Aira Torres, Jaden Badal-Campbell, Danilo Montalvo

CAP 4630

Professor Marques

June 16, 2022

Project 1 Report

Roles:

“architect” – Jaden Badal Campbell

“developer” – Danilo Montalvo

“reporter” – Aira Torres

The process:

We all went on a zoom call to discuss how the project will go and which role we would participate in. The beginning of this project after we discussed how the code is going to go, Danny had some issues implementing the beginning of the code because he was not familiar with the way visual studio code run. Danny and Jaden mainly worked on the code together during our zoom meetings and I (Aira) took notes on the problems we encounter and looked up ways to help them out. We all participated in implementing the functions in our code.

Part 1 and Part 2 of the project were done by all of us. For part 2, Danny ran the code for tic tac toe, and I (Aira) ran the one for connect four. This was straight forward, and we did not encounter any problem with these steps.

Part 3: For this we needed to implement 4 different functions for the whole code to work. We divided the work between the 3 of us.

The lose function in our code was worked on by Danny and Jaden together. This one was the most problematic out of the 4 functions we had to work on.

The make_move function on our code was worked on by me (Aira) and Danny. We did not have any problems on this specific functions.

The is_over function and scoring function were both worked on by all three of us. We had to use and look up how to do the scoring function because without it the whole code was not working. We used the example from tic tac toe and other previous example to put together the scoring function since they all had similarities.

Problems:

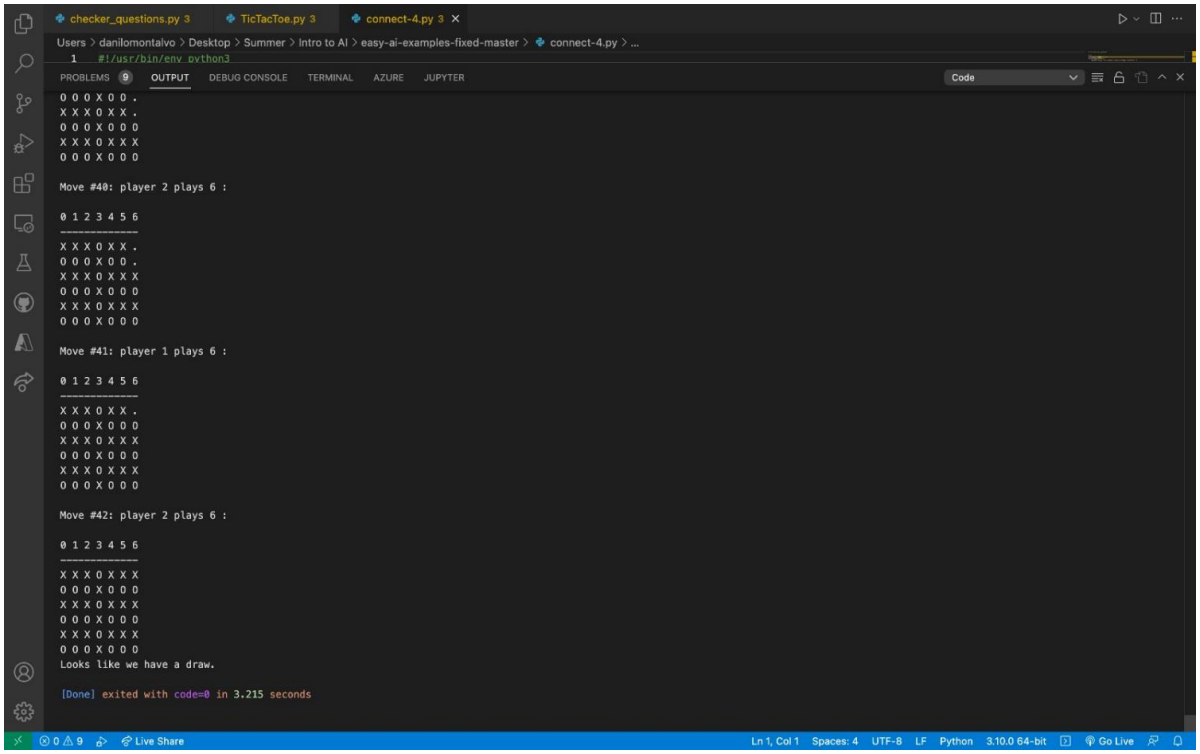
One of the problems all three of us shared was that we were all new to python and did not have much experience on it. That's why during our zoom meetings we were all learning together and looking up the differences it had to C++ because it was the language, we were all familiar with. Like I said earlier, Danny encountered a problem right from the beginning because visual studio could not find the "easyAI" because it was not located in the right folder.

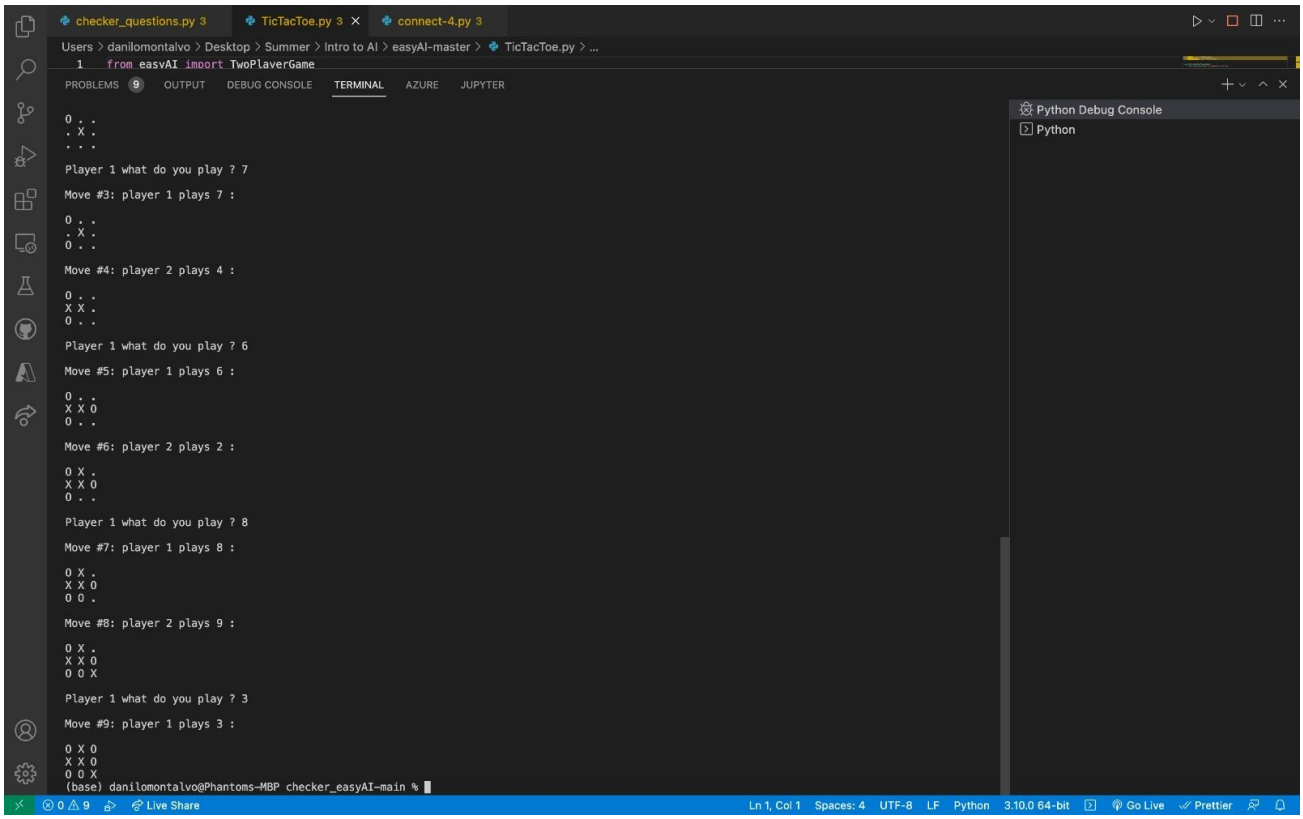
Part 3 gave us our biggest problem because the lose function was not working properly. The initial problem with this function was the board itself was not changing. We ran it many times and it was giving us the same error. Another problem that we encountered with this is that it was taking 51 steps from start to finish, which is a lot of steps and in the end it will still not work. When we were able to fix our initial problem, we encountered another problem where it would give us the same outcome every time, we ran the code. However, we were able to lower the steps from 51 to 15.

How to make it better:

Having an AI that is able to generate multiple outcomes will make this project better. It would save time and solve one of the problems we faced on Part 3 with the lose function.

Screenshot of us running tic tac toe and connect 4:




checker_questions.py 3
TicTacToe.py 3
connect-4.py 3
Users > danilomontalvo > Desktop > Summer > Intro to AI > easyAI-master > TicTacToe.py > ...
1 from easyAI import TwoPlayerGame
PROBLEMS 9
OUTPUT
DEBUG CONSOLE
TERMINAL
AZURE
JUPYTER
Python Debug Console
Python
0 . .
. X .
. . .
Player 1 what do you play ? 7
Move #3: player 1 plays 7 :
0 . .
. X .
0 . .
Move #4: player 2 plays 4 :
0 . .
X X .
0 . .
Player 1 what do you play ? 6
Move #5: player 1 plays 6 :
0 . .
X X 0
0 . .
Move #6: player 2 plays 2 :
0 X .
X X 0
0 . .
Player 1 what do you play ? 8
Move #7: player 1 plays 8 :
0 X .
X X 0
0 0 .
Move #8: player 2 plays 9 :
0 X .
X X 0
0 0 X
Player 1 what do you play ? 3
Move #9: player 1 plays 3 :
0 X 0
X X 0
0 0 X
(base) danilomontalvo@Phantoms-MBP checker_easyAI-main %
0 9
Live Share
Ln 1, Col 1
Spaces: 4
UTF-8
LF
Python
3.10.0 64-bit
Go Live
Prettier