Abstract

The development of the SIABDes TAXion application was carried out by implementing Clean Architecture to achieve a modular, maintainable, and scalable system. The use of Clean Architecture in this project facilitated the separation of concerns into four main layers: Entities, Services, Use Case/Store, and Components. Each layer operates independently, allowing for changes in data sources without disrupting the entire codebase. This structure not only improved the efficiency of the development process but also ensured that future enhancements or fixes could be implemented with minimal impact on the overall system.

The front-end development of the SIABDes TAXion application leveraged the Next.js framework due to its ability to generate static pages for optimal performance. The integration of TypeScript enhanced code clarity and security, while Tailwind CSS ensured a consistent and responsive user interface design. By adhering to the principles of Clean Architecture, the application achieved a high level of maintainability and flexibility, making it easier to manage and extend over time.

This approach not only provided a robust foundation for the current application but also laid the groundwork for future development, ensuring that the system can adapt to changing requirements with minimal technical debt. The project serves as a model for developing scalable and sustainable applications by combining modern frameworks with sound architectural principles.

Keywords: BUMDes, Financial Reports, Clean Architecture, Next.js, TypeScript, Tailwind CSS