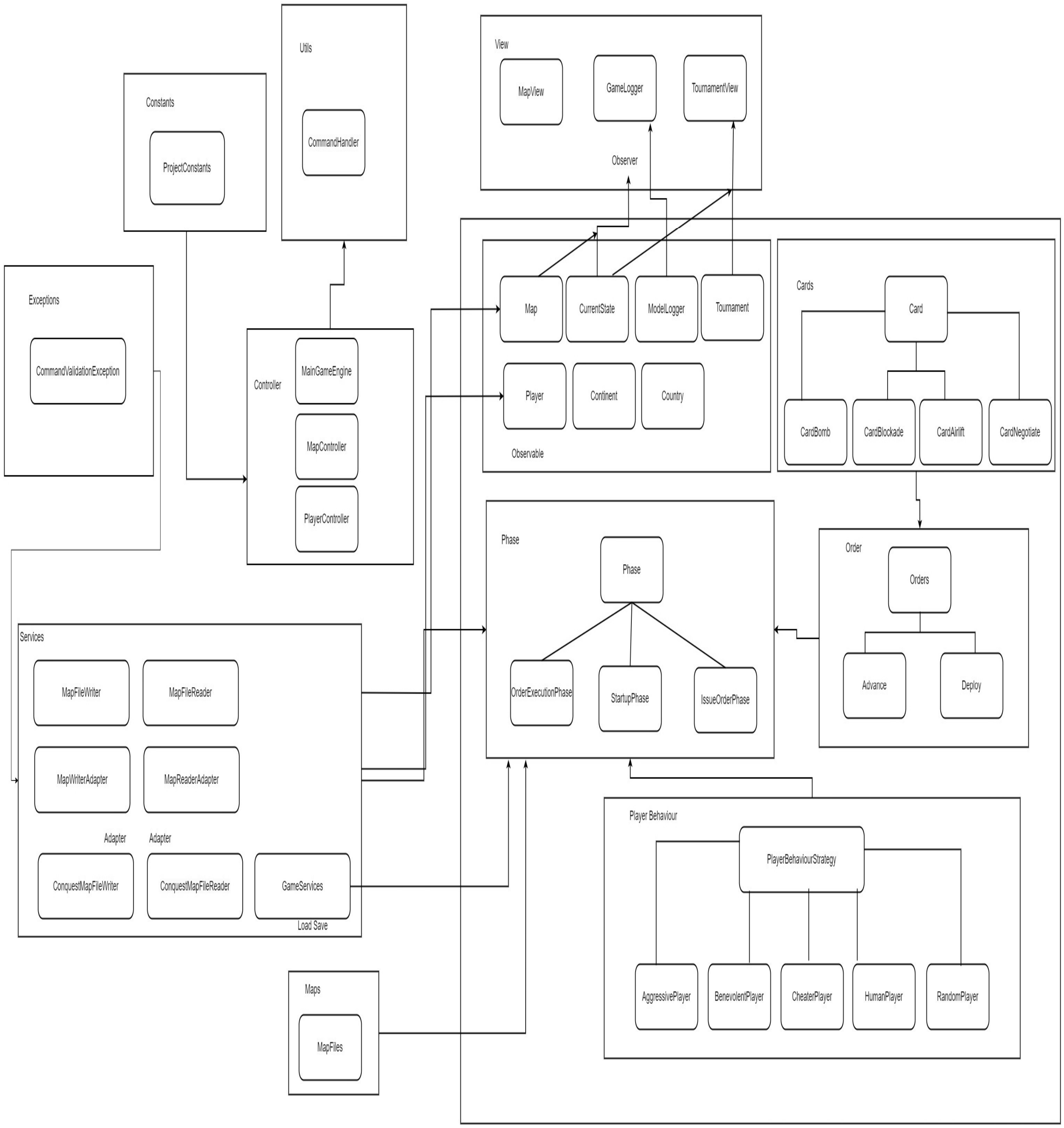
Group 15: Architecture Diagram

COURSE: SOEN 6441

BUILD #3



Models

Advance: - Stores the advance order details and contains the functions required to perform advance order.

Card: - Card interface is implemented by 4 special cards and it inherits the Order class.

CardAirlift: - It stores the airlift order details and contains the functions required to perform airlift operation.

CardBlockade: - It stores the Blockade order details and contains methods required to perform blockade operations.

CardBomb: - It stores the Bomb order details and contains methods required to perform bomb operation.

CardNegotiate: - It stores the Negotiate order details and contains methods required to perform Negotiate operation.

Continent: - This class contains the data and functions related to the Continents such as list of countries, continent value, etc

Country: - It includes operations to manage countries, armies and its neighbours.

CurrentState: - CurrentState is used throughout the game to get current state of map, player information and operations to manipulate the players in a game.

Deploy: - Stores the deploy Order details and contains the functions required to perform deploy Order.

IssueOrderPhase: - It is second phase of the game containing methods to take Orders from the user in round robin way.

Map: - It manages map related data and operations such as validate map, etc.

ModelLogger: - This class acts as a Subject for logger Observer pattern implementation.

OrderExecutionPhase: - This is the last phase in our game contains execute method that executes all the orders taken in the issueOrder Phase.

Orders: - It manages the player orders and is inherited by deploy, advance and card models.

Phase: - Phase is inherited by 3 other phases and it contains common functions needed in all the phases such as handling commands, etc.

Player: - This class manages the data and functions related to the player such as addPlayer, issueOrder, nextOrder, etc.

StartupPhase: - The game starts from this phase and it contains operations for commands allowed in this phase.

Tournament: - Handles tournament gameplay with different player strategies.

PlayerBehaviorStrategy (Strategy Pattern): - Implements various player strategies (Aggressive, Benevolent, Cheater, Human, Random).

Controller

- **MainGameEngine: -**Game starts from this phase and it calls the init method of Startup Phase.
- **MapController: -**It handles all the map related operations of the game.
- **PlayerController:** - It manages all the player related operations of the game.

Views

- **MapView: -** This view is used to display the map during the execution of the game.
- **GameLogger: -** This class stores all the game operations in a logger text file and acts as a observer to the ModelLogger class.
- **TournamentView: -** This view is used to display the final outcome of the tournament command in tabular format.

Utils

- **CommandHandler: -**This class handles the input command given by the user by separating different components of the command that are further used to perform operations accordingly

Services

- **Game Service: -** This class includes game related functions such as savegame and loadgame functionality.
- **MapWriterAdapter (Adapter Pattern):** - Converts and writes map files using MapFileWriter and ConquestMapFileWriter.
- **MapReaderAdapter (Adapter Pattern):** - Reads and parses map files using MapFileReader and ConquestMapFileReader.