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UI/UX Financial Dashboard with Streamlit Report

This website was designed as an all-in-one financial dashboard that allows you to track your income, expenses, and investments. The usability goal for this assignment was to accomplish an easy-to-use, good-utility, and easy-to-remember website application. These usability goals were kept in mind by using a sidebar to allow for different selection options in areas that are not cluttered or overwhelming, with a clean and intuitive layout for the main content area. The implementation of graphs provides utility because the user can visually see income, expenses, and investment data all in a centralized location, helping them make informed financial decisions efficiently. The simple layout of the website makes it easy to remember the location of key features. At the same time, the consistent design and use of detailed UI elements ensure a smooth and intuitive user experience.

The design process began by discussing as a group what the user needs were and the features we wanted to implement. Given that we wanted to solve the problem of having financial information all in one place, we decided to split the work into three distinct parts. Jonathan was tasked to create the functionality of the corrected data pulled from the API and ensure that fetching messages are displayed for different cases. Mateo was tasked to create the UI elements and ensure that design principles were followed throughout the process. Michel created a functional

map and table that would be used to display stock, investment, and income data. We all first made sure that the logic of each of our codes worked before coming together. After which we ensured that each of our codes worked together.

We utilized the API provided by AlphaVantage.co. This API formats real-time data about historical stock market data. We used the data to create a chart that displays the stock data based on the share price and a specified time series. One difficulty we ran into was parsing the JSON response data from the API and formatting it correctly for visualization in the chart.

One effective way we incorporated widgets on the website was the input for the dollar amount of income, expenses, and investments. We made it into a widget so that the user has the option of either manually typing an amount or clicking until their desired amount. Another widget we used was the button used to calculate your savings; this was to add an interactive element for the user so that calculations are only made when the user clicks the widget.

This website application adheres to the HCI principles by being easy to use and having perceptible information. Understanding the main purpose is to assist with finance, we aimed to make the website as simple as possible to not take away from its usability. We had the approach that less time spent trying to figure out controls means more time spent making financial decisions. Perceptibility was important to adhere to because there is a large amount of data being pulled from the API; if we did not have easy-to-understand data, it would result in a negative user experience.

After testing the website, minimal changes were made. Only design elements were changed, for example, the layout of buttons and maps and the implementation of a bouncing text for interesting visuals and creative design. Overall, this was a successful website that provided usability and accessibility for the target audience, with a cohesive and visually appealing user experience. Being able to use a Streamlit framework to create a financial dashboard was engaging and easy to use. The only future improvements that would be made are further improving the responsiveness of the design to ensure optimal viewing on mobile devices and potentially adding additional data visualization features to enhance the analytical capabilities of the dashboard.