# CS 438: Artificial Intelligence
## Assignment 3 – Fall 2024

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**Problem 1** [8pts]

For the gridworld example below, we will perform reinforcement learning.



Consider the following observed transitions:

(A, South, E, 2), (E, North, A, 1), (A, East, B, 2), (A, North, D, 4), (B, West, A, 3), (A, West, C, 4)

The initial value of each state is 0, and $\gamma = 0.1$ and $\alpha = 0.5$. Don't round your answers.

a) [**4pts**] Perform TD learning and report all the learned values for all states in gridworld.

b) [**4pts**] Perform Q learning and report all the learned Q-values in gridworld.