

Architectural design #1

The main design of our program is that the game is entirely controlled by the GameEngine, this is done with the GameEngine holding control of the current WarMap, and the list of players.

Our design is split into two modules, Models and Controllers. The models consist of the following classes: Player, Orders, Country, Continent, WarMap.

The Orders class stores the information about the orders that players make. (Currently only Deployments).

The Player class stores its orders, the number of reinforcements it can currently place as well as its owned countries.

The Country class simply stores an ID, name, continent ID, army count, and list of neighboring countries.

The Continent class stores an ID and army bonus.

The WarMap stores all of the countries and continents as well as an adjacency list of the entire WarMap, it also holds important functions for validating and saving maps.

The Controllers are made up of the following classes: MapEditor, MainGameLoop and GameEngine.

The MapEditor is responsible for the controlling flow when a map is being edited from the console, it holds both the read and edit map functions to load from a file.

The GameEngine is responsible for game set-up or passing control to the map editor, it requires a user to load a valid map and add an adequate number of players, once these conditions are met it can use the assign countries function to start the game and pass control to the MainGameLoop.

The MainGameLoop class is responsible for calculating the number of reinforcements, and having the deploy orders taken from the user and then executing these orders.

