Abstract games rush

Summary: In this rush, you will implement a popular abstract strategy game.

Chapter 1

Introduction

An abstract strategy game is a strategy game in which the theme is not important to the experience of playing. Many of the world's classic board games fit into this category, including: Chess, Xiangqi, Shogi, Go, Checkers and Draughts, Reversi, Nine men's morris, and most Mancala variants, as do modern games such as Dameo, Hive, Quoridor, and YINSH.

Many abstract strategy games also happen to be "combinatorial"; i.e., there is no hidden information, no non-deterministic elements (such as shuffled cards or dice rolls), no simultaneous or hidden movement or setup, and (usually) two players or teams take a finite number of alternating turns.

(Source: Wikipedia)

Chapter 2

Instructions

The objective of this rush is to implement an abstract strategy game as a program playable by two players on the same computer. That's all!

The most important aspects you should consider are:

- The correct implementation of the rules. You should use the game's official rulebook as reference.
- The user interface. It should give players a clear view of the full information of the game state, and the ability to input their desired move in an intuitive way. Note that the interface does not have to be graphical, though that would be a plus.

You can use the languages, libraries, frameworks or tools of your choice.

Chapter 3

The game

You have the choice between two popular, award winning, modern abstracts. Note that one represents a greater challenge than the other!

3.1 Normal mode: Santorini

If you choose the normal difficulty mode, you will have to implement the game Santorini, designed by Gordon Hamilton and published by Roxley Games in 2016.

For the main exercise, you only need to implement the base 2-player game (no god powers or hero powers).

3.2 Hard mode: Hive

If you choose the hard difficulty mode, you will have to implement the game Hive, designed by John Yianni and most recently published by Gen42 in in 2015.

For the main exercise, you only need to implement the base game (no expansions).

Chapter 4

Bonuses

- Choose and implement extra features beyond the core game: a few god powers for Santorini, or some (or all) of the extra pieces for Hive.
- Make your game playable "by post". That is: allow the game state and move input to be codified as a text string, which can be shared on a forum or by email, allowing people to play a game remotely with each other. Your program should be able to take in that string as input to set the board to a given state, or to apply a move.

Chapter 5

Evaluation

As usual, the evaluator will clone your git repository, and should be able to run your project themselves. Since you have the choice of language and tools, make sure that your project can run on the school iMacs, and to include instructions on how to install the requirements.

If you write your project in C, you are not required to follow the Norm. However, regardless of the language, you are still expected to provide source code that compiles and/or runs without errors.