Checkers

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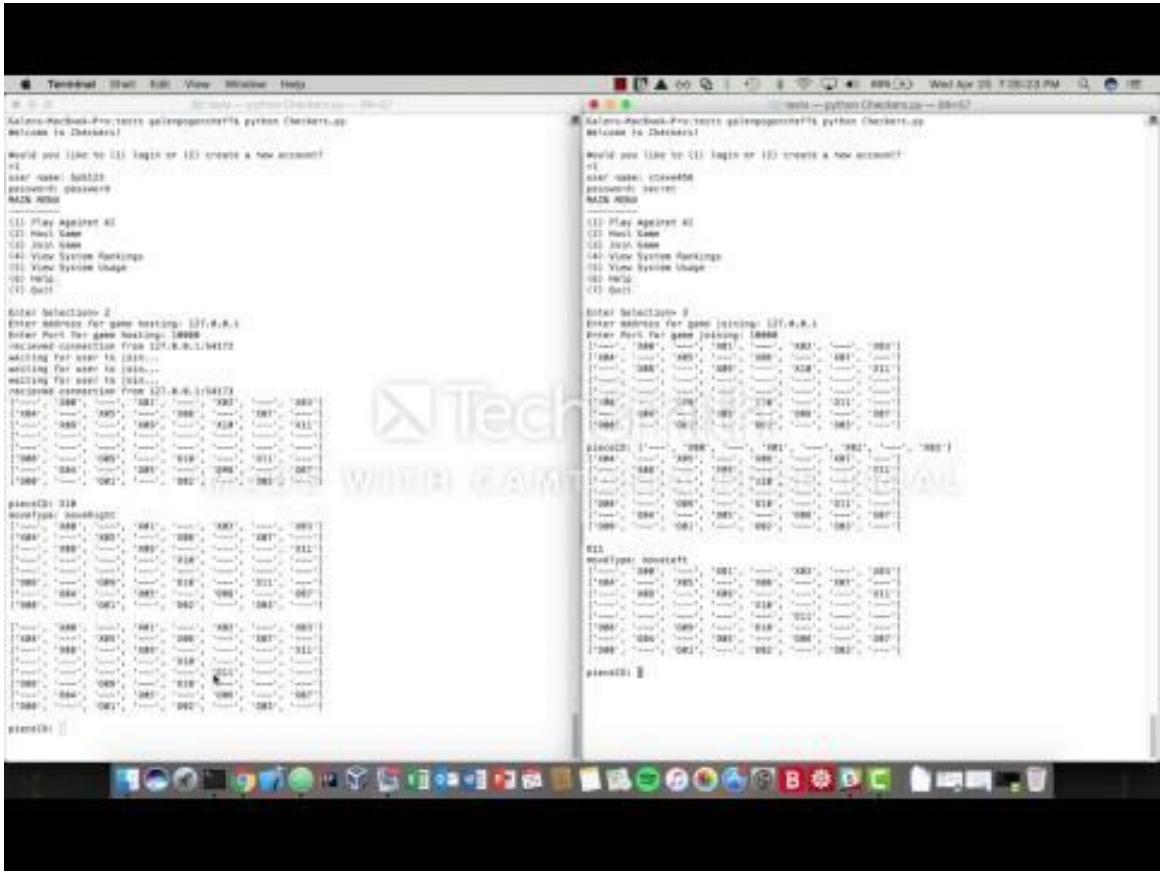
Use Case-03: Play Against User

- Primary Hosting User and Joining User connect
- Board is displayed for both users
- Primary User has first move and selects a checker piece
- Primary User chooses where to move the selected piece
- Board updates for both users
- Joining User selects move
- Game continues playing from the pattern above

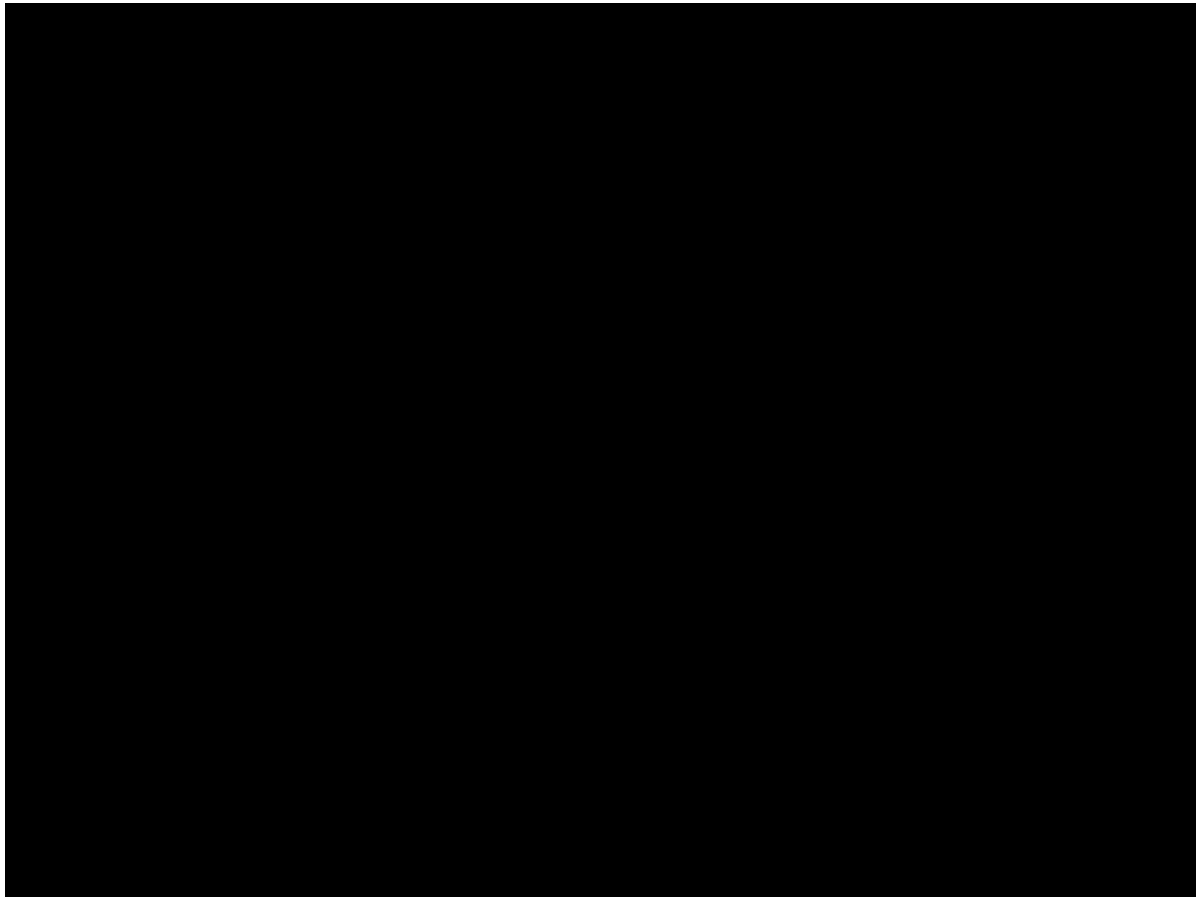
Use Case-03 Demo



Use Case-05: Play AI-Player

- After choosing to play again AI, a new instance of CheckersBoard is created and set as the current game.
- The computer player sets the heuristic function that it will use for its AI strategy, then initializes its strategy as well.
- Both the human and computer players are notified, the human player makes the first move, and both players continue until a winner is decided.

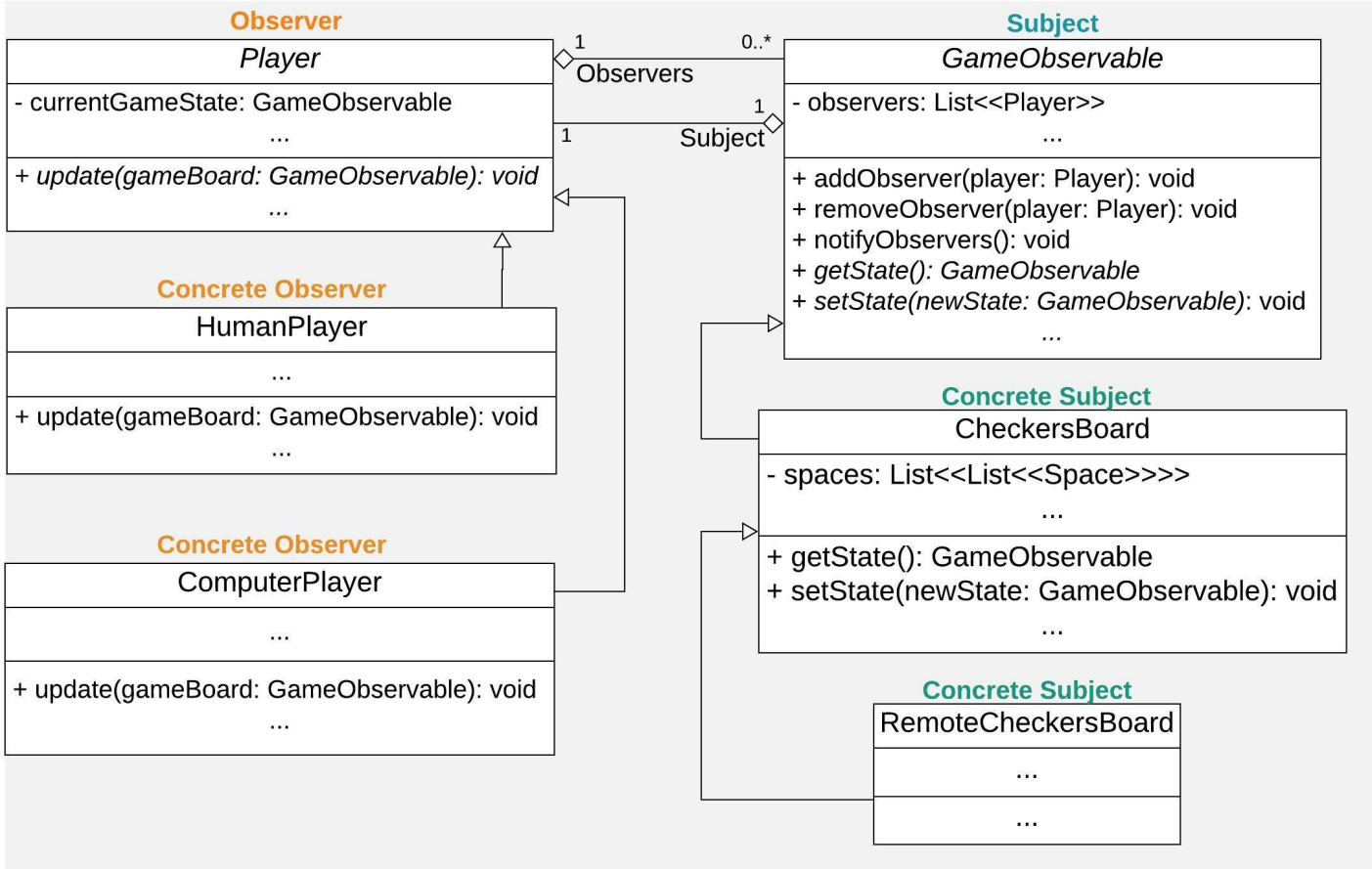
Use Case-05: Demo



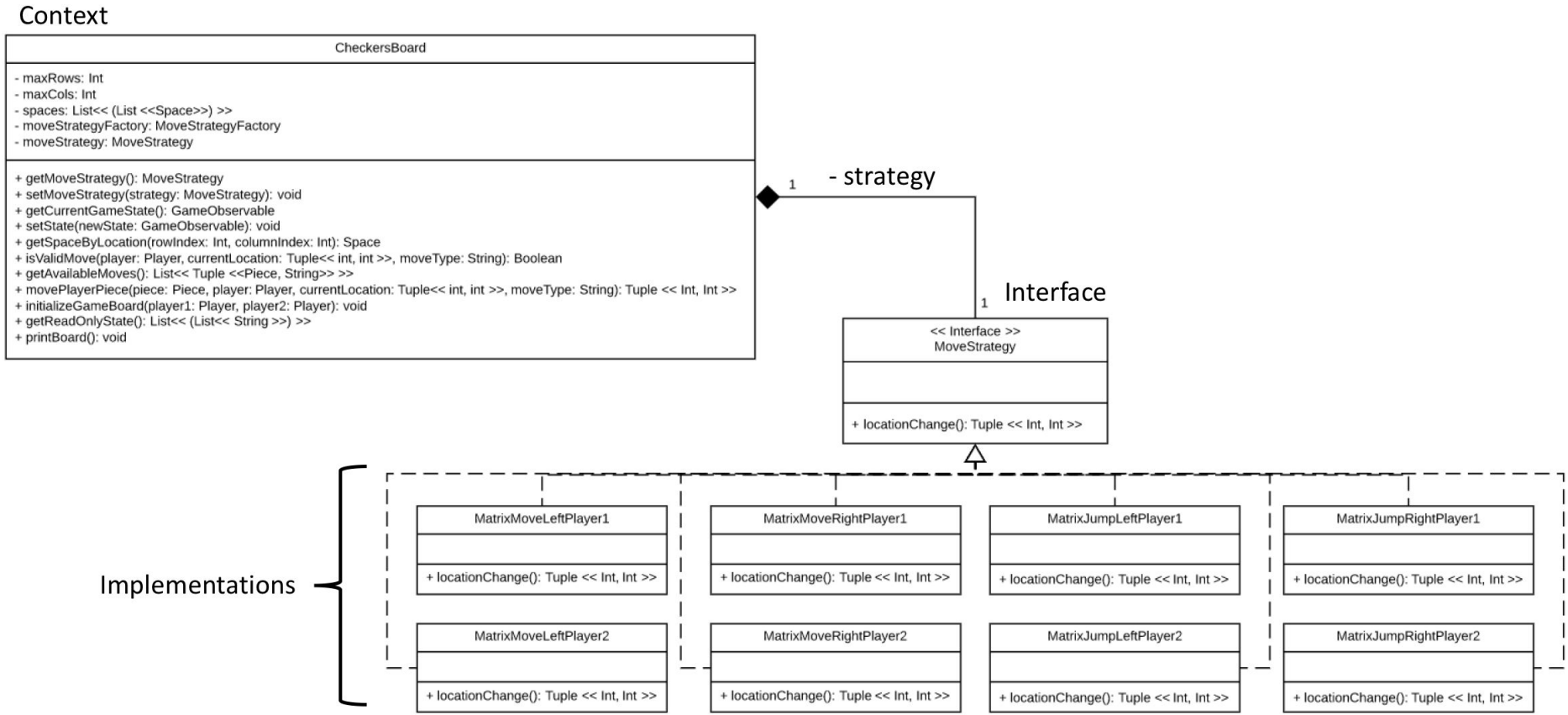
Using the Observer Pattern

- Subject (publisher) is abstract class GameObservable, extended by the CheckersBoard and RemoteCheckersBoard classes. Player objects are the observers in the implementation.
- When a CheckersBoard/RemoteCheckersBoard is initialized, two Player objects are passed as arguments, which are attached to the board.
- After a Player makes a move, the board notifies all the attached Players, causing them to update. Updating the Player objects causes them to update their saved state of the board.
- The ComputerPlayer uses this updated game state to calculate possible moves in its following turn.

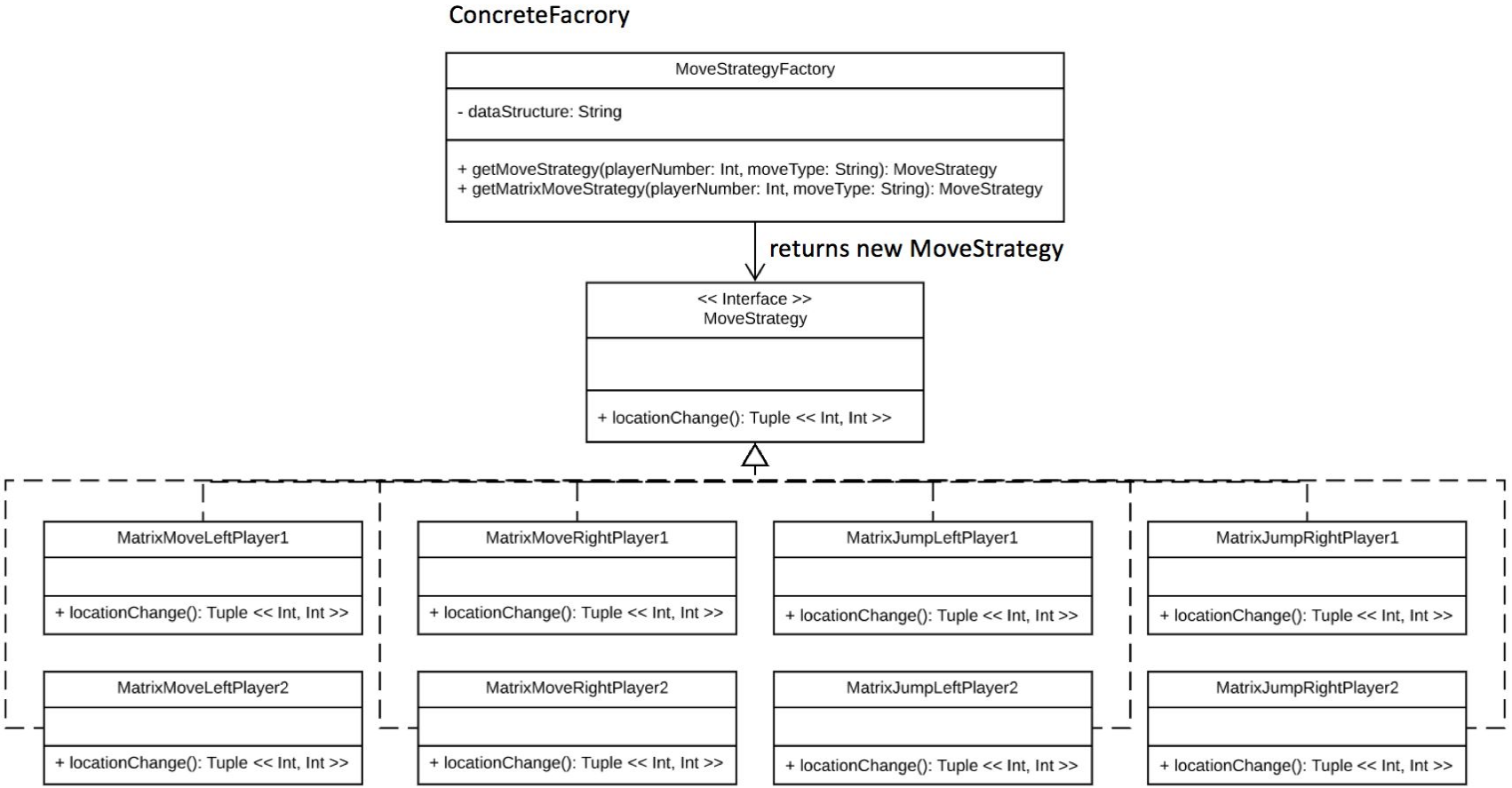
Using the Observer Pattern



Using the Strategy Pattern



Using the Factory Pattern to create Strategy Objects



Link to Project Demo

https://drive.google.com/open?id=1l2MmiAySGg3ZqhvDl5JgiLdmTpVHQBHR