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

State grid (left, checkIfFree):

O						
X						
X						

O	X	O	O	X		

checkIfFree(int) – [Test_checkIfFree_col0_notFree]

Input: 0

State:

X						
O						
X						
O						
X						
O						
X						
O		O				
X	O	X	X			

Output: False

State:

Board remains unchanged

checkIfFree(int) – [Test_checkIfFree_col6_free]

Input: 6

State:

						O

Output: True

State:

Board remains unchanged

					O
				X	O
	O	X	O	X	O

checkIfFree(int) – [Test_checkIfFree_col6_notFree]

Input: 6	Output: False
State:	State: Board remain unchanged

						O
						X
						O
						X
					X	X
					O	O
					O	X
				X	X	O
X	O	X	X	X	O	O

checkIfFree(int) – [Test_checkIfFree_empty_col3_free]

Input: 3	Output: True
State:	State: Board remains unchanged

checkHorizontalWin(BoardPosition, char) – [Test_checkHorizontalWin_playerO_NoWin_pos8_0]

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

State:

Output: False

State:

Board remains unchanged

checkHorizontalWin(BoardPosition, char) – [Test_checkHorizontalWin_playerX_Win_pos8_6]

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

State:

O	O	X	O	O	O	
X	O	X	X	X	X	X

Output: True

State:

Board remains unchanged

checkHorizontalWin(BoardPosition, char) – [Test_checkHorizontalWin_playerO_Win_pos5_6]

Input: BoardPosition(5,6), 'O'

State:

		O	O	O	O	O
	X	X	O	O	X	O
X	X	O	X	X	X	X

Output: True

State:

Board remains unchanged

X	X	O	X	O	O	O

checkHorizontalWin(BoardPosition, char) – [Test_checkHorizontalWin_playerX_NoWin_pos4_6]
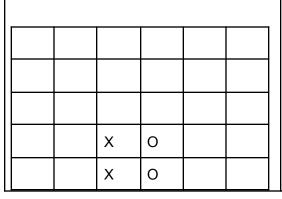
Input: BoardPosition(4,6), 'X'	Output: False
State:	State:
	Board remains unchanged

Input State:

						X
					X	O
				X	O	O
			X	O	X	O
		X	O	X	X	X

checkVertWin(BoardPosition, char) – [test_checkVertWin_PlayerO_Win_pos3_3]

Input: BoardPosition(3,3), "O"	Output: True
State:	State:
	Board remains unchanged

Input State:

		X	O		
		X	O		

		X	O		
		X	O		
		O	O	O	
		X	X	X	X

checkVertWin(BoardPosition, char) – [test_checkVertWin_PlayerX_Win_pos4_2]

Input: BoardPosition(4, 2), 'X' State:	Output: True State: Board remains unchanged

		X				
		X				
		X				
		X				
		X				
		O				
		O				
		O				

		O			O	

checkVertWin(BoardPosition, char) – [test_checkVertWin_PlayerO_NoWin_pos3_1]

Input: BoardPosition(3, 1), 'O'	Output: False
State:	State: Board remains unchanged

O						
O						
X						
X						
X						
O						
O						

checkVertWin(BoardPosition, char) – [test_checkVertWin_PlayerX_NoWin_Interrupted_pos5_0]

Input:BoardPosition(5, 0), 'X'	Output: False
State:	State: Board remains unchanged

X						
X						
X						
O						
X						

X						
X						
O						
O						

checkDiagWin(BoardPosition, char) – [test_checkDiagWin_PlayerX_DiagWin_pos2_2]

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

State:

X						
O	X					
O	X	X				
O	X	X	X			
O	O	O	O	X		
X	X	O	O	O		
X	O	X	X	X		
X	X	O	X	O		
O	X	O	X	O		

Output: True

State: Board remains unchanged

checkDiagWin(BoardPosition, char) – [test_checkDiagWin_PlayerO_Win_Boundary_pos0_0]

Input: BoardPosition(0, 0), 'O' State:	Output: True State: Board remains unchanged

O						
X	O					
X	X	O				
X	O	O	O			
O	O	X	X	O		
X	X	O	X	O		
X	X	O	O	O		
X	X	X	O	O		
X	O	X	X	X		

checkDiagWin(BoardPosition, char) – [test_checkDiagWin_PlayerX_ValidWin_pos4_0]

Input: BoardPosition(4, 0), 'X' State:	Output: True State: Board remains unchanged

				X	X	
			X	O	X	
		X	O	O	X	
	X	X	O	O	O	

X	X	O	X	O	O	
X	X	O	O	X	X	
X	X	O	O	O	O	
O	X	X	O	X	X	
O	O	X	X	O	O	

checkDiagWin(BoardPosition, char) – [test_checkDiagWin_PlayerO_ValidDiagWin_pos1_1]

Input: BoardPosition(1,1) 'O'

State:

O						
O	O					
X	X	O				
X	X	X	O			
O	O	X	X	O		
X	X	X	O	O	O	
O	X	O	X	X	O	
O	X	O	O	X	X	O
O	O	X	O	O	O	O

Output: True

State: Board remains unchanged

checkDiagWin(BoardPosition, char) – [test_checkDiagWin_PlayerX_BoundaryWin_pos4_6]

Input: BoardPosition(4, 6), 'X'	Output: True
State:	State: Board remains unchanged

						X
					X	O
				X	O	X
			X	O	O	X
		X	O	O	X	X
		O	X	O	X	O
		X	X	O	X	O
		O	O	X	X	x
		X	X	O	O	X

checkDiagWin(BoardPosition, char) – [test_checkDiagWin_PlayerO_boundaryWin_pos8_0]

Input: BoardPosition(8, 0), 'O'	Output: True
State:	State: Board remains unchanged

				O		
			O	X		
		O	X	O		
	O	O	O	X		
O	O	O	O	X		

checkDiagWin(BoardPosition, char) –
[test_checkDiagWin_PlayerX_NoWin_ScatteredTokens_pos3_3]

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

State:

X						
O	O	X	X			
O	O	O	X			
O	X	X	X			
X	X	O	O	X		
O	X	O	O	O		
O	O	X	O	X	X	

Output: False

State: Board remains unchanged

checkTie(void) – [test_checkTie_empty_false]

Input: N/A	Output: False
State:	State: Board remains unchanged

checkTie(void) – [test_checkTie_full_true]

Input: N/A	Output: True
State:	State: Board remains unchanged

X	O	X	O	X	O	X
X	O	X	O	X	O	X
O	X	O	X	O	X	O
X	O	X	X	X	O	X
O	O	O	O	X	O	X
O	X	O	X	X	O	X
X	O	X	O	O	X	O
O	O	X	O	O	X	O
X	O	O	X	X	X	X

checkTie(void) – [test_checkTie_halfFull_false]

Input: N/A	Output: False
State:	State: Board remains unchanged

X	O	O	O	X	X	O
O	X	X	X	O	X	O
O	X	X	O	X	O	O
X	O	X	O	O	X	X

checkTie(void) – [test_checkTie_PlayerXWin_false]

Input: N/A	Output: False
State:	State: Board remains the same

	X	X	X	X	X	

whatsAtPos(BoardPosition) – [Test_whatsAtPos_markerX_pos8_2]

Input: BoardPosition(8, 2)

State:

	X					

Output: 'X'

State:

Board is unchanged

whatsAtPos(BoardPosition) – [test_whatsAtPos_empty_pos4_1]

Input: BoardPosition(4, 1)

State:

Output: ' '

State:
Board is unchanged

whatsAtPos(BoardPosition) – [Test_whatsAtPos_markerO_pos3_4]

Input: BoardPosition(3, 4)

State:

Output: 'O'

State:
Board is unchanged

whatsAtPos(BoardPosition) – [Test_whatsAtPos_markerO_pos8_6]

Input: BoardPosition(8,6)

State:

					O	

Output: 'O'

State:
Board is unchanged

whatsAtPos(BoardPosition) – [Test_whatsAtPos_markerO_pos0_0]

Input: BoardPosition(0,0)

State:

X						
O						
X						
O						
X						
O						
X						
O						
X						

Output: 'X'

State:
Board is unchanged

isPlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerO_pos8_0]

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

State:

X				O		

Output:
False

State:
Board remains unchanged

isPlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerX_pos1_2]]

Input: BoardPosition(1,2), 'X'

State:

		X				
		O				
		X				
		O				
		X			O	
		O			X	O

Output:
True

State:
Board remains unchanged

		X			X	O
		O			X	O

isPlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerX_pos0_0]

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

State:

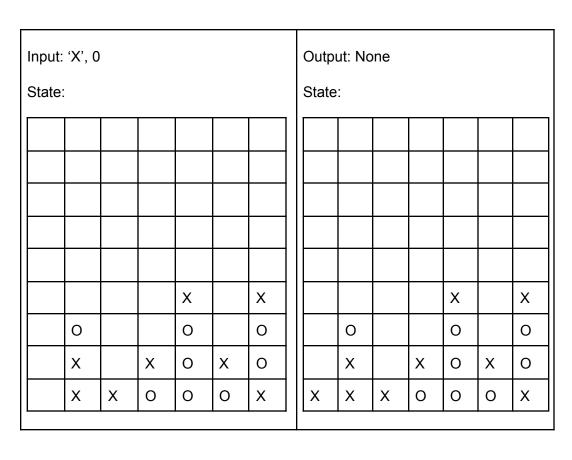| O						
O						
X						
O						
X						
O						
X						
O						
X						

Output:
False

State:
Board remains unchanged

isPlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerO_pos8_6]

Input: BoardPosition(8,6), 'O'

State:

Output:
False

State:
Board remains unchanged

					X	

isPlayerAtPos(BoardPosition, char) – [Test_isPlayerAtPos_playerX_pos2_3]

Input: BoardPosition(2,3), 'X'

State:

		X				
		O				
		O				
		X				
		O	X			

Output:
False

State:
Board remains unchanged

dropToken(char, int) – [Test_dropToken_playerX_column0_regular]

dropToken(char, int) – [Test_dropToken_playerO_column6_filled]

Input: 'X', 0

State:

				X		X
	O			O		O
	X		X	O	X	O
	X	X	O	O	O	X

Output: None

State:

				X		X
	O			O		O
	X		X	O	X	O
X	X	X	O	O	O	X

dropToken(char, int) – [Test_dropToken_playerO_column6_filled]

Input: 'O', 6

State:

O	X	O	O	X	O	
X	X	O	X	X	X	X
O	O	X	O	O	X	O
O	X	O	O	X	O	O
X	X	O	X	X	O	X
O	O	X	O	O	X	O
X	O	O	X	X	O	O
X	X	O	O	O	O	X
O	O	X	O	O	X	O

Output: None

State:

O	X	O	O	X	O	O
X	X	O	X	X	X	X
O	O	X	O	O	X	O
O	X	O	O	X	O	O
X	X	O	X	X	O	X
O	O	X	O	O	X	O
X	O	O	X	X	O	O
X	X	O	O	O	O	X
O	O	X	O	O	X	O

dropToken(char, int) – [Test_dropToken_playerX_column3_empty]

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

State (input grid): empty 7-wide grid with 9 rows, all empty.

State (output grid): 7-wide grid with 9 rows; bottom row has an X in column 3.

dropToken(char, int) – [Test_dropToken_playerO_column4_Vwin]

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

State (input grid): 7-wide grid with 7 rows; column 4 has O in the two bottom rows.

State (output grid): 7-wide grid with 7 rows; column 4 has O in the three bottom rows.

				O		X
X	X			O	X	X

				O		X
X	X			O	X	X

dropToken(char, int) – [Test_dropToken_playerX_column3_Hwin]

Input: 'X', 3

State:

					O
X					X	O
X	X	X		X	X	X

Output: None

State:

					O
X					X	O
X	X	X	X	X	X	X

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