CS 611
Dots and Boxes

Specifications: Your game should be a two player/team game played in the terminal (do not write a graphical component for this game).

The program should begin with a welcome message indicating the purpose of the program. The user should then be able to select one of the two games (puzzle and dots and boxes). If dots and boxes is selected, you should then allow the user to customize player information as well as dimensions of the game. The program should then generate the board and allow the two players/teams to take turns selecting edges.

The object of the game is to close place the 4^{th} edge of a box and to close the box. For every box you close, you gain a point and get to go again. Whichever player has the most points after all boxes are claimed, wins.

Upon someone winning or a tie, your program should congratulate the winner, display the running score, and prompt to play again, change game, or quit. In summary, the program should:

- Allow user to select one of two games
- Puzzle requirements are the same as assignment #1
- Dots and boxes should allow custom information on the players, as well as the board.
- Maintain the configuration of the board as the players compete.
- Prompt the user for which edge they want to claim.
- Display the newly updated board.
- Check for a winner or a tie, update user statistics and
- Prompt the user to play again, play another game, or quit.
- Upon a quit (at end of round or during gameplay) print the summary results and exit

Things to consider in your design: correctness, scalability and extendibility, and your object design.

When thinking about correctness, consider the following among others:

- Can I create a m x n board?
- Can I select an edge that is already been played?
- Can I play off of the board?
- How do you annotate who has claimed which edge and which box?

When thinking about scalability, consider the following among others:

- Can your game be played on different sizes?
- Is there a minimum/maximum size and how are those dimensions enforced?
- Can your game determine who the winner is before the game plays out?

When thinking about extendibility, consider how your design from Assignment #1, the sliding puzzle, can be extended and reused for this game. Then consider how your design can be further extended to another similar game.