

Complete the exercises and record your observations in the *observations.txt* file.

1. Tabular Q-Learning

Implement the Q-Learning update step in *q_learning_tabular.py* and try different state discretizations (**BINS**) and learning rates (**LEARNING_RATE**). How does the number of states and learning rate affect the training of the RL algorithm?

2. Q-Learning with Value Function Approximation

Implement the value function training step in *q_learning_vfa.py* using the **Q** module and the **optimizer**. How does the training differ from the tabular case? How sensitive is the algorithm to the weight initialization?