

18/8/25

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AT Lab - Week - 01

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

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

win

win

win

win

X	X	O
O	O	X
X	O	X

Draw

X	O
O	X
X	X

Draw

Algorithm

- Step 1 : Start the game  
 Step 2 : initialize 3x3 board  
 Step 3 : Check for possibilities where  
 u can put x & set current  
 player = 'x'



- Step 4: loop until win or draw  
 Step 5: If move is valid, update board  
 Step 6: switch the player 1 & player 2 in each game  
 Step 7: check, if it is win end the game  
 Step 8: check, if it is draw end the game  
 Step 9: stop the game

output:


Player x's turn

Enter row (0, 1, or 2) : 0

Enter column (0, 1, or 2) : 0

X		

Player's O's turn

Enter row (0, 1, or 2) : 1

Enter column (0, 1, or 2) : 0

X		
O		



Player x's turn

Enter row (0, 1 or 2): 1

Enter column (0, 1 or 2): 0

X		
O	X	

Player's o's turn

Enter row (0, 1 or 2): 1

Enter column (0, 1 or 2): 2

X		
O	X	O

Player x's turn

Enter row (0, 1 or 2): 2

Enter column (0, 1 or 2): 0

X		
O	X	O
X		

Player x wins

\* The game ended on the 5<sup>th</sup> move

\* Winner : Player x

\* Each move in the Tic-Tac-Toe has a cost of 1

\* cost = 5

\* because the game ended on the 5<sup>th</sup> move.

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|  | 
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|  | 
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```

Player X's turn.

Enter row (0, 1, or 2): 0

Enter column (0, 1, or 2): 0

```

X |  | 
-----
|  | 
-----
|  | 
-----

```

Player O's turn.

Enter row (0, 1, or 2): 1

Enter column (0, 1, or 2): 0

```

X |  | 
-----
O |  | 
-----
|  | 
-----

```

Player X's turn.

Enter row (0, 1, or 2): 1

Enter column (0, 1, or 2): 1

```

X |  | 
-----
O | X | 
-----
|  | 
-----

```

Player O's turn.

Enter row (0, 1, or 2): 1

Enter column (0, 1, or 2): 2

```

X |  | 
-----
O | X | O
-----
|  | 
-----

```

Player X's turn.

Enter row (0, 1, or 2): 2

Enter column (0, 1, or 2): 2

```

X |  | 
-----
O | X | O
-----
|  | X
-----

```

Player X wins!

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