QuantifiedSelf App Report

Author
Name: Nathania Fernandes
Roll No.: 21f1000454
Email: 21f1000454@student.onlinedegree.iitm.ac.in

Approach
The purpose of this app is for the user to track habits, activities, other life parameters etc.. Each user can have multiple trackers. This has been implemented using Python (Flask), HTML and CSS, etc.. The data has been stored using SQLite. The user can perform all CRUD (create, read, update and delete) operations on a tracker and each log.

Framework used
My app requires the following modules/ dependencies to run:

1. Flask, render_templates, render_template, request, url_for, redirect
2. Flask extension: flask-sqlalchemy
3. Python Modules: pytz and datetime to capture last seen time of each log/ tracker updated and added
4. Matplotlib.pyplot for visual representation of the log data of each tracker.
5. SQlite to maintain our cards database

Design of the Database
The database(tracker.sqlite3) works with the sqlite3 extension.
Schema: It has two tables for now, named “tracker” and “log”.

1. No. of attributes used in tracker: 6
    a. tracker_name
    b. description
    c. tracker_type
    d. time
    e. user_id
    f. tracker_value
2. No. of attributes used in log: 6
    a. sr_no
    b. tracker_log
    c. time
    d. value
    e. Note

Design of the App

This app contains the following seven pages:

1. *Login Page:* Contains a form which takes username and password input, a login button (does not contain a validation check).
2. *Dashboard:* Lists all trackers with features to update and delete already existing trackers. It redirects one to an html to create new trackers and for each already existing tracker, it redirects one to the html page to see logs of that particular Tracker.
3. *Create a Tracker:* Contains a form to create a tracker and add it to the dashboard.
4. *Update Tracker:* Contains a form to update an already existing tracker.
5. *View Log:* Displays data of each individual tracker along with a scatter plot for visualization.
6. *Add Log:* Contains a form to add log to the tracker.
7. *Update log:* Contains a form to update an already existing log in the tracker.

The aesthetics of the app have been steered primarily by the HTML and CSS files. Additional bootstrap functionalities have been used to add a modern look to the website.

Salient Features

Time: The timezone and datetime function of Python was used in order to store and display the timestamp when the tracker was last created or updated.

Video Link

https://drive.google.com/file/d/1ZtprKh9SNPaVKp1e0WMjePwHro7DEi4_/view?usp=sharing

Replit Link

https://final-project.nathania-fernandes.repl.co/