CSI 460 — Artificial Intelligence
Assignment #4, First piece due 11/7, Second due 11/16

Kalah:

Kalah is a two player game where each player has one scoring hole hereafter called the Kalah. Each player also has six 'other' non-scoring holes on their side, hereafter called pits. At the start of the game, each pit has 3 stones in it. On his/her turn a player may pick up all the stones in one of their pits and place one stone in each pit to their right (counter-clockwise), slowly making their way around the board. A stone is placed in your scoring Kalah, but not in your opponents. Your scoring Kalah is on your right. At times, you will be placing stones in your opponents pits. If your last stone is placed in your Kalah, you may go again. Whenever there are no more stones in the pits on one player's side, the opposing player may put the remaining stones in their pits in their own Kalah, right away - thus ending the game. At the end of the game, the player with the most stones in their Kalah, wins.

- Create a two-player game of Kalah. (Due 11/7) The computer only works as a medium to display the board and to allow the users to decide input. Your program should correctly determine the end of game.

- Use minimax to write an AI version of Kalah that plays against one user. (Due 11/16).

- For extra credit (due 11/16), fully enable /alpha-/beta pruning. Be sure to discuss this in your documentation.

- Documentation (due 11/16)

    - Fully describe how to interact with your system.
    - Did you require a cutoff?
    - Explain your scoring/evaluation function.
    - Does your program play optimally? Why/why not?