Game Board <<interface>> PlayerPhase gameBoard: Board positions: Map<String, Position> - positionsID: ArrayList<String> - actions: ArrayList<Action> + update(): void interface: Display + undo(): void actionFactory: ActionFactory Position Action Player isOccupied: boolean - currentPlayer: Player positionIndex: int - complete: Boolean name: String - playerOccupying: Piece - game : Game piecesPlaced: boolean adjacentPosID: ArrayList<Position> - finalPosition: Position placedCount: int - turn: int - info: String Piece - positions: Position ActionFactory **Display** - colour: Sting selected: Boolean game: Game game: Game millCounts: int

Game: this is the 9 man morris game class which controls the flow of the game, responsible for executing actions and passing updates to the display object. The game keeps tracking all the moving actions during a game.

Board: this class is a virtualization of the game board. The board is responsible for linking up all its positions as well as managing them. Additionally, the board will also check for a mill event.

PlayerPhase: this is an interface which includes 2 methods. One is to update the phase and the other one is to undo the phase. Since we have 3 phases(slide, place, jump) and they have the same function.

Action: This class controls all the actions of the game, and it facilitates all the actions a player can perform while playing the game.

ActionFactory: The action factory is responsible for returning an action depending on the state of the game (I added it as a new class here, maybe it is not a good choice).

Position: this is a class of virtualization of the position on the game board. The position can have a piece on it and knows its adjacent positions.

Player: This class is about player's information. A player has a name, number of placed pieces and also needs to check if a piece is placed by a player or not.

Piece: this is a class of virtualization of the pieces in the game, and it is responsible for managing whether it is in a mill, as well as keeping track of what position it's on.

Display: this is the class that publishes the current state of the game, needed to be implemented as a Java GUI.