Weekly Activity Report

Student Internship, 2025

Rateeva Daria

FAF-232

Brief Overview of the Week's Activities

This first week of my internship focused on establishing the foundation for our development project and getting acquainted with the work environment. The week began with an introductory meeting with mentors where we discussed internship goals and project expectations. Following this orientation, I dedicated significant time to setting up the development environment by installing essential tools, libraries, and databases required for the project. The core technical work involved initializing a Blazor WebAssembly project with a clean architecture approach, implementing CQRS principles for better code organization. By the end of the week, I successfully established database connectivity and implemented my first entity with full CRUD operations, marking important milestones in the project setup phase.

September 1, -Monday-

- **Initial Meeting with Mentors** - The week commenced with a comprehensive introductory meeting with my assigned mentors. During this session, we discussed the overall goals and objectives of the internship program, outlined the expected learning outcomes, and reviewed the project scope that would serve as the primary focus throughout my internship period. The mentors provided valuable insights into the company's development practices and coding standards.
- **Internship Realization Discussion** - We engaged in detailed discussions about the practical implementation of the internship program, including timeline expectations, deliverables, and evaluation criteria. This session helped me understand the structured approach to learning and development that would guide my progress over the coming weeks. The mentors also shared their expectations regarding weekly reports and progress documentation.

September 2, -Tuesday-

- **Development Environment Setup** - I dedicated the entire day to preparing my development workstation by installing all necessary software tools and development environments. This included setting up Visual Studio IDE with the latest updates and extensions required for .NET development, ensuring optimal performance for Blazor WebAssembly projects.

- **Database and Library Installation** - A significant portion of the day was spent configuring database management systems and installing essential libraries and packages. I set up SQL Server for database operations and installed various NuGet packages that would be required for the project architecture. Additionally, I configured version control systems and established connections to the project repositories, ensuring seamless collaboration with the development team.

September 3, -Wednesday-

- **Blazor WebAssembly Project Initialization** - I began the core development work by creating a new Blazor WebAssembly project, carefully structuring the solution to support clean architecture principles. This involved setting up multiple projects within the solution to separate concerns effectively, including presentation, application, domain, and infrastructure layers.
- **CQRS Architecture Implementation** - A crucial aspect of today's work was implementing Command Query Responsibility Segregation (CQRS) principles within the project structure. I created separate folders and namespaces for commands and queries, establishing the foundation for maintainable and scalable code architecture. This separation ensures better code organization and will facilitate easier testing and maintenance as the project grows.

September 4, -Thursday-

- **Database Connectivity Configuration** - The primary focus was establishing reliable database connectivity within the Blazor project. I configured Entity Framework Core as the ORM solution, setting up the necessary connection strings and database context classes. This involved creating the initial database context and configuring dependency injection to ensure proper database access throughout the application layers.
- **Database Connection Testing** - After setting up the basic connectivity, I performed comprehensive testing to verify that the application could successfully connect to the database and perform basic operations. This testing phase was critical to ensure that the foundation was solid before proceeding to implement more complex database operations in the following days.

September 5, -Friday-

- **Entity Design and Implementation** - I focused on learning and implementing my first domain entity within the project structure. This involved understanding domain-driven design principles and creating a well-structured entity class that follows best practices for data modeling. The entity was designed with appropriate properties, validation rules, and relationships that align with the project requirements.

- **CRUD Operations Development** - The final major task of the week was implementing complete Create, Read, Update, and Delete (CRUD) operations for the entity. This included creating repository patterns, service classes, and API controllers that follow the established CQRS architecture. I also implemented the corresponding commands and queries, ensuring that all operations were properly structured and tested. By the end of the day, I had a fully functional set of CRUD operations that demonstrated the complete data flow from the presentation layer through to the database.

Conclusion

The first week of my internship proved to be highly productive and educational, successfully establishing the foundation for the development project. The initial mentor meeting provided clear direction and expectations, while the subsequent days allowed me to demonstrate practical skills in environment setup and project initialization. The implementation of Blazor WebAssembly with clean architecture and CQRS principles has created a robust foundation for future development work. Successfully connecting the application to the database and implementing complete CRUD operations represents significant progress toward building a fully functional system. This week has provided valuable hands-on experience with modern web development technologies and architectural patterns, setting the stage for more advanced features and functionality in the coming weeks.