Object Oriented Analysis and Design

Online Shopping System

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Introduction

This introduction provides an overview of the **Online shopping system**. The online shopping system facilitate the customer to create an account with guidance, view products, find price and feedback of specific product, availability of product, purchase product and many more.

In this project we will make an OOAD diagrams like use case diagram, class diagram, system sequence diagram and use case description etc, which will be helpful in the implementation of online shopping system.

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. A typical online store enables the customer to browse the firm's range of products and services, view photos or images of the products, along with information about the product specifications, features and prices. Online stores typically enable shoppers to use "search" features to find specific models, brands or items.

Online customers must have access to the Internet and a valid method of payment in order to complete a transaction, such as a credit card, a debit card, or a service such as PayPal. For physical products (e.g., books or clothes), the e-retailer ships the products to the customer; for digital products, such as digital audio files of songs or software, the e-retailer typically sends the file to the customer over the Internet.

Advantages of online shopping

- Save time
- Save fuel
- Save energy
- Comparison of prices
- 24/7 availability
- Hate waiting in lines
- Too ashamed to buy
- Easy to search goods customer wants to buy

Use case description

- **Create Account**

Name/Goal	Create Account.
Actor	Customer / end user of product.
Description	User create account in online shopping website.
Preconditions	User have verified email address.
Post conditions	User create account successfully.
Main flow	1. User go to official website of online shopping. 2. User click to create account button 3. User select his/her country 4. User entered his/her name. 5. User enter his/her email address 6. User entered strong password. 7. User verify his/her email 8. User entered his/her cell number 9. User accept term and conditions of website. 10. User click to create account button.
Alternate flow	2a. User can view help to create account. 6a. System tell user that the password is strong or not.

Exception flow	1a. User not able to go to official website.
	    ▪ Due to network issue.
	    ▪ May be server is down.
	3a. User not find his/her country in list.

	▪ Due to service not available in that country. ▪ Due to sanctions on that country.

- **Login**

Name/Goal	Login
Actor	Customer / end user.
Description	User login to online shopping store
Preconditions	User have an account.
Post conditions	User login successfully and dashboard is display.
Main flow	1. User go to official website of online shopping. 2. Click on login button. 3. Enter email. 4. Enter password. 5. Click on verify and continue button. 6. System verified email and password. 7. User's dashboard is displayed.

Alternate flow	6a. System not verify credentials.
	   ▪ System prompt invalid email or password message.
	   ▪ User can reset password by clicking on forget password button.

- **Logout**

Name/Goal	Logout
Actor	Customer / end user.
Description	User wants to logout form website.
Preconditions	User must be login.
Post conditions	User logout successfully and homepage of website is display.
Main flow	1. User go to profile section. 2. User click to logout. 3. A message will be displayed "Are you sure you want to logout". 4. User click yes button. 5. User logout and homepage is displayed.
Alternate flow	3a. Pop up message will be displayed by showing. ▪ Yes, want to logout. ▪ Remember email and password

- **View item and price**

Name/Goal	View item and price
Actor	Customer / end user.
Description	User wants to view items along with price in online shopping store.
Preconditions	User go to official website of online shopping.
Post conditions	User view items and price successfully.
Main flow	1. User go to official website of online shopping. 2. User click on search box to view item. 3. Enter the desired product. 4. User view list of product along with price successfully.
Alternate flow	4a. User view list of product along with price and - Minimum price - Maximum price - Warranty years - Location - Popular brands

- **Place order**

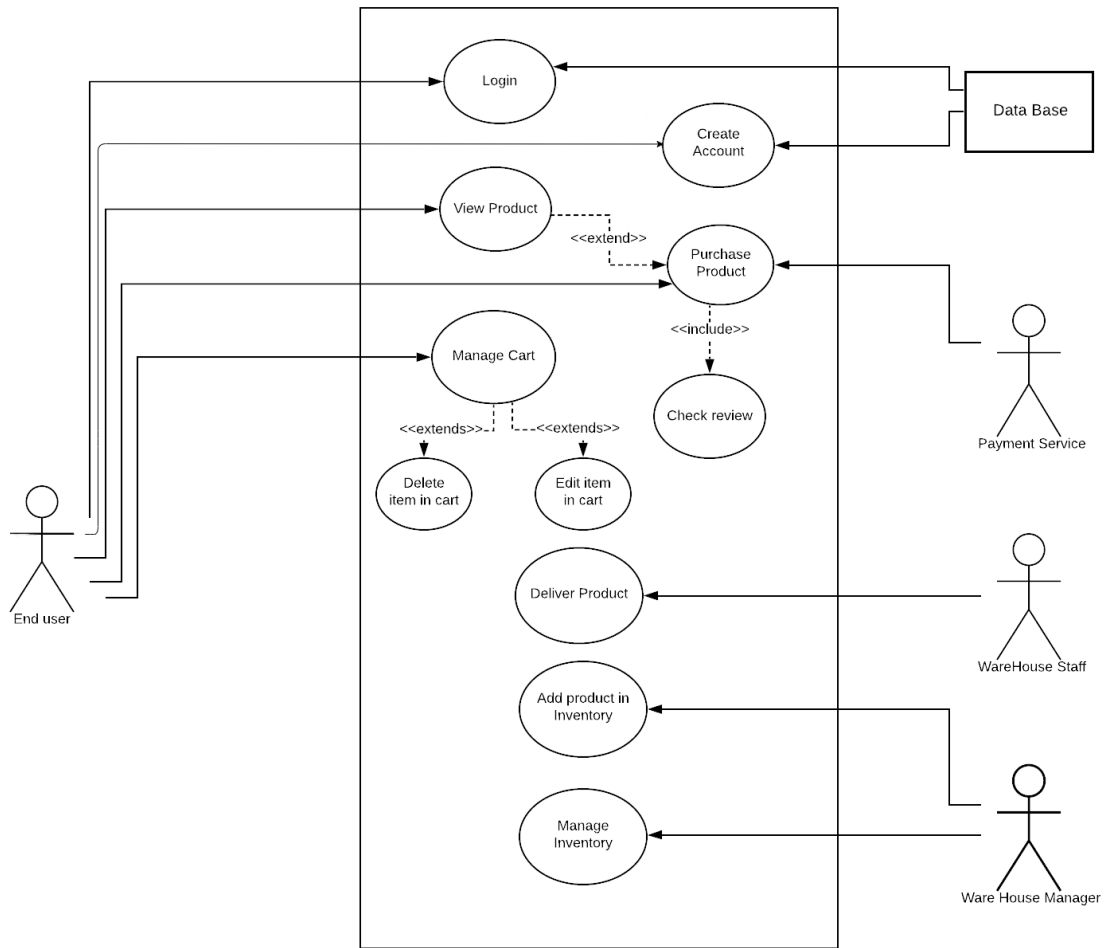| Name/Goal	Place order
Actor	Customer / end user.
Description	User wants to place order.
Preconditions	User must be registered and logged in.
Post conditions	User place order successfully.
Main flow	1. User go to official website of online shopping. 2. Customer logged in successfully to place order. 3. Customer checkout the desired product. 4. Customer place order in cart. 5. Customer enter his/her delivery address. 6. Customer provide his/her bank account number. 7. Customer click on confirm order button.

Alternate flow	6a- Customer may choose other ways like
	    ▪ PayPal
	    ▪ Easy Paisa
	7a- Customer can edit his/her entered details.

Exception flow	4a- Item may not be available. 1. Message will be displayed to customer about that.

- **Refund request**

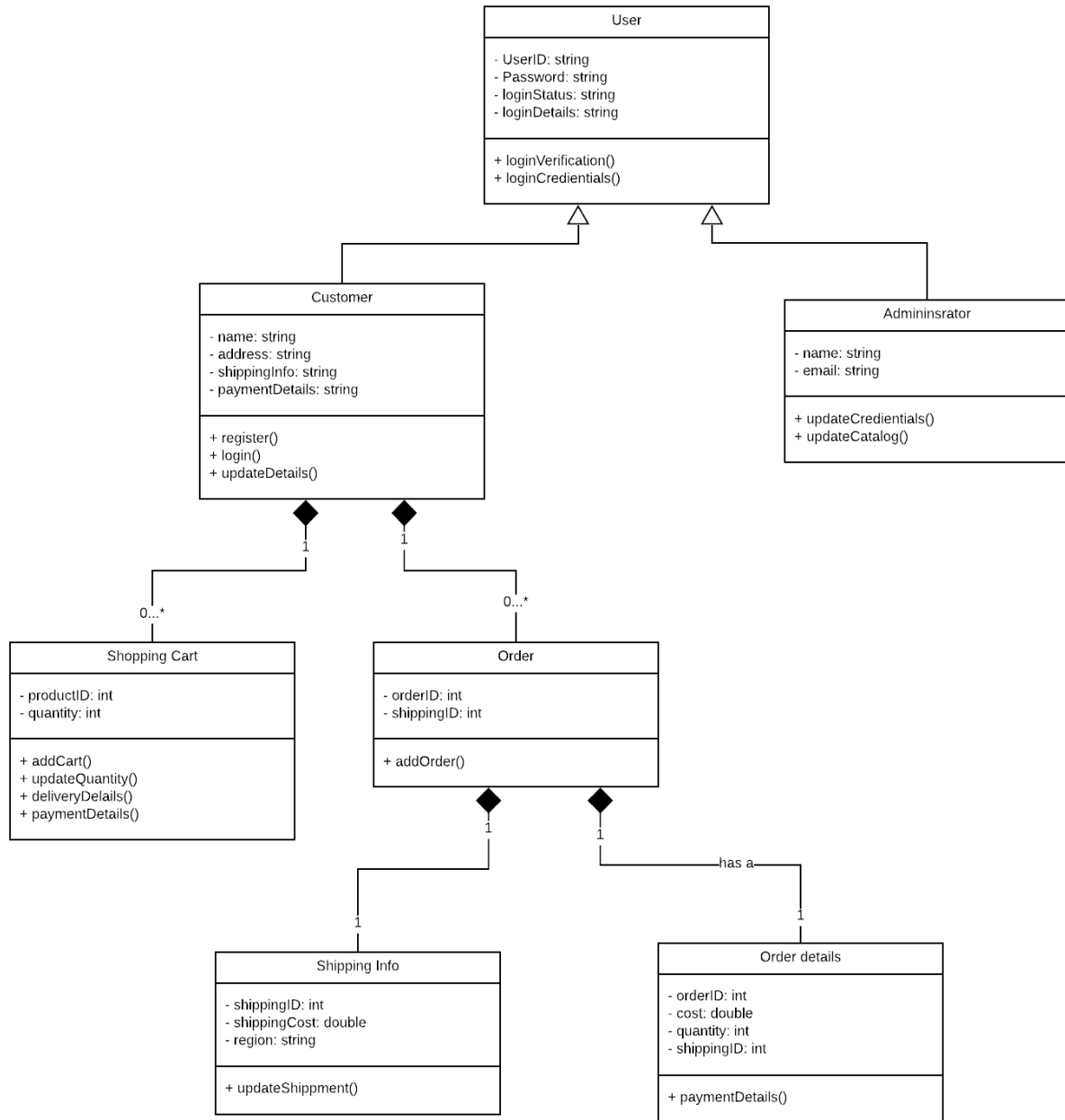| Name/Goal	Request for refund
Actor	Customer / end user.
Description	Customer can request for refund of money in specific time, if user not like product.
Preconditions	User must be registered and logged in.
Post conditions	User submitted request successfully.
Main flow	1. User logged in and go the refund product page. 2. User select item type. 3. User enter product price. 4. User upload receipt receive form online shopping website. 5. System display question that **why you want to return product**. 6. User complete the answer and click on submit application button. 7. User receive message that **you will be updated after verification.**

Alternate flow	1a. On refund page user can also read.
	    ▪ FAQ of return and refund of product.
	    ▪ Refund policy.

- **Feedback**

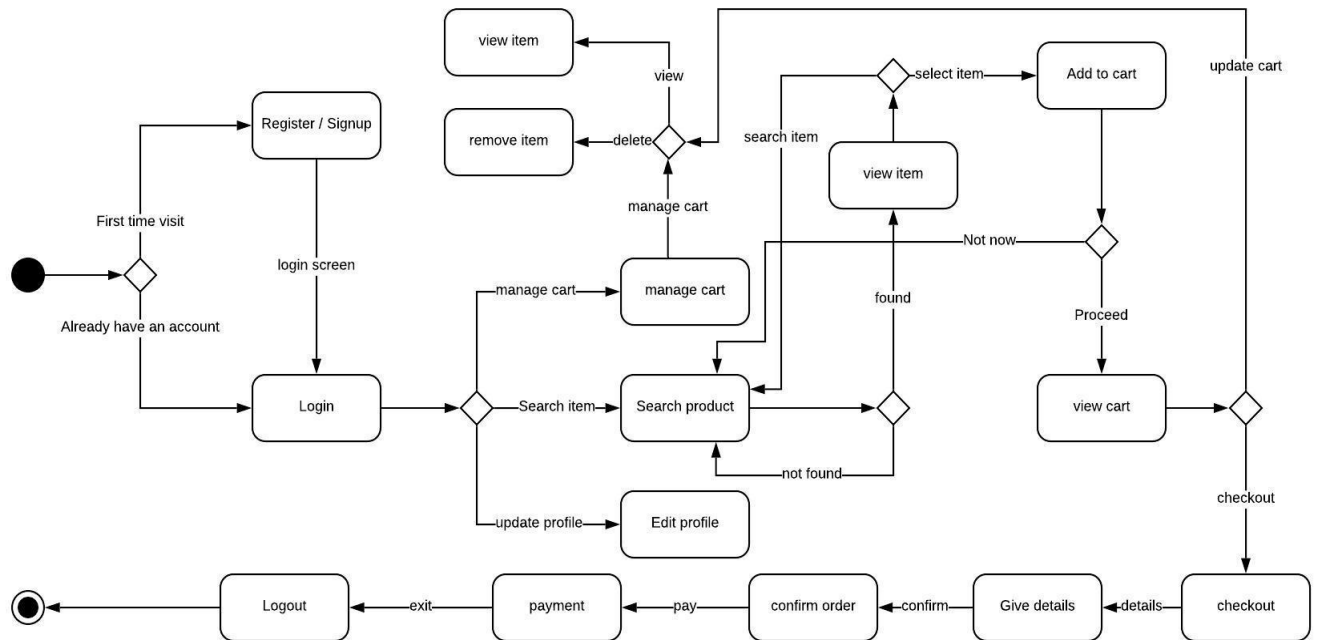| Name/Goal	Feedback
Actor	Customer / end user.
Description	Customer can give feedback about his/her experience and quality of product that is helpful for other user.
Preconditions	User must be registered and logged in.
Post conditions	User submitted request successfully.
Main flow	1. User login successfully. 2. User go to specific item to give feedback about that item. 3. User go to the feedback section. 4. Now user can write his experience and about quality of product in maximum 200 words. 5. User write his feedback and click on submit button. 6. The feedback will display after admin approval.
Alternate flow	2a. User can also choice that he can go to the recent purchased product.

Use case diagram

Class Diagram

User

- UserID: string
- Password: string
- loginStatus: string
- loginDetails: string

+ loginVerification()
+ loginCredientials()

Customer

- name: string
- address: string
- shippingInfo: string
- paymentDetails: string

+ register()
+ login()
+ updateDetails()

Admininsrator

- name: string
- email: string

+ updateCredientials()
+ updateCatalog()

Shopping Cart

- productID: int
- quantity: int

+ addCart()
+ updateQuantity()
+ deliveryDelails()
+ paymentDetails()

Order

- orderID: int
- shippingID: int

+ addOrder()

Shipping Info

- shippingID: int
- shippingCost: double
- region: string

+ updateShippment()

Order details

- orderID: int
- cost: double
- quantity: int
- shippingID: int
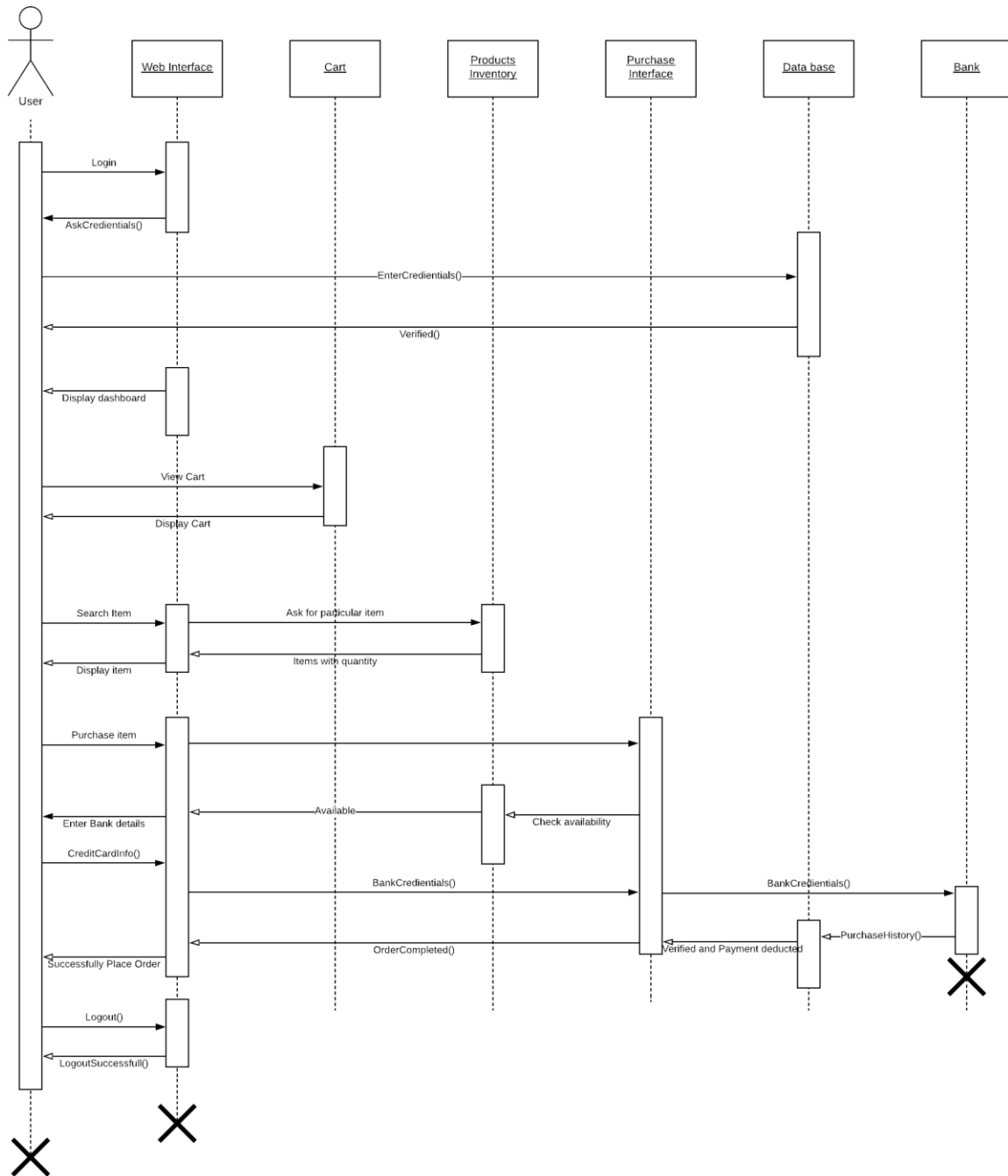
+ paymentDetails()

has a

State diagram

Interaction diagram

- ## Sequence diagram

- **Collaboration diagram**

1: login()

: Database

: Customer

2: *viewItems = get_Items()

: Product

3: order = orderItem()

: Order

4. shippingDetails()

: Details

5. payMent()

: Payment

[if master]
payByMaster()

[if paypal]
payByPaypal()

5.1

5.2

5.3

[if visa]
payByVisaCard()

: Master

: Visa

: Paypal