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Software Development
P01 Design Doc: ArRESTed Development
2022-12-06
time spent: 2.5 hours

Target Ship Date: 2022-12-21

GENERAL IDEA

A website designed to help someone find things to do and places to go during a layover in between flights.

- Input: Airport/Airport Code, Layover Start Time, Layover End Time
- Output: List of Businesses, Hotels, and Restaurants that the user could to during the specified layover
    - Images?
    - Links to Yelp and google maps?

PARTS

Front End Framework: Foundation
The gridding of Foundation is nicer and less prone to hidden automatic shenanigans. Foundation also is optimized for mobile usage, which is where this kind of app would most likely be used.

APIs in Use:

- Airport API:
    - https://rapidapi.com/blog/airport-info-api-with-python-php-ruby-and-javascript-examples/
    - To get the coordinates of an airport from a name, an IATA code, or an ICAO code which airports are given as identifiers.
- Yelp
    - https://docs.developer.yelp.com/docs/fusion-intro
    - Using the coordinates of the airport, we find nearby businesses and restaurants within a 5 mile radius with appropriate open hours
        - Business must be open before halfway point of layover time
- Hotels
    - https://rapidapi.com/davidtaoweiji/api/priceline-com
    - Using the coordinates of the airport, we find hotels w/in a 5 mile radius available for overnight/longer overlays
- Embedded Google Map
    - https://developers.google.com/maps/documentation/embed/get-started
    - Adding bits of google maps to show the location of the businesses on Google Maps

Database Storage:

- Users
    - Column 0: Username
    - Column 1: Password
- Business Feedback
    - Column 0: Name of Business
    - Column 1: Location
    - Column 2: Net_Rating
- Hotels
    - Column 0: Name of Hotel

    - Column 1: Coordinates of Hotel
    - Column 2: Name of nearby airport

Python:

- One Flask App that acts as the middleman between the front end framework and the information from APIs and the database
- A program that holds a bunch of functions that interacts with the database directly
- A program that uses all of the APIs so that the users don't rapidly use up all of the API requests

PLANNING

Tasks:

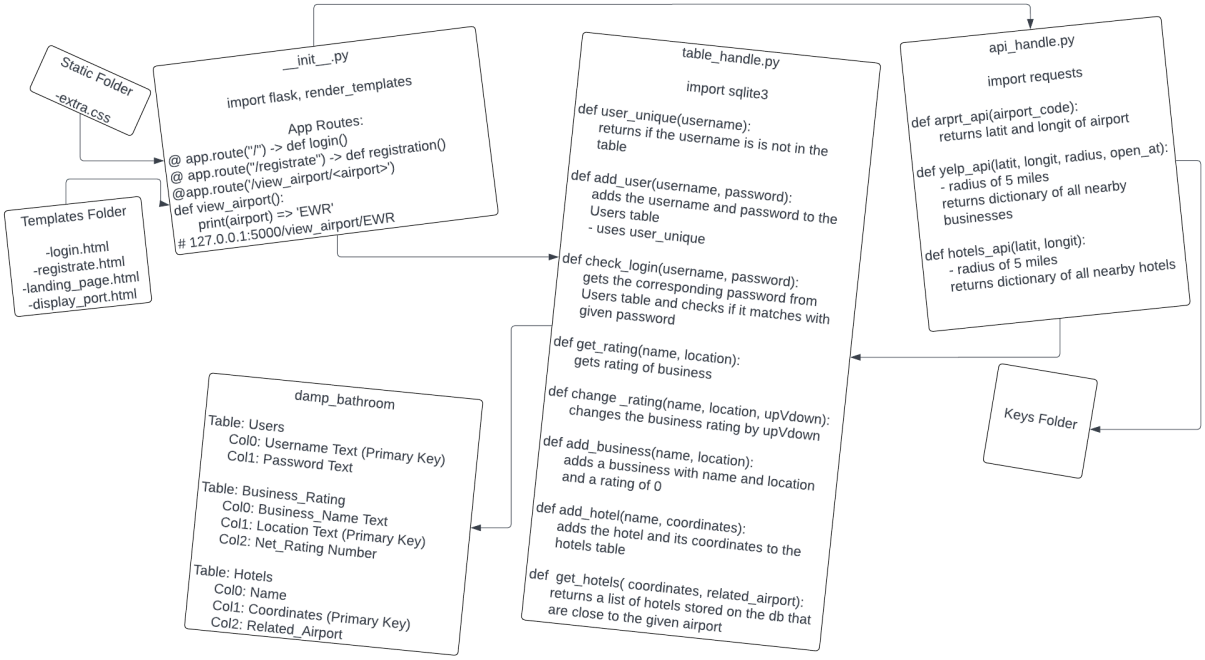
- ☐ Accessing the 4 APIs via Python
- ☐ Make API cards
- ☐ Database Logins and Registration
- ☐ Take in user requests and getting info from API
- ☐ Storing the businesses and hotels onto the API
- ☐ Embedding the Google Maps to show businesses and hotels
- ☐ Front End Stuff to beautify the site

Task Assignments:
Sadi: Database
Gabriel: Foundation
Emily: API
Thomas: Flask

Stretch Goals:

- Put an embedded google map into the website in which users can navigate to their airport and click on a pinpoint to select their airport
    - Would work for any location selected, not just an airport
- On results page, list top 3 places for each category
    - "See more" button for each category
    - put hotels, businesses, and restaurants on separate pages
- Have page not refresh when an upvote/downvote is submitted (like YouTube)
- Advanced search feature which accounts for price

COMPONENT MAP



SITE MAP