

Python Programming

Tic-Tac-Toe Game

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Application: NxN tic-tac-toe

- In this challenge, you will implement tic-tac-toe game
- However, the board can be an integer $N \geq 3$
 - Same rules applied. Just bigger
- Read integer N for the dimension of tic-tac-toe.
- Then run a game of 2 users who keep playing till one of them **wins or tie**.
 - Assume user input is integer. Verify the cell location.
 - Make sure to test scenarios for row, col, left diagonal and right diagonal winning + tie
- Follow the next printing style
- Tip: Don't write many ugly loops to verify the board
 - Use direction array thoughts to write short elegant code
 - Hard for you? Code it anyway

```
Enter grid size: 3
Player X, make a move: 5 5
Invalid location. Try again
Player X, make a move: 1 3
| |X
| |
| |
Player O, make a move: 1 3
Invalid location. Try again
Player O, make a move: 1 1
O| |X
| |
| |
```

```
Player X, make a move: 2 2
O| |X
|X|
| |
Player O, make a move: 3 3
O| |X
|X|
| |O
Player X, make a move: 3 1
O| |X
|X|
X| |O
Play X won!
```

Enter grid size: 5

Player X, make a move: 3 3

| | | | | | | | | |
|---|--|---|---|---|--|---|--|---|
| . | | . | | . | | . | | . |
| . | | . | | . | | . | | . |
| . | | . | X | . | | . | | . |
| . | | . | | . | | . | | . |
| . | | . | | . | | . | | . |

Player O, make a move: 5 5

| | | | | | | | | |
|---|--|---|---|---|--|---|--|---|
| . | | . | | . | | . | | . |
| . | | . | | . | | . | | . |
| . | | . | X | . | | . | | . |
| . | | . | | . | | . | | . |
| . | | . | | . | | . | | 0 |

Player X, make a move: 1 4

| | | | | | | | | |
|---|--|---|--|---|--|---|--|---|
| . | | . | | X | | . | | . |
| . | | . | | | | . | | . |
| . | | X | | . | | . | | . |
| . | | | | | | . | | . |
| . | | | | | | . | | 0 |

Player O, make a move:

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”