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- The project is divided into one main and four modules: game_init.h, game_init.c, input_output.h, input_output.c. Board and Player initializations are in game_init.h and game_init.c. To initialize the board, I used a couple of structs named: square_type, piece, square. For player, used the struct called player. Both the board and player make use of the enum color. To initialize the board, I used to function called initialize_board which assigns square type and piece colour to each square on the board. For players, I used initialize_players asks players to enter their names and the colour they want.
- To play the game, I used the function play_game with 'player' as the return type. The function will return the winner of the game. The function has a while loop that will keep looping until there are no moves left for one of the players. To move a piece/stack, I used the make_move function. This function contains if statements to check if the move made is valid and follows the rules of the game. This function also makes use of the push function to move a piece/stack to another piece/stack. The way I had push work was that it makes a copy of the stack the player wants to move. After making the copy, the end of that copied list is linked to the top of the piece/stack where the player wants to move it. The other function used to play the game is called place_reserve which places the reserve piece of a player back on the board.
- Other function in the project is the print_board function which displays the board and the changes made to it after each move. The remove_piece function takes stacks with size greater than 5 and removes the bottom pieces until the stack size is equal to 5. There is also the count_captured function which counts the reserves and captured pieces before using the remove_piece function.
- The winning function that I have set is when a player's board pieces count reaches zero. Meaning they do not have any pieces left on board and as reserves.
- After the winning player is returned to main, a few printf statements are set up to display the details relevant to the player (piece colour, number of reserves, number of enemy pieces captured, number of pieces left on board).