**Nehang Patel Individual Capstone Assessment**

My senior design project revolves around developing a personal finance and investment management application, designed to help users track their expenses, manage subscriptions, and receive stock market investment recommendations. From my perspective as a computer science major, this project is the culmination of years of technical and analytical skill development. With experience in Flutter and front-end UI/UX development from my internships and academic courses, this project allows me to apply these skills in building a robust, scalable application that solves real-world financial challenges.

My academic curriculum has provided a solid foundation for the development of this project. Courses like Introduction to Computer Science (CS1021), Python Programming (CS2021), Data Structures (CS2028C), Programming Languages (CS3003), Software Engineering (EECE3093) and User Interfaces-I (CS5175) taught me how to write and structure code efficiently and work within teams to deliver software solutions. Additionally, Database Design & Development (CS4092) gave me a strong understanding of managing data, which will be crucial for handling user transactions and subscriptions in the app. My coursework in Data Structures (CS2028C) and Design and Analysis of Algorithms (CS4071) will guide the development of the stock recommendation system, utilizing data analysis to provide personalized investment suggestions. The structured approach I learned in these courses along with the various certifications I earned along the way will help me ensure the app's functionality, security, and efficiency.

In addition to the above academic knowledge, my co-op experiences will guide the practical aspects of the project. As a Software Developer Intern at MediTechSafe, Inc., I worked extensively with Flutter, a technology I am incorporating into this app. My time there taught me how to refactor and optimize code for better performance while also managing data effectively through database management, all critical skills for developing scalable applications. At ITE LLC., I worked on designing engineering solutions, where I enhanced my problem-solving and teamwork skills—essential for managing this project's complexity. All these roles along with my role as a Learning Assistant at the University of Cincinnati also sharpened my communication and collaboration abilities, which will be valuable when working with teammates and users.

My motivation for this project stems from a personal interest in financial literacy and technology. I believe in the power of technology to simplify complex financial processes, and this project gives me the chance to develop an app that can make budgeting, investing, and financial tracking more accessible to users. My approach to the design will involve building a modular architecture with clear separation between the frontend, backend, and database layers, ensuring scalability and ease of maintenance. I plan to integrate third-party APIs for real-time stock data and possibly, leverage machine learning algorithms for personalized investment recommendations.

I expect the final product to be a fully functional personal finance app with seamless expense tracking, budget management, and intelligent investment suggestions. The project will be evaluated based on user feedback, performance benchmarks, and the ability to meet all functional requirements. Regular feedback from users and team members will also help gauge the project’s success. I will know the project is successful if it runs smoothly across different devices, provides accurate financial insights, and achieves a user-friendly interface. My self-evaluation will focus on code quality, the responsiveness of the UI, and whether the app meets its core purpose of improving financial literacy and management for its users. Ultimately, I will know I’ve done a good job when the app performs as intended, offers value to its users, and aligns with the project’s initial goals.