Project 270-Connect 4

Report

**Introduction:**

We were tasked to recreate a game called “Connect 4”, by using the material we learned in class including the language C, Code Review, GitHub, Specifications and Testing.

**The process:**

- Our program makes a human play Connect4 against a bot. There are 3 difficulty levels to choose from easy, medium, and hard.

**Methodology:**

- Finding and executing the best move to win using the choose function, which utilizes the minimax function to calculate the best column for the bot to use.

**Testing:**

-We used the theoretical approach and the Regression Testing to indicate whether the final game works with respect to the specifications and for old and new bugs not to appear again.

We tested our program by entering multiple possible inputs and diagnosing bugs we encountered.

Many of said bugs were created during development, so we had to coordinate our coding to eliminate them. One of which is entering a non-number as a column, which resulted in an error that causes the infinite printing of a message on screen.

Also entering a number larger than the number of columns just skipped your turn.

**Evaluation:**

-We have learnt how to code in groups more efficiently and have made a well working bot that is difficult and fun to try and beat.

However, what we would have done better in the future is better cutting up the work and clearly designating to each developer what to work on for a more efficient experience.

**Summary/Conclusions:**

We have used our gathered knowledge till now to recreate a game from scratch. After days of work and debugging our code, we have come up with a difficult bot to beat in a fun game of Connect4.