$GameBoard(void) - [Test_GameBoard_Constructor]$

Input:N/A	Output: N/A
State: N/A	State:
checkIfFree(int) – [Test_checkIfFree_col0_	Free]
Input: 0	Output: True
State:	State:
	Board remains unchanged
0	
X	
X	

0	Х	0	0	Х	

checkIfFree(int) - [Test_checkIfFree_col0_notFree]

Input:	0				
State	:				
X					
0					
X					
0					
X					
0					
X					
0		0			
X	0	Х	Х		

Output: False

State:

Board remains unchanged

checkIfFree(int) - [Test_checkIfFree_col6_free]

Input:	6				Output: True
State:					State:
					Board remains unchanged
				0	

checkIfFree(int) - [Test_checkIfFree_col6_notFree]

Inpu	t: 6						Output: False
State	e:						State: Board remain unchanged
						0	
						Х	
						0	
						Х	
					Х	X	
					0	0	
					0	Х	
				Х	Х	0	
Х	0	Х	Х	Х	0	0	
	•	•	•	•	•		

 $checkIfFree(int) - [Test_checkIfFree_empty_col3_free]$

Input: 2	2			Output: True
State:				State: Board remains unchanged

checkHorizontalWin(BoardPosition, char) – [Test_checkHorizontalWin_playerO_NoWin_pos8_0]

Input:	: Boar	dPosi	tion(8	,0), "C)"	Output: False
State	:					State:
						Board remains unchanged
0	Х					

 $check Horizontal Win (Board Position, \, char) - [Test_check Horizontal Win_player X_Win_pos8_6]$

							Board remains unchanged
			+				
-			<u> </u>				
-			<u> </u>				
0	0	Х	0	0	0		
$\ _{X}$	0	X	X	X	X	X	
		1	<u> </u>	1			
check	Horizo	ontalV	Vin(Bo	ardPo	osition	n, char)	- [Test_checkHorizontalWin_playerO_Win_pos5_6]
Inpu	t: Boai	rdPos	ition(5	5,6), "0) "		Output: True
Ctoto							State
State	ð .						State:
	•						Board remains unchanged
			<u> </u>				
		0	0	0	0	0	
	Х	Х	0	0	Х	0	
X	Х	0	Х	Х	Х	Х	

Output: True

State:

Input: BoardPosition(8,6), "X"

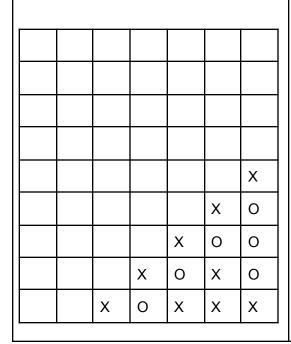
State:

	Х	Х	0	Х	0	0	0
-							•

 $check Horizontal Win (Board Position, \, char) - [Test_check Horizontal Win_player X_NoWin_pos4_6]$

Input: BoardPosition(4,6), "X"

State:



Output: False

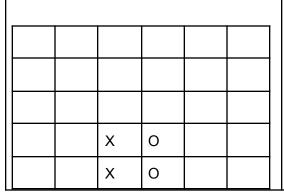
State:

Board remains unchanged

 $check VertWin (Board Position, \, char) - [test_check VertWin_Player O_Win_pos 3_3]$

Input: BoardPosition(3,3), "O"

State:



Output: True

State:

Board remains unchanged

хо
0 0 0
x x x x

 $checkVertWin(BoardPosition,\ char)-[test_checkVertWin_PlayerX_Win_pos4_2]$

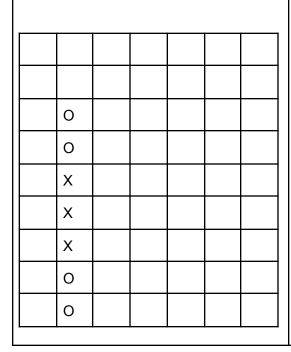
	3oardPosi	tion(4,	2), 'X	~~	Output: True
State:					State: Board remains unchanged
	X				
	Х				
	Х				
	Х				
	Х				
	0				
	0				
	0				

0	0	

checkVertWin(BoardPosition, char) - [test_checkVertWin_PlayerO_NoWin_pos3_1]

Input: BoardPosition(3, 1), 'O'

State:



Output: False

State: Board remains unchanged

checkVertWin(BoardPosition, char) - [test_checkVertWin_PlayerX_NoWin_Interrupted_pos5_0]

Input:BoardPosition(5, 0), 'X'

State:

Х			
Х			
Х			
0			
Х			

Output: False

State: Board remains unchanged

X				
X				
0				
0				
				1

 $check Diag Win (Board Position, \, char) - [test_check Diag Win_Player X_Diag Win_pos 2_2] \\$

Input: BoardPosition(2, 2), 'X'

State:

Х					·
0	Х				
0	Х	Х			
0	Х	Х	Х		
0	0	0	0	Х	
Х	Х	0	0	0	
Х	0	Х	Х	Х	
Х	Х	0	Х	0	
0	Х	0	Х	0	
	-	-	•	•	

Output: True

State: Board remains unchanged

$check Diag Win (Board Position,\ char) - [test_check Diag Win_Player O_Win_Boundary_pos 0_0]$

Input	: Boar	dPos	ition(0	, 0), '(),)	Output: True
State):					State: Board remains unchanged
	_	1	1		1	
0						
X	0					
Х	Х	0				
Х	0	0	0			
0	0	Х	Х	0		
Х	Х	0	Х	0		
Х	Х	0	0	0		
Х	Х	Х	0	0		
Х	0	Х	Х	Х		

 $check Diag Win (Board Position, \, char) - [test_check Diag Win_Player X_Valid Win_pos 4_0] \\$

Input:	Boar	dPosi	tion(4	, 0), 'X	('	Output: True
State:						State: Board remains unchanged
				Х	Х	
			х	0	Х	
		Х	0	0	Х	
	Х	Х	0	0	0	

 $check Diag Win (Board Position, \, char) - [test_check Diag Win_Player O_Valid Diag Win_pos 1_1]$

Input		dPosi	tion(1	,1) 'O'			Output: True State: Board remains unchanged
0							
0	0						
Х	х	0					
Х	Х	Х	0				
0	0	Х	Х	0			
Х	Х	Х	0	0	0		
0	Х	0	Х	Х	0		
0	Х	0	0	Х	Х	0	
0	0	Х	0	0	0	0	

$check Diag Win (Board Position, \, char) - [test_check Diag Win_Player X_Boundary Win_pos 4_6]$

Input: Boa	ardPos	ition(4	·, 6), ''	X'		Output: True
State:						State: Board remains unchanged
					Х	
				Х	0	
			Х	0	Х	
		Х	0	0	Х	
	Х	0	0	Х	Х	
	0	Х	0	Х	0	
	Х	Х	0	X	0	
	0	0	Х	Х	х	
	Х	Х	0	0	Х	
	-					

 $check Diag Win (Board Position, \, char) - [test_check Diag Win_Player O_boundary Win_pos 8_0] \\$

Input	: Boar	dPosi	tion(8,	, 0), 'C)'	Output: True
State	:					State: Board remains unchanged

				0	
			0	Х	
		0	Х	0	
	0	0	0	Х	
0	0	0	0	Х	

checkDiagWin(BoardPosition, char) [test_checkDiagWin_PlayerX_NoWin_ScatteredTokens_pos3_3]

Input: BoardPosition(3, 3), 'X'

State:

Х						
0	0	Х	Х			
0	0	0	Х			
0	Х	Х	Х			
Х	Х	0	0	Х		
0	Х	0	0	0		
0	0	Х	0	Х	Х	
-	•		•	•		

Output: False

State: Board remains unchanged

checkTie(void) - [test_checkTie_empty_false]

Input	: N/A						Output: False
State	:						State: Board remains unchanged
check ⁻	Tie(vo	id) – [1	test_c	heckT	ie_ful	I_true]	
Input	: N/A						Output: True
State	:						State: Board remains unchanged
Х	0	Х	0	Х	0	Х	
Х	0	Х	0	Х	0	Х	
0	Х	0	Х	0	Х	0	
Х	0	Х	Х	Х	0	Х	
0	0	0	0	Х	0	Х	
0	Х	0	Х	Х	0	Х	
Х	0	Х	0	0	Х	0	
0	0	Х	0	0	Х	0	
X	0	0	Х	Х	Х	Х	

$checkTie(void) - [test_checkTie_halfFull_false]$

Input: N/A

State:

Х	0	0	0	Х	Χ	0	
0	Х	Х	Х	0	Х	0	
0	Х	Х	0	Х	0	0	
Х	0	Х	0	0	Х	Х	
check ⁻ Input		id) – [i	test_c	heckT	īe_Pl	Win_false] Output: False	
State	:						State: Board remains the same

Output: False

Board remains unchanged

State:

	X	X	X	X	Х	
Ľ						

 $whatsAtPos(BoardPosition) - [Test_whatsAtPos_markerX_pos8_2]$

Input: BoardPosition(8, 2)	Output: 'X'
State:	State: Board is unchanged
x	

whatsAtPos(BoardPosition) – [test_whatsAtPos_empty_pos4_1]

Input:	Boar	dPosit	tion(4,	1)		Output: ' '	
State:						State: Board is unchanged	

L										

 $whats At Pos(Board Position) - [Test_whats At Pos_marker O_pos 3_4]$

Input: BoardPosition(3, 4)	Output: 'O'
State:	State: Board is unchanged
0	
X	
0	

 $whats At Pos(Board Position) - [Test_whats At Pos_marker O_pos 8_6]$

Input	: Boar	dPosi	tion(8	,6)			Output: 'O'		
State	:						State: Board is unchanged		
						0			
whats.	AtPos	(Board	dPosit	ion) –	[Test	whats	sAtPos_markerO_pos0_0]		
						_			
Input	: Boar	dPosi	tion(0	,0)			Output: 'X'		
State	:						State: Board is unchanged		
Х							Board to arronaliged		
0									
Х									
0									
Х									
0									
Х									
0									
Х									
1									

$is Player At Pos (Board Position, \, char) - [Test_is Player At Pos_player O_pos 8_0] \\$

Output: False

State:

Board remains unchanged

Input: BoardPosition(8,0), 'O'

State:

Х				0								
							'					
sPlaye	PlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerX_pos1_2]]											
Input: State:		dPosit	ion(1,	2), 'X'	,	Output: True						
otate.					1	1	State:					
							Board remains unchanged					
		Х										
		0										
		Х										
		0										
		Х			0							
		0			Χ	0						

	Х		Х	0
	0		X	0

isPlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerX_pos0_0]

Input:		dPosi	tion(0,	,0), 'X	,	Output: False State:	
0							Board remains unchanged
0							
Х							
0							
Х							
0							
Х							
0							
Х							
	•		•	•	•		

isPlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerO_pos8_6]

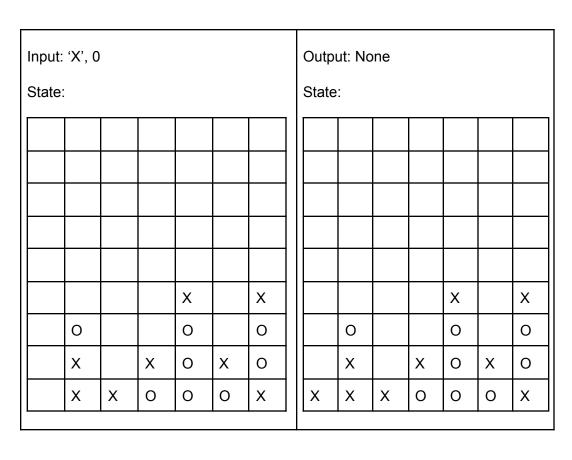
Input:	dPosit	tion(8,	,6), 'O	,	Output: False State:	
						Board remains unchanged

			Х

isPlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerX_pos2_3]

Input: Boardi	Posit	ion(2,	3), 'X'	,	Output: False State: Board remains unchanged	
]	X					
(0					
	0					
	X					
	0	Х				

 $dropToken(char,\,int) - [Test_dropToken_playerX_column0_regular]$



 $dropToken(char,\,int) - [Test_dropToken_playerO_column6_filled]$

	Input: 'O', 6 State:							Output: None State:						
0	X	0	0	Х	0			0	Х	0	0	Х	0	0
Х	Х	0	Х	Х	Х	Х		Х	Х	0	Х	Х	х	Х
0	0	Х	0	0	Х	0		0	0	Х	0	0	Х	0
0	Х	0	0	Х	0	0		0	Х	0	0	Х	0	0
Х	Х	0	Х	Х	0	Х		Х	Х	0	Х	Х	0	Х
0	0	Х	0	0	Х	0		0	0	Х	0	0	х	0
Х	0	0	Х	Х	0	0		Х	0	0	Х	Х	0	0
Х	Х	0	0	0	0	Х		Х	Х	0	0	0	0	Х
0	0	Х	0	0	Х	0		0	0	Х	0	0	Х	0

 $dropToken(char,\,int) - [Test_dropToken_playerX_column3_empty]$

Input: 'X', 3 State:	Output: None State:						
	X						

 $dropToken(char,\,int) - [Test_dropToken_playerO_column4_Vwin]$

Input: 'O', 4		Output: None													
State:	State:								State:						
										0					
		0								0					
		0								0					

			0		Х				0		Х
X	Х		0	X	Х	Х	X		0	Х	Х

dropToken(char, int) – [Test_dropToken_playerX_column3_Hwin]

Input	Input: 'X', 3						Output: None							
State	e:						State:							
					<u> </u>				<u> </u>	_				
					<u> </u>				<u> </u>	<u> </u>				
						0							0	
Х					Х	0	Х					X	0	
X	X	Х		X	X	Х	Х	Х	X	X	Х	x	Х	

What tests did each team member write? Just tell me the names of the functions (unless for some reason multiple team members wrote functions for the same method. In that case, tell me which tests specifically by giving me the test names)

[member 1] Cooper Taylor	Wrote all GameBoard, checkIfFree, checkHorizontalWin, and test_checkVertWin_PlayerO_Win_pos3_3
[member 2] Michael Ellis	Wrote three checkVertWin test cases and wrote all seven checkDiagWin test cases.
[member 3] Ryan Chen	Wrote all test cases for checkTie and whatsAtPos
[member 4] - Adam Niemczura	Wrote all the test cases for dropToken and isPlayerAtPos