

CPSC 224 Final Project

PROJECT PLAN

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Clue Game: Digital Adaptation

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1 Project Overview

1.1 Project Summary



For our group project, we are creating the game *Clue*. *Clue* (also known as *Cluedo* outside North America) is a murder mystery board game in which players must find out who committed a murder, with what weapon, and in which room of a mansion. Each player takes on the role of a suspect and moves around the board to gather clues by making suggestions and eliminating possibilities through a process of elimination. The game is won when a player correctly accuses the murderer, weapon, and location.

2 Project Requirements

Table 1: Major Features

Feature	Description
Game Setup	Randomly generate a secret solution and fairly deal remaining cards to players.
Turn System	Implement a consistent turn-based structure allowing players to move, suggest, or accuse.
Suggestions & Refutations	Allow players to make suggestions and handle secret refutations by other players.
Accusations & Win Condition	Check accusations against the solution and declare a winner or eliminate incorrect players.

User Interface	Provide a clear, user-friendly text-based interface for all actions and feedback.
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3 Project Game Design

3.1 Initial User Interface Design

Regarding the user interface, we have 2 main interface mockups, with the features being overall the same for both. Going over what we want the user to see first:

Map – Displays a top-down view of the Clue board, including rooms, hallways, and character pieces.

Log Info – An area that shows recent moves, suggestions, responses, and dice rolls.

Player Info – Displays a summary for each player, with each player's name/color and cards in hand (cards are hidden from other players)

Next, going over the actions for the user, we want the user to be able to do 5 of the main features of the game:

Move – Rolls the dice and moves the character.

Interrogation – Opens a prompt for the player to choose a room, suspect, and weapon to suggest.

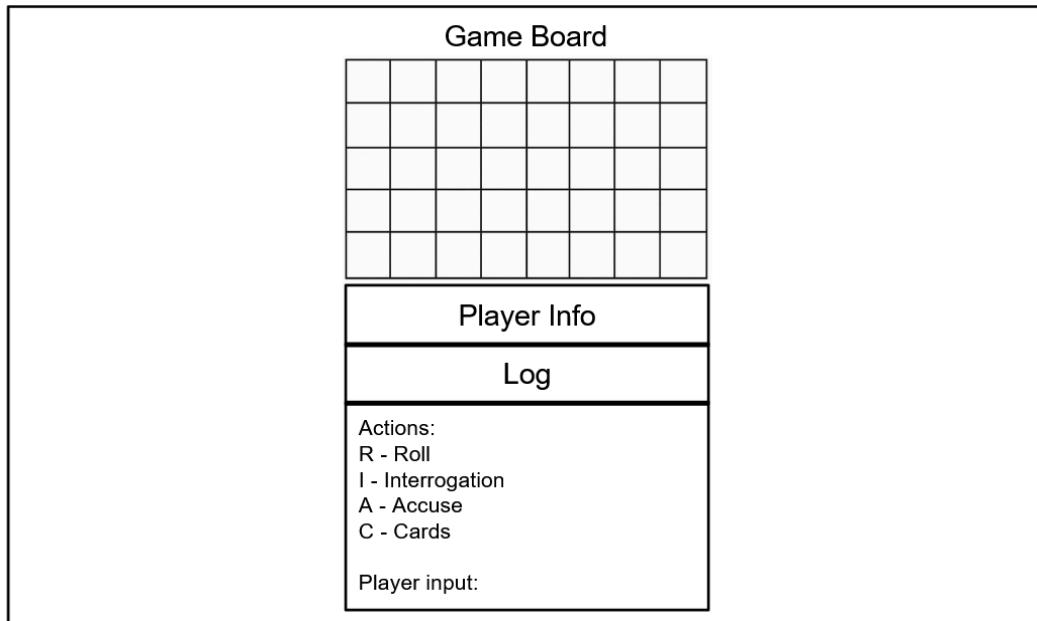
Accusation – Opens a form to make a final accusation.

View Cards – Opens a pop-up or panel showing the player's current hand of cards.

End Turn - Ends the user's turn, either clearing the user's terminal and getting it ready for the next player if the game mode is multiplayer or updating the log/game if in single-player.

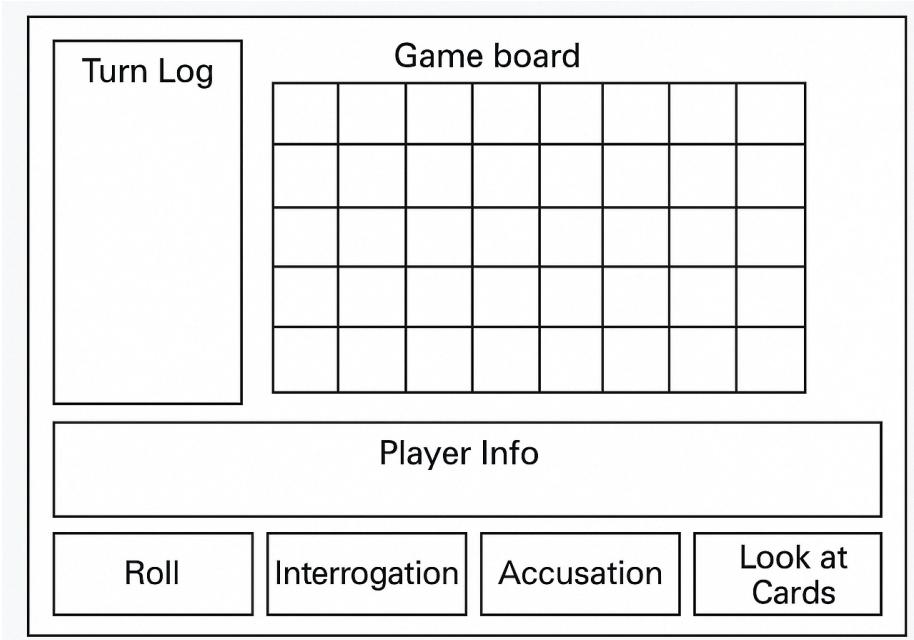
As for what the interface would look like to the player, we made two mock-ups. This first mock-up is an overall basic interface, one similar to our semester's *Farkle* assignment. It shows all the information first (map, log, player info), with underneath showing what inputs the user can enter and what they would do.

Mock-up 1:



Our second mock-up has a more complicated interface and an improved layout. It still shows the player information first, but in a cleaner layout. For the actions the player can take, instead of typing what they would like to do, the interface offers buttons that the user can use instead.

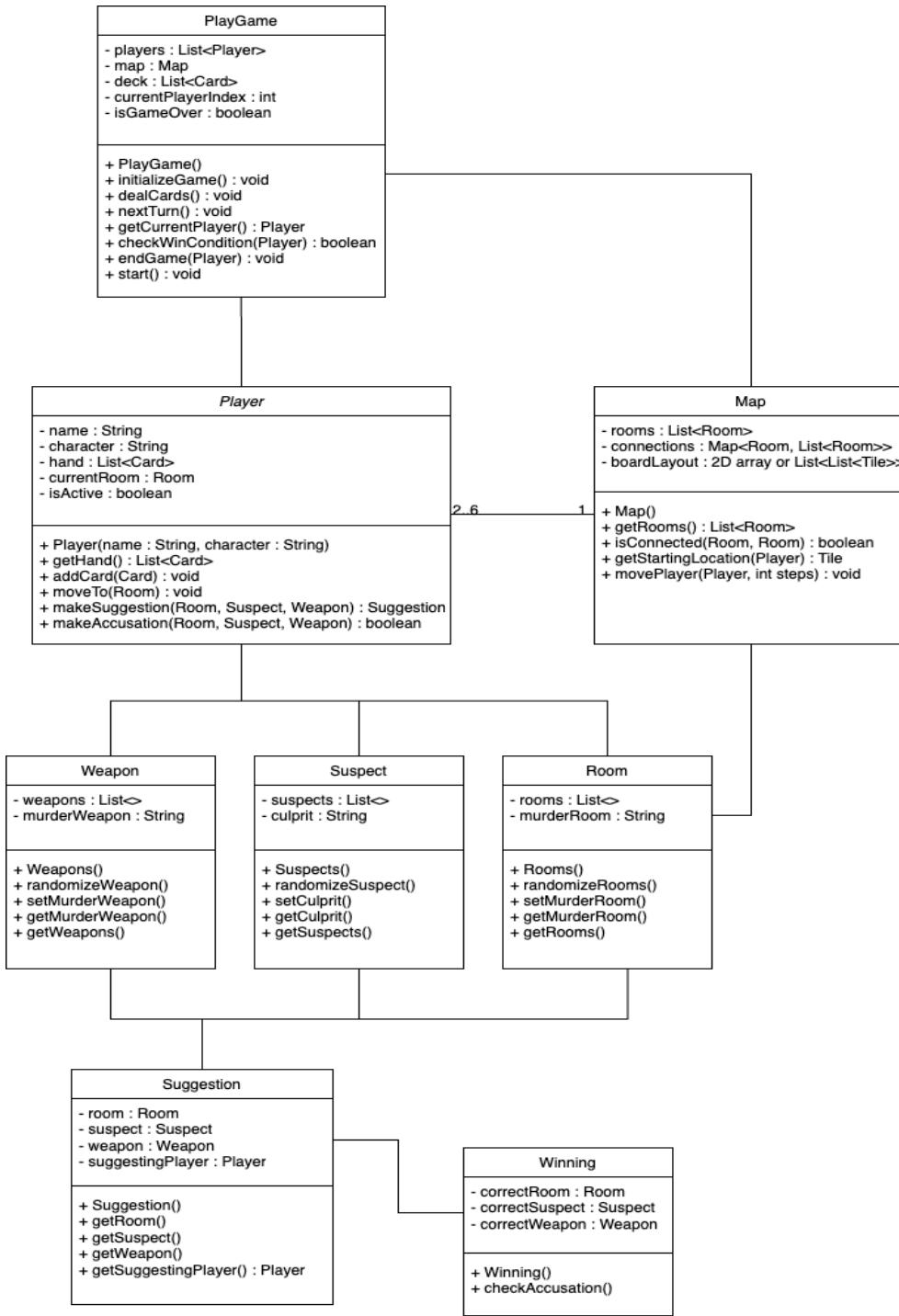
Mock-up 2:

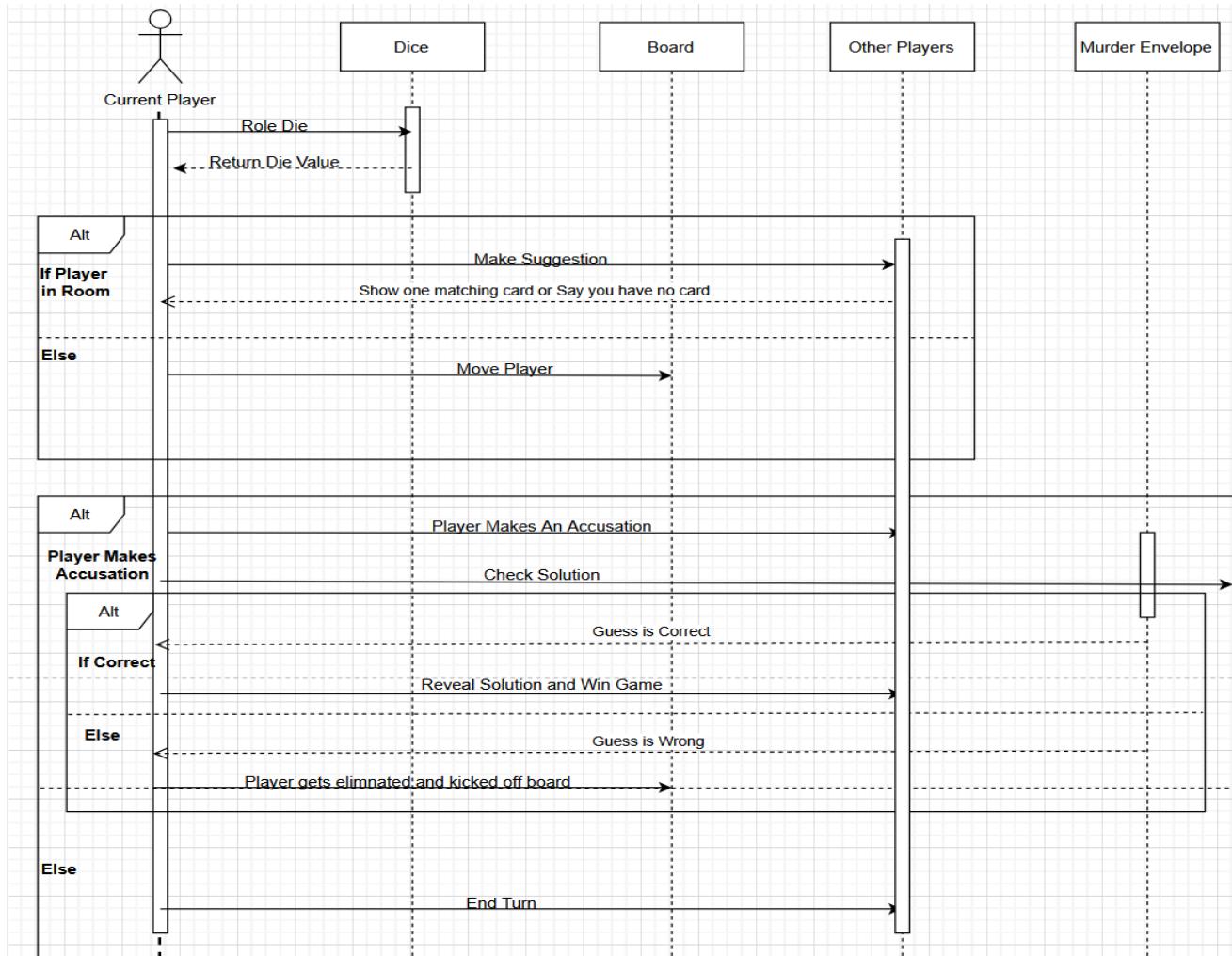


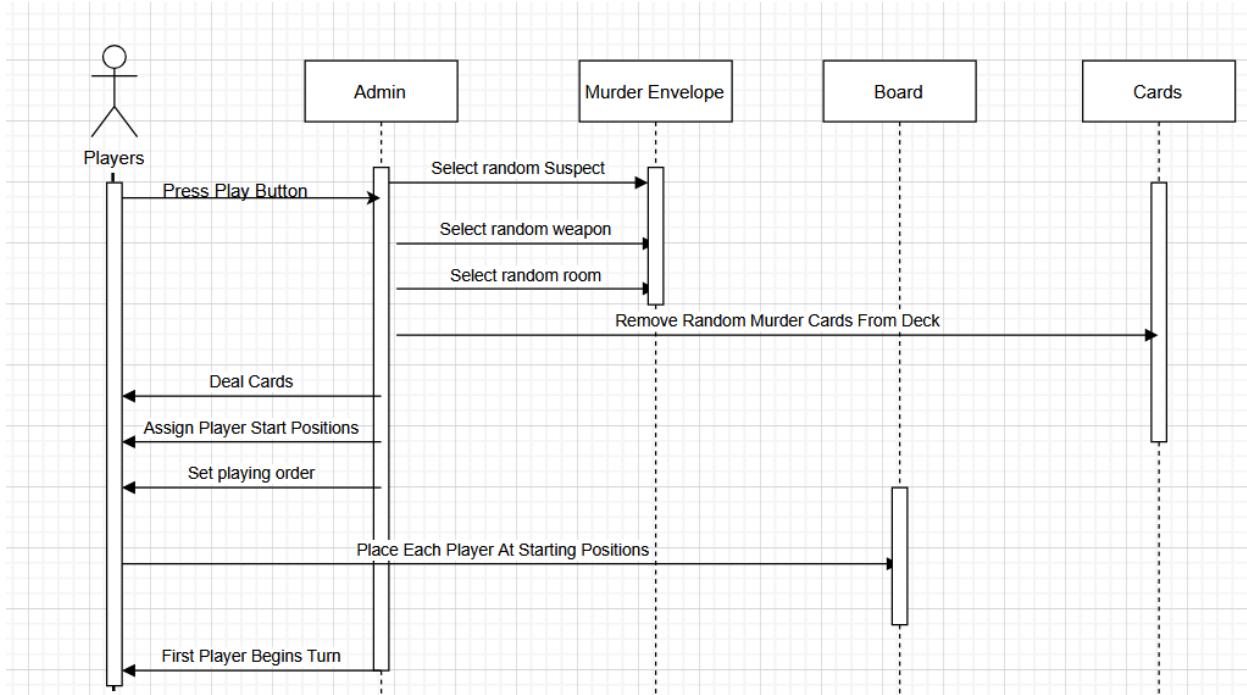
3.2 Initial Software Architecture

Our interpretation of the game Clue features the following major components: players, dice, board, cards, and suggestions. When we initialize the game, we will ask for the number of players who will be playing the game. From there, each player will roll a die at the start of the turn, with the corresponding number being how many spaces they can move on our next major component, the board. The board will feature rooms and empty spaces between rooms. The player must navigate from one room to another while making their guesses. The other major feature is our cards. Each player will be given a random card from the suspects, weapons, and rooms list. One of each card will also randomly be assigned to be our “murder case.” While in a room, the players will make “suggestions” as to what weapon, room, and suspect were involved in the murder. The players will collect data from one another based on these suggestions until ultimately a player makes a correct accusation in the room where the murder occurred, stating the weapon and suspect involved. At this point, the game will end, and the winner will be displayed.

Below is our current UML class diagram and two sequence diagrams showing how the game works from a user's perspective and from the broader perspective of the whole game.







4 Project Schedule

Table 3: Major Scheduling Milestones

Milestone	Description	Target Completion Date
<i>Project Plan</i>	Finalize the overall project plan, including team responsibilities, game structure, key features, and initial design decisions.	April 1st
<i>Core Game Logic</i>	Complete implementation of core gameplay mechanics: player setup, random solution generation, card dealing, and turn structure.	April 15th
<i>Peer Review / Code Walkthrough</i>	Team members review each other's code to ensure consistency, clean design, and bug prevention before code complete.	April 20th
<i>Code Complete</i>	Finalize all features, including bug fixes, user interface polish, and integration of all components into a playable game.	April 22nd
<i>Polish & Final Adjustments</i>	Add any finishing touches: better prompts, improved feedback, and small feature enhancements or optional add-ons.	April 24th

Appendix

Provide additional supplemental information in an appendix as necessary.