

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



**SYSTEM ANALYSIS
AND DESIGN
MENTAL HEALTH
APP - AMYGDALA**

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PROJECT PROPOSAL

Project Title: Mental Health App - Amygdala

Start Date: 30.09.2024

End Date: 29.12.2024

Project Manager: Karasoftić Selma

Project Sponsor: Brković Amina

Purpose and business need:

Mental health is a fundamental aspect of a human life. Unfortunately, it is still a taboo and often overlooked. Luckily nowadays its importance is getting into the focus with new generations.

Advancement of technology is contributing to the improvement of every aspect of life. It has helped in many branches of science, including psychology. With online therapy and consulting with a licensed therapist/psychologist/psychotherapist or a consultant it is easier to have access to get help. Even though there are many apps working on this aspect there are still many people reserved with this theme. They still haven't gained the courage to make the first move and actually go to therapy. There are many apps giving the opportunity to them to go to therapy from their own home, but what if they want to remain anonymous at the beginning?

The answer for that question is the brand-new app called "Amygdala". Let's start with explaining the name of the application. Amygdala (amygdalas, lat.) is a region of the brain primarily associated with emotional processes. It is also involved in the expression of conditioned fear so the name is symbolic. "Amygdala" is focusing on giving the opportunity to the people still living in fear of making the first step.

This project/app addresses all the barriers that we mentioned by providing a unique platform that offers anonymity in order to allow the users to seek help without fear of being judged. This option can be changed later on if the user decides that. This feature is crucial for engaging users and overcoming the stigma.

Amygdala will not have geographical limitations, meaning that professional mental health services would be accessible regardless of the users whereabouts. The goal is to widen and cover as many locations as possible.

Furthermore, the users would be able to chat with trained volunteers when needed. They would have access to different resources regarding practical techniques like breathing exercises.

To sum up, "Amygdala" app is a tool for guiding the person towards self-improvement.

The app will have regular feedback that will be used to improve app properties and in adding other ones if needed. The final goal for this project is to help as many people as possible.

Customers/Users:

The project is aimed at everyone that is above 18 years. The app would be available in every country and compatible for every device. Everyone that needs help and/or wants to communicate with other people with the same problems is welcomed to use the app.

Goals and objectives:

There are several **goals** of this project/App. First one is to provide **support** for people in need of help. The next one is letting them **engage** and **participate** through interactive content. The main goal is **availability** – available to all users, regardless their age, simultaneous and easy usage of the app. This will be maintained and regularly checked over user feedback in order to **improve and enhance** the app's functionality.

Objectives of the project: one is providing an anonymity **option** (the data entered in the app would be available just for the developers, not visible to others). The next one is the user **base** – achieving a significant user base of individuals seeking mental health support. The app will aim to provide a wide range of mental health resources and expert consultations making the **resources available** at every moment. Another objective is **flexible payment options**. The users would be able to pay using debit/credit card, PayPal and other similar options.

Periodically, the users would be asked for **feedback of the app and the psychotherapists** in order to make the app better.

Project priorities:

Priorities of the project/app:

1. Providing high quality care assessment
 2. Immediate Support (psychotherapist/volunteers/support groups)
 3. Library of mental health resources – exercises, advices, techniques
 4. Ease of access
 5. User anonymity
 6. Security of the information and chats
 7. Flexible payment option
-

Constraints and special issues:

1. Legal obedience – only 18+ users
 2. Ethical standards and conducts of laws
 3. Ensuring the privacy and security of the data
 4. Budget - managing costs but ensuring the high-quality features and services
 5. Payment - affordable prices for using the app
 6. Compatibility – responsiveness for every device
-

Risks and obstacles to success:

1. User Engagement – conquering the stigma with mental health in order to encourage users to get help
 2. Ensuring privacy – implementing end-to-end encryption to enhance security and minimize the possibility of data breaches
 3. Legal requirements – following the laws of the certain location (law experts would be responsible for achieving this)
 4. Scalability – the number of users would not affect the performance of the app.
-

Technical Leads:

Amina Brković and Selma Karasoftić

REQUIREMENTS

Functional Requirements

- **Feature name: User Registration and Authentication**

Role(s): All users

Feature description/steps: Allows users to create an account and log in to access the app's features.

1. User opens the app and selects the registration option.
2. User provides necessary information (email, password, etc.).
3. User choose to remain anonymous or reveal their identity.
4. User accepts terms and conditions.
5. User completes registration and logs in.

Dependencies/constraints: Requires a database for storing user credentials and secure authentication mechanisms.

- **Feature name: Profile**

Management Role(s): Registered users

Feature description/steps: Users can update their personal information and change their anonymity settings.

1. User navigates to the profile section.
2. User updates relevant information (name, address, etc.).
3. User can toggle anonymity settings.
4. User saves changes.

Dependencies/constraints: Relies on the user registration and authentication system.

- **Feature name: Appointment Scheduling**

Role(s): Registered users

Feature description/steps: Allows users to schedule appointments with licensed therapists.

1. User selects the appointment scheduling option.
2. User chooses a therapist from the list.
3. User selects a date and time.
4. User confirms the appointment.

Dependencies/constraints: Requires integration with the therapists' schedules and availability.

- **Feature name: Volunteer**

Chat Role(s): Registered users

Feature description/steps: Users can chat with trained volunteers for immediate support.

1. User selects the volunteer chat option.
2. User is connected to an available volunteer.
3. Users and volunteers engage in a chat session.
4. User can end the chat at any time.

Dependencies/constraints: Requires a pool of trained volunteers available for chat sessions.

- **Feature name: Group Discussions**

Role(s): Registered users

Feature description/steps: Allows users to join or create support groups.

1. User navigates to the group discussions section.
2. User browses existing groups or creates a new one.
3. User joins a group or sets up new group details.
4. User participates in group discussions.

Dependencies/constraints: Requires a database to manage group information and user memberships.

- **Feature name: Resource**

Library Role(s): All users

Feature description/steps: Provides access to articles, advice, and techniques for managing mental health.

1. User navigates to the resource library section
2. User searches or browses resources.
3. User selects a resource to view.
4. User reads the resource.

Dependencies/constraints: Requires continuous content updates and a content management system.

- **Feature name: Feedback**

System Role(s): Registered users

Feature description/steps: Users can provide feedback and rate their sessions.

1. User completes a session or interaction.
2. User is prompted to provide feedback.
3. User rates the session and leaves comments.
4. Feedback is submitted and stored.

Dependencies/constraints: Requires a feedback collection and analysis system.

- **Feature name: Payment**

Processing Role(s): Registered users

Feature description/steps: Supports payment methods for transactions.

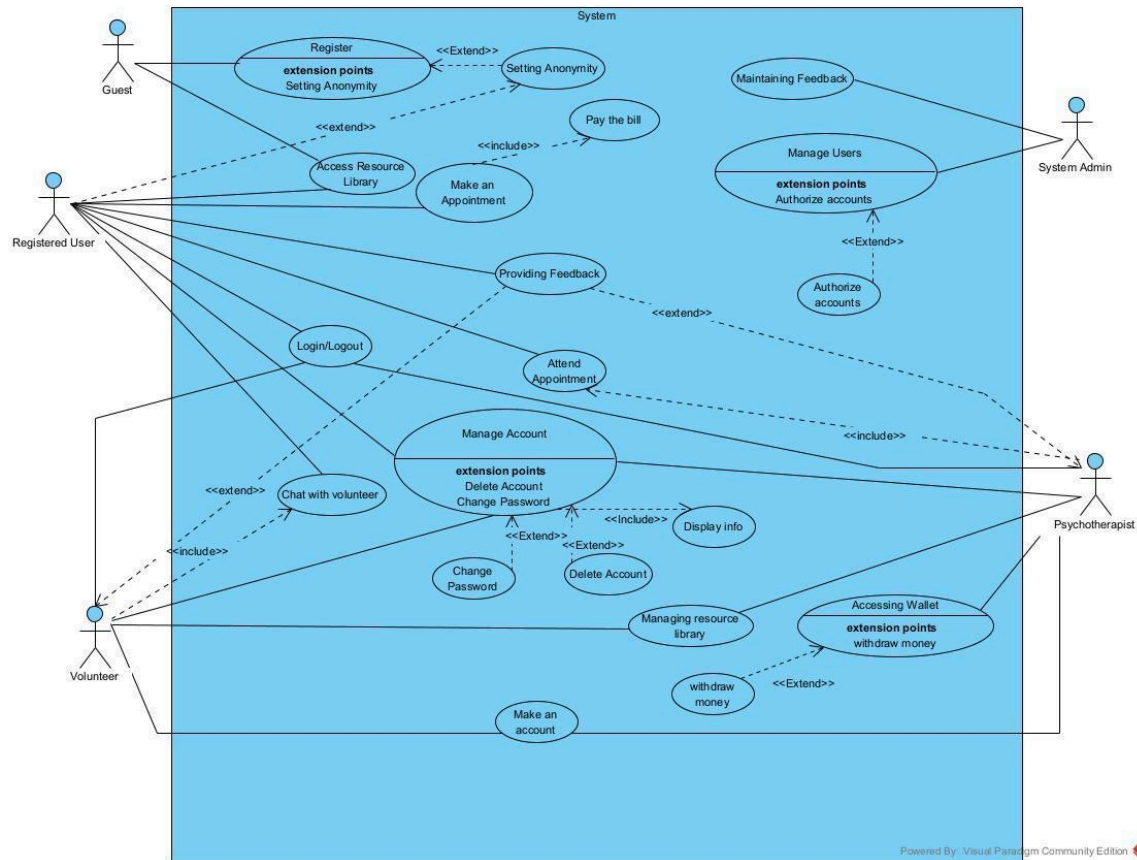
1. User selects a service that requires payment.
2. User chooses a payment method (card).
3. User enters payment details.
4. Payment is processed and confirmed.

Dependencies/constraints: Needs to connect with payment processing services.

Nonfunctional Requirements

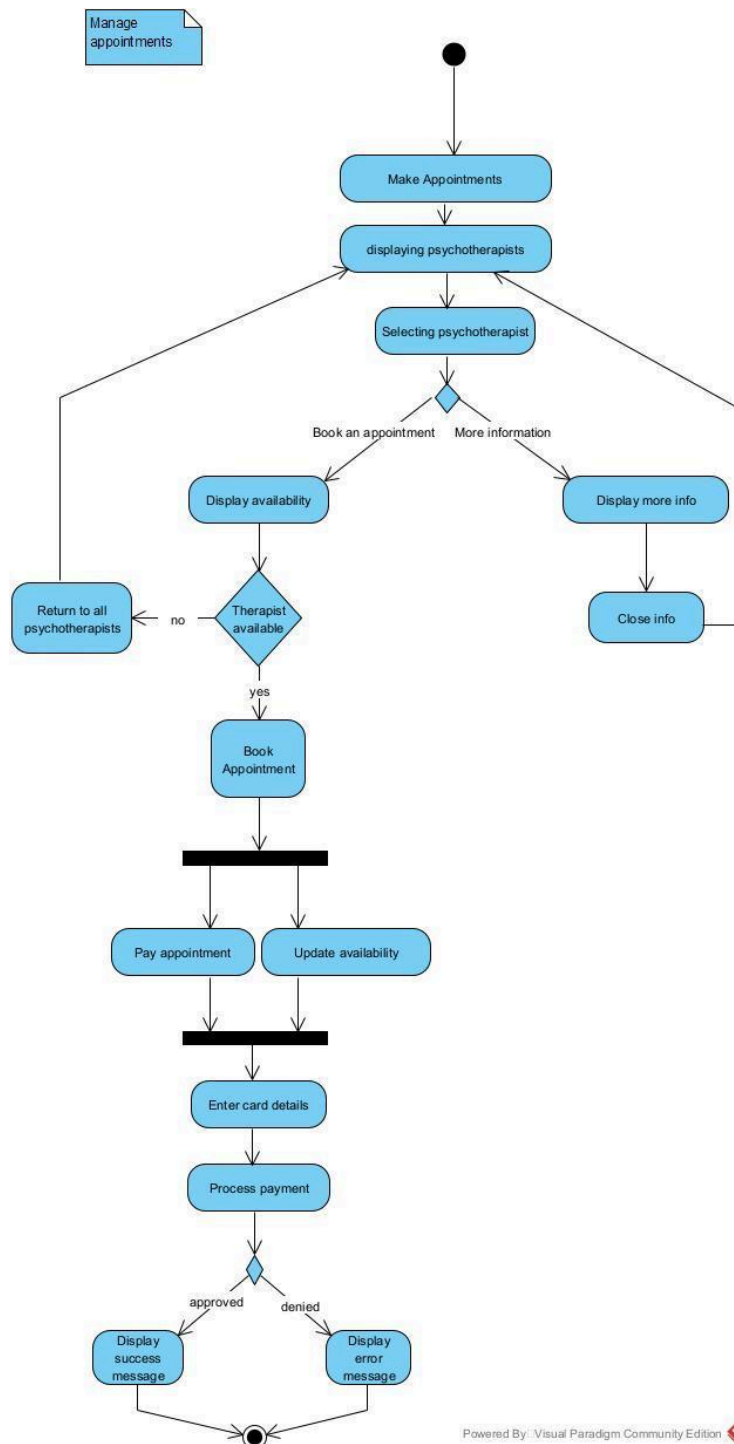
- **Security:** Ensure all user data is encrypted and secure, especially for anonymous users. All user data, especially sensitive information, must be encrypted both in transit and at rest using robust encryption standards.
- **Scalability:** The app must handle a large number of users without lowering the quality of performance.
- **Reliability:** The app should have high uptime and be reliable in delivering services.
- **Usability:** The user interface must be intuitive and easy to navigate.
- **Error Handling:** Implement clear, user-friendly error messages and recovery options.
- **How to use - Tutorial:** Provide a step-by-step guide of the app's features for new users.
- **Compatibility:** The app should be compatible with various devices (screen sizes, resolutions etc.) and operating systems (iOS, Android, Windows).
- **Performance:** The app must load quickly and handle user interactions without significant delay.
- **Compliance:** Adhere to all relevant legal and regulatory requirements for data protection and mental health services. For example, following the HIPAA protocols(Health Portability and Accountability), GDPR(General Data Protection Regulation) and other laws that are covering data protection and other ethical laws.
- **Localization:** Support multiple languages to cater to a global user based
- **User Support:** 24/7 Availability: The app should have 24/7 customer support to assist users with any issues
- **User Notifications:** Push Notifications: Ensure timely and relevant notifications about appointments, updates, and important information.
- **Data Backup and Recovery:** Regular Backups: Implement automatic, regular backups of user data to prevent loss.

Use Case Diagram

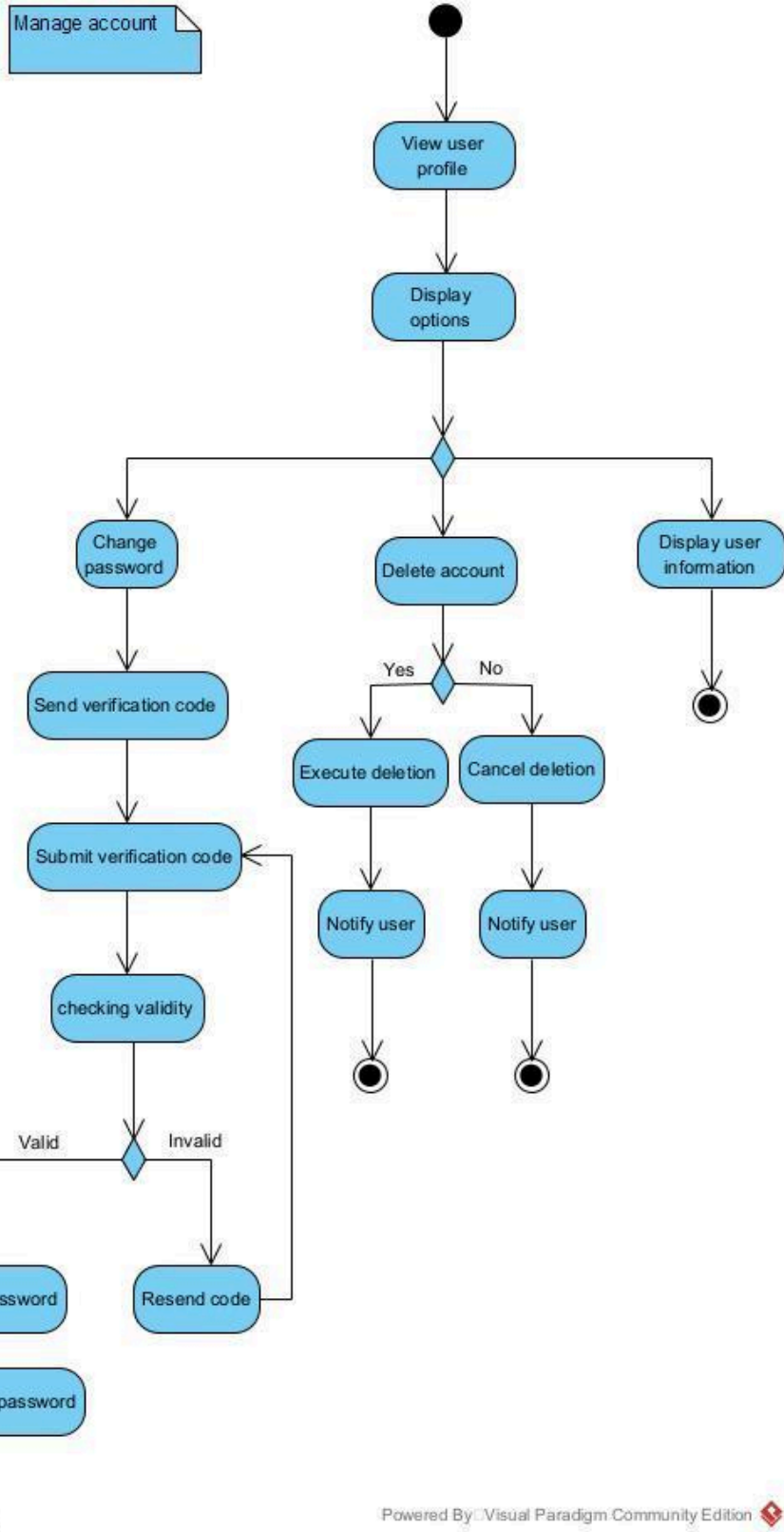


Activity Diagrams

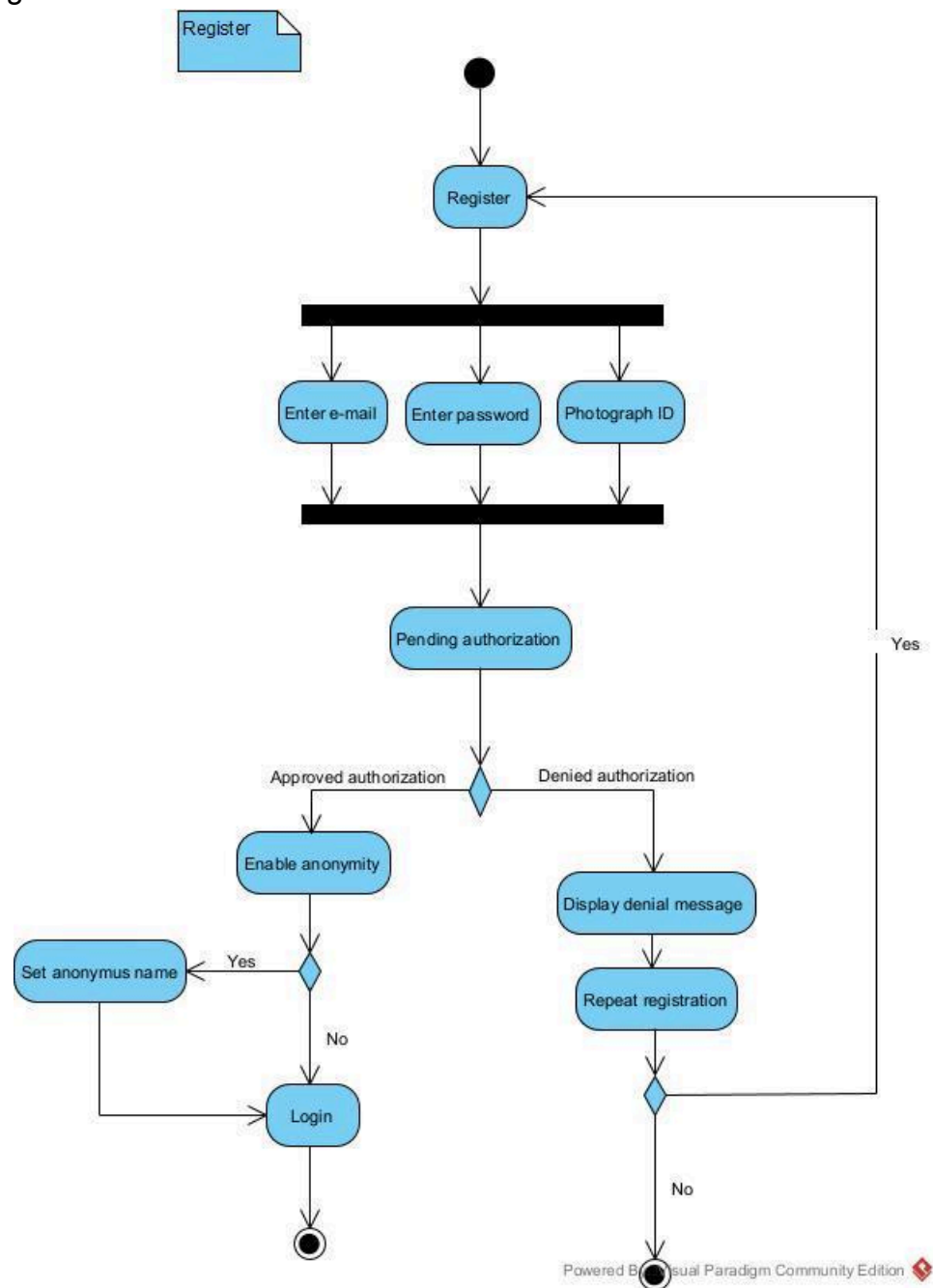
1. Manage Appointments



2. Manage Account

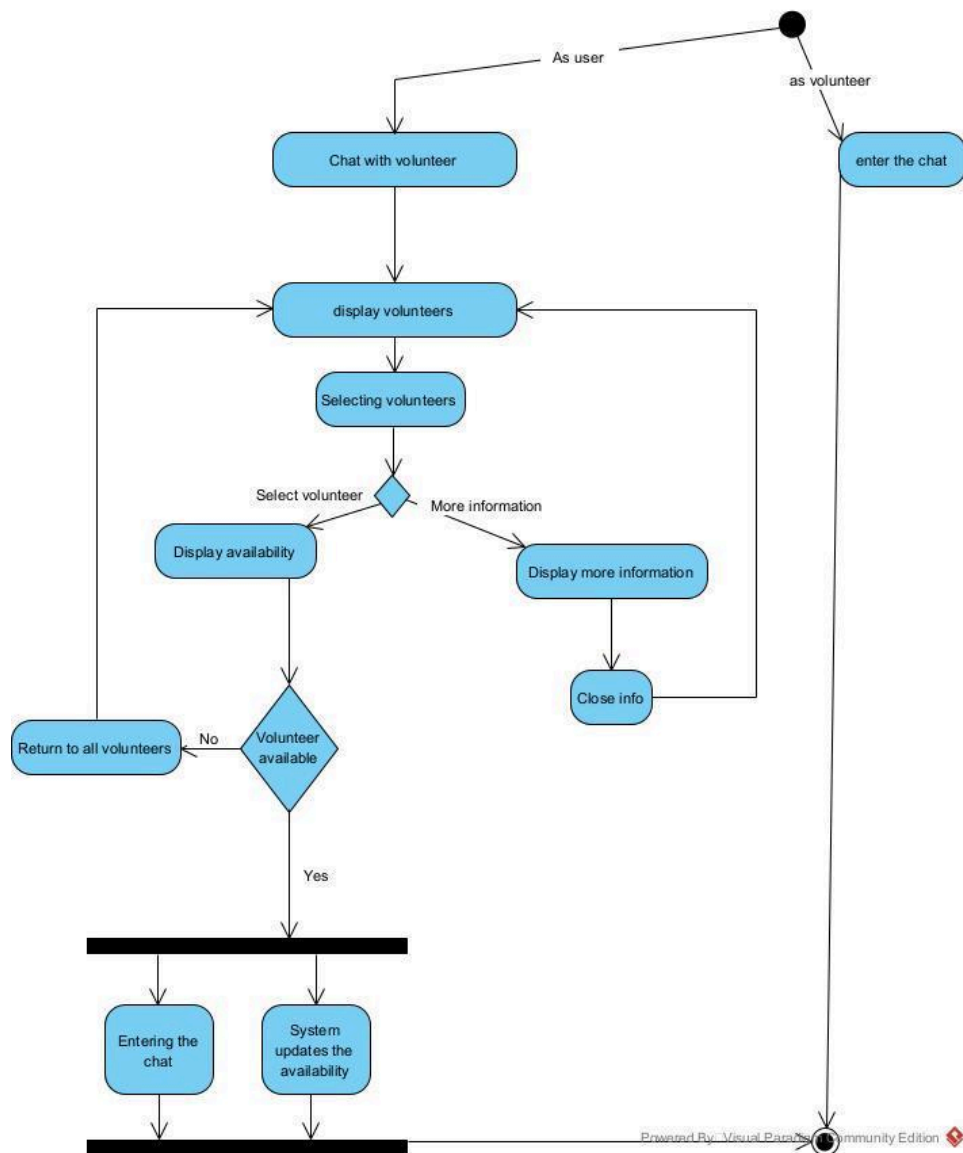


3. Register

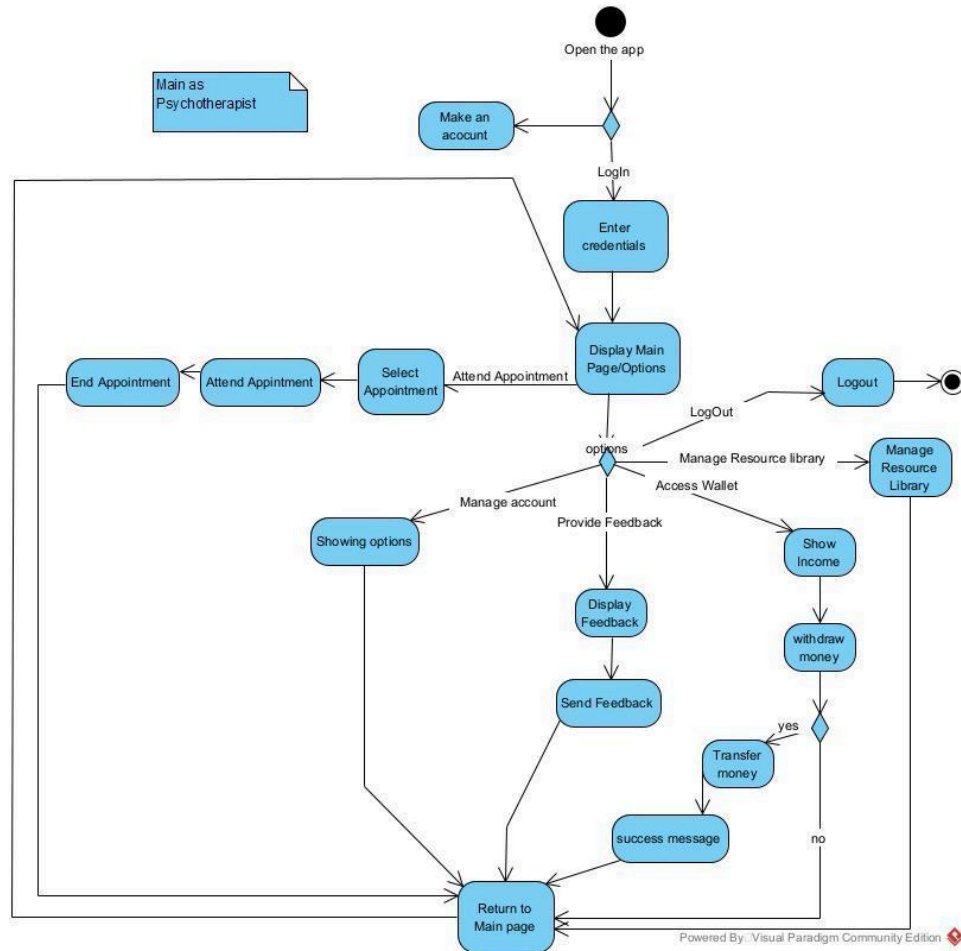


4. Chat with volunteer

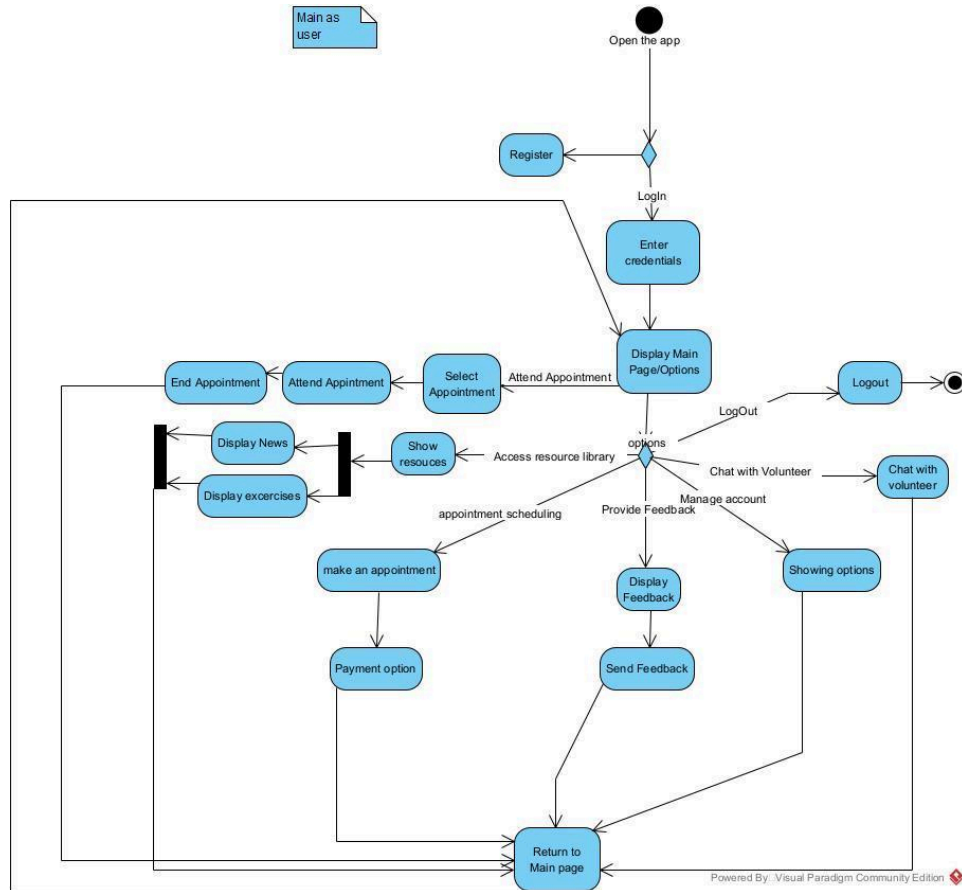
Chat with
volunteer



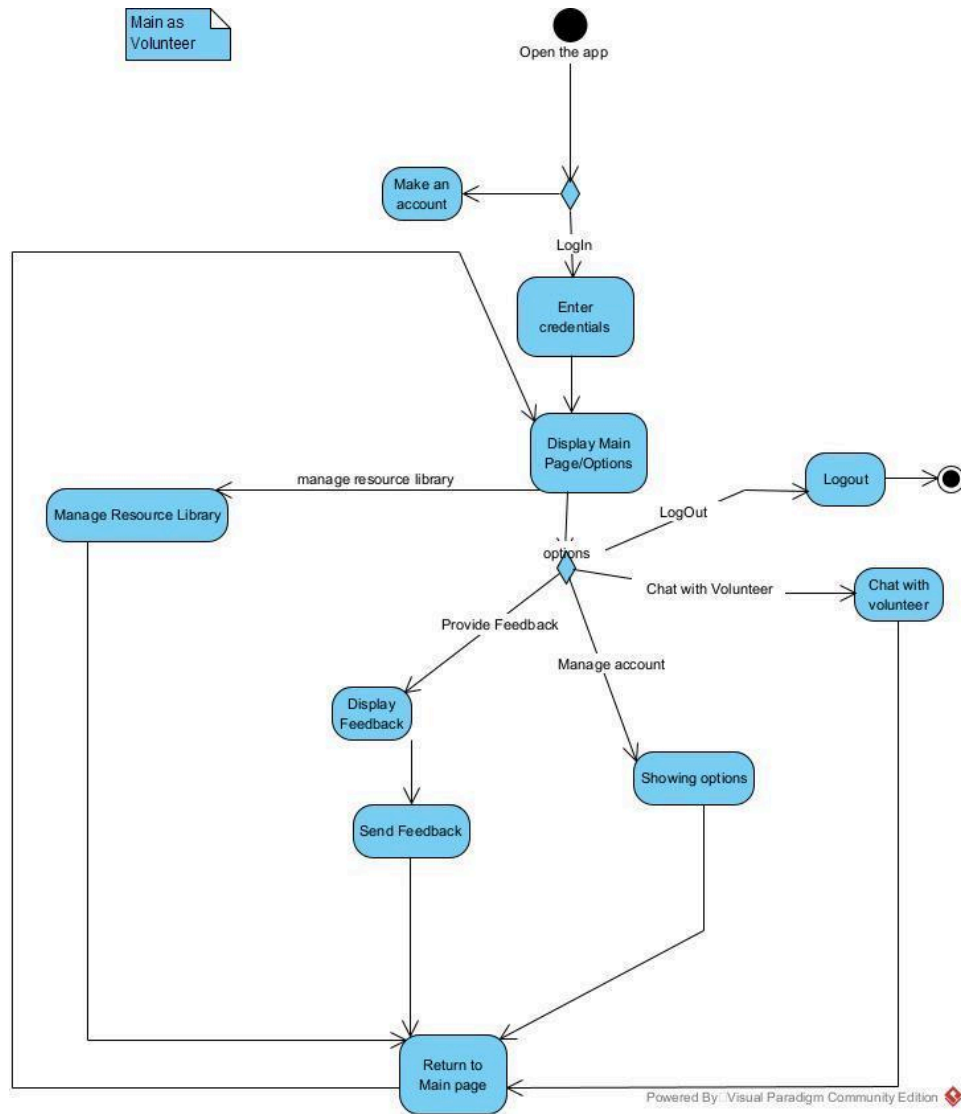
5. Main as Psychotherapist



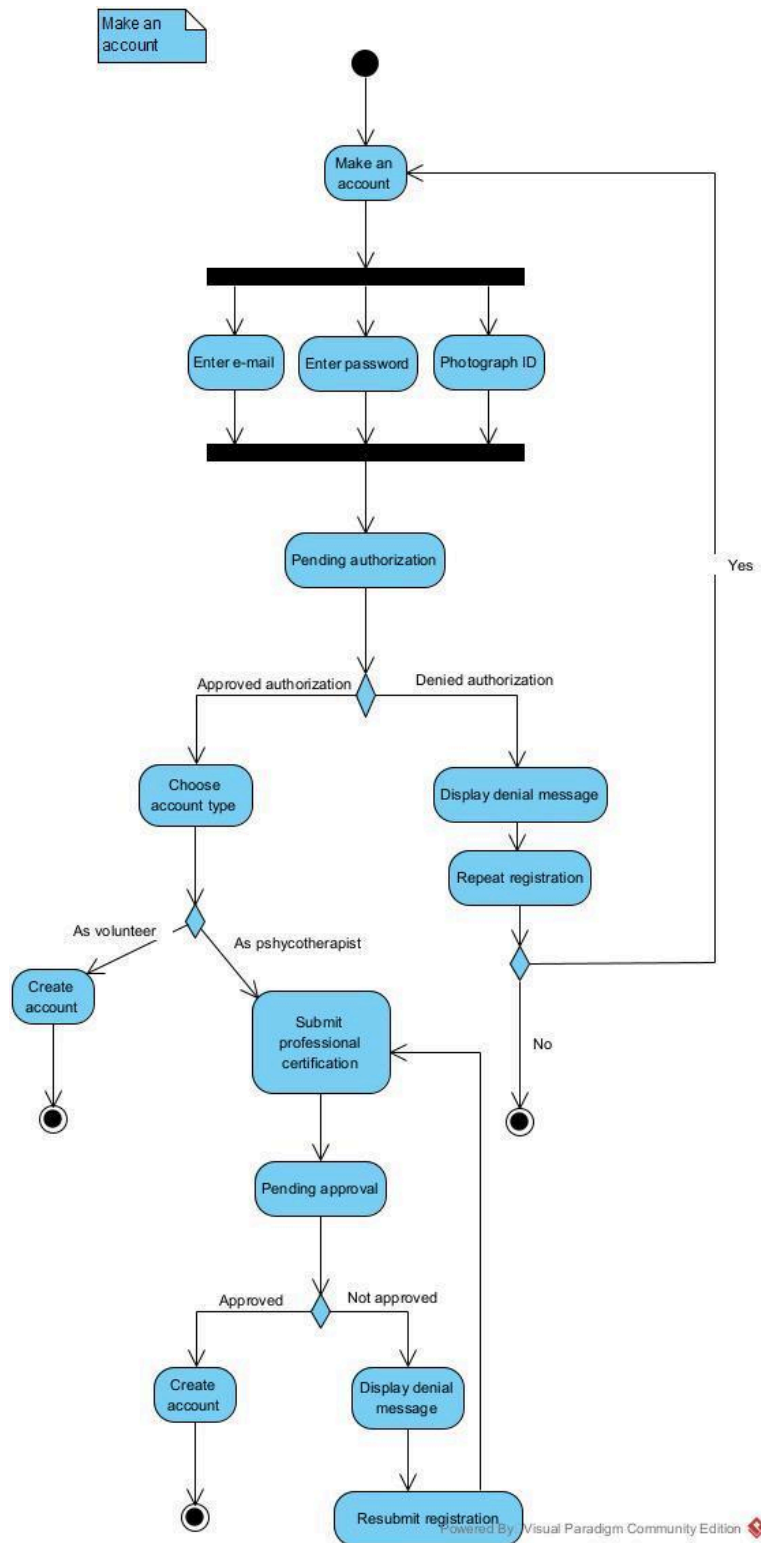
6. Main as User



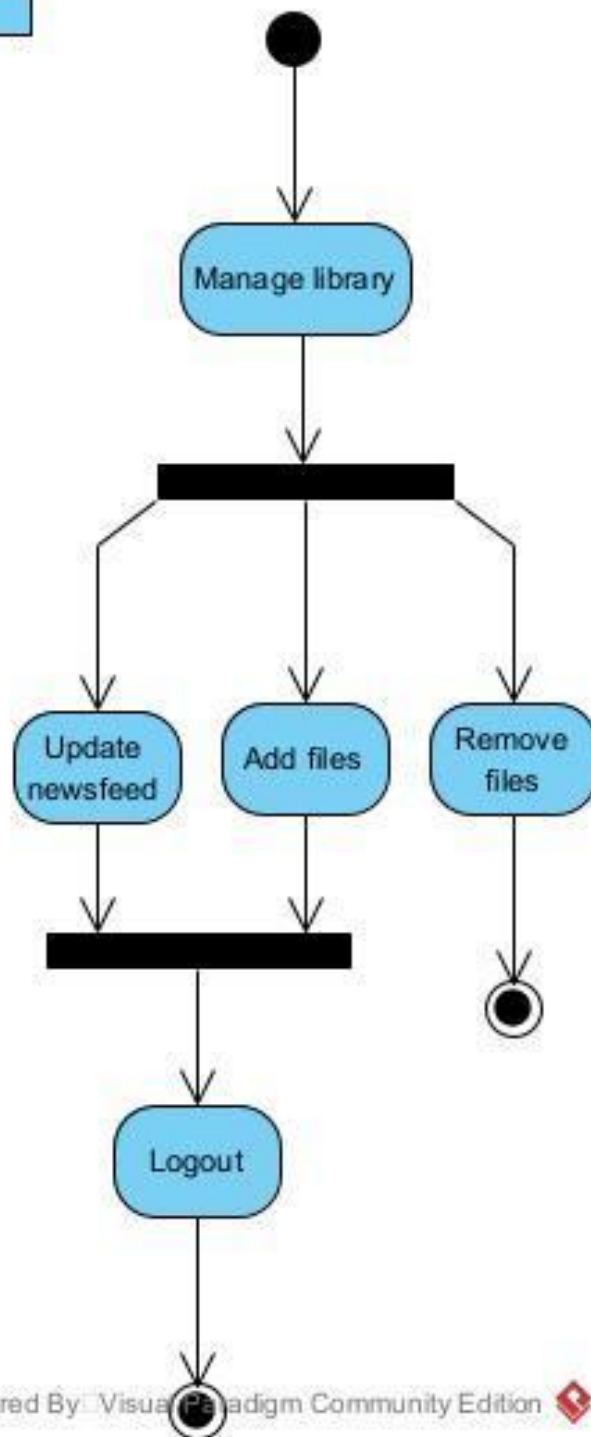
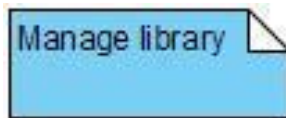
7. Main As Volunteer



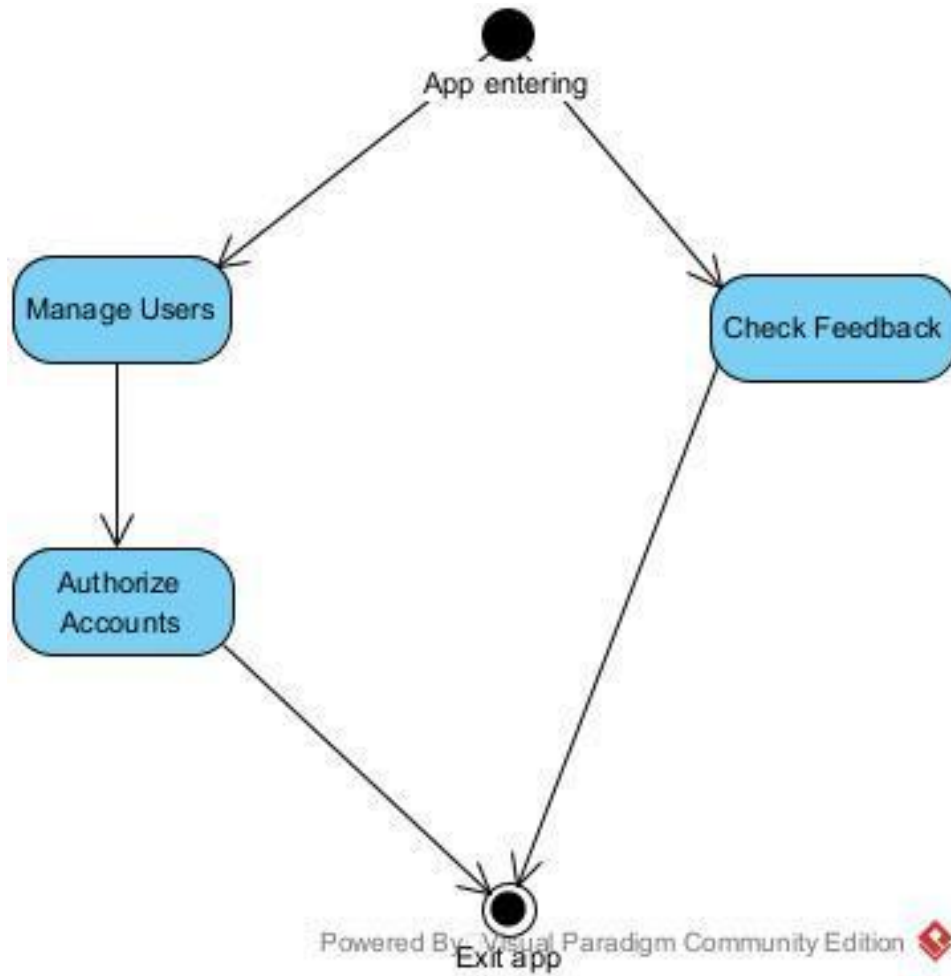
8. Make an account



9. Manage Library

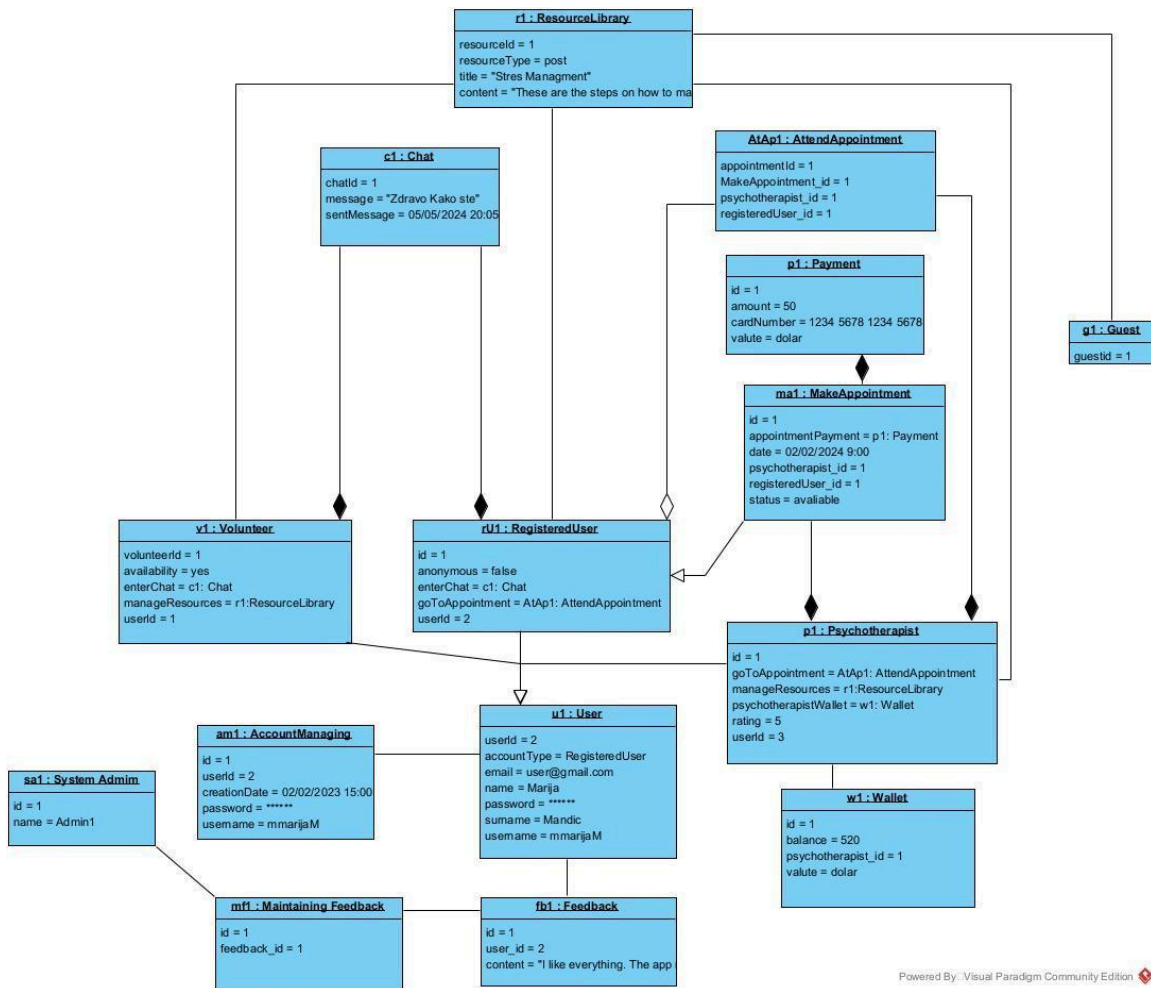


10. Main as System Administrator



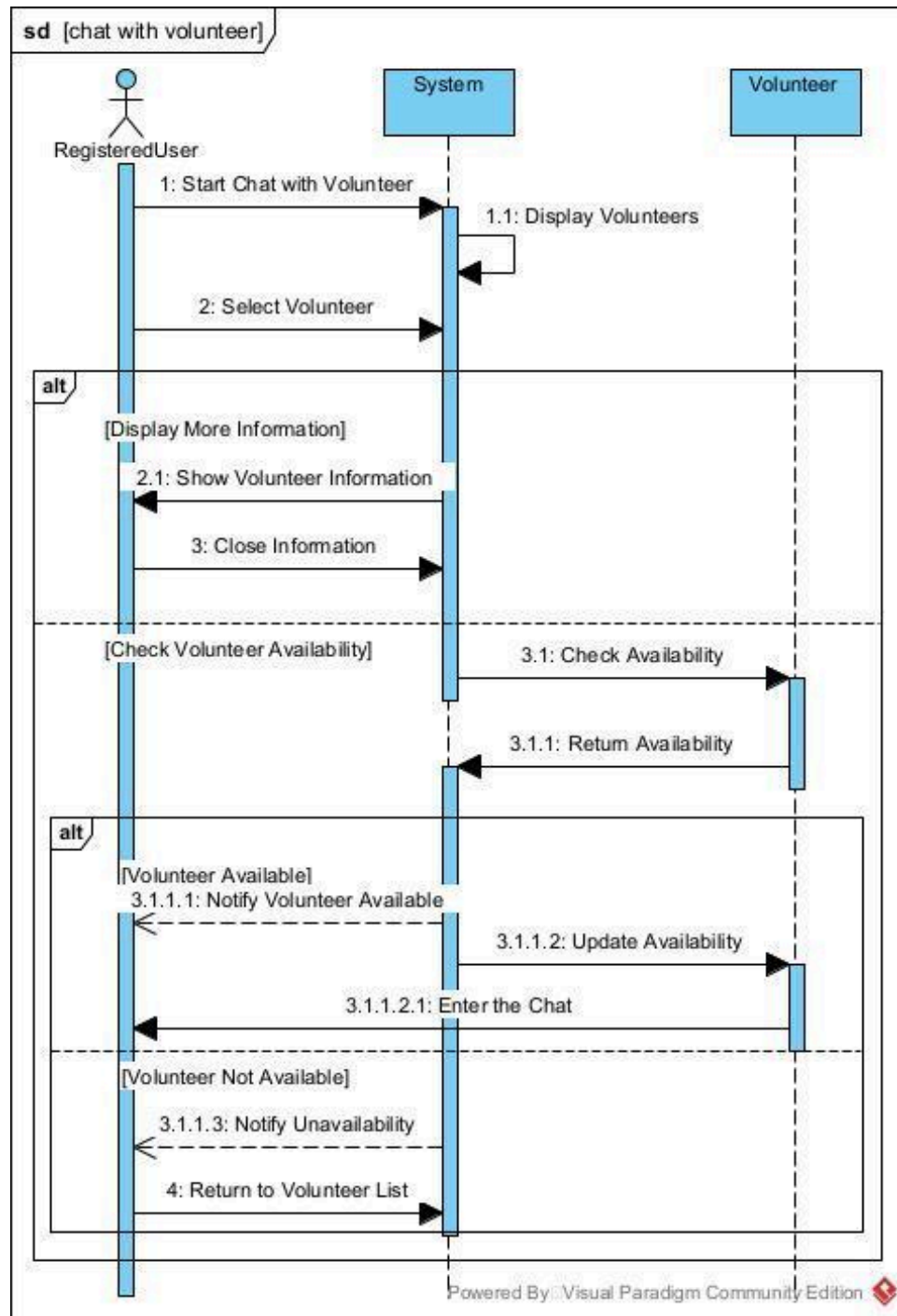


Object Diagram

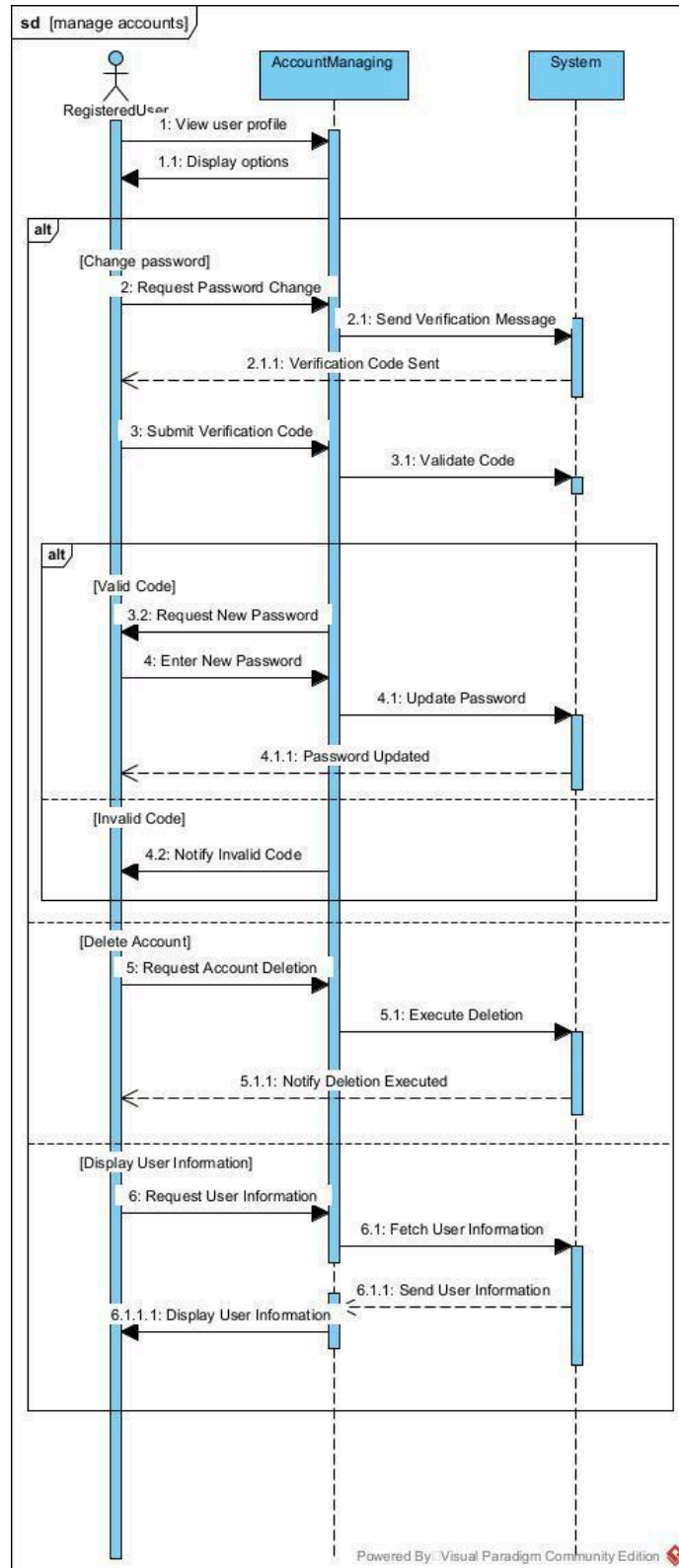


Sequence Diagrams

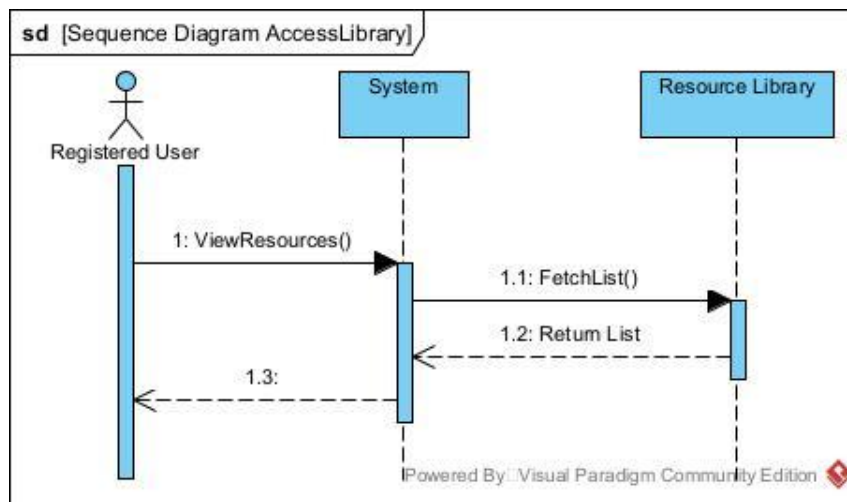
1. Chat with volunteer



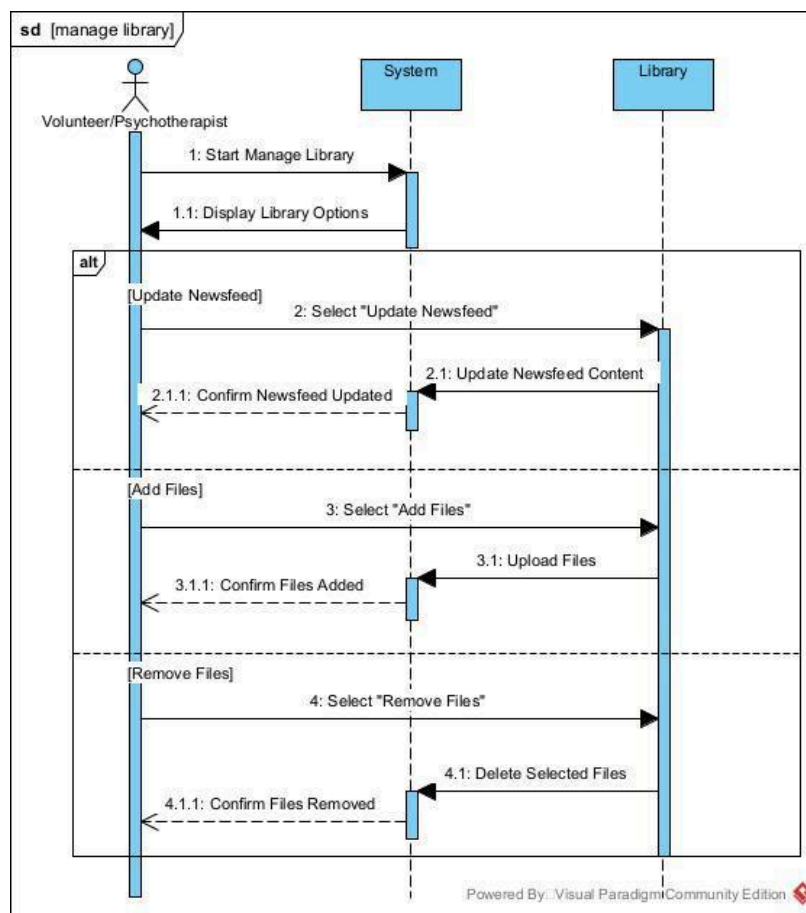
2. Manage accounts



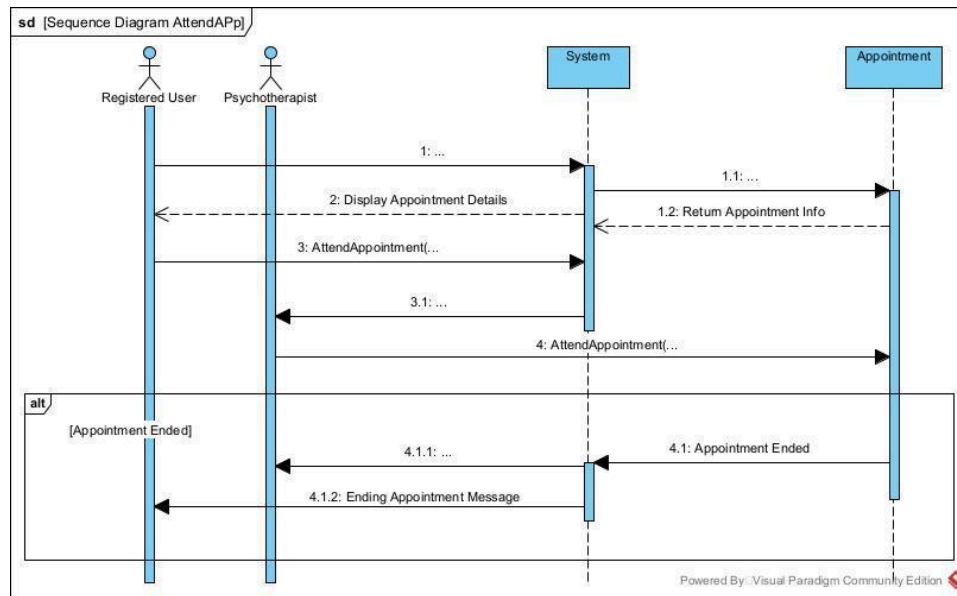
3. Access Library



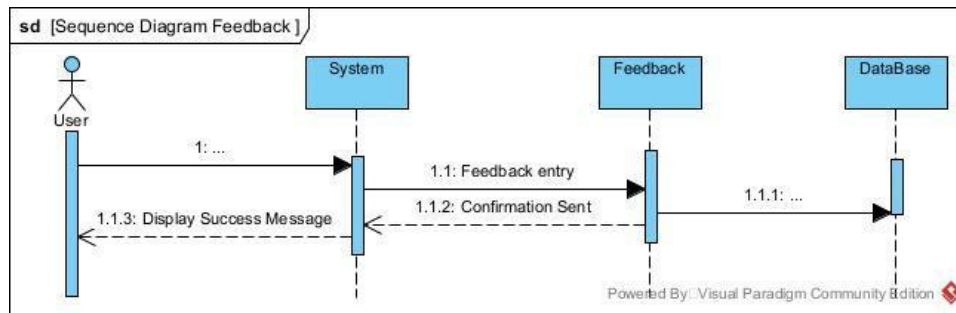
4. Manage Library



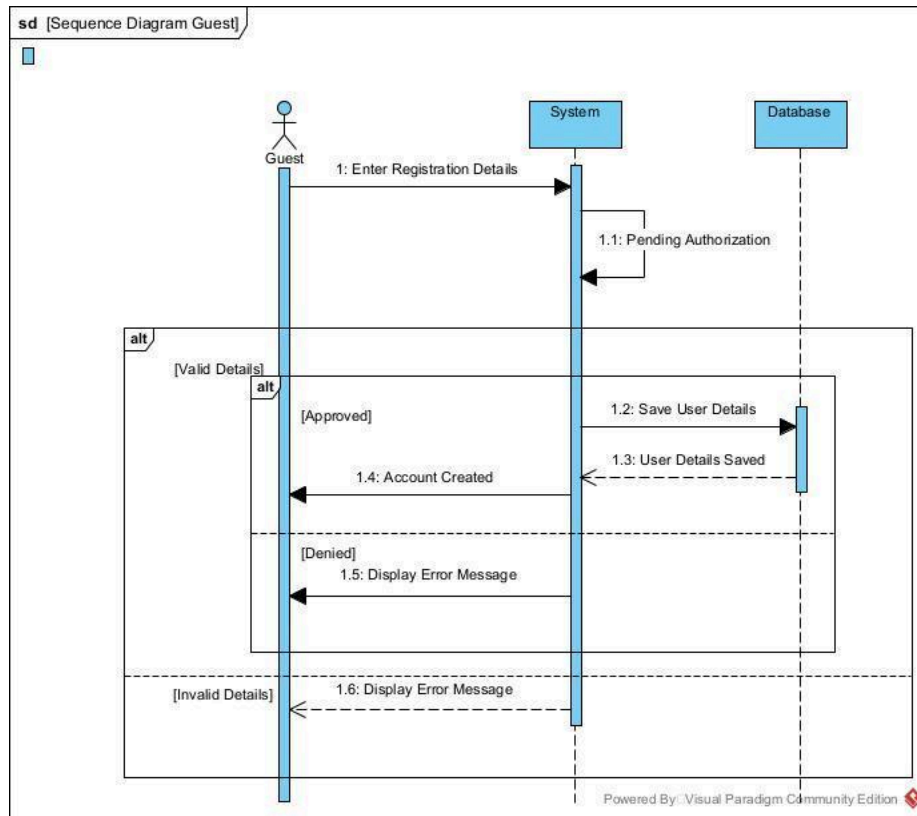
5. Attend appointment



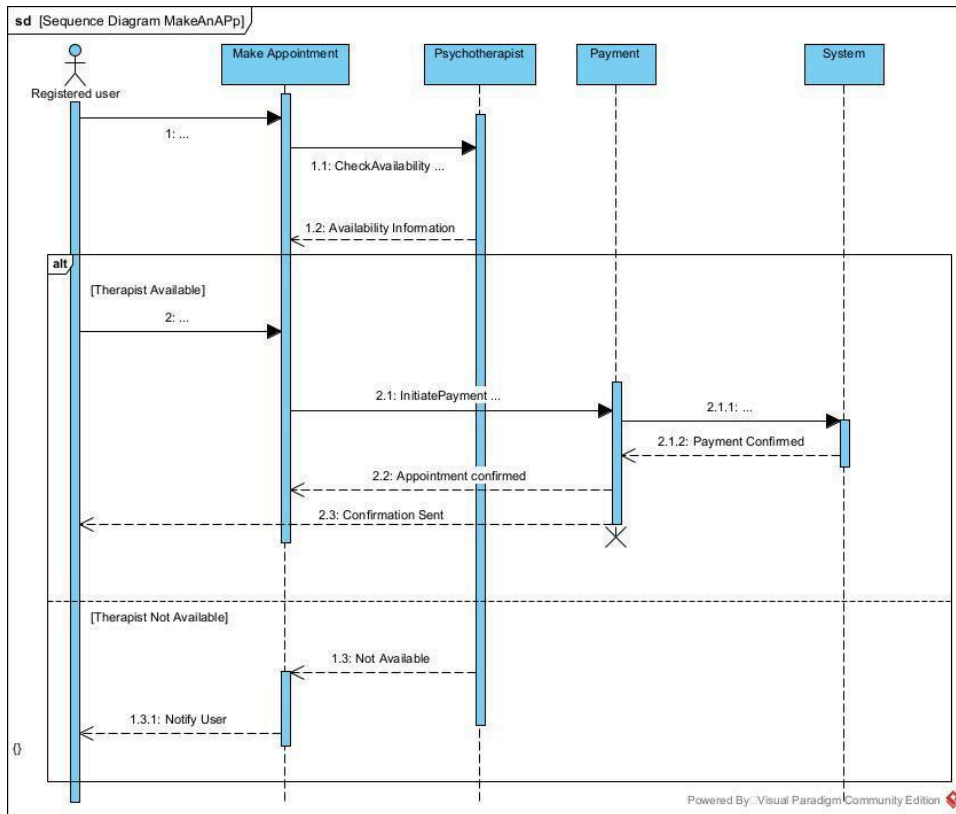
6. Feedback



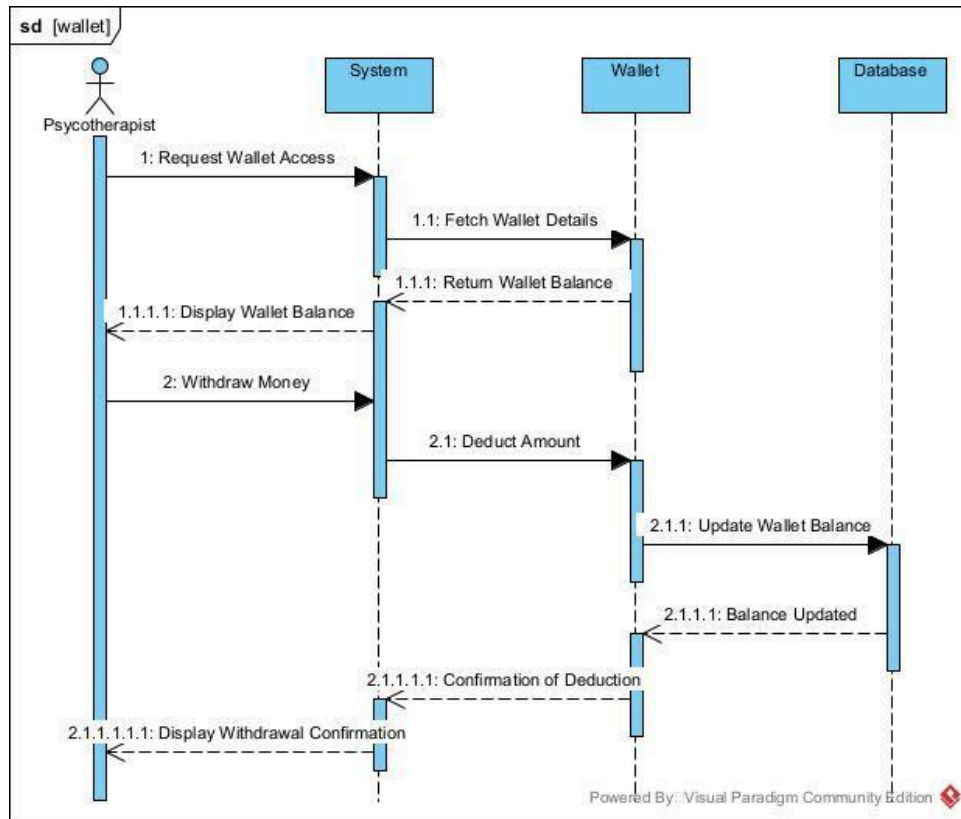
7. Guest



8. Make an appointment

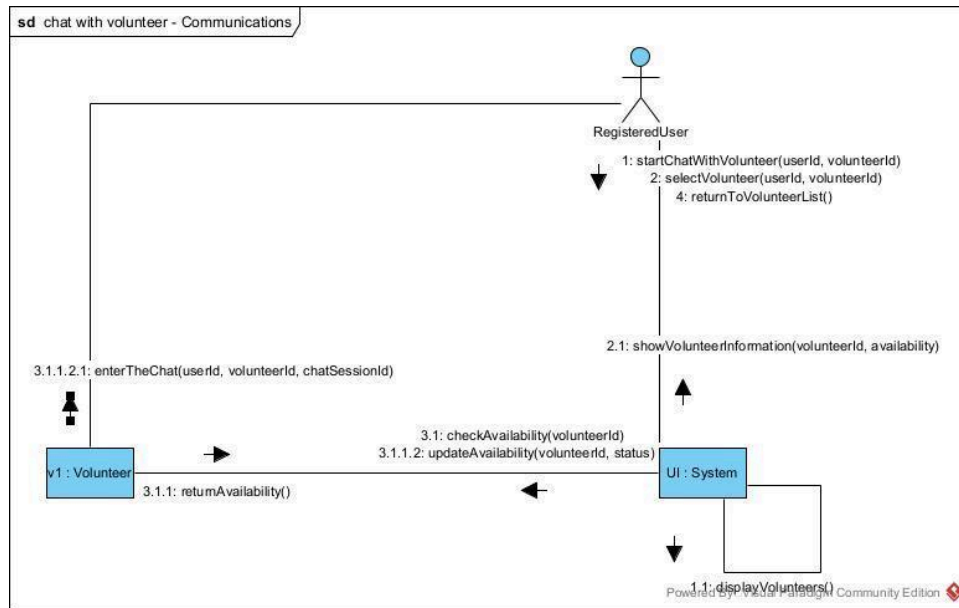


9. Wallet

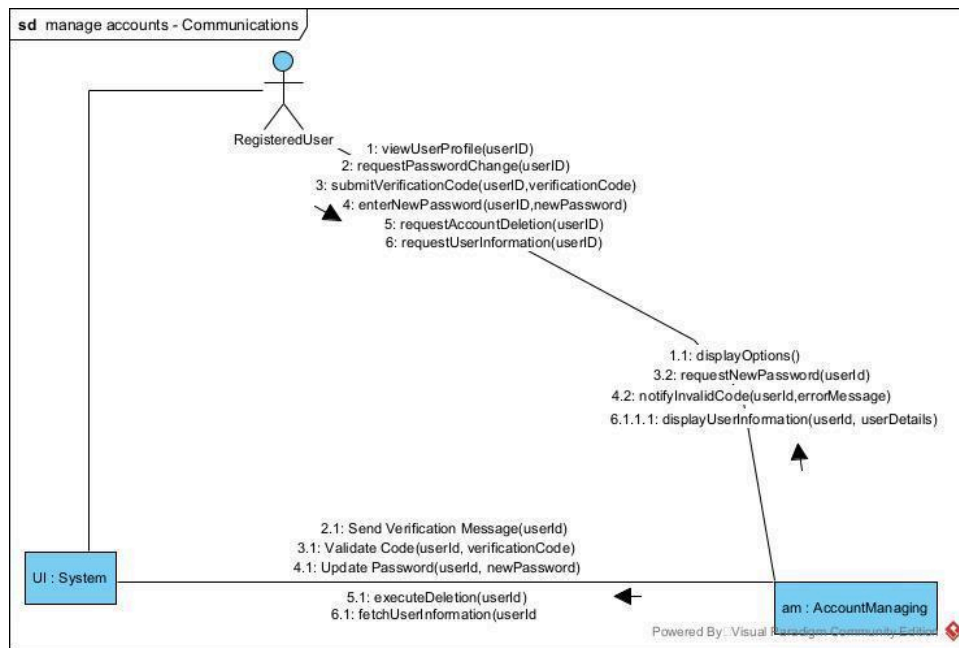


Communication Diagrams

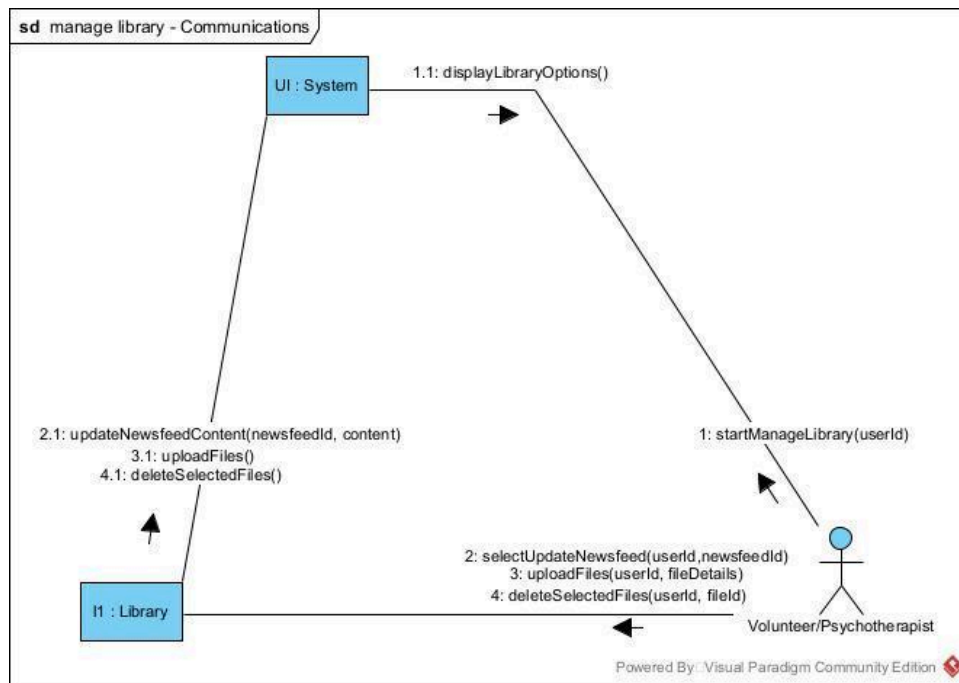
1. Chat with volunteer



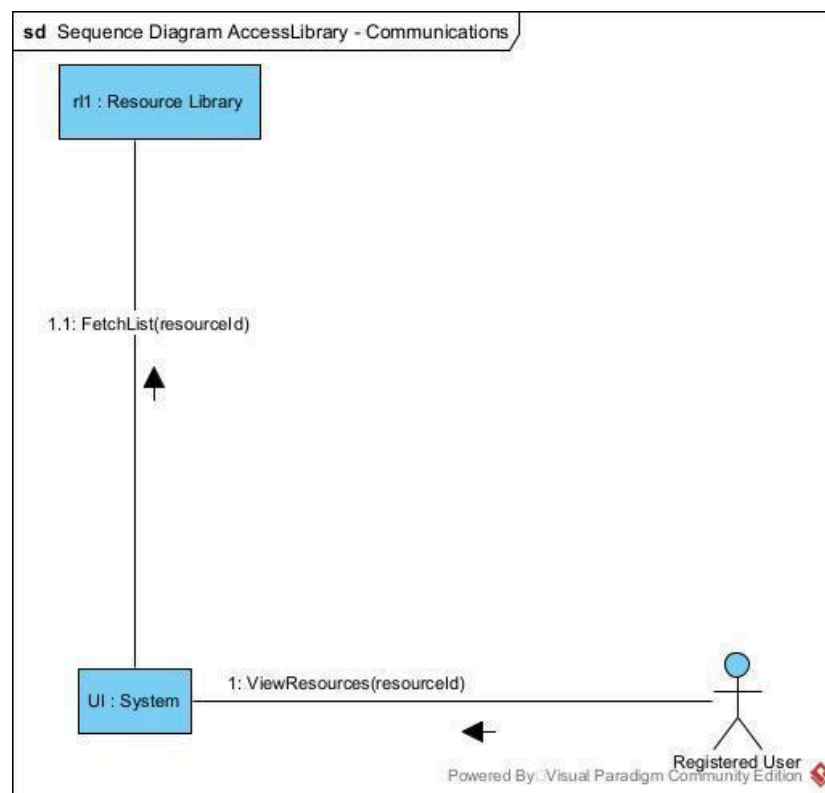
2. Manage Accounts



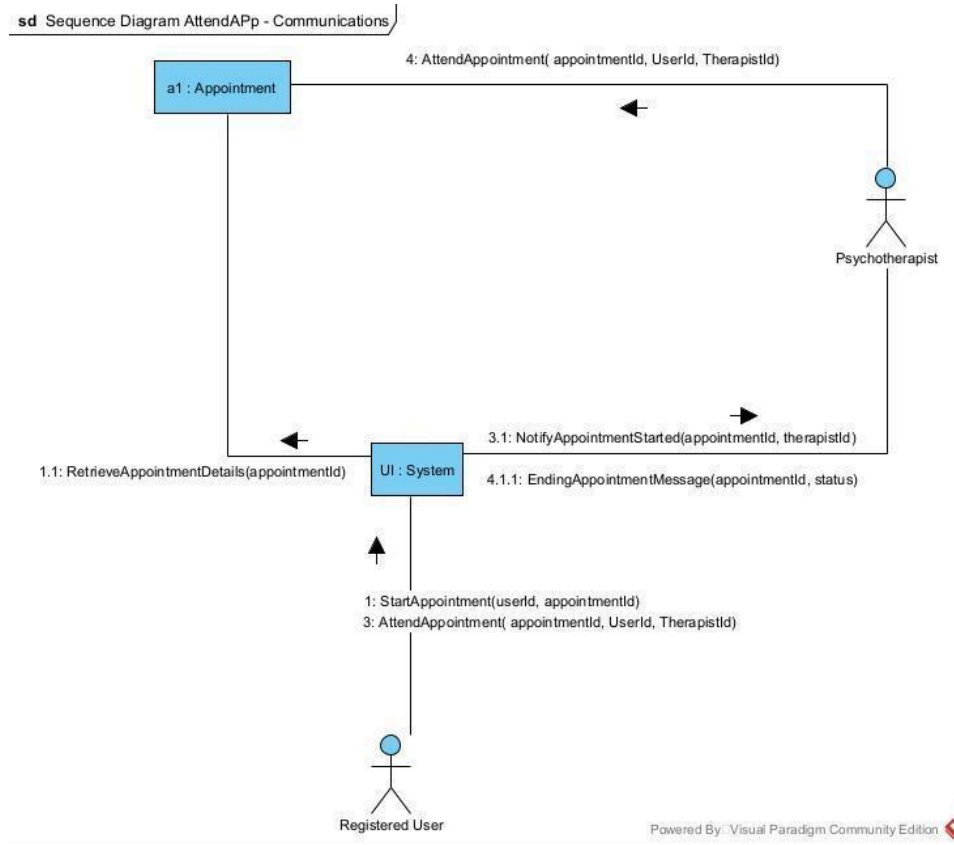
3. Manage Library



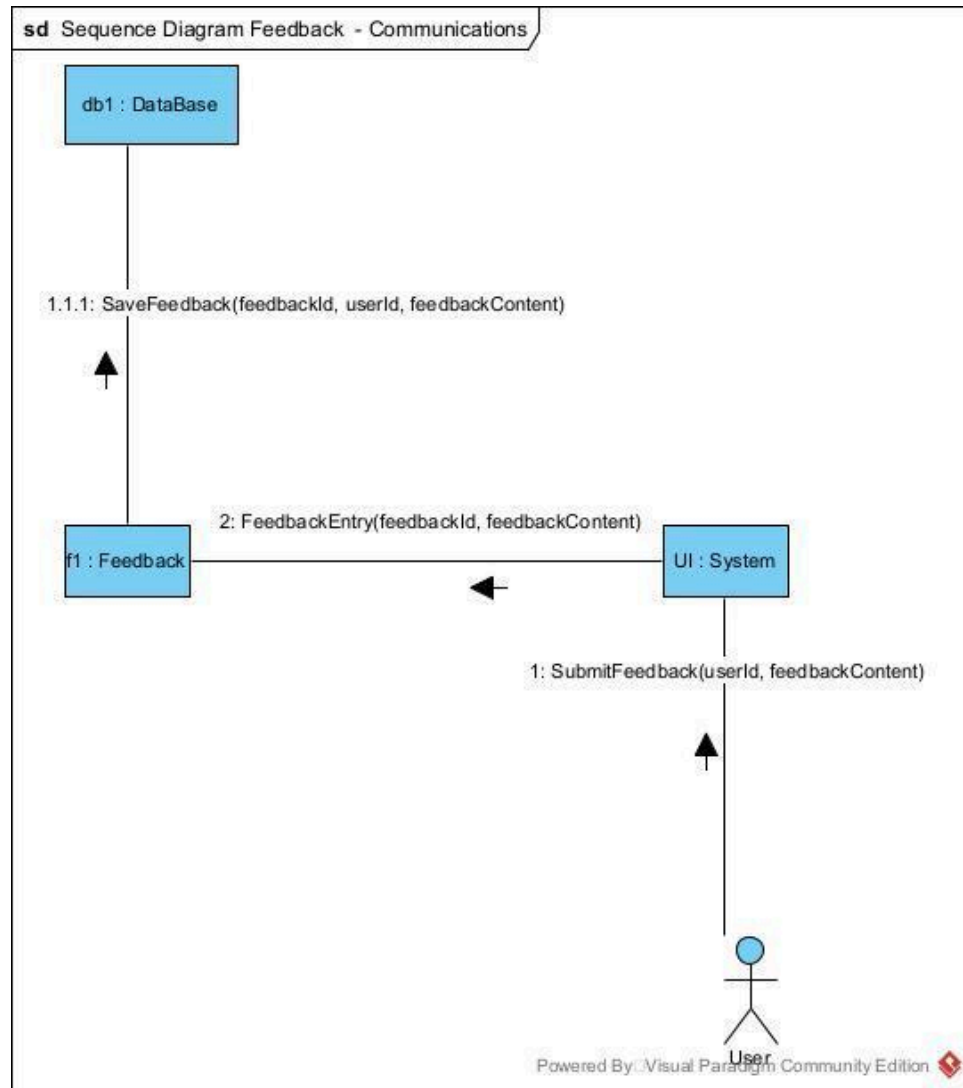
4. Access Library



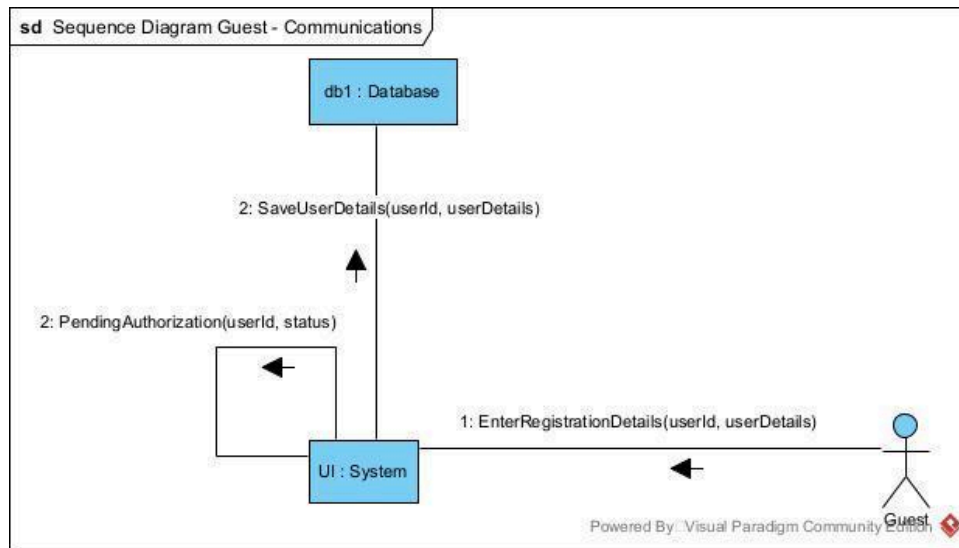
5. Attend Appointment



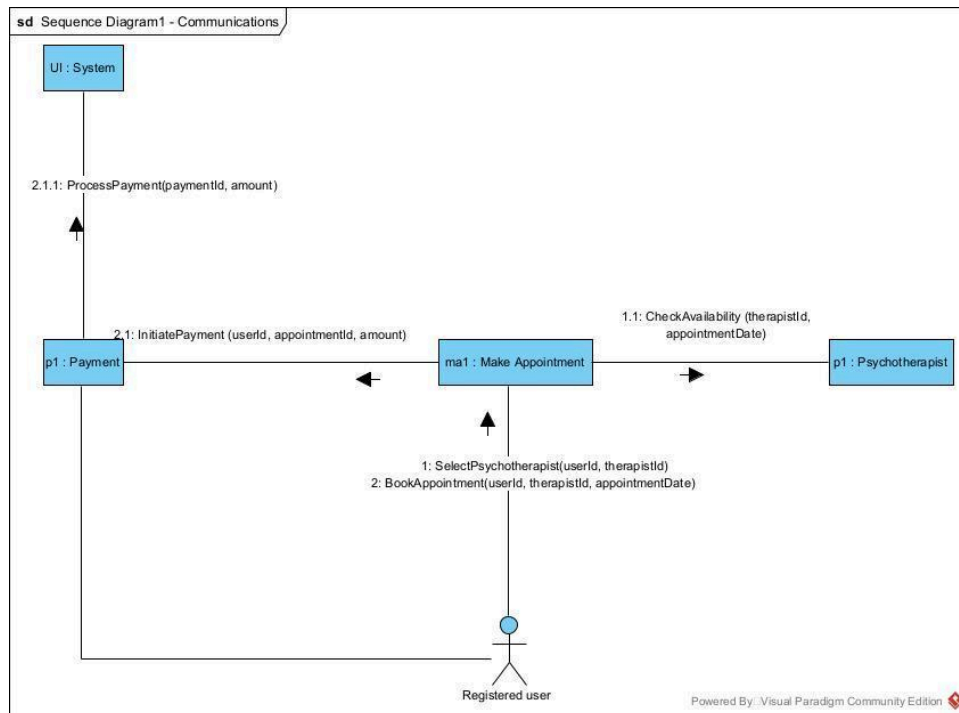
6. Feedback



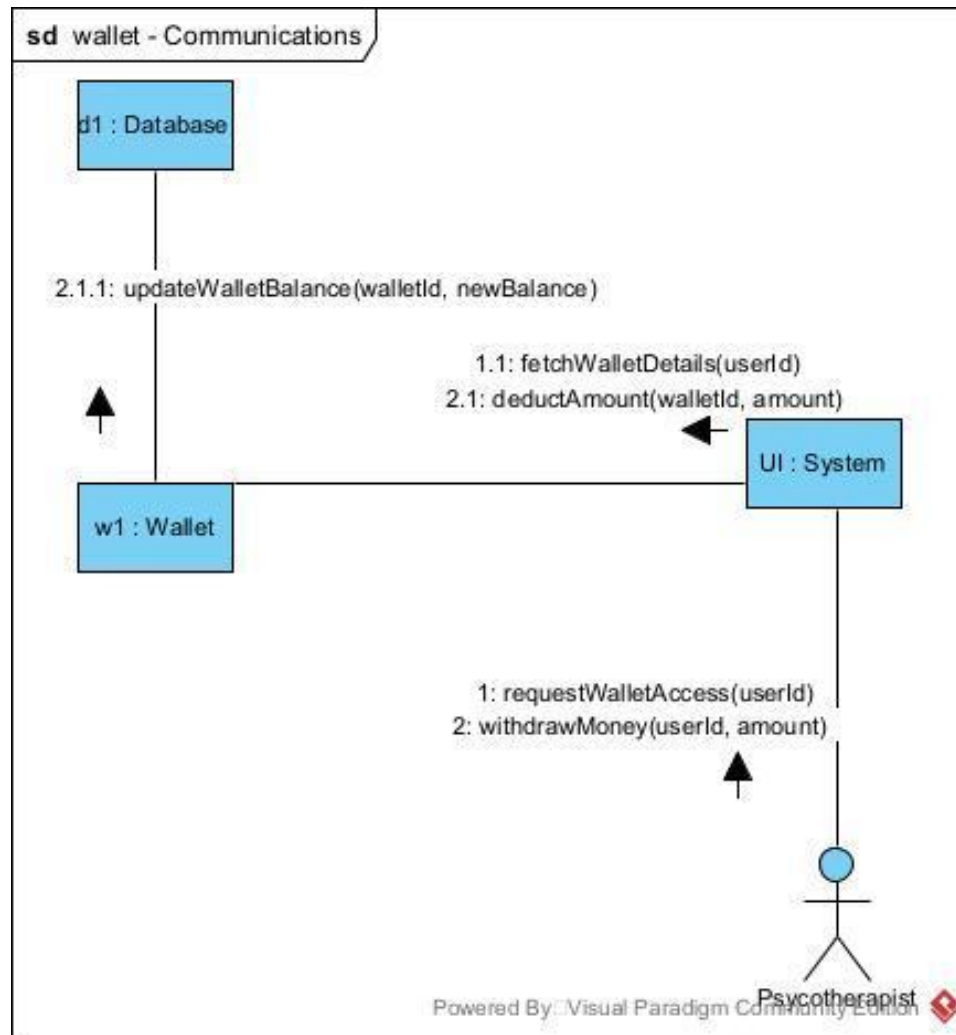
7. Guest



8. Make An Appointment

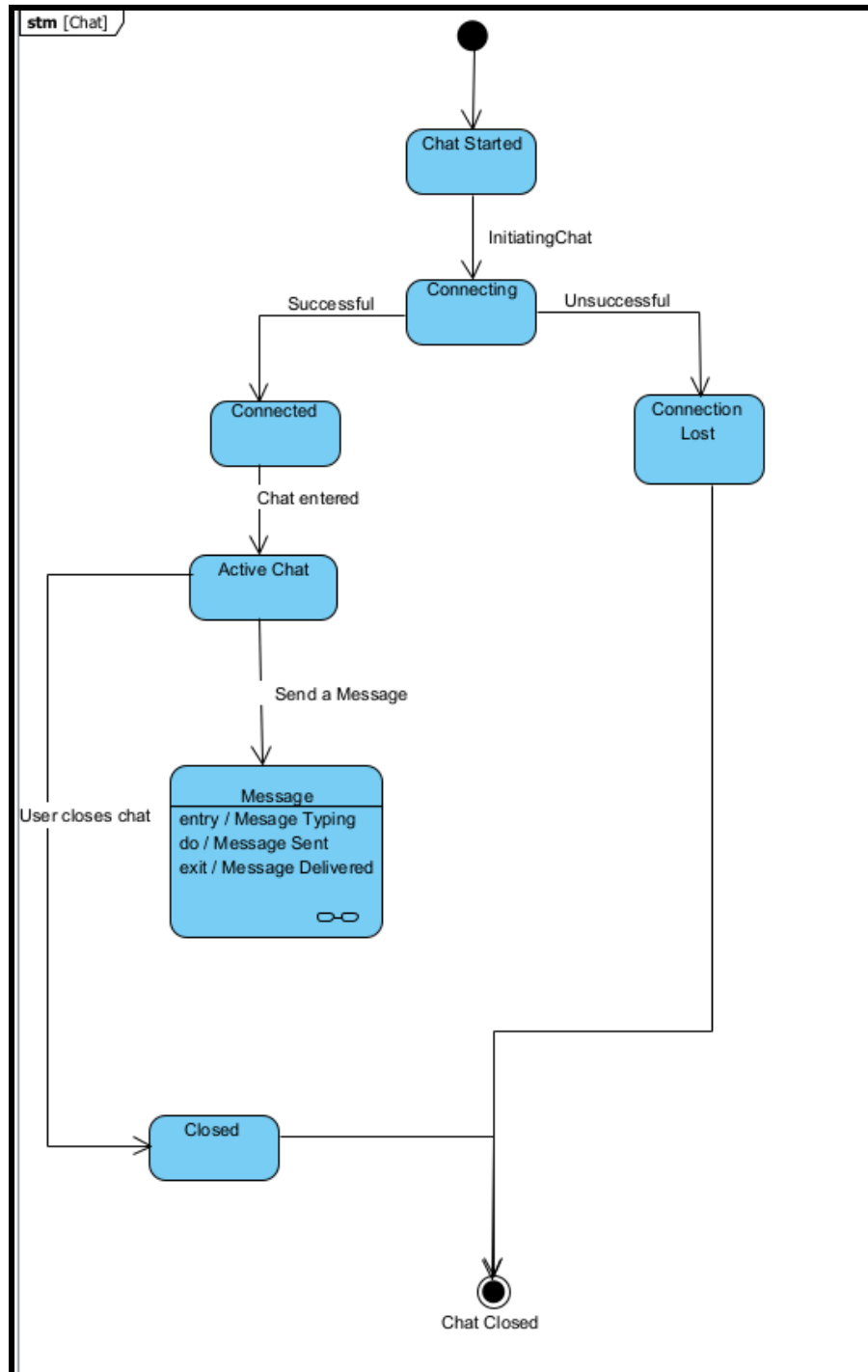


9. Wallet

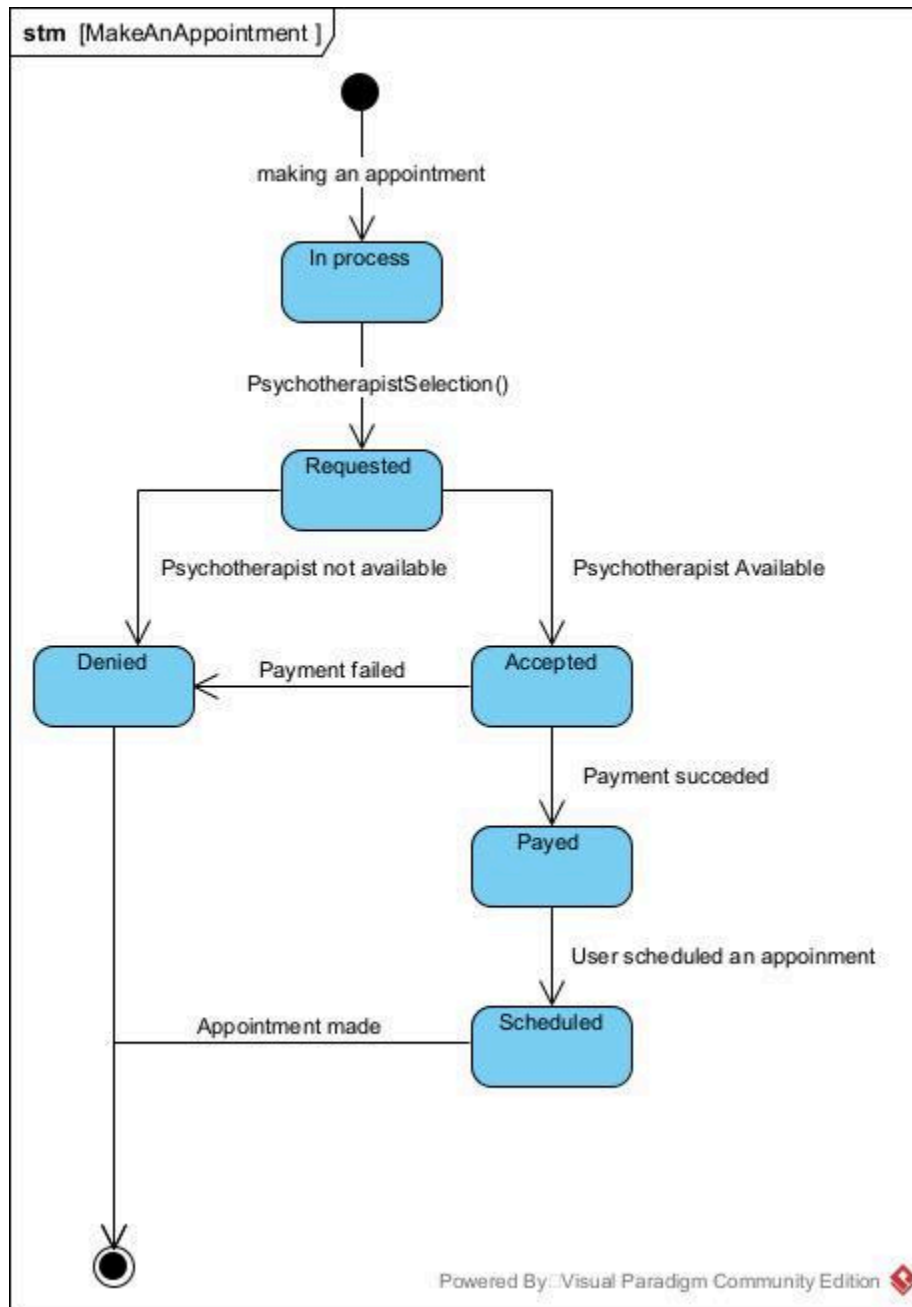


State Machine Diagrams

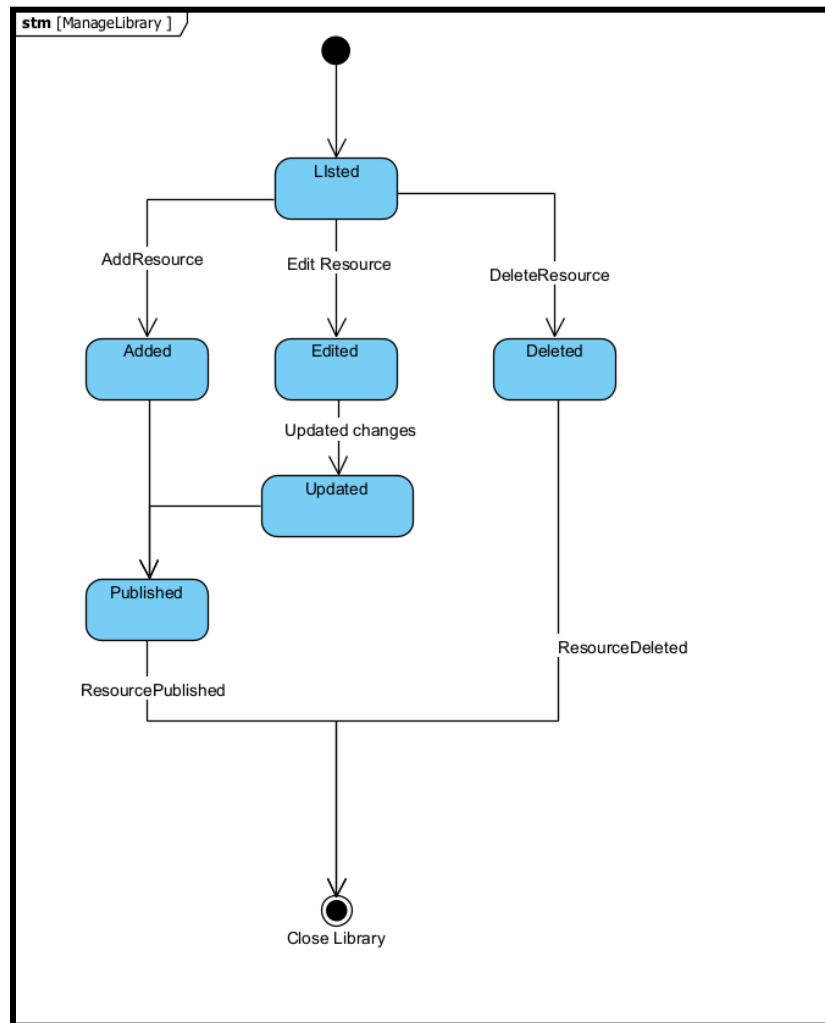
1. Chat



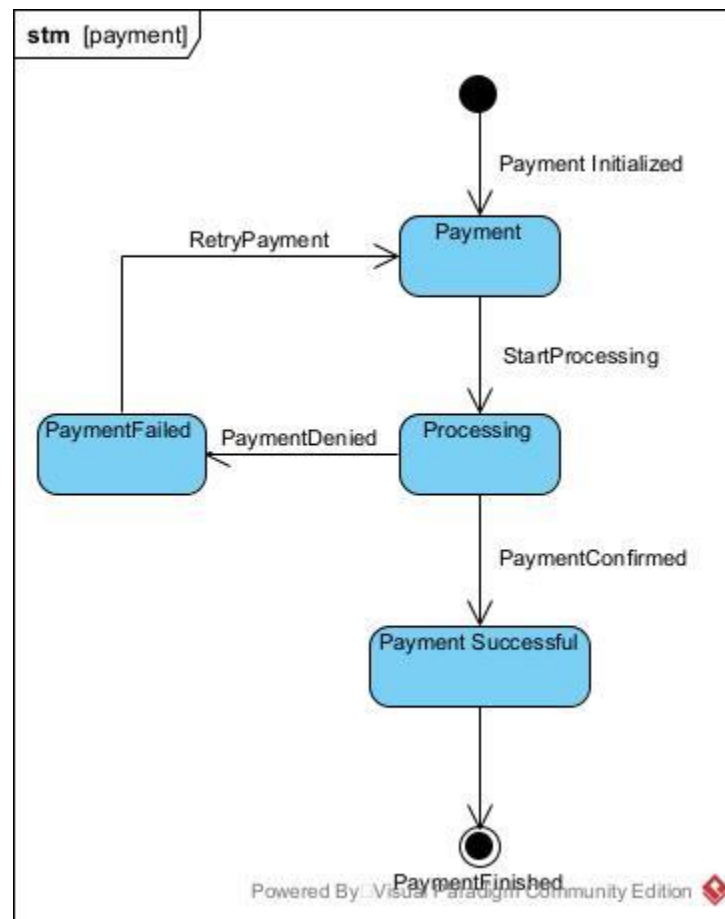
2. Make An Appointment



3. Manage Library



4. Payment



5. Wallet

