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SoftDev
P01 - DESIGN DOC
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time spent: 2.0 hrs
Target ship date: T 2022-12-20

Cafe REST

A cute and comforting study website with a radio, to-do lists, Pomodoro timers, coffee, Dad jokes, and more!
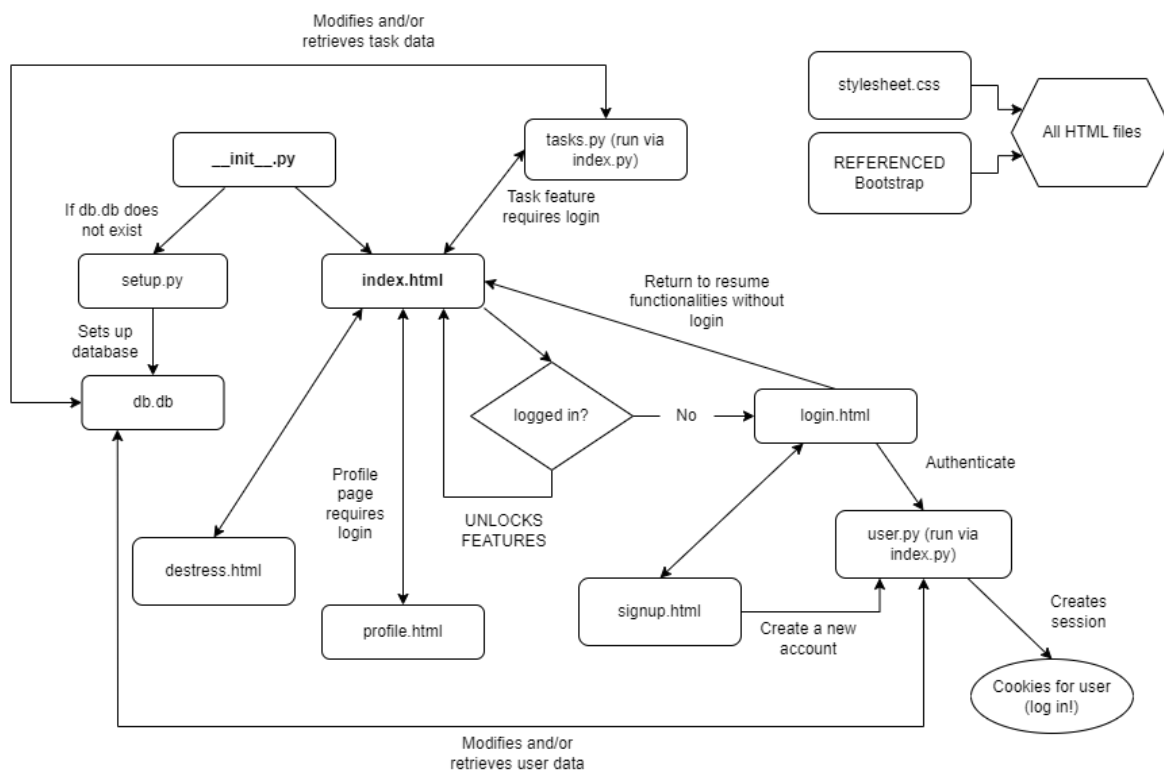
Program Components (role of each specified)

- __init__.py
  - serves flask
- setup.py
  - setup DB
- user.py
  - updates and manages accounts (login, cookies, etc)
- tasks.py
  - creates and updates tasks in the to-do list
- static/
  - css/ (if additional frontend css is needed besides referenced FEF)
    - stylesheet.css
- templates/
  - signup.html
    - a form allowing for the user to create an account, providing the username and password stored in a SQLite database (DB)
  - login.html
    - a form allowing the user to login to the account, providing the **correct** username and password information
  - index.html
    - displays a variety of features for a focused, studying experience; features listed below
      - music
      - background GIF
      - pomodoro

- ● to-do list
  - ○ destress.html
    - ■ displays a variety of features for a relaxing experience; features listed below
      - ● music
      - ● background GIF
      - ● trivia
      - ● dad jokes
      - ● cat pics
  - ○ profile.html
    - ■ presents some information about the user
    - ■ displays and tracks the leaderboard, tracked by how many tasks a user has completed
- ● key/
  - ○ storage for keys; will be added as needed
- ● js/
  - ○ TBD
- ● db.db
  - ○ stores all database information

Component Relations

The file __init__.py is the main Flask runner, calling setup to set up the database with the users and todo tables. Flask renders index.html as the main/home page, which in turn can lead to other pages. A user can use the main homepage without a profile with the basic features including the destress tab (rendering destress.html). Login components and to-do list components draw upon the database to perform the respective functionality. Once logged in, a session is made to "unlock" features.
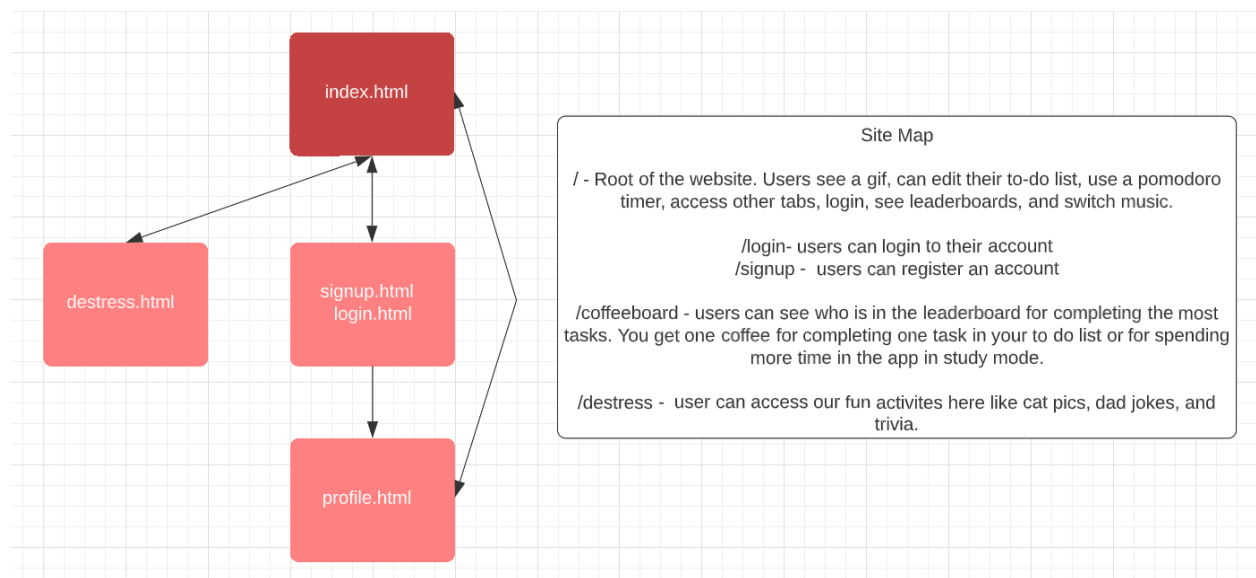

Database Organization

users

userID primary int key	username text	password text	coffee int
a unique set of numbers for each user account registered	string of letters and numbers containing no spaces	string of letters and numbers containing no spaces	counts the number of tasks completed as "coffee"s

todo

userID int	task text
a unique set of numbers for each user account registered	a task that the user creates

Every time a user completes a task, the corresponding row in the todo db is dropped. Then, the coffee variable in the users table is incremented by one.

Site Map for Frontend

Project Task Breakdown

Fang
- Flask: Routing/linkages and switching tabs without reloading
- Making sure frontend and backend work together

Abid
- Using Bootstrap to build the site
- Building all HTML pages

Ziying
- Constructing a functioning login and registration page
- Finding and incorporating Cat API and Trivia API
- Incorporating YouTube API

Faiza

- Constructing a to-do list db and incorporating its functionality

APIs

- Trivia API
    - https://the-trivia-api.com/api/questions
- Giphy API - generates theme-aligning GIFs on the site
    - https://developers.giphy.com/explorer/
- Dad Jokes API - cracks random Dad jokes on destress.html
    - https://github.com/stuy-softdev/notes-and-code/blob/main/api_kb/411_on_DadJokes.md
- Cat Pics API - generates random cat pictures/memes on destress.html
    - https://github.com/stuy-softdev/notes-and-code/blob/main/api_kb/411_on_CatAPI.md
- YouTube API - used to get YouTube videos to play (particularly the audio)
    - https://developers.google.com/youtube/v3

Frontend Framework

Bootstrap
- We're using it to beautify our website
- This is because we found the provided components of bootstrap that we can use more aesthetically pleasing and easier to manipulate for our purposes
- Features
    - Navbar
    - Custom buttons
    - Carousel
        - Rotating different gifs
    - Progress bar
        - Display completion status of the to-do list