

Othello, Part II: Flip pieces

function flipPieces(gameboard, the player's color, a grid);

Output: the state of a new board where all possible flippings are performed (NOTE that the original board is not modified)

OR

function flipPieces(new_board, org_board, the player's color, a grid);

Output: nothing; the new state is saved in new_board

Description

- You can call countFlipPieces() to define this function.

Function	Return Value	Algorithm
function flipPieces(gameboard, the player's color, a grid)	a state of the board	For dr ← 0 ~ 7: num ← countFlipPieces(gameboard, the player's color, a grid, dr); For gd ← num grids in the direction dr: piece(gd) ← color;

Some examples are given here.

Example	Original State	Return Value	New State																																																																																																		
<code>flipPieces("+++++++XX++OOOX+++OXOO++X+XX+++++", 2, "Ae")</code>	<table><tr><td></td><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td>f</td></tr><tr><td>A</td><td></td><td></td><td></td><td></td><td>☆</td><td></td></tr><tr><td>B</td><td></td><td></td><td></td><td>●</td><td></td><td></td></tr><tr><td>C</td><td>○</td><td>○</td><td>○</td><td>○</td><td>●</td><td></td></tr><tr><td>D</td><td></td><td></td><td>○</td><td>●</td><td>○</td><td>○</td></tr><tr><td>E</td><td></td><td>●</td><td></td><td>●</td><td>●</td><td></td></tr><tr><td>F</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>		a	b	c	d	e	f	A					☆		B				●			C	○	○	○	○	●		D			○	●	○	○	E		●		●	●		F							<code>"++++O++++OO++OOOO+++OXOO++X+XX++++"</code>	<table><tr><td></td><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td>f</td></tr><tr><td>A</td><td></td><td></td><td></td><td></td><td>○</td><td></td></tr><tr><td>B</td><td></td><td></td><td></td><td>○</td><td></td><td></td></tr><tr><td>C</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td></td></tr><tr><td>D</td><td></td><td></td><td>○</td><td>●</td><td>○</td><td>○</td></tr><tr><td>E</td><td></td><td>●</td><td></td><td>●</td><td>●</td><td></td></tr><tr><td>F</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>		a	b	c	d	e	f	A					○		B				○			C	○	○	○	○	○		D			○	●	○	○	E		●		●	●		F						
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範例 Examples:	
Input	Meaning
3	Number of test data
+++++++XX++OOOX+++OXOO++X+XX+++++	gameboard of test data #1
2	player's color of test data #1
Ae	grid of test data #1
+++++++XX++OOOX+++OXOO++X+XX+++++	gameboard of test data #2
2	player's color of test data #2
Cf	grid of test data #2
+++++++XX++OOOX+++OXOO++X+XX+++++	test data #3
1	test data #3
Cf	test data #3
Output	Meaning
++++O++++OO++OOOO+++OXOO++X+XX+++++	answer of test data #1
+++++++XX++OOOOO+++OXOO++X+XX+++++	answer of test data #2
+++++++XX++OOOXX++OXOX++X+XX+++++	answer of test data #3