

Design Decisions

Game - The class which contains all the major objects in the game.

Board - Contains the 2d array of cells and a list of all the entities of the board. This class is used as well as the game class to separate methods related only with the board pieces, leaving user input and the game loop to the game class.

Player - Each user player the game has a specific player object, there are between 3-6 in a game and are stored in the game class. Most methods in the player class are related to getting user input. The movement of the characters on the board is handled by the Suspect class instead.

Entity (Weapon+Suspect) - The Entity class represents a moveable item on the board. It is an abstract class which has some predefined methods/fields that all entities must have (a move function, constructor and location, char[] and board fields). The weapon is the most simple entity. The suspect is more complex because it has methods that allow it to move in directions or enter and leave rooms through doors.

Cell - The cell class represents a tile on the board. There are various types of cells that must be accounted for, which is why we made the class abstract. The Cell class has a "free" field which decides whether players can move onto it or not. The isFree() method also takes into account if there is an Entity already in that spot. The cell object has an entity field which is usually set to null. If an entity moves to the cell it stores what entity is in that cell for easy drawing and collisions.

Room - The room class is necessary because it contains collections of all the RoomEntityCells and RoomEntranceCells. RoomEntityCells are necessary to know where to place entities when they enter a room.

Implementation Assumptions

- You must enter a room in a specific direction. The board in the brief has room entrances on the corners of some rooms. Based on the drawing, it is safe to assume that you must enter the room in a specific direction.
- When you enter a room it acts like one big cell, and you can exit the room in one move. Your movement stops immediately. This is based on regular Cluedo rules.
- You can make accusations anywhere on the board. This is based on regular Cluedo rules.
- Once a player has refuted a card it does not continue clockwise. This is again based on regular Cluedo rules.
- You are allowed to make a suggestion while in a room without moving out.
- If you leave a room you can't go back into the room through the same exit, this is similar to the rule which states that you can't visit the same cell twice in one move.