Java 3 - Assignment: Connect Four game over network

Hand in date: 1 December 2014

You are to implement the classic "Connect Four" game (see Wikipedia) where two players can play with each other over a network. That is you program a client which is a peer to peer client and can connect to another copy of the same client on another computer. For communication you have to use UDP. Message protocol is described below.

The game board have 7 columns and 6 rows.
The user interface can be character based in a terminal, where the user will use the command line to enter commands, and get feedback and game status printed in the terminal. Or the user interface can be graphical.

You pass the assignment when your game can connect and play with another client regardless of the chosen user interface on each client.

Description of client behavior:

- When client starts up it will create a UDP socket, and display the computer IP address and the socket number to the user.
- The user can start a new game by entering the other player's IP address and socket number.
- The client that made the connection will start the game, i.e. make the first move.
- Players alternate moves.
- Game ends automatically when one player gets four in one row, column, or diagonal.
- A player can fold at any time.
- When a game is finished, any player may start a new game.

UDP game message protocol:

- Request: NEW GAME
- Response: ACK NEW GAME

- Request: PLACE SEQ COL
- Response: ACK SEQ
- (SEQ is the sequence number of the player's move. COL is column number. If no ACK is received, the sender will resend the request. SEQ is used to eliminate duplicate requests.)

- Request: END GAME
- Response: ACK END GAME
- (This is used when a player wants to fold during an active game.)