

ElectroSpaceX
Requirements Specification

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1. Executive Summary

1.1 Project Overview

The project consists of a web application, which resembles an e-commerce and management system of an electronic business. The web application should be user-friendly, convenient and will contain at least three users, such as the client, economist and administrator.

The services the business provides are mainly focused on the sale of electronic means and their successful delivery. In addition to the services mentioned above, the web application will enable users to give their feedback upon different products. Each user will register and login using its credentials, and then will be able to perform different orders, view its historic of purchases and provide feedbacks. On the other hand, the economist will be responsible of the financial states and the company's profits. The administrator can have much more access than a simple user or economist. He can keep track of the purchases made, be aware of the stock of the products, cancel orders and also view specific client data. He is responsible of taking care of different problems or dissatisfaction users might have.

The technologies we are going to use, include Node.js programming on the back-end and React on the front-end, and MongoDb as a database.

1.2 Purpose and Scope of this Specification

The purpose of this project is to provide a proper management system of an online electronic store, which currently operates in Albania.

In scope of these requirements:

- Approaching the system as one of the three users, each of them having distinct responsibilities.
- Being in track of the services provided, as a result the business will be aware of the client feedback and manage decisions related to the improvement of its products
- Managing the supply of the electronic products and its trading.

Out of scope of these requirements:

- Delivery of the products to its final destination requires a separate management system.

2. Product/Service Description

2.1 Product Context

The product will be easy to comprehend and be utilized by random users, such as clients. As a web-API it is able to interfere with the web. The product is dedicated to specific users, such as administrator of the company, economist of the company, and also for clients who can make purchases as desired.

2.2 User Characteristics

There are three types of users that will be able to use the software:

- Client

Client will be able to register/login the software and then search for a product, make purchases, post feedback as comment for different products. Client can view and edit his profile and also perform CRUD operations for products into wishlist or shopping cart. He can view previous orders.

- Administrator

Administrator can log in using his credentials. He can perform CRUD operations to manage products, categories and users. He can view orders, approve or cancel them. He can view the list of users. He can generate reports.

- Economist

Economist can log in using his credentials. He can check monthly payments, find incomes of the company. He can view stock and orders.

2.3 Assumptions

- Since the software is a web-API it is assumed that users have a persistent network connection to be able to use the product.
- It is also assumed that users have an electronic device such as a smartphone, computer etc.
- Devices should have an IOS, Android, Windows etc. Operating System. For a better result and experience a modern browser is preferred to be installed at the devices.
- It is assumed that the data entered at the system is confidential and protected.
- It is assumed that every completed order needs to be stored in the system for documentation and report purposes.
- It is assumed that every costumer should be limited to watching only his orders and not interfere with other costumers.
- It is assumed that the administrator is responsible for updating stock in real time.

2.4 Constraints

The system will be constrained by:

- The equipment with smart devices and a fast internet connection
- The need of a browser in each device in order to run the software
- The necessity to understand the way the system works and as a result efficiently use the program
- The need to maintain the database from an IT specialist.

2.5 Dependencies

Dependencies that may affect the requirements.

- The need to have a strong internet connection to run effectively.
- Users should be logged in to perform different operations.
- Purchase of products can be approved if the product is available in stock.
- The system is also dependent on the browser performance.
- The costumer needs to have at least 1 product in cart in case to make an order

3. Requirements

Priority Definitions

The following definitions are intended as a guideline to prioritize requirements.

- Priority 1 – The requirement is a “must have” as outlined by policy/law
- Priority 2 – The requirement is needed for improved processing, and the fulfillment of the requirement will create immediate benefits
- Priority 3 – The requirement is a “nice to have” which may include new functionality

It may be helpful to phrase the requirement in terms of its priority, e.g., "The value of the employee status sent to DIS **must be** either A or I" or "It **would be nice** if the application warned the user that the expiration date was 3 business days away". Another approach would be to group requirements by priority category.

3.1 Functional Requirements

Business talk with the manager of the company that we did the software for.

- a. I want you to build for me a website for my business from where I can sell the products that I have here.
 - i. The software must be a web-based application using any technology that you want.
 - ii. The service that the system will offer will be based on online sales and purchases.
 - iii. The application must have a specific UI (user interface) for client.
 - iv. Client should log in in order to gain access to online purchases.
- b. Also I want to have the opportunity to have an admin dashboard where I can see the orders in order to make the shipments in a correct way
 - i. The application must have another interface called Administrator
 - ii. The administrator must have the highest level of user access.
 - iii. The administrator must have access to CRUD categories, products, orders, users.
- c. I also want to have the opportunity to easily make the monthly financial reports about my company
 - i. The administrator must have another interface called Economist
 - ii. Economist should make all the financial reports(daily and monthly reports)
 - iii. He have the right to make changes in the products and add wages to the employees.
 - iv. The statistical data will be displayed by charts or graphs in order to review and compare easily to each other.
 - v. The system must convert the reports in PDF format in order to be printed in a correct format.
- e. I am open for any suggestions that may come out during the way, on what we can add or remove.

f. Attached I am sending you the lists of the products with the relevant descriptions.

- i. In user interface a specific description will be displayed for every product.
- ii. In user interface the price will be displayed for every product.

In the example below, the requirement numbering has a scheme - BR_LR_0## (BR for Business Requirement, LR for Labor Relations). For small projects simply BR-## would suffice.

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
BR_01	The system is designed as a web application with three users	This will be the main platform for users	1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_02	The system's service will be based on online sales and purchases, as well as system management.		2	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_03	All privileges will be granted to the system administrator. Will get real time access to all system and database options for clients and economists.	The admin account has full access to the system's features.	1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_04	The application must have a specific UI (user interface) for client.		1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_05	Every user should be able to log in and out and every client has the opportunity to register into the application	Economist and administrator are already in the database	1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_06	Every user should have access to their own section of the system.		1	4/14/22	Gejsi Dervishi, Kevin Mamaj

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BR_07	The system should have profiles for each user.		1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_08	The administrator must have the most privileges of all users.		1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_09	Client profiles should be private	Data Protection	1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_10	The administrator must have access to CRUD operations (Create, Read, Update, Delete) categories, products, orders, users, employees.		1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_11	The data is presented to the administrator in a table format.	This is done because tables and visuals provide a clearer picture of all the clients who have registered.	2	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_12	Administrator should be able to read all orders and decide if the order is ready to be delivered or not.		2	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_13	A supply balance report should be able to be filed by administrator, and he can choose the amount of products that are needed.		2	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_14	The admin should not be able to see any of the user's personal information.		1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_15	The economist's report/balance should be available to the administrator at the end of each month.		1	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_16	The economist should do a monthly report on the profit or loss of the company		2	4/14/22	Gejsi Dervishi, Kevin Mamaj

BR_17	The system should have a calculation of total monthly, weekly and daily incomes and the economist has the right to `study them.		2	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_18	At the moment when the stock is from 0-3 products in the administrator page will be shown a warning in order to send an email to the supplier.	The email will have the required details for the product by the supplier.	3	4/14/22	Gejsi Dervishi, Kevin Mamaj
BR_19	When a product needs to be shipped, the economist will print a receipt with buyer details and give it to the transporter		3	4/14/22	Gejsi Dervishi, Kevin Mamaj

3.2 Non-Functional Requirements

3.2.1 Product Requirements

Our software will be based as a web application, consisting of three user interfaces.

The client interface, the economist interface and the administrator interface will appear corresponding to the login credentials.

The header of the website contains the logo of the business, a search bar and the menu with various options, such as products, news, services, about us and the log-in button. While the footer contains social media contact details, address details and privacy policy information.

Client Interface:

- When the client presses the log-in button then he will be directed to log-in window, with an extra option to register, if not yet.
- The client interface allows the user to make ***real-time purchases***, by adding products to the cart or deleting existing ones.
- The client can view its ***profile details*** and also edit its information. The information includes the name, surname, the phone number, the address, the country name and the postal number.
- The client can add products on the wish list, and also delete them.
- View the ***purchase historic*** and also the products on the ***wish list***.
- The client can search a product or view recommended items.
- The user can post feedback as a comment or represented as star review.
- Read flash news about technology and products on the website.
- Log-out*** option included, in order to log out of the website.

- *Admin Interface:*
 - The admin logs in the website with its credentials, and owns various responsibilities. Performing **CRUD operations** related to creating, reading, updating and deleting products, categories, economists and other workers.
 - List all the users.
 - Adding product quantity.
 - Set sales for specific products on the website.
 - Checking **product availability**.
 - Being able **to view orders** and invoices.
 - Requesting supplies** which will be visible on the client interface.
 - View reports generated by the economist.
 - View the feedback posted by the client upon different products.
 - Log out of the site.

- *Economist Interface:*
 - Logging in as an economist.
 - Viewing **client purchase invoices**.
 - Viewing total expenses.
 - Calculating the **daily & monthly profit**.
 - Generate reports** related to the financial state of the business throughout the month.
 - View supply needs and its required budget.
 - Add workers and define their wages.
 - Log-out option, to leave the website.

3.2.1.1 Usability Requirements

Include any specific usability requirements, for example,

- Learnability Requirements
 - The application is user-friendly, simple and easy to understand.
 - An extensive document will be provided in order to instruct common users about the usage of the system.
 - This step by step instruction will be separated into modules, related to the interfaces the system owns.
 - The system is easy to remember for common users.

- Flexibility Requirements
 - The software is designed to minimize as much as possible user errors.
 - It can be updated easily in order to meet new requirements.

- Accessibility Requirements
- The software can be conveniently accessed in various times and environments, since it requires only a device and Internet connection to be used.

3.2.1.2 Efficiency Requirements

The software will provide a fast and reliable way of managing an electronic shop operating in online sales.

- Performance Requirements

The software is a web application, as a result it will be stored in a web server.

- The performance depends on the speed and the quality of the Internet connection.
- Its efficiency is highly related to the server hardware capability.
- Number of users accessing the website effects the performance.

- Space Requirements

Since the business serves as an e-commerce website, there will be a great number of users predicted to access the website and perform purchases or different tasks. It is thought that several hundred clients can interface with the application. As for the staff it has a limited number of users and does not have a major effect in space.

3.2.1.3 Dependability Requirements

Availability

- The web application will be available for use all the time.
- The web application can be accessed in any geographical area, as long as the user has a stable Internet connection.
- Error message warnings will be provided in order to prevent system fatal error.
- Different user categories can access specific parts of the web application.
- The system should behave as expected, with very few errors.
- Downtime can affect the user experience, as a result an immediate maintenance should be provided. It should be avoided as much as possible during certain times when the application is highly frequented.
- Scheduled maintenance can be performed in times when the store itself is closed, or at times when the website bears as little traffic as possible.

Latency

Latency is the delay between a user's action and the response of the web application, referred as the round trip time it takes a packet of data to travel through the network.

- Connection based latency is not covered by the software, since it is related to the speed and quality of the Internet connection.
- The latency of the web application depends mainly on the strength of the Internet connection, the size of the database etc.
- The linking between interfaces should be optimal, in order to avoid latency.

3.2.1.4 Security Requirements

Security is a property that defines the ability of the system to protect itself from attacks. When it comes to security, the software should provide:

- Confidentiality: Access should be granted only to authorized users.
- Integrity: Only the authorized user can modify the data depending on its role.

3.2.1.4.1 Protection

Specify the factors that will protect the system from malicious or accidental access, modification, disclosure, destruction, or misuse. For example:

- Each user is required to log in using its credentials.
- User input filtering is provided, in case the user enters incorrect data.
- The encryption of customer personal data, as well as inventories, company financial information etc.
- SQL filtering, in case of SQL injections.
- Refreshing the session, in order to prevent Session ID hijacking attempts.

Data integrity is represented by a series of integrity constraints used in the database system. These constraints include entity integrity, which states that the table must have a primary key, defined to be unique. Referential integrity which states the concept of a foreign key. The foreign key of one table refers to the primary key of another. Domain Integrity restricts the attributes or values of a column upon a defined domain. User-defined integrity which are specified according to the needs of specific user.

3.2.1.4.2 Authorization and Authentication:

Authorization:

- The process of giving permission to a user to access their information or website.
- Users of a specific role should be able to view a particular part of the web application.
- Authorization works through settings that are implemented and maintained by the organization.
- It is combined with authentication to give a brief information to the server of the client that is requesting access.

Authentication:

- The process of determining the exact information of a user, by comparing the user's credential with the ones in the database of authorized user or in the data authentication server.
- The user has to prove its identity to the server.
- Identifies who the person or the system that intends to access the software is.
- The server can authenticate users by the input of username and password.

3.2.2 Organizational Requirements

Requirements that are a consequence of organizational policies and procedures.

3.2.1.1 Environmental Requirements

- Users should have access to Internet connection, in order to use the web application and perform various operations.
- Users should be able to access the system by entering their credentials and perform tasks related to their role. If the user is a client, he can purchase items, put products on the wish list, view their purchases etc.
- The users induce changes into the database, by performing operations, such as purchases, modifications of personal information etc. For example the administrator can add/delete products, categories and users. Thus the database is modified.

3.2.1.2 Operational Requirements

- Users should firstly access the web application by entering the correct credentials. As a result, a user can approach the website as a client, an economist or an administrator, depending on their role.
- Users that are authorized by the system can proceed with other operations.
- The administrator is informed of the purchases, the clients that access the website, the stock of the products and the company's finances and takes actions according to these reports.

3.2.1.3 Development Requirements

- Communicating with the business representatives, in order to have a preview of their requirements and services the business will provide. This phase consists in gathering information and analysis of the project.
- Making a design of how the product will resemble on its final state.
- Starting the implementation by creating the ER diagrams and then the database of the system.
- Building the web application step by step using front-end and back-end technologies.
- Creating each interface that has a different target group of users and linking them with each other.
- Testing the product in a group of users and checking for minor errors, which need improvements. Final product is then launched.

3.2.3 External Requirements

Requirements that arise from factors which are external to the system and its development process.

3.2.3.1 Regulatory Requirements

3.2.3.1.1 Network and Hardware Interfaces

- Persistent TCP connection is required to enable our web application to exchange messages over the network.
- Operating system is not as important, as long as it supports web browsers.
- A server should be up all the time to host the system, except on cases of event maintenance.

3.2.3.2 Ethical Requirements

The web application cannot make decisions on its own in regard to:

- Add or remove a user from the system.
- Modify specific categories of the database.
- Share personal information of the users.
- Make purchases of the products without the approval of the client user.

The software and its services are not in use for anyone under the age of 18. The website does not collect information from anyone under the age of 18, or allow anyone under that age to use the services provided.

3.2.3.3 Legislative Requirements

Data Protection

Enshrined in Article 35 of the Constitution of the Republic of Albania (only available in Albanian [here](#)) ('the Constitution'), the protection of personal data constitutes a fundamental right.

User personal information should be confidential and private. Data integrity is quite important, and the safety of the users has to be aimed. The system should be safe and as a result the user experience will be pleasant.

ElectroSpaceX website collects immediately the customers' personal data when it is required to sign up for buying online. It protects all the personal data from its customers and only use them for contractual and informative purposes. Using the website, the customer has to give his confirmation for registering himself as a customer, for using his personal data for further procedures and to guarantee that the given information is correct, true and updated.

3.2.4 Manageability/Maintainability

3.2.4.1 Monitoring

- The application user interface will be easy to comprehend and it will not be prone to system crashes.
- The log-in interface needs a username and password as input, if not then the client user needs to register and have an active account.
- The user will enter the system in case he has typed the correct credentials, if not an error message will appear. Filtering the data is required for this step.

3.2.4.2 Maintenance

- The software will be developed using PHP scripting language as a back-end technology. As front-end technologies HTML, CSS and JavaScript will be used. The database will be built using MySQL.
- PHP is quite flexible, and enables the developer to make changes even after starting a project. It is compatible with the majority of operating systems, as a result it can easily run on different platforms.
- The web application will be created in a way that new features can be added in the future.

3.2.4.3 Operations

Some operations that can be taken by the users:

- Users can log-in using their credentials.
- Client user can purchase a product.
- Client user can update their profile.
- Client user can post a feedback about a specific product.
- CRUD functionality for admin.
- Admin can add and remove other users.
- Admin can send a request when a product is low in stock.
- Economist can check the financial state of the company.

3.2.5 Data Management

The database will contain some of these tables and attributes:

- User(id, username, name, surname, email, phone, password, created_at, active)
- Role(role_id, role_desc, user_id)
- Product(product_id, product_name, product_desc, category_id, category_photo, product_status, product_price, product_discount, quantity, brand_id, date_created)
- Cart(id, product_id, brand_id, user_id, quantity, address_id)

3.2.6 Standards Compliance

The web application is developed in such a way that it will respect the legislative laws related to the user data safety and guarantee a reliable service on the e-commerce field of electric means.

3.2.7 Portability

Portability does not affect the maintenance of our software. Since it is a web application, it can be accessed anywhere, as long as the user has a stable Internet connection and an electronic device, such as a smartphone, computer or laptop.

3.2.8 Other Non-Functional Requirements

3.2.8.1 Domain Requirements

- The ElectroSpaceX is a web application which covers three categories of users, such as economists, clients and admin.
- It provides different services, from the online trading of products to the management of an electronic store.
- Providing a menu of products, which can be modified by the admin.
- The system data is safe, considering the fact that the users need to be authenticated and authorized to enter their profile.

4. User Scenarios/Use Cases

4.1 User Scenarios

1. Scenario title: Successful login
 - a. User opens the ElectroSpaceX page and in the top right there is a button that says Hyr
 - b. He is redirected to the login page where he should log in with his credentials, username and password.
 - c. The username and password are checked in the dedicated database
 - d. The credentials are correct so the user is authorized to be redirected to the first page/ home page of the system
2. Scenario title: Login failed
 - a. User opens the ElectroSpaceX page and in the top right there is a button that says Hyr
 - b. He is redirected to the login page where he should log in with his credentials, username and password.
 - c. The username and password are checked in the dedicated database

- d. The credentials are incorrect so the login is unsuccessful
 - e. There is a message that shows the user that his credentials are not correct so he should try again
3. Scenario title: User has forgotten his password
- a. User opens the ElectroSpaceX page and in the top right there is a button that says Hyr
 - b. He is redirected to the login page where he should log in with his credentials, username and password.
 - c. The username and password are checked in the dedicated database
 - d. The credentials are incorrect so the login is unsuccessful
 - e. There is a message that shows the user that his credentials are incorrect: “Invalid username or password”
 - f. At the bottom there is a “Forgotten password?” button which redirects the user into the reset password page
 - g. He is asked to enter his email and the safe question answer. At this moment an automatic email has been send to his email with a code which will be put in the window that now is open. h. At this moment he can choose another password for his profile.
4. Scenario title: First time client registers successfully
- a. A guest wants to do a purchase or to add a product to the Wishlist
 - b. In order to do this, he needs to have an account first
 - c. There is a button “Regjistrohu tani” at the login page which means register.
 - d. He is asked to enter the registration details which are a username, email, password, reentering the password and a safe question
 - e. The data are valid.
 - f. A message is shown that tells the user that he is registered successfully.
5. Scenario title: First time client registers unsuccessfully
- a. A guest wants to do a purchase or to add a product to the Wishlist
 - b. In order to do this, he needs to have an account first
 - c. There is a button “Regjistrohu tani” at the login page which means register.
 - d. He is asked to enter the registration details which are a username, email, password, reentering the password and a safe question
 - e. The data entered are ambiguous (not valid)/ not existent email / one of the required fields left empty
 - f. The costumer is displayed an error message, “Your data are not valid or you have left any required field empty” so he reenters its data.
6. Scenario title: Client edits his profile

- a. At the moment the client registers from the first time at his account he will be redirected into his profile
 - b. He presses the button that says “edito”
 - c. He edits name, surname, address, postal code and his telephone number
 - d. He updates the data and presses the save button
 - e. The data are saved at the database
7. Scenario title: View flash news
- a. At the moment a user logs in or a guest visits the ElectroSpaceX page at the top menu there is a button for the latest news.
 - b. User clicks that button and he is redirected to the flash news page
 - c. User can view news for electronics devices
8. Scenario title: Customer adds a product to the shopping cart
- a. At the menu in the top is a button that says products. Also, at the same page there are shown best sellers’ products and on sale products.
 - b. A guest views a product and wants to add it to the shopping cart. Firstly, he logs in as in the scenario 1 then he can add his product to the shopping cart.
 - c. Now he has one product at the shopping cart so he can view other products.
9. Scenario title: Order placement
- a. A customer wants to order a specified product so he choose the product and presses the button buy now.
 - b. He can press the button buy from the shopping cart only.
 - c. The total cost is shown at the left of the window.
 - d. At the right of the window the checkout form is shown that will be filled by the client.
 - e. In this way the order is proceed and the client will be informed by an email for the order details.
 - f. A thank you message is shown at the window and the user is redirected to the home page.
10. Scenario title: Feedback on a product
- a. Customer wants to review a product that he has bought.
 - b. He has a panel which is titled Feedback with 5 stars and a panel where he can leave a comment
 - c. The customer presses the number of stars that he wants to review the product
 - d. Then he can leave a comment if he wants
 - e. The customer presses the post button.
11. Scenario title: Logging out
- a. The user wants to log out from the system
 - b. He selects the log out option in the right top
 - c. He logs out of the system

12. Scenario title: Checking the orders
 - a. The customer scrolls down to the end of the page
 - b. Then he selects the option My account
 - c. By pressing the “My Orders” option he can view all his orders
13. Scenario title: Checking the order status
 - a. The customer scrolls down to the end of the page
 - b. Then he selects the option My account
 - c. By pressing the “My Orders” option he can view all his orders
 - d. He selects the order that he wants to check the status
 - e. Then he selects the Status option
 - f. The status of his order is shown
14. Scenario title: Adding a new product
 - a. After logging in with his credentials, admin is redirected to his dashboard
 - b. At the dashboard there are several options and he selects manage products option
 - c. Then he selects the add new product button
 - d. The admin inserts all the attributes needed to create a new product in the appropriate fields
 - e. The administrator confirms the addition of the new product
 - f. Attributes are extracted from the fields, and product is added to the database
15. Scenario title: Delete a product
 - a. After logging in with his credentials, admin is redirected to his dashboard
 - b. At the dashboard there are several options and he selects manage products option
 - c. Then he selects the product that he wants to be deleted because it is not offered
 - d. Presses the delete option
 - e. The product is deleted from the database
16. Scenario title: Update a product
 - a. After logging in with his credentials, admin is redirected to his dashboard
 - b. At the dashboard there are several options and he selects manage products option
 - c. A table with all products is shown in the window
 - d. He selects the product that wants to edit
 - e. The product information form is displayed with the actual data
 - f. He changes the data and then saves it
 - g. The updated data are saved in the database
17. Scenario title: Adding a new category
 - a. After logging in with his credentials, admin is redirected to his dashboard

- b. At the dashboard there are several options and he selects manage categories option
 - c. Then he selects the add new categories button
 - d. The admin inserts all the attributes needed to create a new category in the appropriate fields
 - e. Admin then adds the category id to the products that fit in it, or updates it properly
 - f. Everything is added to the database
18. Scenario title: Delete a category
- a. After logging in with his credentials, admin is redirected to his dashboard
 - b. At the dashboard there are several options and he selects manage categories option
 - c. Then he selects the category that he wants to be deleted because it is not offered d. Presses the delete option
 - e. The category is deleted from the database but he should take care about the products that were in this category
19. Scenario title: Update a category
- a. After logging in with his credentials, admin is redirected to his dashboard
 - b. At the dashboard there are several options and he selects manage categories option
 - c. A table with all categories is shown in the window
 - d. He selects the category that wants to edit
 - e. The category information form is displayed with the actual data
 - f. He changes the data and then saves it
 - g. The updated data are saved in the database
20. Scenario title: Delete a user
- a. Admin goes to his dashboard and selects manage user's option
 - b. All the users with their details are displayed to him
 - c. Admin presses the "Delete" option to the desired user
 - d. The user is deleted from the database
21. Scenario title: Create a new user
- a. Admin can create employees, economists and clients
 - b. The button Add a new user at the manage users page provides the admin with the opportunity to add a new use in the system
 - c. A form is displayed to admin for filling the new user credentials and user level
 - d. Admin fill the form and presses add
 - e. The system checks if the user data are valid or existent before
 - f. If the user exist an error message is displayed, "This user exists already!"
 - g. Else the user is created
22. Scenario title: View bills and print them

- a. Admin enters the system by entering his credentials
 - b. He is redirected to his dashboard
 - c. There is an option named bills where he can view bills filtered by the time, price or user.
 - d. He selects one bill and then selects print the bill option
 - e. The bill is printed.
23. Scenario title: The stock is low, requesting supplies
- a. At the moment that one product is low on stock then a warning is generated at the admin screen.
 - b. Admin logs in with his credentials
 - c. Selects the option request supply
 - d. An automatic email is sent to the supplier
24. Scenario title: Creation of daily and monthly report
- a. Economist logs in using his credentials and he is redirected to his dashboard
 - b. The daily and monthly report for all order proceedings (in total of products used and income) is produced.
 - c. This report is sent to the admin for a verification
25. Scenario title: View stock of products
- a. Economist logs in using his credentials and he is redirected to his dashboard
 - b. At the moment that one product is low on stock then a warning is generated at the economist screen
 - c. He selects the option “request supply”
 - d. An automatic email is sent to the supplier
26. Scenario title: Check monthly payments
- a. Economist logs in using his credentials and he is redirected to his dashboard
 - b. He can calculate total earnings, total spendings and their respective taxes
 - c. It is further supplied with wages, to each worker
 - d. The total is written at the end of the report

4.2 Use Case

UC_1.1	<i>Login</i>
Summary	User type his/her credentials to enter the system.
Dependency	
Actors	<i>Admin, Customer, Economist</i>
Preconditions	Customer must have an existing account. Economist account is created by admin.
Description of the Main Sequence	<ul style="list-style-type: none"> • User opens the ElectroSpaceX page and in the top right there is a button that says Hyr • He is redirected to the login page where he should log in with his credentials, username and password. • The credentials are correct so the user is authorized to be redirected to the first page/ home page of the system
Description of the Alternative Sequence	<ul style="list-style-type: none"> • In the other case, when a user doesn't have an account, he can register by entering some required credentials. • The Admin is created by us • Economist will be added by the Admin
Nonfunctional requirements	<ul style="list-style-type: none"> - This is a crucial part of the project because this is where the 'hackers' will try to break through, by using SQL injection. It is made sure that this will be avoided. Also, the password will be hashed and cannot be seen by any person
Postconditions	The user will be directed to his dashboard

UC_1.2	<i>Edit profile</i>
Summary	Each user has the right to edit his profile. (or credentials)
Dependency	
Actors	<i>Admin, Customer, Economist</i>

ElectroSpaceX Requirements Specification

Preconditions	<ul style="list-style-type: none"> • User must have a valid account first • User must be logged in the system
Description of the Main Sequence	<ul style="list-style-type: none"> • User logs in the system • In the dashboard they have the option my profile • Each of them can edit their profile like their username, password, address (for customers) photo.
Description of the Alternative Sequence	<ul style="list-style-type: none"> • If by any chance the new data aren't in the correct form then they will not be put in the database and the profile of the user will remain the same. User will be warned.
Nonfunctional requirements	<ul style="list-style-type: none"> • The password will be hashed and cannot be seen by anyone.
Postconditions	<ul style="list-style-type: none"> • User can now see the updated profile

UC_1.3	<i>View products and their sales</i>
Summary	Each user and guest can view the available products
Dependency	
Actors	<i>Admin, Customer, Economist, Guest</i>
Preconditions	<ul style="list-style-type: none"> • Everyone who visits the website can view the available products • It is needed internet connection
Description of the Main Sequence	<ul style="list-style-type: none"> • They can view all the available products with their respective details • Customers can add them to the Wishlist or to the shopping cart
Description of the Alternative Sequence	<ul style="list-style-type: none"> • The stock may be low for some products so there won't be any product. • Guest can only view products. He hasn't any right to add the products to the Wishlist or shopping cart.
Nonfunctional requirements	<ul style="list-style-type: none"> • To meet the Usability Requirements, the application is user-friendly, simple and easy to understand.
Postconditions	<ul style="list-style-type: none"> • When the product is selected, user can view the product details

ElectroSpaceX Requirements Specification

UC_1.4	<i>Purchasing a product</i>
Summary	Each user can buy a product
Dependency	
Actors	<i>Customer</i>
Preconditions	<ul style="list-style-type: none"> • The product must be added in the database by the admin • Customer must be logged in first
Description of the Main Sequence	<ul style="list-style-type: none"> • A customer wants to order a specified product so he choose the product and presses the button buy now. • He can press the button buy from the shopping cart only. • The checkout form will be filled by the client.
Description of the Alternative Sequence	<ul style="list-style-type: none"> • The stock may be low for some products so there won't be any product. Guest • can only view products. He hasn't any right to add the products to the Wishlist or shopping cart.
Nonfunctional requirements	<ul style="list-style-type: none"> • To meet the Usability Requirements, the application is user-friendly, simple and easy to understand.
Postconditions	<ul style="list-style-type: none"> • A thank you message is shown at the window and the user is redirected to the home page. The client will be informed by an email for the order details.

UC_1.5	<i>Feedback on the products</i>
Summary	Each customer can leave feedback on a product
Dependency	
Actors	<i>Customer</i>
Preconditions	<ul style="list-style-type: none"> • The product must be added in the database by the admin • Customer must have bought this product • Customer must be logged in first
Description of the Main Sequence	<ul style="list-style-type: none"> • He has a panel which is titled Feedback with 5 stars and a panel where he can leave a comment • The customer presses the number of stars that he wants to review the product and a comment

ElectroSpaceX Requirements Specification

Description of the Alternative Sequence	<ul style="list-style-type: none"> Customer hasn't bought yet the product Customer hasn't log in in the system.
Nonfunctional requirements	<ul style="list-style-type: none"> To meet the Usability Requirements, the feedback panel is user-friendly, simple and easy to understand.
Postconditions	<ul style="list-style-type: none"> He is redirected in the home page

UC_1.6	<i>Manage products</i>
Summary	Admin can manage all products
Dependency	
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> Admin must be logged in with his credentials
Description of the Main Sequence	<ul style="list-style-type: none"> Admin can manage all products. He can add, delete, view, update specific products.
Description of the Alternative Sequence	<ul style="list-style-type: none"> Admin hasn't logged in as admin There isn't any product to view, edit or update. The only option that is left is add new product option.
Nonfunctional requirements	<ul style="list-style-type: none"> To meet the Usability Requirements, the application is user-friendly, simple and easy to understand.
Postconditions	<ul style="list-style-type: none"> Admin is redirected to the Manage products page

UC_1.6.1	<i>Add products</i>
Summary	Admin can add new products with their respective details
Dependency	<i>Manage products</i>

ElectroSpaceX Requirements Specification

Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • Admin must log in as an admin in the system • Selects the option add a product
Description of the Main Sequence	<ul style="list-style-type: none"> • The admin inserts all the attributes needed to create a new product in the appropriate fields • The administrator confirms the addition of the new product
Description of the Alternative Sequence	<ul style="list-style-type: none"> • The attributed doesn't meet the needed requirements or a field is empty so admin is warned about this.
Nonfunctional requirements	<ul style="list-style-type: none"> • Security requirements: • Confidentiality: Access should be granted only to authorized users. Integrity: Only the authorized user can modify the data depending on its role.
Postconditions	<ul style="list-style-type: none"> • Attributes are extracted from the fields, and product is added to the database. • Admin is redirected to his dashboard and customers will have a new product in their menu

UC_1.6.2	<i>Delete products</i>
Summary	Admin can delete a selected product
Dependency	<i>Manage products</i>
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • <i>Admin must be logged in as admin firstly</i> • The product must be available in the database
Description of the Main Sequence	<ul style="list-style-type: none"> • He selects the product that he wants to be deleted because it is not offered anymore • Presses the delete option
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Admin hasn't been logged in. • The product is on a sale already

ElectroSpaceX Requirements Specification

Nonfunctional requirements	<ul style="list-style-type: none"> • Security requirements: • Confidentiality: Access should be granted only to authorized users. <p>Integrity: Only the authorized user can modify the data depending on its role.</p>
Postconditions	<ul style="list-style-type: none"> • The product is deleted from the database • Customers cannot view or buy anymore this product • Admin is redirected to his dashboard

UC_1.6.3	<i>Update products</i>
Summary	Admin can update product attributes
Dependency	<i>Manage products</i>
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • Admin must be logged in as admin firstly • The product must be available in the database • A table with all products is shown in the manage products page
Description of the Main Sequence	<ul style="list-style-type: none"> • He selects the product that wants to edit • The product information form is displayed with the actual data • He can change the price, image, quantity, name and other details.
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Any of the attributes is put wrongly or a field is empty so the product won't be updated
Nonfunctional requirements	<ul style="list-style-type: none"> • Security requirements: • Confidentiality: Access should be granted only to authorized users. • Integrity: Only the authorized user can modify the data depending on its role.
Postconditions	<ul style="list-style-type: none"> • The updated data are saved in the database • Customers and guests have now the updated product in their page

UC_1.7	<i>Manage categories</i>
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ElectroSpaceX Requirements Specification

Summary	Admin can manage all categories
Dependency	
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • Admin must be logged in with his credentials
Description of the Main Sequence	<ul style="list-style-type: none"> • Admin can manage all categories. He has several options like edit, view, delete, update.
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Admin hasn't logged in as admin • There isn't any category to view, edit or update. The only option that is left is add new category option.
Nonfunctional requirements	<ul style="list-style-type: none"> • To meet the Usability Requirements, the application is user-friendly, simple and easy to understand.
Postconditions	<ul style="list-style-type: none"> • Admin is redirected to the manage categories page

UC_1.7.1	<i>Add categories</i>
Summary	Admin can add new categories with their respective details
Dependency	<i>Manage categories</i>
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • Admin must log in as an admin in the system • Selects the option add a category
Description of the Main Sequence	<ul style="list-style-type: none"> • The admin inserts all the attributes needed to create a new category in the appropriate fields • The administrator confirms the addition of the new category
Description of the Alternative Sequence	<ul style="list-style-type: none"> • The attributed doesn't meet the needed requirements or a field is empty so admin is warned about this.

ElectroSpaceX Requirements Specification

Nonfunctional requirements	<ul style="list-style-type: none"> • Security requirements: • Confidentiality: Access should be granted only to authorized users. <p>Integrity: Only the authorized user can modify the data depending on its role.</p>
Postconditions	<ul style="list-style-type: none"> • Attributes are extracted from the fields, and the category is added to the database.
	<ul style="list-style-type: none"> • Admin is redirected to his dashboard and customers will have a new category in their menu

UC_1.7.2	<i>Delete categories</i>
Summary	Admin can delete a selected category
Dependency	<i>Manage categories</i>
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • Admin must be logged in as admin firstly • The product must be available in the database
Description of the Main Sequence	<ul style="list-style-type: none"> • He selects the category that he wants to be deleted because it is not offered anymore • Presses the delete option
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Admin hasn't been logged in. • The category mustn't have any product.
Nonfunctional requirements	<ul style="list-style-type: none"> • Security requirements: • Confidentiality: Access should be granted only to authorized users. <p>Integrity: Only the authorized user can modify the data depending on its role.</p>
Postconditions	<ul style="list-style-type: none"> • The category is deleted from the database • Customers cannot view anymore this category • Admin is redirected to his dashboard

UC_1.6.3	<i>Update categories</i>
Summary	Admin can update categories attributes

ElectroSpaceX Requirements Specification

Dependency	<i>Manage categories</i>
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • Admin must be logged in as admin firstly • The category must be available in the database • A table with all categories is shown in the manage category page
Description of the Main Sequence	<ul style="list-style-type: none"> • He selects the category that wants to edit • The category information form is displayed with the actual data • He can change the attributes of this category
Description of the Alternative Sequence	updated
Nonfunctional requirements	<ul style="list-style-type: none"> • Security requirements: • Confidentiality: Access should be granted only to authorized users. • Integrity: Only the authorized user can modify the data depending on its role.
Postconditions	<ul style="list-style-type: none"> • The updated data are saved in the database • Customers and guests have now the updated category in their page

UC_1.8	<i>Manage orders</i>
Summary	Admin can manage all orders.
Dependency	
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • Admin must be logged in the system as admin • Must be an available order
Description of the Main Sequence	<ul style="list-style-type: none"> • He can view the order details, approve or cancel orders.
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Admin hasn't been logged in as admin • There isn't any order available

ElectroSpaceX Requirements Specification

Nonfunctional requirements	
Postconditions	<ul style="list-style-type: none"> • Admin is redirected to the manage orders page

UC_1.8.1	<i>Approve orders</i>
Summary	Admin can approve an order
Dependency	<i>Manage orders</i>
Actors	<i>Admin</i>
Preconditions	<ul style="list-style-type: none"> • Admin must be logged in the system as admin • Must visit manage orders page • Must be a new order
Description of the Main Sequence	<ul style="list-style-type: none"> • He can approve the new order by clicking in an approve option
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Admin hasn't been logged in as admin • The product that has been ordered isn't available for the moment in the warehouse so the admin should email the client.
Nonfunctional requirements	<ul style="list-style-type: none"> • The order details are shown only to admin and the client. They are invisible to other users.
Postconditions	<ul style="list-style-type: none"> • Admin is redirected to the manage orders page • Order is approved.

UC_1.8.1	<i>Cancel orders</i>
Summary	Admin can cancel an order
Dependency	<i>Manage orders</i>
Actors	<i>Admin</i>

ElectroSpaceX Requirements Specification

Preconditions	<ul style="list-style-type: none"> • Admin must be logged in the system as admin • Must visit manage orders page • Must be a new order
Description of the Main Sequence	<ul style="list-style-type: none"> • He can cancel the new order by clicking in the cancel option • The product that has been ordered isn't available for the moment in the warehouse so the admin should email the client.
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Admin hasn't been logged in as admin • The product is available so the order is approved by the admin
Nonfunctional requirements	<ul style="list-style-type: none"> • The order details are shown only to admin and the client. They are invisible to other users.
Postconditions	<ul style="list-style-type: none"> • Admin is redirected to the manage orders page • Order is canceled.

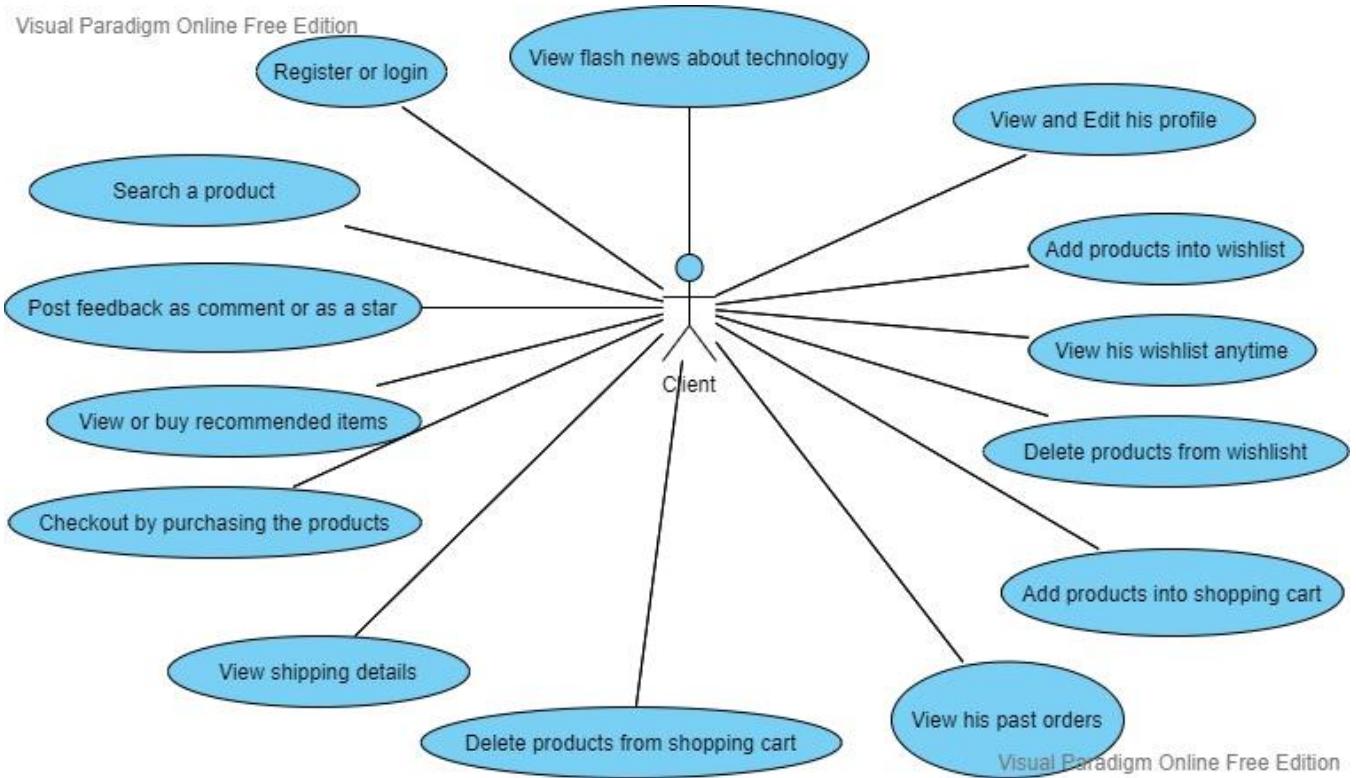
UC_1.9	Requesting supplies
Summary	Admin and Economist can request supplies when stock is low
Dependency	
Actors	<i>Admin, Economist</i>
Preconditions	<ul style="list-style-type: none"> • Admin must be logged in the system as admin • Economist must be logged in
Description of the Main Sequence	<ul style="list-style-type: none"> • At the moment that one product is low on stock then a warning is generated at the admin or economist screen. • Selects the option request supply
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Admin hasn't been logged in as admin • Economist hasn't been logged in • There isn't a product with low stock
Nonfunctional requirements	
Postconditions	<ul style="list-style-type: none"> • An automatic email is sent to the supplier • <i>Admin or economist is redirected to the dashboard</i>

ElectroSpaceX Requirements Specification

UC_2.0	Creation of daily and monthly report
Summary	Admin and Economist can request supplies when stock is low
Dependency	
Actors	<i>Economist</i>
Preconditions	<ul style="list-style-type: none"> • Economist must be logged in
Description of the Main Sequence	<ul style="list-style-type: none"> • The daily and monthly report for all order proceedings (in total of products used and income) is produced. • This report is sent to the admin for a verification
Description of the Alternative Sequence	<ul style="list-style-type: none"> • Admin doesn't approve the report
Nonfunctional requirements	
Postconditions	<ul style="list-style-type: none"> • Admin approves the report and the report is ready to be printed

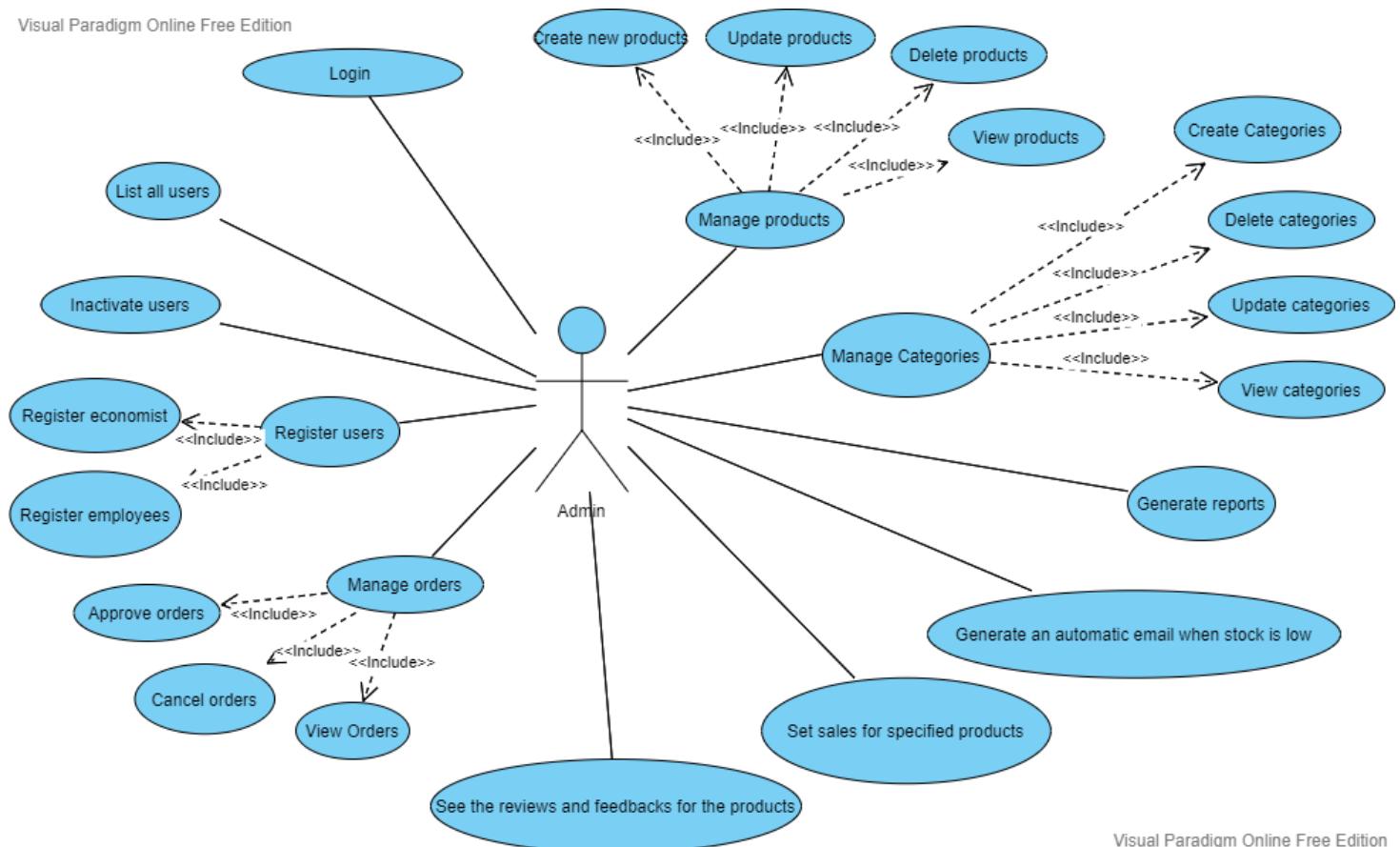
USE CASE DIAGRAMS

Client Use Case



Admin Use Case

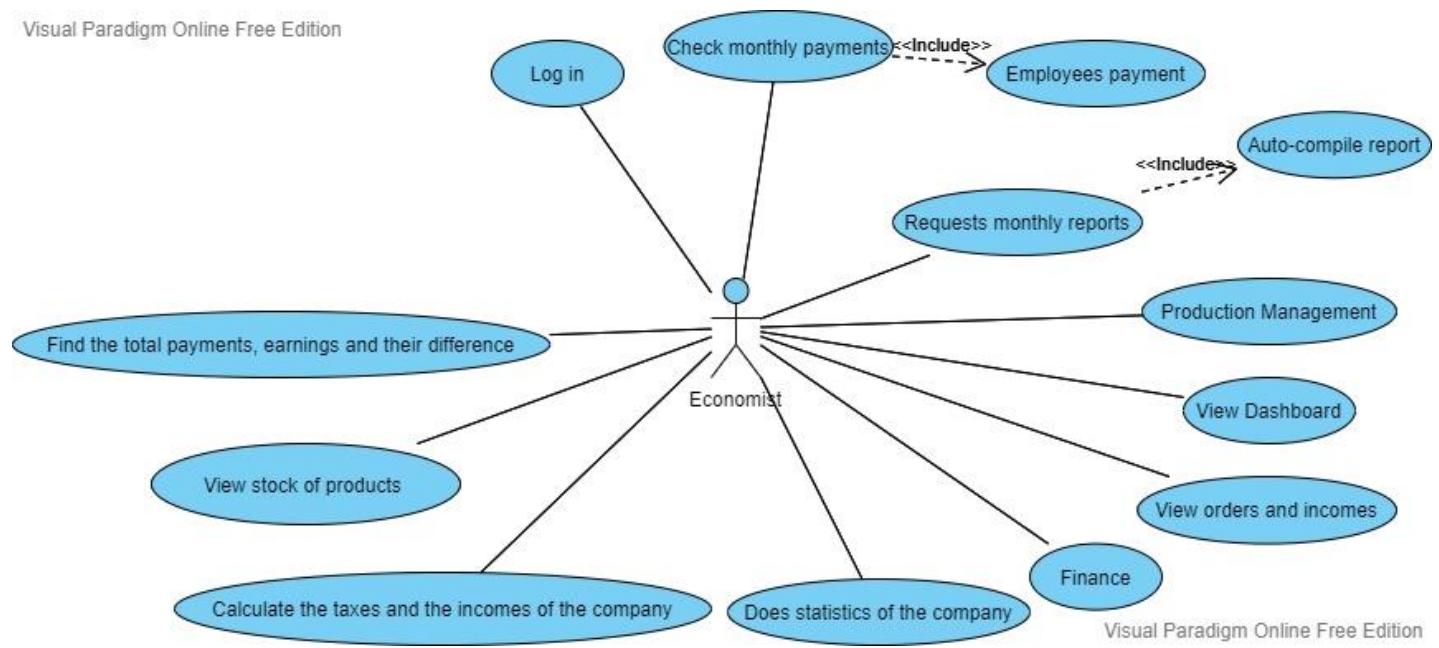
Visual Paradigm Online Free Edition



Visual Paradigm Online Free Edition

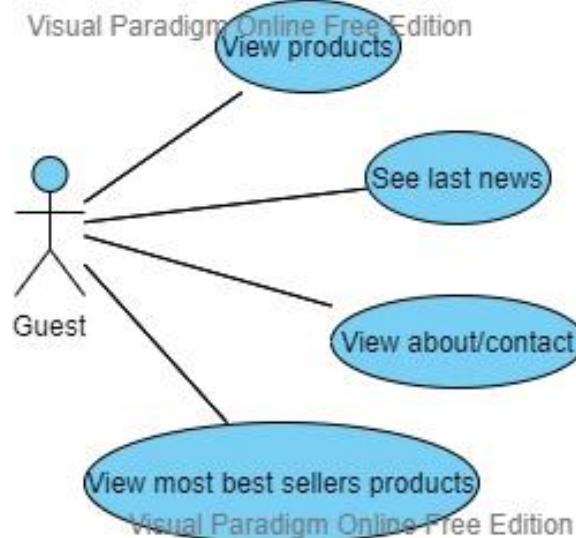
ElectroSpaceX Requirements Specification

Visual Paradigm Online Free Edition

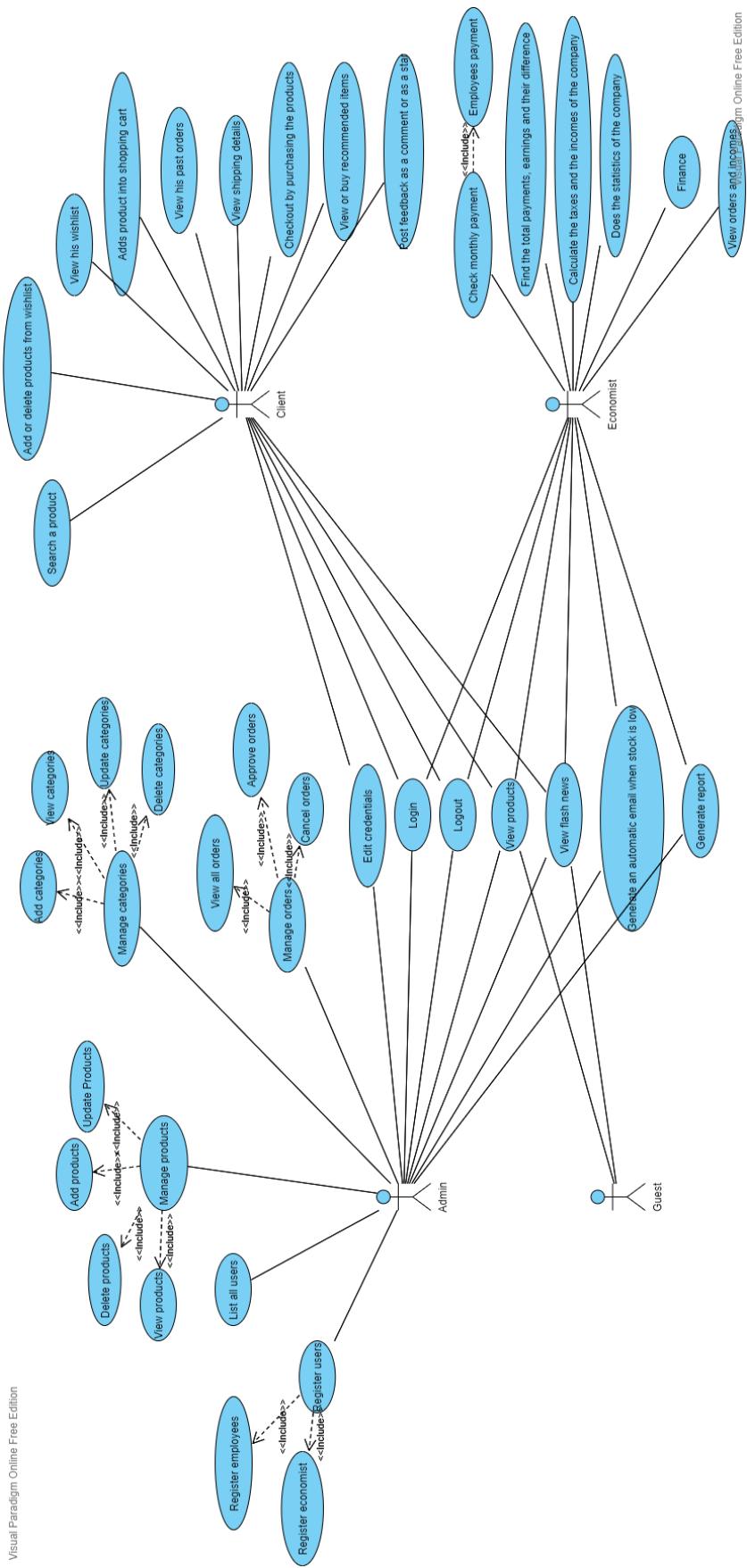


Economist Use Case

Guest Use Case

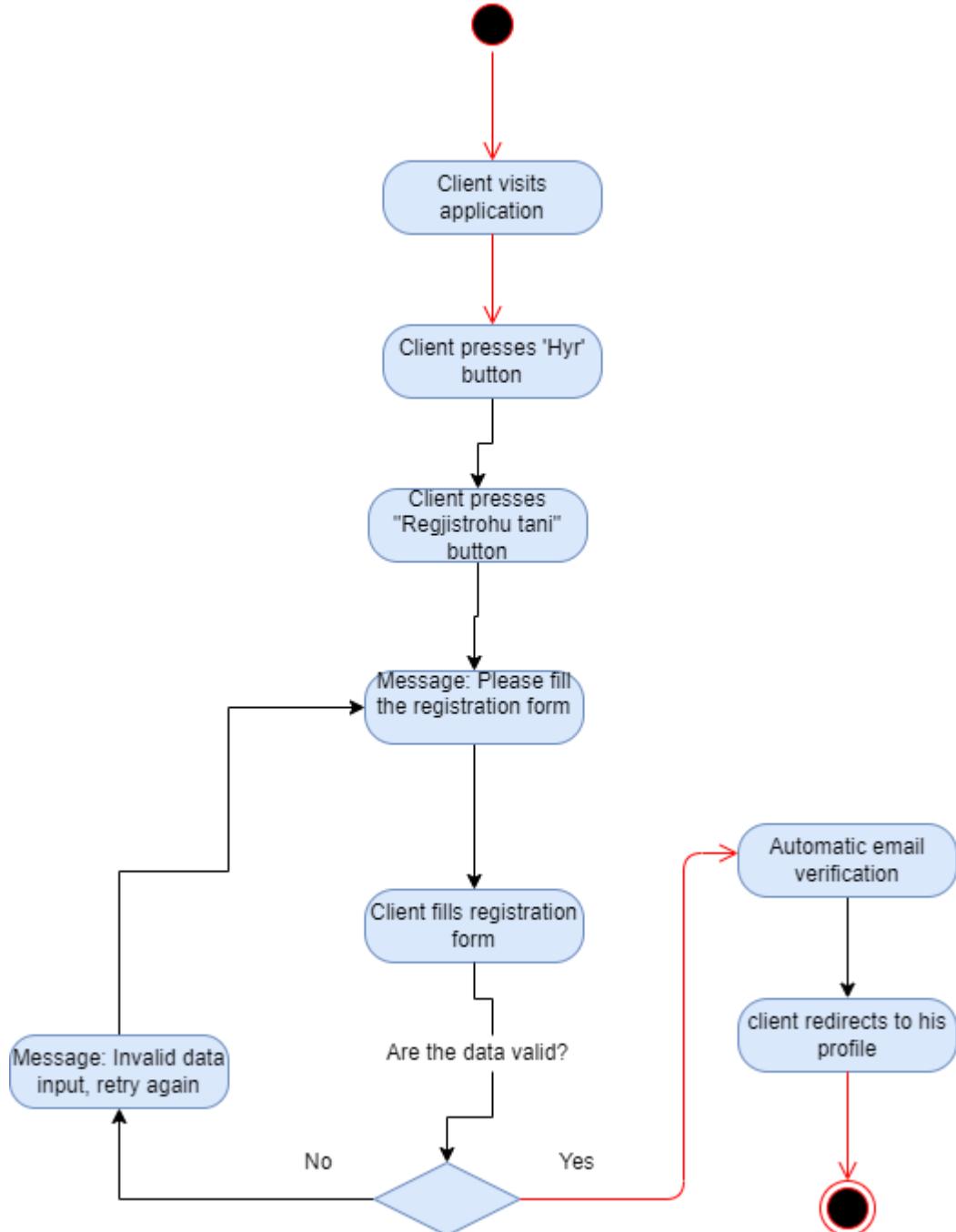


General Use Case

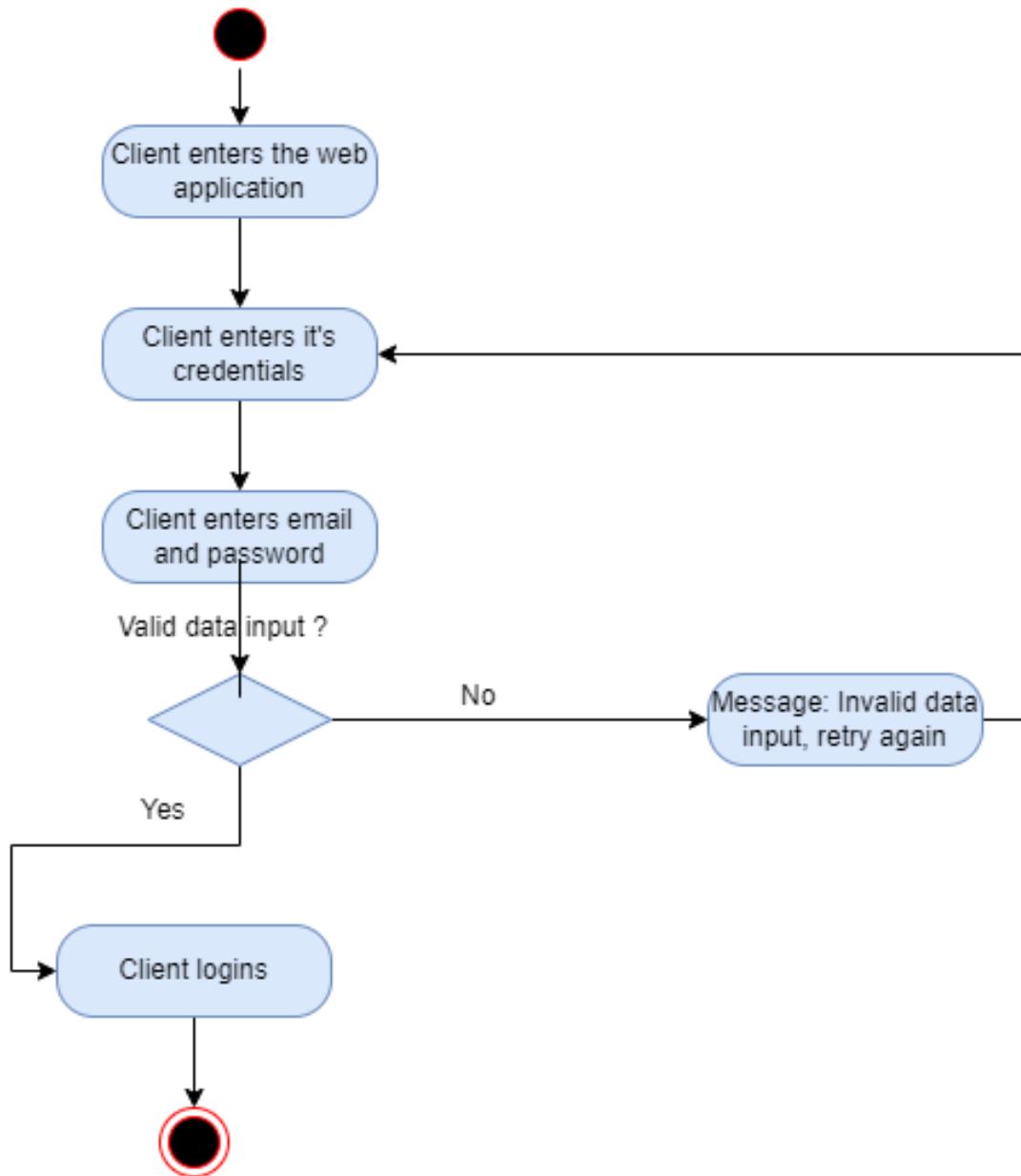


6. ACTIVITY DIAGRAMS

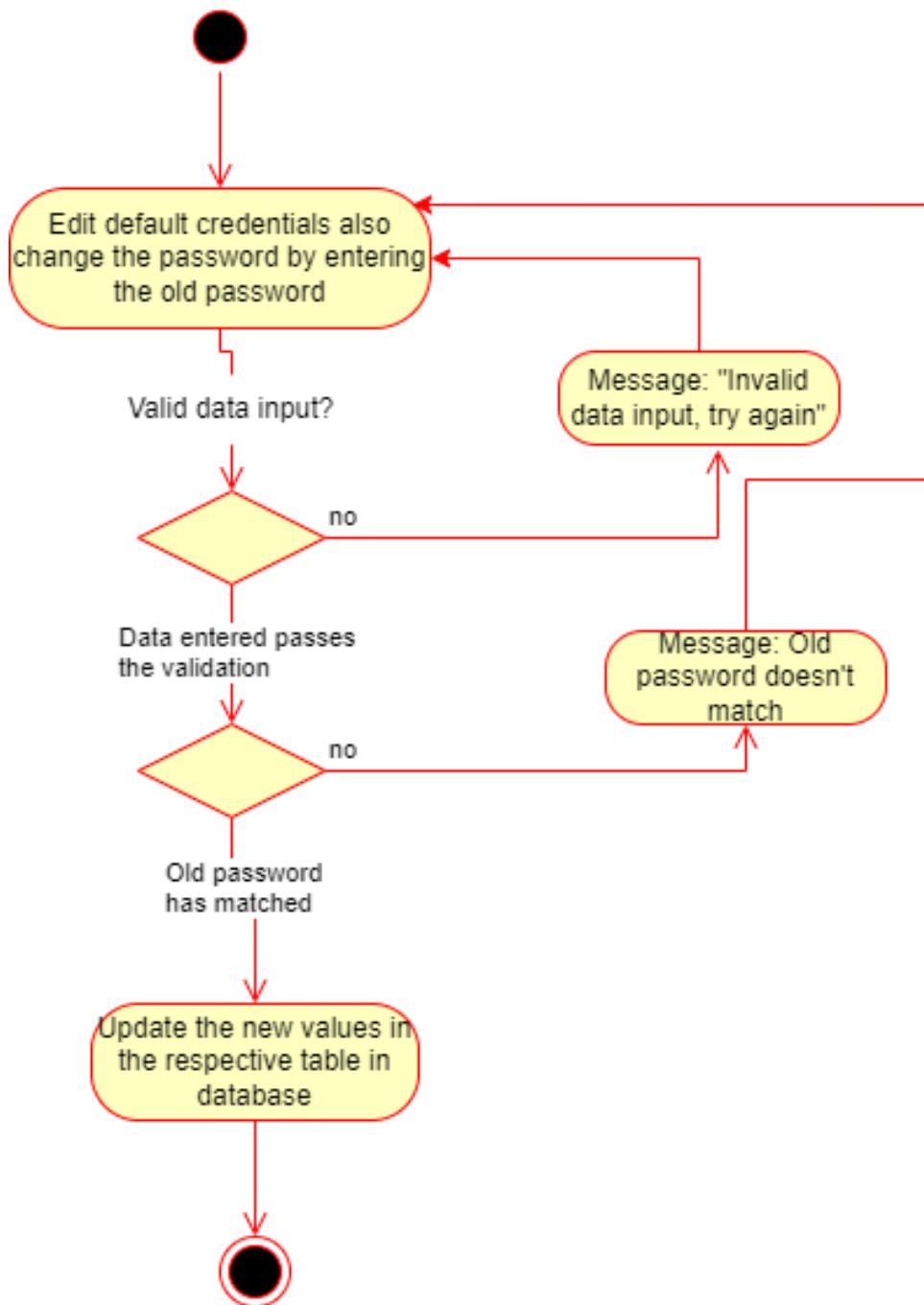
Client Sign Up



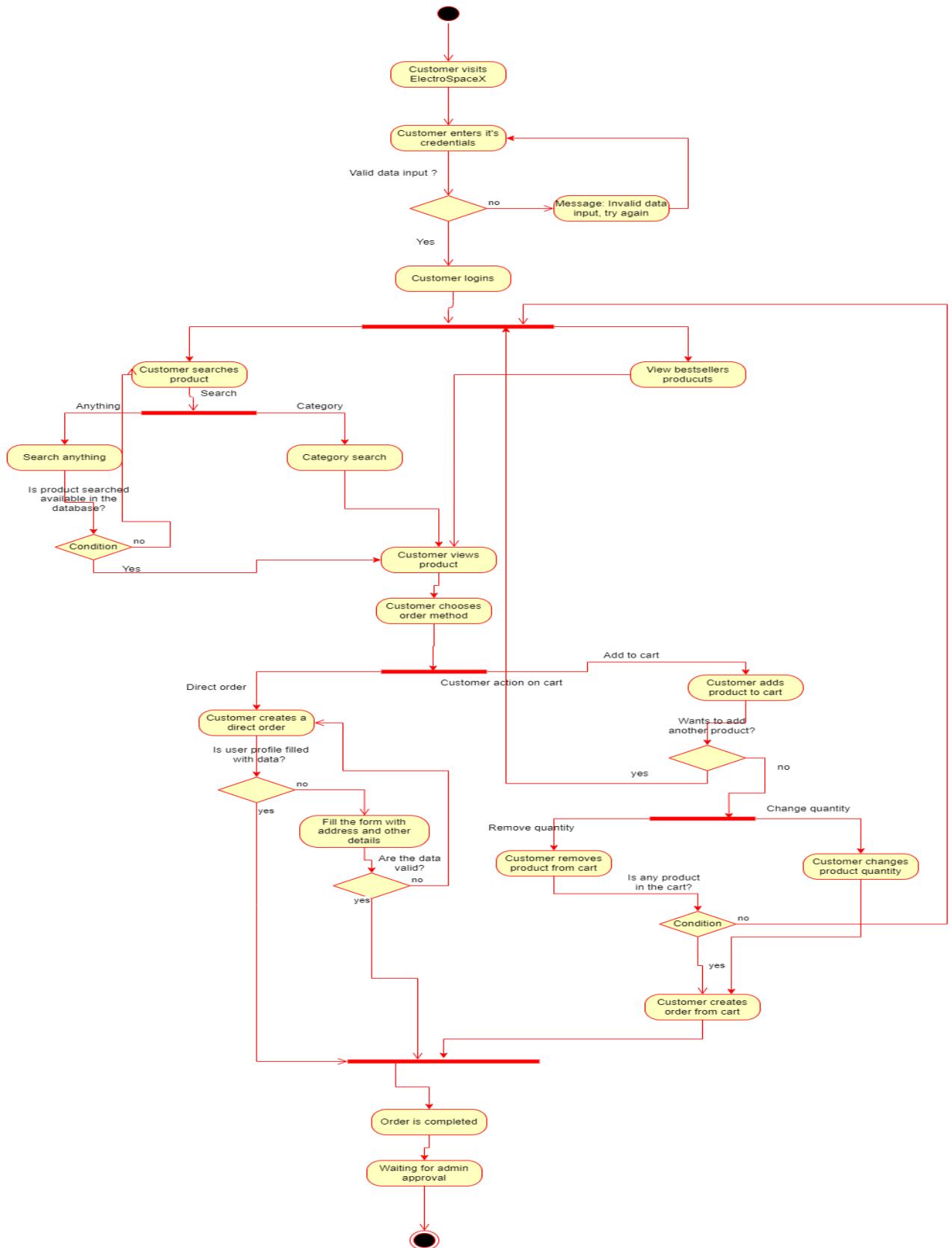
Client Log In



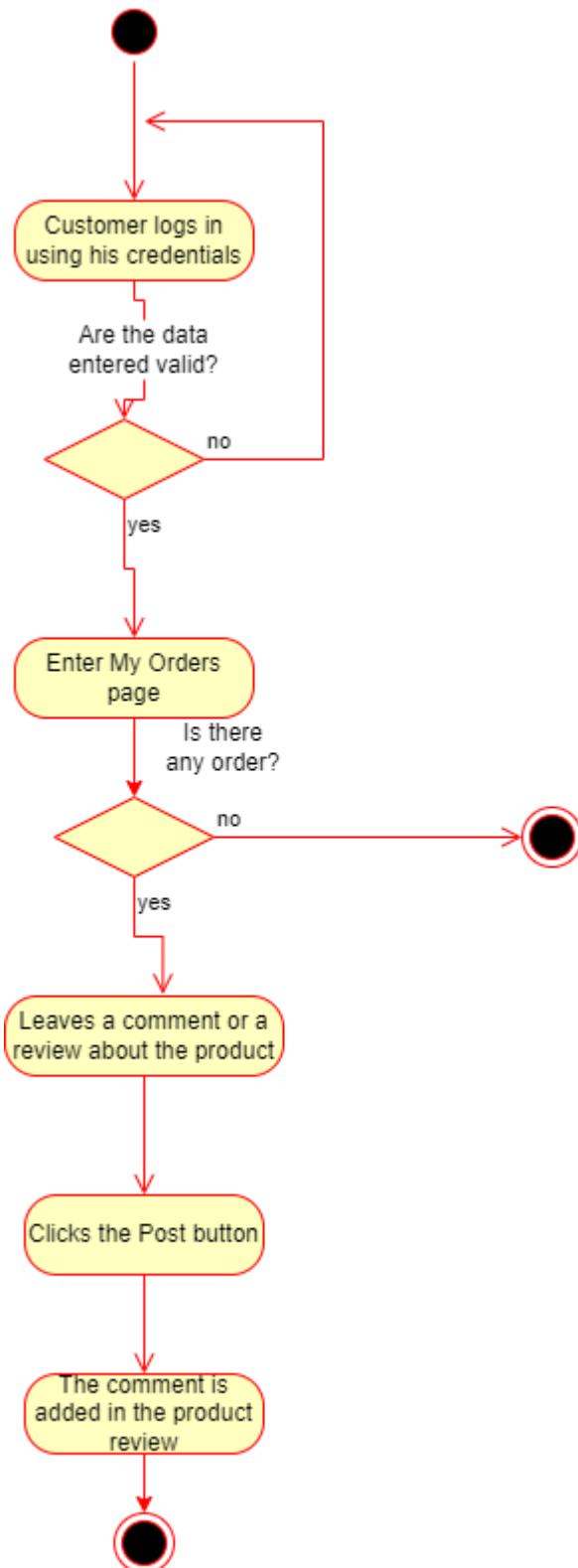
Edit User Credential



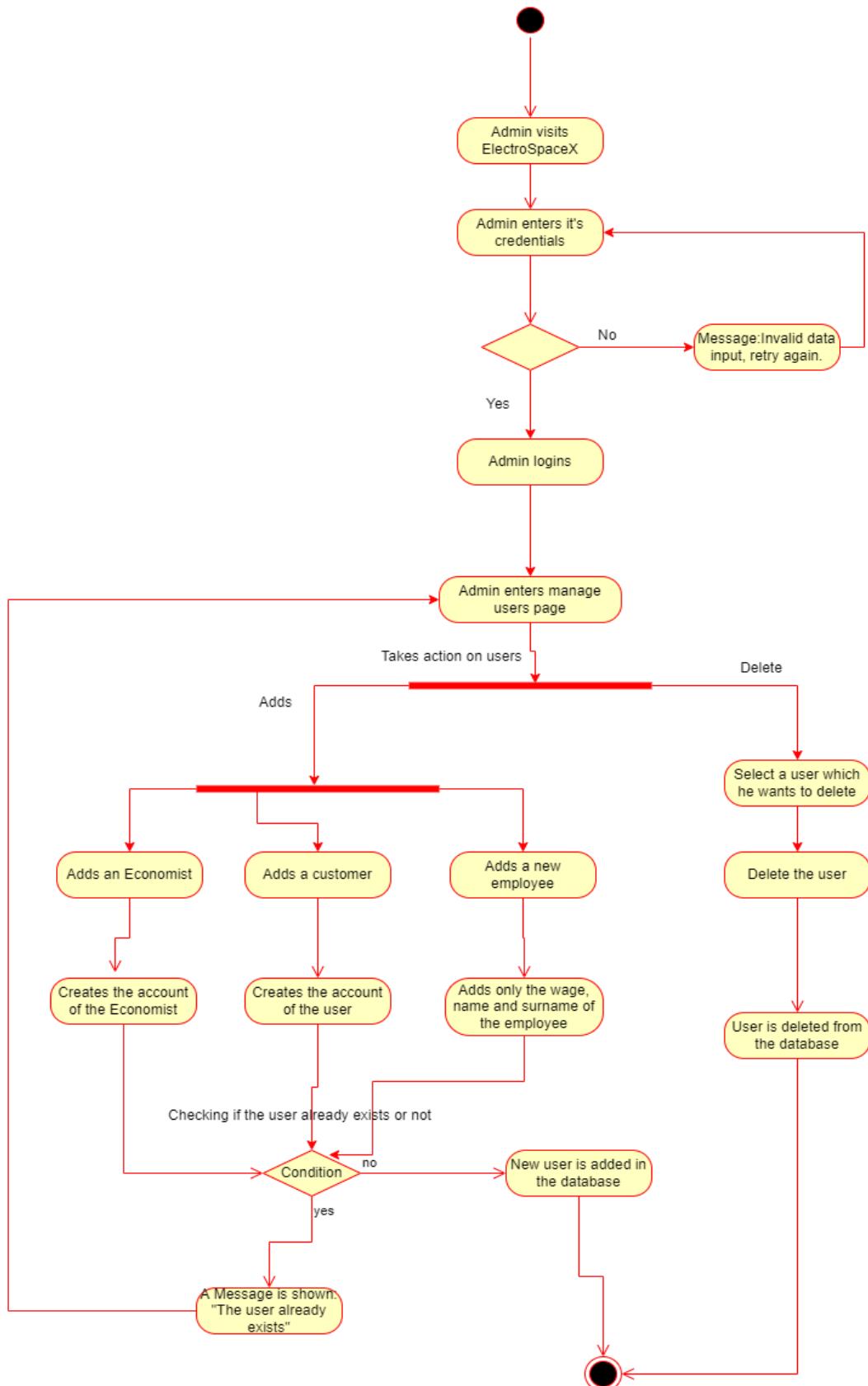
Client Orders Product



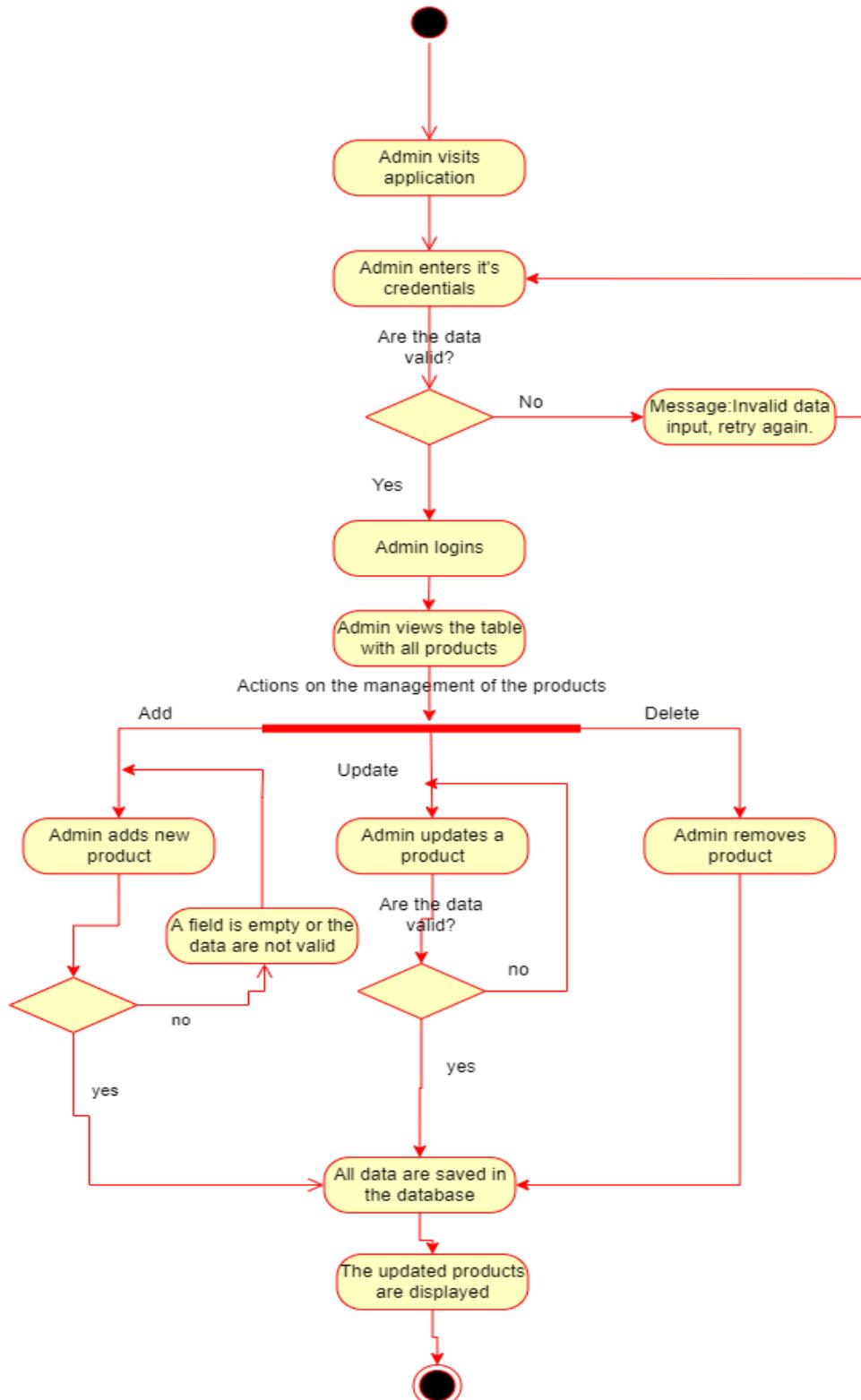
Client Leaving Feedback On A Product



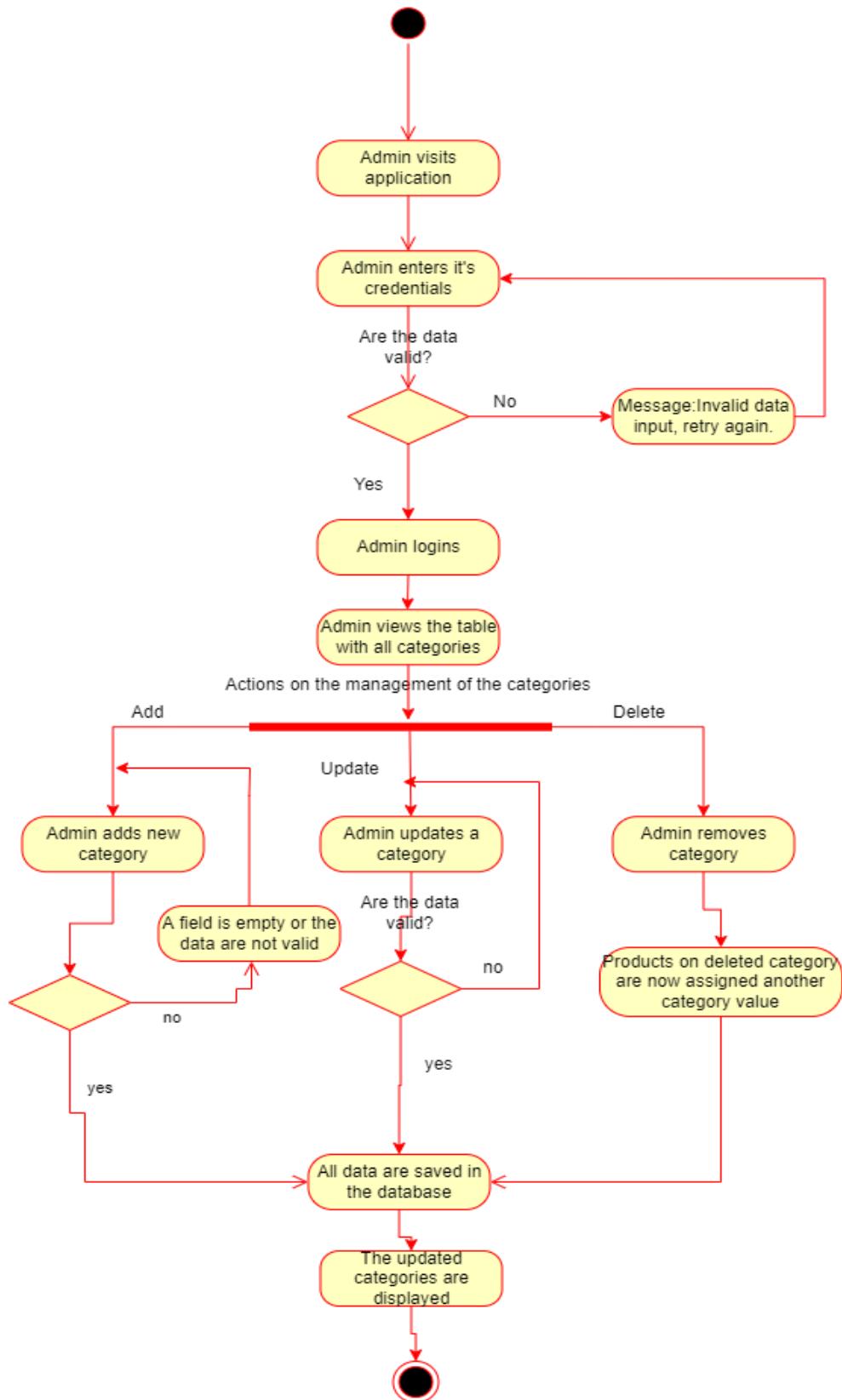
Admin Action on Users



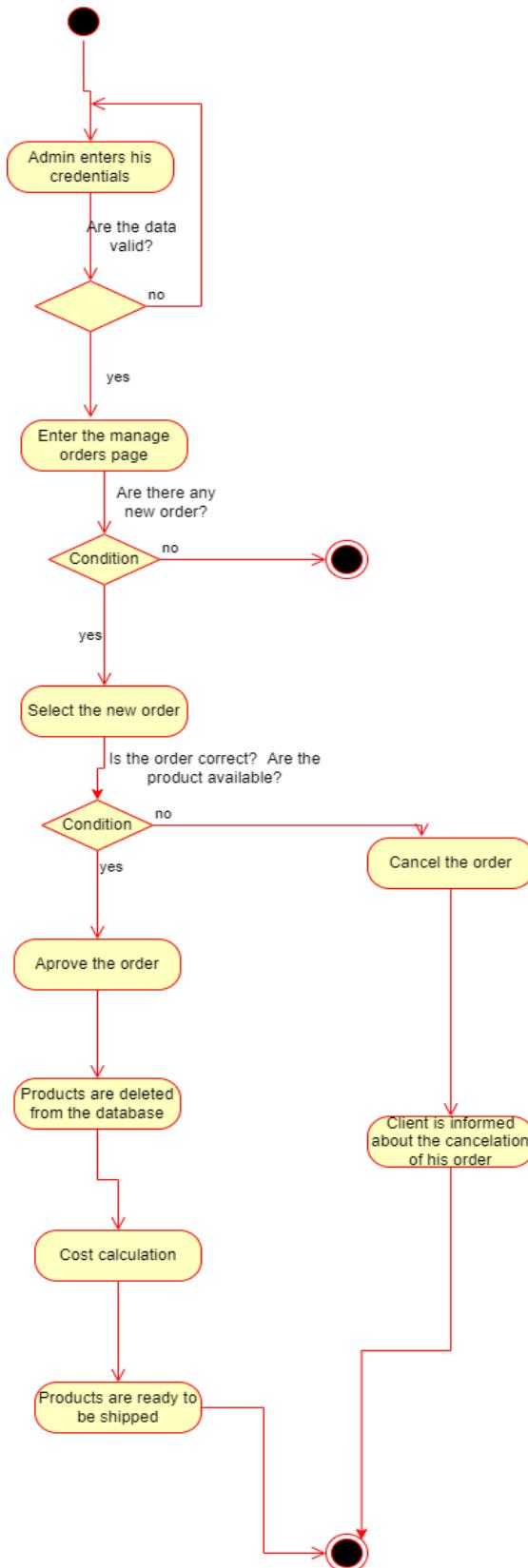
Admin Action On Products



Admin Action On Categories



Admin Action On Order Approval



Admin Or Economist Requests Supply



User enters his credentials

Are the data valid for
economist or for admin?

no

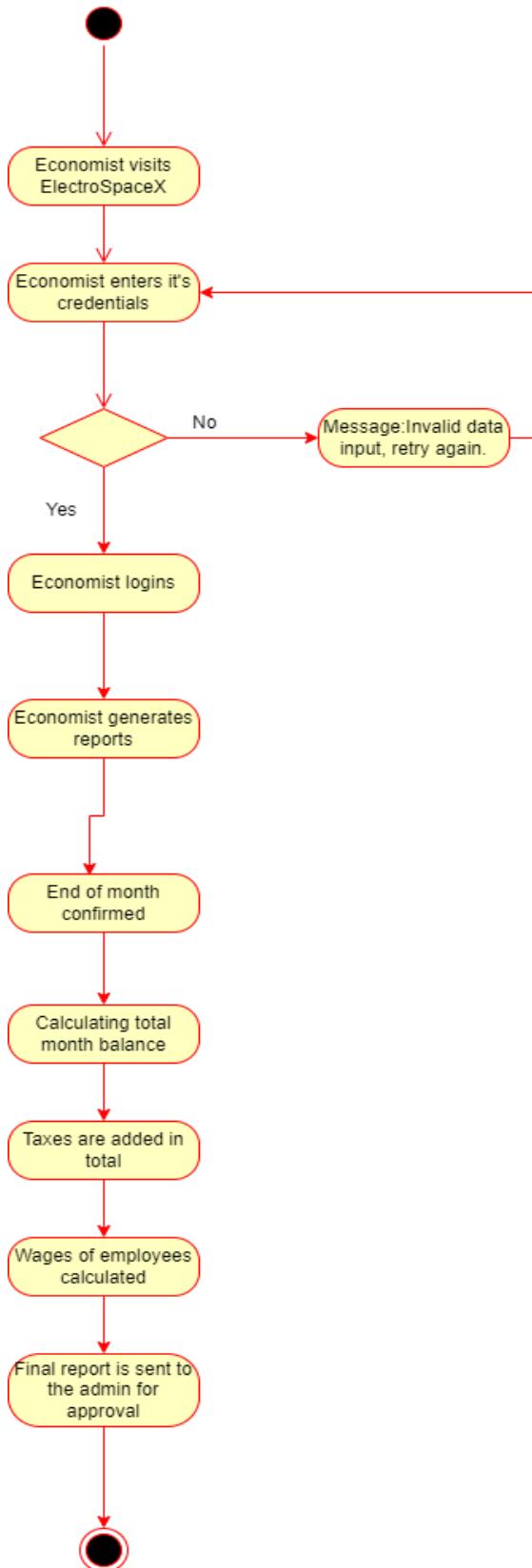
yes

A warning is displayed
showing that a product is
low on stock

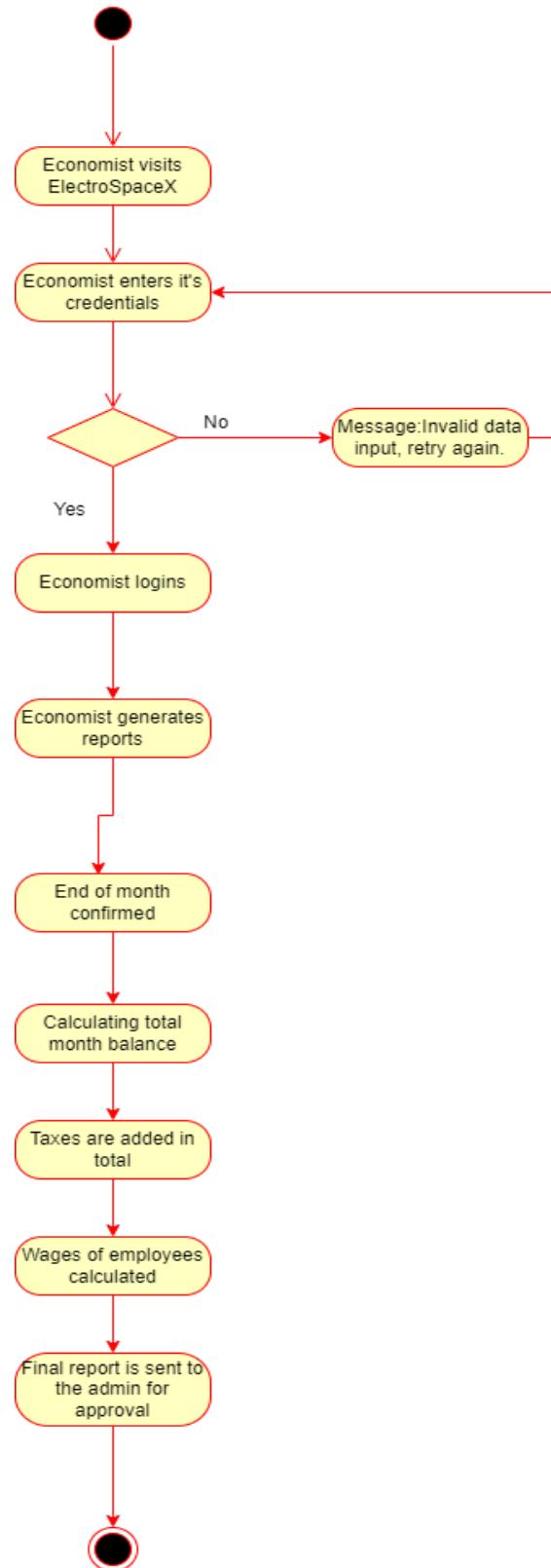
Send an email to the
supplier asking for
products



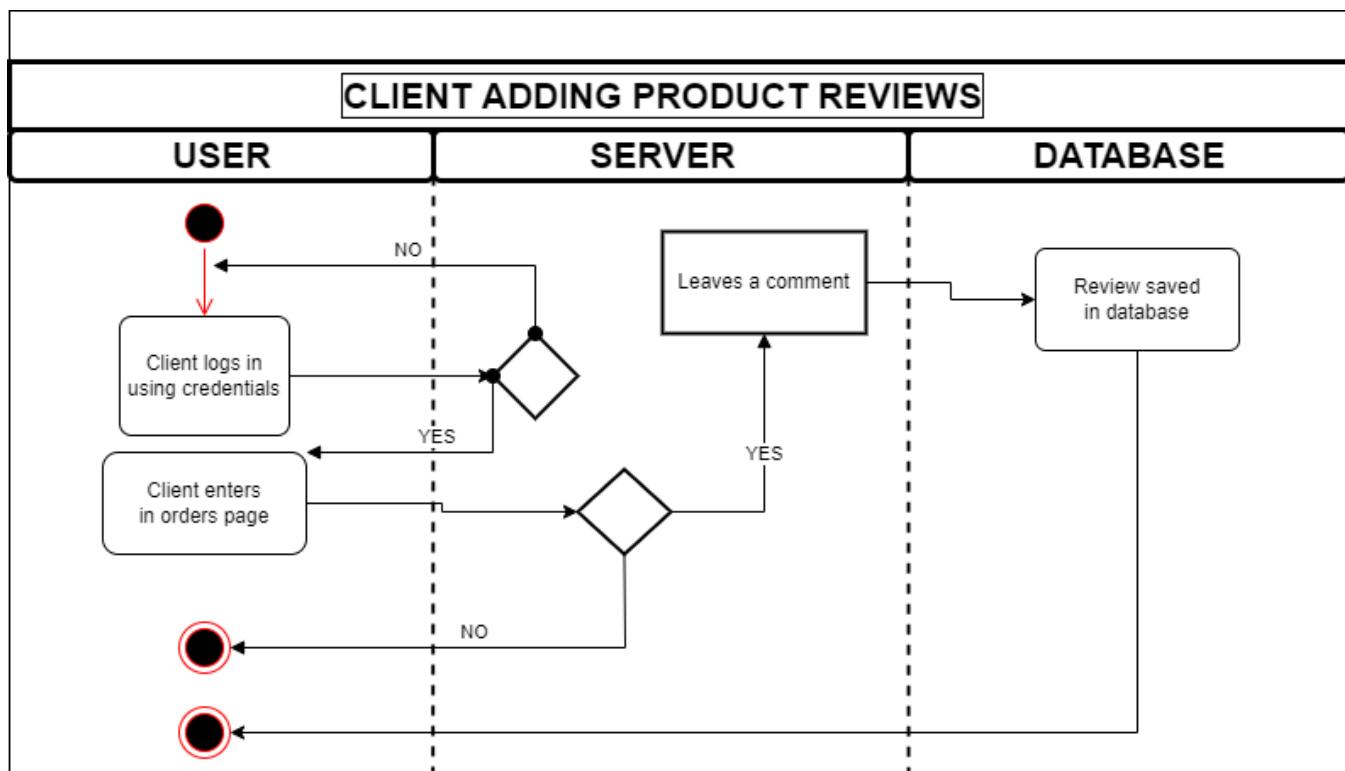
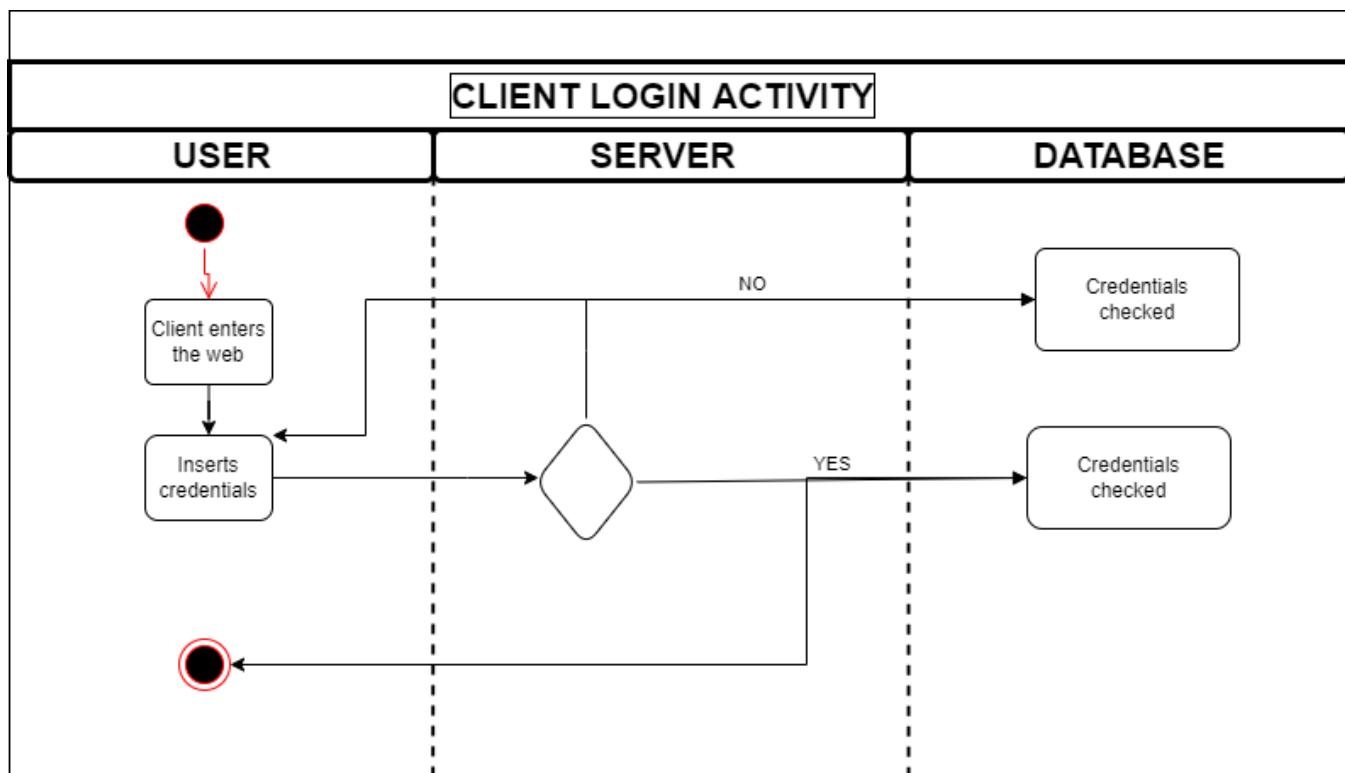
Economist Action On Monthly Report

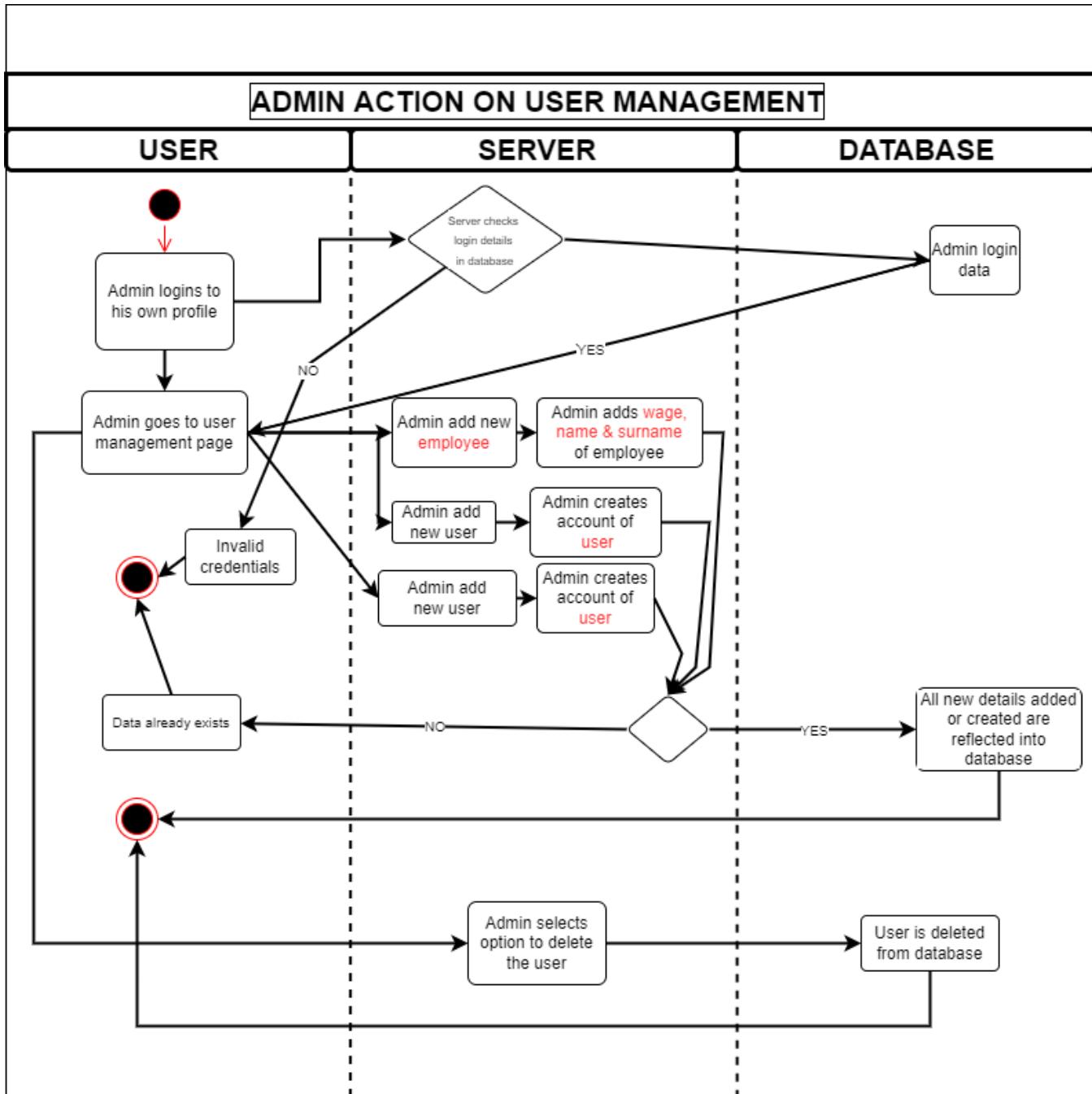


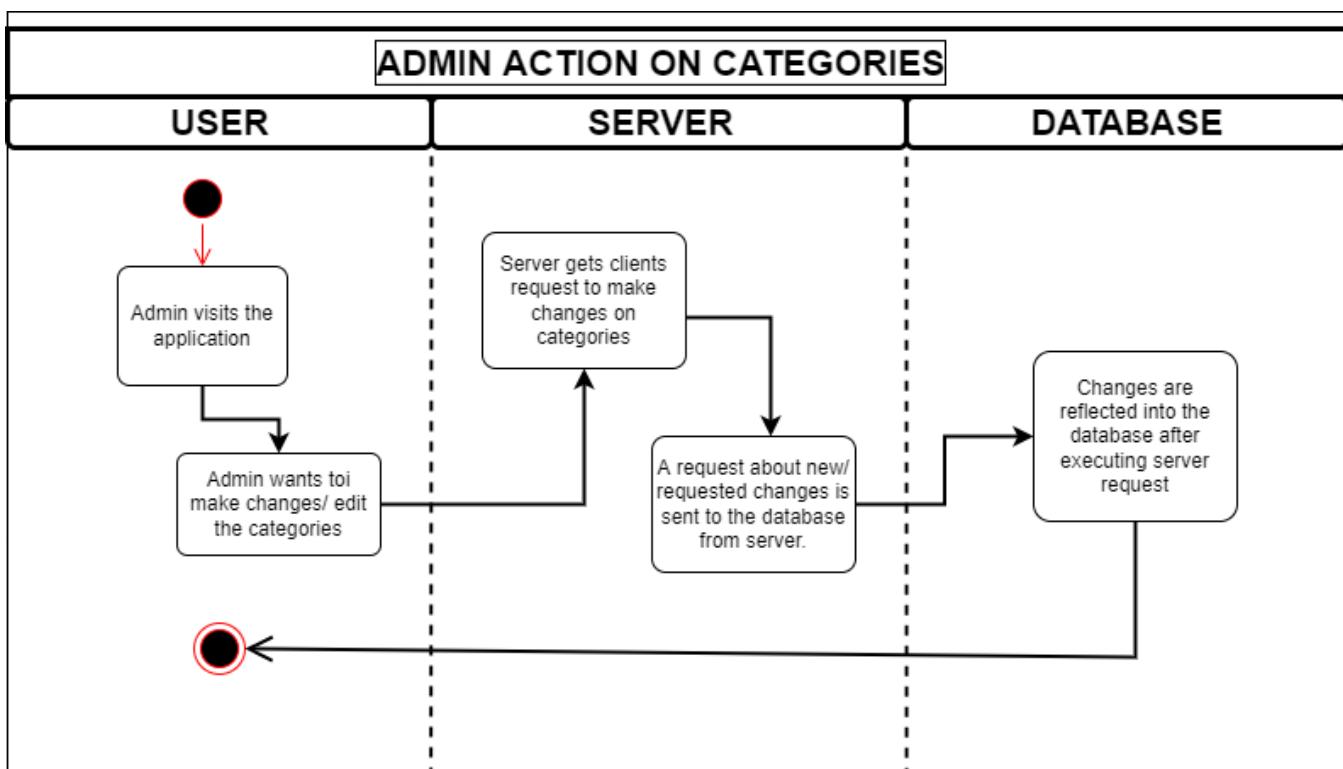
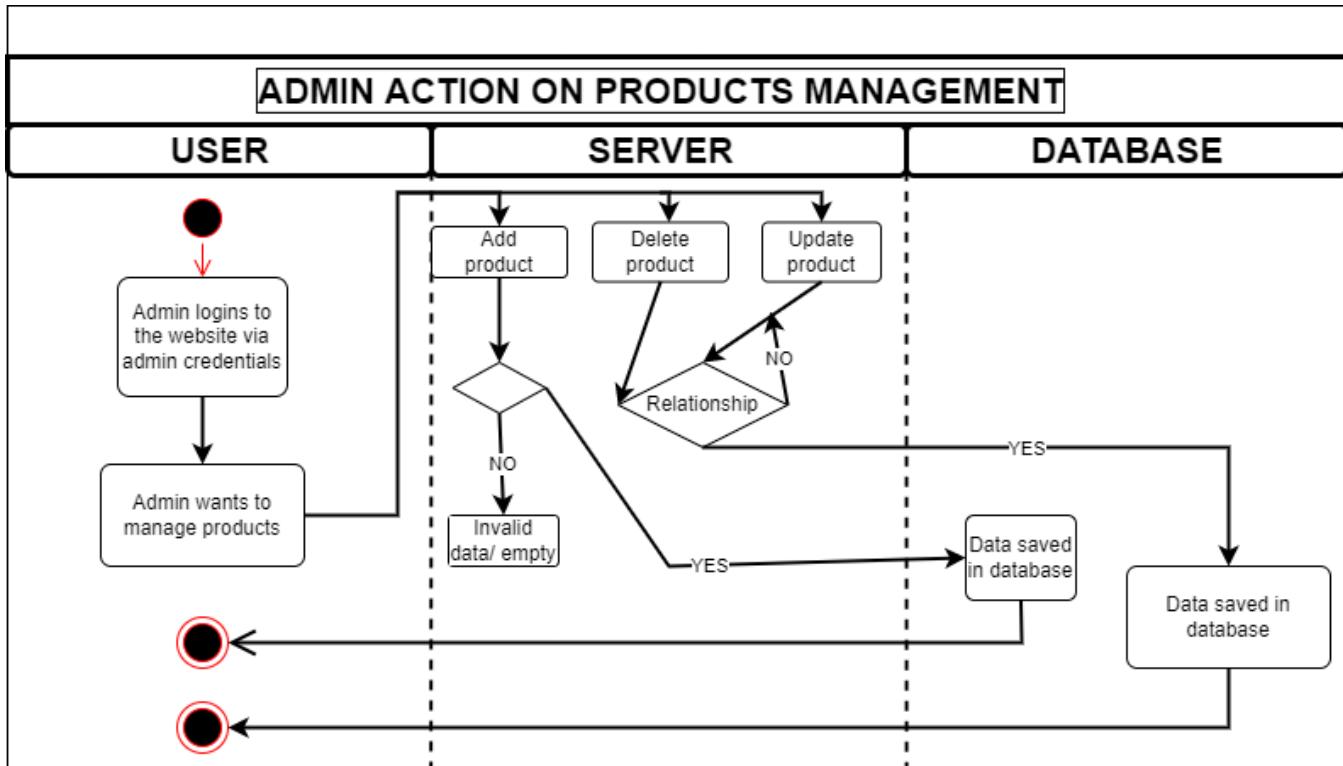
Economist Action On Reports

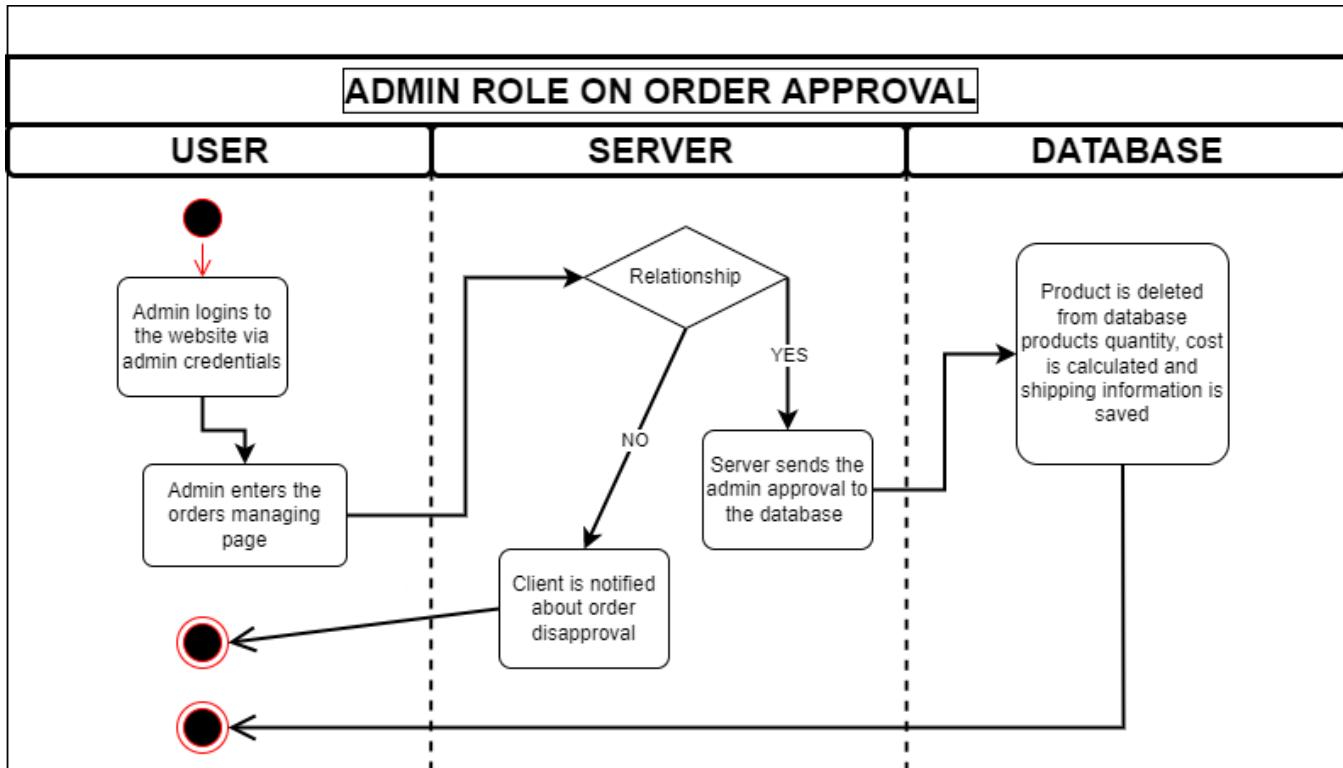


7. SWIMLANE DIAGRAMS



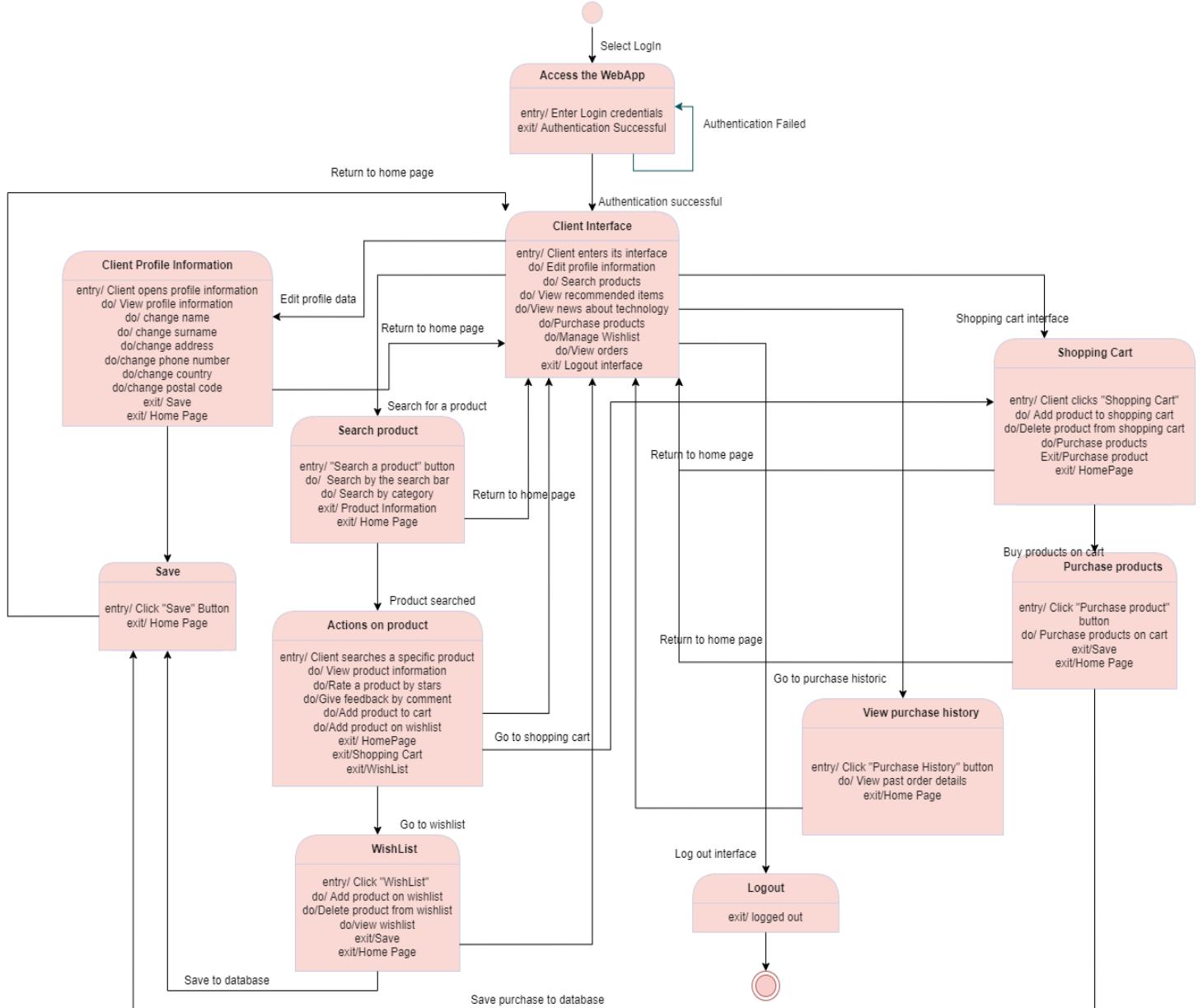






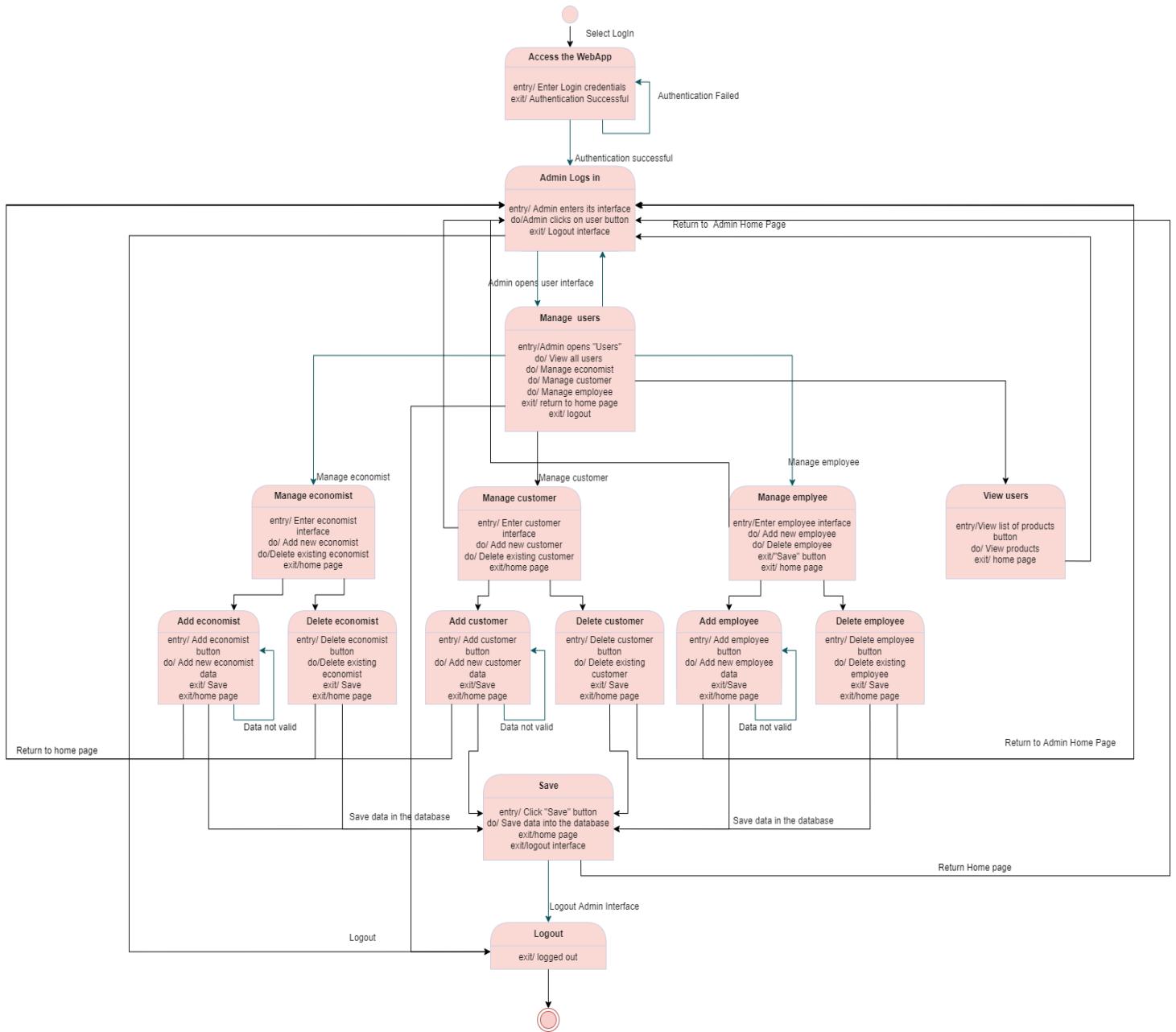
8. STATE DIAGRAMS

Client State Diagram

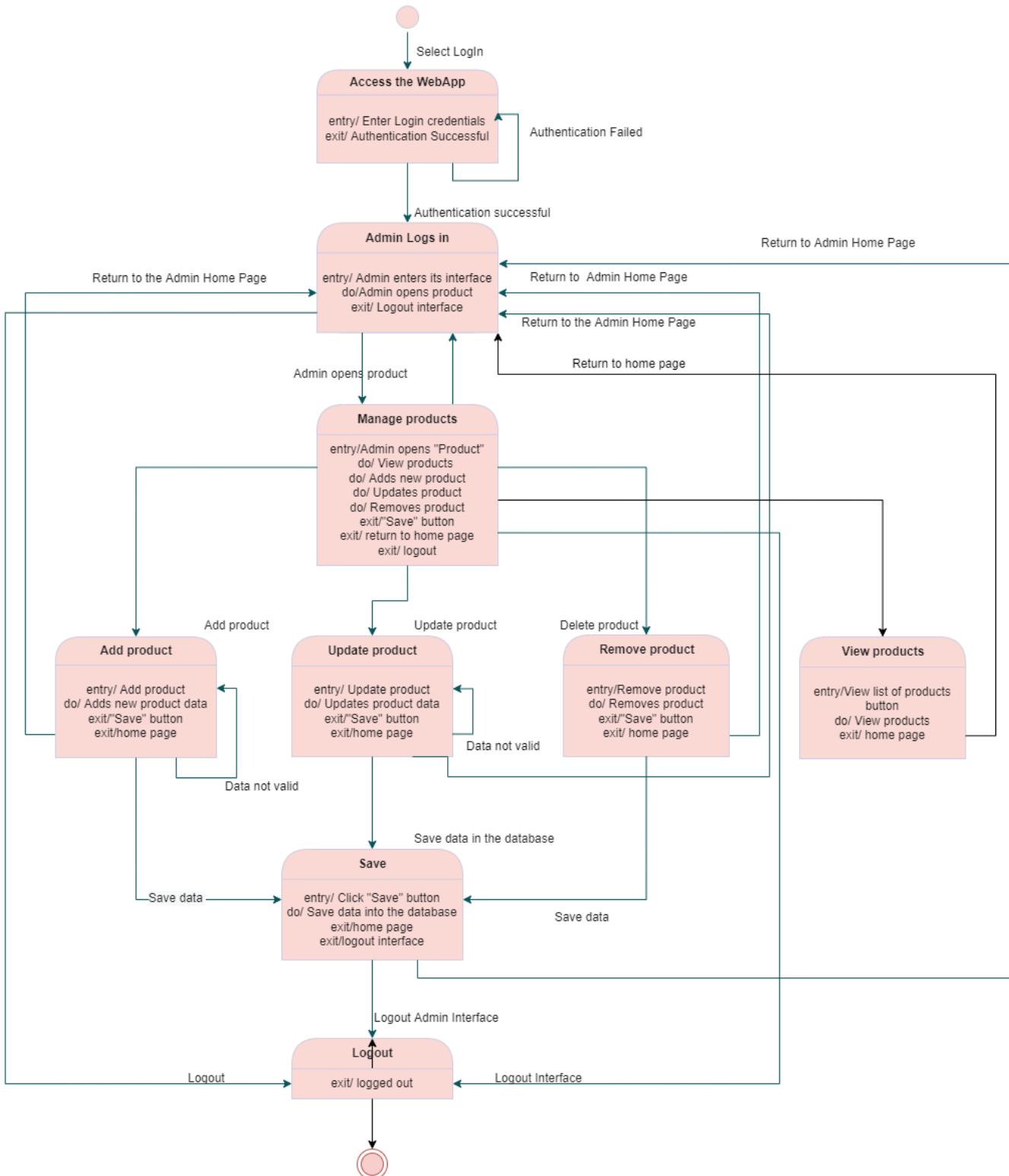


ElectroSpaceX Requirements Specification

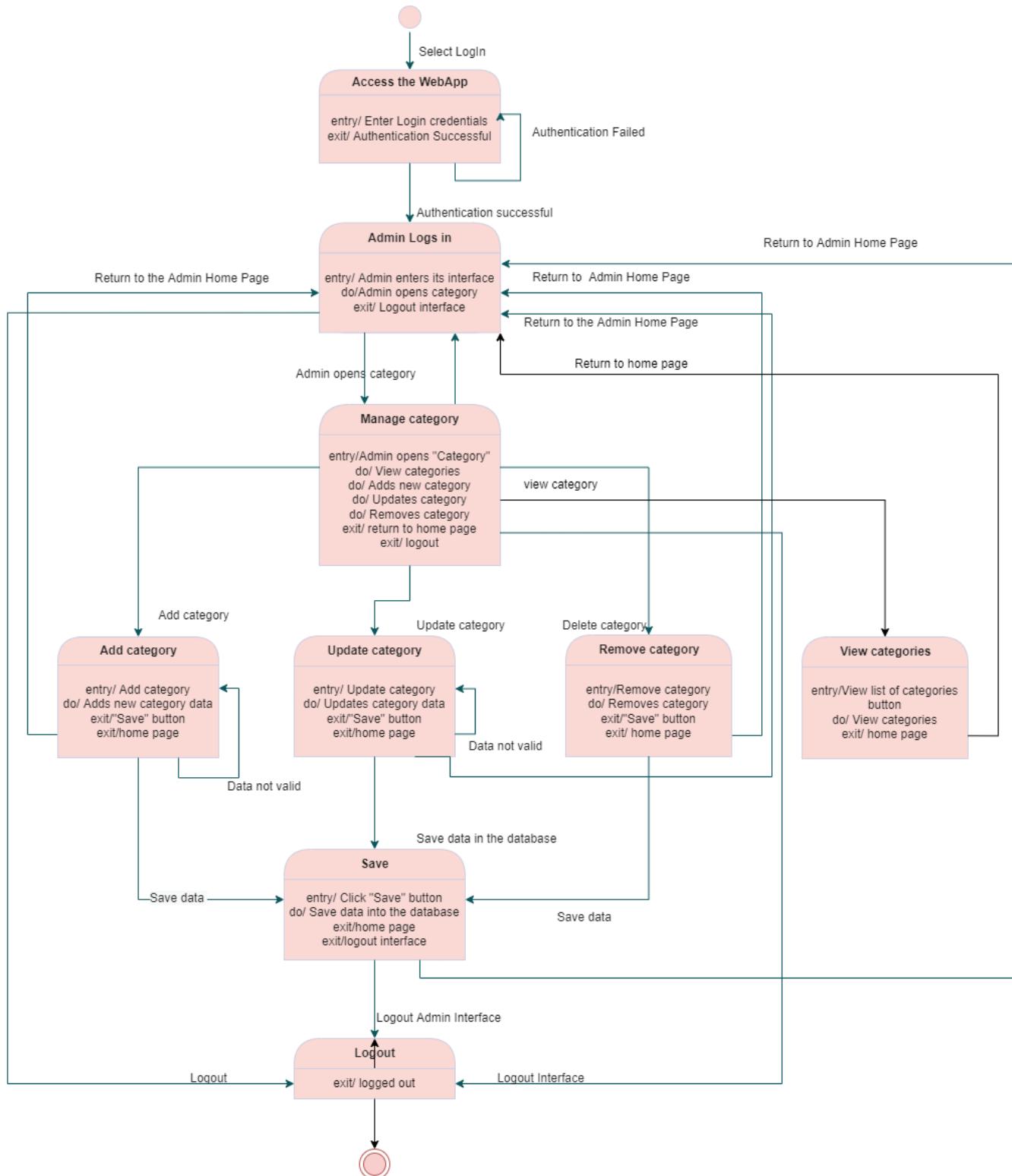
Admin Manage Users



Admin Manage Products

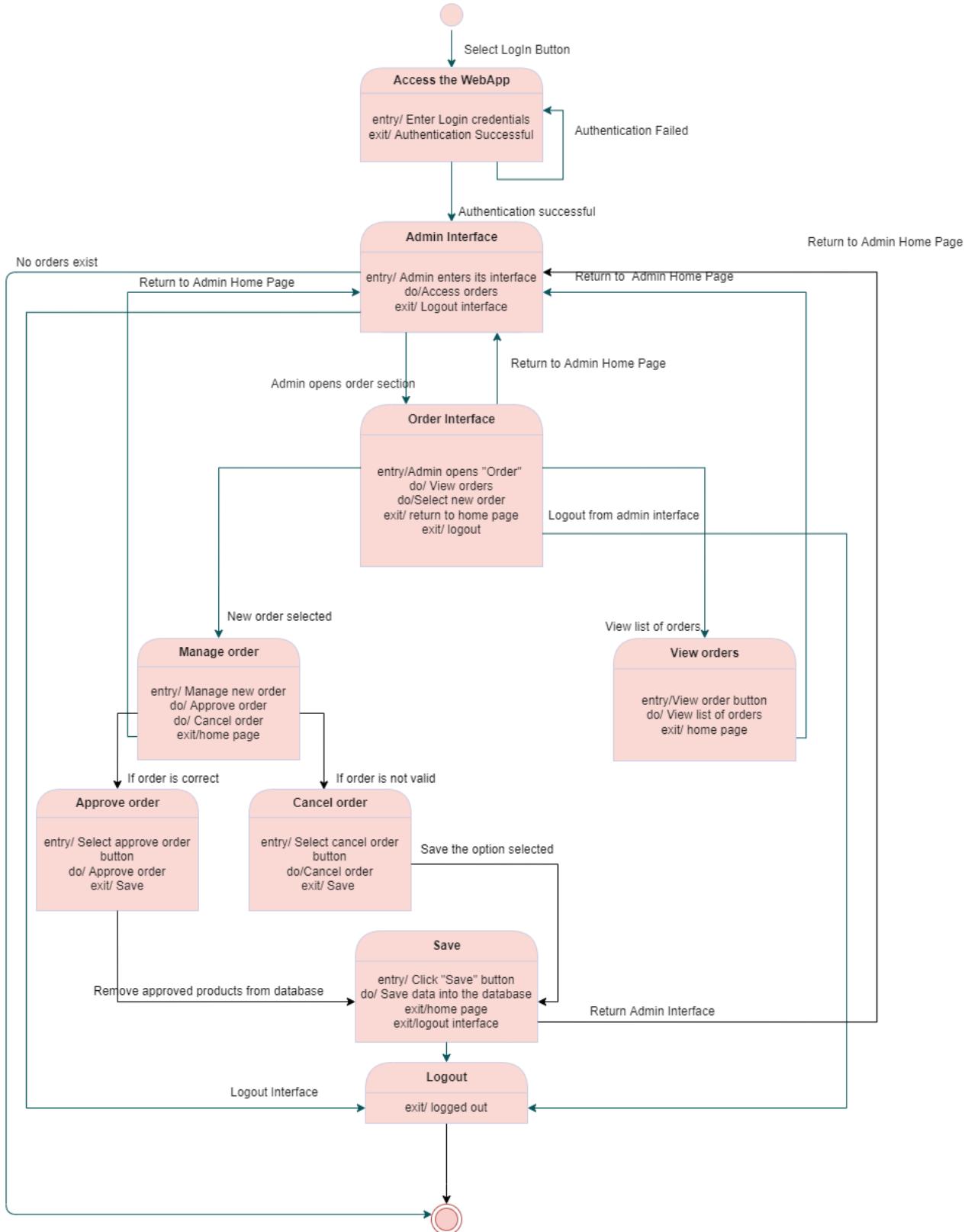


Admin Manage Category

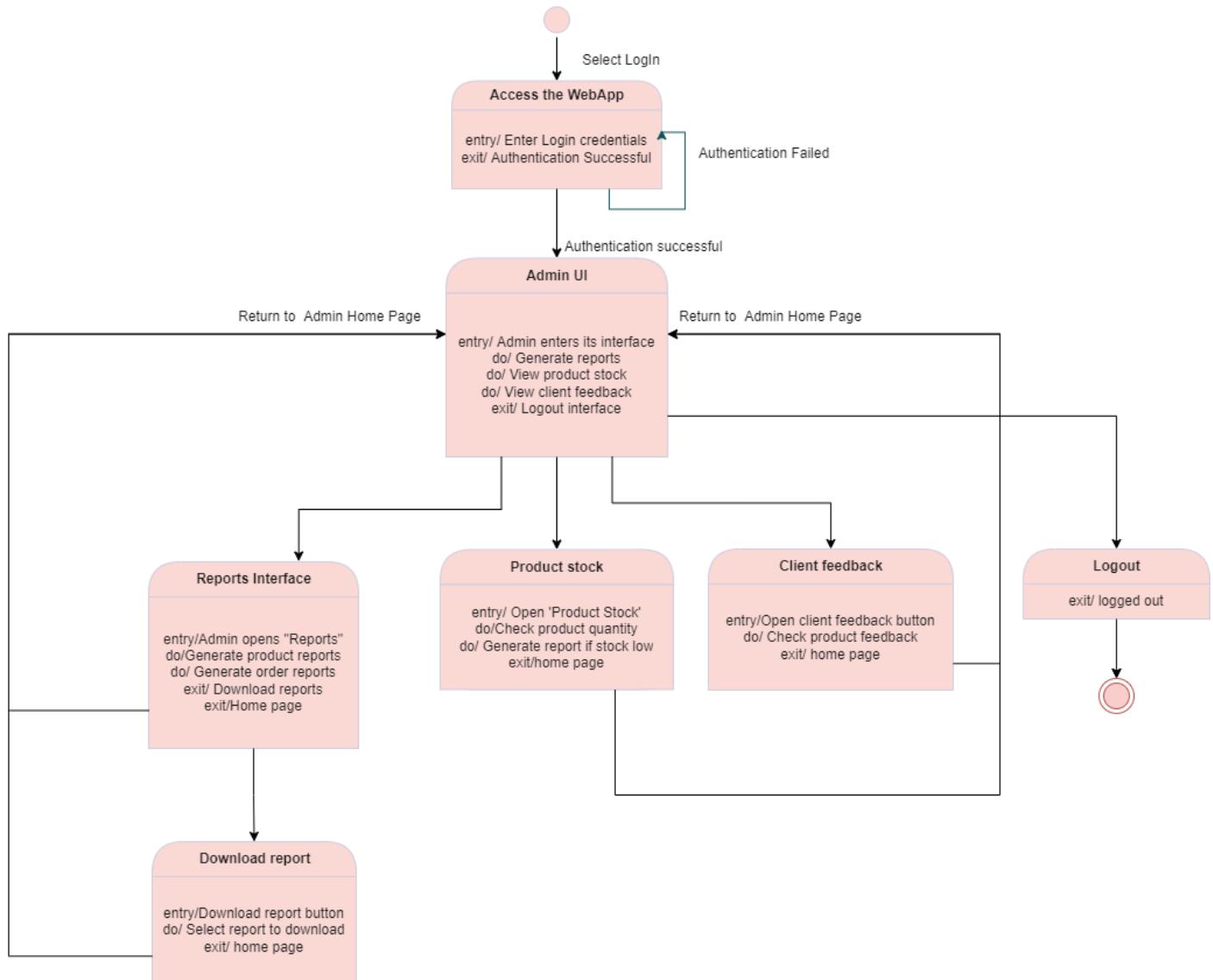


ElectroSpaceX Requirements Specification

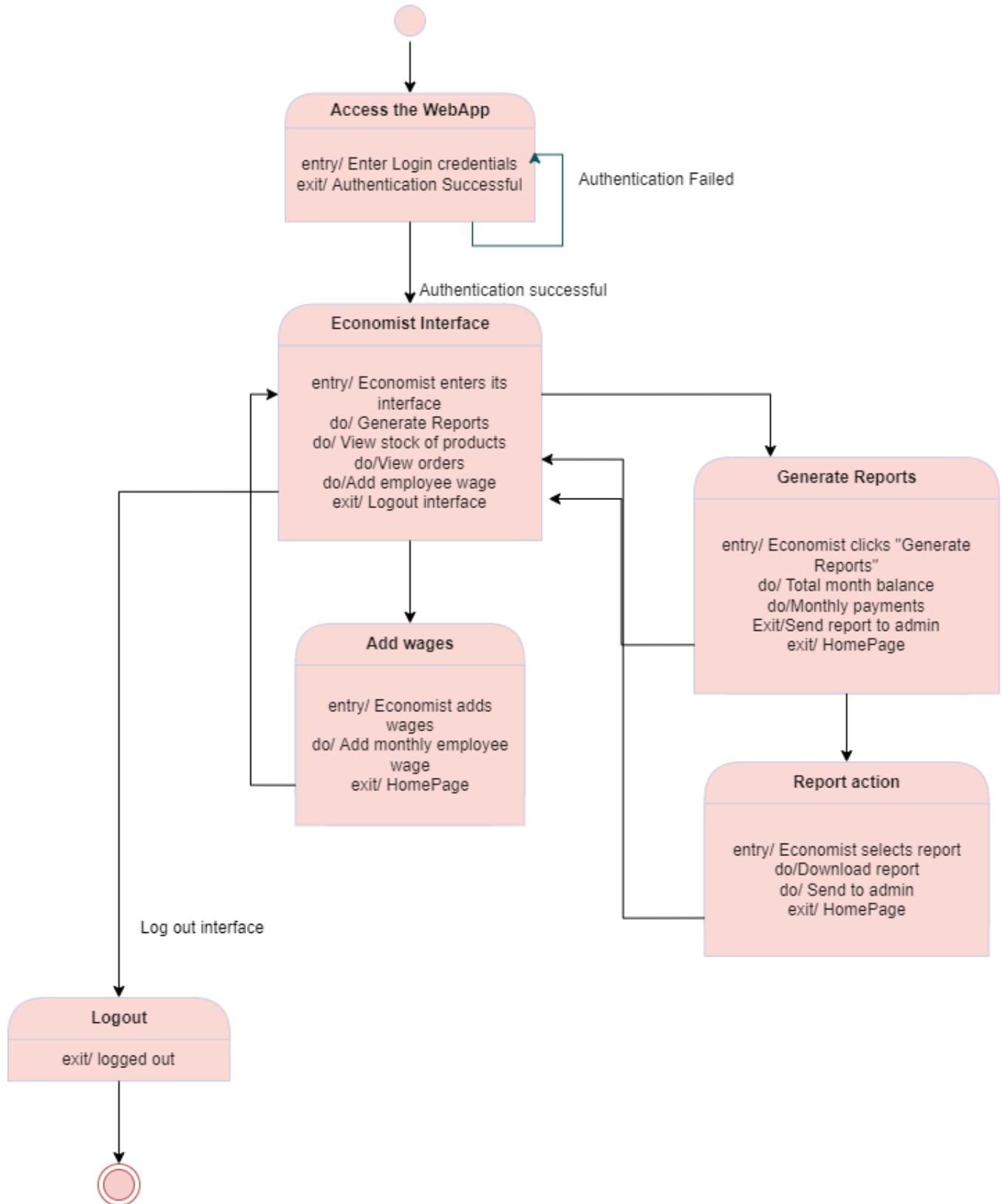
Admin Manage Order



Admin Other Operations State Diagram

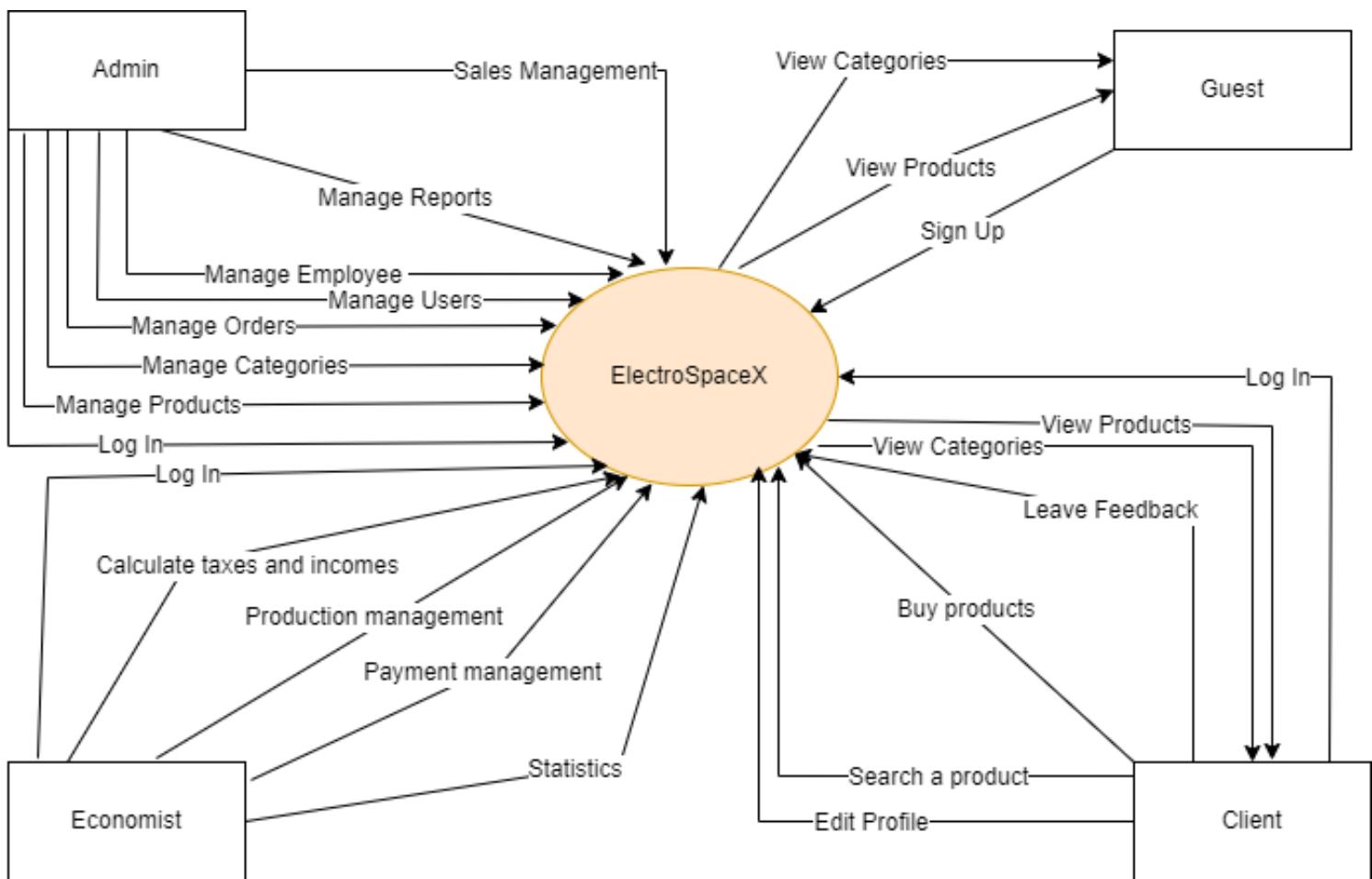


Economist State Diagram

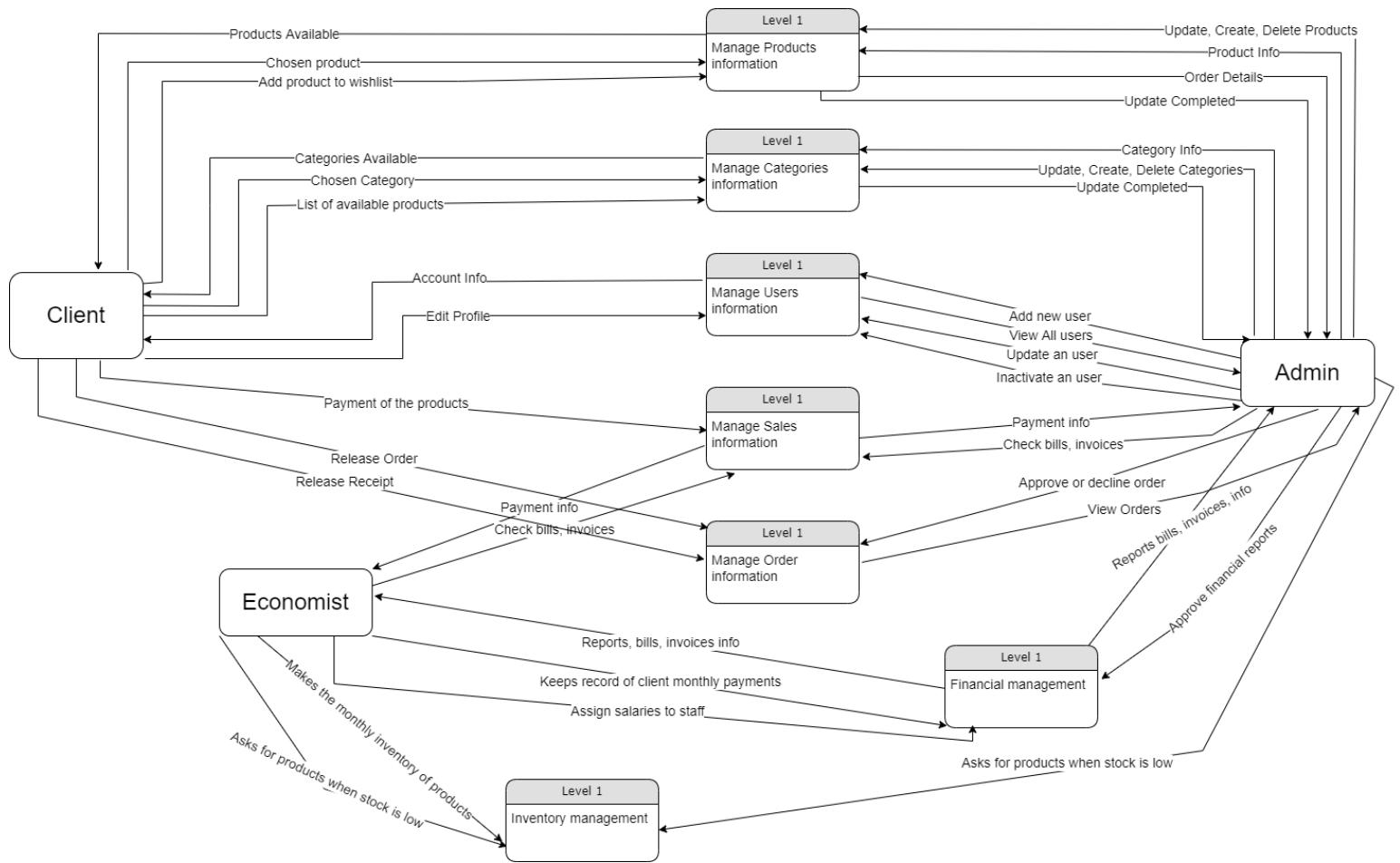


9. DATA FLOW DIAGRAMS

Level 0

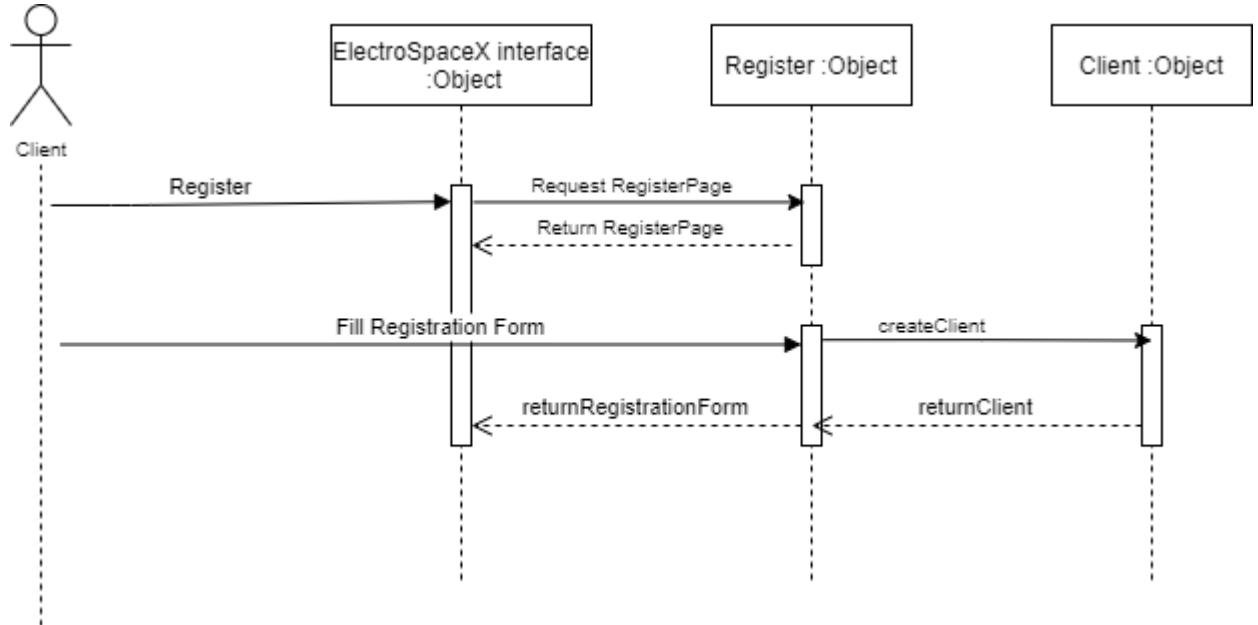


Level 1

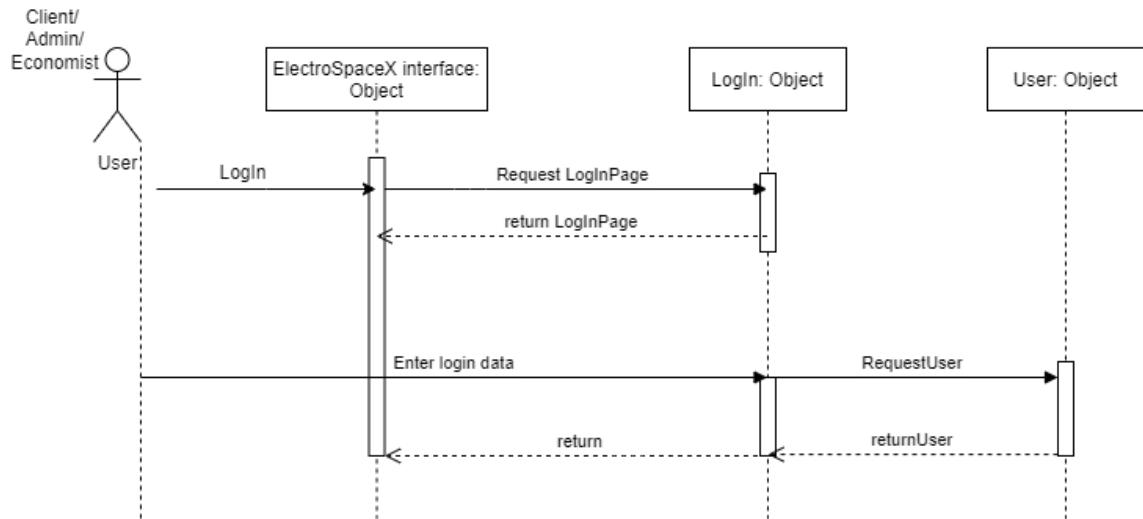


10. SEQUENCE DIAGRAMS

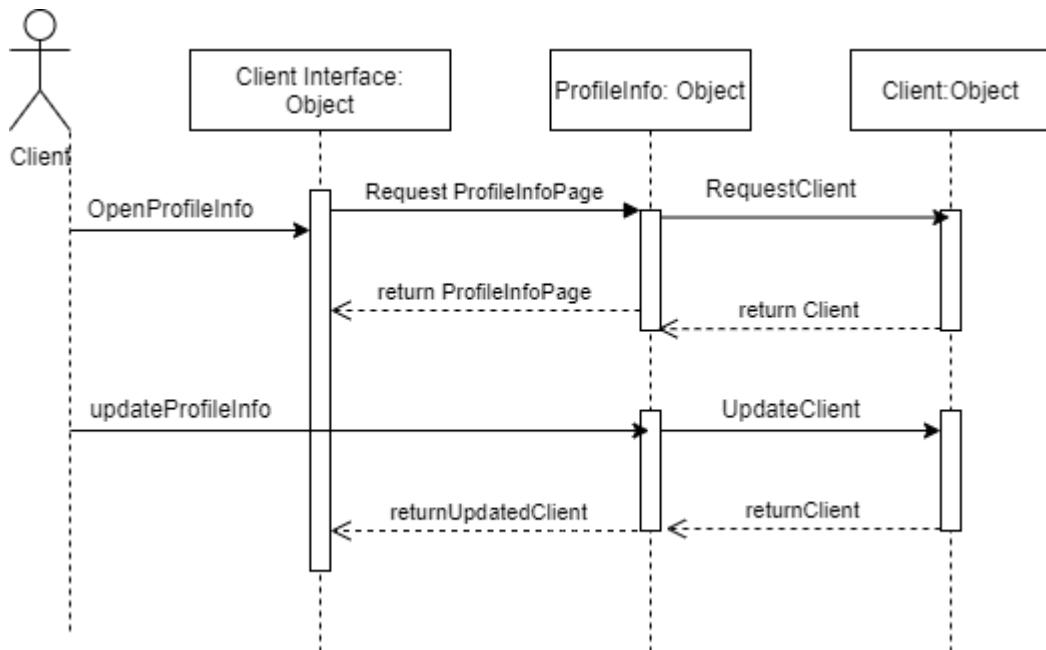
Customer Register



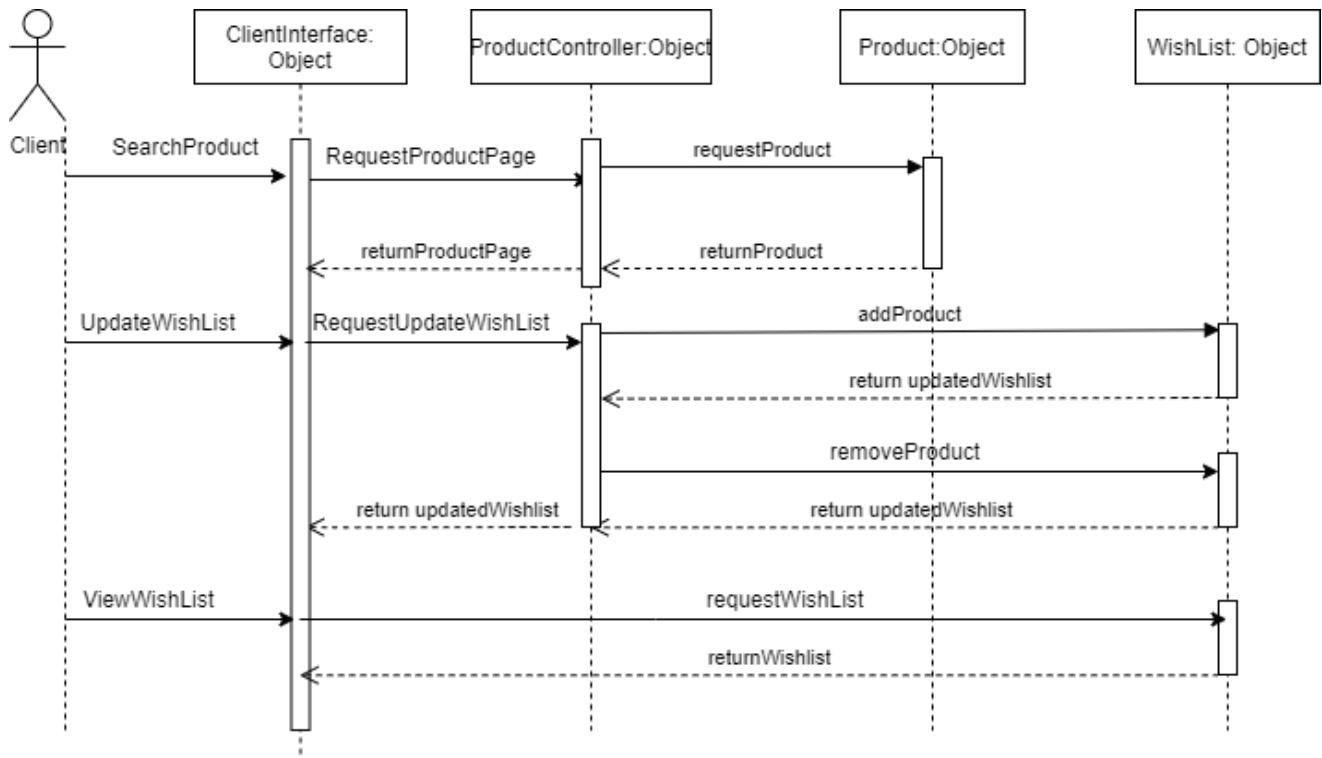
User Log In



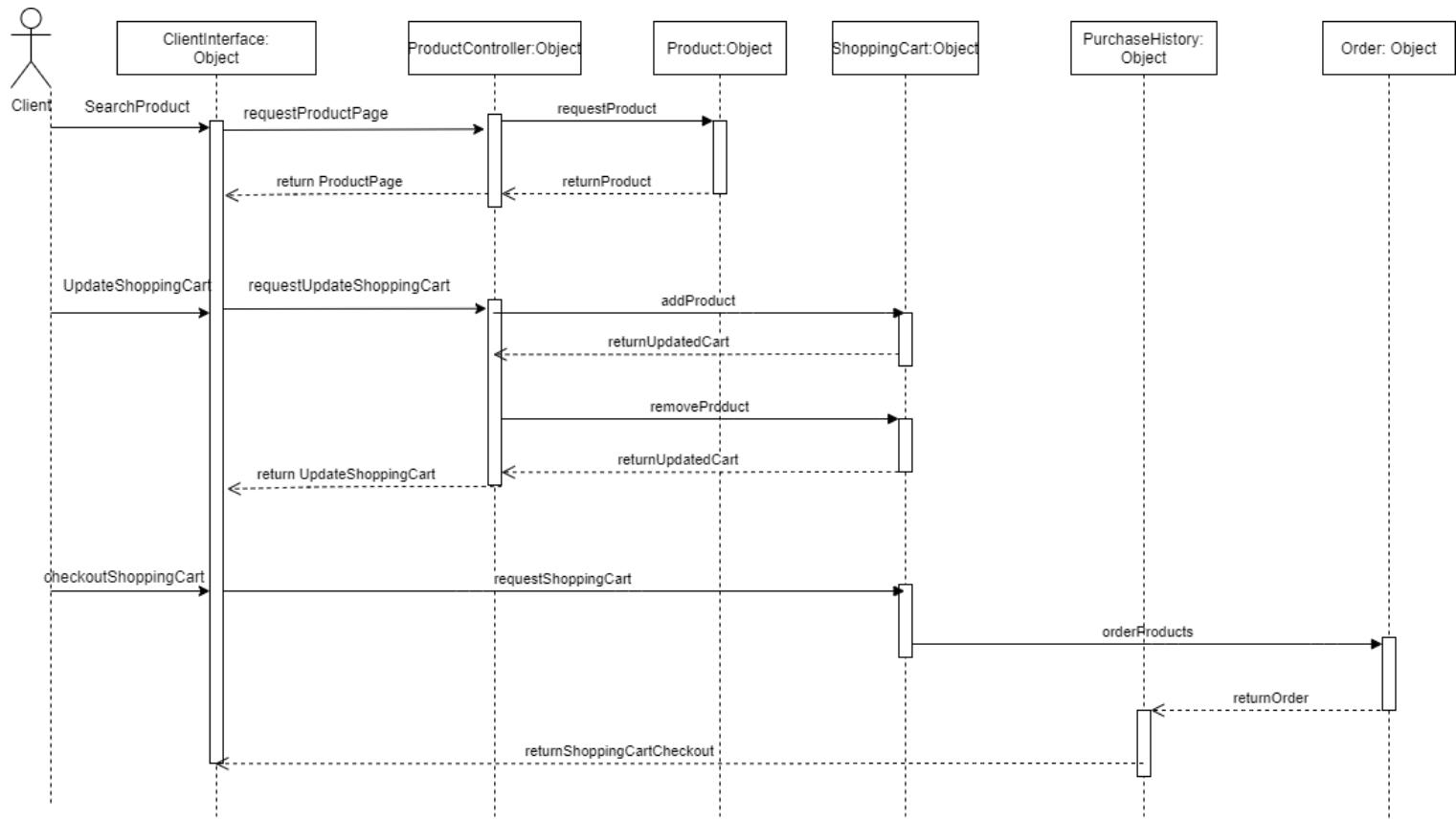
Customer Edit Profile Information



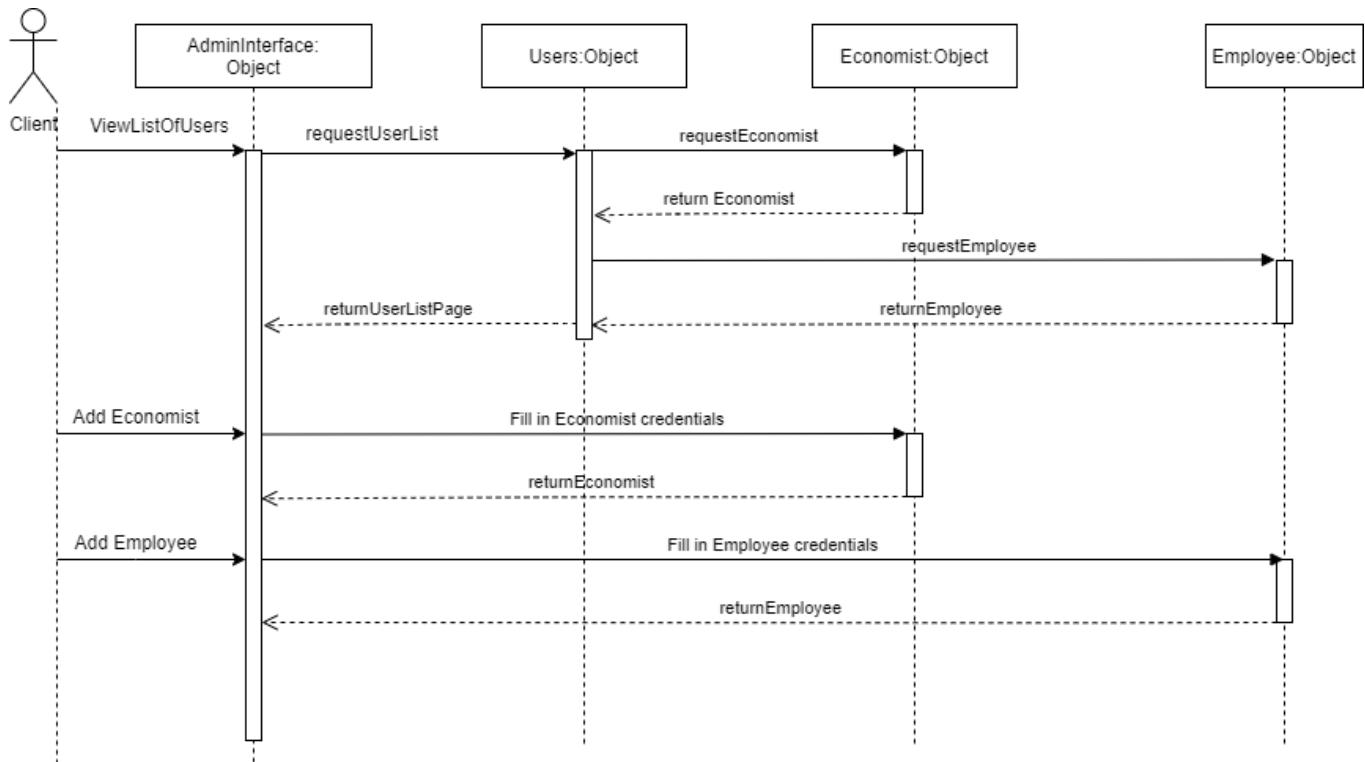
Customer Manage WishList



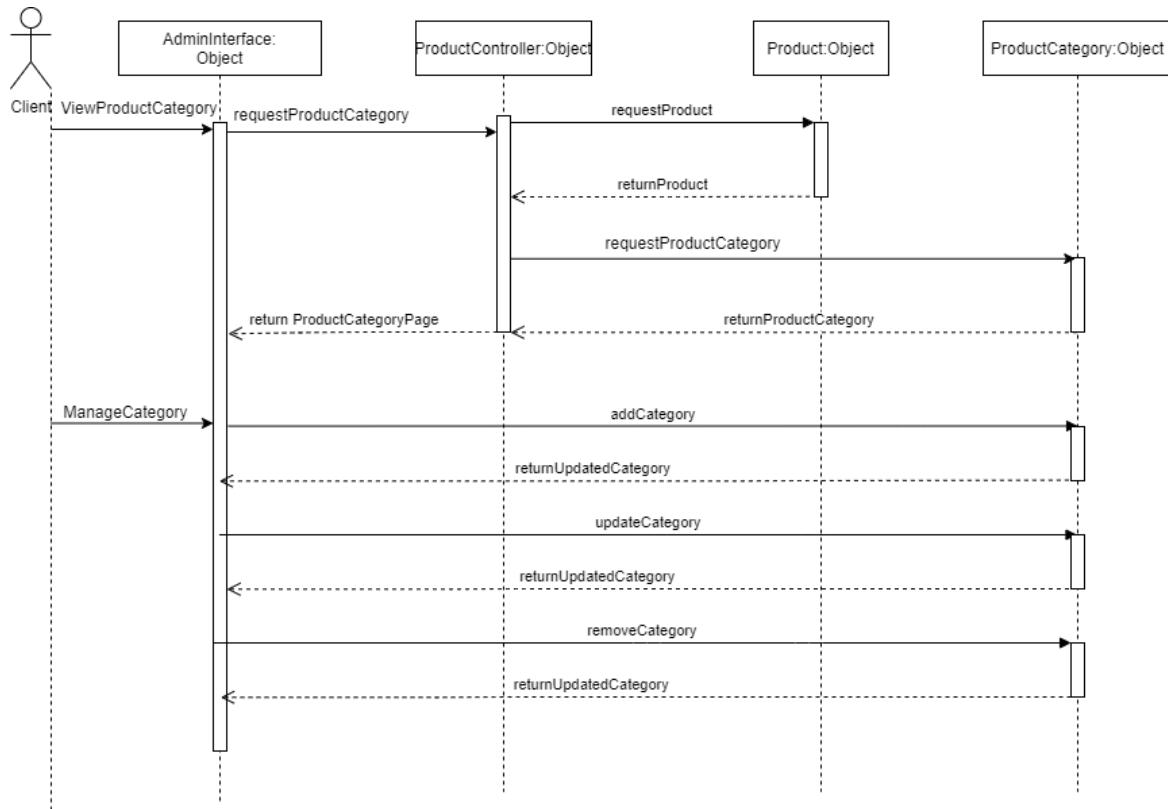
Customer Manage Shopping Cart and Order



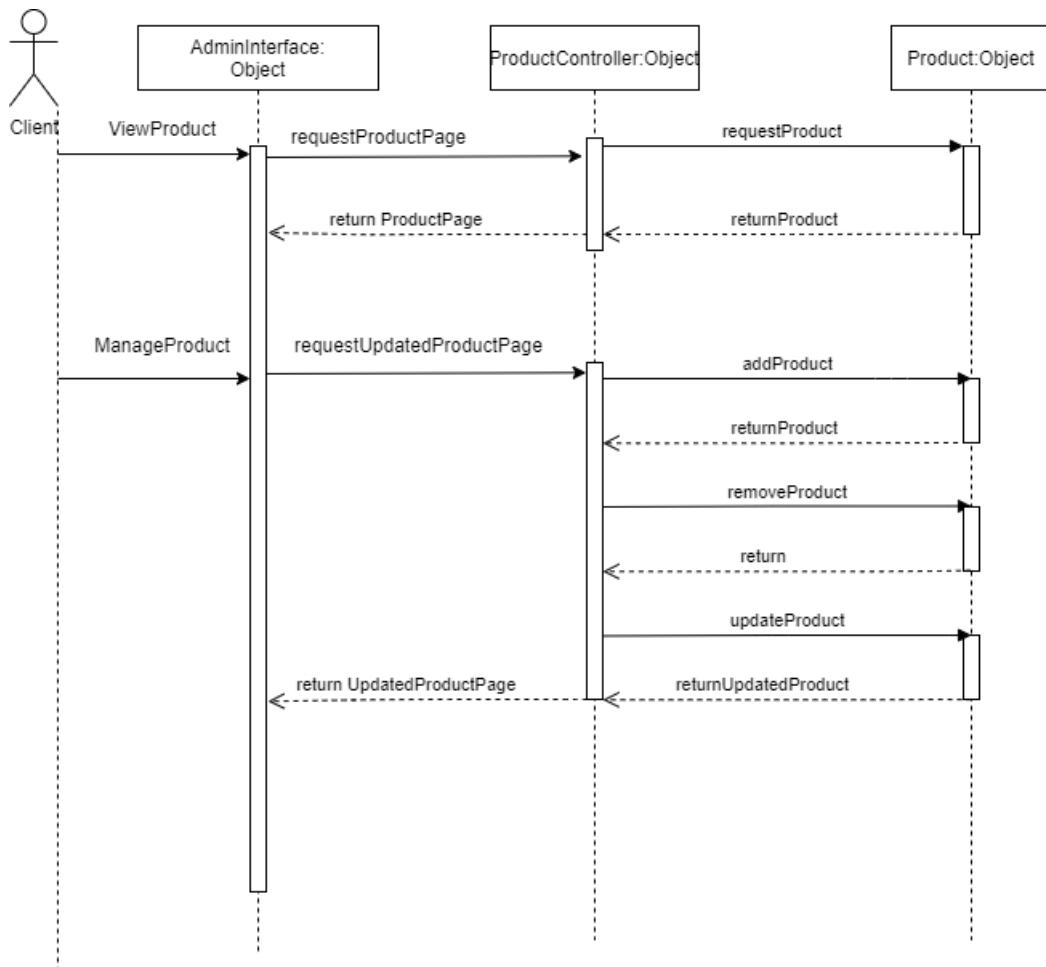
Admin Manage Users



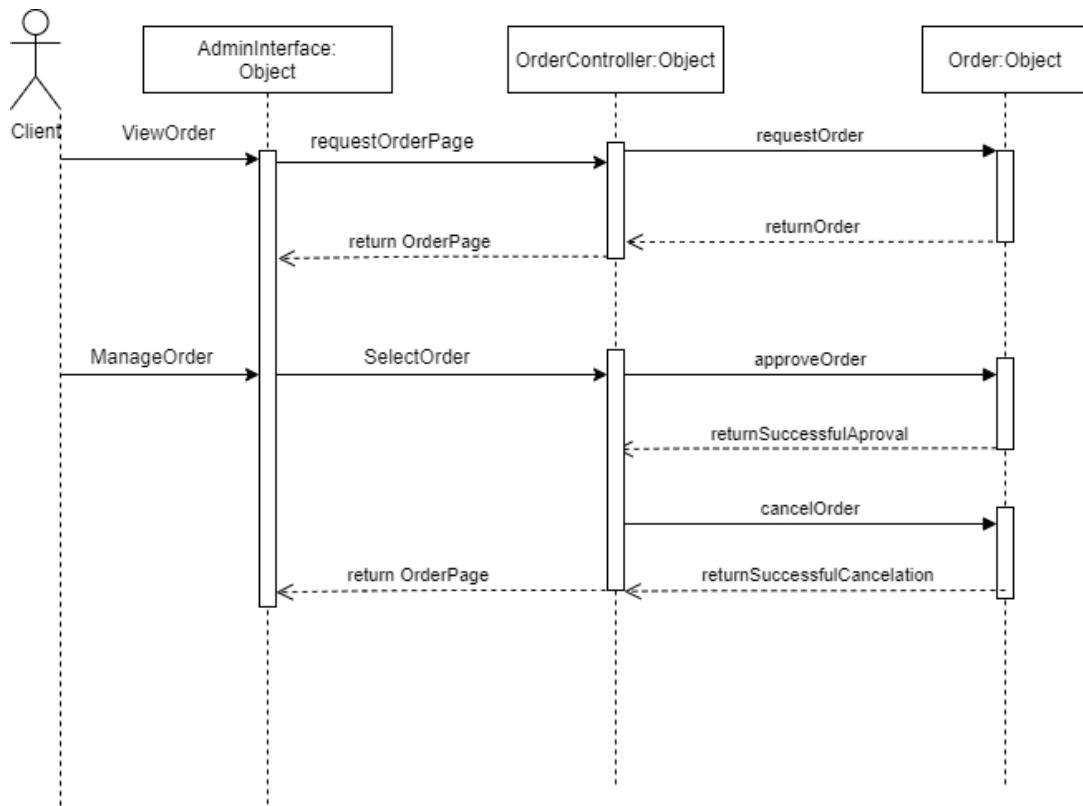
Admin Manage Category



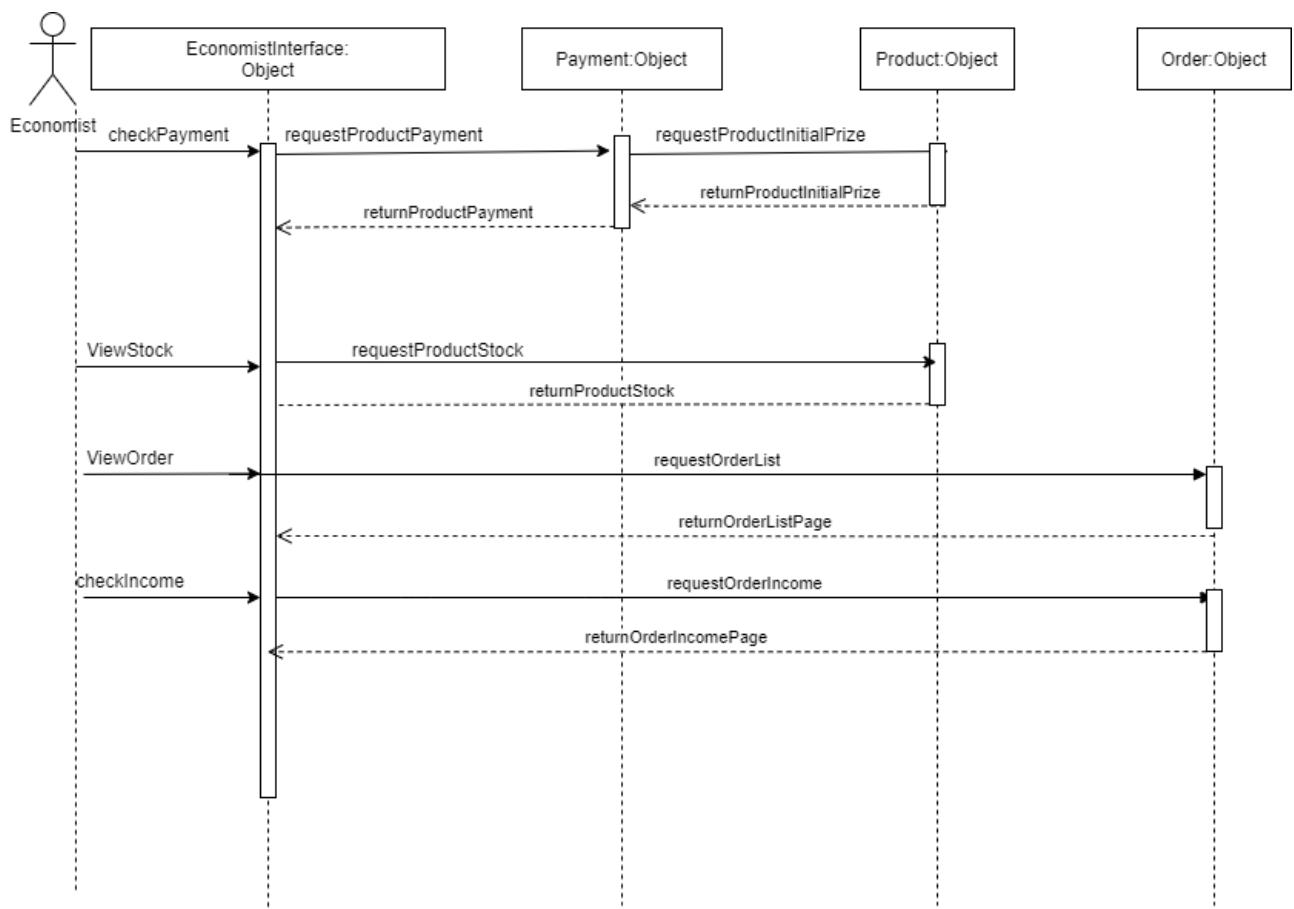
Admin Manage Product



Admin Manage Order

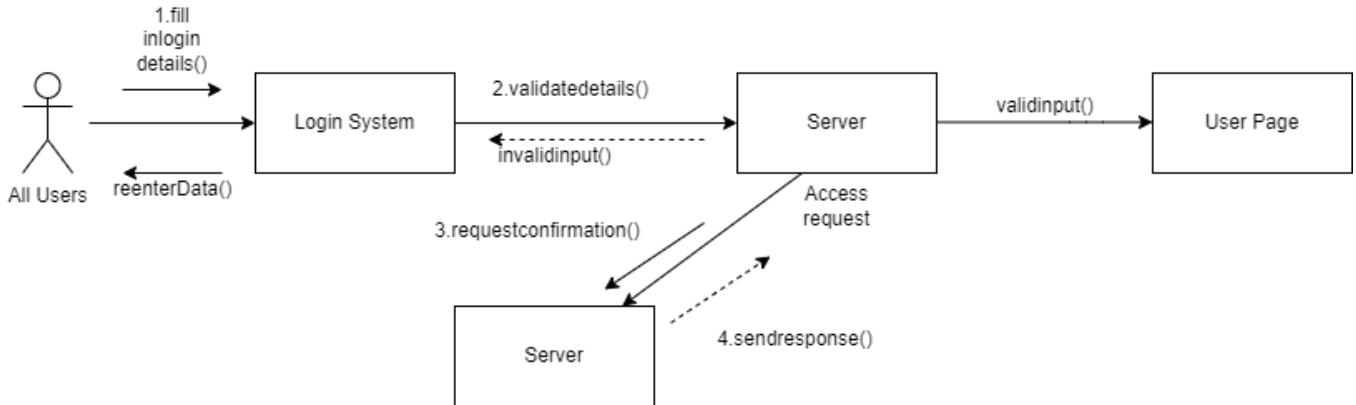


Economist Operation

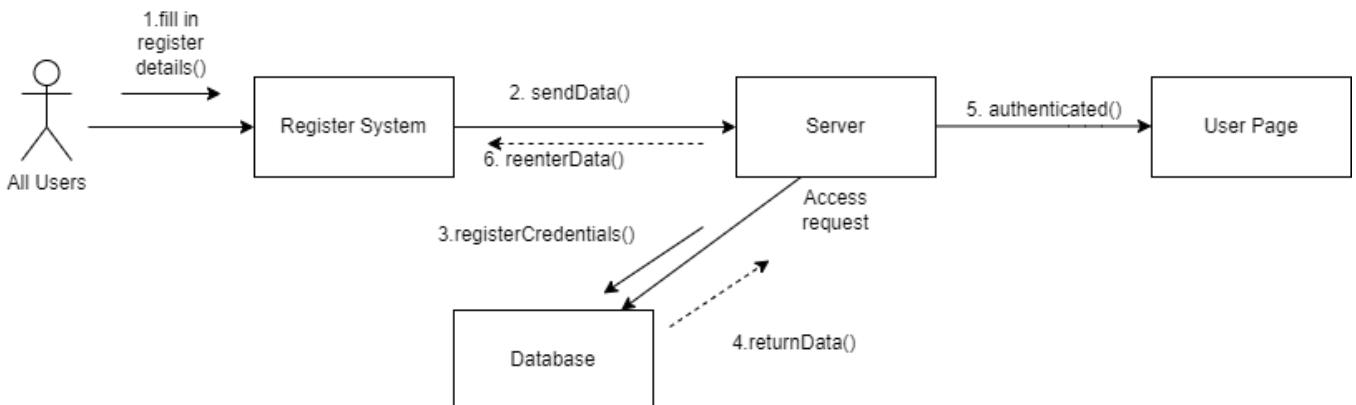


11. COLLABORATION DIAGRAMS

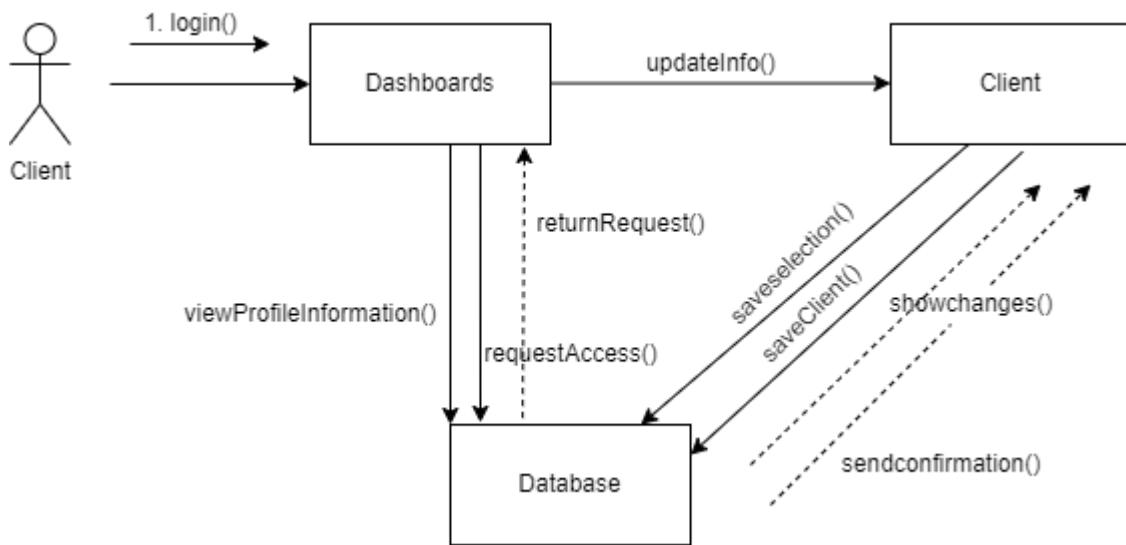
Login Collaboration



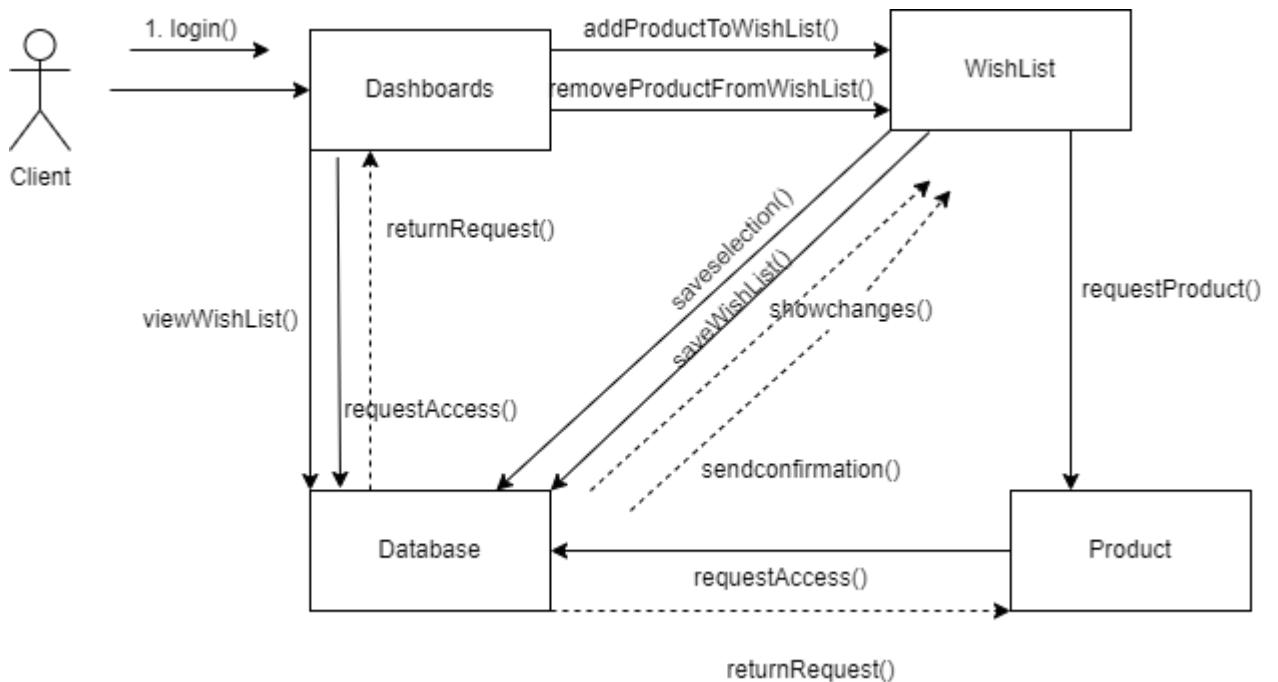
Register Collaboration



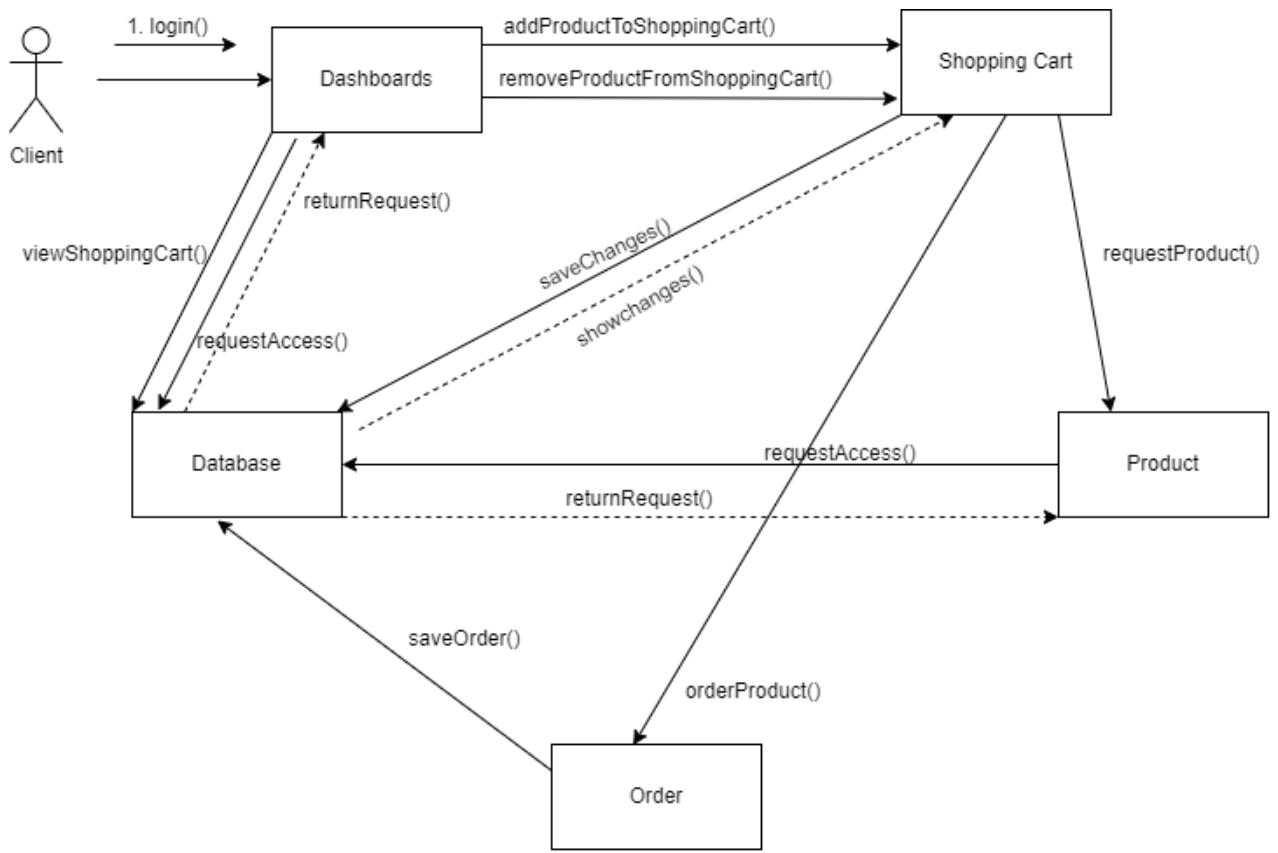
Client Edit Profile Information



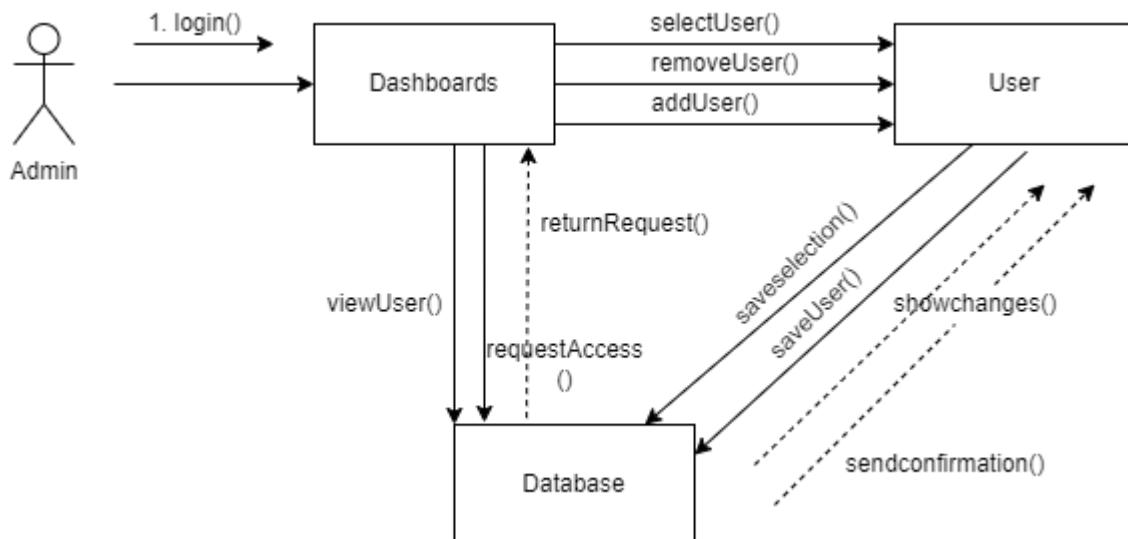
Client Manage WishList



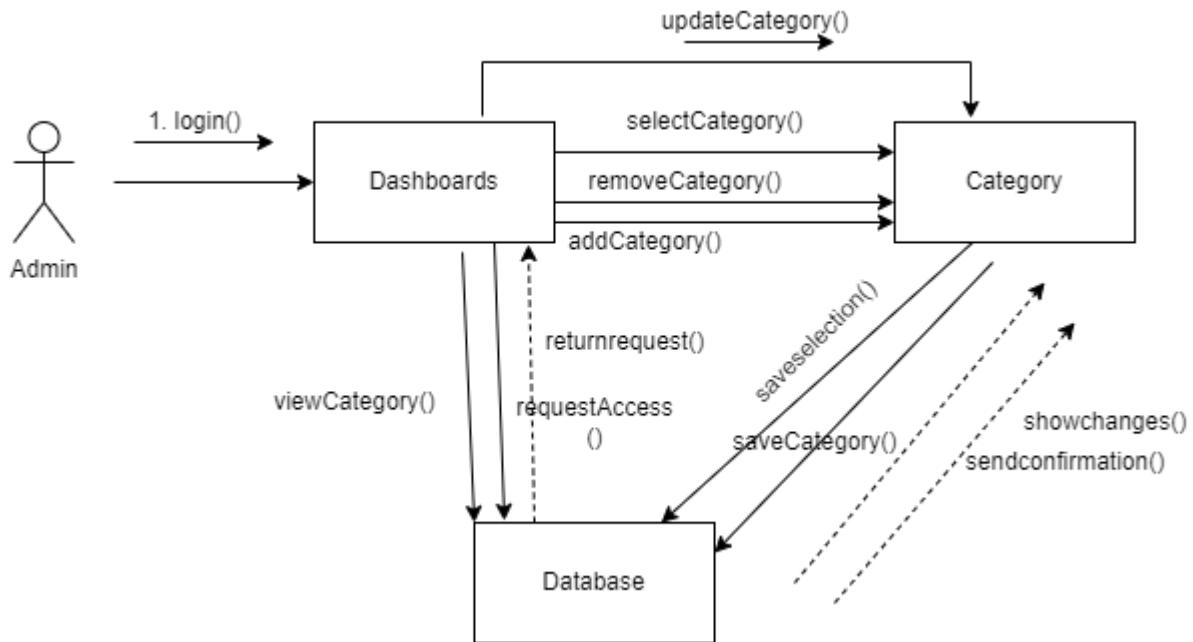
Client Manage ShoppingCart



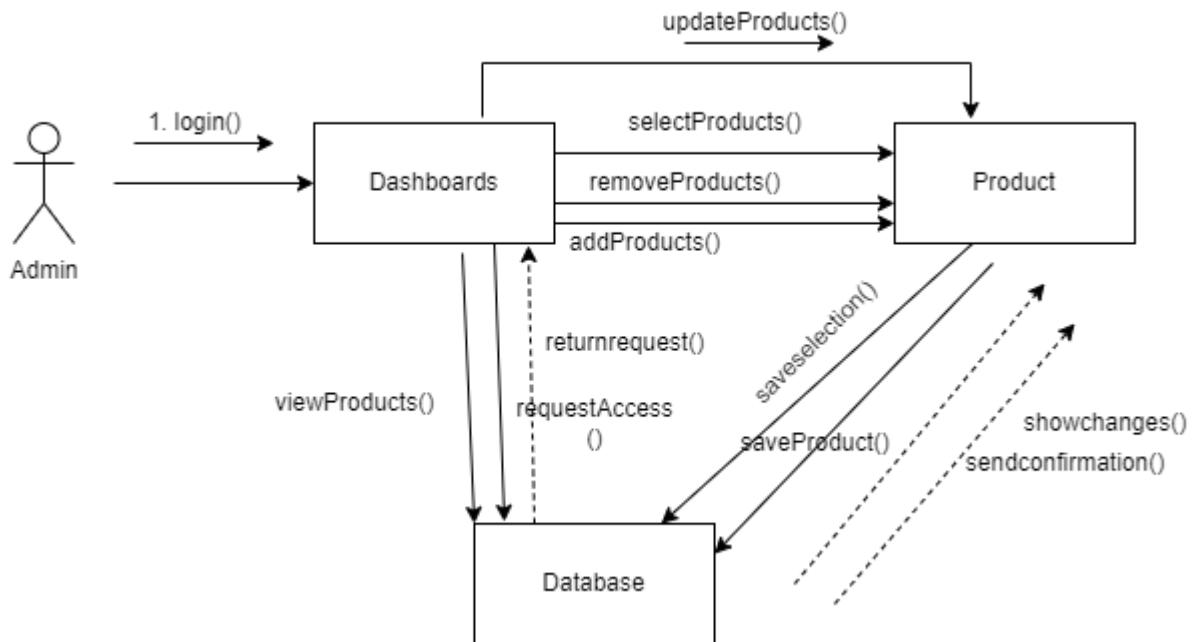
Admin Manage User



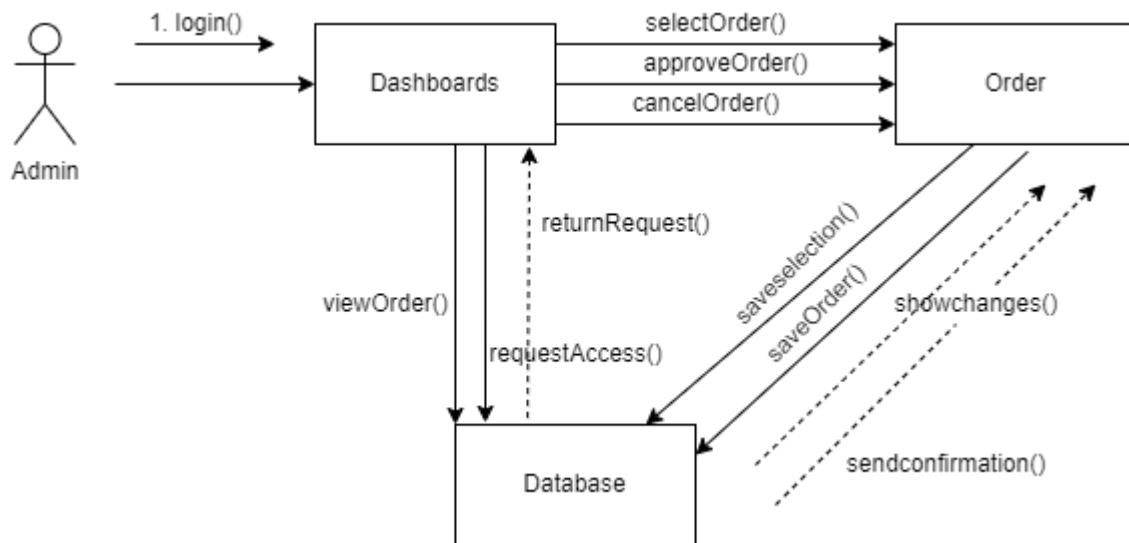
Admin Manage Category



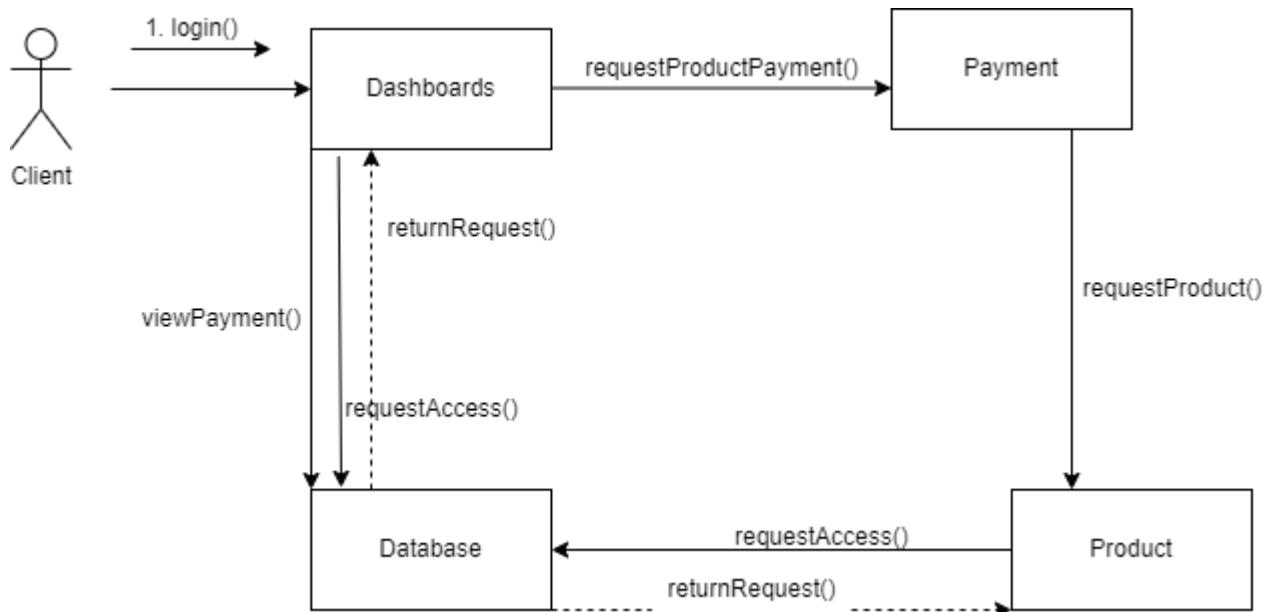
Admin Manage Products



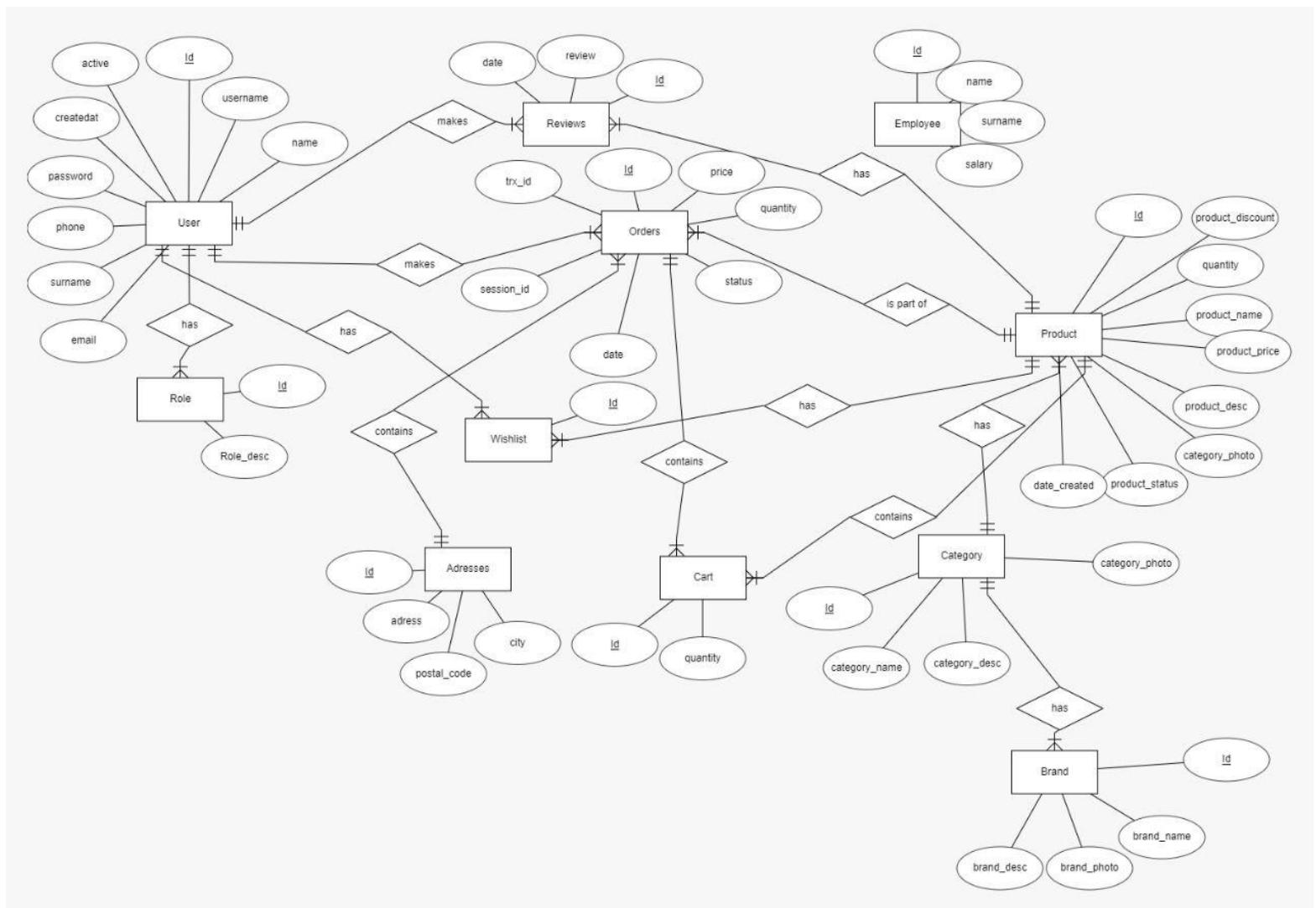
Admin Manage Order



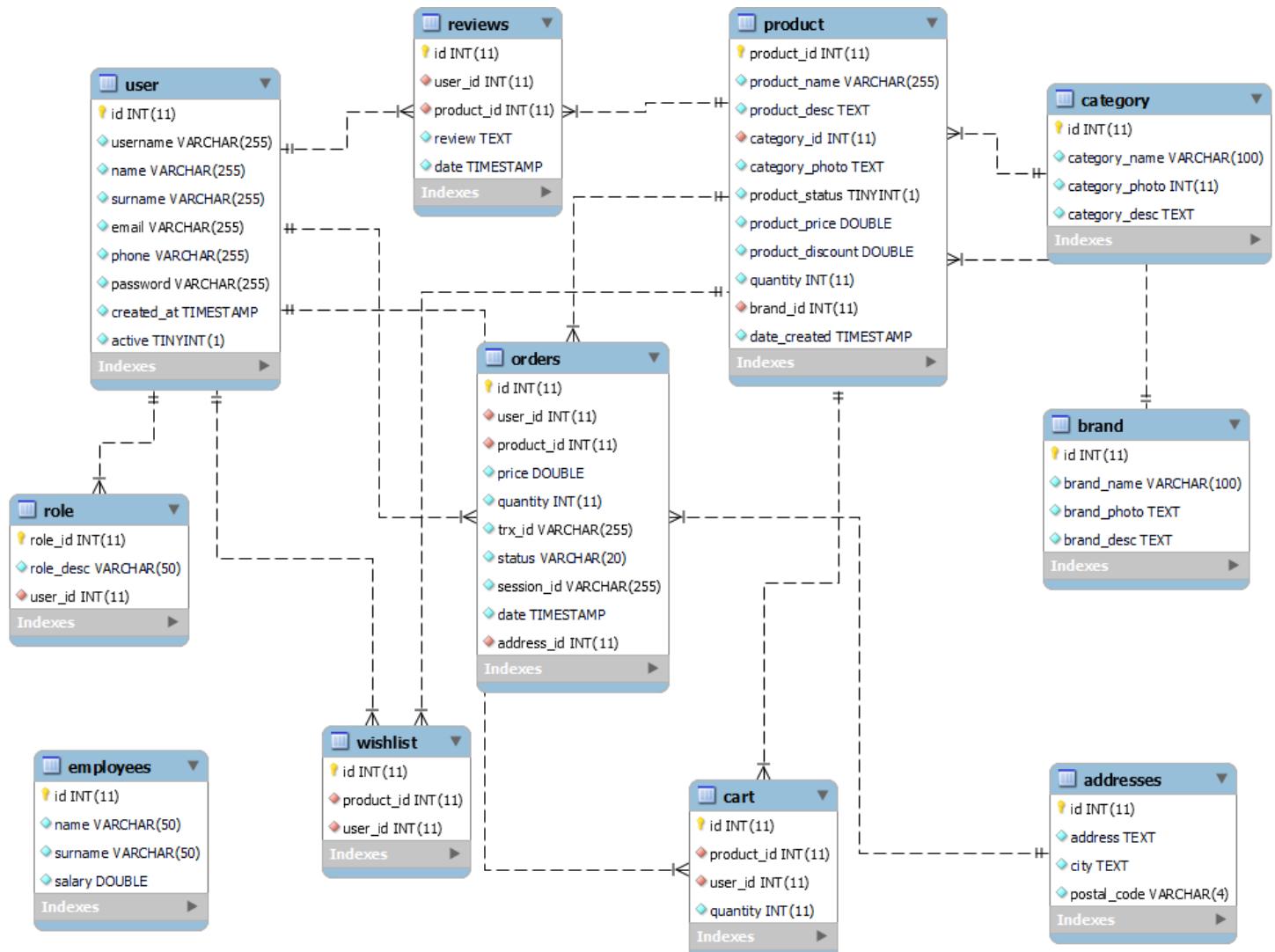
Economist Requests Payment



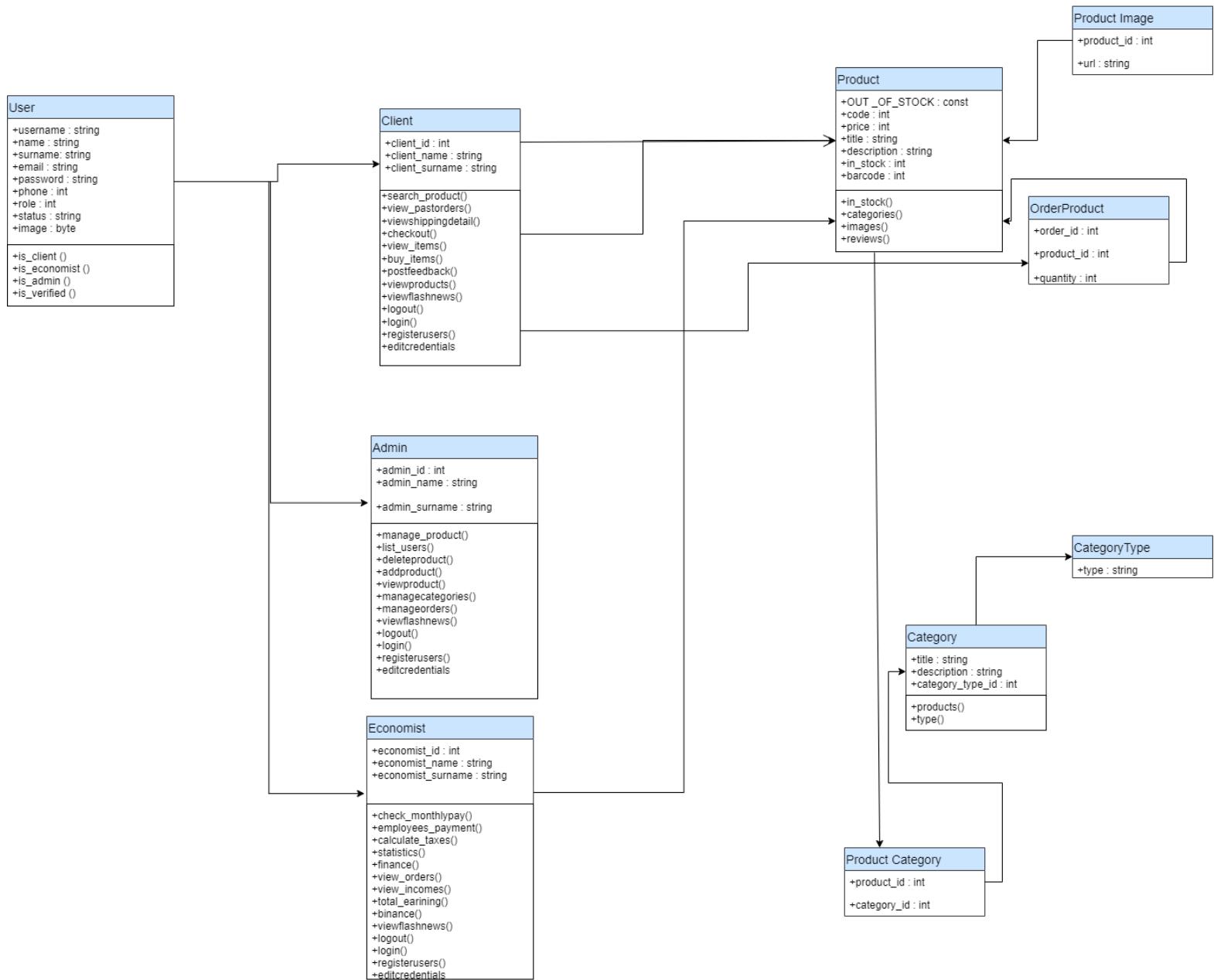
12. ERD DIAGRAM



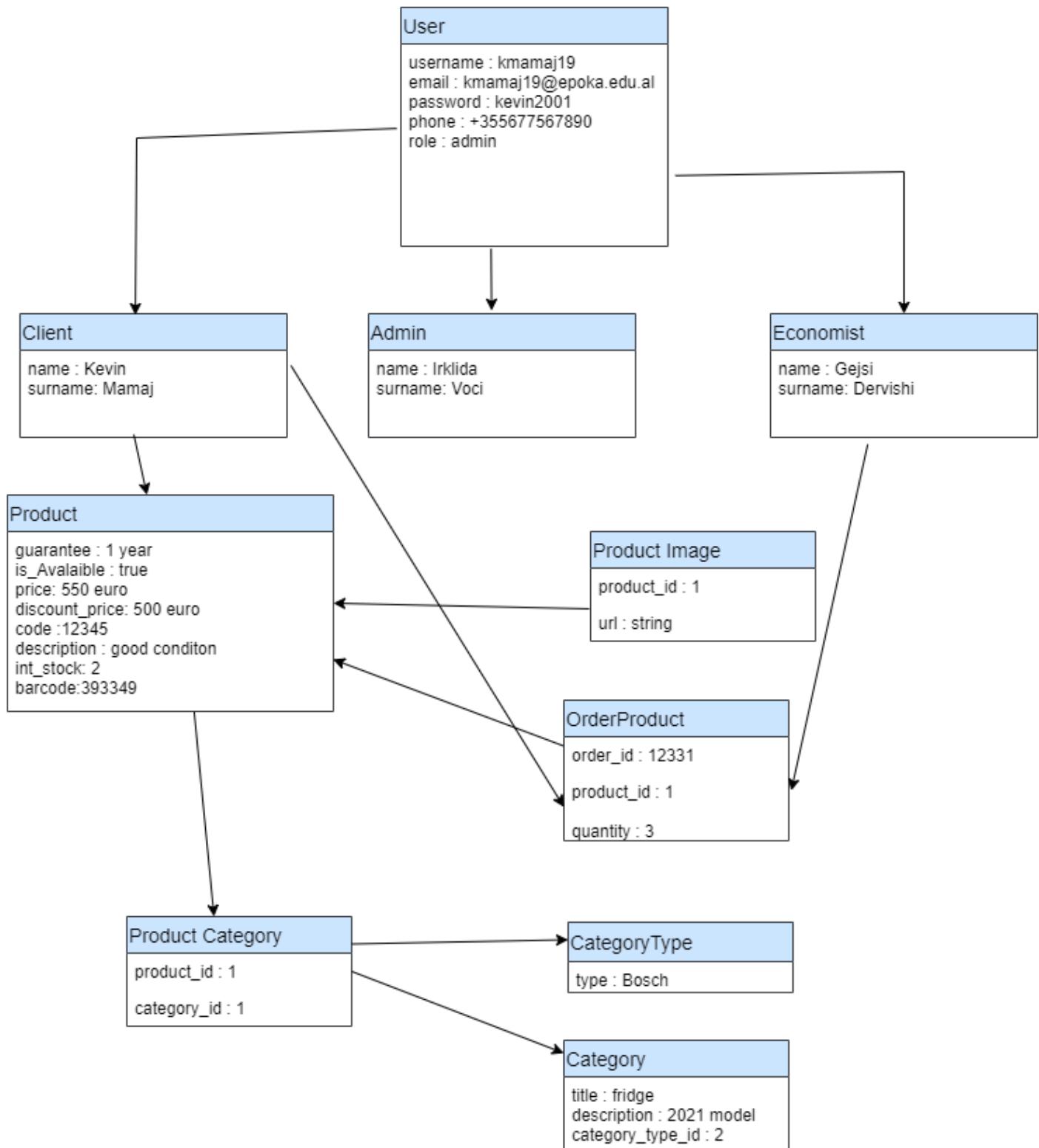
& RELATIONAL SCHEMA DIAGRAM



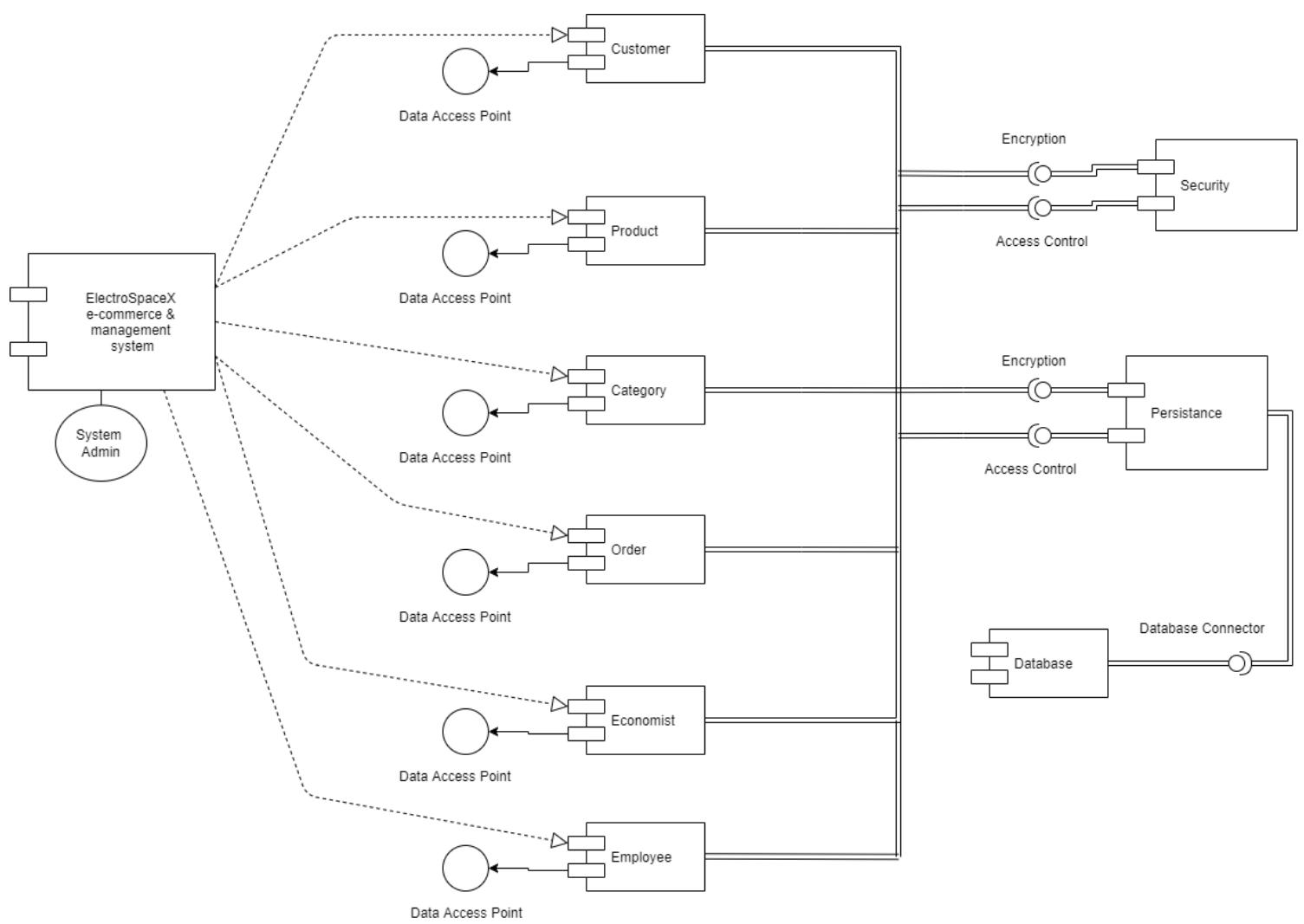
13. CLASS DIAGRAM



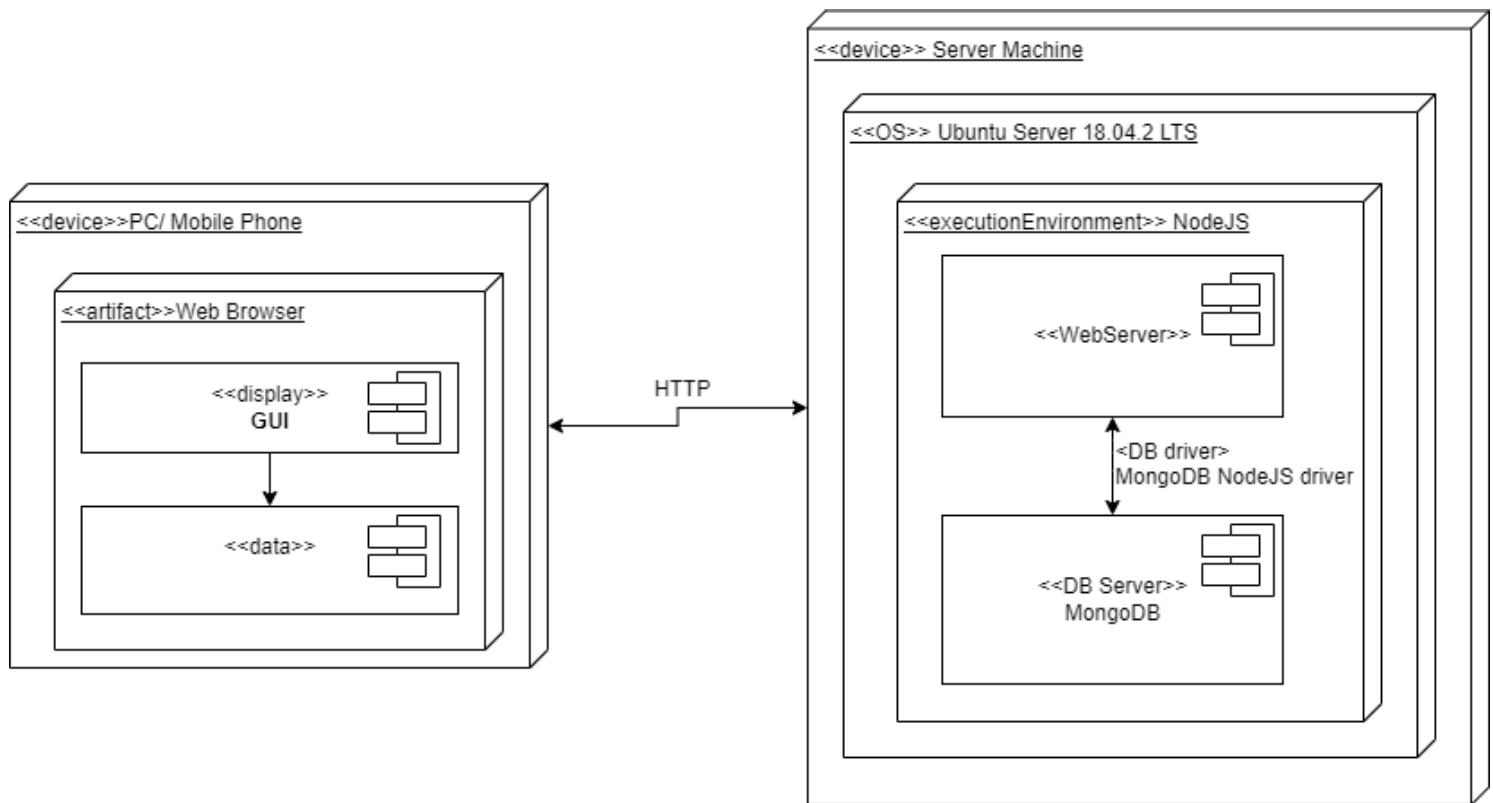
14. OBJECT DIAGRAM



15. COMPONENT DIAGRAM



16. DEPLOYMENT DIAGRAM



17. PROJECT MANAGEMENT DIAGRAMS

Activity Table

Activity Number	Activity Name	Dependencies	Duration	Pessimist Time	Optimist Time
1	Declaring skills to the members		1	2	1
2	Meeting with the business manager		1	2	1
3	Assigning group roles	1	1	2	1
4	Deciding on project roles	2	1	2	1
5	Sketches	4	4	6	3
6	Prototyping	5	10	12	8
7	User stories	4	4	5	3
8	Use scenarios	7	4	5	3
9	Use Case Diagrams	8	6	9	5
10	Use Tables	9	4	5	3
11	Functional Requirements	7	2	3	1
12	Nonfunctional Requirements	7	4	5	3
13	Activity Diagrams	10	4	5	3
14	State Diagrams	9	6	7	5
15	Swimlane Diagrams	13	5	6	3
16	ERD	9	4	5	3
17	Relational Schema	16	3	4	2
18	Data flow diagram	17	9	11	8
19	Sequence	13,14,15	5	6	4
20	Collaboration	19	4	5	2
21	Class Diagram	18,20	5	6	3
22	Object Diagram	21	3	4	2
23	Coding separation of work	6,11,12,13,22	1	2	1

ElectroSpaceX Requirements Specification

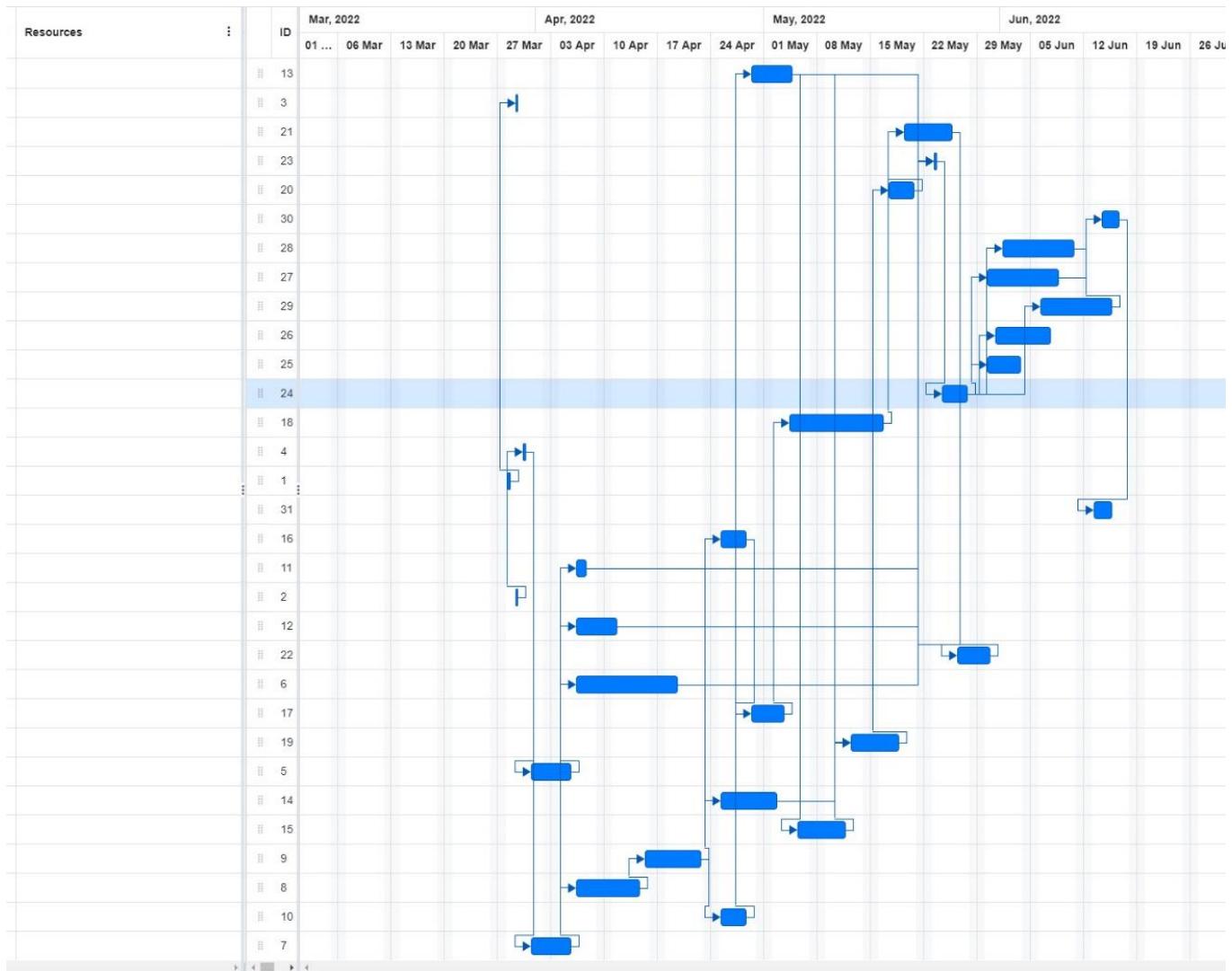
24	Creation of models	23	4	5	2
25	Creating controllers and routes	24	5	7	3
26	Create REST API	24	6	8	3
27	Create Client page	24	8	10	6
28	Create Admin Page	24	8	10	6
29	Create Economist Page	24	8	10	6
30	Component diagram	27,28,29	3	4	2
31	Deployment diagram	30	3	4	2

ElectroSpaceX Requirements Specification

Gantt Chart

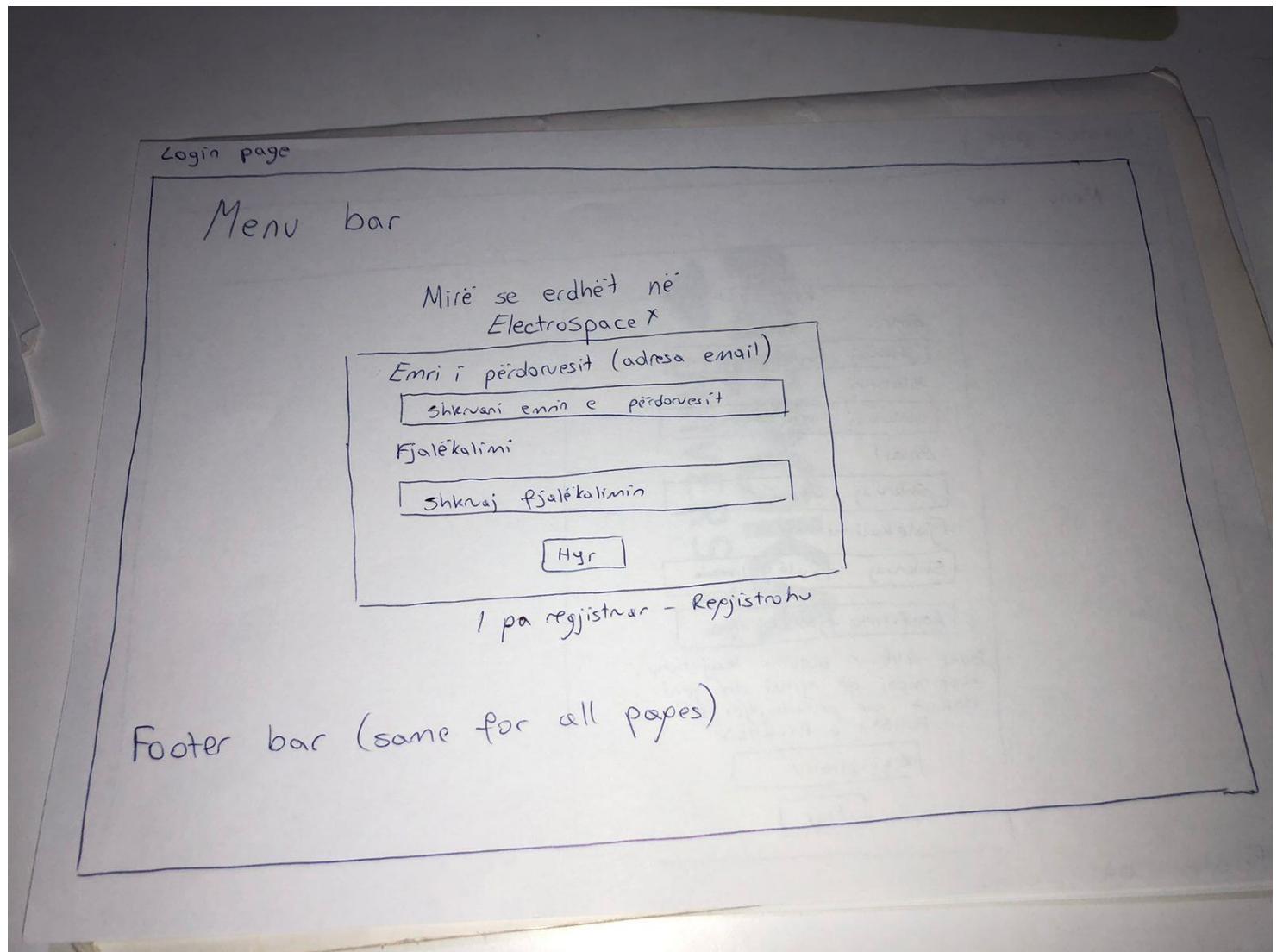
ID	Name	Start Date	End Date	Duration	Progress %	Dependency
7	User stories	Mar 31, 2022	Apr 05, 2022	4 days	0	4FS
10	Use Tables	Apr 25, 2022	Apr 28, 2022	4 days	0	9FS
8	Use scenarios	Apr 06, 2022	Apr 14, 2022	7 days	0	7FS
9	Use Case Diagrams	Apr 15, 2022	Apr 22, 2022	6 days	0	8FS
15	Swimlane Diagrams	May 05, 2022	May 11, 2022	5 days	0	13FS
14	State Diagrams	Apr 25, 2022	May 02, 2022	6 days	0	9FS
5	Sketches	Mar 31, 2022	Apr 05, 2022	4 days	0	4FS
19	Sequence	May 12, 2022	May 18, 2022	5 days	0	15FS,14FS,13FS
17	Relational Schema	Apr 29, 2022	May 03, 2022	3 days	0	16FS
6	Prototyping	Apr 06, 2022	Apr 19, 2022	10 days	0	5FS
22	Object Diagram	May 26, 2022	May 30, 2022	3 days	0	21FS
12	Nonfunctional Requirements	Apr 06, 2022	Apr 11, 2022	4 days	0	7FS
2	Meeting with the business manager	Mar 29, 2022	Mar 29, 2022	1 day	0	
11	Functional Requirements	Apr 06, 2022	Apr 07, 2022	2 days	0	7FS
16	ERD	Apr 25, 2022	Apr 28, 2022	4 days	0	9FS
31	Deployment diagram	Jun 13, 2022	Jun 15, 2022	3 days	0	30FS-4 days
1	Declaring skills to the members	Mar 28, 2022	Mar 28, 2022	1 day	0	
4	Deciding on project roles	Mar 30, 2022	Mar 30, 2022	1 day	0	2FS
18	Data flow diagram	May 04, 2022	May 16, 2022	9 days	0	17FS
24	Creation of models	May 24, 2022	May 27, 2022	4 days	0	23FS
25	Creating controllers and routes	May 30, 2022	Jun 03, 2022	5 days	0	24FS
26	Create REST API	May 31, 2022	Jun 07, 2022	6 days	0	24FS+1 day
29	Create Economist Page	Jun 06, 2022	Jun 15, 2022	8 days	0	24FS+5 days
27	Create Client page	May 30, 2022	Jun 08, 2022	8 days	0	24FS
28	Create Admin Page	Jun 01, 2022	Jun 10, 2022	8 days	0	24FS+2 days
30	Component diagram	Jun 14, 2022	Jun 16, 2022	3 days	0	29FS-2 days,28FS+
20	Collaboration	May 17, 2022	May 20, 2022	4 days	0	19FS-2 days
23	Coding separation of work	May 23, 2022	May 23, 2022	1 day	0	22FS-6 days,13FS+...
21	Class Diagram	May 19, 2022	May 25, 2022	5 days	0	20FS-4 days,18FS+...
3	Assigning group roles	Mar 29, 2022	Mar 29, 2022	1 day	0	1FS
13	Activity Diagrams	Apr 29, 2022	May 04, 2022	4 days	0	10FS

ElectroSpaceX Requirements Specification

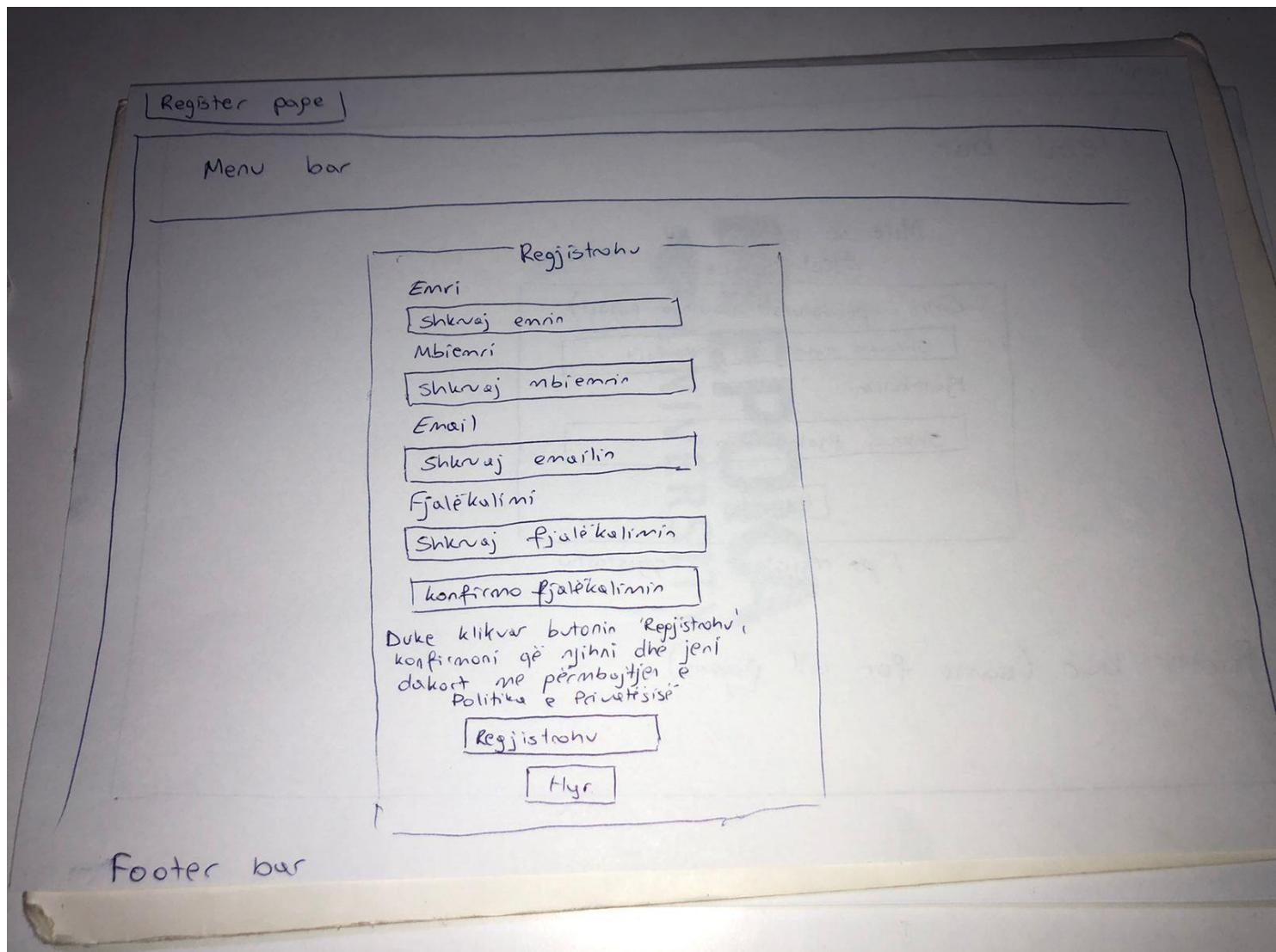


18. SKETCHES

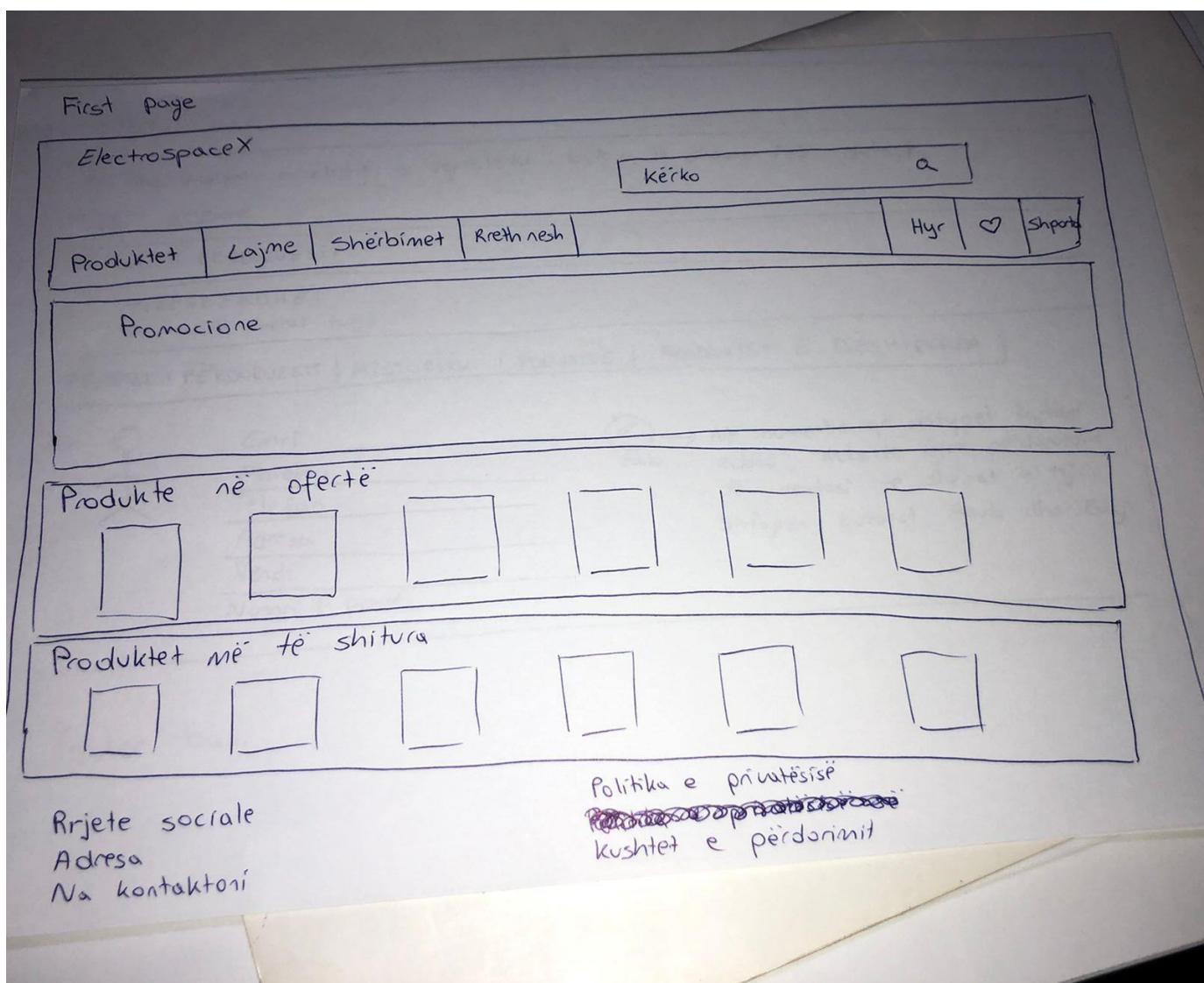
Log In Page



REGISTRATION PAGE



MENU PAGE



When Clicking a Product

At the moment we click a product.

Produktet	Lojme	Shërbimet	Rreth nesh	Kërkohet	Hyr	Shporta
Të > kategoritë						
Foto e produktit		Emri i produktit Kodi: --- më tepër ★ ★ ★ ★ ★ Totali i komenteve: -			Gjimi kryesor: Ulje: Gjimi mbas uljes: zgjidhni sasinë ♥ <input checked="" type="checkbox"/> 1 <input type="checkbox"/> Shto	
Përshtkimi	Specifikat	Komente (-)				

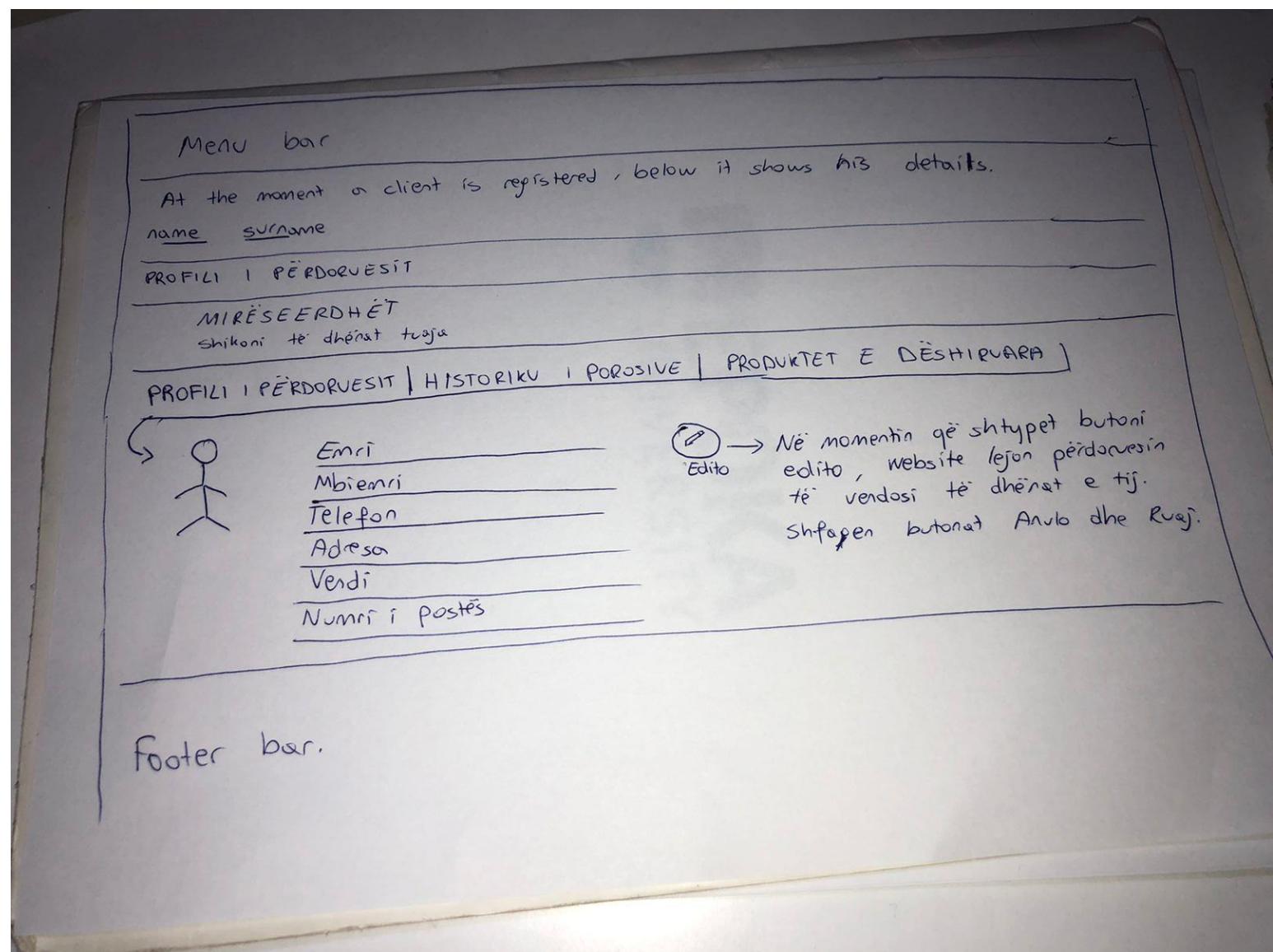
If the client clicks the përshtkimi button, a text will appear describing the product.

- If the client clicks the specifikat button, some general specifications of the product will appear.
- If the client clicks the komente button, comments and reviews of other users will be shown.

Rrjetet sociale
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kushtet e përdonimit

Client Profile Page



19. PROTOTYPE

The screenshot shows a website layout for 'ELECTROSPACEX'. At the top, there's a purple header bar with the company logo 'EE ELECTROSPACEX' on the left and a search bar with the text 'KERKO' on the right. Below the header, a navigation menu includes links for 'Produktet', 'Lajme', 'Sherbimet', 'Rreth nesh', 'Hyr', a magnifying glass icon for search, and 'Shporta'. The main content area has three distinct sections:

- Promocione**: A large purple box containing placeholder text.
- Produktet ne oferte**: A purple box featuring three product images: a black microwave oven, a red and silver electric heater, and a copper-colored kettle.
- Produktet me te shitura**: A purple box featuring three product images: a built-in oven with a cooktop, a white range hood, and a white chest freezer.

At the bottom of the page is a dark blue footer bar with social media icons for Facebook, LinkedIn, Twitter, and Instagram.

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ELECTROSPACEX

KERKO

Produktet Lajme Sherbimet Rreth nesh Hyr Q Shporta

Produkte te rekomanduara

Televizore | Frigorifere | Pjanure | Sobe | Aspiratore | Freskuese per lokale



FURRE BEKO BIE22100XC

✓ Furre me kapacitet 71 L, Klasi i energjisë A

✓ Muret katalitike: Muret qe thithin yndyrat

✓ Muret katalitike ne muret e pasme
dhe anesore te furres tuaj perdonin shkencen
e zgjuar per te thithur yndyrat e gatimit
dhe per te zvogeluar aromat e ushqimit
me teper...

[Shiko specifikat](#)



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The screenshot shows the top navigation bar of the website. It features the logo "ELECTROSPACEX" with a stylized "E" icon. To the right is a purple search bar with the text "KERKO". Below the search bar is a horizontal menu with the following items: "Produktet", "Lajme", "Sherbimet", and "Rreth nesh". To the right of the menu are three icons: a magnifying glass for search ("Hyr"), a person icon for user account ("Shporta"), and a gear icon.

This screenshot displays a section of the website dedicated to product specifications. At the top, there are three tabs: "Pershkrimi" (Description), "Specifikat" (Specifications), and "Komentet" (Comments). The "Specifikat" tab is currently active, indicated by a purple background. Below the tabs, a list of product features is presented with green checkmarks:

- ✓ Furri me kapacitet 71 L, Klasi i energjise A
- ✓ Muret katalitike: Muret qe thithin yndyrat
- ✓ Muret katalitike ne muret e pasme dhe anesore te furres tuaj perdonin shkencen e zgjuar per te thithur yndyrat e gatimit dhe per te zvogeluar aromat e ushqimit
- ✓ Ndriçim halogjen: Pamje e qarte e asaj qe po ndodh brenda
- ✓ Ndriçimi halogjen ju ndihmon te shihni te gjithe zgavren e furres tuaj, keshtu qe ju mund te mbani nje sy ne krijimet tuaja te kuzhines me deren e mbyllur fort.
- ✓ Dera e qendrueshme: Dera e forte per mbajtjen e eneve te renda dhe ene gatimi SteamShine: Pastrim me Avull



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Pershkrimi	Specifikat	Komentet
Marka:	BEKO	
Lloji:	FURRE	
Kapaciteti:	71 Litra	
Menyra e pjekjes:	Multifunksionale 6 Funksione	
Kohemates:	PO	
Paneli i kontrollit:	Manual	
Ekran LCD:	JO	
Vetepastrim:	JO	
Menyra e hapjes:	Normale	
Bllokim per femijet:	JO	
Mikrovale:	JO	
Klasa e energjise:	A	
Garanci Shtese:	-	
Menyra e vetepastrimit:	Katalitik	
Garancia Normale:	60	
Ean Code:	8690842021404	



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The screenshot shows a web application interface for managing requirements. At the top, there is a navigation bar with the ElectroSpaceX logo, search bar, and various menu items like 'Produktet', 'Lajme', 'Sherbimet', 'Rreth nesh', 'Hyr', 'Q', and 'Shporta'. Below the navigation, there are three tabs: 'Pershkrimi' (selected), 'Specifikat', and 'Komentet'. The main content area displays a large light blue background with a white speech bubble icon in the center. Below the icon, the text 'Nuk ka komente per kete produkt' is displayed. At the bottom of this section is a purple button labeled 'Sugjerimi juaj'. At the very bottom of the page, there is a footer bar with social media icons for Facebook, LinkedIn, Twitter, and Instagram.



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KERKO

Produktet Lajme Sherbimet Rreth nesh

Hyr Shporta

Mire se erdhet ne

Emri i perdoruesit (adresa email)

Shkruani emrin e perdoruesit

Fjalekalimi

Shkruaj fjalekalimin

Hyr

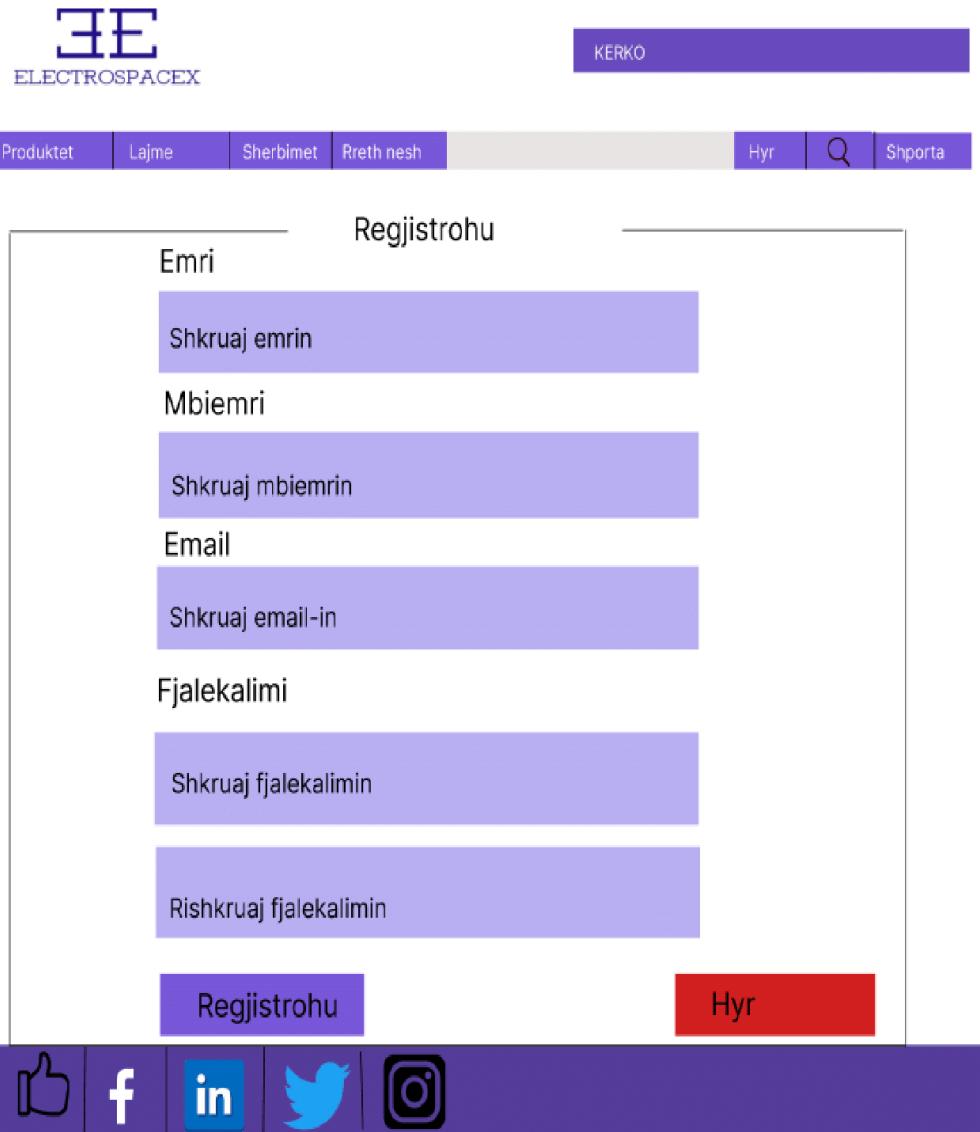
[Regjistrohu](#)

[Keni harruar fjalekalimin](#)



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The image shows a registration form for ElectroSpaceX. At the top left is the company logo 'EE ELECTROSPACEX'. To its right is a purple search bar labeled 'KERKO'. Below the logo is a navigation bar with tabs: 'Produktet' (selected), 'Lajme', 'Sherbimet', 'Rreth nesh', 'Hyr' (with a magnifying glass icon), and 'Shporta'. The main form area has a light gray background and a white registration form. The form is titled 'Regjistrohu' at the top center. It contains four input fields with placeholder text: 'Emri' (Shkruaj emrin), 'Mbiemri' (Shkruaj mbiemrin), 'Email' (Shkruaj email-in), and 'Fjalekalimi' (Shkruaj fjalekalimin). Below these are two additional input fields: 'Rishkruaj fjalekalimin' (Shkruaj) and 'Rishkruaj emrin' (Shkruaj). At the bottom of the form are two buttons: a blue 'Regjistrohu' button and a red 'Hyr' button. Below the form is a dark purple footer bar featuring social media icons for Facebook, LinkedIn, Twitter, and Instagram.

Regjistrohu

Emri
Shkruaj emrin

Mbiemri
Shkruaj mbiemrin

Email
Shkruaj email-in

Fjalekalimi
Shkruaj fjalekalimin

Rishkruaj fjalekalimin

Rishkruaj emrin

Regjistrohu Hyr

Like f in Twitter Instagram

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Keni harruar fjalekalimin

Email

Shkruani adresen email

Shkruani adresen email ne llogarine tuaj
ne faqen ElektroSpaceX. Per te
ndryshuar fjalekalimin, klikoni linkun e
derguar permes adreses email.

[Keni harruar fjalekalimin](#)

[Hyr](#)



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Produktet Lajme Sherbimet Rreth nesh Hyr Shporta

Ju jeni regjistruar
me sukses

Lidhja e konfirmimit dërgohet në postën
elektronike. Për të aktivizuar llogarinë tuaj të
përdoruesit, konfirmoni regjistrimin përmes
lidhjes së dërguar në postën tuaj elektronike.

Nëse nuk e morët postën elektronike në kutinë tuaj, kontrolloni
dosjen e spamicës.

Hyr



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APPENDIX

The appendixes are not always considered part of the actual Requirements Specification and are not always necessary. They may include

- Sample input/output formats, descriptions of cost analysis studies, or results of user surveys;
- Supporting or background information that can help the readers of the Requirements Specification;
- A description of the problems to be solved by the system;
- Special packaging instructions for the code and the media to meet security, export, initial loading, or other requirements.

When appendixes are included, the Requirements Specification should explicitly state whether or not the appendixes are to be considered part of the requirements.

Appendix A. Organizing the Requirements

This section is for information only as an aid in preparing the requirements document.

Detailed requirements tend to be extensive. Give careful consideration to your organization scheme. Some examples of organization schemes are described below:

By System Mode

Some systems behave quite differently depending on the mode of operation. For example, a control system may have different sets of functions depending on its mode: training, normal, or emergency.

By User Class

Some systems provide different sets of functions to different classes of users. For example, an elevator control system presents different capabilities to passengers, maintenance workers, and fire fighters.

By Objects

Objects are real-world entities that have a counterpart within the system. For example, in a patient monitoring system, objects include patients, sensors, nurses, rooms, physicians, medicines, etc. Associated with each object is a set of attributes (of that object) and functions (performed by that object). These functions are also called services, methods, or processes. Note that sets of objects may share attributes and services. These are grouped together as classes.

By Feature

A feature is an externally desired service by the system that may require a sequence of inputs to affect the desired result. For example, in a telephone system, features include local call, call forwarding, and conference call. Each feature is generally described in a sequence of stimulus-response pairs, and may include validity checks on inputs, exact sequencing of operations, responses to abnormal situations, including error handling and recovery, effects of parameters, relationships of inputs to outputs, including input/output sequences and formulas for input to output.

By Stimulus

Some systems can be best organized by describing their functions in terms of stimuli. For example, the functions of an automatic aircraft landing system may be organized into sections for loss of power, wind shear, sudden change in roll, vertical velocity excessive, etc.

By Response

Some systems can be best organized by describing all the functions in support of the generation of a response. For example, the functions of a personnel system may be organized into sections corresponding to all functions associated with generating paychecks, all functions associated with generating a current list of employees, etc.

By Functional Hierarchy

When none of the above organizational schemes prove helpful, the overall functionality can be organized into a hierarchy of functions organized by common inputs, common outputs, or common internal data access. Data flow diagrams and data dictionaries can be used to show the relationships between and among the functions and data.

Additional Comments

Whenever a new Requirements Specification is contemplated, more than one of the organizational techniques given above may be appropriate. In such cases, organize the specific requirements for multiple hierarchies tailored to the specific needs of the system under specification.

There are many notations, methods, and automated support tools available to aid in the documentation of requirements.