

Project Brief: Ollama DB Layer

Overview

Ollama DB Layer is a data access layer for an AI-powered application that provides a structured way to interact with a database. It implements the Repository and Unit of Work patterns to manage data operations for various entities related to AI models, conversations, user management, and more.

Core Requirements

1. **Data Access Layer:** Provide a clean, abstracted interface for database operations.
2. **Entity Framework Core Integration:** Utilize EF Core for ORM capabilities.
3. **Repository Pattern:** Implement repositories for each entity to encapsulate data access logic.
4. **Unit of Work Pattern:** Coordinate operations across multiple repositories.
5. **Identity Integration:** Support user authentication and authorization through ASP.NET Identity.

Project Goals

- **Maintainability:** Create a well-structured codebase that's easy to maintain and extend.
- **Separation of Concerns:** Keep data access logic separate from business logic.
- **Testability:** Design components that can be easily tested in isolation.
- **Scalability:** Support growing data needs and additional entity types.
- **Security:** Implement proper data access controls and user management.

Project Scope

In Scope

- Database context and configuration
- Entity definitions and relationships
- Repository implementations for all entities
- Unit of Work implementation
- Identity integration for user management

Out of Scope

- Business logic implementation
- User interface components
- External API integrations
- Deployment infrastructure

This project serves as the foundation for data persistence in the Ollama application ecosystem, providing reliable and consistent data access patterns for higher-level application components.