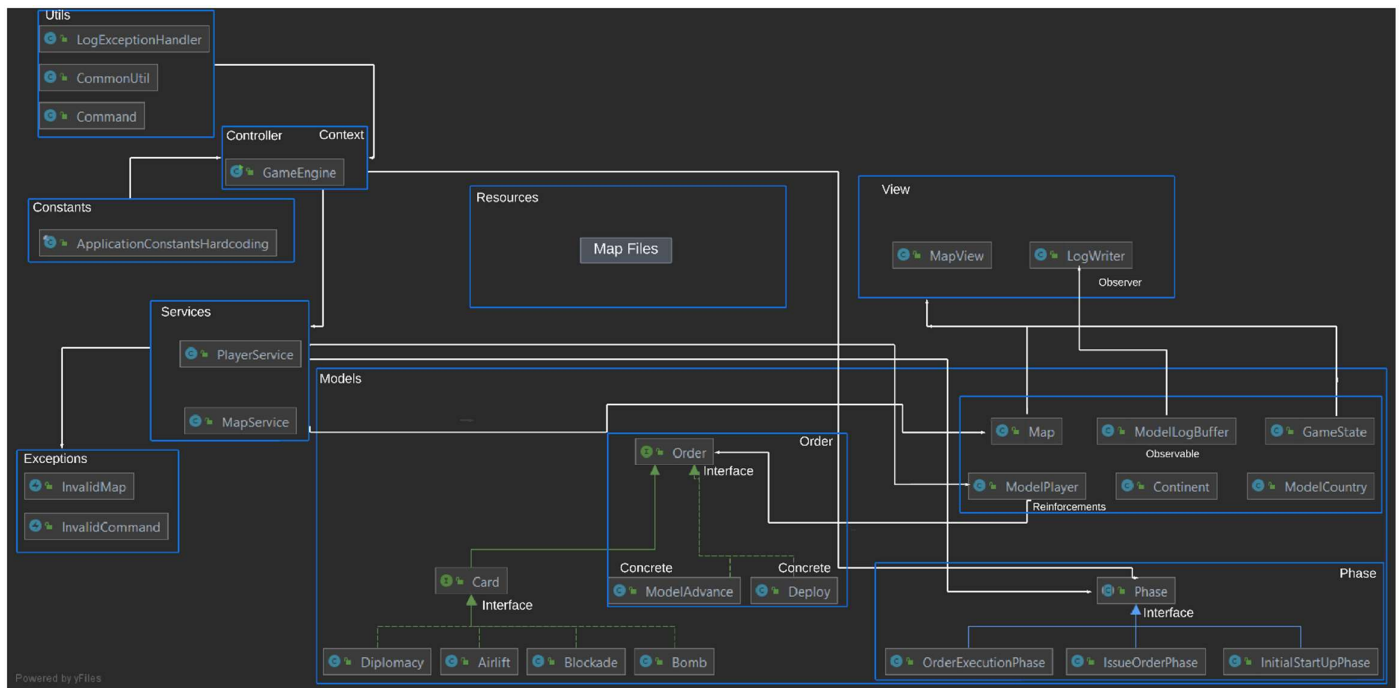# Group U5: Architecture Diagram

COURSE: SOEN 6441

BUILD #2

- Models

  • **Player**: Manages continents, countries, orders, and armies for each Player object.

  • **Order**: Handles order actions, source/destination countries, and the number of armies to move. Order also **Implements Command Pattern** for ModelAdvance and Deploy models.

  • **GameState**: Manages Player and Order objects, maintains a list of pending orders.

  • **Map:** Manages Country and Continent objects, validates map connectivity.

  • **Continent**: Manages Continents with bonus values, linked to Country objects.

  • **Country**: Manages Countries, armies, and adjacent countries.

  • **ModelLogBuffer**: Records logs for various game stages using **Observer Pattern.**

  • **Tournament**: Handles automatic tournament gameplay with different Player Strategies.

  • **Phase**: Manages gameplay phases using **State Pattern**.(IssueOrderPhase, InitialStartupPhase, OrderExecution Phase)

  • **Card**: Manages various card logic (Bomb, Blockade, Airlift, Diplomacy).

- View

- **MapView**: Displays current Map state and overall Map in different game phases.

- **LogWriter**: Writes logs to a file from ModelLogBuffer Model Class.

- **TournamentView**: Displays the entire Tournament Gameplay.

- Controller

- **GameEngine**: Controls main command handling logic.

- Services

- **MapServices**: Handles map state logic, load, edit, and save functionalities.

- **PlayerServices**: Enables Player-related services.

- Utils

- **Command**: Takes and formats player commands.

- **CommonUtil**: Handles input files.

- **LogExceptionHandler**: Manages exceptions related to uncaught logs.

- Constants

- **ApplicationConstantsEncoding**: Defines static members for application-wide use.

- Exceptions

- **InvalidCommand**: Displays a meaningful message for invalid commands.

- **MapValidationException**: Displays a meaningful message for invalid maps.

- Resources

- **Map Files**: Stores and manages all .map files created by users.

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