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About me: I am a software professional having 6+ years of experience. My current position is Senior Software Developer in Oracle plsql.

Description

This small application can encourage you to start a good habit in your daily life. You can track any activity you want. Log them and see the progress.

Technologies used

I. **SQLite database:** To store user details, tracker details of each user and logging details of each tracker of each user. In MVC architecture, this is using as Model.
II. **HTML:** For GUI. This is using to take instruction from the user and display the output after processing the information. In MVC architecture, this is using as View.
III. **Flask:** This is using to process the information received from user. In MVC architecture, this is using as Controller.
IV. **Flask SQLAlchemy:** This is using to communicate with database using python. CRUD functionality has been applied by this.
V. **Jinja2 templates:** To pass the information to display in HTML page.
VI. **Dictator:** After processing information, this method used to move to required path.
VII. **Render_Template:** After processing information, this method used to display the required HTML page.
VIII. **Pyplot:** This method is used to create trendline graph.
IX. **Datetime:** This method is used to get the current logging time
X. **Tkinter:** This method is used for pop up messages.
XI. **Bootstrap:** This is used for designing the web page.

DB Schema Design

- **User:** This table contains the user information. Table structure is as below:

Column Name	Datatype	Constraints	Constrains Reason
User_id	Integer	Primary key. Autoincrement	To uniquely identify each user
Username	Text	Not null	Each user should have username
Password	Text	Not null	Each user should have password

- **Tracker:** This table contains tracker information of every user: Table structure is as below:

Column Name	Data Type	Constraints	Constraints Reason
ID	Integer	Primary Key	To uniquely identify each tracker

Name	Text	Not Null	Name of the tracker should be there
Description	Text		
Ttype	Text	Not Null	Type of each tracker
Settings	Text		
Userid	Integer	Foreign Key	Referencing user_id from USER table
Log_time	Datetime		

- **Logger:** This table contains logging information of every tracker of every user. The structure is as below:

Column Name	**Datatype**	**Constraints**	**Constraints Reason**
User_id	Integer	Not null Foreign key	Referencing user_id from USER table
Tracker_id	Integer	Not null Foreign key	Referencing tracker_id from TRACKER table
Track_time	Datetime	Not null	Time of the activity should be there
Value	Text		
Note	Text		
Logger_id	Integer	Primary key Auto increment	To identify each logging details of each tracker for each user

Architecture and Features

Architecture:

- Controller : /Project/app.py
- Templates: /Project/templates
- Image: /Project/static
- Database: /Project/trackerDB.sqlite3

Features Implemented:

- User login: User login validation has been implemented. New user can register themselves and track their activity.
- Tracking: Each user can track their own activity. User can add, update or delete a tracker. User can see the last logged time for each tracker. Whenever a tracker is deleted, corresponding logging information will also be deleted.
- Logging: Each user can log their activity for each tracker. User can check the trendline of each tracker. User can add, update or delete logging information also.
- Text and number validation has been implemented.
- Mandatory field validation has been implemented.
- Backend validation has been implemented.

Video

https://drive.google.com/file/d/1_gZHOXkx9C3gKg_HatOqBkZX9aesW8d3/view?usp=sharing