## Tic Tac Toe vs Al

Welcome to a Tic Tac Toe fight vs artificial intelligence. This program lets you compete with an unbeatable AI, always letting you start first and giving you the advantage (it won't help!).

## How to use:

- Open program in a python IDE
- Run the program
- Follow the instructions given to you in console
- Continue until the game ends ( a maximum of 9 possible moves encompassing both the Al and user )

## Sample Game where Al Wins

```
Welcome to tic tac toe!
You are 'X' and the AI is 'O'.
00 | 01 | 02
10 | 11 | 12
20 | 21 | 22
Enter your move (row (horizontal) and column (vertical), like '1 1' for the middle):
- | - | -
- | - | -
- | - | -
Your turn: 11
- | - | -
- | X | -
- | - | -
Al's turn:
0|-|-
- | X | -
- | - | -
Your turn: 0 1
0 | X | -
- | X | -
```

```
- | - | -
Al's turn:
0 | X | -
-|X|-
-|0|-
Your turn: 0 2
O|X|X
- | X | -
- | O | -
Al's turn:
O|X|X
- | X | -
0|0|-
Your turn: 2 2
O|X|X
- | X | -
οιοιχ
Al's turn:
O|X|X
O | X | -
0|0|X
Al wins!:)
```

## Sample game where AI forces draw

```
Your turn: 1 1
- | - | -
- | X | -
- | - | -
Al's turn:
O|-|-
-|X|-
-|-|-
Your turn: 20
0 | - | -
- | X | -
X | - | -
Al's turn:
0|-|0
-|X|-
X | - | -
Your turn: 0 1
0 | X | 0
- | X | -
X | - | -
Al's turn:
0|X|0
- | X | -
X | O | -
Your turn: 2 2
0 | X | 0
- | X | -
ΧΙΟΙΧ
Al's turn:
0|X|0
0|X|-
X \mid O \mid X
Your turn: 0 2
This position is already taken. try again.
Your turn: 1 2
0|X|0
0|X|X
X|0|X
It's a tie!
```

Credits for help with making the minimax algorithm: Chapter 5 Adversarial Games slides by Professor von Briesen, and <u>GeeksForGeeks</u>