FACts - Deven Maheshwari, Aaron Contreras, Owen Yaggy, Oscar Wang

SoftDev

P04 -- Design Document/Education Policy Research:

2022-23-05

time spent: 1 hour

Proposal

Anytime the DOE tries to make a change in how students are taught, whether that is increasing funding or changing teaching techniques, they do not work. The goal of this project would be to analyze and collate the data from these experiments and see what else can be done/what has been successful. It will also include comparisons to other education standards around the country and world, to see how New York City students specifically can benefit.

Design Components

- Flask - Will serve as the python backend, routing the various python files and html front end code.
- Python with Numpy/Pandas - Will be used to analyze data collected from various education studies using
- HTML and CSS/JS (Bootstrap) - Use to display the front end and make the website aesthetically pleasing. Handle form inputs. JS will be used for animations and toggling between studies. CSS for styling.
- Sqlite3 - Stores data from IES database and NYC council API.
- Digital Ocean Droplet
- APIs
  - [N YC Council Legistar API](#)
    - Key: Uvz0@9eyju.laIBz44DbQvnX54sN4dUL0z_ExMy9Mew0KICAiVmVjci9b0HDExDQogICJOYW1ljogIk5ZQyByZWFpdHRcnd2VsID9eM7cxMDI2IveNCiAgIbRz6GUDdAMjAz9ly9eMC0yNIQz0jxyNjaIM0t0DMiIMDYmZU9MDAlLA0KICAiVl3jzdGUOdBmYWxzZQ0KIQ

Component Map

- Main/Home page

- Login/registration page - optional

- Data page - toggling between various studies. Presenting information and corresponding data. Search feature.

- Analysis page - Connecting studies with open source education statistics to observe effects. Conclusions based on legislative API

- About page
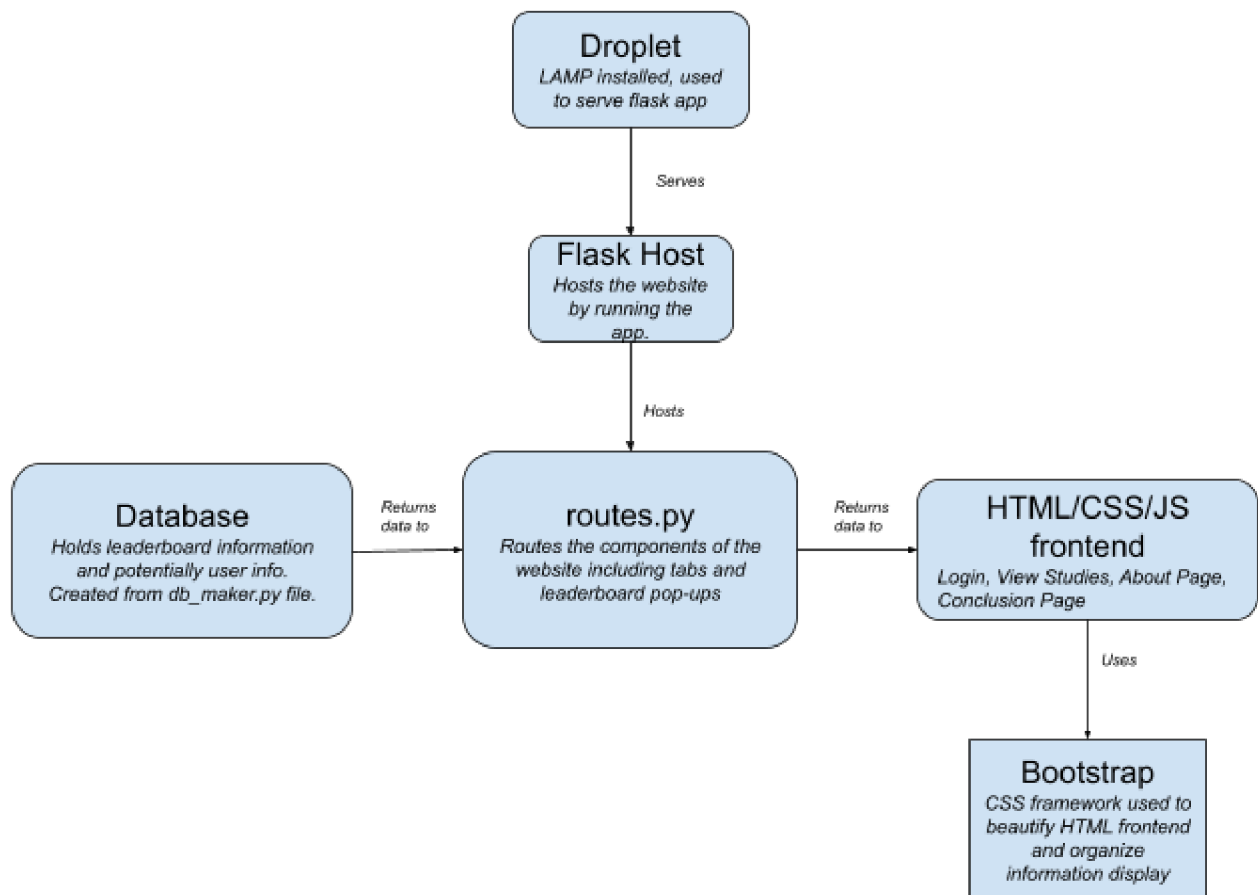
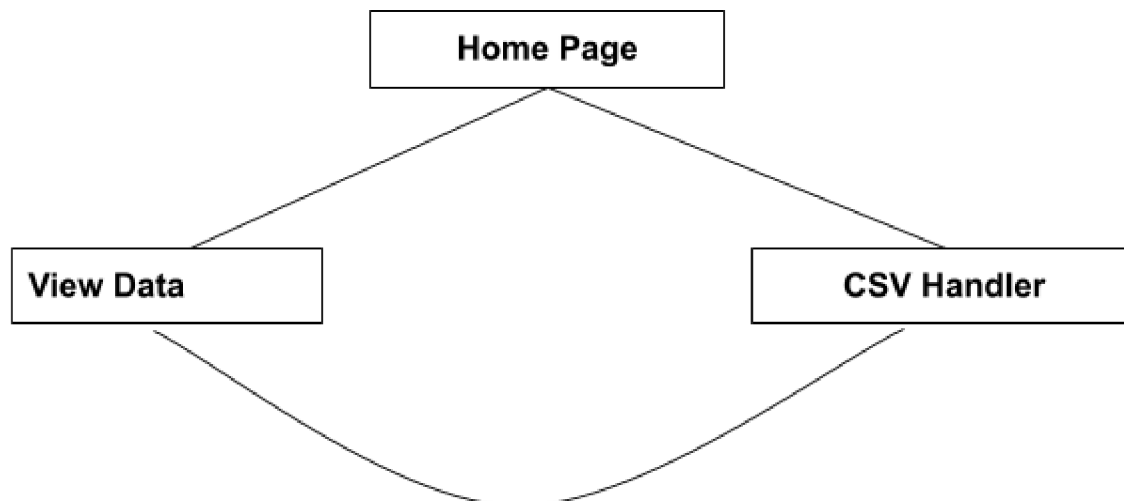**Database Organization:**

Research

Summary taken from abstracts of studies

INITIATIVE_ID	RESEARCH STUDY SUMMARY
PRIMARY _KEY TEXT	TEXT

Statistics

INITIATIVE_ID	GRADE	<DATASET SPECIFIC INFORMATION>	NUMBER OF STUDENTS
PRIMARY _KEY TEXT	TEXT	TEST	INTEGER

Sitemap (Frontend):

- / : home page
    - about us page & meet the team
    - project vision
- /CSV handler
    - Allows users to input CSV and generates correlation with performance data
- /Conclusion:
    - Our analysis of the data.

Sources:

1. [National Statistics](#)
2. [National Studies](#)
3. [NYS Stats](#)
4. [Legislative API](#)

Task Breakdown

- Deven - Droplet and data scraping/analysis with python libraries.
- Aaron - Routing, and backend. Connecting data sources to database, JS toggling.
- Owen - Frontend design and supporting SQLite features.
- Oscar - Sqlite and numpy/pandas/matplotlib implementations.

Stretch Goals:

- Analyzing more research initiatives (> 5)

Ship Date

June 10th, 2022