Assignment 1: Schema Design for 100x Microblogging Platform

Introduction

Building upon your foundational knowledge in database schema design, this assignment aims to expand the 100x Microblogging platform's functionality to include a follow system, likes, and a single-level reply feature.

Objective

Your task is to create database schemas for these features, aligning with the simplicity and conventions of the existing users and posts schemas. This exercise will solidify your understanding of key database concepts such as foreign key relationships, constraints, and data integrity.

Features to Implement

Following System

Develop a schema that allows users to establish following relationships with other users, capturing the timestamp of when the follow action was initiated.

Guidelines:

- Prevent self-following scenarios.
- Ensure uniqueness in follow relationships.

Likes

Design a schema that enables users to like posts, recording the unique interaction between a user and a post along with the timestamp.

Guidelines:

- A user should not be able to like the same post more than once.

Replies

Create a schema that facilitates users to reply to posts. Note that replies can only be made to original posts, not to other replies.

Guidelines:

- Ensure that a reply is linked to the original post it pertains to.

Deliverables

Your schema design submissions should follow the same format that was used to create `users` and `posts` tables.

Submit a document with the following details for each feature:

- Table name.
- Column names with data types and any necessary constraints.
- A short description of each table's role and how it relates to the existing schema.

Submission Guidelines

Your schema designs should be submitted in a plain text document, adhering to the format exemplified by the users and posts schemas.

Evaluation Criteria

Your work will be assessed based on the logical structure of the database, adherence to relational database design principles, and the clarity of your documentation.

Focus on creating a schema that allows for effective data storage and retrieval, while maintaining the simplicity required for beginner understanding.