Author

Paarth Bhatnagar
21f1003592
21f100592@ds.study.iitm.ac.in

Hi, I am Paarth Bhatnagar and this is my MAD-2 project submission BlogLite.

Description

In this project, we had to make a multi-user blogging app. The app should enable a user to create blogs and these blogs should be accessible to all the users across the platform. The author of a blog should be able to edit, delete, and publish blogs.

Technologies Used

- **SQL Lite** - Used as the main database to implement all the models for this project.
- **Flask** is a backend API to serve JSON objects to the front end.
- **Flask SQL Alchemy** - Used Python to make changes directly into the SQL Lite database.
- **VueJS** - Used for hosting the front end, displaying, and making calls to the back end.
- **HTML** - Used for manipulating the data sent by the backend and displaying it on the front end.
- **CSS** - Used for styling HTML.
- **Bootstrap** - Used as a framework for HTML objects.
- **Redis** - Used for message broking and caching.
- **Celery** - Used to schedule async tasks and periodic jobs.

Database Schema Design

- User Table: To keep the data about each user.

Column Name	Constraints
username	Text, Primary Key, Unique, Not Null
password	Text, Not Null
email	Text, Not Null
full_name	Text, Not Null
follower_count	Integer
post_count	Integer
bio text	String

- Post Table - To keep the data about each blog

Column Name	Constraints
id	Integer, Primary Key, Unique, Not Null
title	Text, Not Null, Unique

caption	Text, Not Null
username	Text, Not Null
image_url	Text
timestamp	Text, Not Null

- Followers Table - To keep the data about who is following who.

Column Name	Constraints
username	Primary Key, Text, Not Null
follows	Primary Key, Text, Not Null

API Design

The API files are divided into four Python files. The login_controllers control all the login-related tasks. The post_controllers control all the blog-related tasks. The profile_controllers control all the profile-related tasks. The email_controllers control all the mailing tasks, reminders, and alert jobs.

Architecture

- The project root folder contains a file main.sh which is a shell script. This script when executed after installing all the dependencies can be used to start both the backend and frontend servers.
- The backend folder contains all the code for the backend built using Flask.
- The frontend folder contains all the code for the frontend built using VueJS 2.
- All the backend dependencies are given in the requirements.txt present within the backend folder.
- All the frontend dependencies can be installed using the steps given in the README.md inside the frontend folder.

Features

- Basic login/signup for a user is implemented, but the login and signup. Token-based authentication is used to authenticate users.
- All the pages contain a navigation bar on the top. The navigation bar helps a user to navigate to the homepage, navigate to the publish new blog section, and a dropdown from where a user can visit its profile or log out.
- On the homepage, a user is able to view blogs by the users they follow. A new user by default has an empty homepage and is given suggestions to follow a few people to populate their feed.
- The homepage contains a Recommended Blogs section on the right side. This contains some specific blogs tailored especially for a user. For now, this section selects random blogs.
- On the top of the homepage is a search bar that can be used for searching for users.
- When a user visits another user's profile, they are able to follow or unfollow that specific user.
- In the user profile section, a user is able to change their profile picture and bio. The count of followers and following is also displayed. Clicking on followers/following opens up a modal displaying list of users.
- Users are allowed to export their blogs as csv. They are sent monthly progress reports via mail and a daily reminder to come to publish something on BlogLite via email if they have not already done so.

Project Video:
https://drive.google.com/file/d/12ViYAvH1dHwQ2m1k7TTR5UdkOYZ7MZxp/view?usp=sharing