Final Project Proposal
Rebuilding a Connect Four game in Java that would work with
Computer vs Player and Player vs Player

Pros	Cons
Creative	Computer AI will be harder to implement
Simple to understand and would not be as complicated as other games; this is a very intuitive game.	Winning algorithm can be difficult due to diagonals
Includes many topics we learned (see below) Array Manipulation 2D Arrays Inheritance	There has to be a way to ensure the token "falls" to the lowest possible spot at a column

How to include these major topics/tools in our project:
Inheritance
       Abstract Classes
       Interfaces
       Superclass Player
2D Object array - The board for the game would be structured as a 2D array; any unfilled element is null by default and filled arrays are Objects
Instances - player1, player2, and computer
Loops (while and for)
       For example, we could use loops that would cycle a piece to its lowest position possible
       A checker that allows us to see who has won either vertically, horizontally, or diagonally
in any direction
Conditionals

Visions/Goals/Plans for the Project:
Interface - what can a ConnectFour Object do Void newGame() Void place()
2d array with each element as an Object that is either a player or 2 players
The person must not be able to place dots outside the 2d array, and pieces must cycle to the lowest position possible
Optional for Player v Computer and Player v Player
Player pick a column to insert the token

User Experience
In Connect Four, a user is presented with an 8 by 8 board, with 32 tokens given to each player
The user's goal is to connect 4 tokens in a row, by either horizontally, vertically or diagonally.
The game is turn-based, letting a user pick to play against another user or the computer.
Pick a column to place token in, (if column filled, return error and ask for a redo)

Minimal Viable Product
A board that can allow people to place token(s)
Player vs player if AI is too complicated to be implemented
A random slot-picking AI that is really bad for if a good AI algorithm is difficult to figure out

Organization
Interface ConnectFour (what can a ConnectFour game do?)
Superclass Player (abstract)
Subclass Computer (includes Artificial Intelligence)
Subclass User
Driver class Woo

Outside Resources/Tools that could potentially be implemented
Switch statement
ANSI escape sequences