Gaslighting Gatekeeping Girlbosses Part X: Ian Jiang, Aden Garbutt, Gitae Park, Kevin Xiao
softdev
pd 7
Target "ship date.": May 28, 2023

Abstract:
Our Stock Simulator will use data on stocks and Kaggle models to predict whether specific stocks will go up or down and will display the predicted price with a line graph to accompany it

Components and roles:
- Magic prediction machine
  - API
  - Models imported for machine learning e.g. LSTM, ARIMA, GRU (Neuro-networks and regression models for time series forecasting)
  - Simulation of test runs with model, predicting for each stock
- Database (SQL)
  - Stores the login information from the magic prediction machine
- Website (HTML/CSS/FEF)
  - Magic Button for Magic Prediction
  - Dropdown for stock selection.
  - Image of line graph
- Javascript for Website:
  - Changes the text on screen and animations like loading animation

How does each component relate to each other?:
- Magic prediction machine outputs the data that'll be processed and displayed by the javascript.
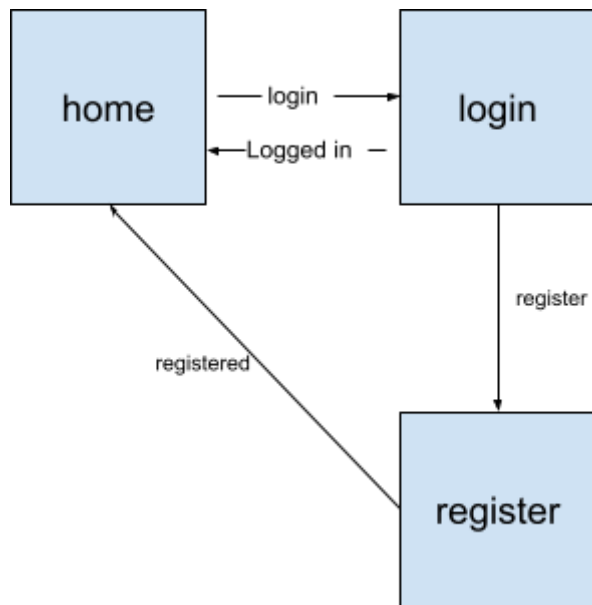- The database stores the login information required to access the website.

Component map
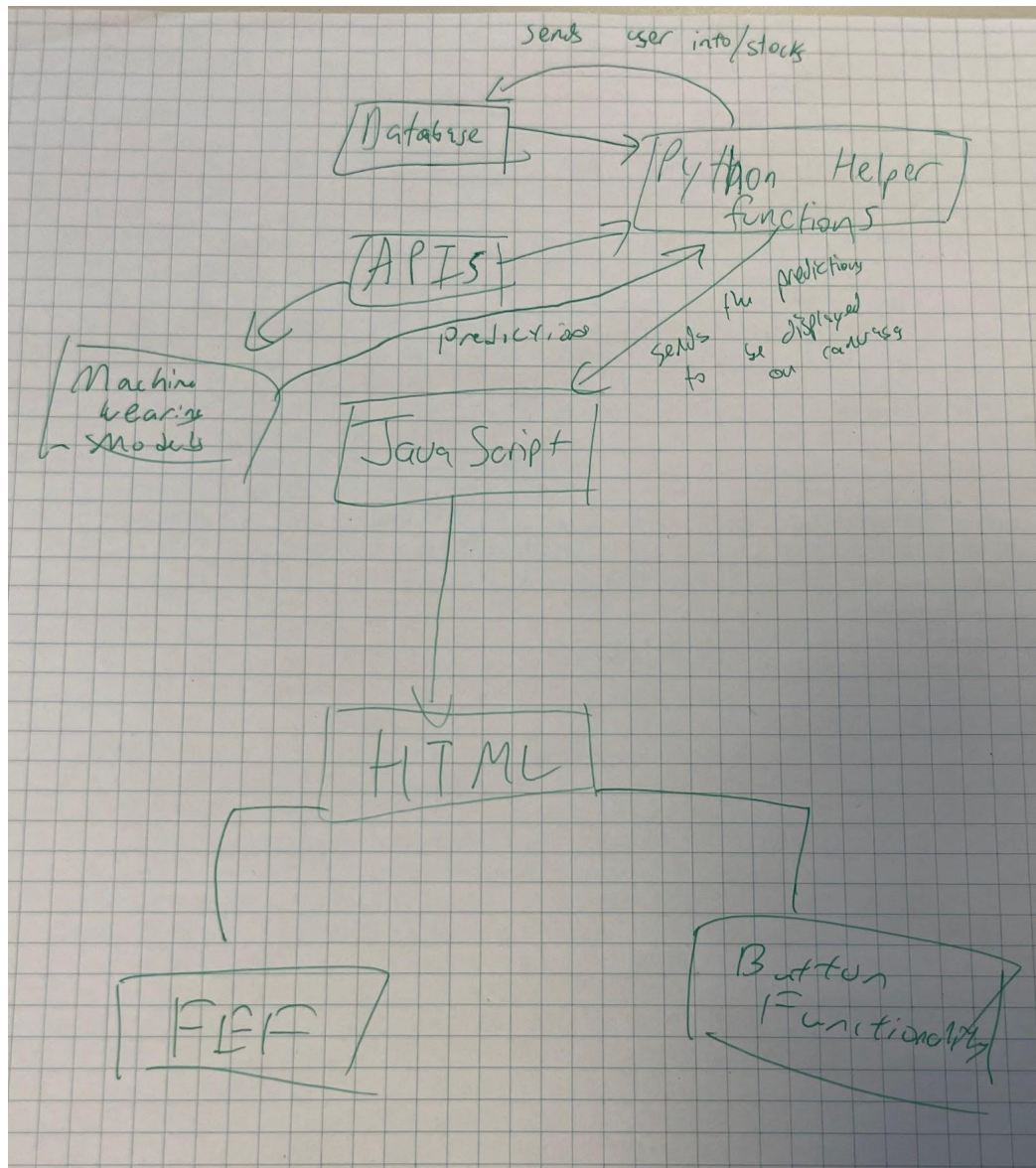
Database Organization:
- tables.db
- Login Info: Username & Password
- List of selected stock in portfolio

Front-end Site Map:

- home.html
  - If signed in, there will be a drop-down menu to select which stock you want predictions on.
  - A big button to that'll start the predictions and tell you whether you should buy the stock or not
  - It will consist of many canvases that will visualize the predictions
- register.html
  - Has space to log in or signup. Username requires an email address and error messages will appear if there is an error.

Breakdown of tasks:
Machine learning APIs - kevin
Flask and JavaScript - ian
Frontend stuff - aden
Database - gitae

APIs:
Yahoo Finance API : https://algotrading101.com/learn/yahoo-finance-api-guide/
Bloomberg Terminal? Mayhaps? (Stretch)
https://www.bloomberg.com/professional/solution/bloomberg-terminal/
Kaggle Datasets
- Crypto:
  https://www.kaggle.com/datasets/sudalairajkumar/cryptocurrencypricehistory
- S&P 500:
  https://www.kaggle.com/datasets/camnugent/sandp500

Openai Datasets
FEF:
We are choosing to use Bootstrap as our front-end framework. We made this decision because we think the look and feel of it fits into our design. We would also like to make use of its Javascript add-ons to increase the interactivity of our site.