Python Program for Alpha Beta Pruning

def alphabeta(depth, nodeIndex, isMax, scores, alpha, beta, maxDepth):

if depth == maxDepth:

return scores[nodeIndex]

if isMax:

best = float('-inf')

for i in range(2):

val = alphabeta(depth+1, nodeIndex\*2+i, False, scores, alpha, beta, maxDepth)

best = max(best, val)

alpha = max(alpha, best)

if beta <= alpha:

break

return best

else:

best = float('inf')

for i in range(2):

val = alphabeta(depth+1, nodeIndex\*2+i, True, scores, alpha, beta, maxDepth)

best = min(best, val)

beta = min(beta, best)

if beta <= alpha:

break

return best

scores = [3, 5, 6, 9, 1, 2, 0, -1]

maxDepth = 3

print("Optimal value:", alphabeta(0, 0, True, scores, float('-inf'), float('inf'), maxDepth))

Output

Optimal value: 5