Dr. Hesham Pharmacy

Part1: Overview and SRS

1) Introduction

a) Purpose:

The purpose of this document is to build an online system to provide products and deliver medical supplies to homes to make the service more comfortable for the customers to increase the pharmacy sales.

b) Project scope:

The purpose of the online pharmacy system is to ease buying and selling operation and to create a convenient and easy-to-use application for the customer, trying to sell products and deliver them to customer's homes. The system based on a relational database with products and categories. We will have a database server supporting the update of what the customers want and always check the database to ensure that the pharmacy able to provide these needs with the best pricing available.

c) Project Glossary:

Admin: the person who control the system and manage the database, he can update products and see the details of customers.
Customer: A single user of a pharmacy website that is order some products and shopping in this website. The program's main component (the data) resides on a centralized server, with smaller components (user interface) on each client.
Category: collection of products that have the same type

Register: provide customer make an account to order products Complaints: it is help user to describe his problem with using website which improve the system

Add to cart: provide customer saving his products that need to order

User interface: This help users to interact with the system in easy way Database: A collection of information and details about products the users stored in the database's pharmacy. This information may be created and stored in a database management system (DBMS).

d) List of the System Stakeholders:

Type of stakeholders:

- Project Manager
- project build team (developers)
- customers
- pharmacy owner

Key Stakeholders:

Internal Stakeholder:

- Pharmacy owner: someone who manage and own the pharmacy (Admin)

- Project build team: the group performing the work

External Stakeholder:

- Customer: person or organization that will use the results of a project

- Bank services: API that chick if credit number and password is right or wrong.

2) Functional requirements:

a) User

1-User Can Search About all Products (Customer).
2- Show all information About Products (Customer).
3- Make order (Customer).
4- Add/update/delete Products/categories (Admin).
5- User can update his profile (Customer) & (Admin).
6- Show user's orders (Admin).

b) System

1- Generate report about all products.
2-Store the information of the products.
3- System support user with help info.
4-System support user with help info.
5- System generate unique id for each member
7- Bank verify credit number and password.

3) Non-functional requirements:

a)

Types of non-functional requirements:

- Usability & Humanity requirements
- Performance requirements
- Operational & Environmental requirements
- Cultural requirements
- Legal requirements
- Security requirements

b)

Product requirement:

- The pharmacy shall be available during normal working hours (24)
- Order delivered successfully to correct customer.

Organizational requirement:

- Users of the system shall authenticate themselves using their ID
- The system must secure the data of user.

External requirement:

- The system must secure the id & password of visa card
- The system must encrypt user's password.

4) Domain requirements:

- Validity Date
- System will delete product if its validity date finished (expired).

5) Design & implementation Constraints:

Effective interface which user can easily interact.

- Using HTML to get tools, buttons and links images.
- Using CSS to make style.
- Using Bootstrap to make responsive website.
- Using JAVA SCRIPT & Jquery to make animations.
- Using Fontawsome to get fonts and icons.
- Using PHP Lang. To Developed the System.

6) The requirements discovery approaches that we will rely on:

Interviewing

In offline interviews, team members can ask the stakeholder about anything in the system, which they use, and there are two ways of interviewing:

- Closed interview: Discussed in it pre-defined questions.
- Open interview: there is no pre-defined questions and the team members can ask, enquire and have better understanding about what they want.

Requirements documentation

- The requirements should be documented, testable, traceable, and its details are clear enough to the system design.

Scenarios

We use scenarios for adding details of the system as a type of description, the scenario may include:

- A description of the system starting state (the admin has logged in)
- A description of the normal flow of events (several users can register and browse the site).
- A description of any problem and how we can solve it.
- A description of the system end state.

Use cases

- The use case identifies the actors and functions found in the system, use cases are documented using a high-level use case diagram. Use cases identify the individual interactions between the system and its users or other systems.

7) The requirements validation techniques that we used:

Requirements Reviews:

The System requirements specifications is carefully reviewed by the group, systematically analyses the document to check error and ambiguity.

Test case generation:

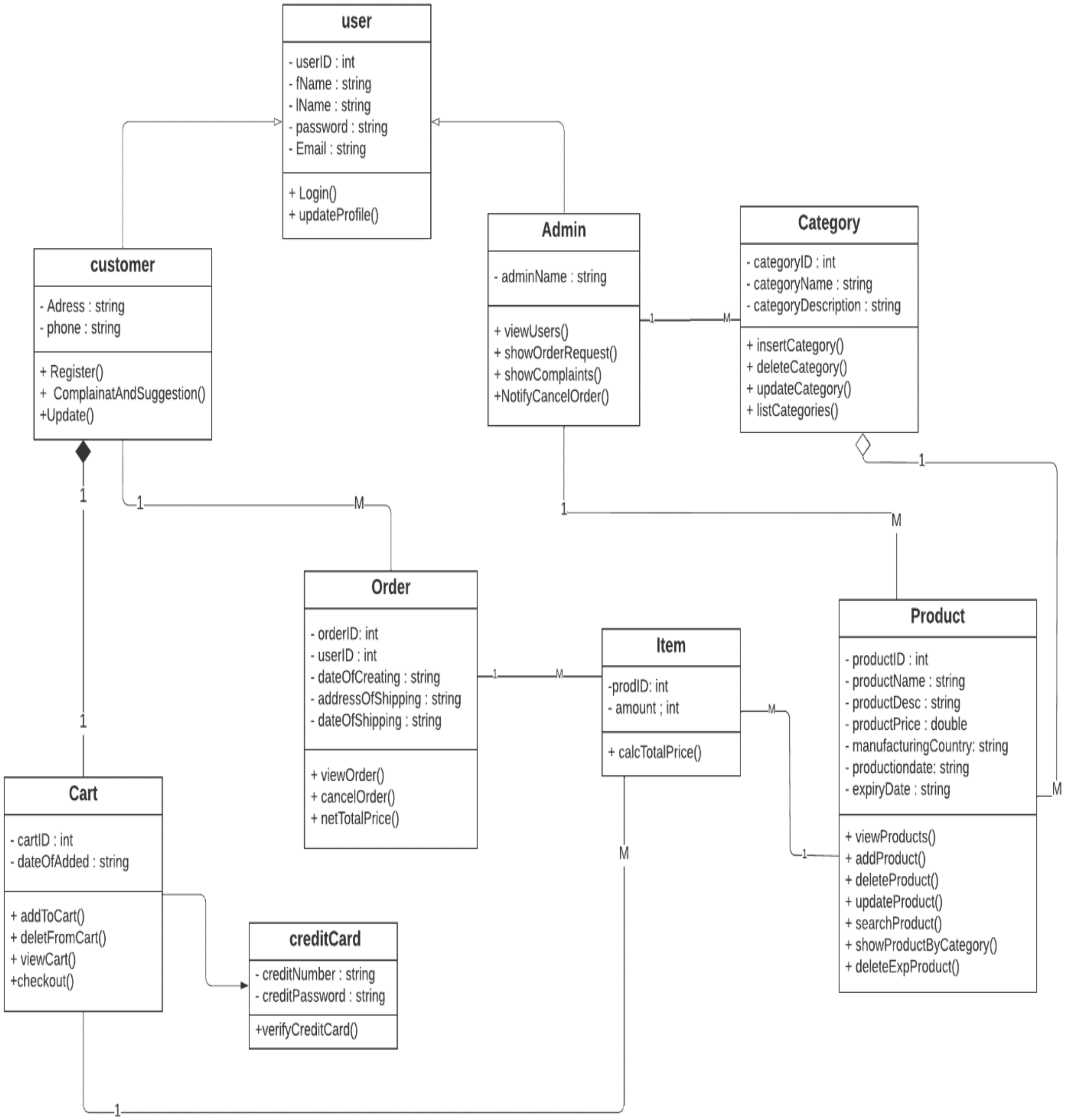
The requirement mentioned in functional and non-functional document should be testable, and if we found that the test is difficult or impossible to design than, this means that requirement will be difficult to implement so it should be reconsidered.

Walk-through:

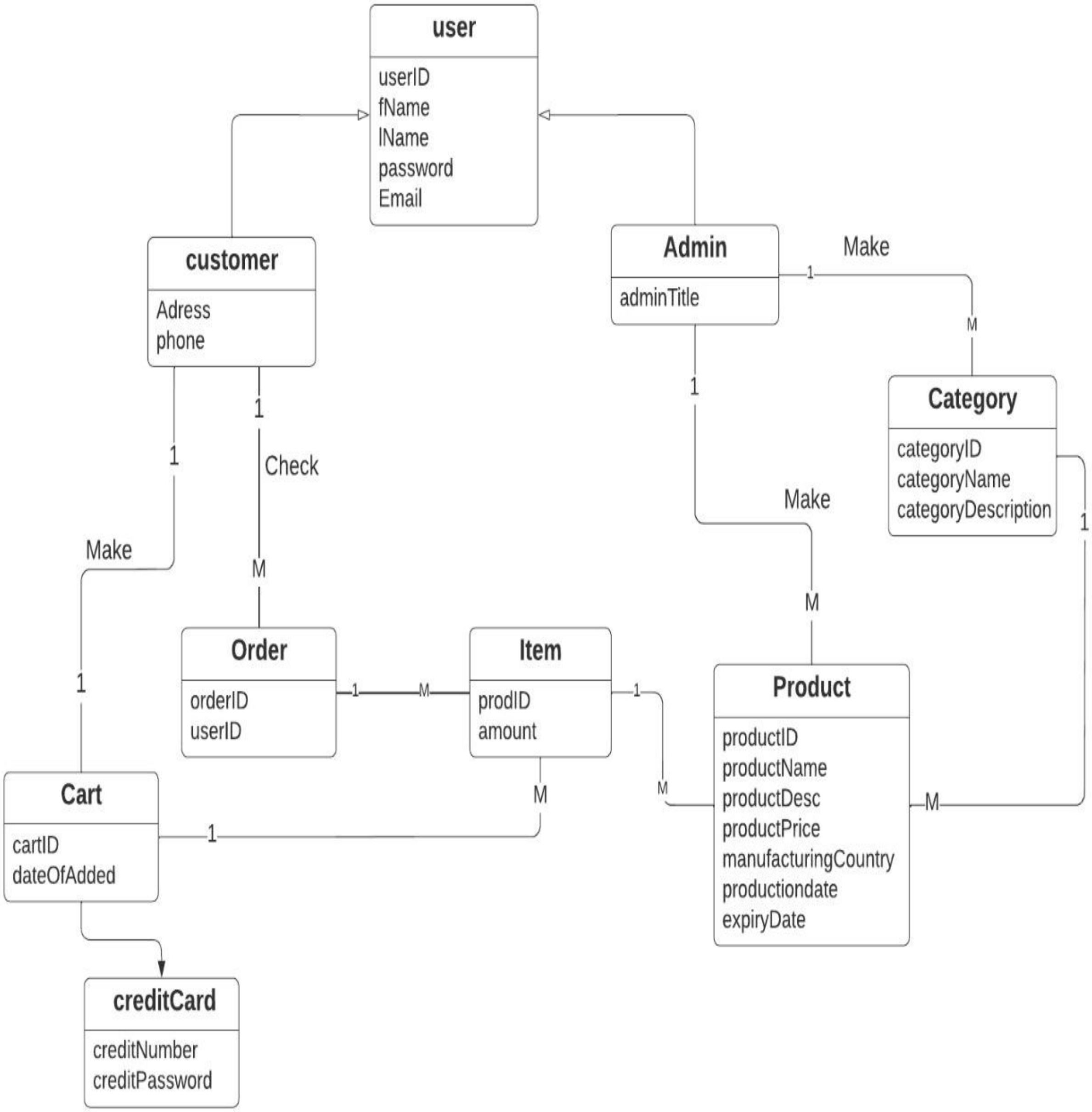
- Checking early whether the idea is feasible or not.
- Obtaining the opinions and suggestion of other people.
- Checking the approval of others and reaching an agreement.

Part2: System design and Model

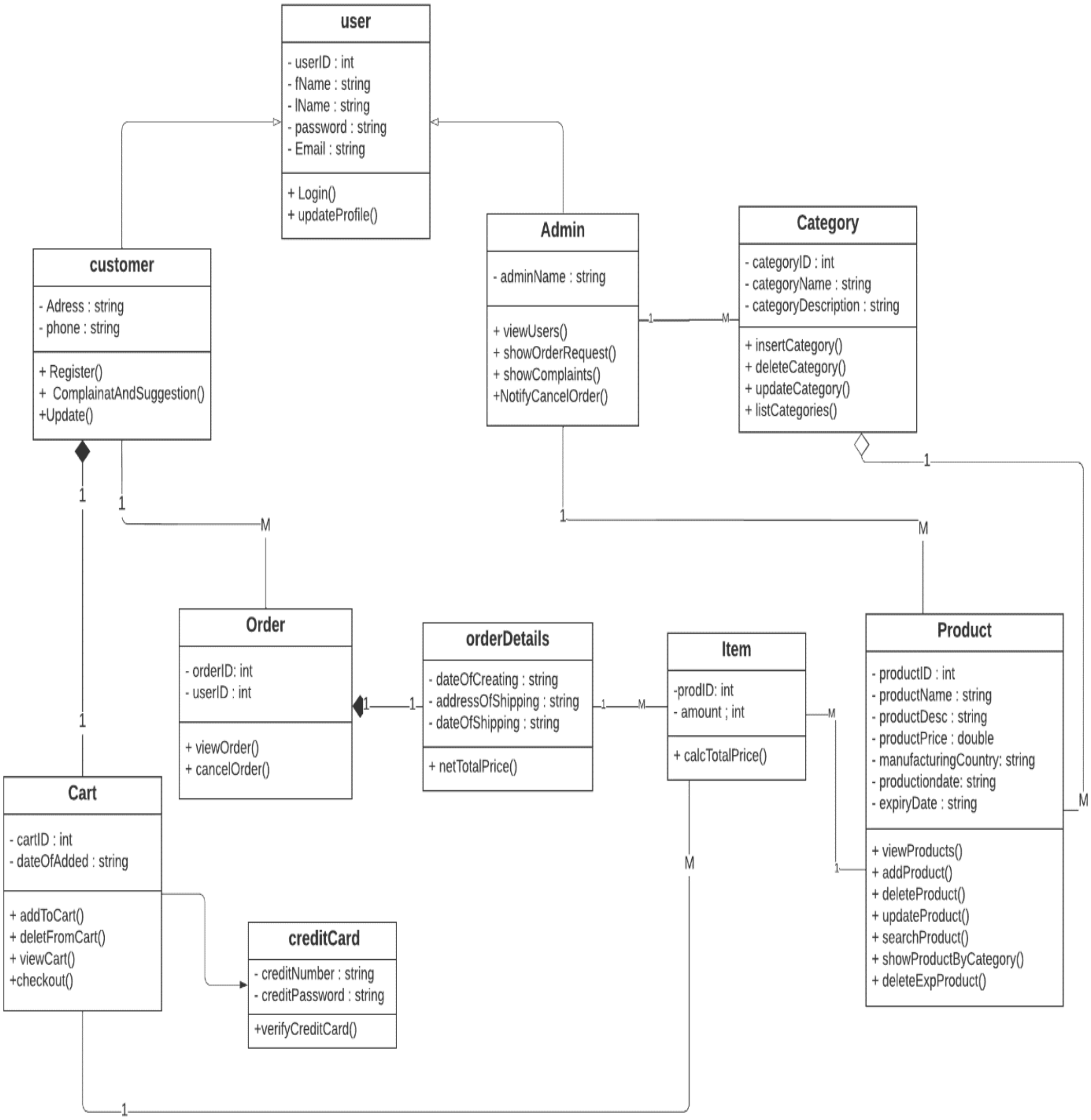
Class Diagram:



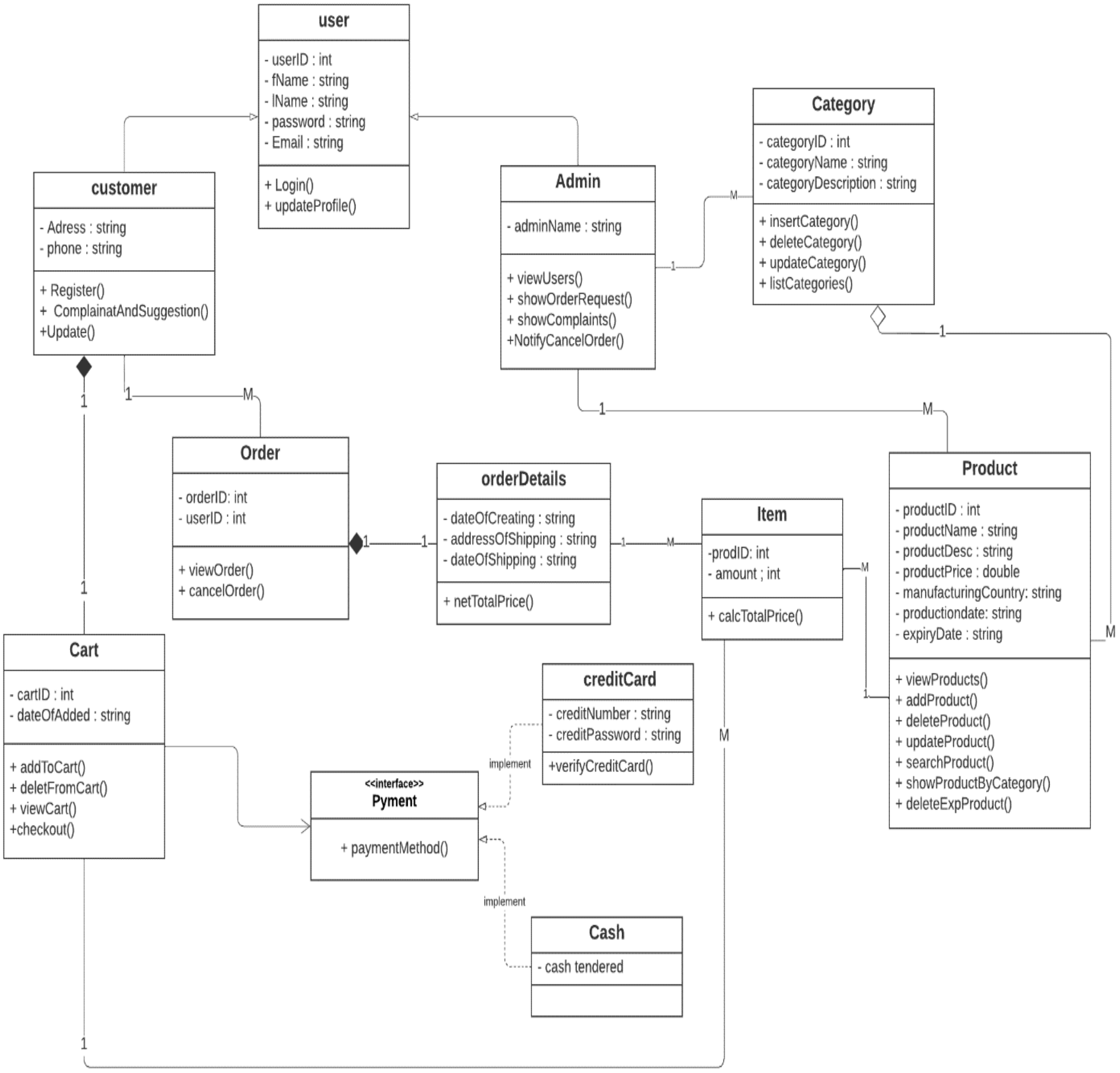
Conceptual class diagram:



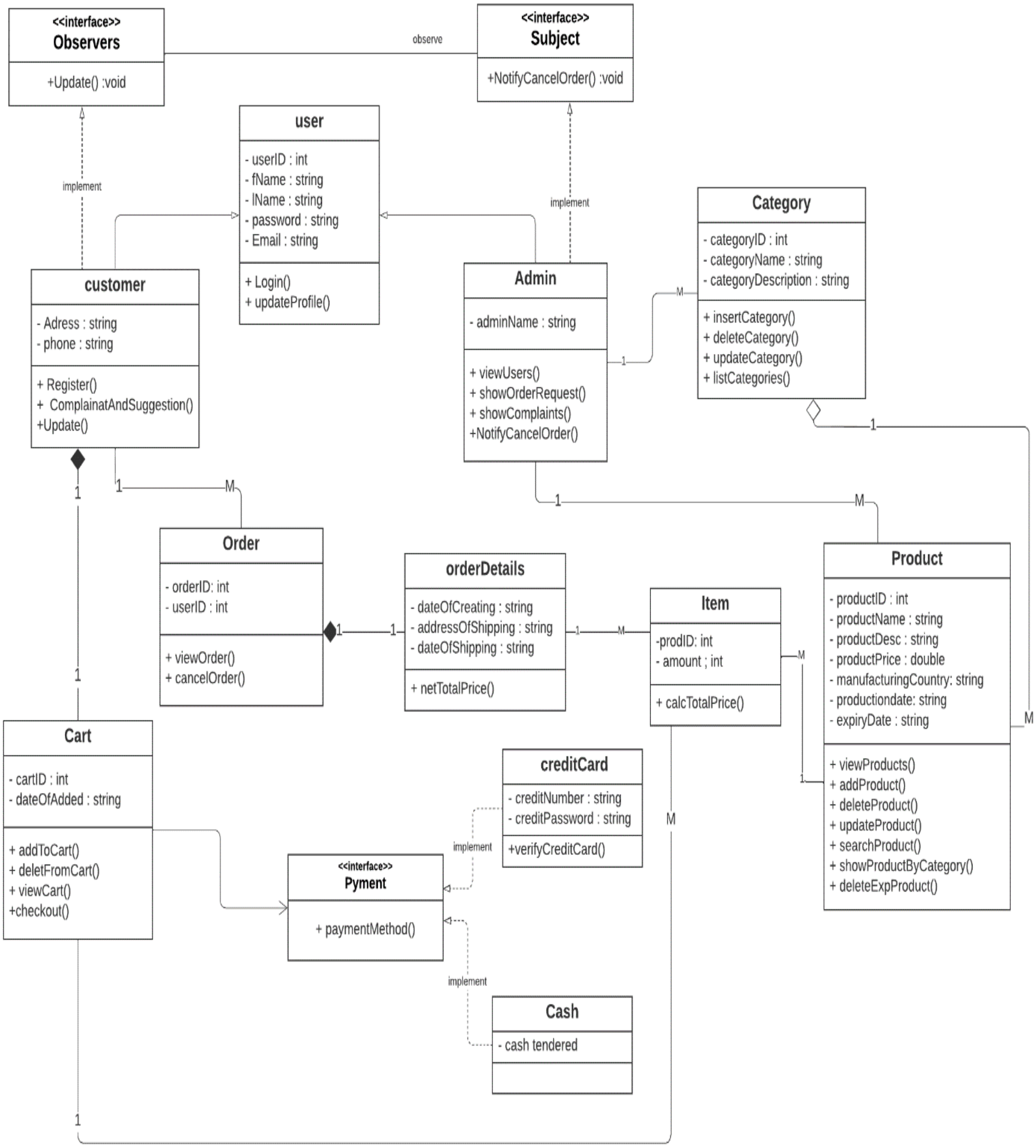
Class diagram by single responsibility principle (SRP):



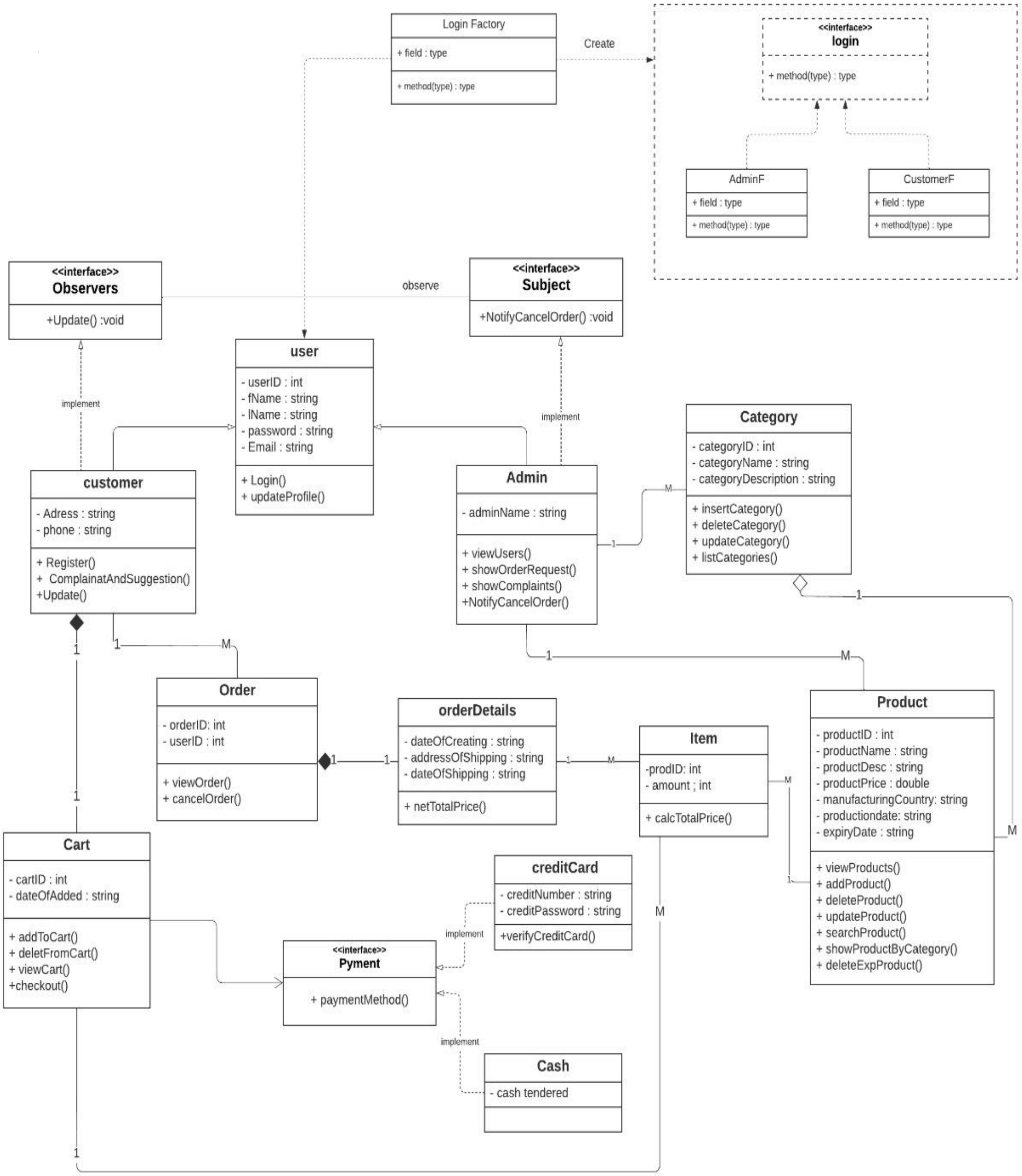
Class diagram by open closed principle (OCP):



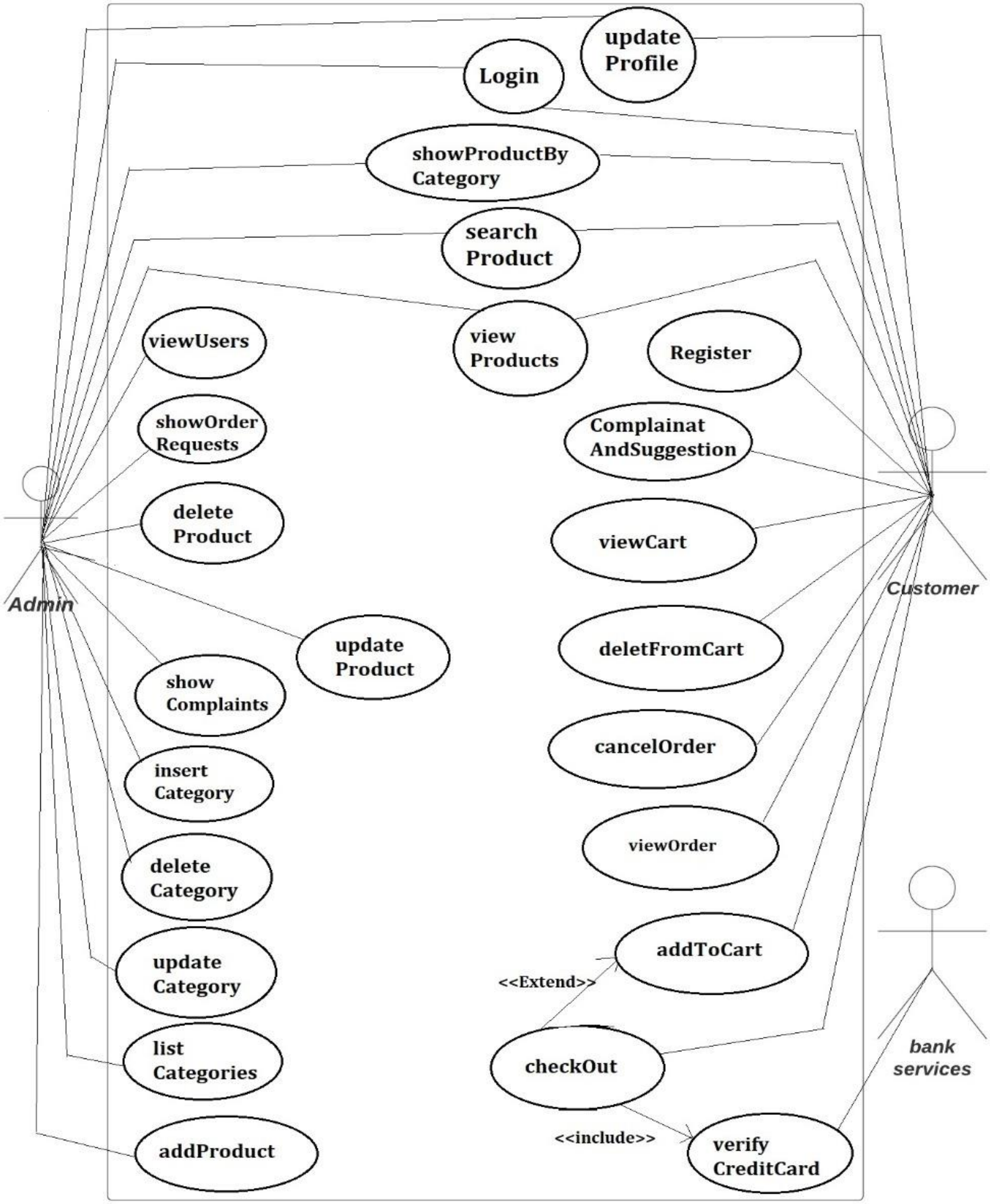
Class diagram using observer design pattern:



Factory Method Pattern:



Use-case diagram:



Use case scenarios:

1-Update profile:

Description: Customer wants to update something in his profile. /Admin wants to edit someone's profile.

Success scenario: They change/update what they want successfully.

Unsuccessful scenario: They're not able to change/update what they want.

Pre-condition: Every customer should have an existing account/profile and he's logged in successfully.

Post-condition: Profile has been updated.

Steps:

1. Admin/customer selects update profile button.

2. Admin/customer does the update successfully

3. Admin/customer presses on update button to save the data.

2- Login:

Description: Admin/customer wants to log in the system.

Success scenario: They do login successfully.

Unsuccessful scenario: They're not able to login.

Pre-condition: Admin/Customer should have an existing account.

Post-condition: Admin/Customer logs in successfully

Steps:

1. Admin/Customer clicks on the login button

2. Admin/customer enters their details (email and password)

3. Admin/customer clicks LOG IN, if the user is found he'll login otherwise he'll be notified that he's entered wrong information.

3- Show Product by Category:

Description: A customer wants to know a list of products related to a specific category.

Success scenario: The products of the category are shown.

Unsuccessful scenario: He does not find any products in the category he mentioned.

Pre-condition: There should be products and categories in the system.

Post-condition: The products in the mentioned category should be listed in front of him.

Steps:

1. A customer Selects show product by cat button.

2.Customer enters the category ID

3. Either to see the products he wants, or he'll be told that the ID is invalid (if he enters wrong data).

4- Search product:

Description: A customer wants to know a list of products related to a specific category.

Success scenario: The products of the category are shown.

Unsuccessful scenario: He does not find the products in the category he mentioned.

Pre-condition: There should be products and categories in the system.

Post-condition: The products in the mentioned category should be listed in front of him.

Steps:

1. A customer selects show product by cat button.

2. Customer enters the category ID

3. Either to show him the products or to tell him that the ID is invalid if he enters wrong data.

5- View products:

Description: A customer wants to view all products in categories.

Success scenario: All products of all categories are shown.

Unsuccessful scenario: There're no products shown.

Pre-condition: There should be products and categories in the system.

Post-condition: The products in all categories will be listed in front of him.

Steps:

1. A customer Selects View Products button.

2. All products in all categories will be listed in front of him.

6- View users:

Description: An admin wants to view all users' details.

Success scenario: The details is shown up in front of the admin.

Unsuccessful scenario: There's no details shown up regarding the user.

Pre-condition: users accounts should be existing.

Post-condition: All users' details should be listed in front of the admin.

Steps:

1. An admin selects View users button.

2. Then selects Get all user details

3. The details will appear in front of the admin.

7- Show Order Requests:

Description: An admin wants to view all order requests.

Success scenario: Admin manages to see all the requests.

Unsuccessful scenario: The requests aren't show up in front of the admin.

Pre-condition: There should be an ordering system implement.

Post-condition: All users' orders should be listed in front of the admin, if there's no orders the admin will get a no-orders message/notification.

Steps:

1. An admin clicks on Show order requests button.

2. A list full of orders will be appeared/ might be an empty list if no orders were requested.

8-Delete Product:

Description: An admin wants to delete a specific product.

Success scenario: Admin manages to delete the product.

Unsuccessful scenario: Admin is not able to delete the product nor find it.

Pre-condition: There should be an existing product to be deleted.

Post-condition: The chosen product will be deleted.

Steps:

1. An admin clicks on the delete button and enter product ID.

2. The system asks for confirmation and if the admin presses OK then the item will be deleted.

9- Complaint and suggestion:

Description: A customer wants to post a complaint or a suggestion.

Success scenario: Customer posts it successfully.

Unsuccessful scenario: Customer cannot post his complaint or suggestion due to system error.

Pre-condition: The customer should have an existing account in the system.

Post-condition: A complaint or a suggestion will be posted by the customer.

Steps:

1. A customer clicks on complaints or suggestion

2. Then he/she does write his/her complaint/suggestion.

3. Then he/she saves the details.

10- Update Product:

Description: Admin will have rights to update products' information.

Success scenario: Admin can update or edit products' information.

Unsuccessful scenario: Admin cannot update or edit products' information because of system failure or admin inserts invalid fields.

Pre-condition: Every product must have been added before.

Post-condition: Admin updates products' information.

Steps:

1. Admin selects the product which he wants to update.

2. Admin displays the old information of the selected product.

3. Admin writes the updated information of the selected product.

4. Admin saves the new information of the selected product.

11- Show Complaints:

Description: Admin will have rights to Show all the customers complains and suggestions.

Success scenario: Admin can see all the customers complains and suggestions.

Unsuccessful scenario: Admin cannot show customers complains and suggestions because of system failure.

Pre-condition: Every customer have the right to put a complaint or suggestion.

Post-condition: Admin shows all the customers complains and suggestions.

Steps:

1. Admin selects show complaints.

2. Admin displays all the customers complains and suggestions.

12 – Insert Category:

Description: Admin will have rights to add new category of products.

Success scenario: Admin can insert a new category of products.

Unsuccessful scenario: Admin cannot insert a new category and suggestions because of system failure or admin inserts invalid fields.

Pre-condition: Admin should be logged in and be aware of all the new category details.

Post-condition: Admin inserted new category of projects.

Steps:

1. Admin selects insert category.

2. Admin inserts the new category

13 – Delete Category:

Description: Admin will have rights to delete a specific category of products.

Success scenario: Admin can delete a specific category of products.

Unsuccessful scenario: Admin cannot delete a specific category and suggestions because of system failure.

Pre-condition: the selected category has been inserted before.

Post-condition: Admin delete the selected category of products.

Steps:

1. Admin views list of categories.
2. Admin selects a specific category to delete.

14 – List Category:

Description: Admin will have rights to show all categories of products.

Success scenario: Admin can show all categories of products.

Unsuccessful scenario: Admin cannot show all categories of products because of system failure.

Pre-condition: Admin had inserted categories before.

Post-condition: Admin show all categories of products.

Steps:

1. Admin selects list categories.
2. Admin displays all categories of products.

15- Register:

Description: Customer wants to register to the system.

Success scenario: customer registered successfully.

Unsuccessful scenario: customer does not able to register.

Pre-condition: Customer should click to register.

Post-condition: Customer registered to the system successfully

Steps:

1. Customer clicks on the register button

2. customer enters the data.

3. customer clicks REGISTER, if the user is not found he'll register otherwise he'll be notified that his user is already in the system.

16- Add Product:

Description: Admin will have rights to Add new product.

Success scenario: Admin can add new product.

Unsuccessful scenario: Admin cannot add new product because of system failure.

Pre-condition: Admin must login.

Post-condition: Admin added new product.

Steps:

1. Admin Clicks on Add product.

2. Admin inserts the data of the new product.

17- Add to Cart:

Description: Customer will have rights to Add products to his cart.

Success scenario: Customer can add products to his cart.

Unsuccessful scenario: Customer cannot add products to his cart because of system failure.

Pre-condition: Customer must login.

Post-condition: Customer added products to his cart.

Steps:

1. Customer select specific product.

2. Customer Clicks Add to Cart.

18- View Cart:

Description: Customer will have rights to view all products on his cart.

Success scenario: Customer can view products on his cart.

Unsuccessful scenario: Customer cannot view products on his cart because of system failure.

Pre-condition: Customer added products on his cart.

Post-condition: Customer Viewed all products on his cart.

Steps:

1. Customer select View Cart.

2. Customer Displayed all products on his cart.

19- View Order:

Description: Customer will have rights to view his order.

Success scenario: Customer can view his order details.

Unsuccessful scenario: Customer cannot view his order details because of system failure.

Pre-condition: Customer added products on his cart.

Post-condition: Customer Viewed details of his order.

Steps:
1. Customer select View order.

2. Customer Displayed all products on his cart if they exited, otherwise it will show no orders message.

20 – Update Category:

Description: Admin will have rights to update categories of products.

Success scenario: Admin can update categories of products.

Unsuccessful scenario: Admin cannot update categories of products because of system failure.

Pre-condition: Admin had inserted categories before.

Post-condition: Admin updated categories of products.

Steps:
1. Admin selects list categories.

2. Admin selects category which he wants to edit/update.

3. Admin Display old details of selected category.

4. Admin insert the new data of the category and save it.

21-Verify Credit card:

Description: The system asks the customer to verify his personal credit card information.

Success scenario: Customer verifies his information in a successful way.

Unsuccessful scenario: Customer couldn’t verify his credit card information (he/she enters wrong information)

Pre-condition: The customer should’ve prepared a cart that includes products he wants to buy , his card should have enough cash and then he chooses the check-out button.

Post-condition: A successful order details receipt(check-out) that includes everything is shown up to the customer.

Steps:

1. A customer chooses products and adds them to his cart then press the “check-out” button

2. Then he/she does enter his/her personal credit card information.

3. The system checks if he has enough balance if yes it withdraws the total price from his card and he receives a receipt otherwise the customer gets notified.

22-Check-out:

Description: A customer wants a check-out.

Success scenario: Customer sees his check-out successfully.

Unsuccessful scenario: Customer couldn’t receive his check-out due to low balance in his card or a system error.

Pre-condition: The customer should’ve prepared a cart that includes products he wants to buy and his card should have enough cash.

Post-condition: The customer is now aware of his check-out and he’s ordered successfully.

Steps:

1. A customer chooses the “check-out” button.

2. Then he/she does enter his/her personal credit card details.

3. The system checks if he has enough balance if yes then its verified successfully and the system withdraws the total price from his card and he receives a receipt otherwise the customer gets notified that he cannot get his check-out due to his low balance.

23-Cancel order:

Description: A customer wants to cancel his order.

Success scenario: Customer has cancelled his order successfully.

Unsuccessful scenario: Customer couldn’t cancel his order due to passing the cancelation date or a system error.

Pre-condition: There should be an existing order to be able to cancel it.

Post-condition: The order will be canceled.

Steps:

1. A customer chooses “my orders” button.

2. Then he/she choose “cancel order” and then enters the order’s id.

3. The system asks him/her for confirmation, he’s to press “OK”, if he/she does press it then the order is canceled successfully and If he enters the ID incorrectly the system notifies him.

24- Delete from cart:

Description: A customer wants to delete a specific product from a cart.

Success scenario: Customer does delete the product from the cart successfully.

Unsuccessful scenario: Customer couldn’t delete the product from the cart due to system error.

Pre-condition: There should be an existing product in the cart to be able to delete it.

Post-condition: The product will not be in the cart anymore.

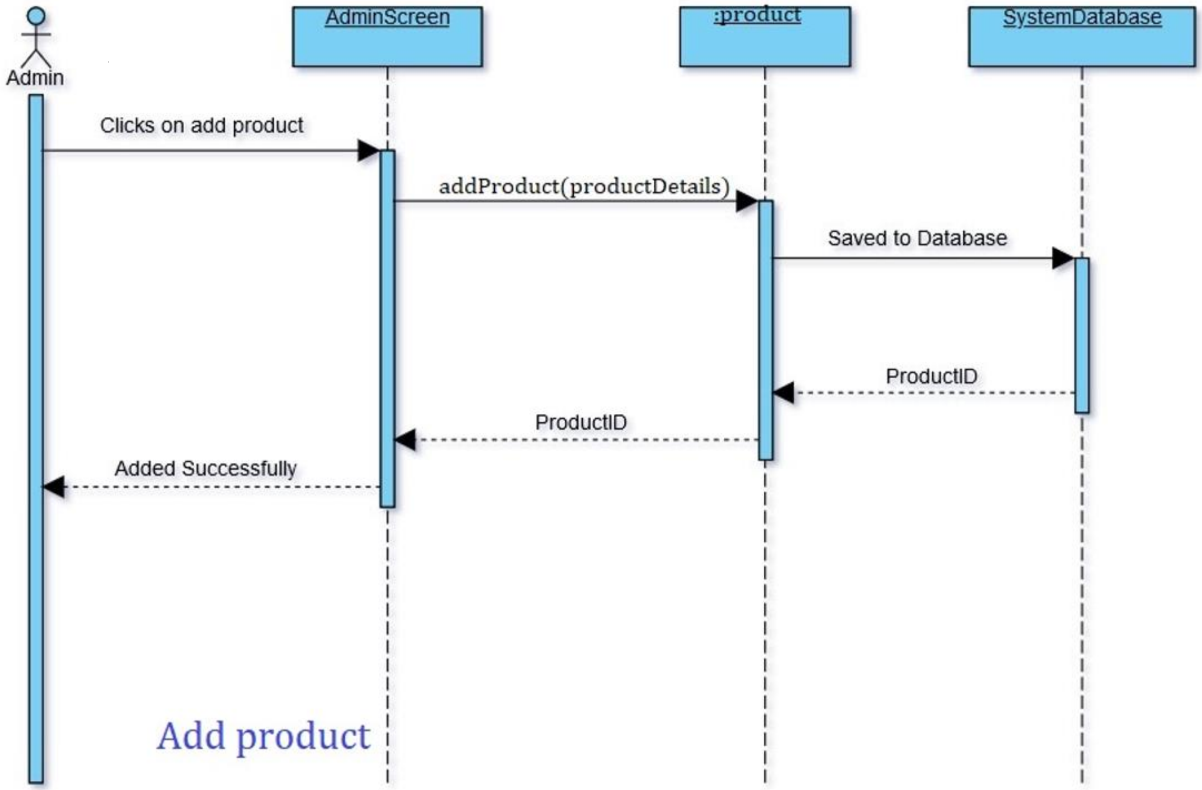
Steps:

1. A customer chooses “select delete from cart” button.

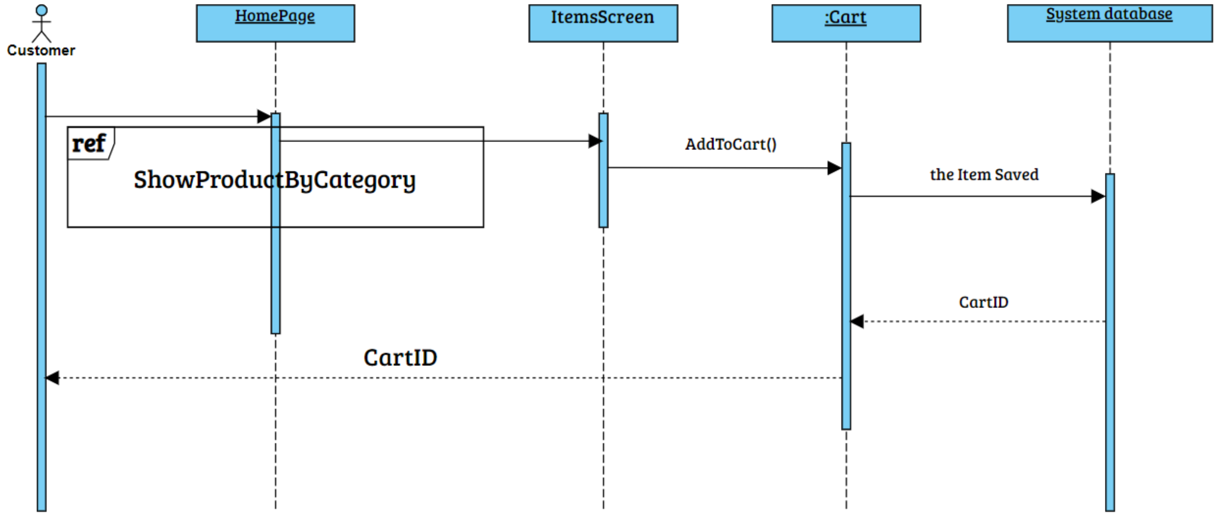
2. Then he/she enters the product’s id.

3. Choose to “delete product from cart” then the product will be deleted from the cart.

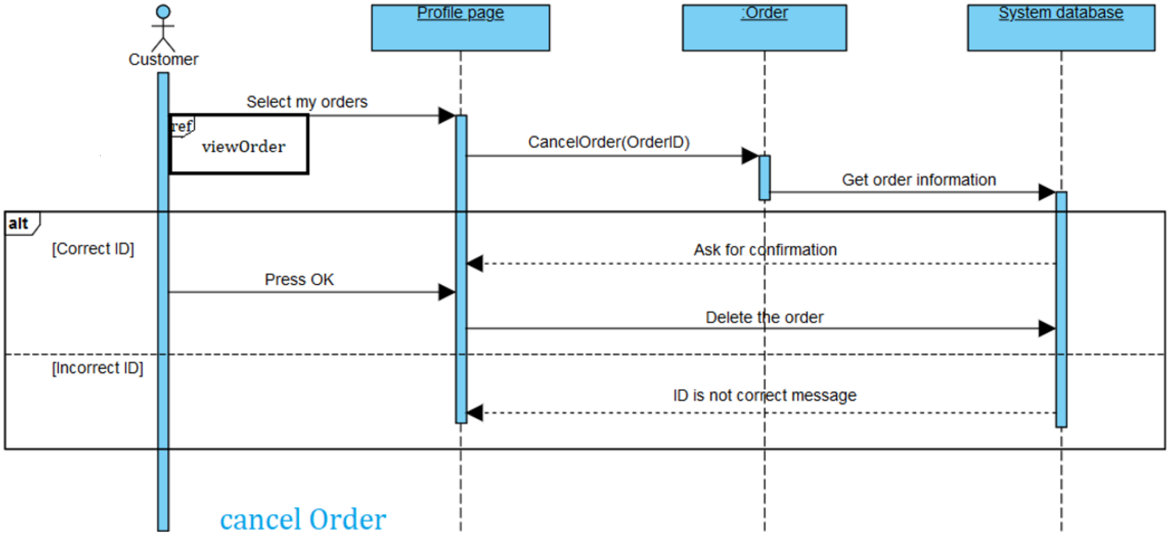
Sequence diagram:



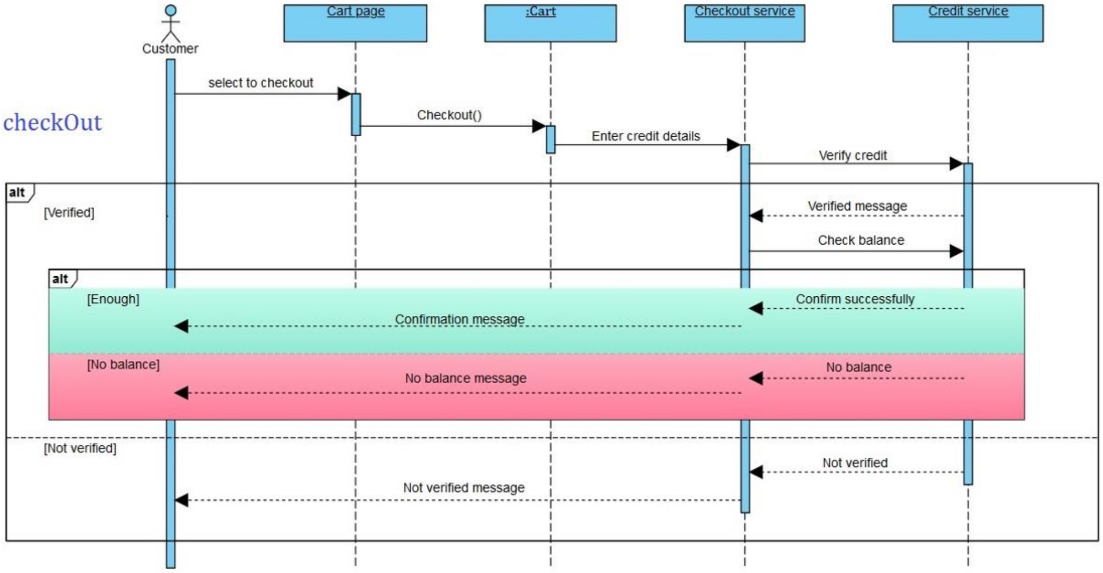
Add product



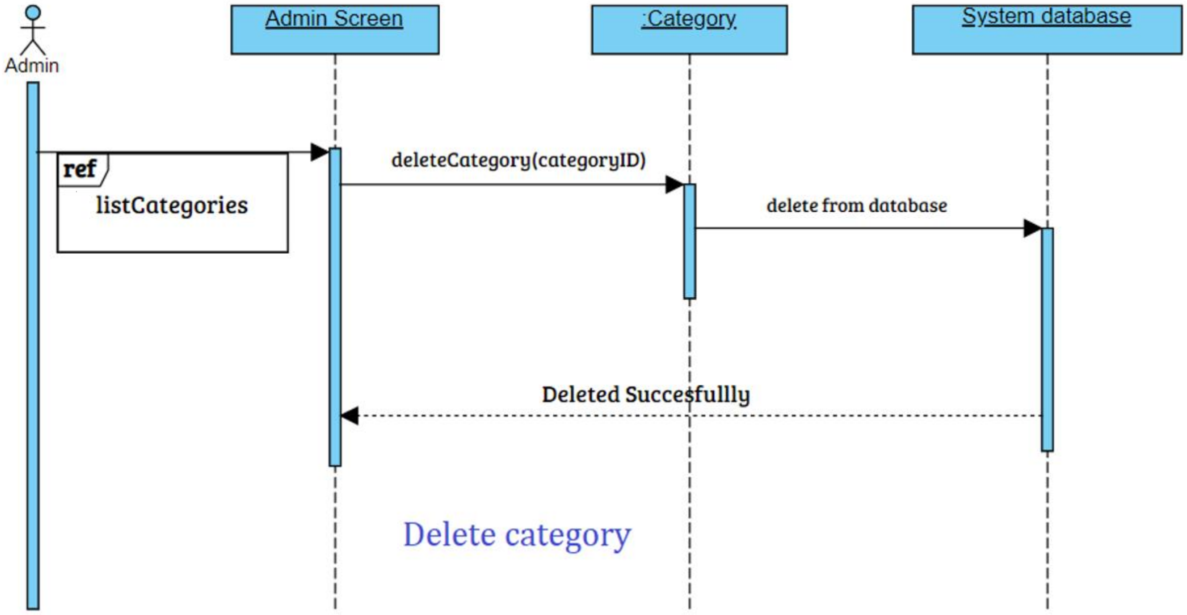
Add To Cart



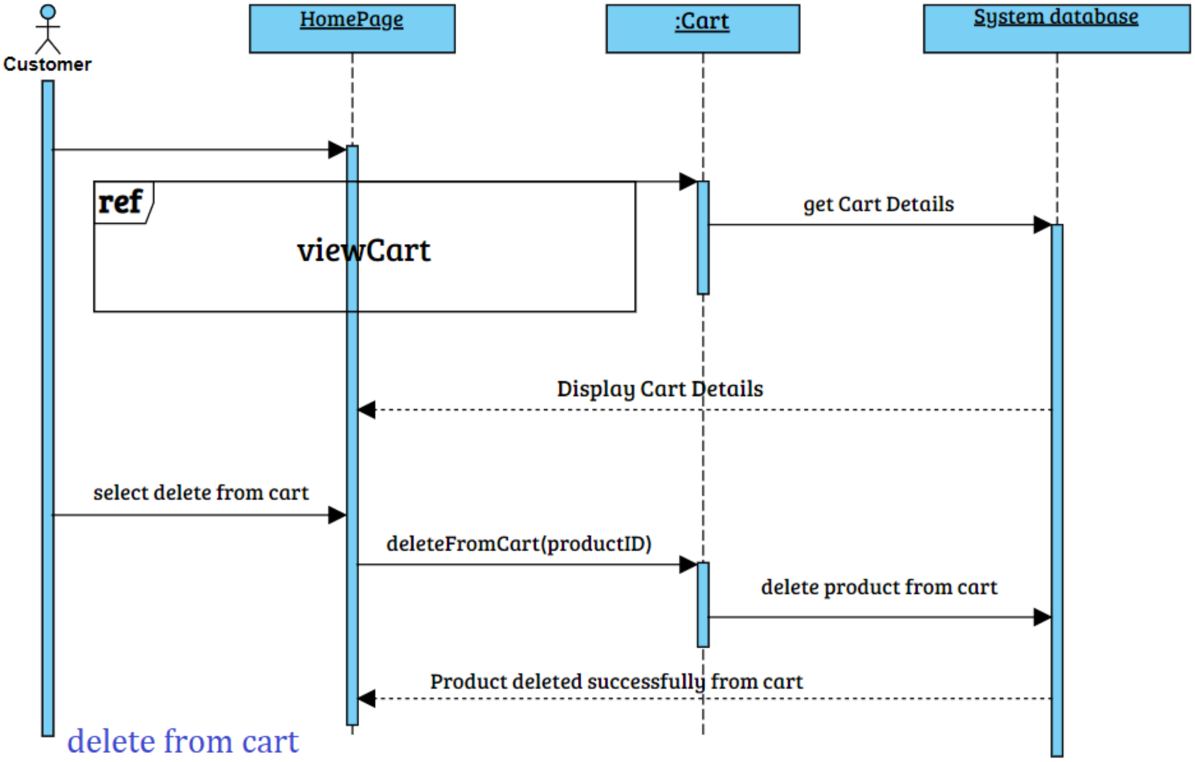
cancel Order



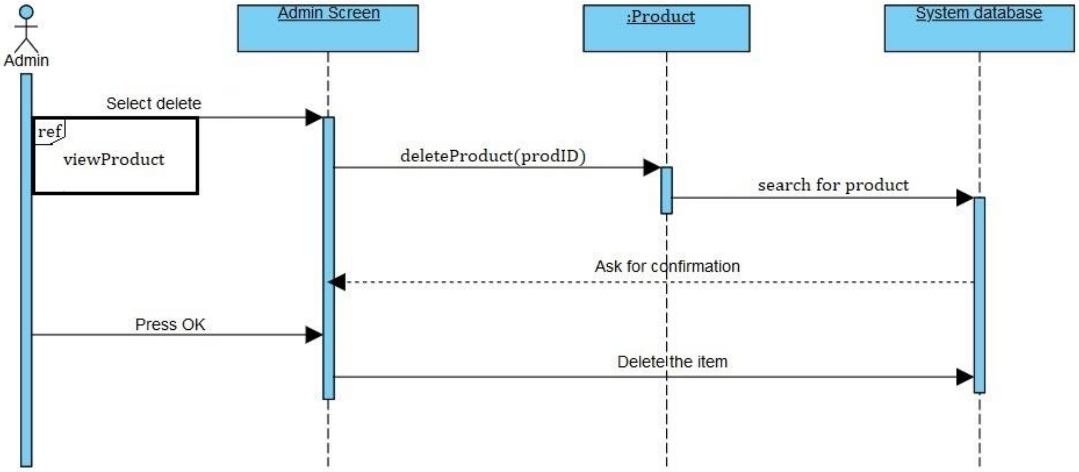
checkOut



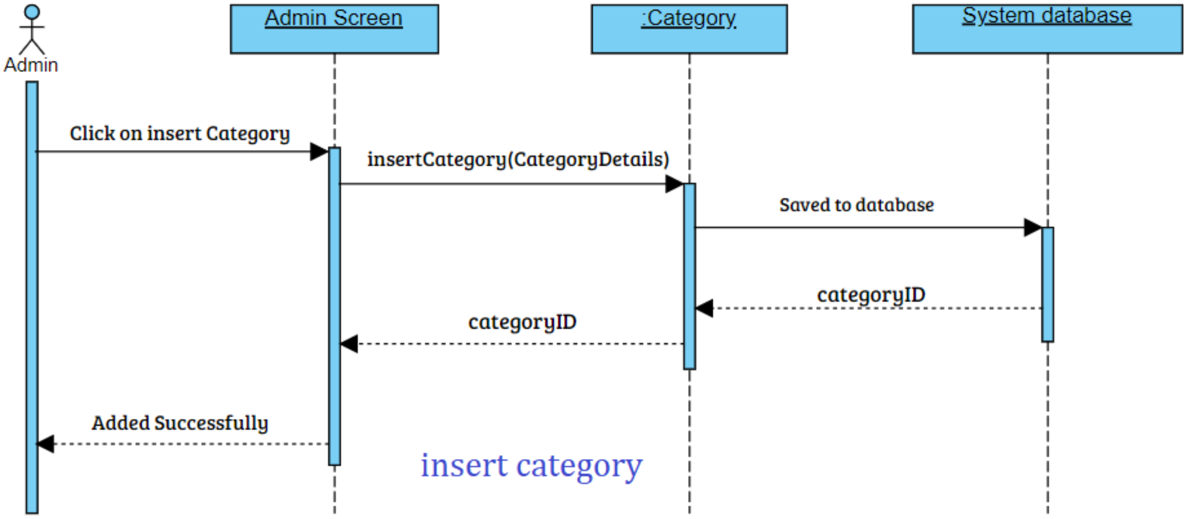
Delete category



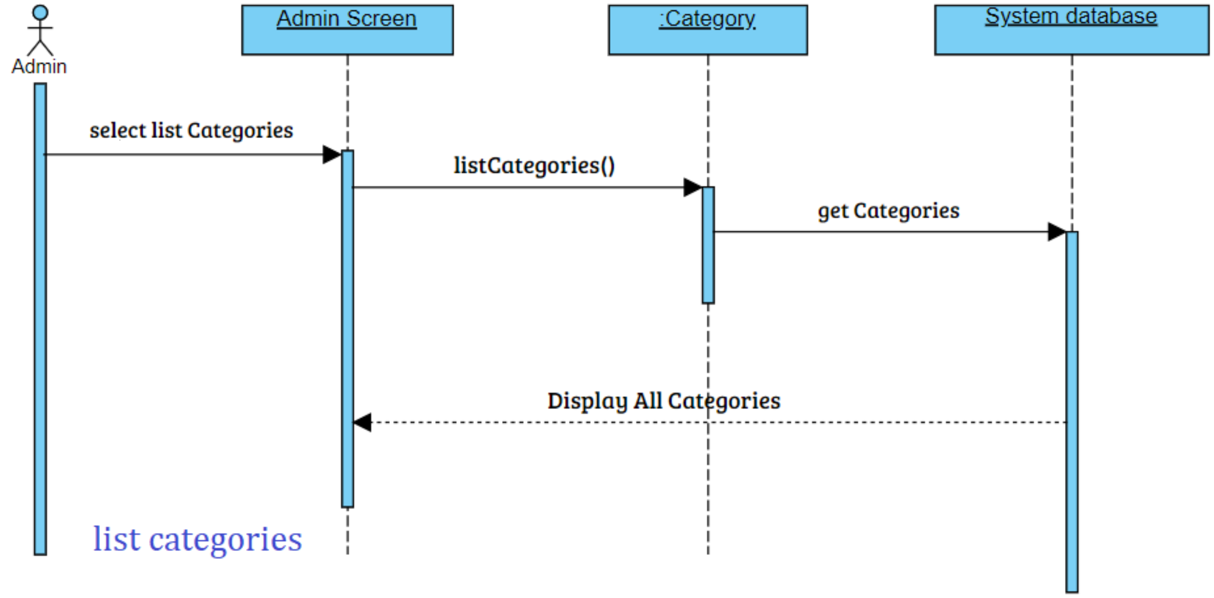
delete from cart



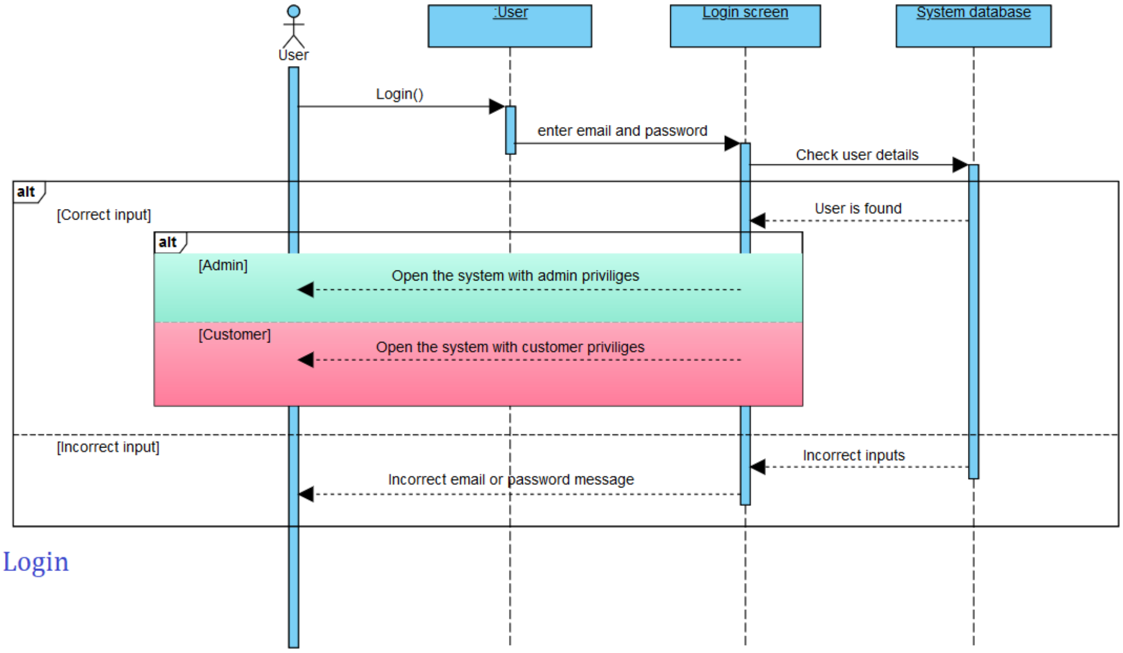
delete Product



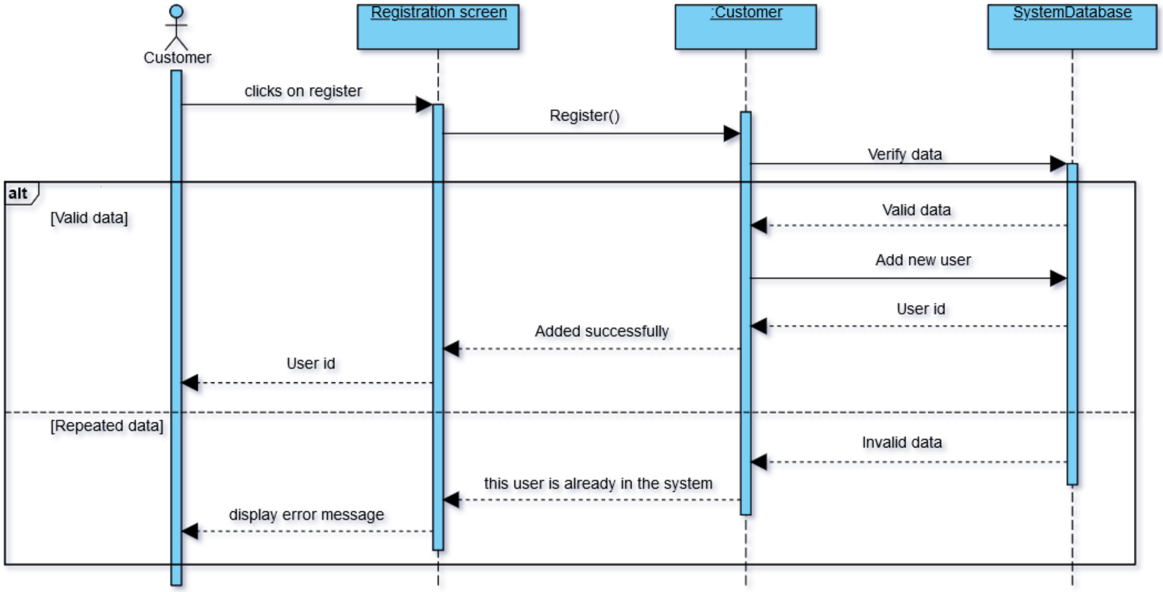
insert category



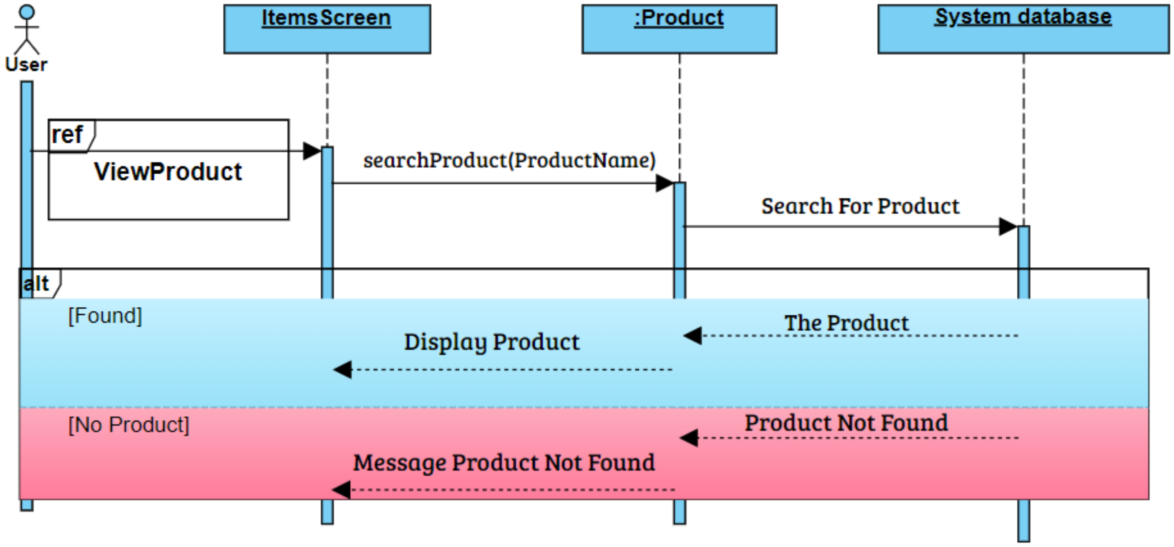
list categories



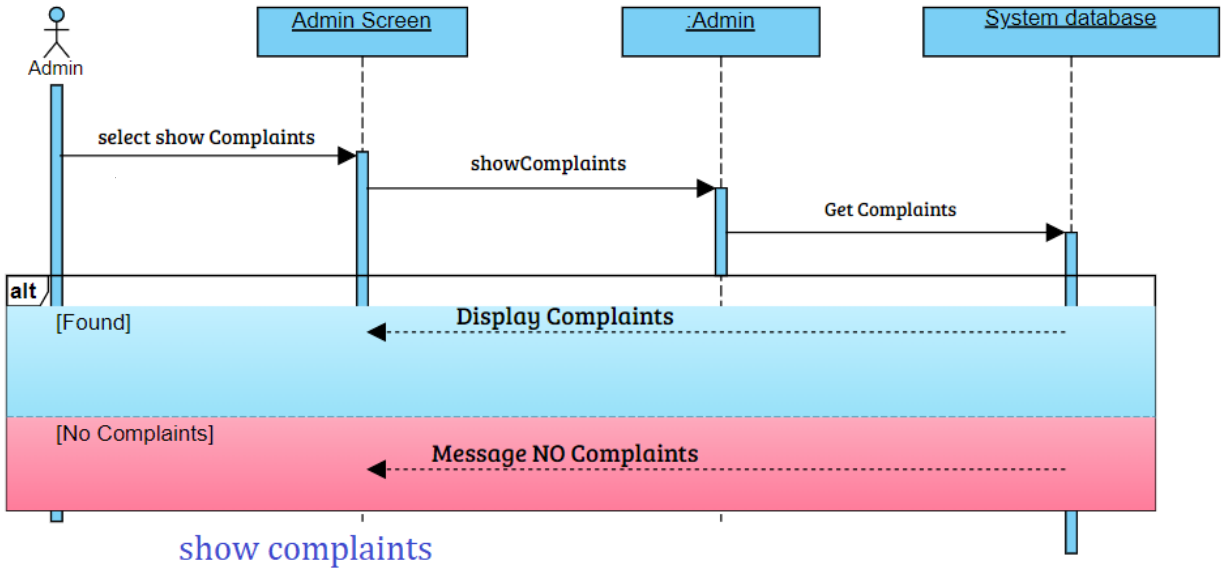
Login



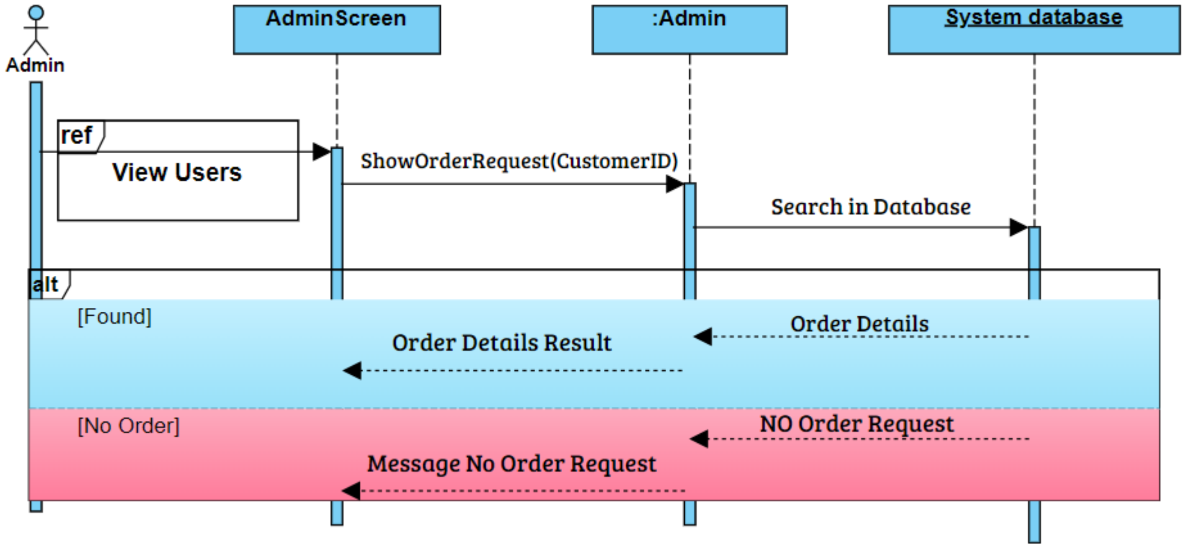
Register



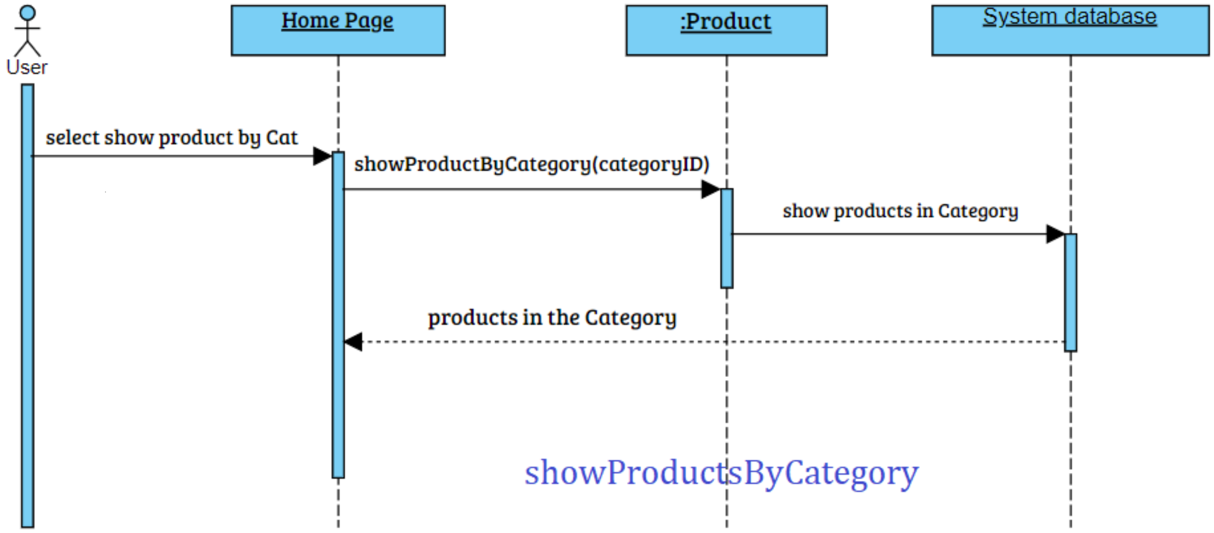
Search Product



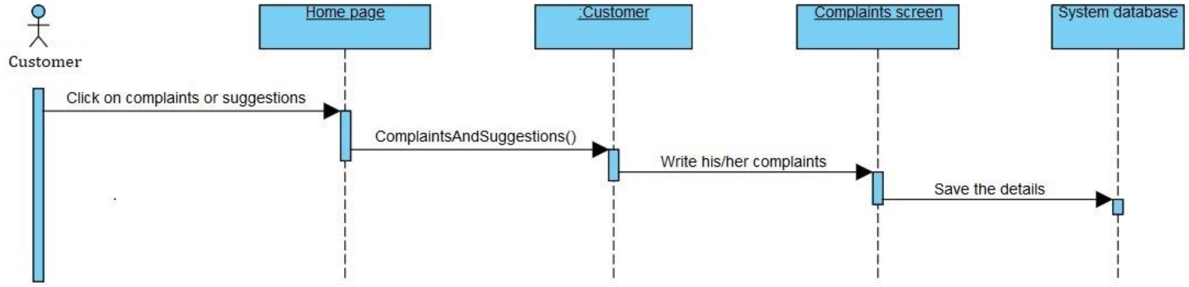
show complaints



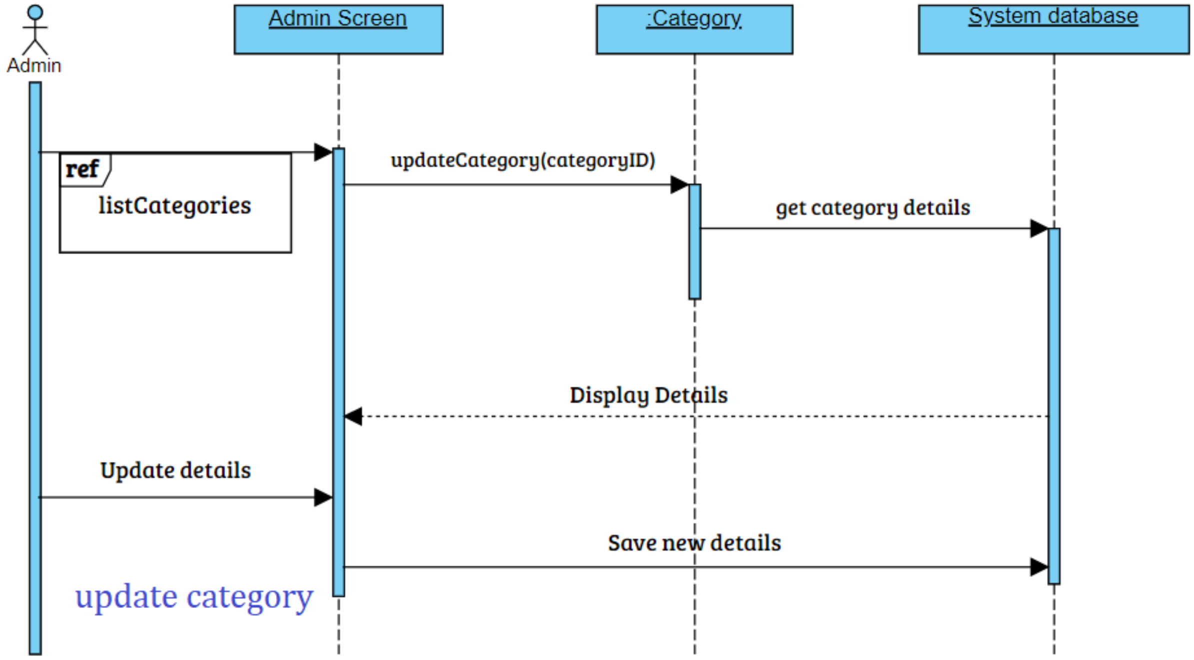
show Order Request


User
Home Page
:Product
System database
select show product by Cat
showProductByCategory(categoryID)
show products in Category
products in the Category

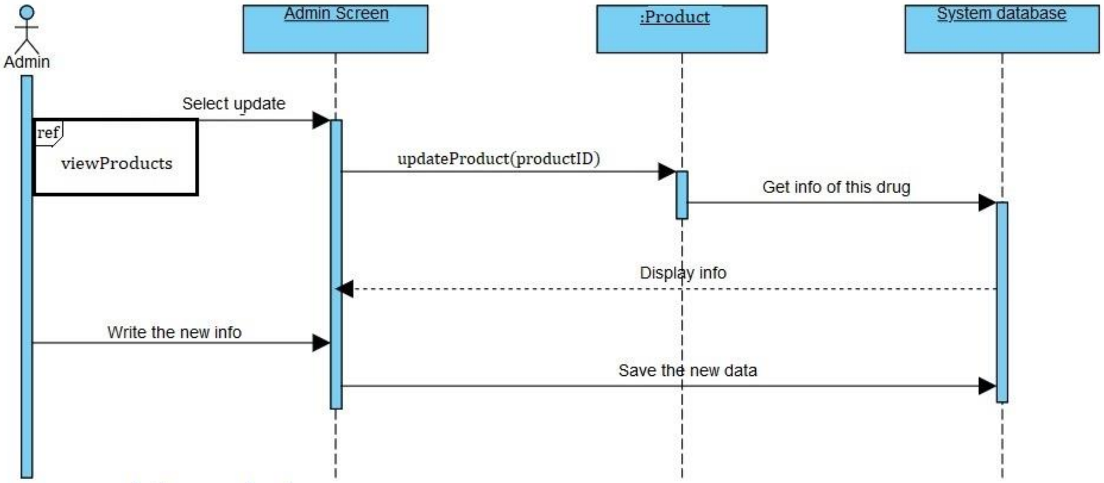
showProductsByCategory



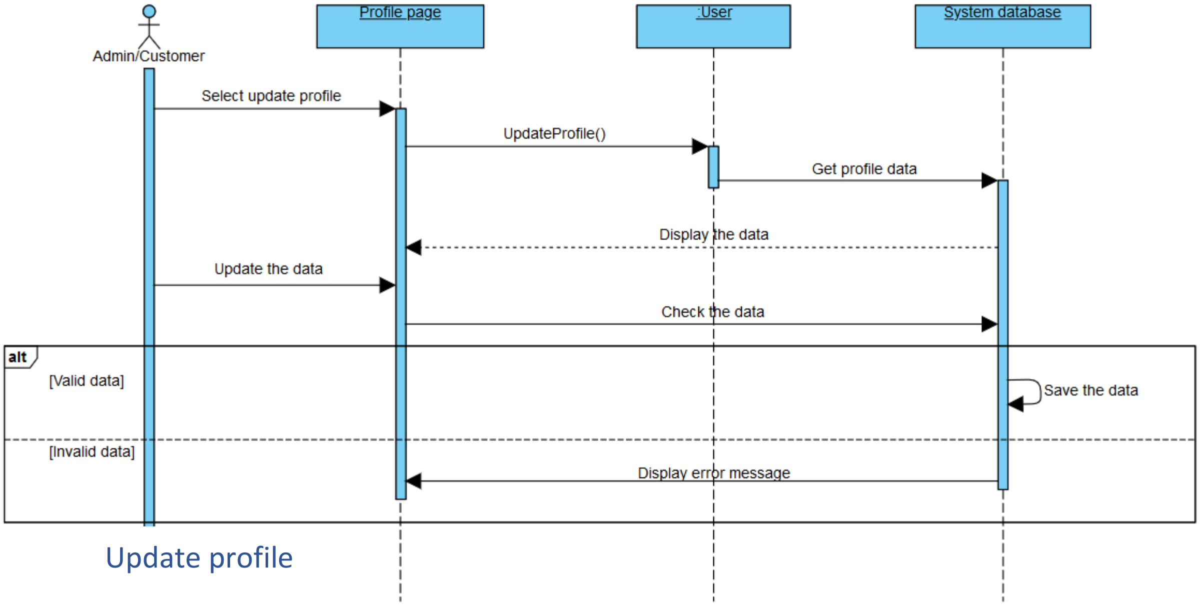
suggestion



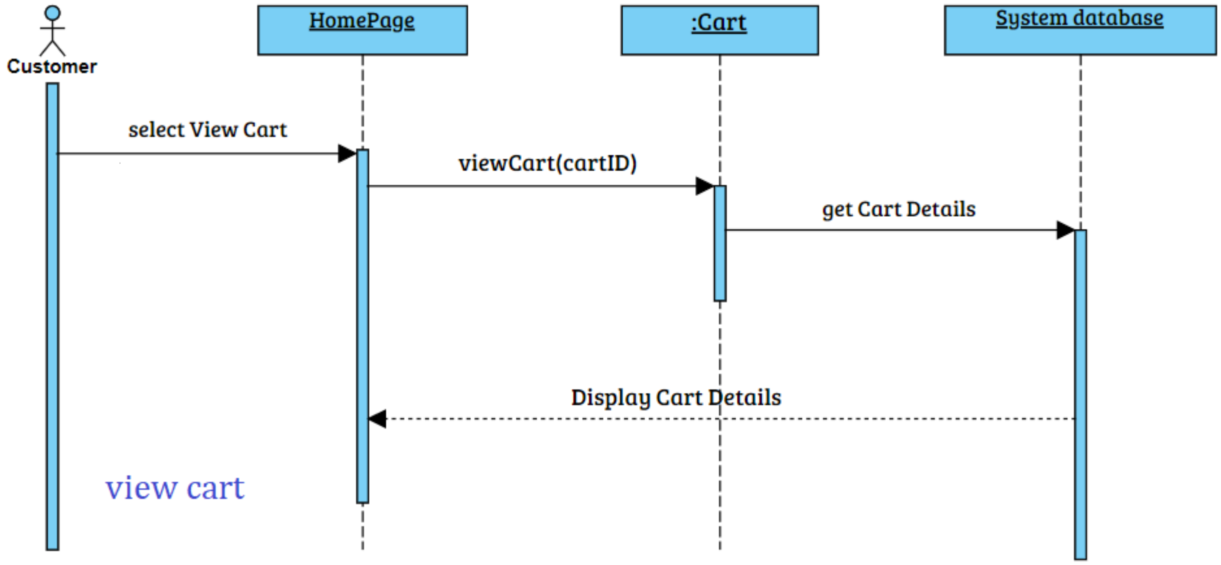
update category

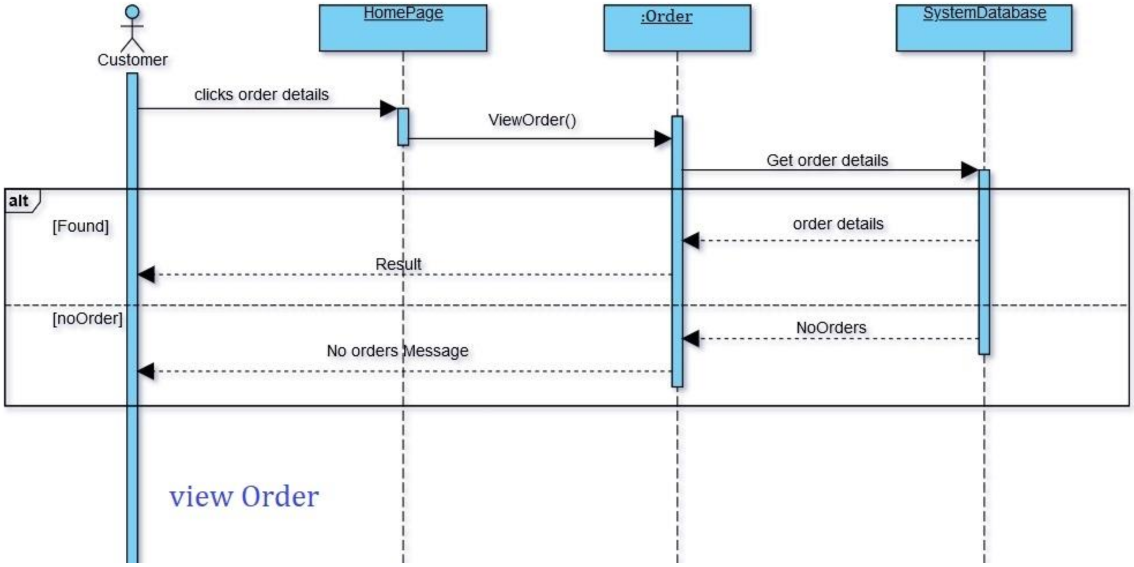


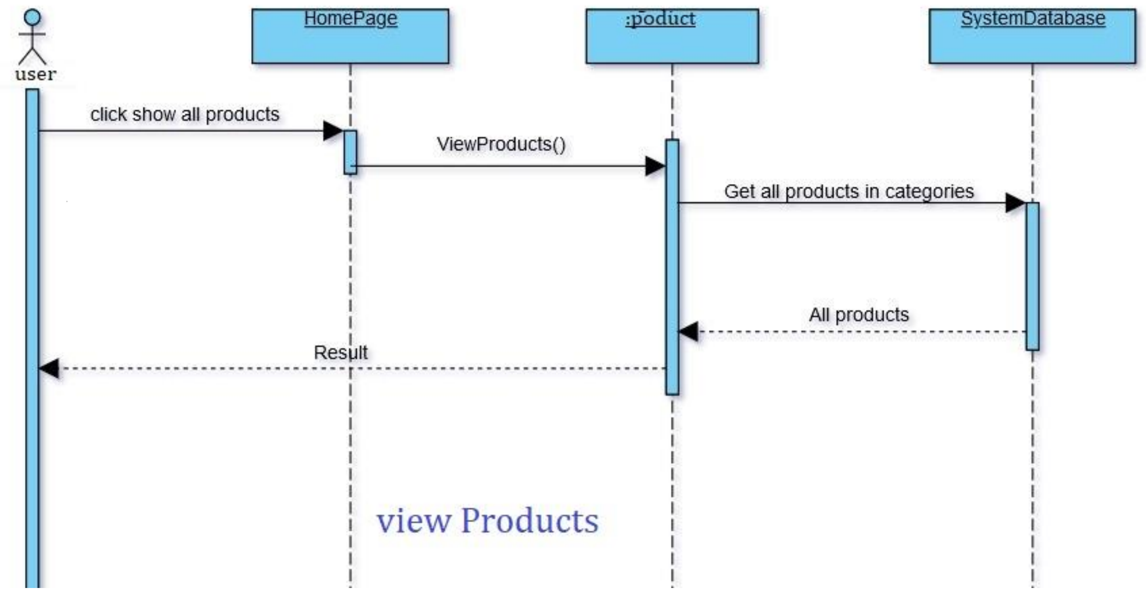
update product

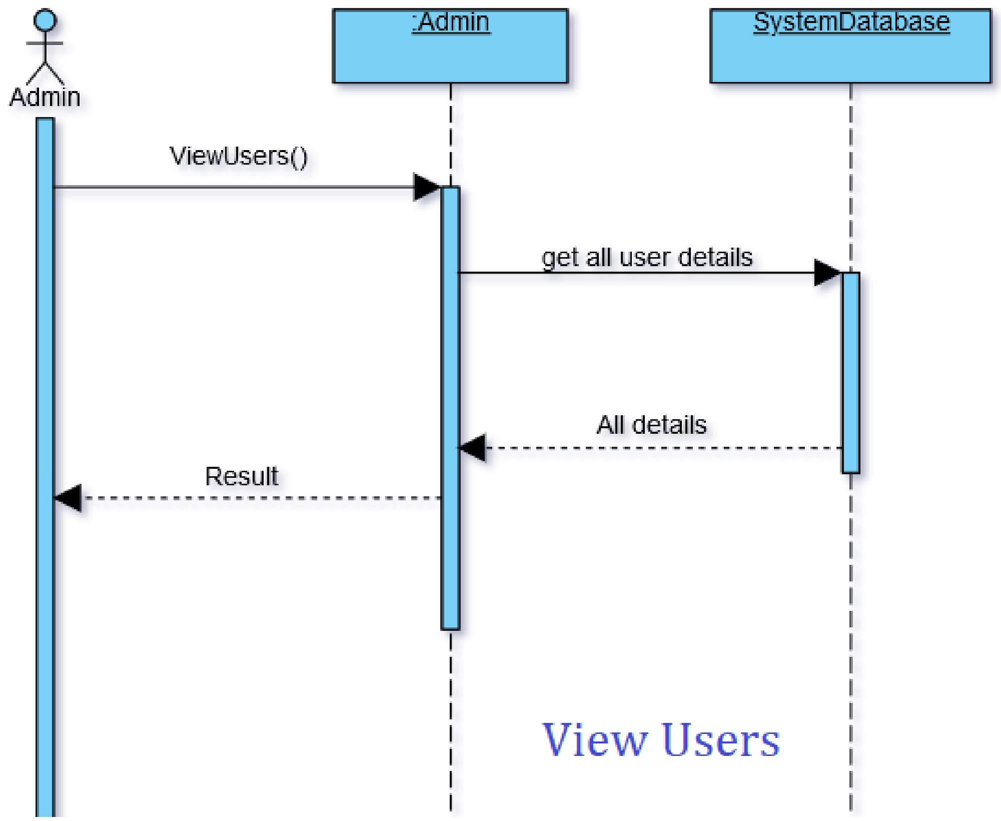


Update profile


Customer
HomePage
:Cart
System database
select View Cart
viewCart(cartID)
get Cart Details
Display Cart Details
view cart


Customer
HomePage
:Order
SystemDatabase
clicks order details
ViewOrder()
Get order details
alt
[Found]
order details
Result
[noOrder]
NoOrders
No orders Message
view Order


user
HomePage
:poduct
SystemDatabase
click show all products
ViewProducts()
Get all products in categories
All products
Result
view Products

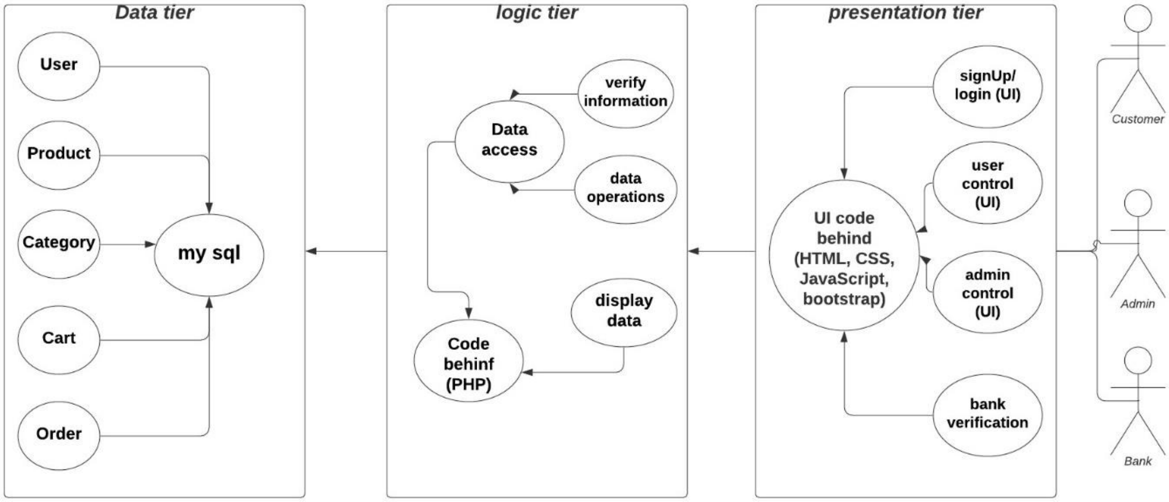

Admin
:Admin
SystemDatabase
ViewUsers()
get all user details
All details
Result
View Users

Architecture diagram:

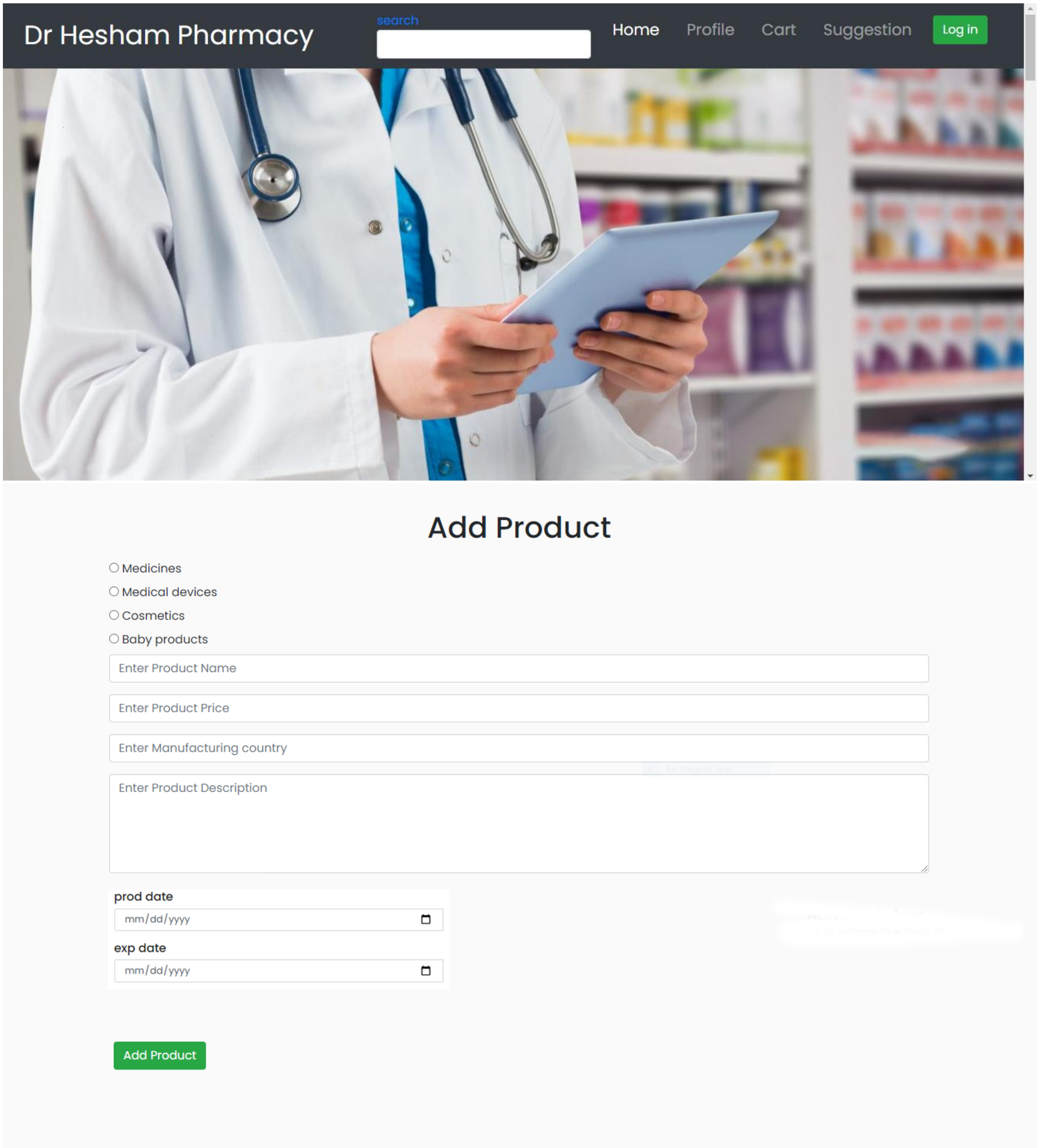
Three-tier architecture

A three-tier architecture is a client-server architecture in which the functional process logic, data access, computer data storage and user interface are developed and maintained as independent modules on separate platforms.

Three-tier architecture is a software design pattern and a well-established software architecture.



GUI:



Add Product

○ Medicines
○ Medical devices
○ Cosmetics
○ Baby products

Enter Product Name

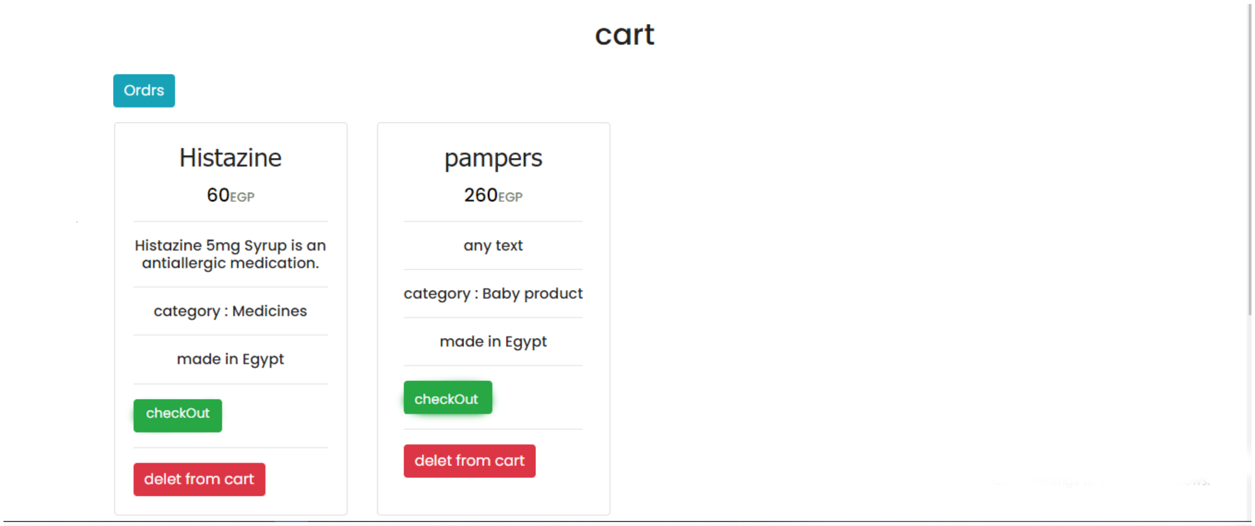
Enter Product Price

Enter Manufacturing country

Enter Product Description

prod date
mm/dd/yyyy

exp date
mm/dd/yyyy



cart

Histazine

60EGP

Histazine 5mg Syrup is an antiallergic medication.

category : Medicines

made in Egypt

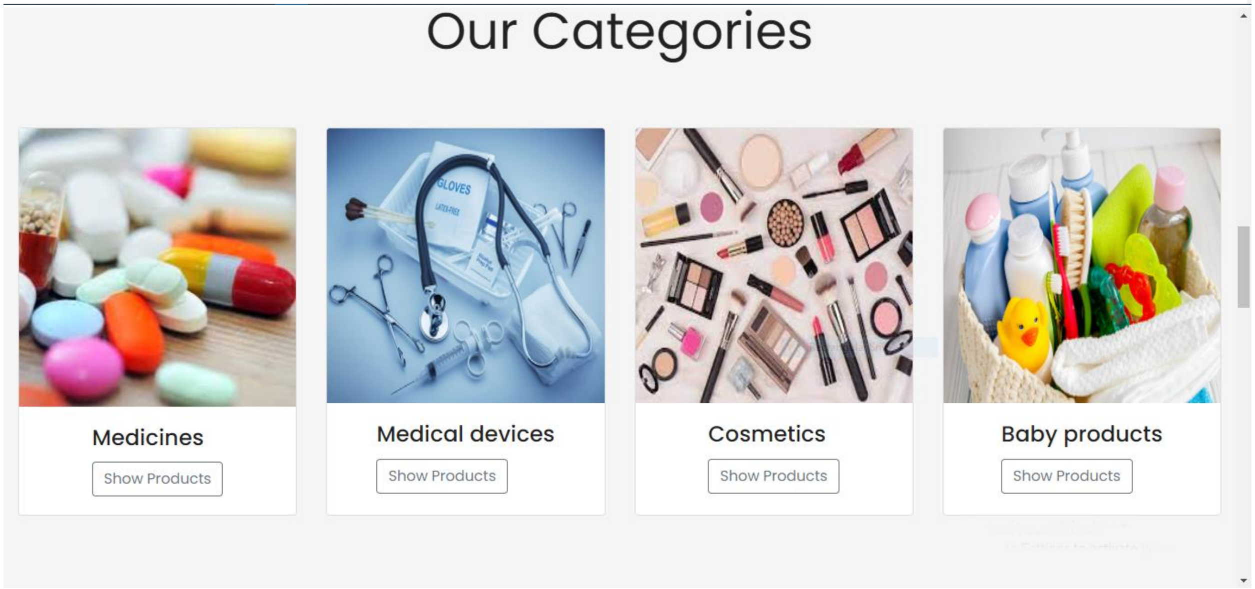
pampers

260EGP

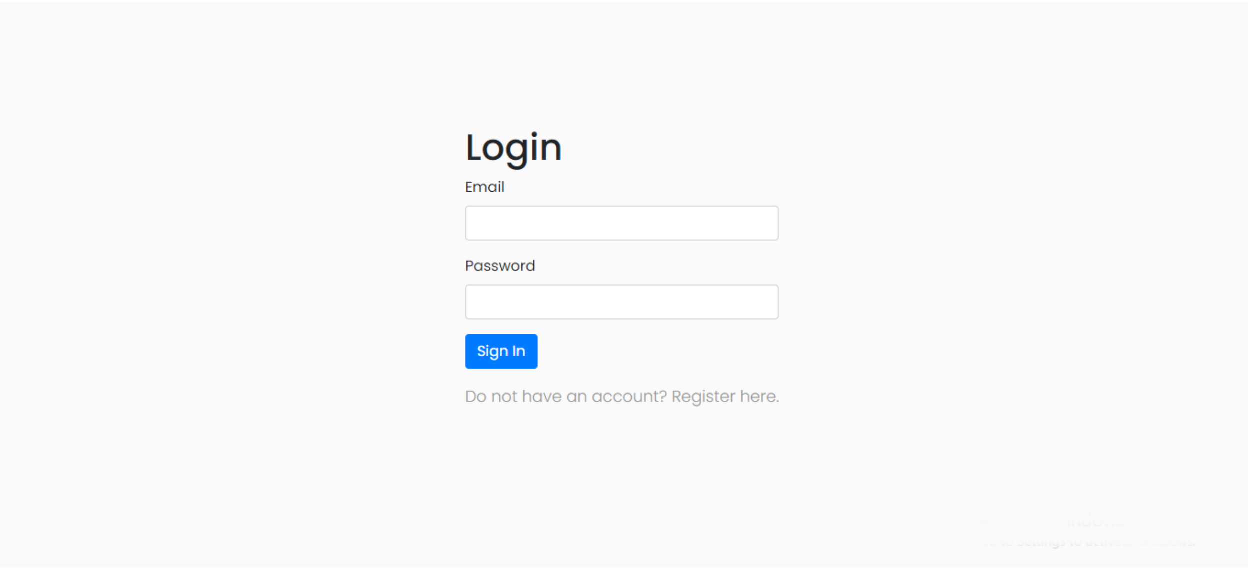
any text

category : Baby product

made in Egypt



Our Categories

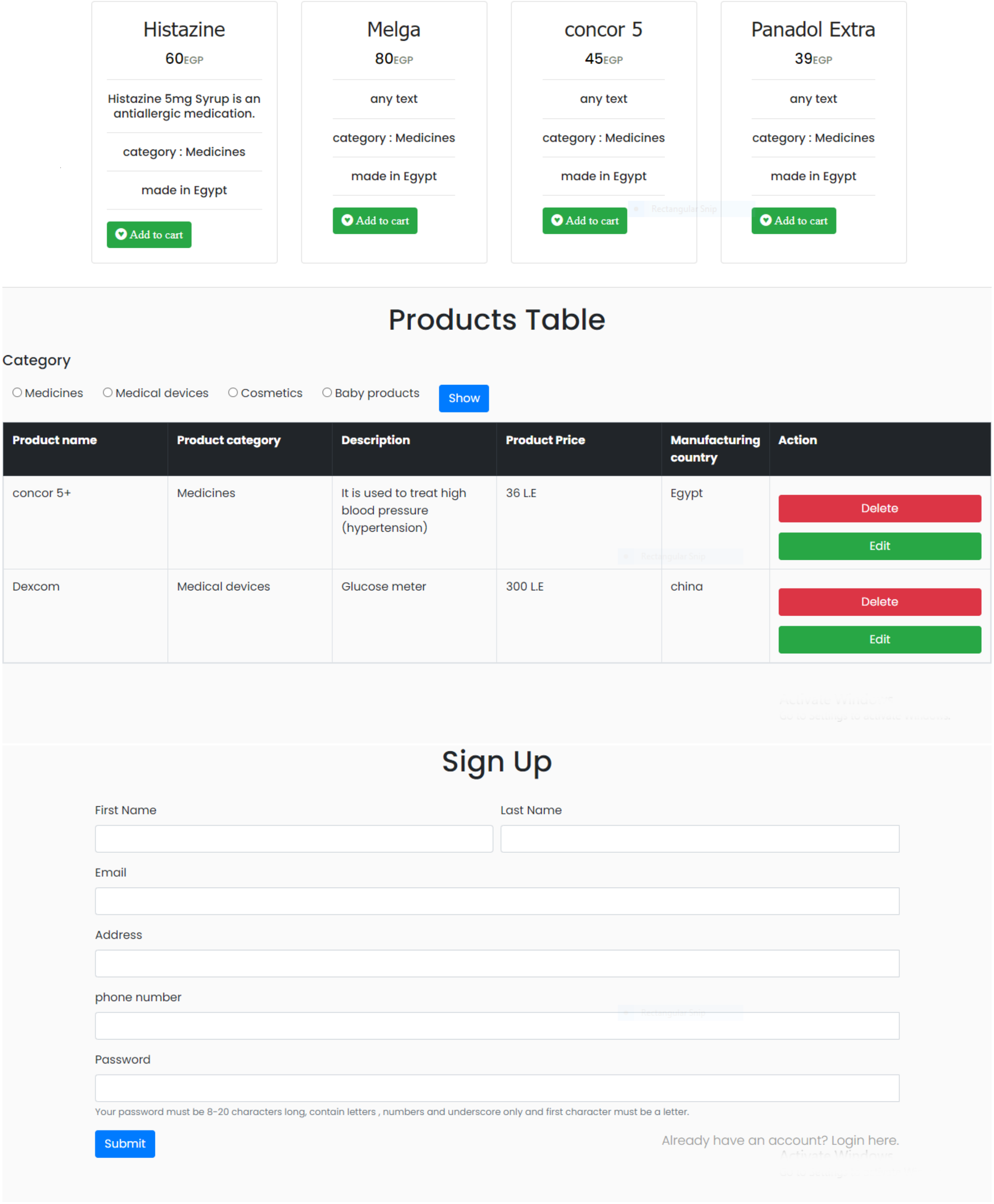


Login

Email:

Password:

Do not have an account? Register here.



Histazine
60EGP
Histazine 5mg Syrup is an antiallergic medication.
category : Medicines
made in Egypt

Melga
80EGP
any text
category : Medicines
made in Egypt

concor 5
45EGP
any text
category : Medicines
made in Egypt

Panadol Extra
39EGP
any text
category : Medicines
made in Egypt

Products Table

Category

○ Medicines ○ Medical devices ○ Cosmetics ○ Baby products

Product name	Product category	Description	Product Price	Manufacturing country	Action
concor 5+	Medicines	It is used to treat high blood pressure (hypertension)	36 L.E	Egypt	Delete Edit
Dexcom	Medical devices	Glucose meter	300 L.E	china	Delete Edit

Sign Up

First Name

Last Name

Email

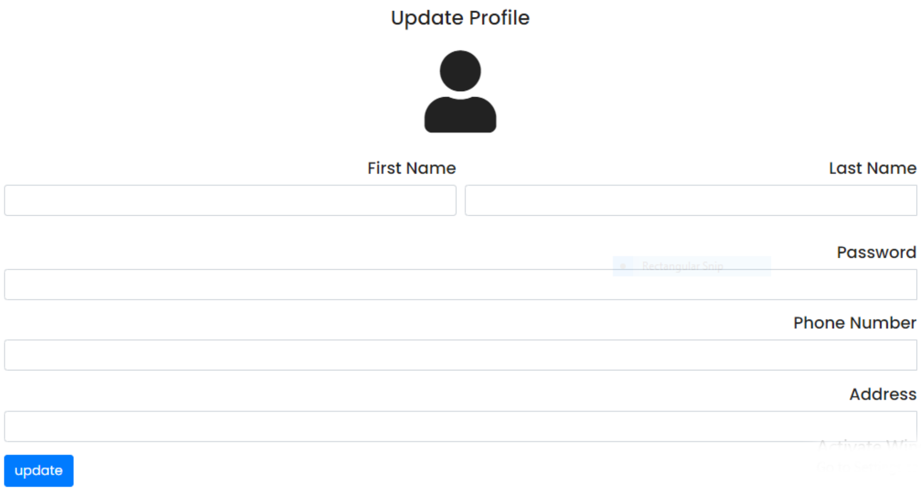
Address

phone number

Password

Your password must be 8-20 characters long, contain letters , numbers and underscore only and first character must be a letter.

Already have an account? Login here.



Update Profile

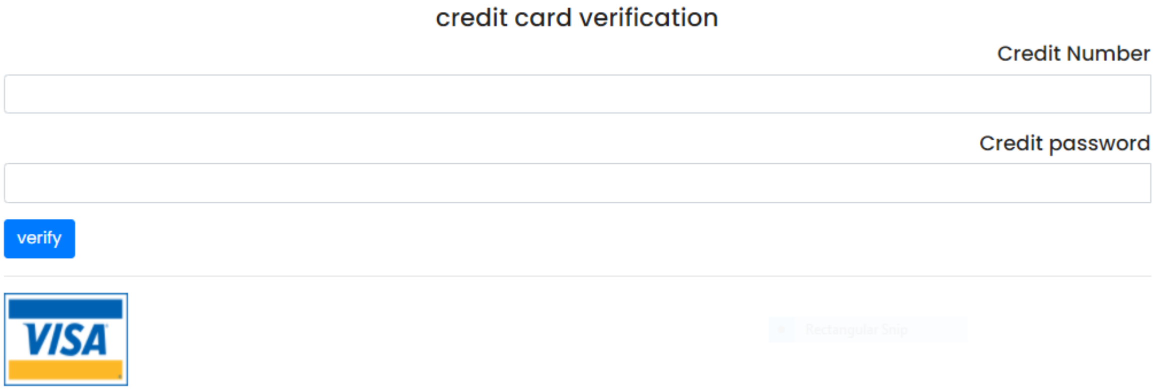
First Name

Last Name

Password

Phone Number

Address



credit card verification

Credit Number

Credit password