

# COMP10050\_Assignment2

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This project presented many challenges but was very interesting and was a great learning opportunity. The biggest challenge of this project was definitely getting used to using linked lists but I feel much more confident using them now. It was also my first time using a GitHub repository, I found this quite difficult at first but feel I have a good grasp of it now.

## The Code

The first thing I did in this project was define the different structs I would need. After I had figured out all the different variables I would need each struct to store I started to initialize the board.

The board itself is an array of structs, of `board_pos` type. Each position contains the amount of pieces on that position and a pointer to the top piece on that position. When initializing the board I piece in each position which contained an int value for which player it belongs to as well as a pointer to the piece below it, or NULL if that piece is at the bottom of the stack. I used global variables to keep track of the No. of dominated stacks each player has as well as how many pieces they have in hand

The next thing I did was make a function to print the board to make sure I had initialized the board correctly.

After that I moved on to moving stacks to other positions. This was by far the most challenging part of the project as I found manipulating the linked lists to be very difficult. I found the note very helpful during this part.

Next I wrote a function to get rid of the bottom pieces in a stack over 5 pieces and get rid of or store them pieces in hand depending on who's turn it is.

The Final thing I did was write some code to update the amount the dominated stacks a player has every time a move was made. This was necessary for the winning condition, when a player has 0 dominated stacks and 0 pieces in hand.

## GitHub

It took me a while to get used to using GitHub. I am very happy I now have some experience using Git and I am sure it will come in very useful in the future