MAD1 Project – Blog Application

Author

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Ilham, a 3rd year Btech student. I love coding and anything related to Computers.

Description

A Blog Application has to be created which includes functionalities such as registration of users, signing in, ability to post blogs, follow others, see post feed

Technologies used

Flask – This is the python based server
Jinja2 – Used to render HTML templates
SQLite – Used as Database for the application
SQLAlchemy – Facilitates communication between python programs and databases.

DB Schema Design

The Database has 3 Tables:

1 – Users(username STRING PRIMARY_KEY , password STRING, followers INTEGER, posts_num INTEGER)
2 – Posts(Id STRING PRIMARY_KEY, username STRING FOREIGN_KEY, title STRING, desc STRING, img_url STRING, timestamp DATE)
3 – Follows(Id STRING PRIMARY_KEY, follower STRING FOREIGN_KEY, followers STRING FOREIGN_KEY)

-Users table stores the list of users.
-Posts table stores the list of all posts.
-Follows table keeps tab of all follow data

API Design

API's handle all the functionalities of the website as well as serving of each page. Used SQLAlchemy to communicate with the sqlite3 database.

Created APIs to:

- Register a user and sign in a user as well as logout
- Post a blog, delete a blog and edit a blog (3 separate APIs with separate routes)
- Fetch all posts made by the user logged in along with the details
- Fetch list of users registered(search)
- Handle Follow and unfollow operation
- Fetch all posts(for feed) made by users that the logged in user is following(according to timestamp, newest posts are shown first)
- Fetch details and posts of a particular user profile
- Serve all the web pages

Architecture and Features

The whole project is inside the 'MAD_1 IITM' folder.

Within this folder, the 'Templates' folder contains all the html web page files.
'MAD" folder contains the virtual environment for the application.
'App.db' is the database file.
'Models.py' contains all the models of tables that is used in the database
'database.py' contains the initialisation of SQLAlchemy
'App.py' contains all the controllers and implements the functionalities of the website.

All Features:

- User signup and login with validation(Signup only works if username doesn't already exists, returns alert if already exists)
- User profile view with basic stats as well as posts
- Blog Post Management(create, edit, delete)
- Search and Follow / Unfollow Others
- User's Feed (Fetches posts according to timestamp, newest posts first)

Video link

https://drive.google.com/file/d/1IdSv6cCY45hs_HDV8cHEMJjcp64UJsDT/view?usp=sharing