INTERNATIONAL BURCH UNIVERSITY
FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGIES
DEPARTMENT OF INFORMATION TECHNOLOGIES

Software Requirements Specification (SRS) Project

IT Shop

Team members:
Tarik Panjeta
Benjamin Peljto

Sarajevo, 2023.

Table of Contents

Project Proposal 2
Functional Requirements 3
Nonfunctional Requirements 7
Use case diagram 8
Activity diagrams 9
Login 9
My profile 10
My cart 11
Search with filter 12
Customer support 13
Class diagram 14
Object diagram 15
Sequence diagrams 16
Login 16
Registration 17
Display products 18
Add products 18
Buy products 19
Supplier 20
Shopping bot 20
Communication diagrams 21
Login 21
Register 22
Display products 22
Add products 23
Buy products 24
Supplier 24
Shopping bot 25
Behavioral state machine diagrams 26
MyCart 26
Product 26
Order 27

Project Proposal

Project Title: IT Shop	
Start Date: 31.10.2022	**End Date:** 01.02.2023.
Project Manager: Tarik Panjeta	
Project Sponsor: European Investment Fund	
Purpose and business need: Bosnia's IT market offers a lot of individual IT web stores with different items and, of course, different prices. To find the best price at the most reliable retailer, you need to visit several different IT Shop web stores and analyze ratings and prices from those retailers to find the best deal you can get. Our IT Shop web application resolves those problems and simplifies that process.	
Customers/Users: We separate our customers/users into two groups. Those two groups are mass and individual buyers. Our potential mass buyers are IT companies, state institutions, universities, market retailers, and many other big companies in search of technical devices. As for the individuals who can be our potential buyers we include students (from elementary school to university), freelancers, and any other individuals in search of the best price for desired technology items.	
Goals and objectives: This project's main goal is to make shopping for IT equipment much easier, safer, less costly, and more time efficient. The main income of our software will be through advertisement (ex. Google AdSense) and subscribed companies (consulting). Less-known stores will get exposure via our software if they accept advertisements based on our advice. Increase in sales for our cooperators.	
Project priorities: Both web application and mobile application development, Fast searching algorithms for searched products in several different ways (default, price, availability, delivery time, brands, specifications, and category), Design and implementation of online shopping system, Protection and good encryption of user's data as well as DLP (data loss prevention), Online support through shopping support bot.	
Constraints and special issues: Individual database merging into our big database (via seller's web server API), sellers without their own premade database.	
Risks and obstacles to success: Because we are pioneers in this kind of software, we don't expect people to use it immediately but we hope that our software will be desired. One of the issues can be if some of the IT Shops don't want to cooperate. The main part of our country's citizens are afraid to buy online.	
Technical Leads: Tarik Panjeta, Benjamin Peljto	

Functional Requirements

1. Feature name: Home page

Role(s): Logged users and Guest users

Feature description/steps:

The home page must contain:

- Page logo
- Search bar and Search button
- Carousel with products on sale
- “Login” button
- “Register” button
- “My profile” dropdown menu
- “Customer support” button

Dependencies/constraints: “My profile” and “Customer support” button must not be selectable if you’re not a logged-in user.

2. Feature name: Register

Role(s): New users

Feature description/steps:

1. Register popup must appear when the user selects the register button on the home page or when a guest tries to buy a product and in the login pop-up selects the “Register” button.

2. The register popup shall contain two options: To register as an individual or as a company.

3. When the user selects to register as an individual, the pop-up must contain Full Name, E-mail address, Phone number, Password, and Confirm password text fields.

4. When the user selects to register as a company the pop-up must contain Company Name, E-mail address, Phone number, Company ID, Password, and Confirm password text fields.

5. The user which successfully registers is going to receive a confirmation e-mail.

Dependencies/constraints: If the user doesn’t fill every field or when the password is less than 8 characters, the pop-up must appear again with empty fields and a message “You must fill in required fields and the password must be >=8 characters in order to register!”.

3. Feature name: Login

Role(s): Registered users

Feature description/steps:

1. Login popup will appear when the user selects the login button on the home page or when a guest user selects the “Add to cart” button of a product.

2. Login pop-up must contain the E-mail and Password required text fields as well as the “I forgot my password” and the “Register” button.

3. After entering the correct login information, the software must give the user a possibility to select the “Login” button in order to proceed to the Home page.

Dependencies/constraints: If a user doesn’t fill every field correctly, the pop-up must appear again with empty fields and the message “Your e-mail or password is incorrect”.

4. Feature name: Reset password

Role(s): User that selected the “I forgot my password” button.

Feature description/steps:

1. Reset password pop-up must appear when the user selects the “I forgot my password” button from the Login pop-up.

2. Reset password pop-up shall contain only an E-mail text field and a “Send reset password E-mail” button.

3. If the entered e-mail address is found in the system and the user selects the “Send reset password E-mail” button, the user shall get a reset password email.

Dependencies/constraints: Entering existing e-mail is required in order for the system to send a reset password e-mail to the user. If the entered e-mail address doesn’t exist in the system, the user will get the same Reset password pop-up with an additional “This E-mail doesn’t exist” message.

5. Feature name: Searched items page

Role(s): Users that activated the “Search” button

Feature description/steps:

1. User shall land on the searched item page after entering the search word in the “Search bar” and selecting the “Search” button.

2. Searched items page must contain every product relevant to the searched word using the “Relevant product” algorithm.

3. Software must give the user a possibility to add products to “My cart” by selecting the “Add to cart” button.

Dependencies/constraints: If nothing’s entered in the search bar, the user will not activate the “Search” button when selected.

6. Feature name: Filter

Role(s): Users that landed on the searched items page

Feature description/steps:

1. Filter button must contain a dropdown menu with options:

- Filter by price (lower to higher)
- Filter by price (higher to lower)
- Filter by availability
- Filter by manufacturer

Dependencies/constraints: -

7. Feature name: My profile

Role(s): Logged users that selected the “My profile” button

Feature description/steps:

My profile must be a dropdown menu that must contain:

- Profile e-mail
- Change the password button
- Purchased items
- Wish list
- My cart

Dependencies/constraints: -

8. Feature name: My cart page

Role(s): Every logged user

Feature description/steps:

1. My cart page must be activated when the user selects the “My cart” button from the “My profile” dropdown menu.

2. My cart page must contain:

- The list of added products.
- At the end of added products list, the user should see the Summary price.
- User has the ability to increase the quantity of every product and to remove products from the list.
- My cart page must contain the “Buy” button which will activate the purchase algorithm and add the purchased items to “Purchased items”.

Dependencies/constraints: If the item from the “My cart” list is no longer available, it must be removed from the list.

9. Feature name: Customer support

Role(s): Every logged user

Feature description/steps:

1. Online customer support must be implemented as a chat button.

2. When the user selects the chat button, a chat pop-up will appear and the online shopping bot algorithm should be activated in the pop-up.

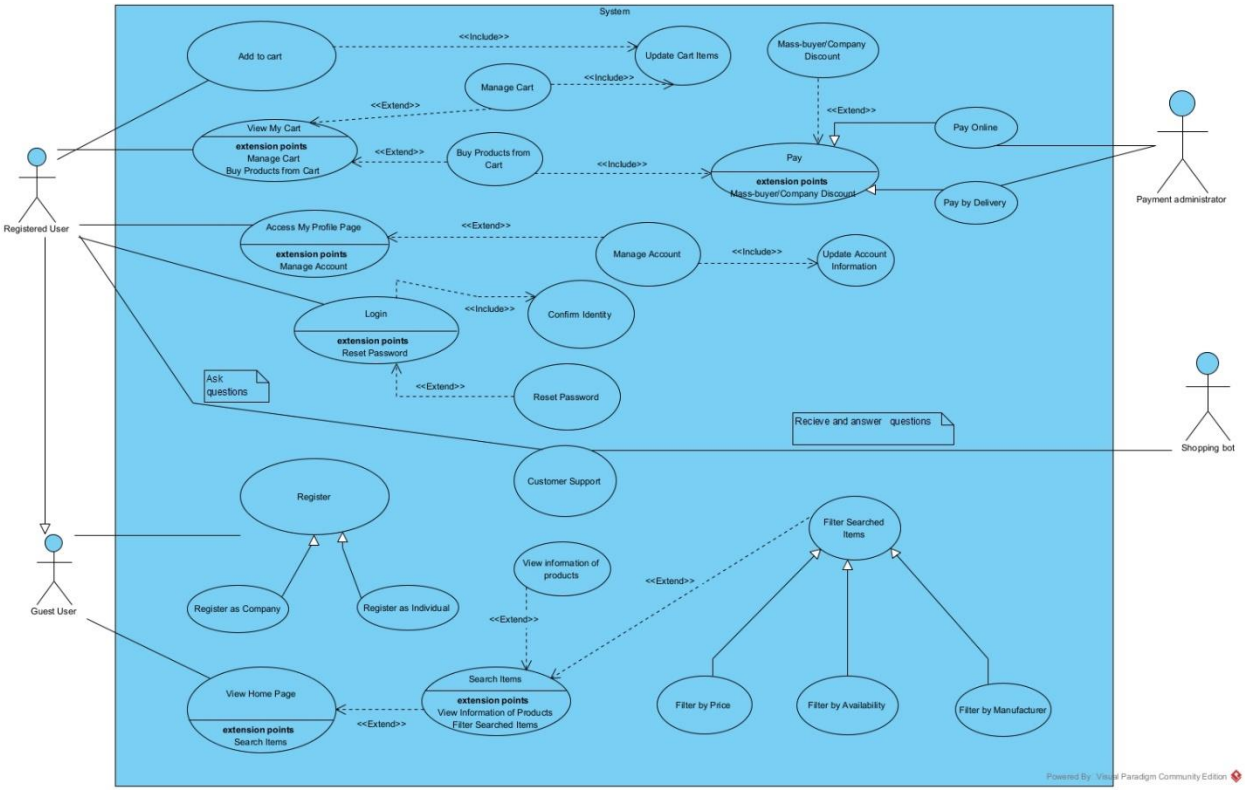
3. User should be able to receive help while shopping.

Dependencies/constraints: In case the online shopping bot can’t help the user, it should prompt the phone number of our customer support employee and working hours.

Nonfunctional Requirements

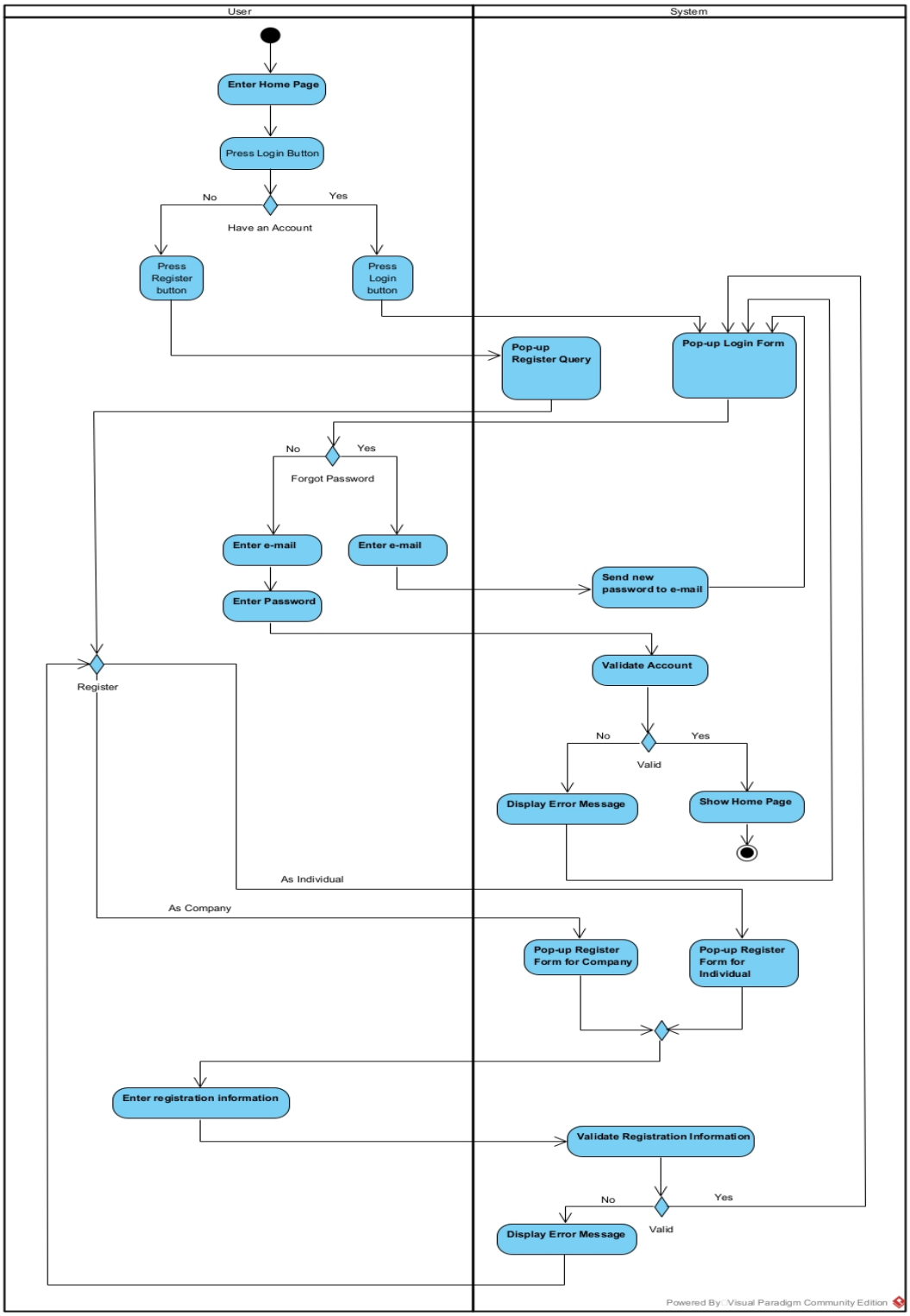
- In case of system maintenance, the system can be unavailable from 2 AM until 6 AM CET.
- In case of updates, the system can be unavailable maximum of 1 day.
- System should show an update message on the home screen 10 days before the update.
- After selecting the “Register” button, a confirmation e-mail should be sent in a maximum of 15 seconds.
- After confirming your account, the account should be created in the database in a maximum of 30 seconds.
- After 10 incorrect inputs of password and login tries, the profile with the entered email address shall be blocked for 24 hours, and the “Confirm your identity” email shall be sent to the same email address.
- System must be available in both Bosnian and English languages
- Search bar must be placed in the top middle of the home page and must be of color (#F9EFEC)
- Carousel on the Home page shall contain items on sale based on system recommendations.
- After the user searches or filters an item, Searched items page must be loaded in less than 3 seconds.
- The system should only be available to users from Bosnia and Herzegovina.
- To successfully log in, the user must confirm that it’s not a robot.
- Company ID should be available only to the system admin.

Use case diagram

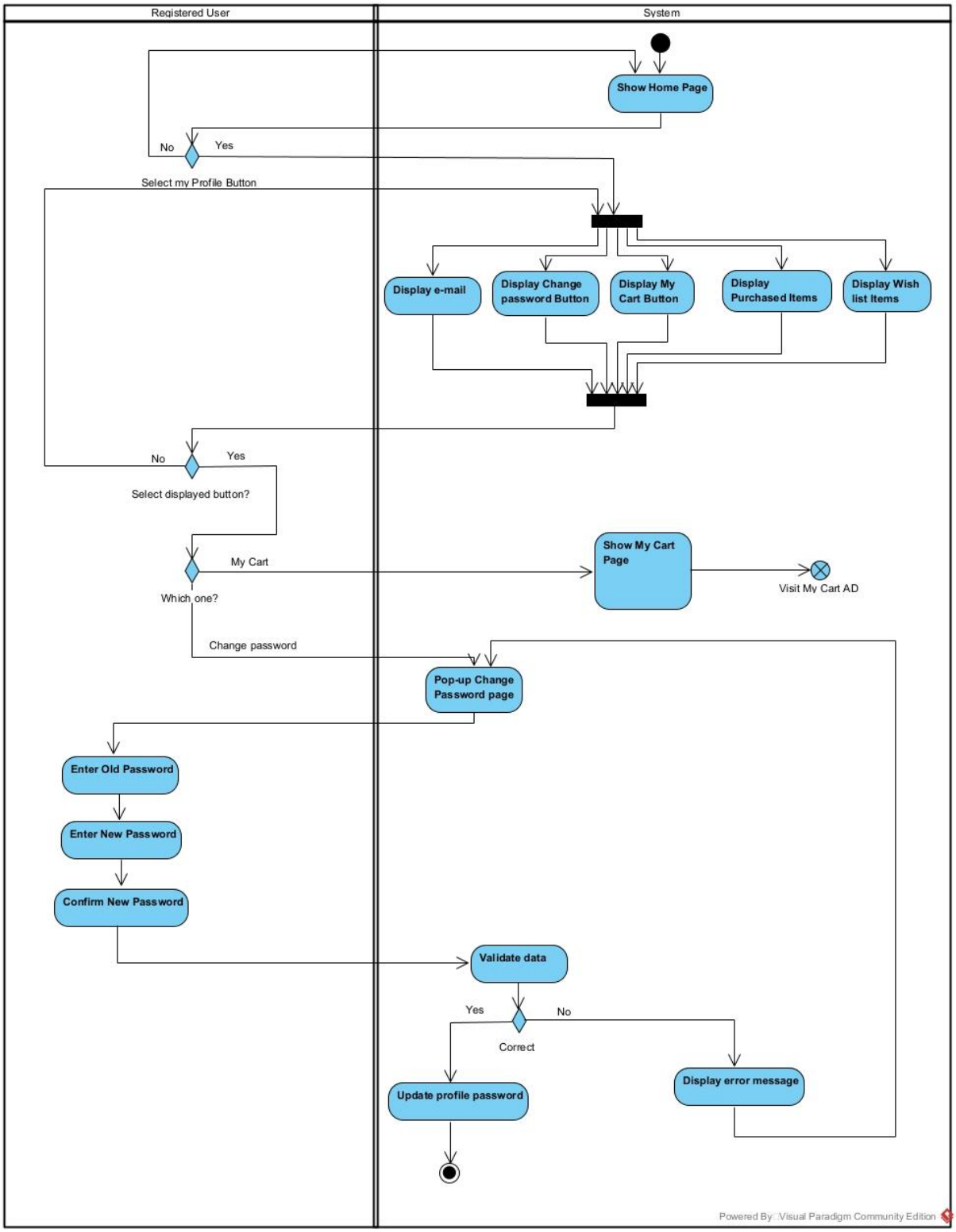


Activity diagrams

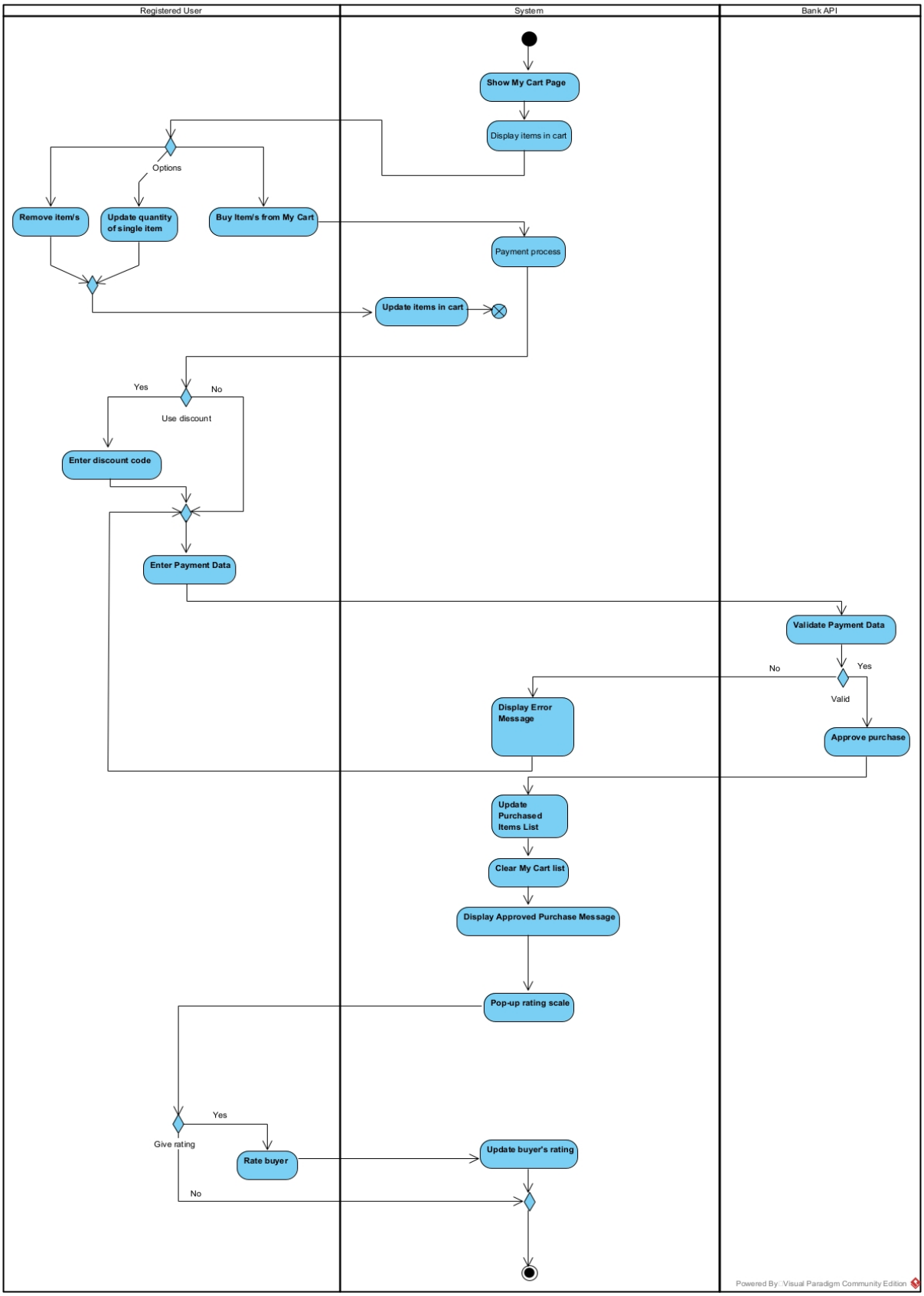
Login



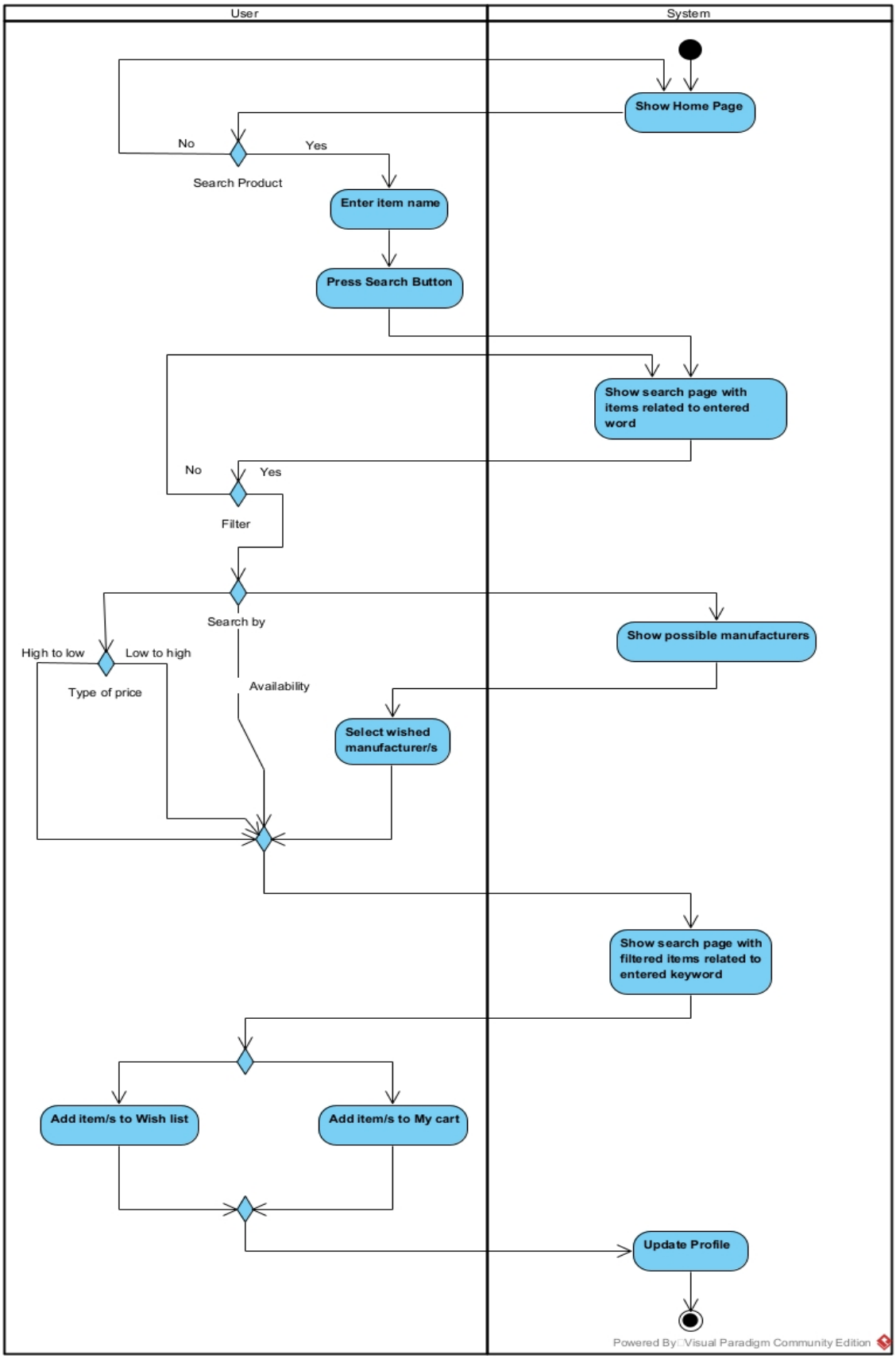
My profile


Registered User
System
Show Home Page
No
Yes
Select my Profile Button
Display e-mail
Display Change password Button
Display My Cart Button
Display Purchased Items
Display Wish list Items
No
Yes
Select displayed button?
My Cart
Which one?
Show My Cart Page
Visit My Cart AD
Change password
Pop-up Change Password page
Enter Old Password
Enter New Password
Confirm New Password
Validate data
Yes
No
Correct
Update profile password
Display error message
Powered By: Visual Paradigm Community Edition

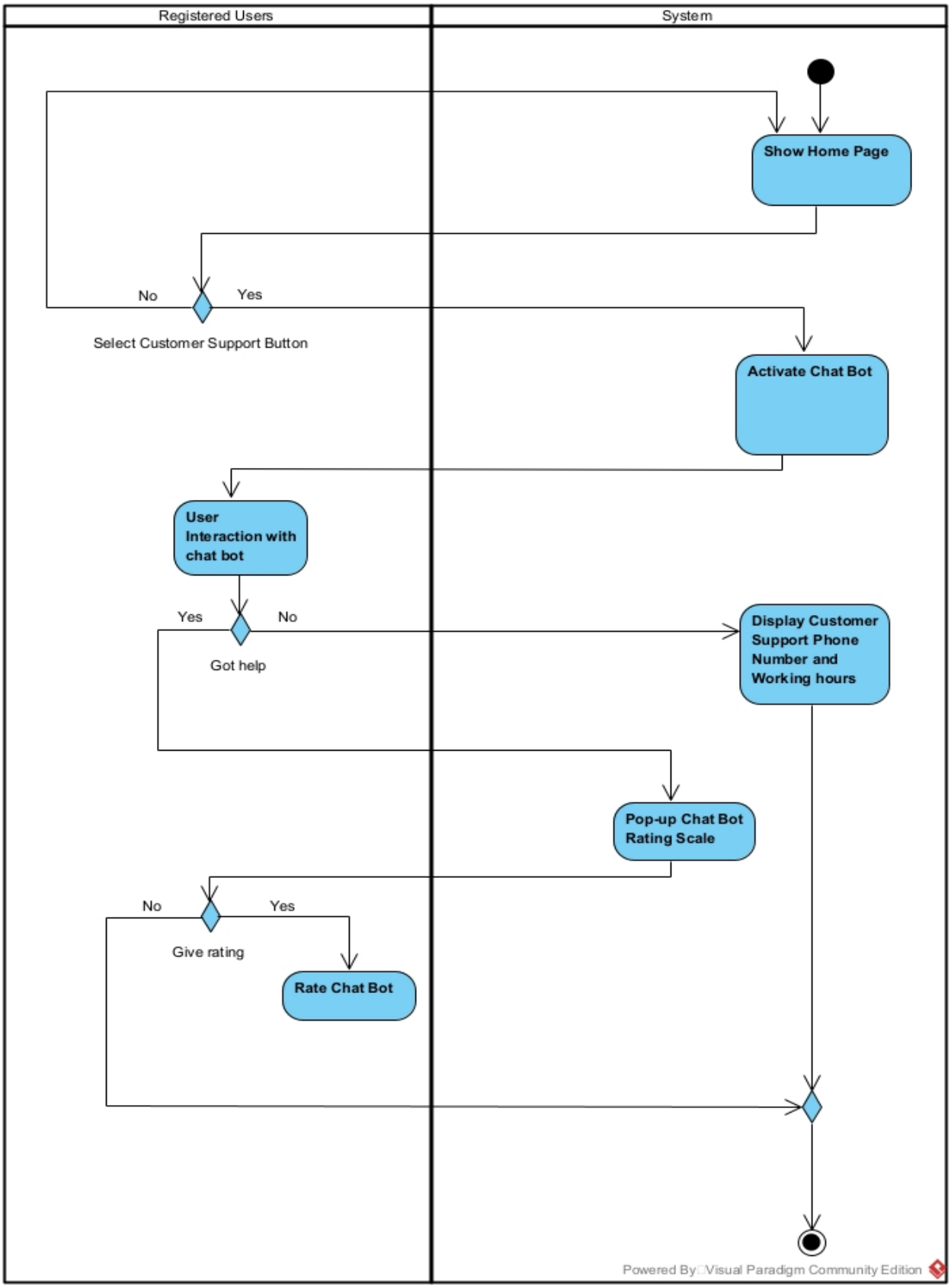
My cart


Registered User
System
Bank API
Show My Cart Page
Display items in cart
Options
Remove item/s
Update quantity of single item
Buy Item/s from My Cart
Payment process
Update items in cart
Yes
No
Use discount
Enter discount code
Enter Payment Data
Validate Payment Data
No
Yes
Valid
Display Error Message
Approve purchase
Update Purchased Items List
Clear My Cart list
Display Approved Purchase Message
Pop-up rating scale
Yes
Give rating
Rate buyer
Update buyer's rating
No
Powered By: Visual Paradigm Community Edition

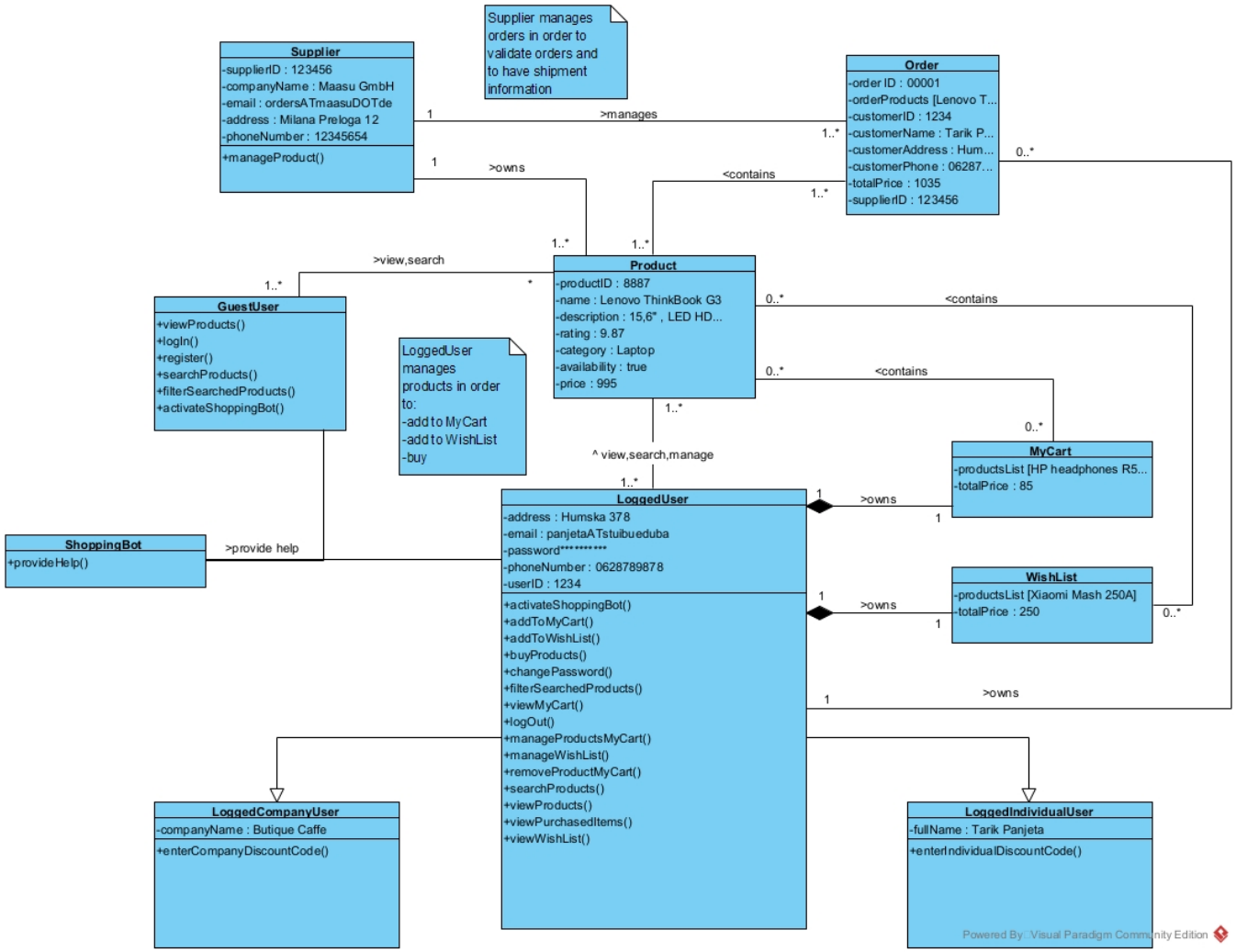
Search with filter



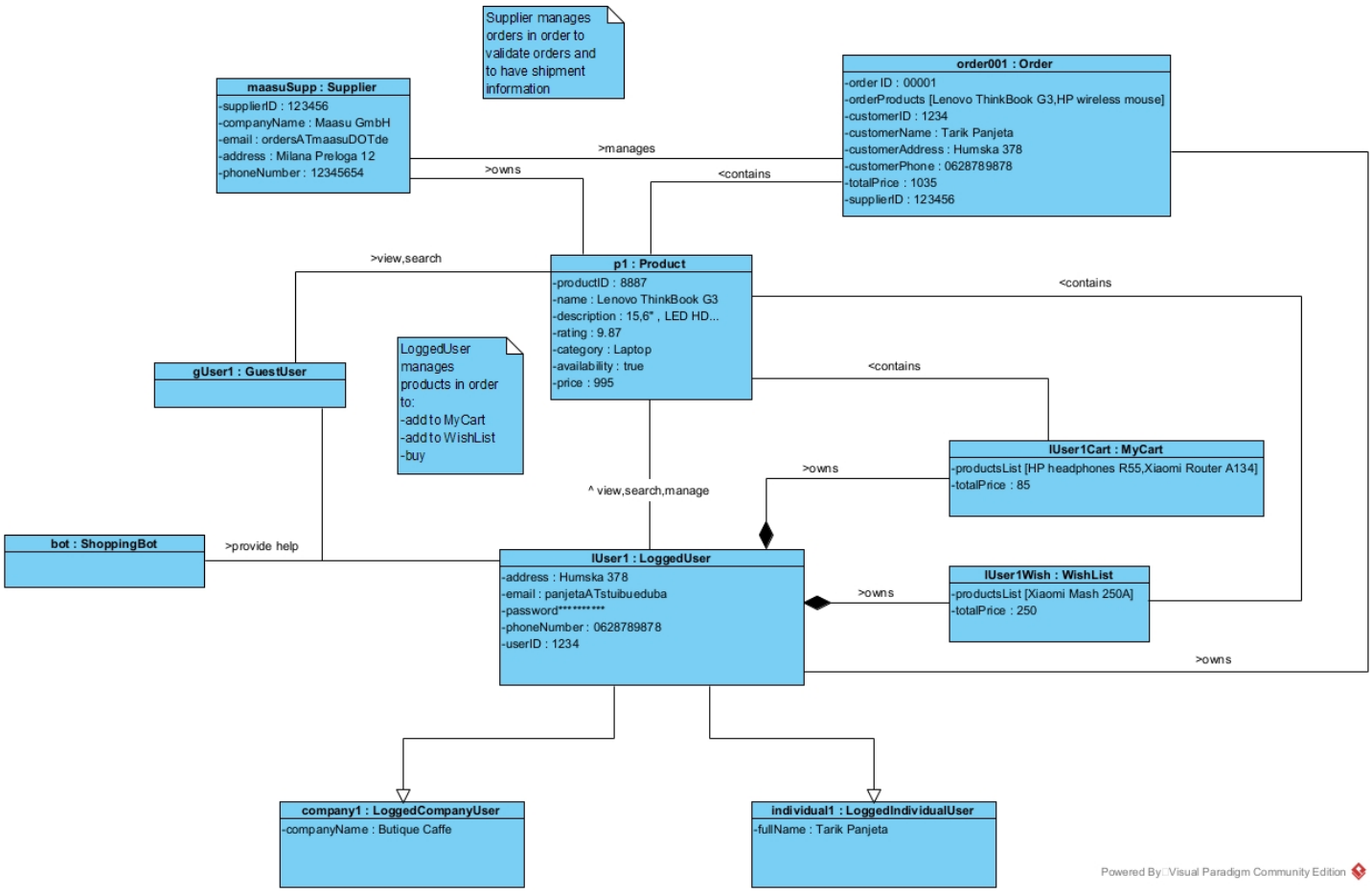
Customer support



Class diagram

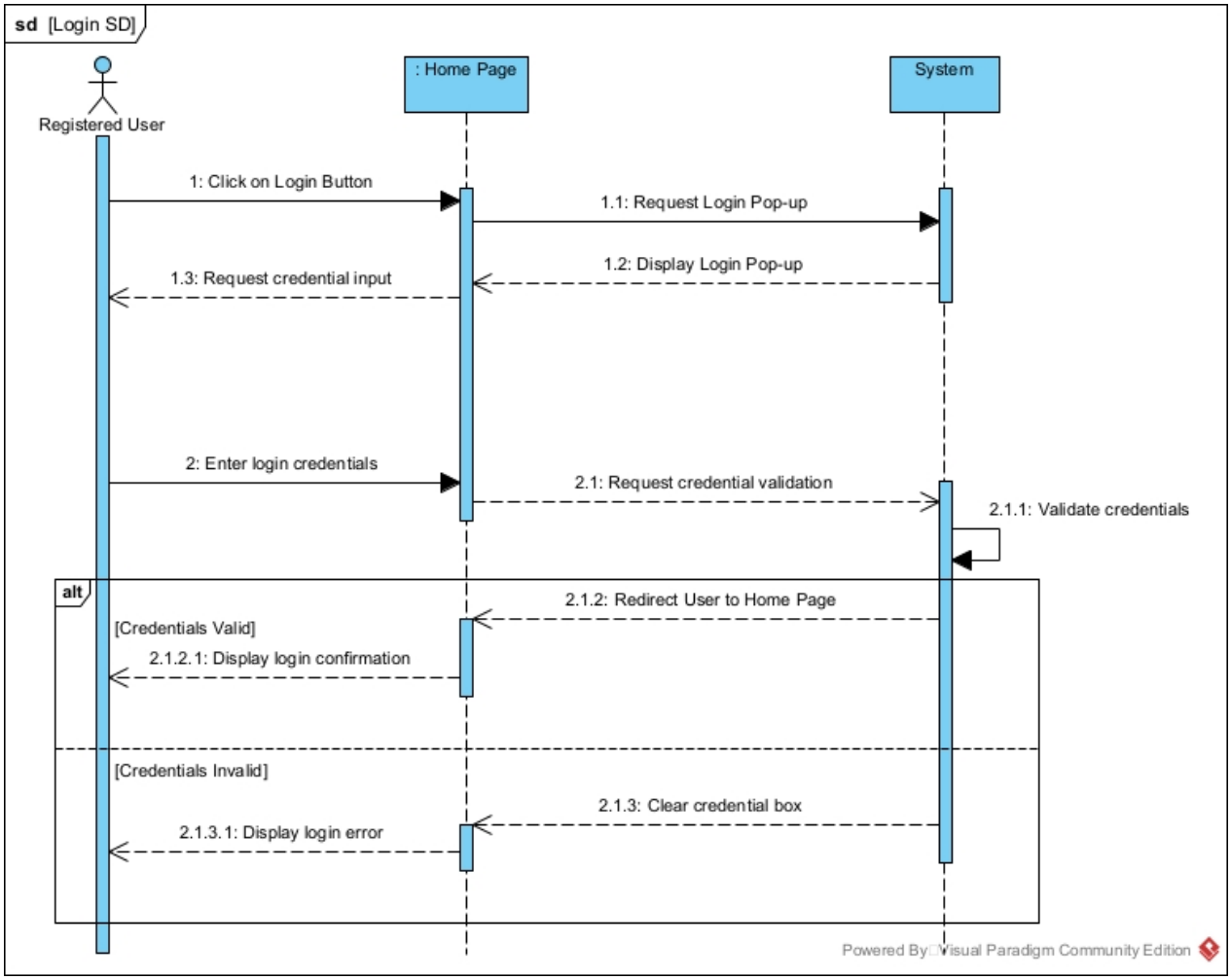


Object diagram

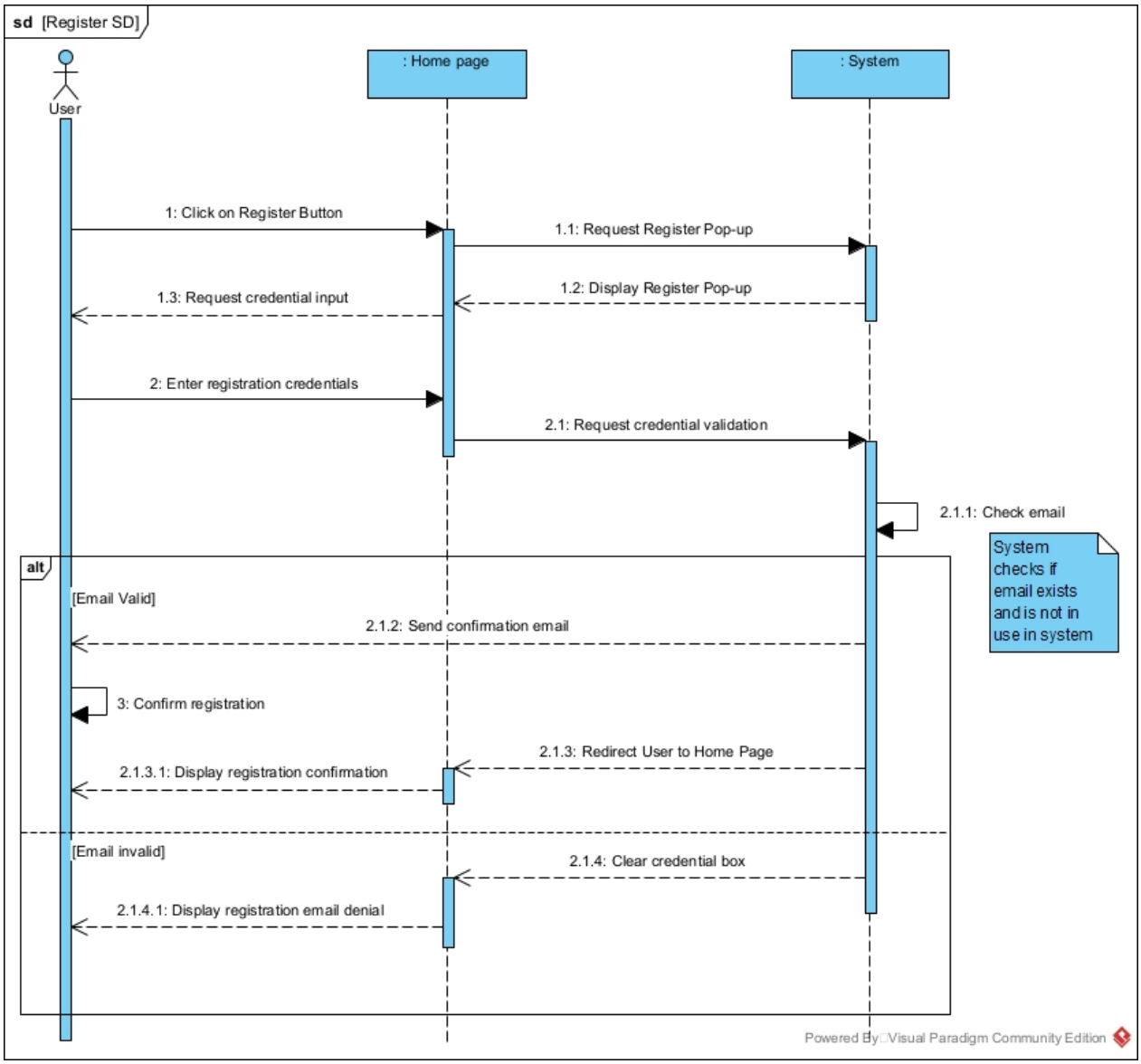


Sequence diagrams

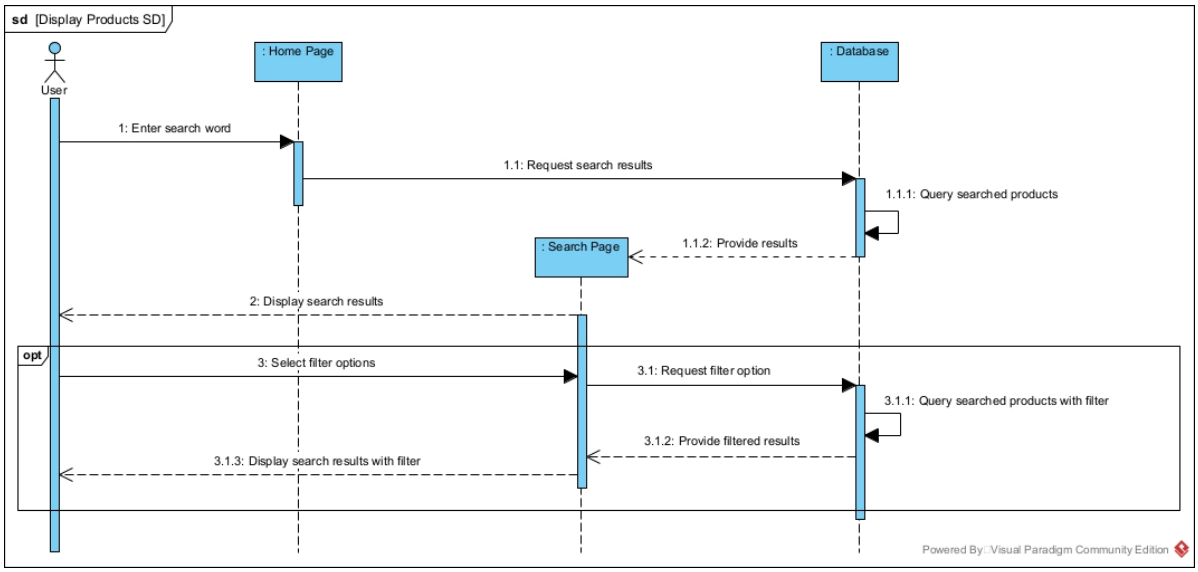
Login



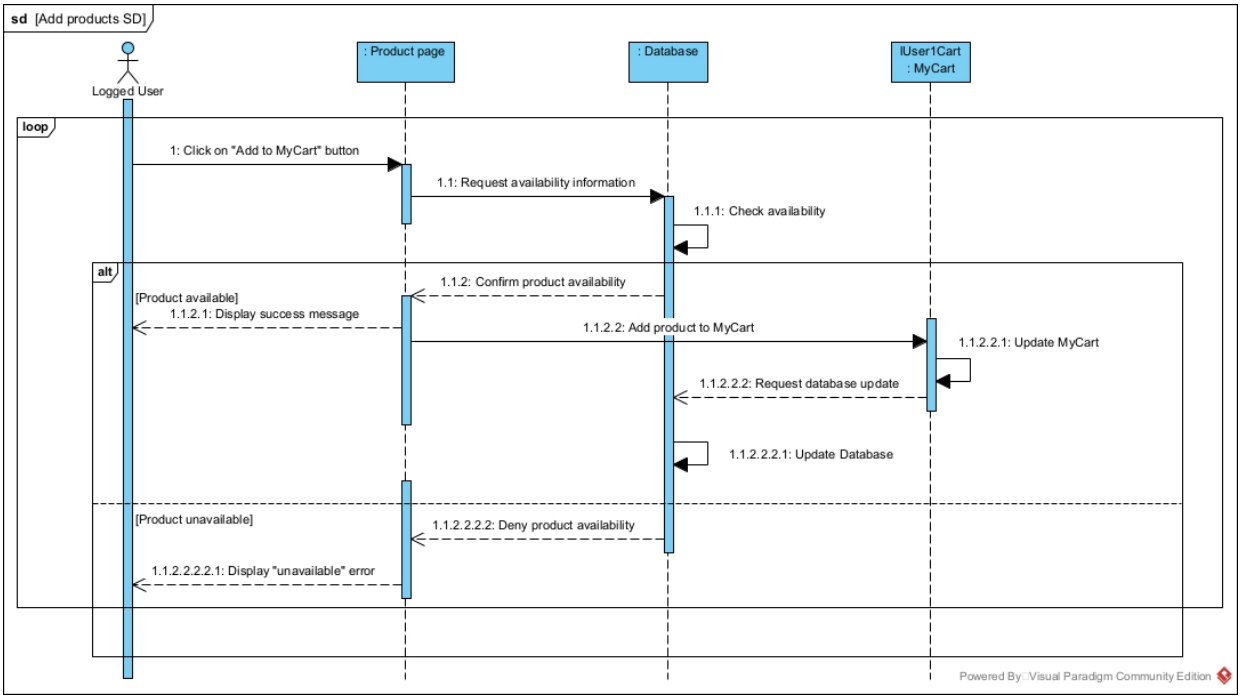
Registration



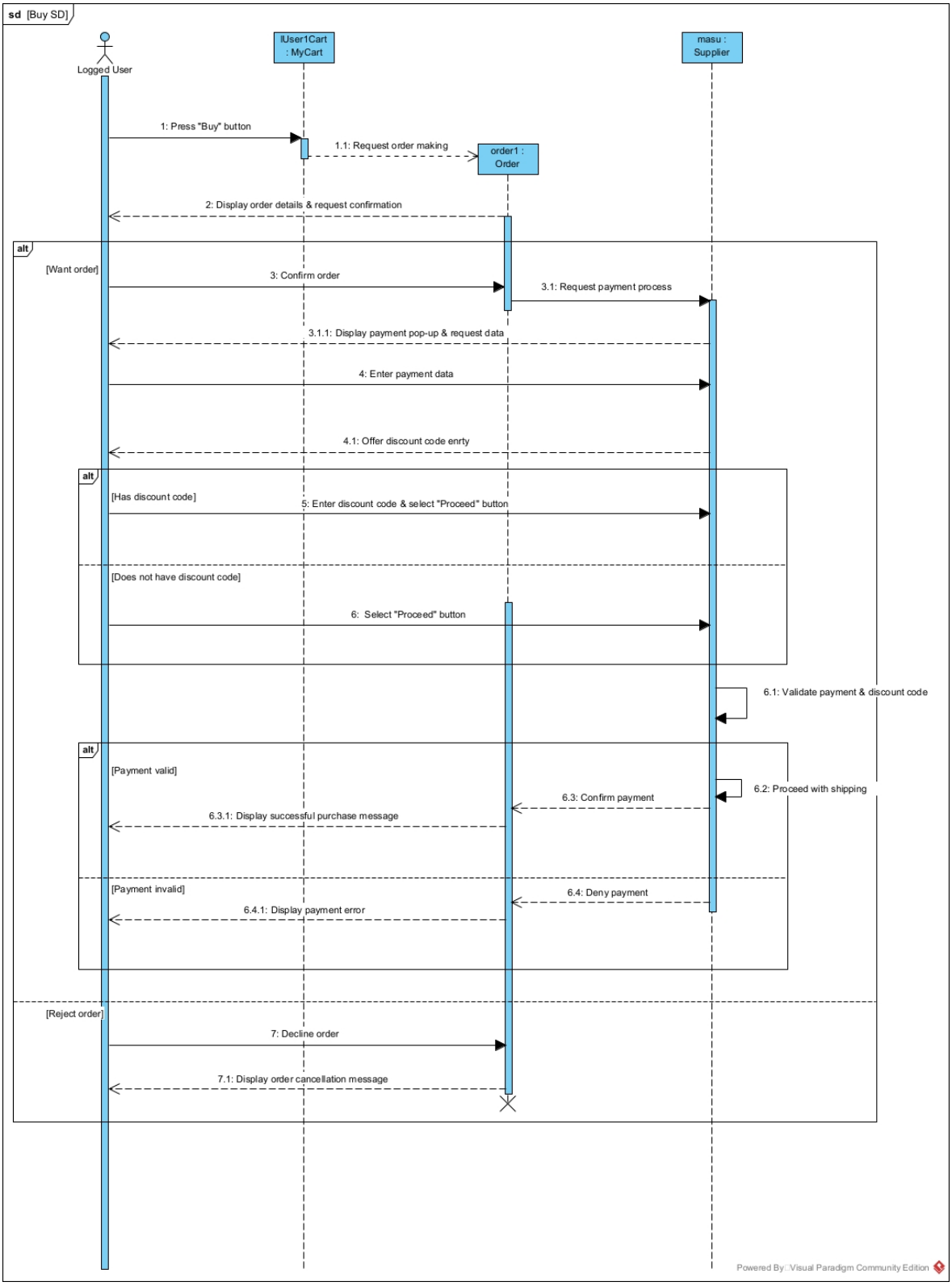
Display products



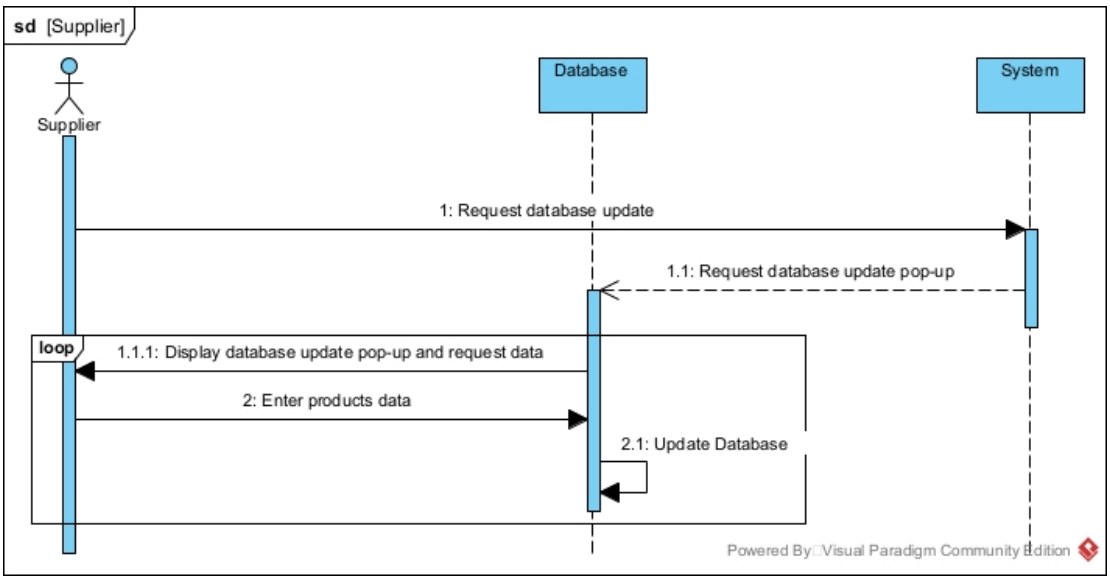
Add products



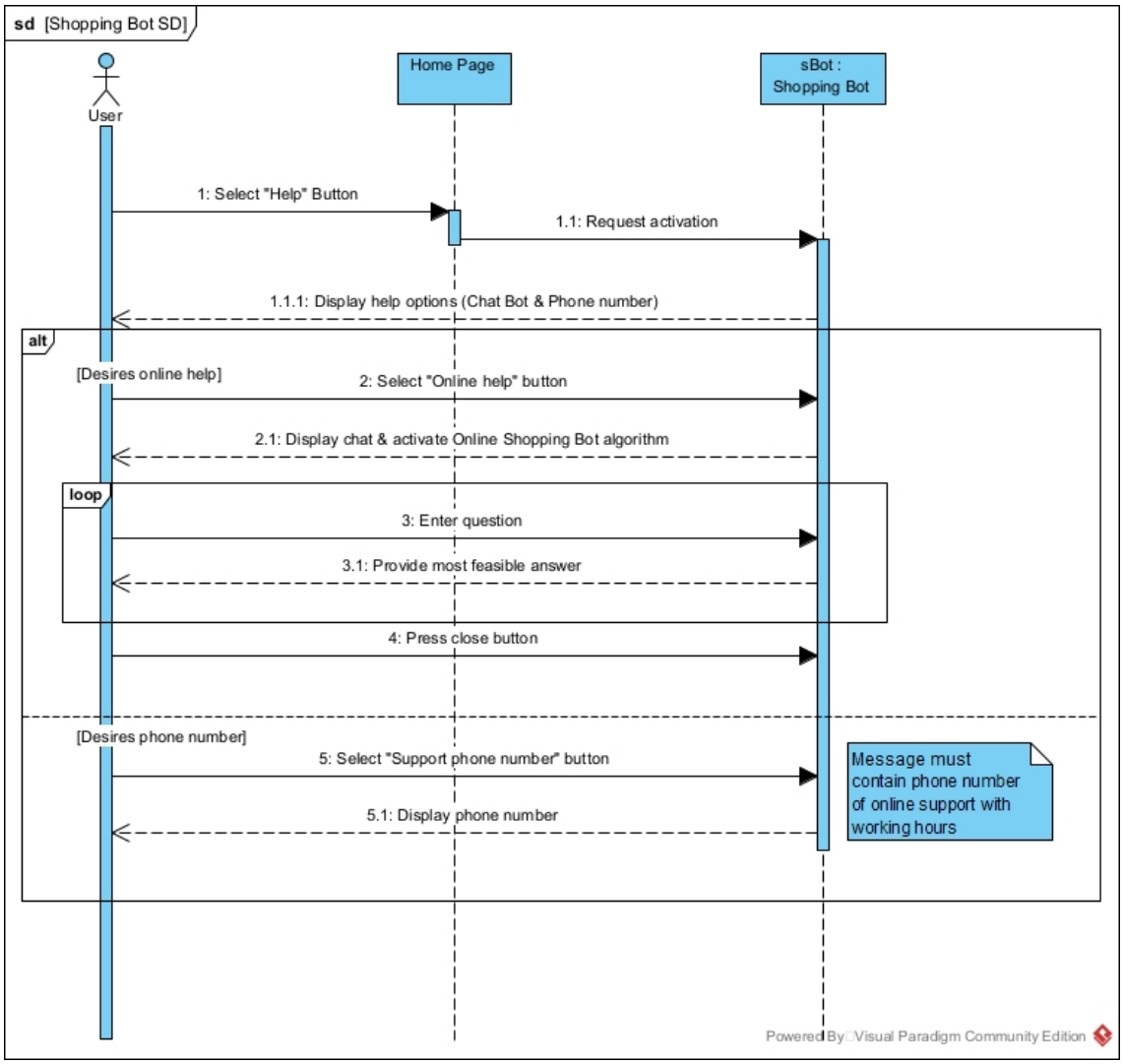
Buy products



Supplier

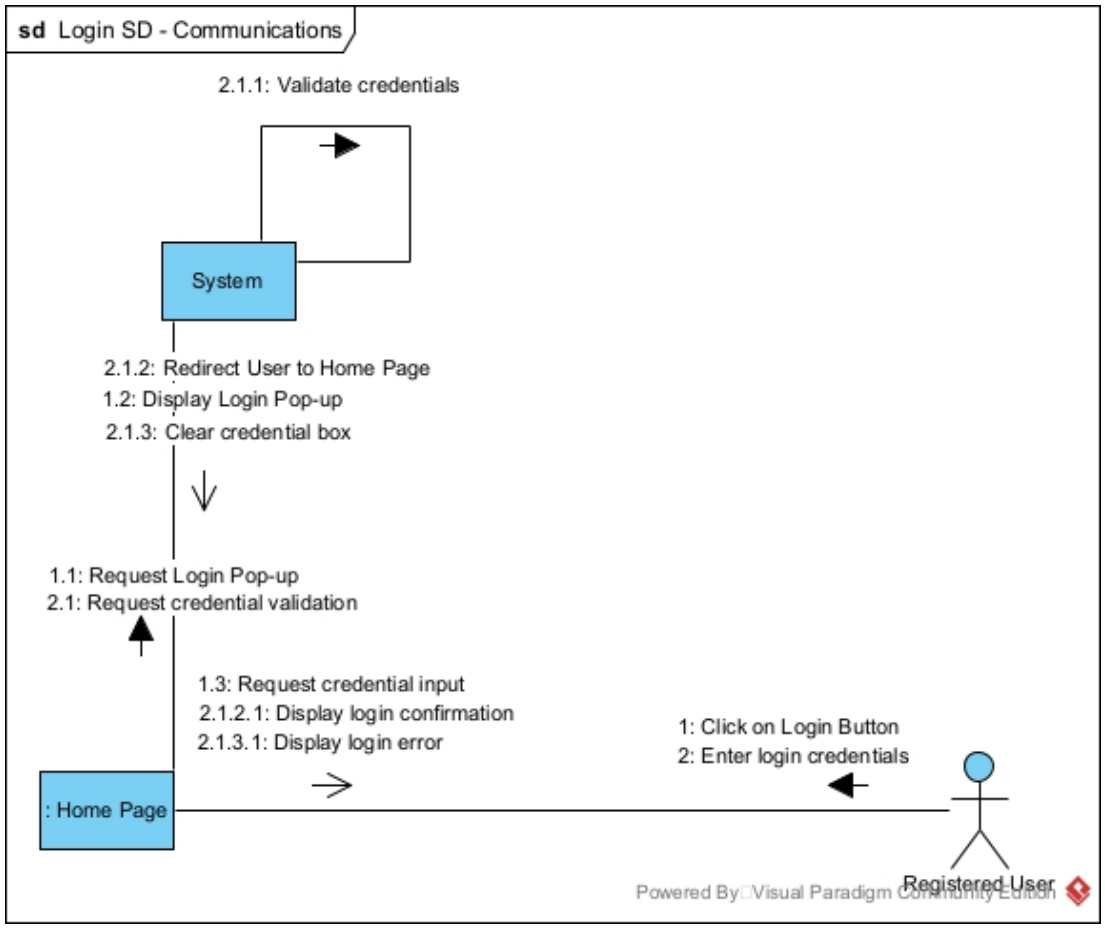


Shopping bot

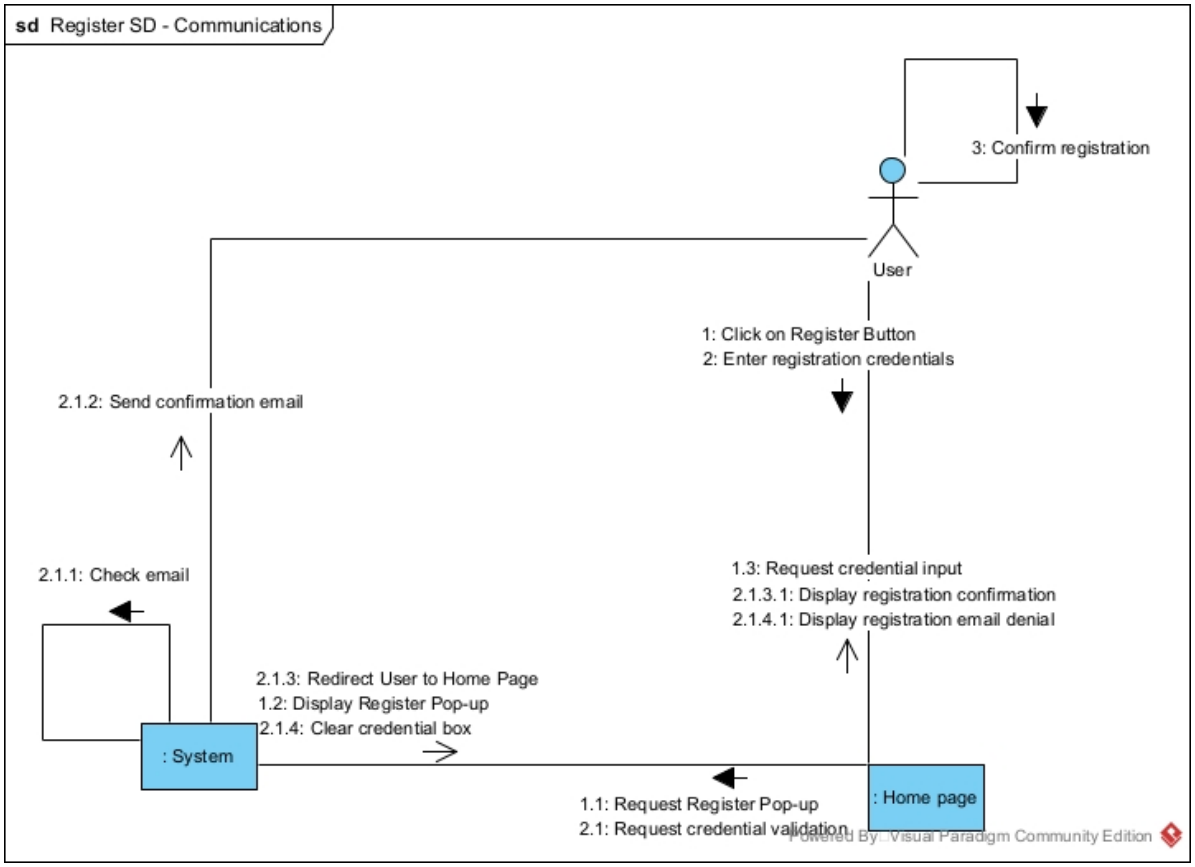


Communication diagrams

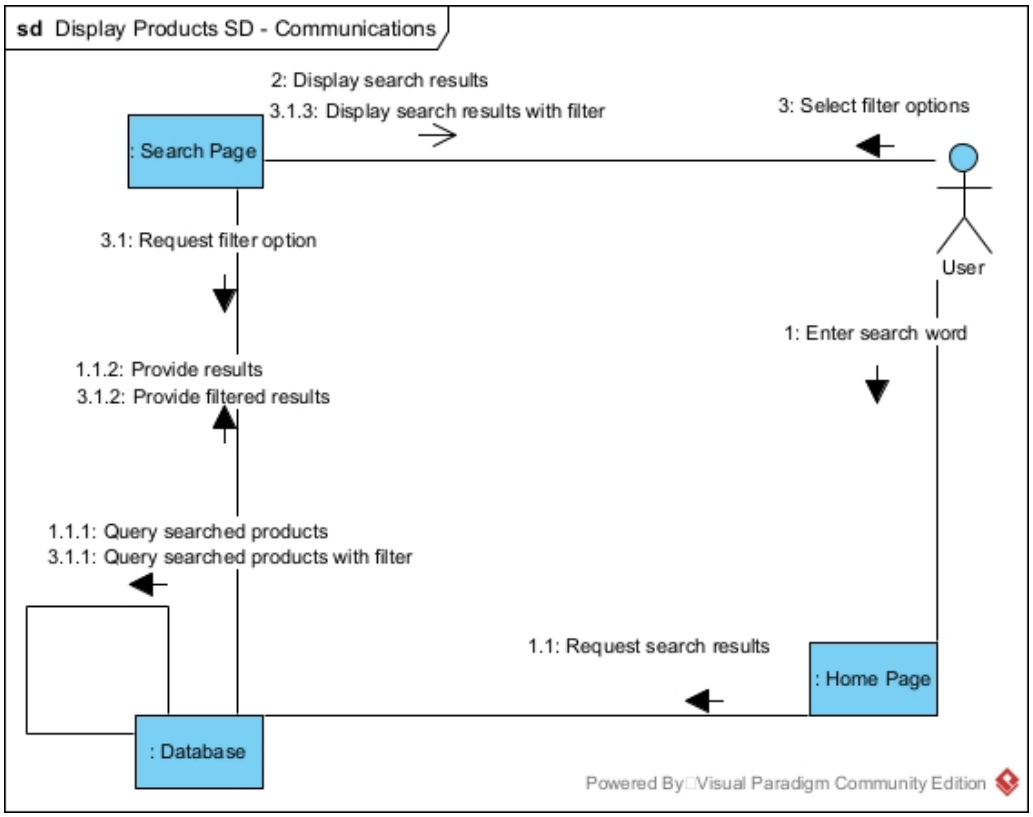
Login



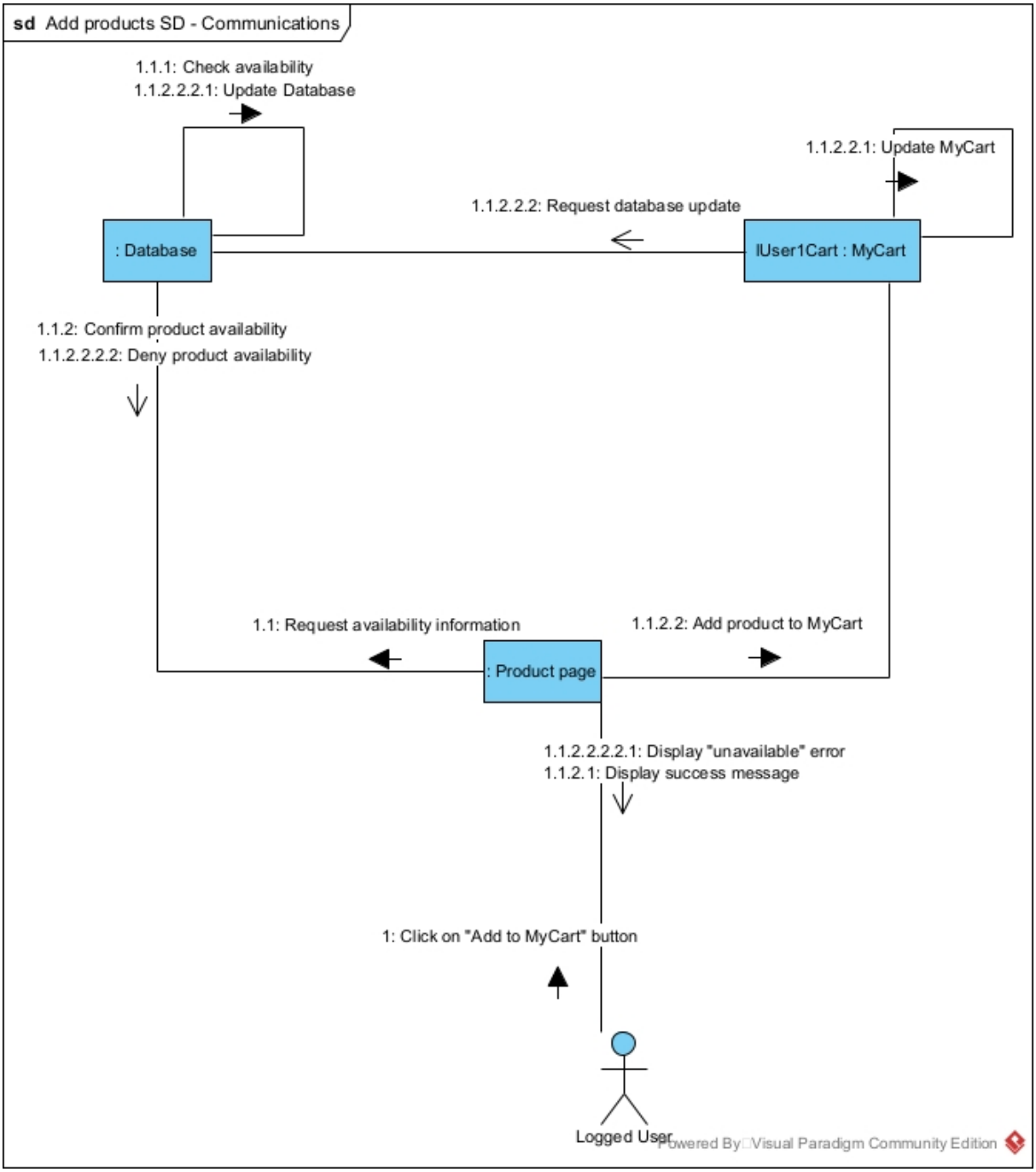
Register



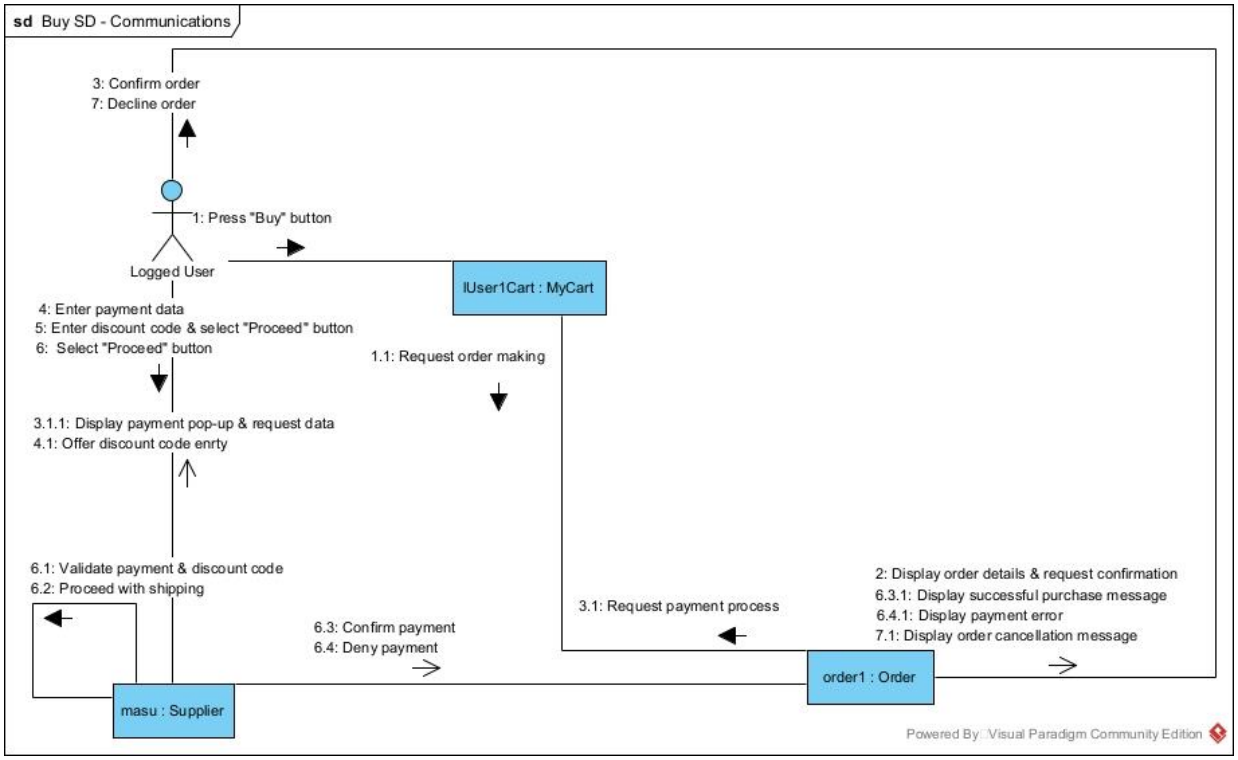
Display products



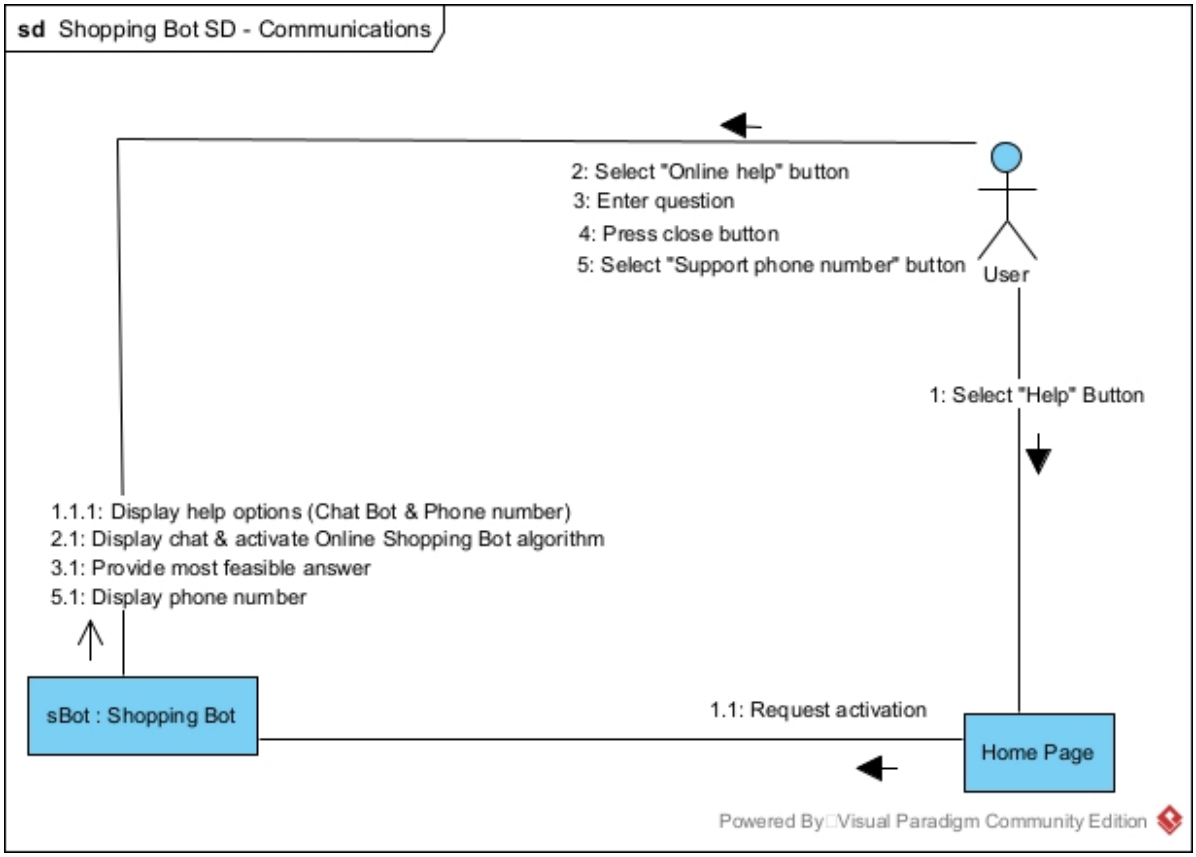
Add products



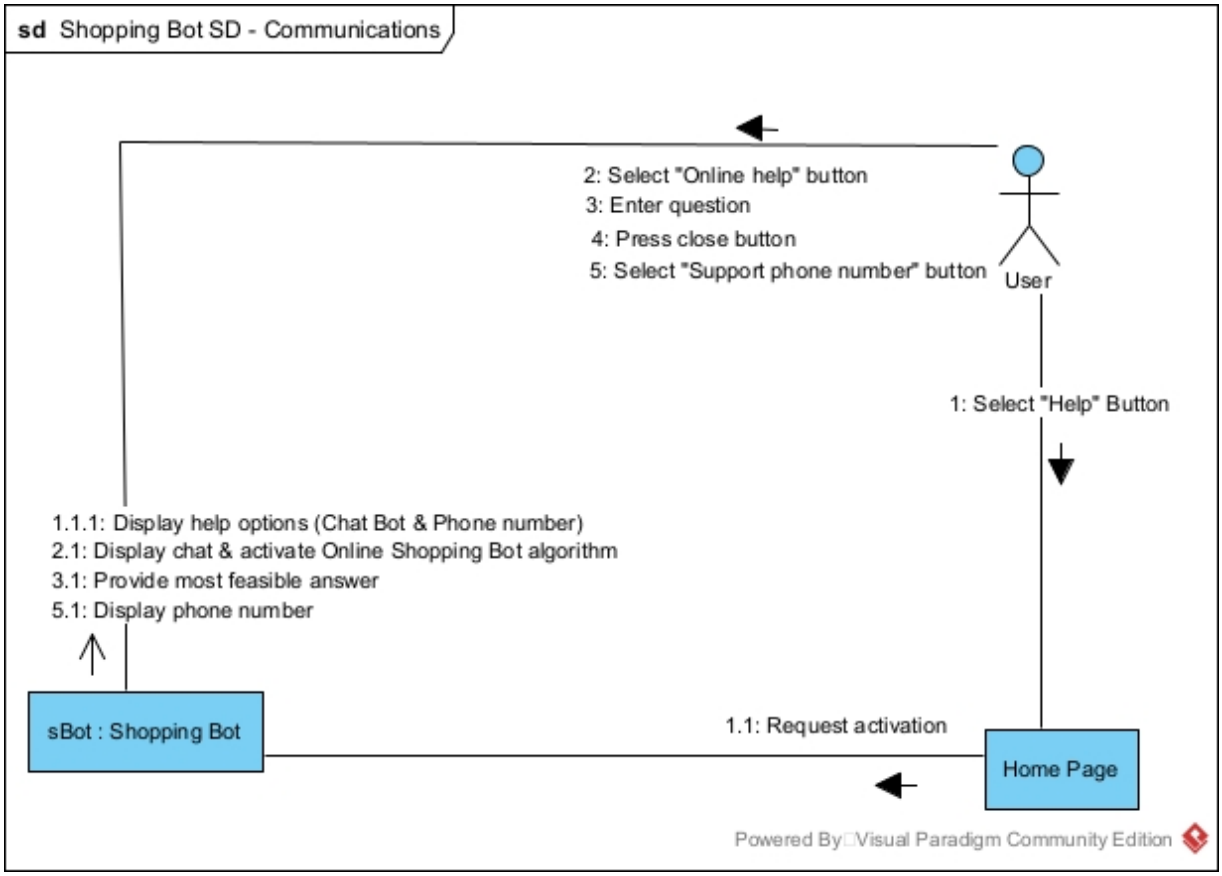
Buy products



Supplier

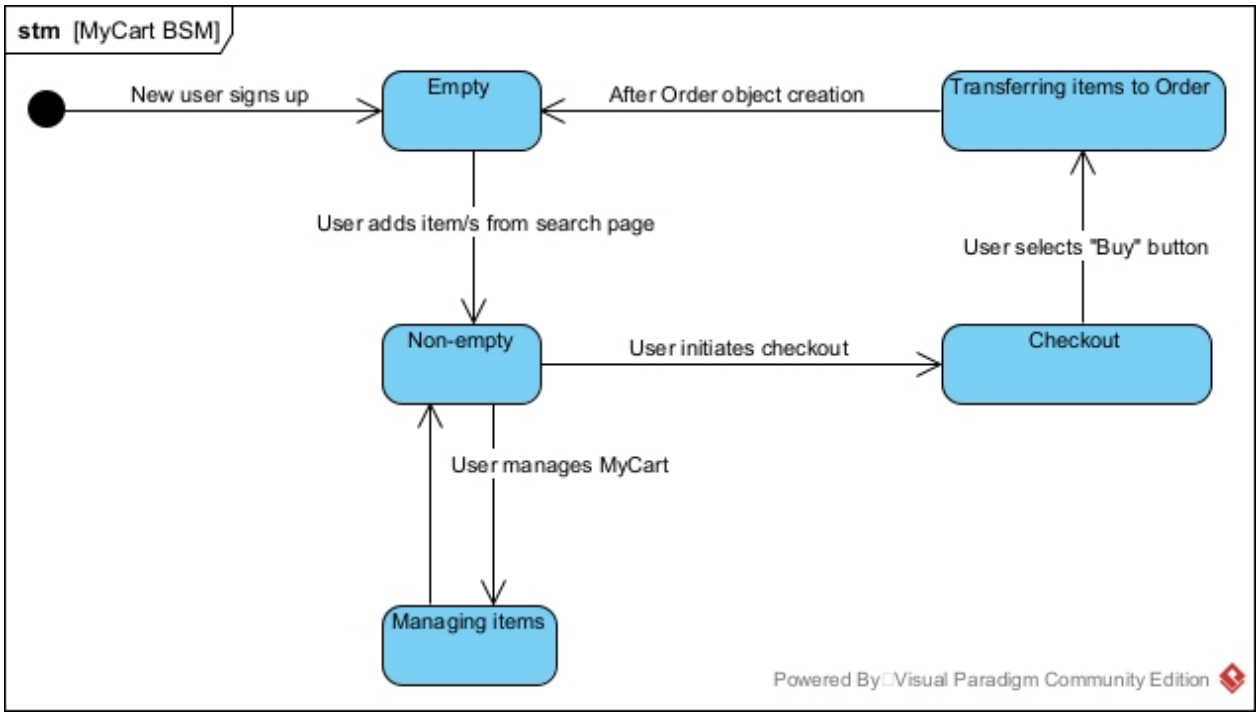


Shopping bot

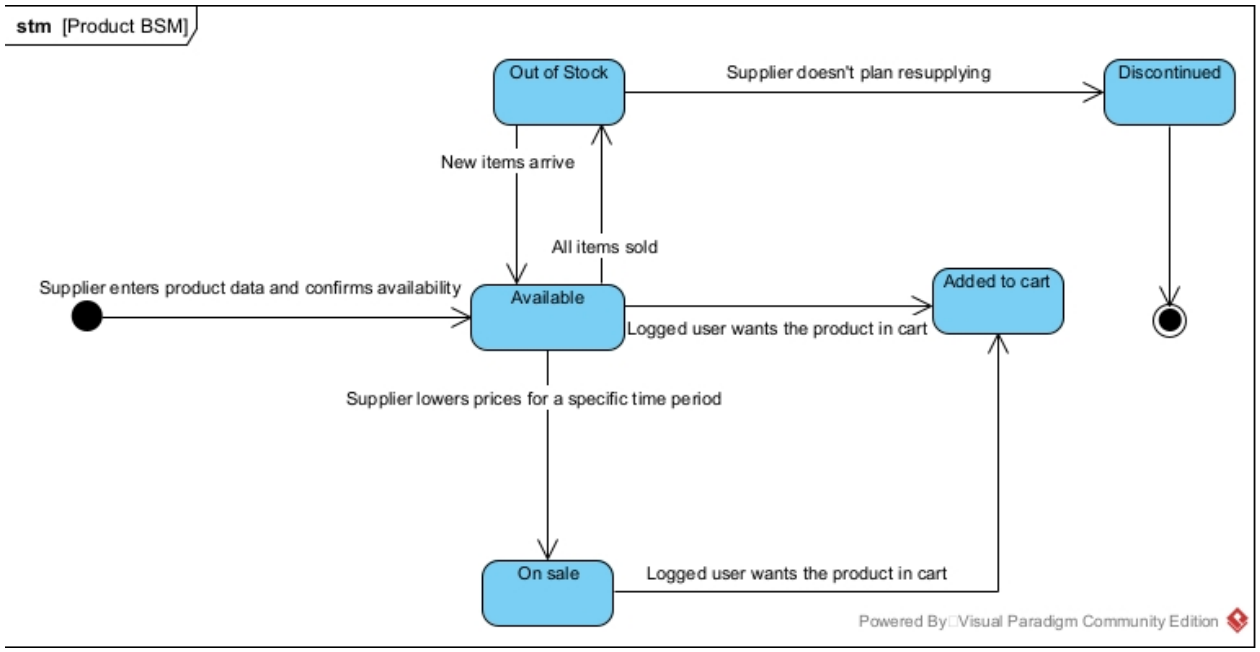


Behavioral state machine diagrams

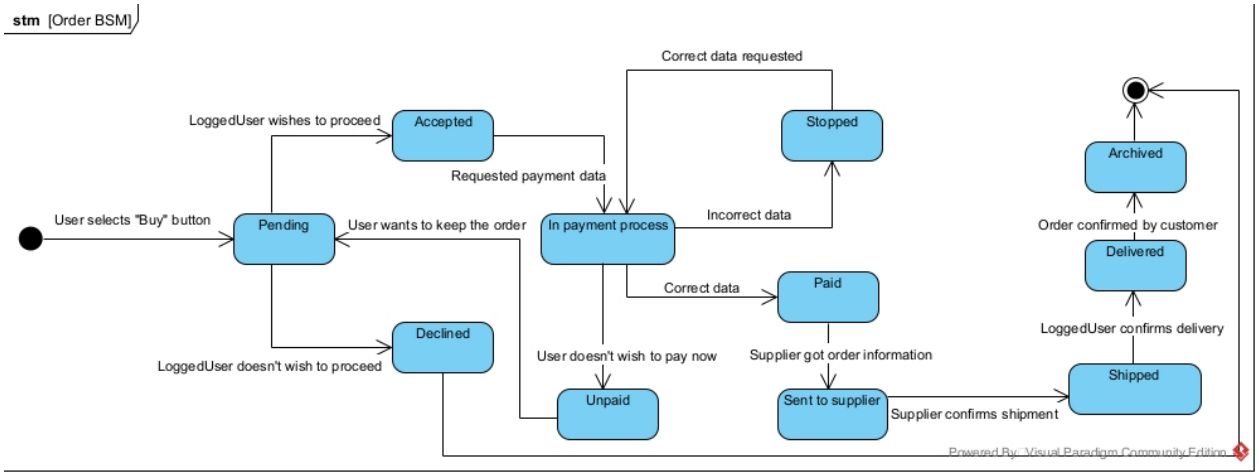
MyCart



Product



Order


stm [Order BSM]
Correct data requested
LoggedUser wishes to proceed
Accepted
Stopped
Archived
Requested payment data
User selects "Buy" button
Pending
User wants to keep the order
In payment process
Incorrect data
Order confirmed by customer
Delivered
Correct data
Paid
LoggedUser confirms delivery
Declined
User doesn't wish to pay now
Supplier got order information
Shipped
LoggedUser doesn't wish to proceed
Unpaid
Sent to supplier
Supplier confirms shipment
Powered By: Visual Paradigm Community Edition