

A
Minor Project
On
“SOCIAL MEDIA APPLICATION”



Submitted by:

Gopal Khadka
Lokesh Japrel
Sumit Pratap Sah
Amit Neupane
Sagar Kushwaha

Supervised by:

Er. Subodh Shrestha

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Department of Computer Engineering
Acme College of Engineering (Affiliated to CTEVT)
Bagdol-04, Lalitpur
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Candidate's Declaration

We hereby declare that the minor project work being presented in this report entitled **“Social Media Application”** submitted in the department of computer faculty, **ACME COLLEGE OF ENGINEERING, LALITPUR** is the authentic work carried out by us under the guidance of Er. Subodh Shrestha, professor, Department of Computer Engineering, Acme College of Engineering, Bagdol-04, Lalitpur.

Acknowledgement

We would like to extend our heartfelt appreciation to everyone who contributed to the successful completion of this project. Our sincere thanks go to our project team members for their dedication and collaboration throughout the project. Each member played a significant role in shaping the outcome. Special thanks to our supervisors, Er. Subodh Shrestha and Er. Pradip Bhattarai, for their guidance and valuable feedback, which enriched our work.

We'd like to express my heartfelt gratitude to CTEVT and Acme College of Engineering for affording us the opportunity to collaborate on the "Social Media Application".

Executive Summary

DevGram is a social media platform for developers, inspired by Instagram's interface. It offers tailored features and authentication through email, GitHub, and Google accounts. Powered by React, TypeScript, Chakra UI, and Firebase, DevGram ensures a responsive user interface across devices. Firebase provides secure cloud storage and efficient database management for seamless content sharing and collaboration. DevGram is an innovative social media website designed for developers.

With a user-friendly interface resembling Instagram, it offers authentication through email, GitHub, and Google. Using React, TypeScript, Chakra UI, and Firebase, DevGram delivers a dynamic and visually appealing user experience. Firebase enables secure cloud storage and efficient database management, fostering collaboration and content sharing among developers.

Table Of Contents

S.N.	Content	Pages
1	Introduction	1
2	Objectives	2
3	Proposed System	3
4	Completed System	4
5	Problems Faced	5
6	System Analysis and Design	6-9
7	Future Task	10
8	Time Schedule	11
9	Conclusion	12
10	References	13

Introduction

DevGram is a social media website exclusively for developers. Its goal is to provide a platform where developers can connect, collaborate, and share knowledge within a dedicated community. The project uses React with TypeScript, Chakra UI, and Firebase to deliver a user-friendly experience.

DevGram focuses on creating a social media space tailored for developers. It enables them to connect, collaborate, and share knowledge within a dedicated community. The website utilizes React with TypeScript, Chakra UI, and Firebase technologies to ensure a user-friendly experience.

Objectives

- Develop a social media website for developers.
- Facilitate knowledge sharing and learning within the developer community.
- Create a user-friendly interface inspired by Instagram.
- Foster collaboration among developers for sharing ideas, projects, and solutions.
- Build a thriving community of developers by creating an engaging and supportive environment.

Proposed System

Problems we are trying to solve:

- Difficulty in finding relevant developer-focused content on general social media platforms.
- Limited visibility and recognition for developers' work and projects.
- Inefficient communication channels for developers to seek help and support.
- Challenges in discovering and joining developer communities and events.
- Lack of a centralized platform for showcasing portfolios, skills, and achievements.

Solutions to those problems:

- DevGram provides a specialized platform where developers can discover and access curated developer-focused content.
- The platform offers features to showcase developers' projects, skills, and achievements, providing increased visibility and recognition within the community.
- DevGram provides dedicated communication channels like chat groups, for developers to seek help, support, and collaboration opportunities.
- The platform facilitates the discovery and connection with developer communities and events, promoting networking and knowledge sharing.
- DevGram offers a centralized profile feature that allows developers to showcase their portfolios, skills, and experience, making it easier for others to find and connect with them.

Completed System

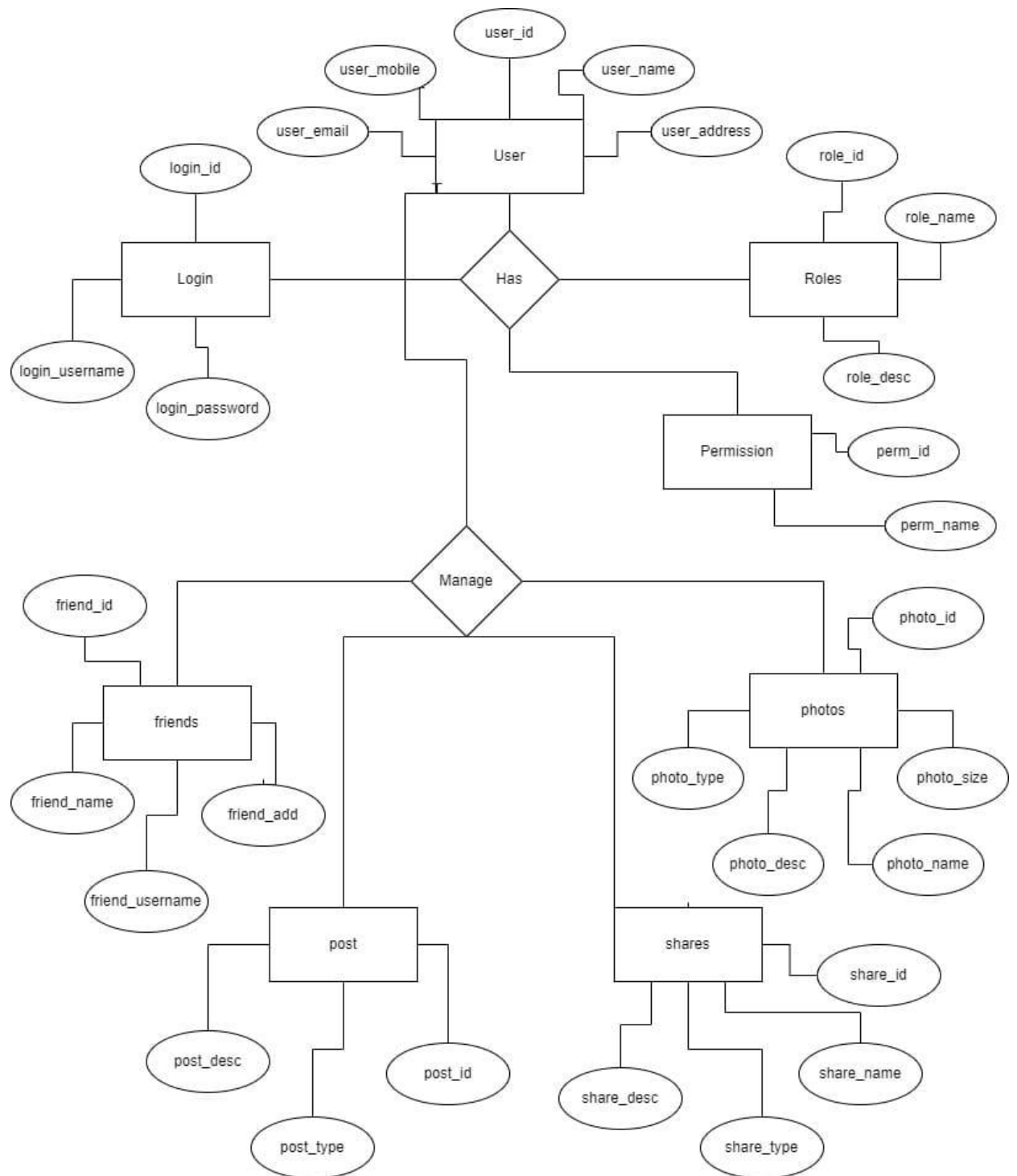
- **User Authentication:** Users can sign in to DevGram using their Google or GitHub accounts, ensuring a secure and convenient login process.
- **Profile Creation:** Users can create their profiles, providing information about their skills, interests, and a bio to showcase their developer identity.
- **Feed and Timeline:** Users have a personalized feed displaying posts from developers they follow, allowing them to stay updated on their network's activities.
- **Image Sharing:** Developers can upload and share images of their coding projects, allowing them to visually showcase their work to the DevGram community.
- **Likes and Comments:** Users can engage with posts by liking them and leaving comments, fostering conversations and providing feedback to fellow developers.
- **Follow/Unfollow System:** Users can follow other developers to stay connected with their updates and unfollow them if desired.
- **Search Functionality:** Easily search for specific users, allowing users to connect with like-minded developers and discover relevant content.

Problems Faced

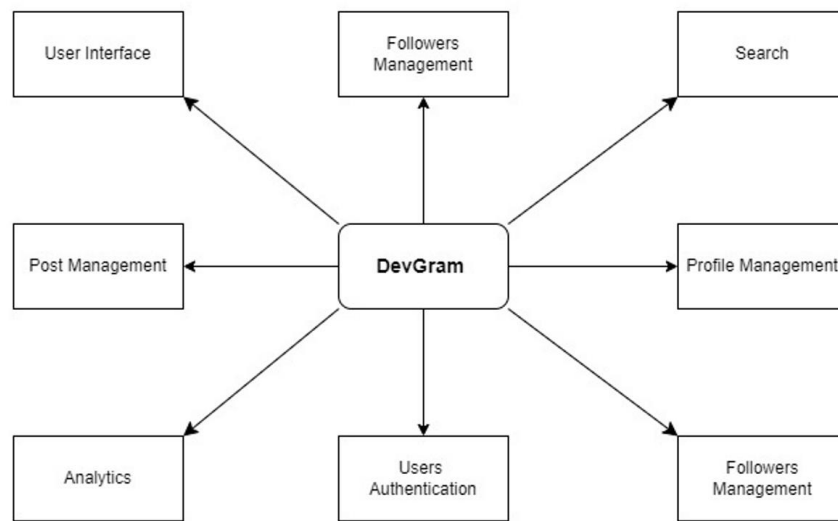
- **Coding Issues:** Resolving coding errors, optimizing code performance, and ensuring compatibility between different technologies used in the project.
- **Integration Issues:** Ensuring smooth integration between React, TypeScript, Chakra UI, and Firebase
- **Schedule Issues:** Managing project timelines and coordinating team efforts to meet deadlines.
- **System Design Issues:** Creating a scalable and modular architecture that supports future enhancements and allows for easy maintenance and updates.
- **Database Issues:** Ensuring efficient data storage, retrieval, and management
- **UI/UX Issues:** Designing a user-friendly interface, ensuring a seamless user experience
- **ER Diagram Issues:** Designing an accurate and well-defined Entity-Relationship (ER) diagram that properly represents the data model and relationships within the system.

System Analysis and Design

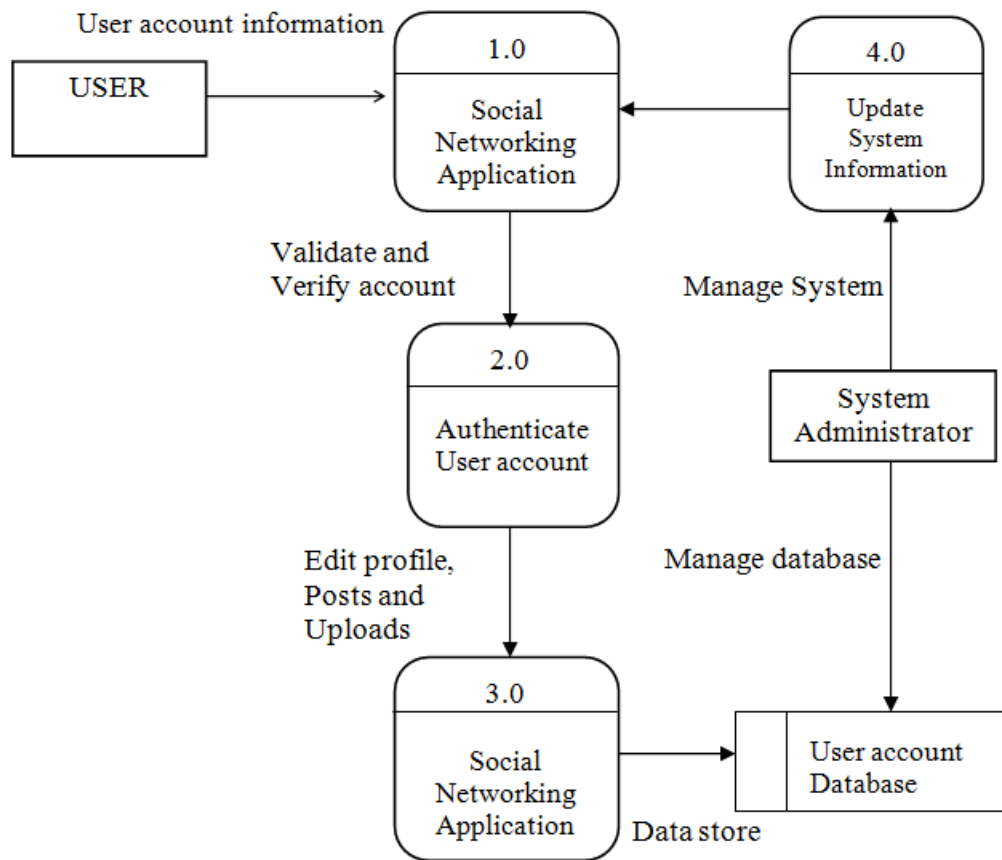
ER Diagram:



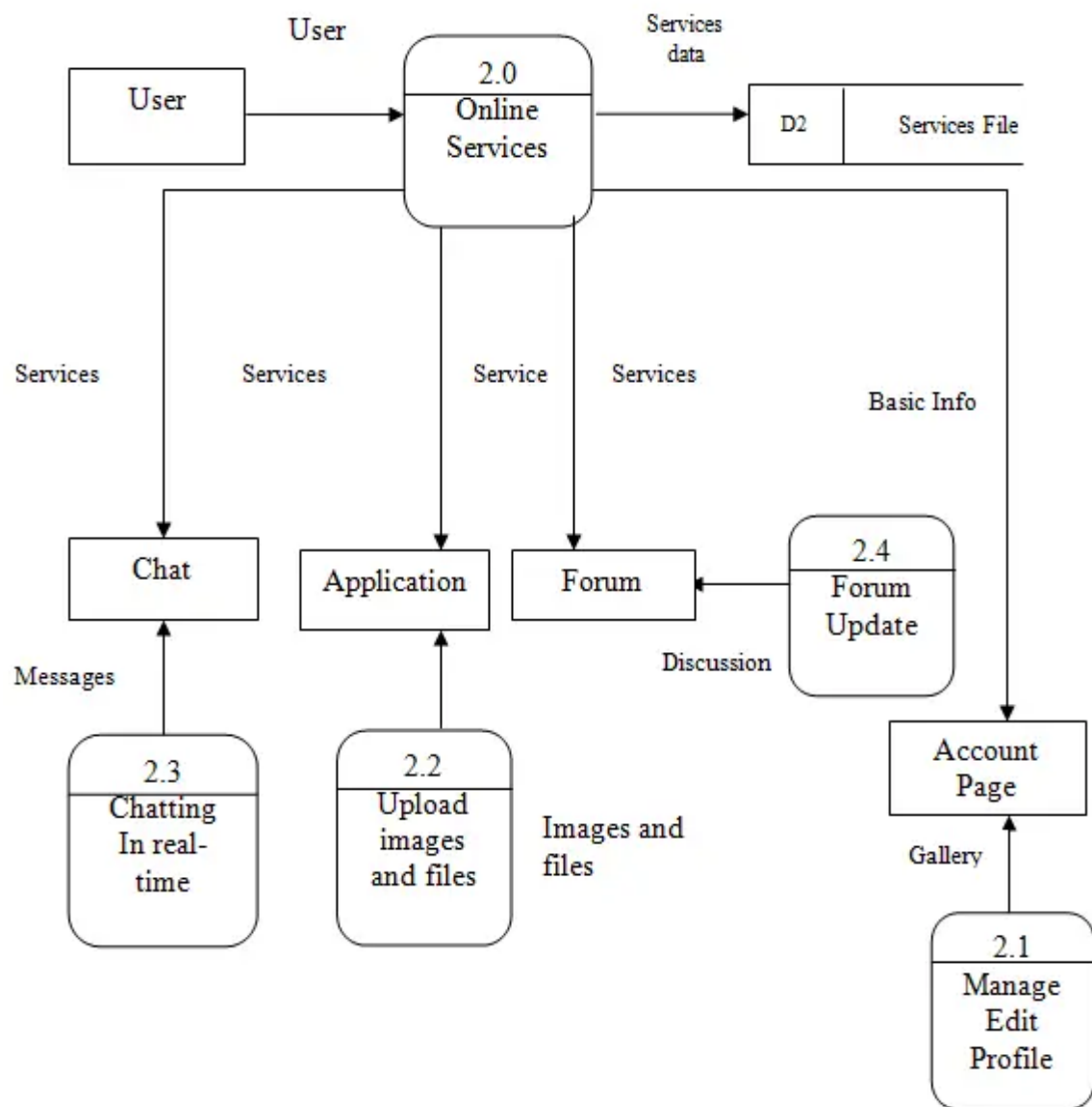
DFD Level-0 Diagram:



DFD Level-1 Diagram:



DFD Level-2 Diagram:



Future Tasks

- **Performance Optimization:** Implement measures to optimize code, database indexing, and caching techniques for faster load times and improved user experience.
- **Enhanced Collaboration Features:** Introduce project management tools, version control integration, and real-time collaborative coding environments to facilitate efficient teamwork among developers.
- **Advanced Search Functionality:** Improve search with advanced filtering options, personalized recommendations, and intelligent algorithms for better content, developer, and project discovery.
- **Community Engagement Enhancements:** Introduce developer challenges, coding competitions, and virtual events to foster active community participation, knowledge sharing, and networking.
- **Mobile Application Development:** Develop a native mobile application to provide users with an optimized mobile experience and expand the platform's accessibility to a wider developer audience.

Time Schedule

Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Case Study																
System Analysis and Design																
Coding																
Testing and debugging																
System Testing																
Review And Documentation																

Conclusion

The DevGram project aims to create a dedicated social media platform for developers using modern technologies like React with TypeScript, Chakra UI, and Firebase. It focuses on fostering collaboration, knowledge sharing, and project management while offering an intuitive user interface.

The success of DevGram can be measured by user engagement, satisfaction, collaboration, performance, security, and technical metrics. It has the potential to create a vibrant developer community, facilitate meaningful collaboration, and deliver a robust and user-friendly experience, thanks to the integration of advanced technologies.

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