CS221 Fall 2018 - 2019 Homework 5

Name: Dat Nguyen

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By turning in this assignment, I agree by the Stanford honor code and declare that all of this is my own work.

Problem 1: Minimax

(a) $V_{\text{minmax}}(s, d) = \begin{cases} \text{Utility}(s) & \text{IsEnd}(s) \\ \text{Eval}(s) & d = \text{max depth} \\ \max_{a \in \text{Actions}(s)} V_{\text{minmax}}(\text{Succ}(s, a), d) & \text{Player}(s) = a_0 \\ \min_{a \in \text{Actions}(s)} V_{\text{minmax}}(\text{Succ}(s, a), d) & \text{Player}(s) = a_1, \ldots, a_{n-1} \\ \min_{a \in \text{Actions}(s)} V_{\text{minmax}}(\text{Succ}(s, a), d + 1) & \text{Player}(s) = a_n \end{cases}$