

Game Specifications:

MemoME is a two-player game. The players first need to specify the board size which is $n \times n$ (square board). They can play with a board size (n) that can be between 2-32. Please note that the board size can only be multiple of two. Therefore, the board size can be 2x2, 4x4, 6x6, etc. When the game starts, the players will be asked to enter the board size. If they enter it properly, then the program will **dynamically** create the board.

```
Welcome to MemoMe!  
Please specify the board size (2-32): 35  
Board size can only be between 2-32!  
Please specify the board size (2-32): 3  
Board size can only be a multiple of two!  
Please specify the board size (2-32): 6  
A Board is created for you with the size of 6x6!
```

When the board size is decided then the game needs to add the characters to the board and close the doors. The board size will also decide the number of characters that are hidden. If the board size is 2, then 2 different characters will be hidden, if the board size is 8 then 8 different characters will be hidden.

The characters that can be hidden will be the characters starting from ASCII code of 33. Therefore, if the board size is 2, then the characters that can be hidden will be:

ASCII code	Character
33	!
34	"

If the board size is 4, then the characters that can be hidden will be :

ASCII code	Character
33	!
34	"
35	#
36	\$

These characters need to be also repeated. For example, if the board size is 2x2, then each character will be repeated twice. If the board size is 4x4, then each character will be repeated 4 times. These characters need to be located on the board **randomly**.

Once the players choose the board size, e.g., a board size of 6, a board can be initialised as follows. Please note that characters that will be hidden will be as follows: !, ", #, \$, %, &

	1	2	3	4	5	6
1	!	"	#	%	&	%
2	\$!	%	&	"	\$
3	!	"	&	#	&	"
4	#	%	"	!	&	#
5	\$	"	%	\$!	\$
6	#	%	&	#	\$!

Once the board is created the game can start. When the game starts the board will need to close the doors (hide the symbols) and start the game. When the doors are closed the players will be shown the board as follows:

	1	2	3	4	5	6
1	@	@	@	@	@	@
2	@	@	@	@	@	@
3	@	@	@	@	@	@
4	@	@	@	@	@	@
5	@	@	@	@	@	@
6	@	@	@	@	@	@

The game is a two-player game. Therefore, the players will have a turn. In each turn, the players will have a chance to enter the locations of two doors, if they find a matching characters, then they score 2 points, and the doors will be opened. If they do not find a matching characters, then they lose 1 point and then the doors will be closed.