**Theory of Computer Games 2022**

**Report of Project #1**

Student name: 劉子齊 Jonathan

Student ID: 311605004

In project 1, our goal is to implement a simple heuristics-based player. For the framework of the game, and the environment, I followed the given sample.

The original given method was to play randomly, but care nothing about the reward. In the following method which I implemented, I applied the backward method and an 8 x 4 tuple network. In my implementation, I calculate the corresponding reward of each operations, which are “slide up”, “slide down”, “slide left”, “slide right”. By calculating reward of each potential operations, I will choose the operation with the highest reward and act to it. The following figure is the implementation of my greedy sliding method.



With my greedy sliding method introduced above, I obtained a way better result than the original strategy with the score of “92.3” in the provided Linux workstation, which the score of the original random method is about “65.7”. The capture of the result is shown in the following figure.

