

King Saud University
College of Computer and Information Sciences
Department of Information System
IS 240
System Analysis and Design



كلية علوم الحاسب والمعلومات
قسم نظم المعلومات

{AAA online store }

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Course Project

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CHAPTER ONE - INTRODUCTION

1.1 Introduction

The term “store” has been known for a long time, but with the development of technology and the emergence of the Internet, the online store has become one of the necessities of life to facilitate buying and selling.

1.2 Problem Statement

Buying and selling in shops may be stressful for some people and you may not be able to travel to buy some products.

1.3 Project Objectives

Online stores were created to facilitate buying and selling for those who cannot go to stores, for example, if they are in another country or cannot go because of health.

CHAPTER TWO - INFORMATION GATHERING

2.1 Information gathering Techniques

2.1.2 Interviews

- ❖ Q1) how many languages does support
- ❖ A: Arabic and English.

- ❖ Q2) who can sell in the system
- ❖ A: Seller and the system.

- ❖ Q3) what payment methods do you need in the system
- ❖ A: Credit card. bank transfer and pay on delivery.

- ❖ Q4) do you plan to have sales?
- ❖ A: Yes.

- ❖ Q5) can the customer rate the products
- ❖ A: Yes and can make reviews.

- ❖ Q6) will you use shipping companies?
- ❖ A: Yes we will, and some orders will be shipped by us.

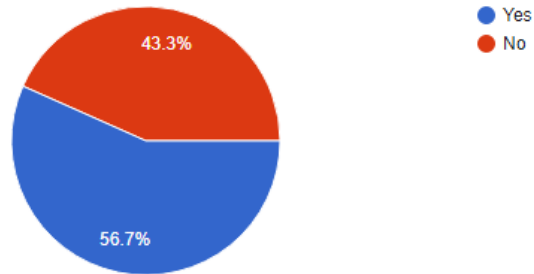
- ❖ Q7) what platform will you support?
- ❖ A: Web and android phones and Iphone.

2.1.3 Questionnaire

Have you shopped online before?

30 responses

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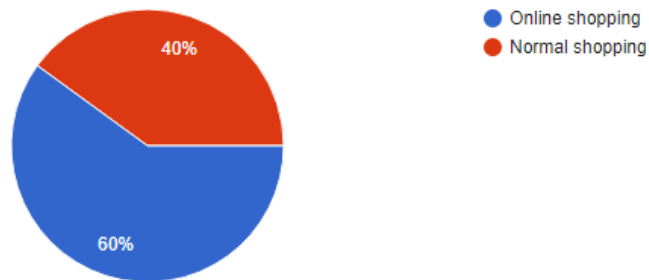


what do prefer

30 responses

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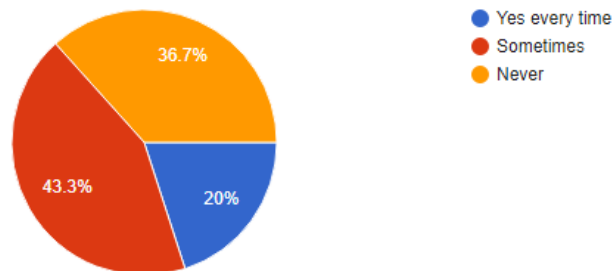
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do you normally rate the products you buy?

30 responses

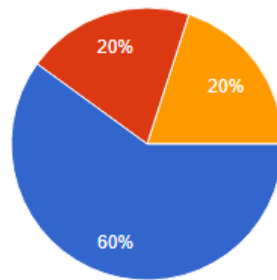
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what kind of products you interested in?

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30 responses

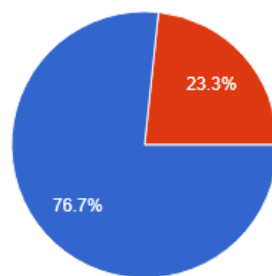


- Electronics
- Fashion
- Household Supplies

I am a

 Copy

30 responses

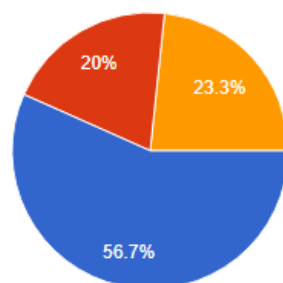


- male
- female

what is your preferred payment method?

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30 responses

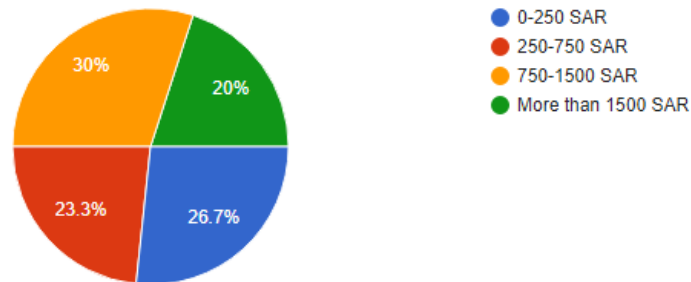


- Credit card
- pay on delivery
- bank transfer

how much do you spend on online shopping every year?

 Copy

30 responses



2.2 Structuring Requirements

2.2.1 Functional Requirements

1. Create customer account
2. Search item
3. Add to cart
4. add to Wishlist
5. View ratings
6. rate item
7. Share item
8. View cart
9. reorder
10. add address
11. change region
12. add credit card
13. choose payment method
14. browse item
15. update cart
16. check out
17. create seller account
18. confirm order
19. cancel order

- 20.** return order
- 21.** view order status
- 22.** accept order
- 23.** add item
- 24.** Remove item from system
- 25.** edit item
- 26.** add photo item
- 27.** make discount
- 28.** contact support
- 29.** view customer
- 30.** Track order
- 31.**update customer account
- 32.**update seller account
- 33.**view purchase history
- 34.**view comments
- 35.**add comment

2.2.2 Non-Functional Requirements

1. support all paying options.
2. The system support 100000 active customers at the same time.
3. support many languages.
4. Database security must meet HIPAA requirements.
5. the system has a regular back up.
6. the customer must enter the website in less than 1 second.

CHAPTER THREE - SYSTEM ANALYSIS AND DESIGN

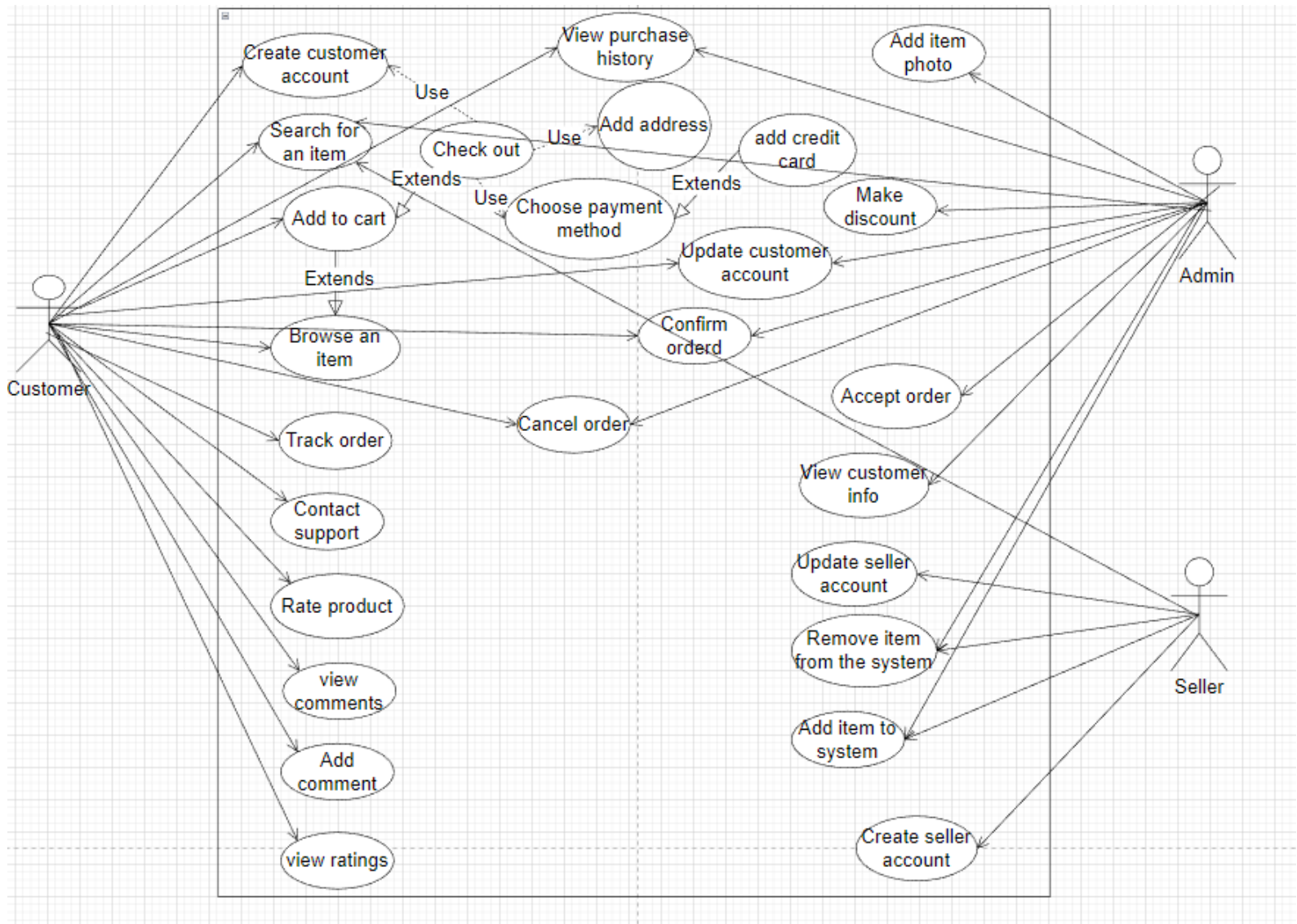
3.1 Analysis Models

3.1.1 Use Case part

A) Events Tables

Event	Type of event	Use case	description
Customer register	External	Crate customer account	When a customer wants to register
seller register	External	Crate seller account	When a seller wants to register
Searching for an item	External	Search item	Customers want to search for an item
Customer contact support	External	contact support	Customer wants help from the staff
Customer seeing old orders	External	view purchase history	When a customer wants to see his old purchases
Adding a product	Internal	Add item	When the admin wants to add product
Customer tracking order	External	Track order	When a customer wants to track his order
Rate product	External	Rate product	When a customer wants to rate a product that he bought

B) Use Case Diagram



C) Use Case Description

Use case name:	View purchase history	
Scenario:	The customer enters and sees old orders	
Triggering event:	Customer wants to see his old orders	
Brief description:	The customer enters and want to see old orders	
Actors:	Customer	
Related use cases	none	
Stakeholders:	Customer	
Preconditions:	System must be online and the customer must be registered	
Postconditions:	none	
Flow of activities	Actor	System
	1 customer enter his personal page 2 customer choose view purchase history	1.1 a screen appears to choose from 2.1 system show him his old orders
Exception conditions:	Customer did not log in	

Use case name:	Create customer account	
Scenario:	Customer enters the website and make an account	
Triggering event:	Customer wants to make an account	
Brief description:	The customer enters the website and register	
Actors:	Customer	
Related use cases	Add address, add credit card	
Stakeholders:	Customer	
Preconditions:	System must be online	
Postconditions:	His information must be completed and saved	
Flow of activities	Actor	System
	1 Enter register page 2 Enter his basic information	1.1 ask him to enter his information 2.1 validate his information 2.2 save his information
Exception conditions:	1.1 customer enter wrong information	

Use case name:	Create seller account	
Scenario:	Seller enters the website and make an account	
Triggering event:	Seller wants to make an account	
Brief description:	The Seller enters the website and register	
Actors:	Customer	
Related use cases	Add item to system	
Stakeholders:	Seller	
Preconditions:	System must be online	
Postconditions:	His information must be completed and saved	
Flow of activities	Actor	System
	1 Enter register page 2 Enter his basic information	1 ask him to enter his information 2 validate his information 3 save his information
Exception conditions:	1.1 Seller enter wrong information	

Use case name:	Search item	
Scenario:	Search for a product by it's name or brand	
Triggering event:	The customer wants to buy or preview a product	
Brief description:	The customer searches for the product by entering it's name	
Actors:	Customer , Admin and Seller	
Related use cases	Add to cart and browse an item	
Stakeholders:	Customer , Seller , Admin	
Preconditions:	System must be online	
Postconditions:	The desired product is displayed	
Flow of activities	Actor	System
	<ol style="list-style-type: none"> 1 Enter item information 2 Pick one of the options 3 Choose one of the sellers 	<ol style="list-style-type: none"> 1 information validation 2 several possible options appear 3 Display the desired product for multiple sellers
Exception conditions:	<ol style="list-style-type: none"> 1 he enters wrong information about the item 2 the item doesn't exist int the system 	

Use case name:	contact support	
Scenario:	The customer communicates with customer service	
Triggering event:	Customer wants help from the staff	
Brief description:	The customer informs customer service about a problem via e-mail	
Actors:	Customer and Seller	
Related use cases	none	
Stakeholders:	Customer , Seller	
Preconditions:	System must be online and the customer or seller must be registered	
Postconditions:	Customer service has contacted the customer and is working on solving the problem	
Flow of activities	Actor	System
	1 Enter customer service page 2 Write the problem	1 a screen appears to write the problem 2 receive the problem 3 send the solutions
Exception conditions:	1 There is no problem according to our terms	

Use case name:	Add item	
Scenario:	Seller adding an item	
Triggering event:	Seller wants to add an item	
Brief description:	The seller wants to add a new product	
Actors:	Seller	
Related use cases	none	
Stakeholders:	Seller	
Preconditions:	System must be online, and the seller must be registered	
Postconditions:	none	
Flow of activities	Actor	System
	<p>1 seller enter his personal page</p> <p>2 seller choose add item option</p>	<p>1.1 a screen appears to choose from</p> <p>2.1 system shows add item window</p>
Exception conditions:	System shutting down	

Use case name:	Track order	
Scenario:	Customer enters shipment number to track his order	
Triggering event:	Customer track his order	
Use case name:		
Brief description:		
	Customer wants to know the shipment status	
Actors:	Customer	
Related use cases	Confirm order	
Stakeholders:	Customer ,seller	
Preconditions:	order must be confirmed	
Postconditions:	Shipment order	
Flow of activities	Actor	System
	1 customer enter shipment company website 2 customer enter the shipment number	1.1ask him to enter his shipment number 2.1 validate shipment number 2.2 show the status
Exception conditions:	1.1 customer enter wrong shipment number	

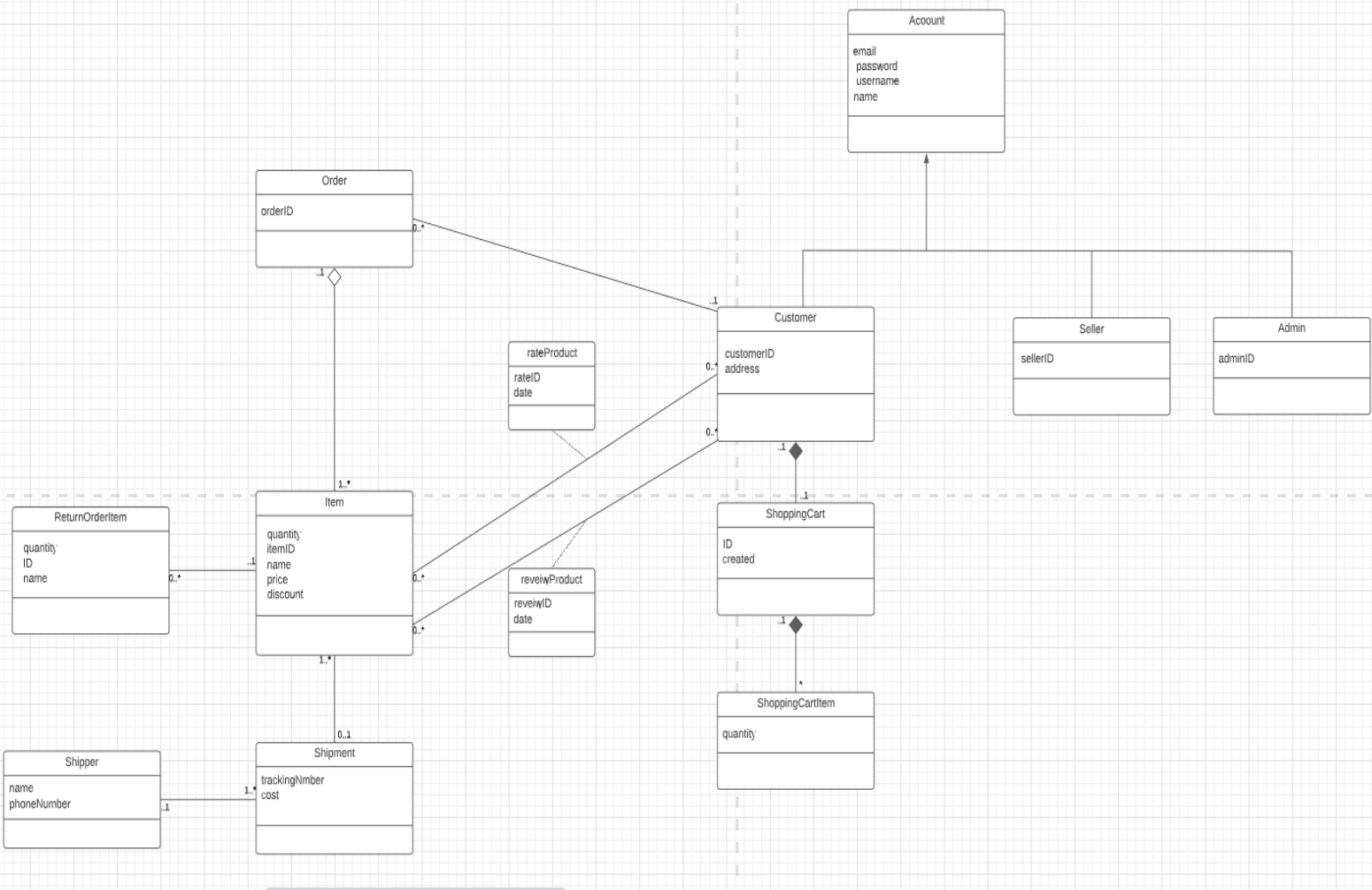
Use case name:	Rate item	
Scenario:	Customer chose the brought product and rate the product	
Triggering event:	Customer want to rate the product	
Brief description:	Customer rate a product	
Actors:	Customer	
Related use cases	Confirm order	
Stakeholders:	Customer	
Preconditions:	order must be delivered	
Postconditions:	Saved rate	
Flow of activities	Actor	System
	1 customer chose product 2 customer rate the product	1.ask customer rate his product 2. confirmed rating
Exception conditions:	1.1 customer not logged in	

3.1.2 Structural Static Models Part

A) Noun Technique

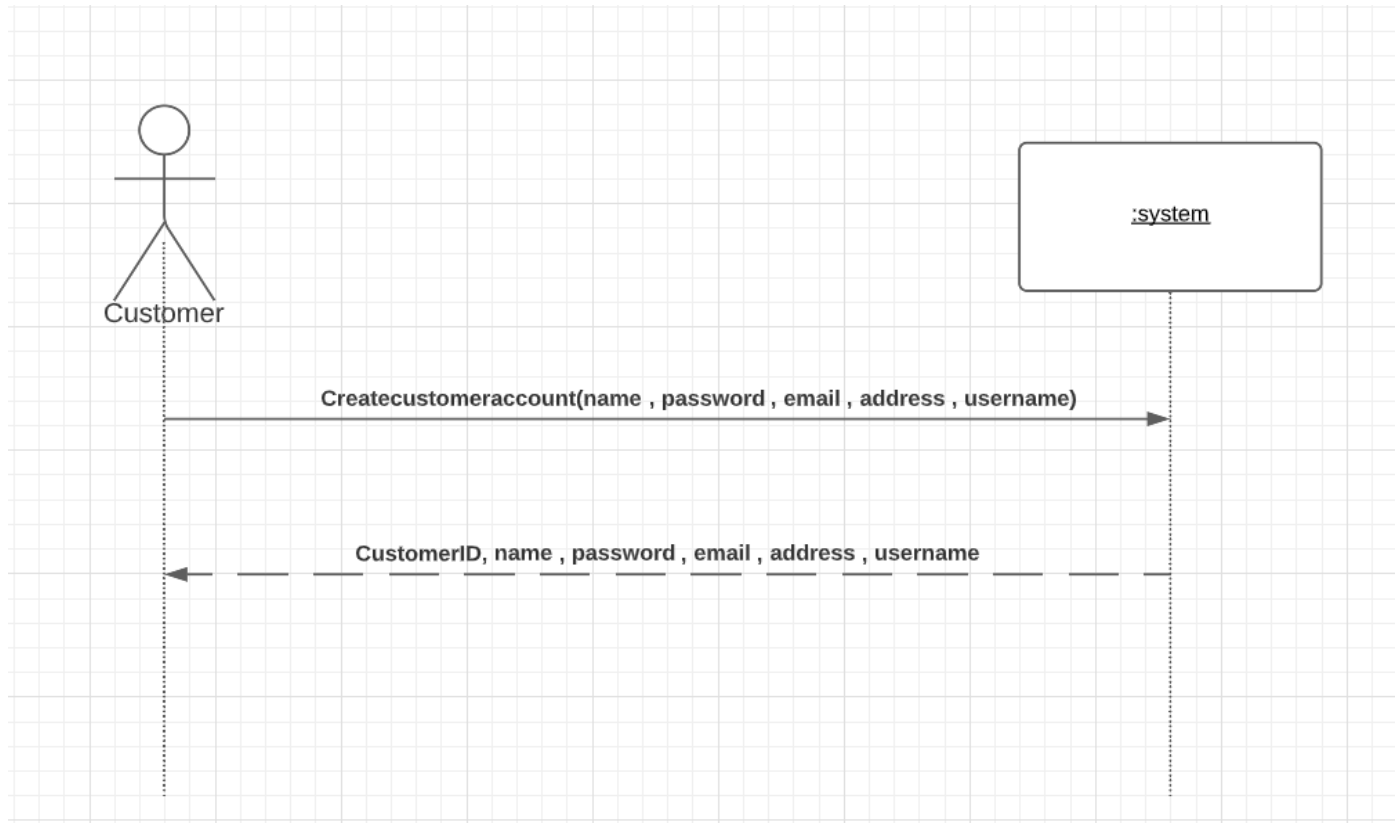
- Account
- Customer
- seller
- product
- order
- payment
- address
- price
- inventory
- sale
- reviews
- Rating
- Shipping
- transaction
- cart
- admin
- return order
- support

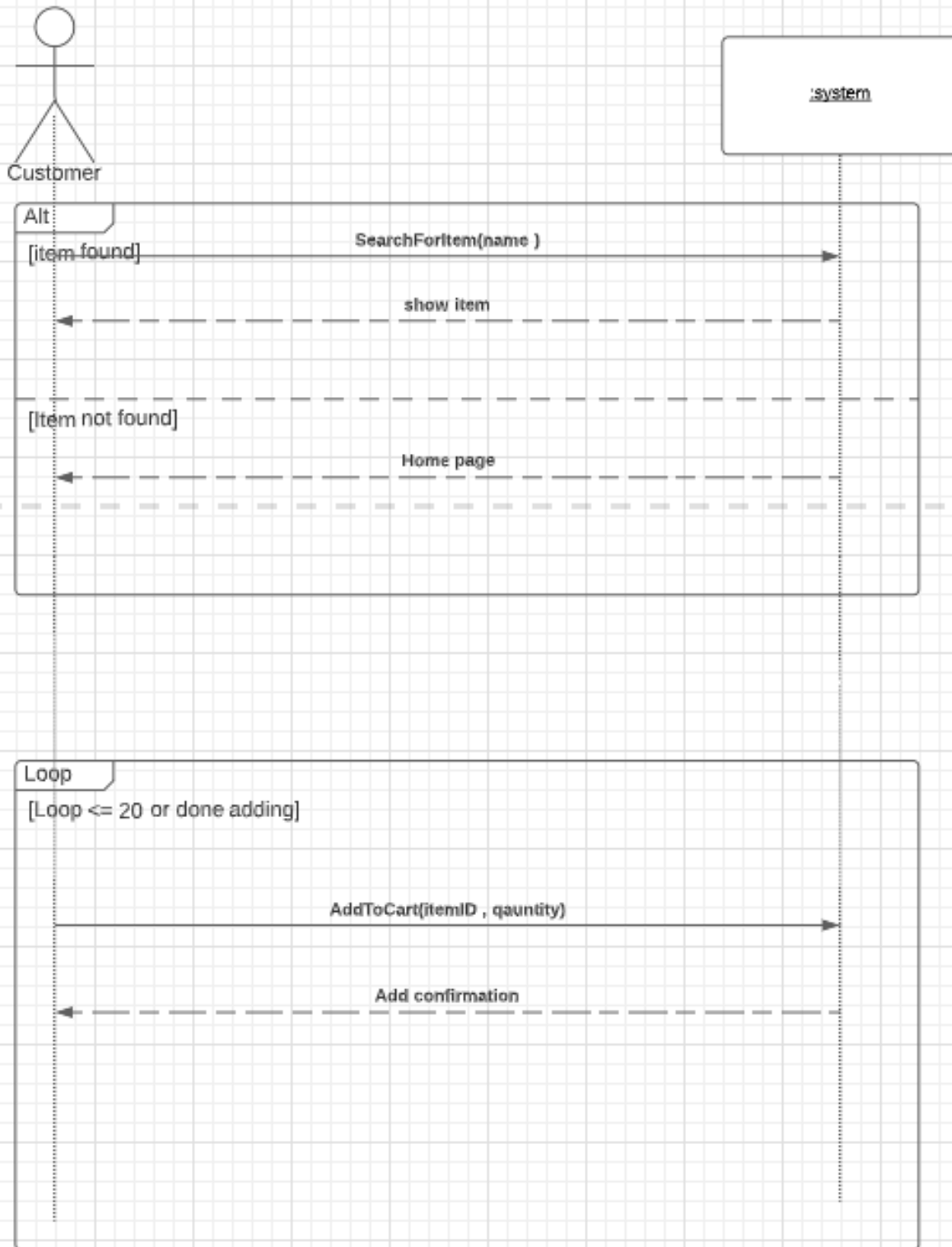
B) Domain Class Diagram

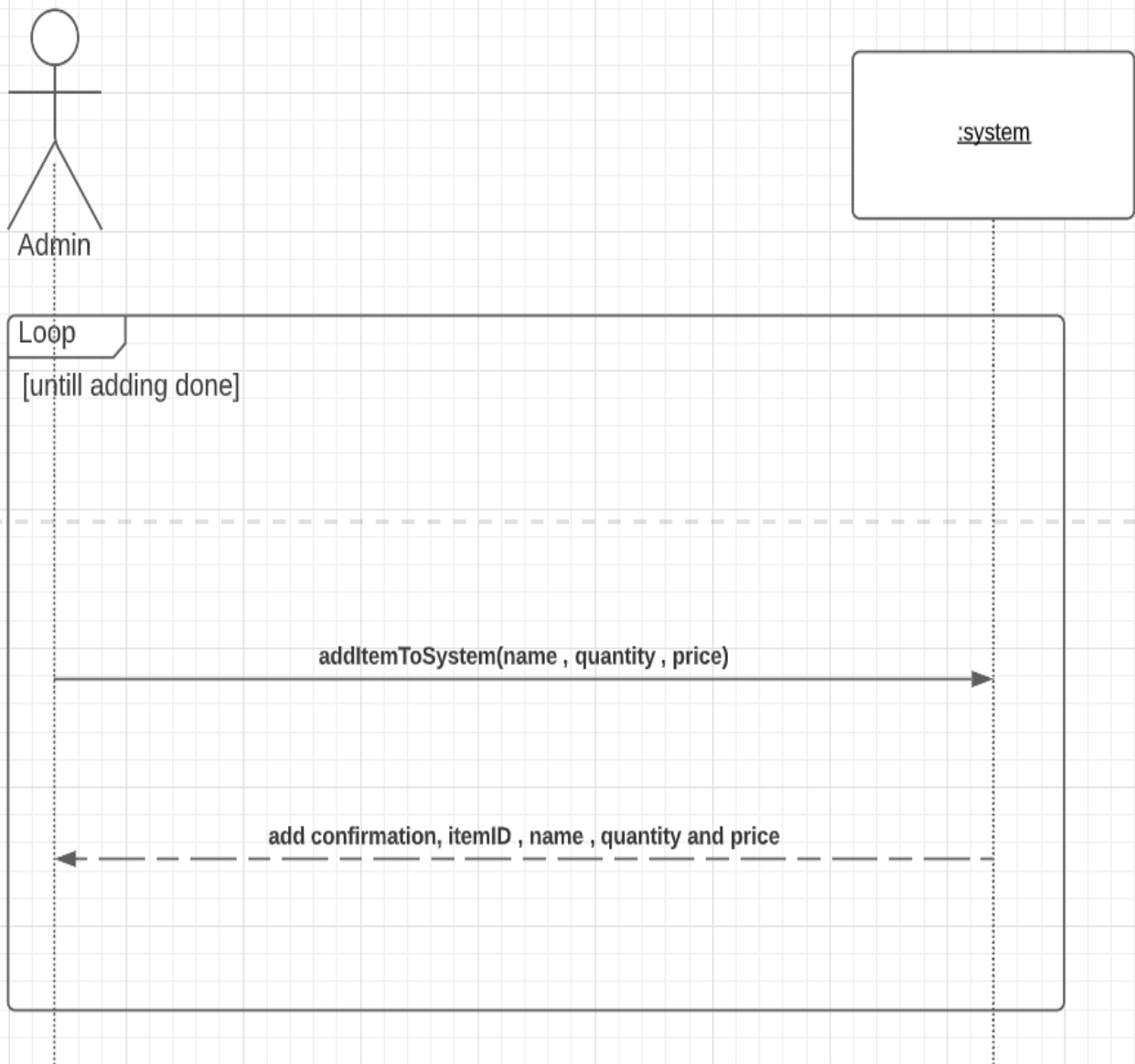


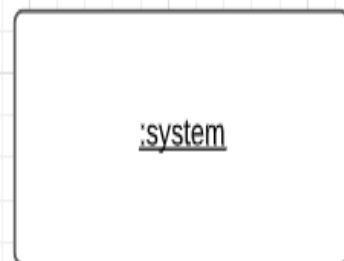
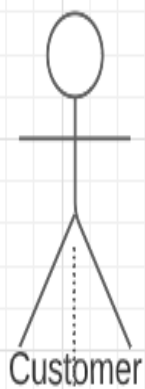
3.1.3 Dynamic Models Part

A) System Sequence Diagrams



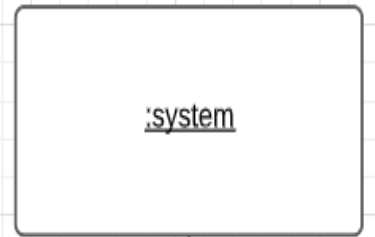
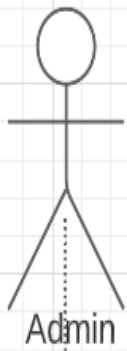






cancelOrder(orderID)

Cancel confirmation



`makeDiscount(discount , itemID)`

`new price with discount`



B) State Diagram

