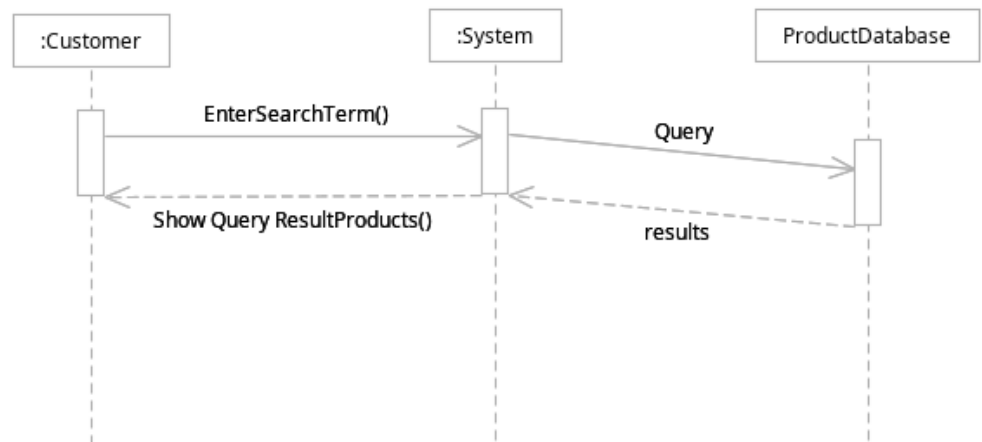
8.2.1 Sequence Diagram for some use cases



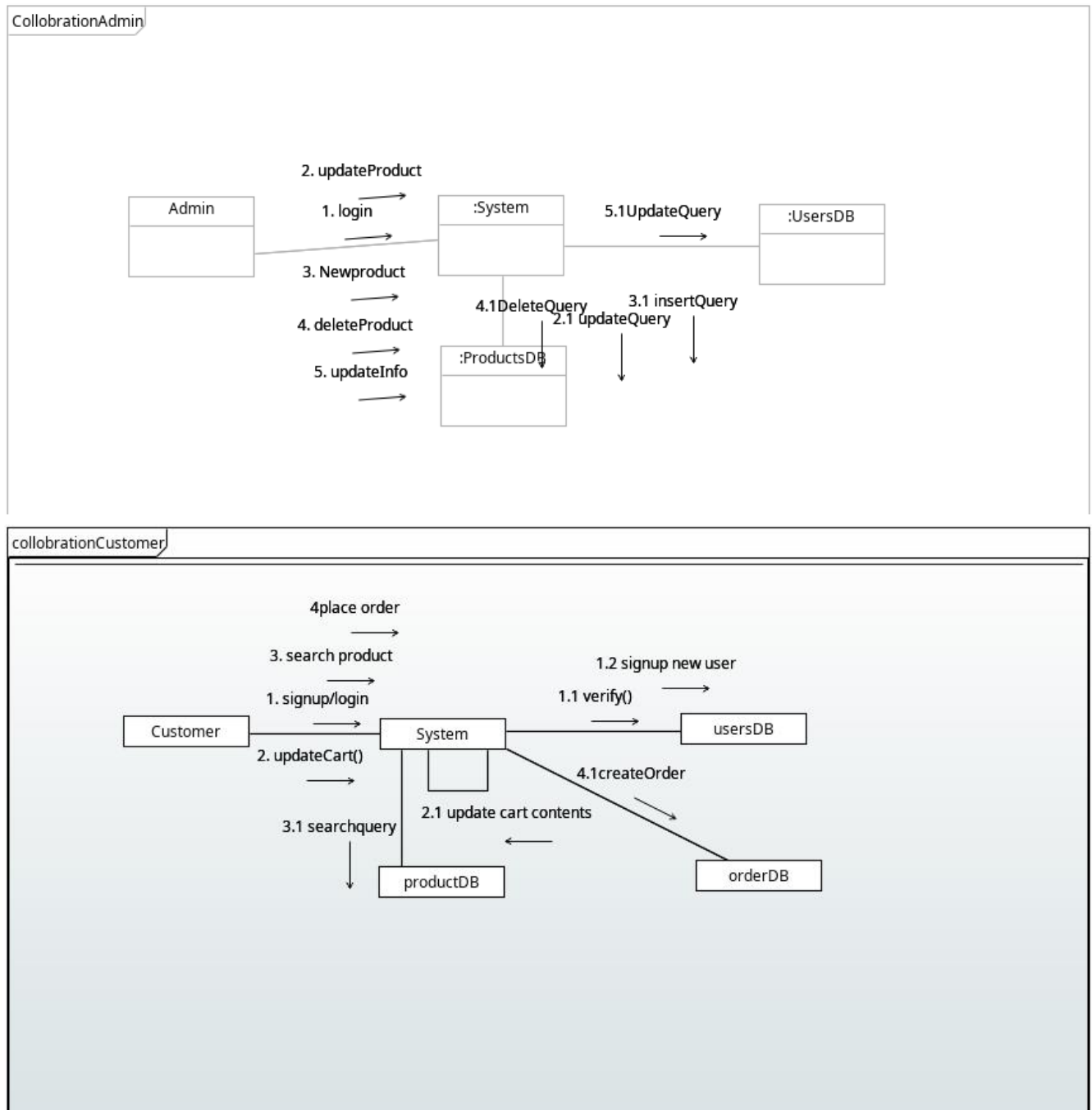
sd: manageProduct



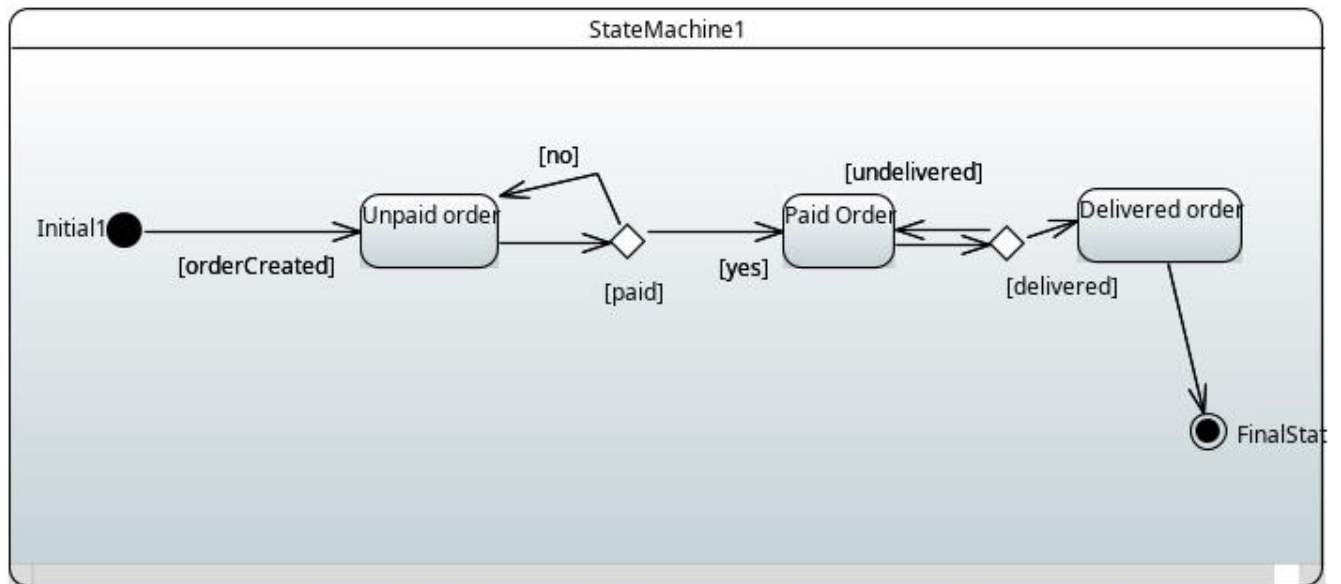
sd: searchProducts



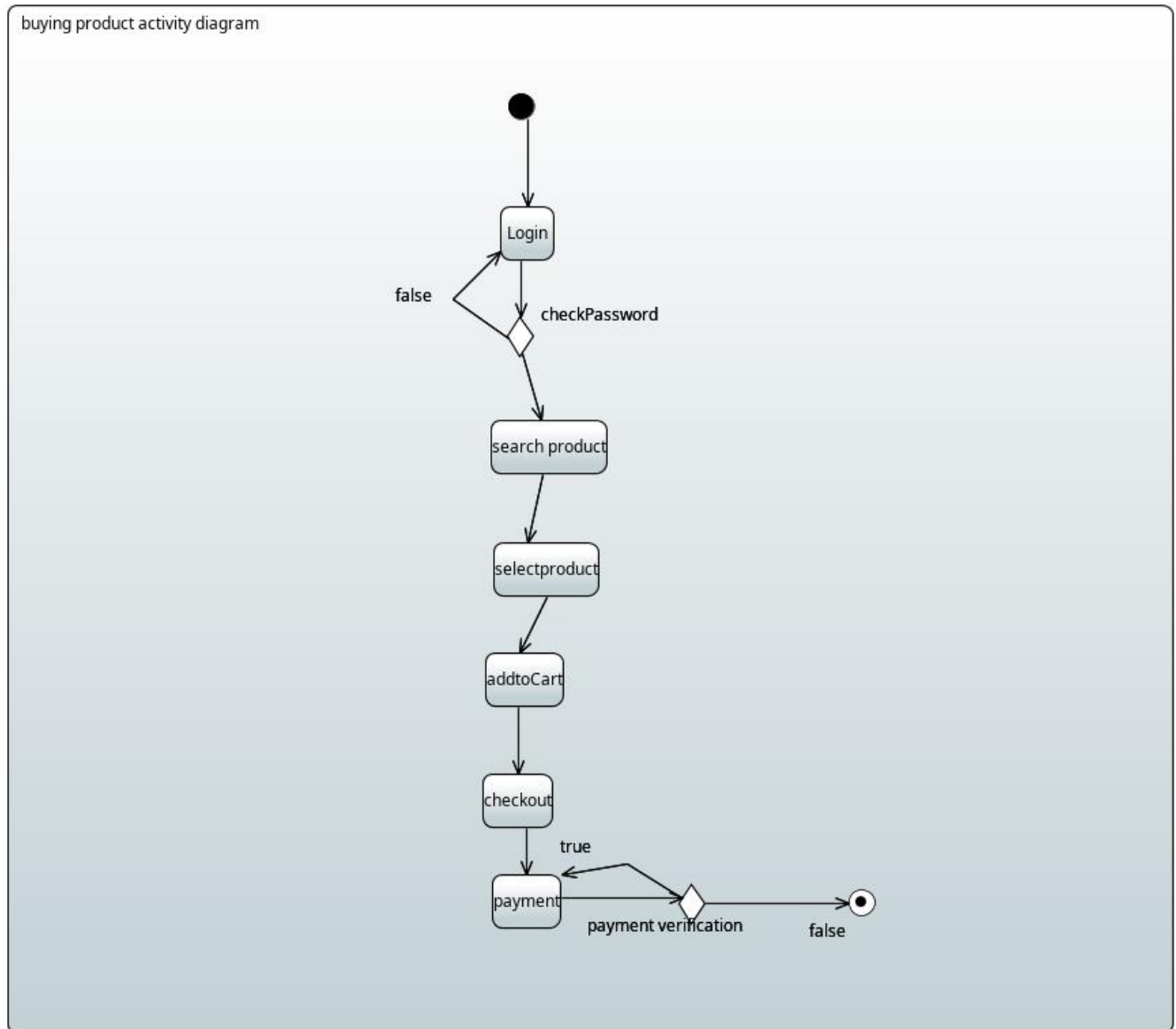
8.2.2 Collaboration Diagram for users



8.2.3 State Diagram for order states



8.2.4 Activity Diagram for buying product:



9. References

(Lectures)

10. Appendices

NA