

# Software Engineering Project 1

## Assignment 2 – Focus/Domination Board Game

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This program is called “Focus” game which is a Command-Line 2D board game. In the beginning, this program will ask two players to enter their name separately. Then, when one of the players select a colour, the other player automatically assigns the remaining colour.

The program will output board and the number of pieces like this way.

***** The Board *****										***** The number of pieces *****									
1	2	3	4	5	6	7	8	C/R		1	2	3	4	5	6	7	8	C/R	
-	-						-	-	1	0	0	0	0	0	0	0	0	1	
-	R	R	G	G	R	R	-	2		0	1	1	1	1	1	1	0	2	
		G	G	R	R	G	G		3	0	1	1	1	1	1	1	0	3	
		R	R	G	G	R	R		4	0	1	1	1	1	1	1	0	4	
		G	G	R	R	G	G		5	0	1	1	1	1	1	1	0	5	
		R	R	G	G	R	R		6	0	1	1	1	1	1	1	0	6	
-	G	G	R	R	G	G	-	7		0	1	1	1	1	1	1	0	7	
-	-						-	-	8	0	0	0	0	0	0	0	0	8	

Since the red player goes first, the program will automatically run the turn for both players. In each turn, the player can only choose to move the same colour as himself.

When the player enters the wrong coordinates of the stack that they want to move, the program will warn the player and ask for entering again, until getting valid coordinates.

Stacks in this program are implemented using linked lists, which very efficient and convenient. After accumulated with 5 pieces in a single stack, the rest piece will become player’s own kept or adversary's pieces captured. If a player got some own kept pieces, when it is no more piece or stack can move onboard, these pieces can be used as an additional supply for the player.

Finally, when no more piece or stack can move onboard and the player doesn’t have extra pieces, then he will lose the game. And the program will show the winner info at the end.