

Documentation

Link to github: <https://github.com/mcglincheyeoghan/Focus-Domination.git>

game_init.h

- The player struct characterises a player by name, colour and the number of captured and reserved pieces the player has
- The piece struct characterises a piece by colour and it has a pointer to the next piece so that stacks can be created
- The square struct characterises a square by the type (valid or invalid), the piece on the top of the stack and the number of pieces on it

game_init.c

- The initialize_players() method creates and stores the name and colour of the players
 - It firstly asks for player 1's name
 - It then asks what colour the player wants and checks if the chosen colour is Red or Green
 - It then asks for player 2's name and automatically assigns the player a colour based on the colour player 1 chose
- The initialize_board() method as the name suggests, initializes the board at the start of the game by assigning squares their appropriate types, colours and number of pieces

input_output.c

- This file updates and prints the board upon each turn

game_logic.c

- The push() method allows a colour to be pushed to a chosen square
- The pop() method removes a colour from a chosen square
- The checkValidMove() method checks if a player's move is possible
 - It firstly makes sure that the player doesn't choose to move to the square they are already on
 - It then makes sure that the number of spaces they choose to move are less than or equal to the number of pieces they are moving from the stack
- The maintainStackSize5() method ensures that no more than 5 pieces can be on a square at any time and it also ensures that if there are more than 5 pieces, only the pieces after the 5th piece are removed
- The transferStack() method allows a player to move a number of pieces from the stack on a board they choose
- The displayPiecesOnSquare() method displays the pieces from top piece to bottom piece on a square
- The playGame() function allows the game to be played until someone wins based on if there are only pieces of a certain colour on the board, I have yet to implement the captured and reserved pieces rules to my game