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Connect 4 Project - Executive Summary

- Multiplayer Connect 4 supporting 2 to 4 players
- Network based game allows geographic freedom
- User friendly Graphical User Interfaces (GUIs) implemented using Swing
- Pre game waiting lobby
    - Top of screen banner displays live player count
    - Leader (first player to join) can choose the board size and the win condition
    - Lobby background randomly chosen from group of 6 backgrounds
        - Background automatically resizes with window
    - Start button can only be pressed by Leader
    - Automatically switches to game Board when Start is pressed for all players
        - All players receive a dialogue box pop up saying what the leader selected for the board size and the win condition
- Board GUI
    - Server-enforced turn order using Java concurrency with turnLock and turnCondition
    - Top of screen banner displays which player's turn it is
        - "Your Turn!!!" or "Waiting on Player _."
        - Banner text displayed in player's chip color
    - Chips placed using mouse clicks on the board
    - Animated chip drop visuals for every player without lag and the same animation for every player
    - Dialogue box pops up declaring winner when the win conditions are met
    - Winners have a spectator mode banner placed across the bottom of their screen
    - Spectator mode allows game to continue with winner watching the rest of the game play out for 2nd, 3rd, and 4th place
    - Automatically switches to post game lobby when game is finished
        - Game is played out until only 1 player is left that has not won
- Post game lobby
    - Leaderboard displays player placement for the order of players winning (1st, 2nd, 3rd)
    - Message field at top of screen for users to type into and then communicate with other players
    - Message display area records messages sent and received to and from each player