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**TARGET SHIP DATE:** May 30, 2023

# Game: How well do you know NYC?

**Overview:** Inspired by the higher or lower game, our project will feature an interactive game where users compare two different neighborhoods based on an arbitrary data set. For each round, users will face a predetermined order of data sets, such as the number of street trees, or teacher salaries, in two randomized boroughs or neighborhoods around NYC. They will be asked to compare the two, with a question along the lines of "Which neighborhood has more squirrels?" or "Which borough has a higher average teacher salary?" After users answer a question, they will see an interactive map of NYC that shows the data set across all neighborhoods in NYC. This will be done via different colors indicating higher amounts/densities. Around ten datasets will be included, and after ten rounds users will see their total percent correct and get a ranking of how well they know NYC!

**Program Components & Roles**

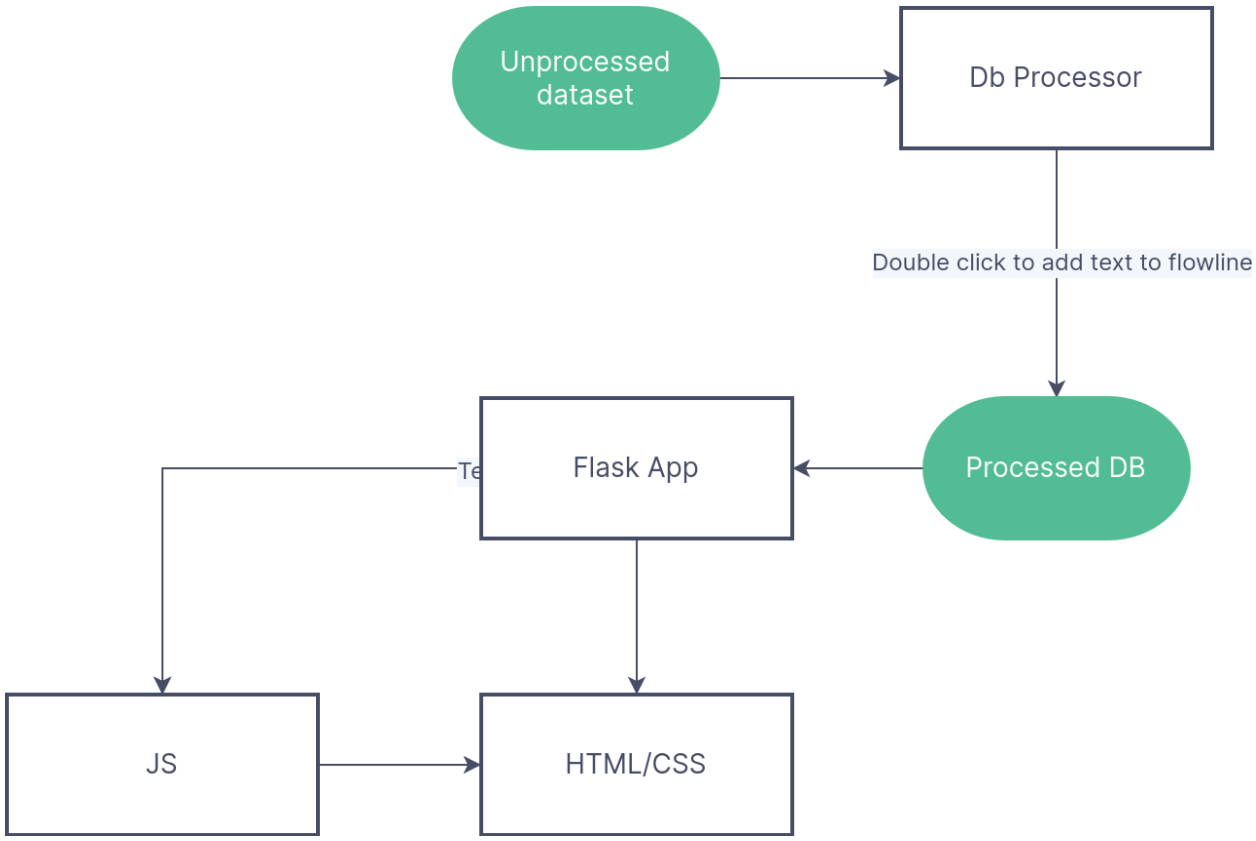
- HTML/CSS - pages to display home page, and spaces for js to operate both our games in the game pages. Also, leaderboard
- JS (all) - render dynamic elements like our interactive map, and dynamically change what is on the web page based on what the user inputs
- DB Processor - preprocess our date to make it easier for our JS to quickly access. Ideally, as much work as possible should be preprocessed by a python script.
- SQLite DB - holds data so it can be easily accessed
- Flask App - serve our web pages, feed data to html/js
- Frontend Framework (all) - we plan on using its general styling features to make our buttons and other html elements look good.
- Interactive map using Leaflet.js

**Data Sets:**

- Teacher salaries
- Dog breeds
- Taxi drivers
- Film permits

- Police Officer Complaints
- Street trees
- Population by Neighborhood tabulation area
- Public recycling bins
- Rat Inspections
- School bus breakdowns
- Water fountains
- Asbestos abatement

**Component Map**




**Database Organization Tables**

- relational db - each db from openNYC goes in their own sqlite database.

| Name | DataPoint | LatEnd | Latitude | Longitude | Percentile |
|---|---|---|---|---|---|
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|---|---|---|---|---|---|
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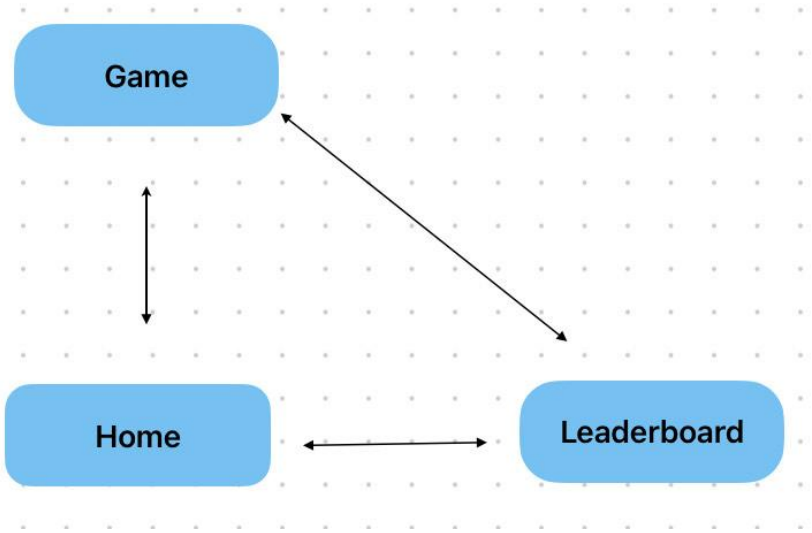
| Correlation Table | db1 | db2 | db3 |
|---|---|---|---|
| db1 | 1 | .93 | .46 |
| db2 | .93 | 1 | .08 |
| db3 | .46 | .08 | 1 |

**Site Map**




**Tasks & Roles**

[will expand on roles delegated in program components section once project has started and we have a better idea of how much work is needed for each section]

**Areas for Expansion:**

- Images for each category appear (eg. pics of squirrels & teachers)
- Other game expansions: correlation comparison between two data sets (original idea)
    - Gives you an over/under correlation coefficient, if you get it right it gives you a new one compared to the old one

    - Leaderboard
    - Will likely have to be implemented by splitting maps up into grids and creating data points for each grid.
    - Correlation coefficients will likely just be pre-calculated, to be referred to later by the website.

**Other Links:**

- https://tylervigen.com/spurious-correlations
- https://twitter.com/YouGovAmerica/status/1504199606430744581
- https://geo.nyu.edu/catalog/nyu_2451_34572
- https://codekarim.com/sites/default/files/DP0701EN-3-3-2-Neighborhoods-New-York-py-v1.0.html#item2
- https://app.zenflowchart.com/flowchart/dTjjDcxyffz72rD8NXKf
- https://data.cityofnewyork.us/City-Government/2010-Neighborhood-Tabulation-Areas-NTAs-/cpf4-rkhq