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Social Media Platform

DBMS PROJECT ABSTRACT (CSL 333)

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# Overview

This project entails the development of a simplified social networking platform centered around the creation and sharing of user-generated content. The platform will facilitate user interaction through post creation, liking, and viewing. To ensure a seamless user experience, the platform will incorporate user registration and authentication mechanisms. The core functionalities will include posting, liking, and displaying content in a user-friendly format. The project will focus on building a robust foundation for understanding the underlying database management principles required for such platforms.

# Features

**User-related functionalities:**

* **User Registration**: New users can create accounts on the platform.
* **Authentication**: Registered users can log in to access their accounts.

**Post-related functionalities:**

* **Post Creation**: Users can create new posts with a title, description, and image.
* **Post Display**: Users can view all posts, their own posts, and posts they have liked.
* **Post Interaction**: Users can like other users' posts.
* **Post Management**: Users can update or delete their own posts.

**Feed-related functionalities:**

* **Feed Display**: The platform will show a feed of posts.
* **Feed Ordering**: Posts in the feed will be ordered by date and number of likes.

# Technologies Used

# A relational database model will be used with three primary tables: Users, Posts, and Likes. The system will support efficient data storage, retrieval, and updates. The project will utilize: Streamlit (frontend): *An open-source Python framework to deliver* interactive frontend Python (backend): A popular multi-paradigm programming language MySQL(Database): A relational database management system.

# Relevance

Understanding the design and implementation of a social media platform's database system is crucial for various reasons. It serves as a foundational project for learning database management concepts in the context of a real-world application. This project provides practical experience in handling user data, content management, and user interactions, which are essential skills for database developers and software engineers. Furthermore, it offers insights into the challenges and considerations involved in building scalable and efficient database systems for high-traffic applications like social media platforms.

By successfully completing this project, individuals can gain a strong understanding of database design, normalization, query optimization, and user experience considerations within the social media domain.

# ER Diagram

