

COMP10050 Assignment 2

Focus Boardgame implemented in C by Marcin Nowak – 19300156

https://github.com/mango-1303/COMP10050_Assignment2

I started the project by using the 'Focus' project given in Week 8 Practical as a base. First, I added a function where the players are set up (name, colour) and modified the `printBoard()` to show stack size. Next, I added a rudimentary version of my `turns()`, which simply asked for a player move and printed the x- and y- coordinates where the move ends, and I added x and y coordinates to the `printBoard()`. Next, I made some improvements to the `turns()` and `initialize_players()`, and spent some time revising all my code and making UI and functionality upgrades, and moved the `turns()` from where it was in 'game_init.c' to 'input_output.c'.

Next, I started work on creating a function `mergeStacks()` to be able to move pieces on the board, merge stacks, and remove pieces from stacks over 5 pieces and count them as either 'owned' or 'captured' depending if they are the current player's or the opponent's colour pieces. The `mergeStacks()` uses linked lists in order to keep track of what colour and how many pieces are in each stack. Next, I added the ability for a player to add any 'owned' pieces onto an empty square on the board, and a display of each players 'owned' and 'captured' pieces above the game board. I spent some time play testing and improving my code functionality and UI before adding a game over mechanic.

Next, I added `gameOver()` which checks the board and counts how many pieces of each colour there are. If there are none left of a colour, the remaining colour wins. I added `victoryScreen()` called when `gameOver()` returns which player won. The `victoryScreen()` displays the winners name, number of captured pieces, and number of pieces lost to the opponent. Lastly, I did some more playtests and final fixes, and updated all my code comments, and added new comments where I deemed they were needed.