

Homework 5

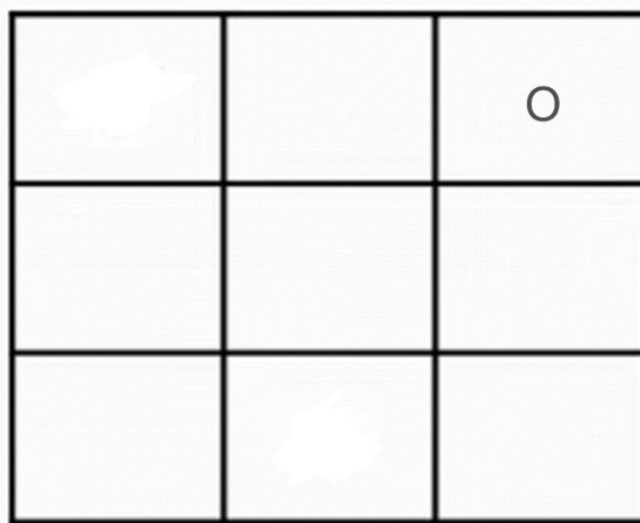
Theoretical part

-- Course: *Intelligent Robotics – Professor: Qi Hao*

Question

Please solve the following two problems step by step using **Monte Carlo method**, **SARSA**, **Q-learning** respectively

1. The robot can take four actions: up, down, left, and right. And the probability of taking each action is equal. The reward for each step the robot takes is -1. In the figure below, **O** represents the starting position.



2. The robot can take four actions: up, down, left, and right. And the probability of taking each action is equal. The reward for each step the robot takes is -0.1. In the figure below, **O** represents the starting position, **B** represents the obstacle, and the reward for walking there is -1.

