Meeting Planner

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https://github.com/NickMuellner/SWEN2-meeting-planner

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Architecture

Layers

View Layer

Built with JavaFX and FXML, this layer handles user interaction. Controllers respond to user input and delegate actions to the ViewModel.

• ViewModel Layer

The ViewModel acts as an intermediary between the View and the Model. It handles input validation, state management, and event propagation.

Model Layer

Contains core domain classes such as Tour, TourLog, and relevant data structures. These classes represent the internal state of the application.

• Service Layer

Provides application logic and persistence operations (CRUD). Services abstract database access and perform logic related to tours and logs.

Utility Layer

Includes reusable helpers like the EventManager (custom event bus), file utilities, and JSON serialization.

Library decisions

- JavaFX GUI framework
- Jackson (FasterXML) JSON serialization and deserialization
- JUnit 5 Unit testing framework
- IText PDF generation
- Apache Log4j Logging tool
- PostgreSQL JDBC Driver Enables connection to database
- Hibernate ORM

Design patterns

MVVM (Model-View-ViewModel)

Enables separation of concerns between UI and logic.

• Observer Pattern

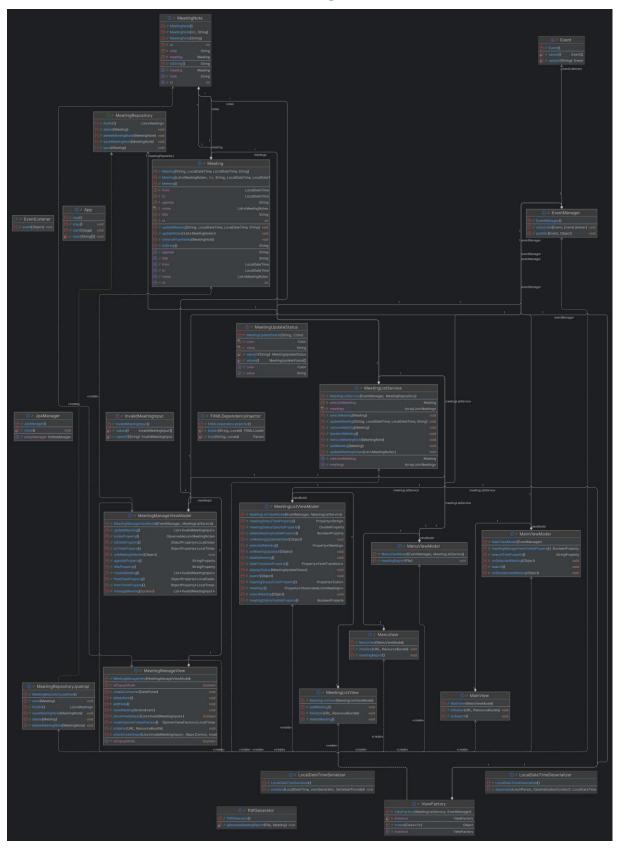
Observables are used to propagate state changes from the model to the view.

Factory Pattern

Factories are used for service instantiation and configuration.

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Class diagram



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Testing

MeetingManageViewModelTest

This test verifies validation and update logic in the view model that handles creating and editing meetings.

TourListServiceTest

Tests the service responsible for managing meetings and meeting notes.

EventManagerTest and EventManagerAdditionalTest

Tests the EventManager who is responsible for subscribing and publishing events through all Views.

MeetingTest, MeetingNoteTest and MeetingUpdateStatusTest

Tests the model (constructor, CRUD) in the application.

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