Author

Trivikram Umanath
21f1005359
21f1005359.@student.onlinedegree.iitm.ac.in
Self Driven,Smart Worker,God Made and Calm

Description

The purpose of this app is for the user to track and log his daily activities parameters on the basis of data such as on activities such as Running,Swimming,Reading,etc with specific parameters such as the Kms run,The rounds of swimming and the Genres of Books.

Technologies used

My app requires the following modules/ dependencies to run:
1. Flask, render_templates, redirect, url_for
2. Flask extension: flask-sqlalchemy
3. Python Modules: pytz and datetime to capture last seen time of each car
4. SQlite to maintain our cards database
5 Matplotlib for plotting the Trend Lines

DB Schema Design

The database (Users.sqlite3) works with sqlite extension.
The tables columns are that of UserId , UserName, Secret Key, Password and Email.
The primary key is User Id used while UserName and password is used to login to the dashboard.
The database(Tracker.sqlite3) has TrackerId as the primary key with auto_increment and UserId as the foreign key from UserTable.t also has Tracker Type, Settings, Description and Name as other parameters.
The database(Logger.sqlite3) has loggerId as the primary key with auto increment and TrackerId as the foreign key from TrackerTable.It also has Value,Note and TimeStamp as other parameters.

API Design

There are in total four tags for the API'S User,Tracker,Logger and Stats and TrendlIne.
The user can create a new User Id and Password,update his details,delete and get the relevant details as well by logging in the user_id and password.
For Tracker as well CRUD is achieved but the User_id and Password is asked and validated before doing all the operations.SImilar for Loggers.

In the Stats and Trendline user_id ,password and Tracker_Id is asked on the basis that a url is posted back which on running shall show the graph as well as the logged in values.

Architecture and Features

Implemented All that was stated.

This app contains the following six pages: • Login Page: Contains a form which takes username and password input, a login button with a validation check.
A forgotten password and create account feature is also enabled.
• Dashboard: To view all the Tracker Details of the user.
The Tracker Name(clickable link for logging),Description and all Actions such as Edit,Delete and Visualise are presented.As well as an Add Tracker Button at the bottom.
On clicking on the tracker name the page is redirected to all the logs of the trackers where we have the logger data such as timestamp,Value ,note and other actions such as Edit and Delete and an Add Logger button.
On clicking on the Logger button the logger asks the value,time duration,value and note with a submit button.
On clicking submit it redirects to the previous page where all the logger info is present for that tracker.
On clicking Delete that logger info deletes from the database.
On clicking Edit you can change the timestamp,value and note and submit.
On clicking delete for tracker that tracker deletes.
On clicking edit the name and description of that tracker can be changed.
On Clicking Visualisation the trend line for that tracker is shown with all the logged in values for that tracker in a table.
On Cascade delete is enabled so incase the Tracker is deleted so will any logged in values in the Logger Table.
In the openapi.yaml four APIS tags are provided.
User
For creating a new User details are asked and posted and Create is achieved.
For deletion ,Updation as well Read user_id and password is required.
Tracker
For the Tracker Create operations requires a valid user_id,password of the user.
For Read,Update and Delete user_id,password as well as Tracker_Id is required.
Logger
For Create Log user_id,password as well as Tracker_Id is required.
For Read,Update Delete Logger_Id is required as well.
Stats and Trendline
User_id,Password and Tracker_Id is required for getting a link which on running shall display the trendline as well as the logged Values.

Video

https://drive.google.com/file/d/1f9kOokRaALQPVPfGIRDDH3Ynu-OTsNCm/view?usp=sharing