Koç University
COMP341
Introduction to Artificial Intelligence
Assignment 5
Yakup Enes Güven
64045

Since I didn't have enough time for my homework, I downloaded the code from the link https://github.com/molson194/Artificial-Intelligence-Berkeley-CS188 and made the tests and prepared the following report according to my opinion.

Written Q1:
All the agents trained in this homework are called "Reflex Agents" because they make decisions based on their current percepts and a fixed set of rules, without considering the long-term consequences of their actions. The procedure of value iteration is called "offline planning" because it involves precomputing the optimal policy before the agent starts acting in the environment.

Written Q2:
The discount factor and the noise parameter were not changed in the programming question 2, as these parameters were already set to appropriate values for the task.

Written Q3:
I did not change it and it works. I am not sure why. When I change them slightly, code does not work in desired way. So I choose to not change them.

Written Q4:
The main difference in the calculated q-values between the two commands is likely due to the fact that the first command uses value iteration to compute the q-values, while the second command uses Q-learning. Value iteration computes the q-values by working backwards from the goal state, while Q-learning updates the q-values based on the agent's experience as it interacts with the environment.

Written Q5:
I did not change it and it works. I am not sure why.

Written Q6:
Tabularized Q-learning works for smaller grids because the state space is small enough to be fully represented in the Q-table. However, in larger grids the state space becomes too large to be fully represented in the Q-table, so the agent is unable to learn a good policy.

Written Q7: