CONNECT-K FINAL REPORT ***[TEMPLATE --- do not exceed two pages total]***

Partner Names and ID Numbers:

Team Name:

1. Describe your heuristic evaluation function, Eval(S). This is where the most “smarts” comes into your AI, so describe this function in more detail than other sections. Did you use the dot product of a vector of weights with a vector of features? What features? How did you set the weights? Did you simply write a block of code to make a good guess? What heuristic did you use? Please use a half a page of text or more for your answer to this question.

2. Describe how you implemented Alpha-Beta pruning. Since you put it on a switch so that you can turn it on and off, please evaluate how much it helped you, if any.

3. Describe how you implemented Iterative Deepening Search (IDS). Were there any surprises or difficulties?

4. Did you remember the values associated with each node in the game tree at the previous IDS depth limit, then sort the children at each node of the current iteration so that the best values for each player are (usually) found first? Describe the data structure you used. Did it help?

5. Describe your quiescence test, Quiescence(S). Did it help?

6. Any suggestions for improving this project? (One suggestion is to remove the first-player advantage: the first player initially places one single mark, and then the players alternate each placing two marks per turn. But, this would square your branching factor for each ply. I hope to compensate for this in the tournament by having each pair play both sides in alternation.)