

USE CASE #1	
Name	Main menu
Actors	User
Brief Description	The user opens the application.
Preconditions:	none
Basic flow	The home screen is displayed and the user can select a level or read some info about the game before playing it.
Alternate flows	none
Postconditions	Home screen is displayed

USE CASE #2	
Name	Select Level
Actors	User
Brief Description	The user chooses one of the 5+1 configurations.
Preconditions:	none
Basic flow	User selects one of the 5+1 levels and clicks on “play”.
Alternate flows	User doesn’t select a level. Level 1 is selected by default
Postconditions	The level selected is displayed.
Note	The level can also be selected during a game (after use case #4) clicking the “level” button and choosing one of the 5 options. It equals to starting a new game (use case #4)

USE CASE #3	
Name	Info
Actors	User
Brief Description	Information about the game are shown
Preconditions:	none
Basic flow	User clicks on “info” and information about the game and rules are shown
Alternate flows	none
Postconditions	none

USE CASE #4	
Name	Play game
Actors	User
Brief Description	The user clicks on the “play” button
Preconditions:	none
Basic flow	A new game starts and the board is displayed
Alternate flows	none
Postconditions	The game board with the selcted configuration is displayed and the user can move the pieces

USE CASE #5	
Name	Move
Actors	User
Brief Description	The user can move the pieces according to the game rules
Preconditions:	A piece has to be selected
Basic flow	The user drags the pieces to the free places
Alternate flows	The user tries to drag the blocks outside the board, to move them diagonally or to overlapping them and the piece won't move
Postconditions	The moves counter increments and now the user has the opportunity to undo or save

USE CASE #6	
Name	Undo
Actors	User
Brief Description	User decides to undo a move.
Preconditions:	The moves counter can't be 0, at least one move must have been performed
Basic flow	User clicks on “undo” and the board returns to the previous configuration
Alternate flows	Moves counter is 0 and can't decrement. The board configuration doesn't change.
Postconditions	The moves counter decrements by one and the board configuration returns to the previous condition

USE CASE #7	
Name	Settings
Actors	User
Brief Description	The user clicks on the “setting” button
Preconditions:	A game must have started, can't do it from the main menu
Basic flow	User clicks on “settings” and 3 different options are displayed. He can save the game, load a saved one or return to the main menu
Alternate flows	User doesn't select any of the 3 options
Postconditions	Use case #8, #9 or #10

USE CASE #8	
Name	Save
Actors	User
Brief Description	The current board configuration gets saved
Preconditions:	Use case #7
Basic flow	After making some moves, the user saves the configuration
Alternate flows	The user saves before making any move. That equals saving the selected configuration
Postconditions	The configuration is saved and can be loaded (use case #9)

USE CASE #9	
Name	Load
Actors	User
Brief Description	The saved configuration gets loaded
Preconditions:	Use case #7 and #8
Basic flow	User saves a game, makes some moves and then loads the saving. The saved configuration is displayed and the moves counter changes too
Alternate flows	User tries to load a configuration without saving one before. The display doesn't change because nothing gets loaded
Postconditions	The configuration and the moves counter change

USE CASE #10	
Name	Return to main menu
Actors	User
Brief Description	The user return to the home screen using the settings. The situation will be the same one as in the use case #1
Preconditions:	Use case #7
Basic flow	The main menu is displayed
Alternate flows	none
Postconditions	Use case #1

USE CASE #11	
Name	Reset
Actors	User
Brief Description	The user return to the home screen using the settings. The situation will be the same one as in the use case #1
Preconditions:	Use case #7
Basic flow	After making some moves the user decides to reset
Alternate flows	The user resets the game without making any move, the configuration doesn't change
Postconditions	New game with the same level starts

USE CASE #12	
Name	Next best move
Actors	Solver
Brief Description	The best possible move is performed automatically
Preconditions:	User must be connected to internet
Basic flow	The solver performs the best move
Alternate flows	none
Postconditions	The configuration changes and moved counter increments by one

USE CASE #13	
Name	Solve all
Actors	Solver
Brief Description	The game is solved automatically
Preconditions:	User must be connected to internet
Basic flow	The pieces move automatically until the 2x2 square reaches the winning position
Alternate flows	Stop (use case #14)
Postconditions	Win (use case #15)

USE CASE #14	
Name	Stop
Actors	User and Solver
Brief Description	User stops the automatic solving
Preconditions:	Use case #13
Basic flow	After letting the solver move some pieces the user decides to stop him
Alternate flows	none
Postconditions	The solver stops solving

USE CASE #15	
Name	Win
Actors	User and/or solver
Brief Description	User (or solver) wins the game
Preconditions:	The 2x2 square is moved to the winning position
Basic flow	User (or solver) moves the pieces until the 2x2 reaches the winning position
Alternate flows	User isn't able to make the 2x2 square go to the winning position
Postconditions	Restart (same as use case #11) or go back to the main menu (use case #1)