

Onenizam



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1. Project Description

Objectives:

Develop Onenizam, an integrated social media and commerce platform, focusing on social interactions and buying/selling features. The completed social media features include posts, catalogues, followers, connections, real-time chat, FCM notifications, and accessibility on both mobile and web platforms.

Key Features:

- **Adding Posts, Catalogues (Update in progress):** Users can create and share their content through posts and catalogues. The platform is currently undergoing updates to enhance this feature.
- **Like, Comment, and Save in Posts:** Users can engage with posts by expressing appreciation through likes, commenting on content, and saving posts for future reference.
- **Follower-Following Connections:** Establish and manage connections with other users by following and being followed. Stay updated on each other's activities and content.
- **Chatting with Seen Status:** Enjoy real-time conversations with other users, complete with seen status indicators to track when your messages have been viewed.
- **FCM Notifications:** Receive instant updates and notifications via Firebase Cloud Messaging, ensuring users stay informed about new activities, messages, and interactions.
- **Platform (Mobile, Website):** Access the platform seamlessly on both mobile devices and desktop websites, providing users with flexibility and convenience.
- **Image Cropping Functionality:** Customize and optimize your images with a built-in cropping tool, allowing users to edit and refine their pictures before sharing.
- **Profile Editing (Bio, Pic):** Personalize your profile by editing your biography and profile picture, giving users the freedom to express themselves and showcase their identity.
- **Discover Page for User, Catalogue, and Posts:** Explore a dedicated Discover page to find new and interesting users, catalogues, and posts, tailored to individual preferences and interests.

- **Home Page Displaying All Content:** The central hub where users can find and consume all types of content – from posts and catalogues to updates from followed connections – conveniently presented on the home page.

Summary: Experience a dynamic and engaging social platform with features like post and catalogue creation (currently undergoing updates), interaction options such as liking, commenting, and saving posts, and the ability to establish connections through follower-following relationships. Stay connected with others through real-time chat with seen status indicators and receive timely notifications through Firebase Cloud Messaging. Accessible on both mobile and website platforms, users can personalize their profiles with a bio and profile picture and edit images using a cropping tool. Discover new content, users, and catalogues on the dedicated Discover page, and enjoy a streamlined experience with a home page displaying all relevant content.

2. Problem Statement and Analysis

Problem Domain:

Challenges in social media and commerce platforms regarding user engagement, content sharing, and buying/selling interactions.

Problem Significance:

Streamlining user interactions, improving content visibility, and enhancing buying/selling experiences to boost platform engagement.

Business Rules:

Adherence to user privacy, security measures, and efficient communication through FCM notifications.

3. Requirement Analysis

Functional Requirements

A. User Requirements

1. Adding Posts, Catalogues:

Users can create and share posts and catalogues with multimedia content.

2. Interacting with Posts (Like, Comment, Save):

Users can engage with posts by liking, commenting, and saving them for future reference.

3. Establishing Follower-Following Connections:

Users can connect with others, establishing follower-following relationships.

4. Real-time Chat with Seen Status:

Users can engage in real-time chat with others, with the ability to see if messages have been seen.

5. FCM Notifications:

Users receive real-time notifications through FCM for post interactions, chat messages, and other relevant updates.

6. Platform Accessibility (Mobile, Website):

The platform is accessible on both mobile devices and the web, providing a seamless user experience.

7. Image Cropping Functionality:

Users can crop and edit images before uploading them in posts and profiles.

8. Profile Editing (Bio, Pic):

Users can edit their profile information, including bio and profile picture.

9. Discovering Users, Catalogues, and Posts:

Users can discover new content, users, and catalogues through a search and discovery feature.

10. Home Page Displaying All Content:

The home page presents a feed displaying all content from following users and catalogues.

B. System Requirements

1. Programming Language:

- The system will be developed using Flutter, a cross-functional application developing framework by Google.

2. Dart Server Running on Azure:

- The server is implemented using Dart and hosted on the Azure platform.

3. Server Access:

- Administrators have access to the server using credentials: one@nizam@112215 (Password: one@nizam@112215).

4. Firebase SDK Download and Environmental Path Setup:

- The system utilizes Firebase SDK for various functionalities, and the SDK is properly downloaded and set in the environmental path.

5. Hosting on Netlify with Domain onenizam.com:

- The web version of the platform is hosted on Netlify with the domain onenizam.com.
- SSL Attached to onenizam.online.

6. SSL Attached to onenizam.online Through Cloudflare:

- SSL is implemented through Cloudflare to ensure secure HTTP calls.

7. User Interface:

- The user interface should be user-friendly and accessible to administrators, normal users, and profile-holders.

8. Security Measures:

- The system should implement security measures to protect sensitive user data, information, and communication channels.

9. Scalability and Performance:

- The system should be scalable to accommodate a growing number of users and shopkeepers.
- It should be designed for optimal performance to handle the data and notification load efficiently.

10. Backup and Recovery:

- Data backup and recovery mechanisms should be in place to ensure data integrity and availability in case of system failures.

Non-Functional Requirements

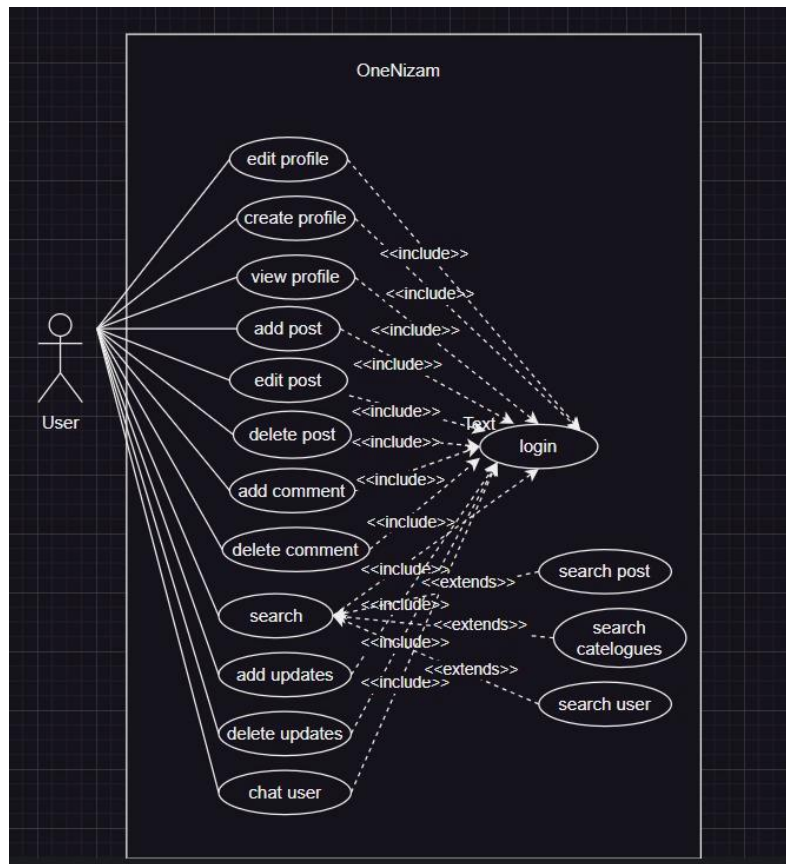
1. **Performance:** The platform should be responsive, providing real-time interactions and quick loading times.
2. **Security:** User data and interactions are secured, and sensitive information is not exposed. Password-based authentication is implemented for access control.
3. **Usability:** The user interface is intuitive and user-friendly, ensuring an easy and enjoyable user experience.
4. **Scalability:** The platform should be designed to handle a growing number of users and content efficiently.
5. **Compliance:** The platform adheres to security and privacy regulations, ensuring compliance with industry standards.
6. **Reliability:** The system should be reliable, with backup and recovery mechanisms in place for data integrity and availability.
7. **Interoperability:** The platform is compatible with standard hardware and operating systems for easy deployment and maintenance.
8. **Availability:** The system is available and accessible with minimal downtime for maintenance or updates.

4. System Design:

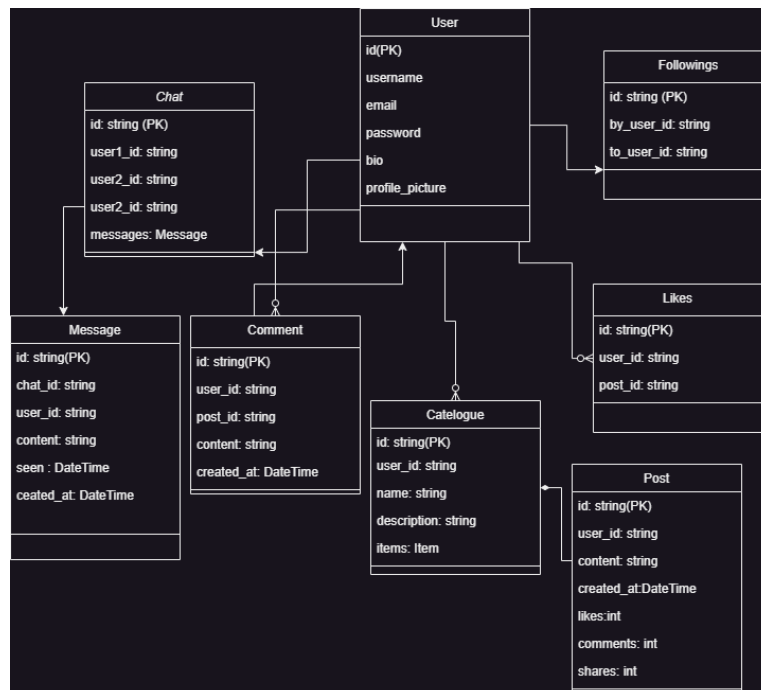
I. Class Diagram:



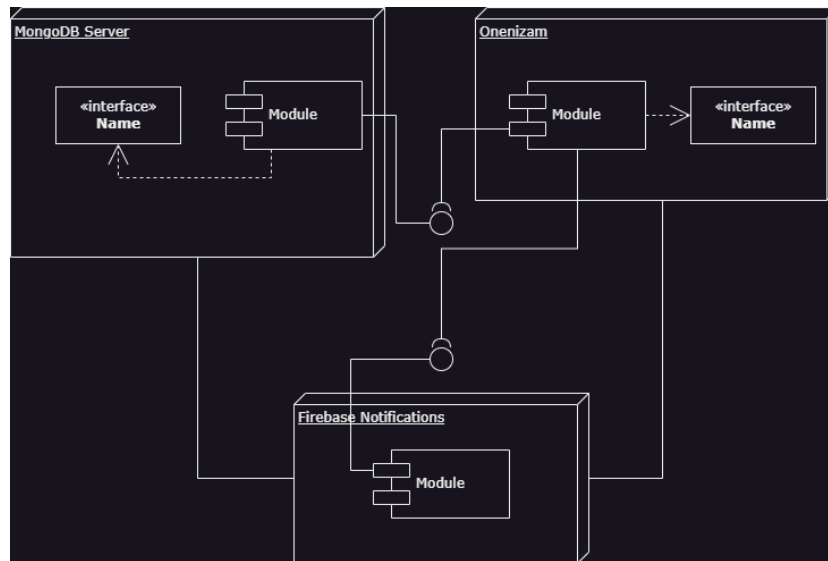
II. Use-Case Diagram:



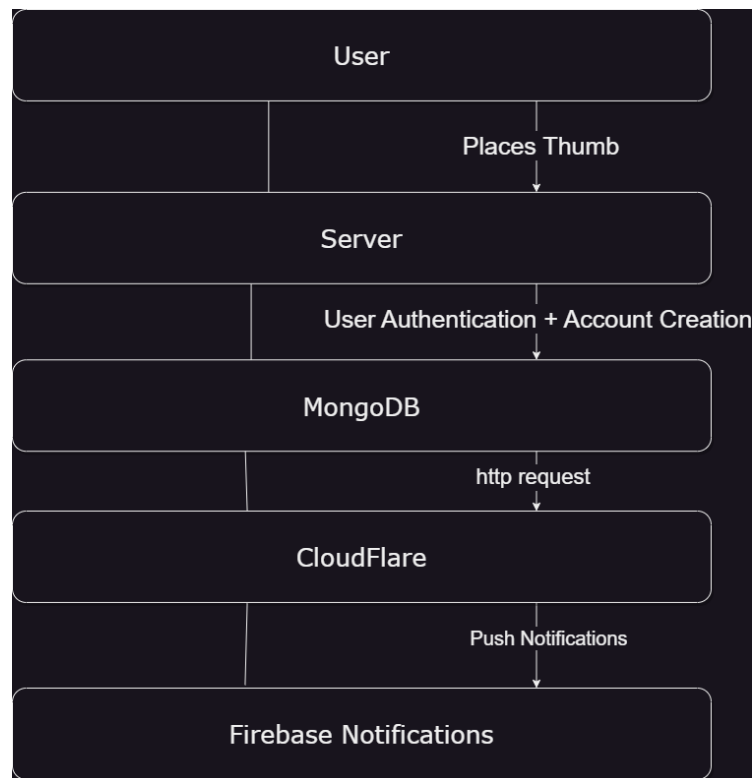
III. ERD:



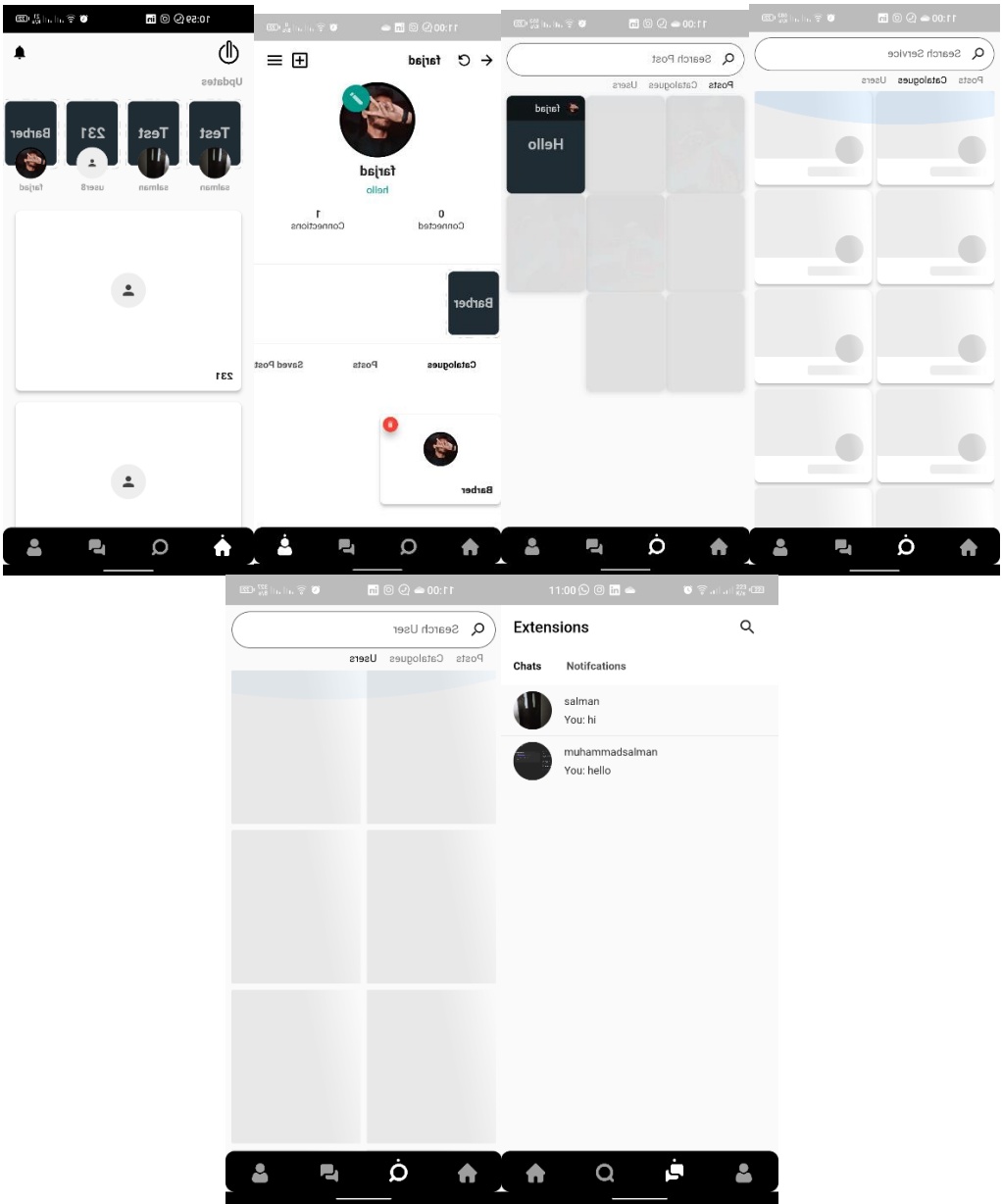
IV. Component Diagram:



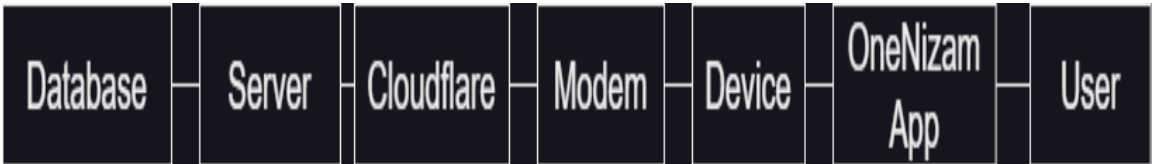
V. Collaboration Diagram:



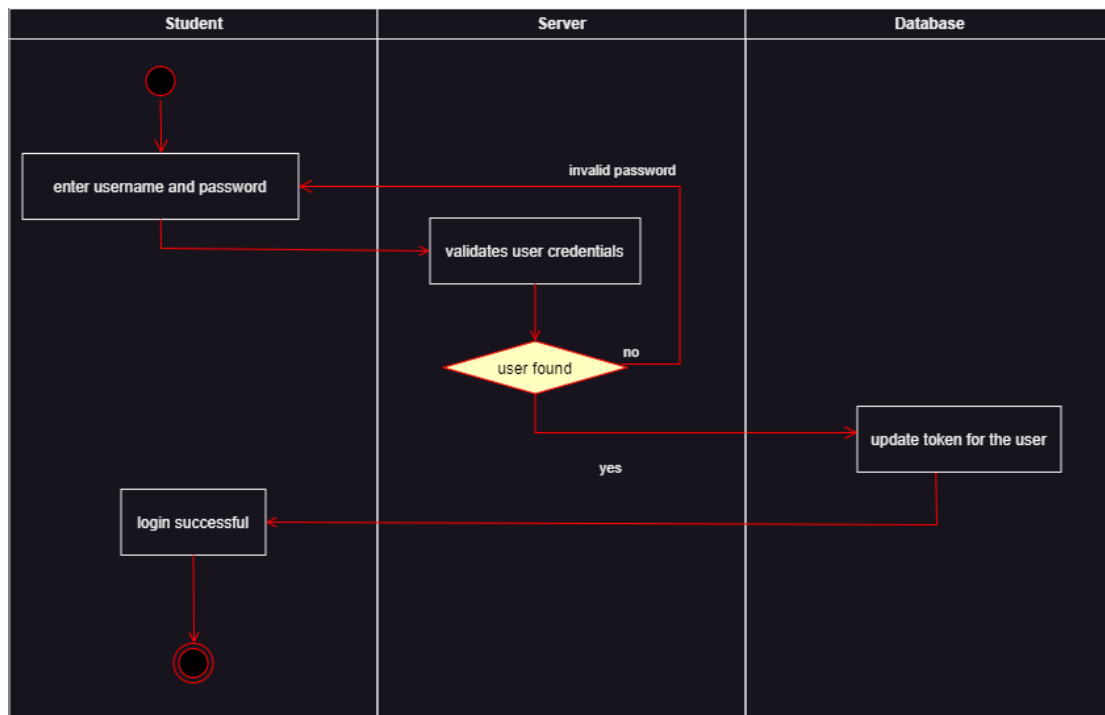
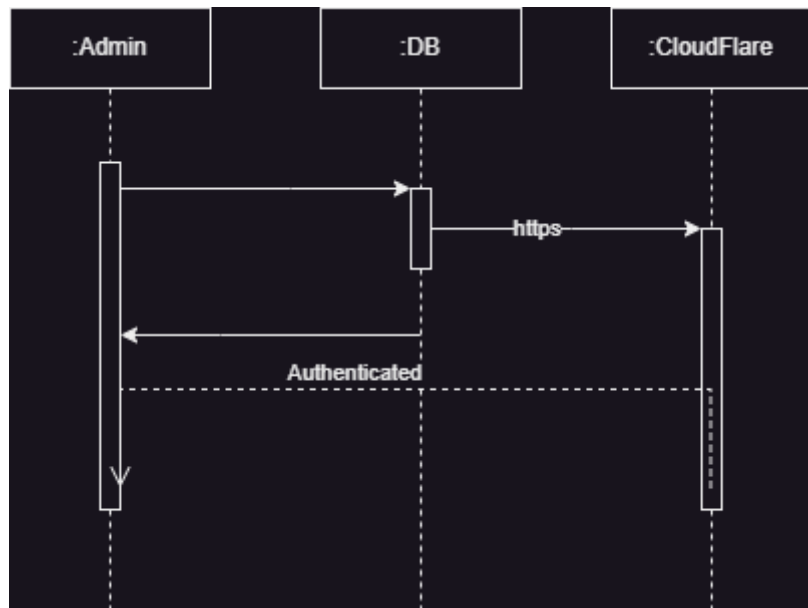
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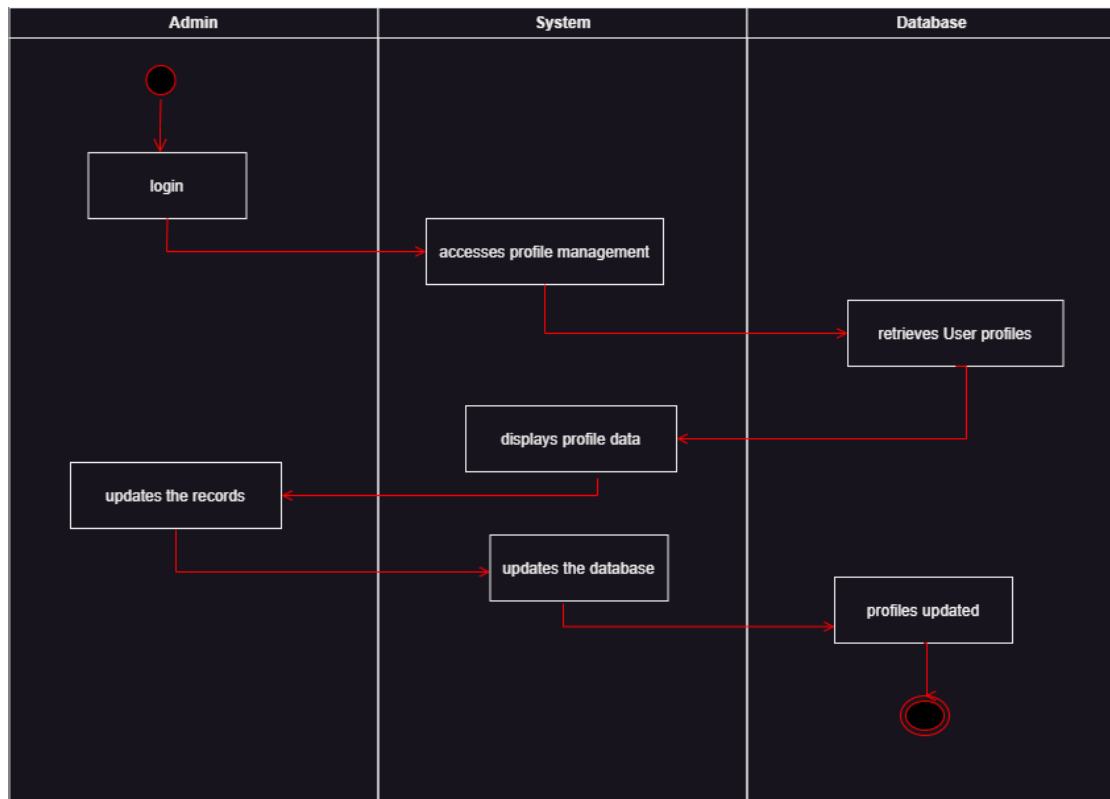
VII. Deployment Diagram:



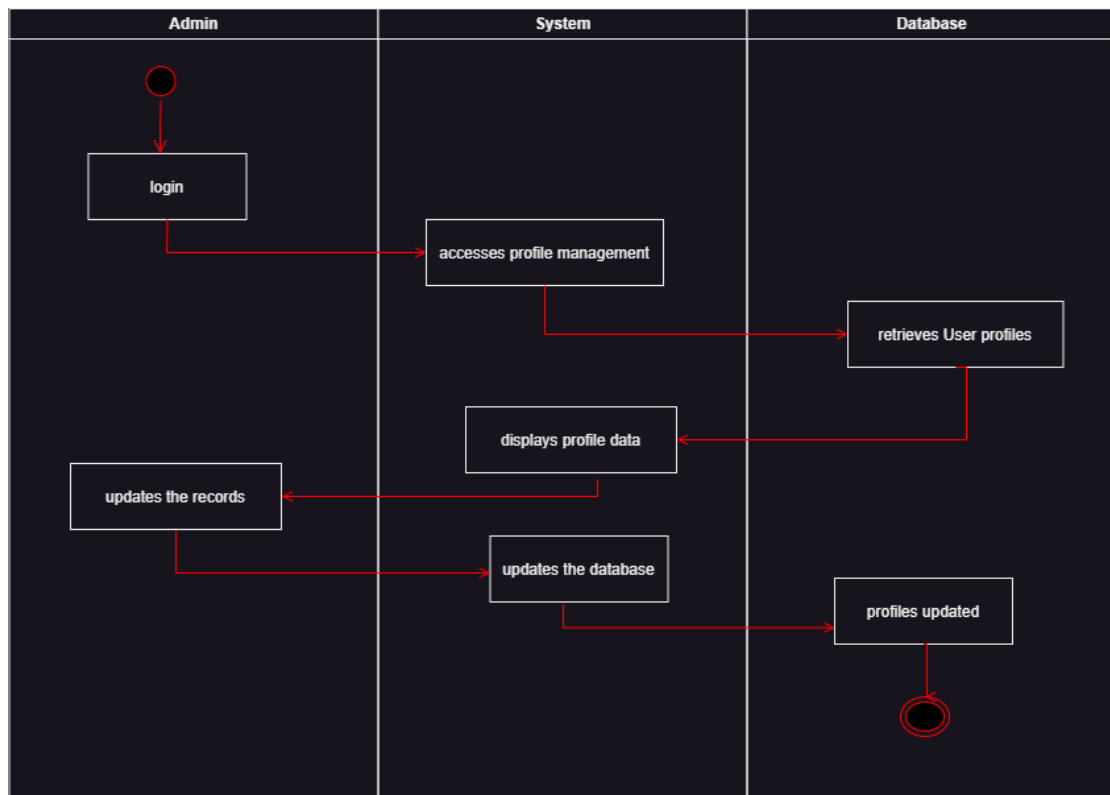
VIII. Sequence Diagram:



IX. Activity Diagram:



X. State Diagram



5. Milestones, Goals & Deliverables:

I. Milestones:

Milestones represent significant achievements or stages in the development process.

1. Project Kickoff

- a. Define project scope, goals, and requirements.
- b. Formulate a project plan and timeline.
- c. Assemble the project team.

2. Requirements Specification Complete:

- a. Finalize and document functional and non-functional requirements.
- b. Ensure alignment with stakeholder expectations.

3. UI/UX Design Approval:

- a. Present and obtain approval for the user interface and user experience design.
- b. Ensure the design aligns with user expectations and usability standards.

4. Backend Development Complete:

- a. Develop the backend components for message handling, user profiles, posts, catalogues and profile history.
- b. Implement secure user authentication mechanisms.

5. Frontend Development Complete:

- a. Develop the user interface components for onenizam, profile creation, home, posts, catalogues etc.
- b. Ensure a responsive and user-friendly front end.

6. Initial Testing and Bug Fixing:

- a. Conduct initial testing to identify and fix bugs.
- b. Ensure basic functionality is stable.

7. Onenizam Completed:

- a. Implement All the necessary and updating features.
- b. Enable posting, liking, commenting mechanism.

8. Messaging Features Completed:

- a. Implement messaging functionality, i.e. messaging the shopkeeper and sending notifications.
- b. Ensure real-time push notification capabilities.

9. Performance Optimization:

- a. Optimize app performance for responsiveness and scalability.
- b. Address any performance bottlenecks.

These milestones represent a logical progression in the development and release of Onenizam with the specified features. Each milestone signifies a crucial stage in the development process, and their successful completion contributes to the overall success of the project.

II. Goals:

The goals of Onenizam with features like sending Messages with notifications, managing user profiles, and preserving their posts, catalogues and profiles, typically revolve around providing a seamless and secure communication experience for the user. Following are the goals of academic management system:

- a. Adding Posts, Catalogues
- b. Interacting with Posts (Like, Comment, Save)
- c. Establishing Follower-Following Connections
- d. Real-time Chat with Seen Status
- e. FCM Notifications
- f. Platform Accessibility (Mobile, Website)
- g. Image Cropping Functionality
- h. Profile Editing (Bio, Pic)
- i. Discovering Users, Catalogues, and Posts

All these objectives work together to produce a feature rich Onenizam that improves sharing posts, maintaining catalogues, offers a satisfying user experience, and contact with shopkeepers. The system's overall success and uptake are influenced by the accomplishment of these objectives.

III. Project Deliverables:

Deliverables for this system with the all the functional and non-functional requirements often span several software development stages and comprise a variety of artefacts.

- a. Project Proposal
- b. Requirements Specification
- c. System Architecture Design
- d. Database Setup
- e. Working Front-end and Back-end with profile posts, catalogues and profiles as well as chatting with shopkeeper.
- f. User Documentation

The successful completion of these deliverables collaboratively enhances Onenizam, resulting in a feature-rich platform that enhances the sharing of posts, management of catalogues, provides a gratifying user experience, and facilitates communication with shopkeepers. The overall success and adoption of the system hinge on the achievement of these objectives.

6. Gantt Chart:

Steps	First Week	Second Week	Third Week	Fourth Week	Fifth Week	Sixth Week	Seventh Week	Eighth Week
Project Description								
Problem Statement and Objective								
Requirement								
Class Diagram								
ER Diagram								
3NF DB								
UML Diagrams								
Documentation								