VALIDATION TESTS

Validation tests related to the input introduced by the user.

Menu:

Input	Expected result	Result
p	Starts the game	Success
h	Display the rules of the game	Success
e	Exit the game	Success
P	Starts the game	Success
H	Display the rules of the game	Success
E	Exit the game	Success
Number	Displays error message. Try again.	Success
Character different from p, h or e.	Displays error message. Try again.	Success
Enter	Displays error message. Try again.	Success

Select subject:

Input	Expected result	Result
Animals	Starts the game	Success
animaLs	Starts the game	Success
Subject that does not exist	Displays error message. Try again.	Success
Number	Displays error message. Try again.	Success
Enter	Displays error message. Try again.	Success

Action:

Input	Expected result	Result
rotate	Ask information related to the rotation of the board	Success
find	Aks information related to finding words on the board	Success
help	Displays the rules of the game. Displays the board again	Success
exit	Ask the player if he/she wants to play again	Success
RotAte	Ask information related to the rotation of the board	Success
fInD	Aks information related to finding words on the board	Success
hElp	Displays the rules of the game.	Success
eXIT	Ask the player if he/she wants to play again	Success
String different from the options	Display error of invalid command. Try again.	Success
Number	Display error of invalid command. Try again.	Success
Enter	Display error of invalid command. Try again.	Success

Action -> Rotate -> Direction:

Input	Expected result	Result
up	Ask the player the information to rotate a column.	Success
down	Ask the player the information to rotate a column.	Success
right	Ask the player the information to rotate a row.	Success
left	Ask the player the information to rotate a row.	Success
Up	Ask the player the information to rotate a column.	Success
DoWN	Ask the player the information to rotate a column.	Success
rIGth	Ask the player the information to rotate a row.	Success
Left	Ask the player the information to rotate a row.	Success
String different from options	Display error of invalid direction. Try again.	Success

Number	Display error of invalid direction. Try again.	Success
Enter	Display error of invalid direction. Try again.	Success

Action -> rotate -> Direction -> up -> Column number:

Input	Expected result	Result
0 < = number < = 9	Ask the player the number of spaces to rotate	Success
number < 0	Display error. The column is not inside the board. Try again.	Success
number > 9	Display error. The column is not inside the board. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> rotate -> Direction -> up -> Column number -> n -> Spaces :

Input	Expected result	Result
0 < spaces < = 9	The board is rotated	Success
spaces < = 0	Display error: invalid number of spaces. Try again.	Success
spaces > 9	Display error: invalid number of spaces. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> rotate -> Direction -> down -> Column number:

Input	Expected result	Result
0 < = number < = 9	Ask the player the number of spaces to rotated.	Success
number < 0	Display error. The column is not inside the board. Try again.	Success
number > 9	Display error. The column is not inside the board. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> rotate -> Direction -> down -> Column number -> n -> Spaces :

Input	Expected result	Result
0 < spaces < = 9	The board is rotated	Success
spaces < = 0	Display error: invalid number of spaces. Try again.	Success
spaces > 9	Display error: invalid number of spaces. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> rotate -> Direction -> left -> Row number:

Input	Expected result	Result
0 < = number < = 9	Ask the player the number of spaces to rotate.	Success
number < 0	Display error. The row is not inside the board. Try again.	Success
number > 9	Display error. The row is not inside the board. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> rotate -> Direction -> left -> Row number -> n -> Spaces :

Input	Expected result	Result
0 < spaces < = 9	The board is rotated.	Success
spaces <= 0	Display error: invalid number of spaces. Try again.	Success
spaces > 9	Display error: invalid number of spaces. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> rotate -> Direction -> right -> Row number:

Input	Expected result	Result
0 < = number < = 9	Ask the player the number of spaces to rotate.	Success
number < 0	Display error. The row is not inside the board. Try again.	Success
number > 9	Display error. The row is not inside the board. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> rotate -> Direction -> right -> Row number -> n -> Spaces :

Input	Expected result	Result
0 < spaces < = 9	The board is rotated	Success
spaces <= 0	Display error: invalid number of spaces. Try again.	Success
spaces > 9	Display error: invalid number of spaces. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> find -> Row number :

Input	Expected result	Result
0 < = number < = 9	Ask the player the initial column number.	Success
number < 0	Display error. The row is not inside the board. Try again.	Success
number > 9	Display error. The row is not inside the board. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> find -> Row number -> n -> Column number:

Input	Expected result	Result
0 < = number < = 9	Ask the player the final cell row number.	Success
number < 0	Display error. The column is not inside the board. Try again.	Success
number > 9	Display error. The column is not inside the board. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> find -> Row number -> n -> Column number -> m -> Row number :

Input	Expected result	Result
0 < = number < = 9	Ask the player the final column number.	Success
number < 0	Display error. The row is not inside the board. Try again.	Success
number > 9	Display error. The row is not inside the board. Try again.	Success
String	Type error. Try again.	Success
Enter	Type error. Try again.	Success

Action -> find -> Row number -> n -> Column number -> m -> Row number -> x -> Column number:

Input	Expected result	Result
0 < = number < = 9	Evaluate if it is a word.	Success
number < 0	Display error. The column is not inside the board. Try again.	Success
number > 9	Display error. The column is not inside the board. Try again.	Success
String	Type error. Try again.	Success

Enter	Type error. Try again.	Success

Action -> exit -> Play Again :

Input	Expected result	Result
yes	Go to the initial menu.	Success
no	Exit the game.	Success
YeS	Go to the initial menu.	Success
No	Exit the game.	Success
String not in the options	Display error invalid option. Try again.	Success
Number	Display error invalid option. Try again.	Success
Enter	Display error invalid option. Try again.	Success

Validation tests related to specific situations on the game.

Rotation of the board

Case	Expected result	Result
Rotate a column up.	The column is rotated according to the column number and the number of space specified.	Success
Rotate a column down.	The row is rotated according to the column number and the number of space specified.	Success
Rotate a row to the left.	The row is rotated according to the column number and the number of space specified.	Success
Rotate a row to the right.	The row is rotated according to the column number and the number of space specified.	Success
Rotate a column X spaces up. Then rotate the same column X spaces down	The board stays the same.	Success
Rotate a row X spaces up. Then rotate the same row X spaces down	The board stays the same.	Success

Rotate the board and then find a word.	The board is rotated according to the coordinates specified and the word is extracted.	Success

Finding words

Case	Expected result	Result
The initial and the final cell form a vertical line longer than 3 letters	The word extracted corresponds to the letters on the board.	Success
The initial and the final cell form a horizontal line longer than 3 letters	The word extracted corresponds to the letters on the board.	Success
The initial and the final cell of the word are equal.	Error message: Those cells does not form a vertical or an horizontal line of at least 3 letters. A new action is requested.	Success
The length of the word specified is less than 3.	Error message: Those cells does not form a vertical or an horizontal line of at least 3 letters. A new action is requested.	Success
The initial and the final word do not form a vertical nor a horizontal line.	Error message: Those cells does not form a vertical or an horizontal line of at least 3 letters . A new action is requested.	Success
The initial and the final cells form a word. The word is on the list of words to find.	Success message. The word does not appear on the list of words to find anymore. A new action is requested.	Success
The initial and the final cells form a word. The word is not on the list of words to find.	Error message: the word is not on the list of words to find. A new action is requested.	Success
The initial and the final cells form a word. The word was already found.	Error message: the word was already found. A new action is requested.	Success
The last word on the list of words if found.	Success message. Winning message. Ask if the player wants to play again.	Success
The initial and the final word form a word if the edges of the board are crossed.	The words extracted do not cross the edges of the board.	Success
Specify a word on the list + one more	Extract the word. Check if it is on the	Success

letter.	list.	

Importing the instructions

Case	Expected result	Result
Import instructions normally.	The instructions are imported and can be printed on the stdout	Success
The file 'instructions.txt' does not exist.	Message: there are no instructions. Exit	Success
The file 'instructions.txt' is not plain text.	Message: there are no instructions. Exit	Success

Importing the dictionary

Case	Expected result	Result
Import subjects normally.	Display the initial message of the game	Success
Do not exist .xml files inside the directory subjects.	Display an error and abort the execution of the program.	Success
Incorrect format of a .xml file inside the directory subjects.	Display an error and abort the execution of the program.	Success
No subjects imported.	Display an error and abort the execution of the program.	Success
Some words into the .xml file with non alphabetic characters	Ignore those words and continue the execution of the importation.	Success
There are more than 1 subject in one .xml file.	Import just the first subject and continue the execution of the importation.	Success
Adding an added word	Ignore the word and continue the importation.	Success

Building the clues

Case	Expected result	Result
The dictionary does not have as many words as expected	Display an error message and stop the execution.	Success
Words are longer than the maximum (8 letters)	Ignore the word and search another one	Success
Words are not longer than the minimum (3 letters)	Ignore the word and search another one	Success
Adding an added word	Ignore the word and search another one	Success

Building the board

Case	Expected result	Result
Add 10 words to the board randomly	Add and start the game	Some failures