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I'm totally obsessed with Anime, PC Games, Super sports bikes, Super Cars

Description

We need to develop an application which tracks daily life tasks/goals and shows the graph of the submitted data. For more description refer link: Quantified self - Wikipedia

Technologies used

- Python - used for programming
- Flask - used to develop the web application easily with python. I used some cool features of it like URL routing, template engine etc.
- Flask_sqlalchemy - used to CRUD operation on the database
- DB browser - used to create database schema design
- Bootstrap framework - used for styling web pages
- Chart.js - used for rendering the graph
- Visual Studio Code - used as code editor to build and debug the application

DB Schema Design

Column Name	Column Type	Constraints
userid	Integer	Primary Key, Not Null
username	String	Unique, Not Null

Table 1: user

Column Name	Column Type	Constraints
tid	Integer	Primary Key, Not Null
tname	String	Unique, Not Null
tdescription	String	
ttype	String	Not Null
tsetting	String	
userid	Integer	Foreign Key (user.userid), Not Null

Table 2: trackers

Column Name	Column Type	Constraints
logid	Integer	Primary Key, Not Null
time	String	Not Null
tracker	String	Not Null
value	String	Not Null

note	String	
tid	Integer	Foreign Key (trackers.tid), Not Null

Table 3: logs

User table has all the data about users, tracker table has all the data about trackers and logs table has all the data about logs. Since one user can have one or many trackers and one tracker can have one or many logs.

Architecture

Folder structure

```
│   app.py
│   Database.sqlite3
│   debug.log
│   models.py
│   readme.txt
│   Project Documentation.pdf
│   requirements.txt
│
└───env
│   Project specific libraries
│
└───templates
    add_log.html
    add_tracker.html
    dashboard.html
    login.html
    test.html
    tracker_details.html
    update_log.html
    update_tracker.html
```

Features

- **Name based login -** User can login with a unique username. If a user logs in for the first time it automatically creates a new one in the database.
- **Dashboard -** Show all the created trackers by the logged in user with ability to create new trackers and edit/delete existing ones. Users can add new logs for a specific tracker or view all the logged values by selecting any tracker. Also shows the last logged time of all the trackers.
- **Tracker details -** Shows all the log values of the selected tracker. Logs can be edited/deleted. Statistics of the tracker are shown in the graph. It can show either the last 5,10,20 or all the logged values.
- **Tracker Types -**
    - Numerical: Takes the numerical values and shows the graph.
    - Multiple Choice: Takes the given setting choices and shows the pie chart graph.
    - Time Duration: Takes the time duration as values and shows the graph.
    - Boolean: Takes only True/False as values and shows the bar graph.
- **Logout -** Logs out the current logged in user from any page to login page.
- **Logging -** Keeps the track of all the requests which the server received.

Video

https://drive.google.com/file/d/1r8KmG8CsARwwduOXGQN6CfMi_wd-A6YA/view?usp=sharing