PROJECT REPORT

Author

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A passionate programmer who likes to build stuff with the knowledge acquired through learning.

Description

The project(Quantified Self) is nothing but a habit/Routine tracker which allows users to keep track of their routine and motivate them to do so.

Technologies used

Flask -> for backend
Celery -> to handle background task
Redis -> as a message broker and for cache
Flask_sse -> for server-sent events
Flask_Bcrypt -> for encryption
Flask_restful -> for rest api
smtplib -> to send email to the users
Flask_CORS -> to handle CORS
Jinja2 -> for designing an email template
Quoters -> to generate a random quote
SQLITE3 -> the database

DB Schema Design

Tables (4)

Name	Type	Schema
logs		CREATE TABLE "logs" ("lid" INTEGER, "tracker" INTEGER, "timestamp" TEXT, "value" TEXT, "note" TEXT, FOREIGN KEY("tracker") REFERENCES "trackers"("tid"), PRIMARY KEY("lid" AUTOINCREMENT))
lid	INTEGER	"lid" INTEGER
tracker	INTEGER	"tracker" INTEGER
timestamp	TEXT	"timestamp" TEXT
value	TEXT	"value" TEXT
note	TEXT	"note" TEXT
sqlite_sequence		CREATE TABLE sqlite_sequence(name,seq)
name		"name"
seq		"seq"
trackers		CREATE TABLE "trackers" ("tid" INTEGER, "uid" INTEGER, "name" TEXT, "description" TEXT, "type" TEXT, "timestamp" TEXT, "subs" TEXT, "settings" TEXT, PRIMARY KEY("tid" AUTOINCREMENT), FOREIGN KEY("uid") REFERENCES "users"("id"))
tid	INTEGER	"tid" INTEGER
uid	INTEGER	"uid" INTEGER
name	TEXT	"name" TEXT
description	TEXT	"description" TEXT
type	TEXT	"type" TEXT
timestamp	TEXT	"timestamp" TEXT
subs	TEXT	"subs" TEXT
settings	TEXT	"settings" TEXT
users		CREATE TABLE "users" ("id" INTEGER, "username" TEXT, "password" TEXT, "email" TEXT NOT NULL, PRIMARY KEY("id" AUTOINCREMENT))
id	INTEGER	"id" INTEGER
username	TEXT	"username" TEXT
password	TEXT	"password" TEXT
email	TEXT	"email" TEXT NOT NULL

API Design

I have assumed that the frontend is totally decoupled from the backend so the communication between the frontend and backend happens through rest API.There are three main resources in the project namely Users,Trackers and Logs.

Architecture and Features

As with any web-based application, this project can also be segregated into two namely frontend and backend. The frontend primarily consists of the Vue app. The backend consists of the rest API, the database, and celery workers.

The project(Quantified Self) has some unique features like monthly reports, daily remainder, and export and import facilities which make the application stand out from the other applications.

Video

https://drive.google.com/drive/folders/1NEtzB_-HBSEiKiJJ4TXLFNg_bD3ce9GT?usp=sharing