Web App: Stock Metrics
Team: Error404
Team Members: Jaynish Shah, Monark Modi, Yanjie Gao, Wenbo Xie, Bin Yu
GitHub: https://github.com/monarkmodi/Stock-Metrics

Overview: Our web application is a cloud based stock analysis tool for the users which helps a user manage their stocks and keep a track on their net profit/loss. It will use machine learning techniques to analyze existing metrics and predict the future value of the stock. It fetches from a list of 8000 stocks across Nasdaq, NYSE exchanges and performs support vector regression based machine learning on historical values to forecast the open, close, high, low and volume of the next business day for each stock in the database. The web application also works as a simple watch list and portfolio application to keep an eye on user's stocks and compare performances. It will also update the prices in real time based on when the stock market opens and closes.

Design Overview: For our web application we have defined four models (Stock, User, StockMetrics, and Portfolio). Stock stores all the details about a stock. Information such as its title, stock ID, buy price, sell price and volume. User contains all the details about a user such as their name, DOB, email, password and their account balance. Whereas portfolio stores information about each user's stock account such as their portfolio value, buying power, withdrawable cash, cash balance and invested funds.

Problems/Successes: To improve the collaboration and implementation on the next project submission we will have to start working on the project early and not 2-3 days before the project is due. And we can try to meet outside class to have better communication among team members and get the project done faster. Meanwhile, choosing the proper field types and fields name for data modeling is an important step which need to be cautious. Otherwise, it might create some conflicts that will directly influence the result of database migration. We had a difficulty implementing the views and populating the UI with the mock data.

Individual Write Up

Jaynish Shah: For the project until now, I made one of the UI designs and then I worked on most of the write up parts in both the team projects (1 & 2). For the second project during in class, I discussed with the team different models we could implement and couple ideas on the data model overview. I even tried to populate the admin website with some mock data.

Monark Modi:

Yanjie Gao: For project 1, I finished some pages of the UI design. For project 2, initially, I finished the Part 0 which configures the environment for the Django project. Then, I designed the data model diagram and implemented data models using Django's Object Relational Mapping with Python. Next, I performed the database migrations and registered these data models for the sake of making them accessible in the Django admin site. Finally, I created a superuser account with username and password, and also finished a few part of the write-up.

Wenbo Xie:

Bin Yu: