

## SWEN222 Assignment 1

### Cluedo Report

The Cluedo game design revolves around one main class (CluedoGame.java) that interacts with other classes, with as little interaction between these other classes as possible. The design aimed to have a high cohesion, such that, they have very specific instructions that they all carry out.

The interface was also designed to be very encapsulated, so it can easily be replaced with a different style of interface (however, this may have been a somewhat ambitious desire).

#### Classes

The primary classes are the; Text Interface, Main Game, Board, Player, and Card classes.

##### Card Classes:

The three card groups, Weapon, Character, and Room, control the cards available to a player. They don't have much functionality, but their use allows simple comparison, collections, and distribution. The Card Interface is mainly a marker interface, but it allows collections of cards, which help in the distribution of cards to players. The implementation of three types of card, as opposed to a single type that uses enums, was decided for the simplicity of separating out card types at the beginning of the game, when choosing the murder cards. Additionally, this allows it to be closely related to the real game.

##### Player Class:

This class holds what you would expect from a real player character; location, hand (of cards), and game status (still in etc), and they can answer suggestions presented to them.

##### Board:

A lot of the game's logic is inside the board, such as the available locations they can go (rooms, points), and stores what places are rooms. It was decided to not put player positions on this board, so that their positions are easier to access.

##### Text Interface:

This class has the sole purpose to communicate with the user. It only has two methods, requestInput and print. It uses System.in/out to communicate and doesn't do anything with the input itself. The values are handled by the main game.

##### Main Game:

The main game controls the player's turn and uses all the other classes to do this. It contains the main game loop as well as methods that dictate the player's turn. The actual game's rules are used here for the game logic.