**Lab 7 Instructions**

In today’s lab you will build the complete solution for using the MINMAX principle to arbitrary game trees and then improving it using alpha-beta pruning. Use the following steps:

1. Generate arbitrary game tree of depth ‘d’. Start from a root node. For each node, generate an arbitrary number of children (3 to 5). Assign random numbers (in the range -5 to +5) as utility values for the leaf nodes.
2. Assuming that the root node is a MAX node, apply the MINMAX principle to find the best choice.
3. Note the number of nodes visited (essentially all nodes in this case).
4. Now modify the MINMAX code to incorporate alpha-beta pruning. Check if the same optimal solution is getting generated. Also check the number of nodes visited.

**Note:** As usual, you should show your work, even if it is partial, during the lab since each lab is being graded.