Quantastic Analyzer Design Process

Initial Goals

- Learn the process and find ways to overcome the difficulties of Web Development
- Understand the methods and techniques for composing a truly 'simple' and 'user-friendly' user interface
- Rekindle old middle-school interests in website design
- Recollect on possible foresights or mistakes made in design and learn to improve on them

UI Simplicity

Improve functionality by programming new buttons to access only the relevant functions of default Plotly graph-generator tools.

Limit useable functions to a small group of majorly useful tools and group them in a side menu to enhance simplicity and user-interactiveness.

Development Journey

Initial Considerations

```
learned basics but eventually not utilized
```

- Learn Django for full-stack integration between Backtesting program (written in Python), database, and web app
- Learn React for more responsive and stylish user-interface design

Other Considerations

```
were given time but were not completely maintained
```

- Using Notion for creating meeting logs
- Editing Wiki Information (not constantly maintained, added final info at end of semester)
- Fully implementing button features (incomplete -- to improve)

Technique Education

- Learning Figma for wireframing and design
- Revisiting and honing skills on Web Development (specifically, the use of HTML, CSS, JavaScript)
- Utilizing Plotly for Data Visualization in a webpage

Problems

- MAIN: lack of proper background on web design
  - SOLUTION. Learn everything from scratch. Apply a programmer's POV. Rekindle past interests and willingness to learn. Skim through necessary procedures. Focus on key techniques for making the web app as soon as possible. Utilize Google and ChatGPT for quick yet in-depth research sessions.
- SUB: lack of experience in collaboration work
  - SOLUTION. Maintain good-willed relationship with colleagues. Understand and appreciate each individual effort and work. Gain insight on colleagues' as well as mentor's work and life experiences.
- SUB: difficulty with visualization of stock data, simplifying a stock-related program
  - SOLUTION. Study how to utilize Plotly for graphing. Examine designs and functionality of other existing software. Ask colleagues regarding their interests and experience in stock investment. Ask colleagues for their opinion on the design functionality.
- SUB: lack of time / time management
  - Semi-Solution: Code important parts of program first, Learn and add more features later
- SUB: lack of additional documentation on Plotly.JS (documentation is more focused on Python)
  - SOLUTION. Refer to community posts and questions. Find and analyze code that results to similar function. Ask colleague that specializes in TypeScript for feedback.

Mentor & Professor Feedback

Mentor Feedback

- Examine and change certain buttons which lacked meaning or caused confusion in the initial design.
- Add more functionality better equipped to the purpose of the project.

Mentor Advice

- Every component in a user interface can become questionable.
- One's behavior is important in an internship, apart from one's initial skillset.
- Getting used to GitHub is a good skill to have for collaborative work in the future

Professor Feedback

- Add additional features, Be open to adding more complexity
  (e.g. selecting various account types at once and showing them in one or various graphs)

Other Advice & Learnings

- Learning is part of the process. Be proud of one's baby steps in achievement.

- Create a portfolio. Take note of all the things one has learned, relevant problems encountered during
- Learning Django, React and more widely used API, as well as getting used to JavaScript will ease the burden of web development.
- Practicing logic transfer of a program from a certain programming language to another aids in integrating front-end and back-end work.

To Improve

Layout and Resizing

- Relied on calculating, measuring, and "eyeballing" while referring to the original wireframe and layout design
- LEARN : Easier and quicker aligning methods, Align components using flexbox, Familiarize oneself and adapt to creating proper div layouts and positioning nested divs when required

Web Programming

- Used JavaScript and older code techniques in creating web application
- LEARN : More modern techiniques involving React, Django or Flask (Python on Web), Learn more responsive and interactive web app making

Utilizing JavaScript

- Had difficulties with using JavaScript; Lack of high-level knowledge - lead to incomplete buttons of side menu compared to prior planning
- LEARN : Adapt to using JavaScript more seamlessly, Analyze Java Script functions and data structures, Analyze how to create common web UI components via JavaScript or other methods, Analyze Plotly.Js source code

Web Application

- Possible addition of cross-platform features and mobile layout
- LEARN : React or other necessary concepts for implementation, Workings of various versions of web applications (Hybrid, Cross-platform, etc.)

Data Visualization

- Plotly.JS has limitations on responsive data visualizing
- LEARN : Other possible methods to show graph data

Server Management

- AWS Server is running on trial; Not good for further analysis and development

- LEARN : Extend AWS Server, OR Study server implementation, Find other methods to implement backend