FinishedWorkingVersion_2

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1 Finished Working Version 2

1.1 How to Play

There are two players for the game.

The goal of the game is to get three noughts or crosses aligned within a 3x3 grid.

This can occur horizontally, vertically or diagonally.

If there no noughts or crosses aligned, the players have drawed and the game starts again.

```
In [ ]: Player_1 = 'X'
        Player_2 = 'O'

        def clear_board():
            board = [" "," "," "," "," "," "," "," "," "," "," "] # Creates empty spaces for the boa
            return board

        Continue = "Yes"

        def print_board(board): # Prints the board in a grid format
            print('  {}  | {} |  {}  '.format(board[1],board[2],board[3]))
            print('---------------')
            print('  {}  | {} |  {}  '.format(board[4],board[5],board[6]))
            print('---------------')
            print('  {}  | {} |  {}  '.format(board[7],board[8],board[9]))

        def winner(char,board):
            if (board[1] == board[2] == board[3] == char or
              board[4] == board[5] == board[6] == char or
              board[7] == board[8] == board[9] == char or # Checks horizontal wins

              board[1] == board[4] == board[7] == char or
              board[2] == board[5] == board[8] == char or
              board[3] == board[6] == board[9] == char or # Check vertical wins
```

```
            board[1] == board[5] == board[9] == char or # Check diagonal wins
            board[3] == board[5] == board[9] == char):
                return True
            else:
                return False

            if (board[1]!=" " and board[2]!=" " and board[3]!=" " and board[4] !=" " and board[5
                return True
            else:
                return False

            pass

        def player_win(Player_1,Player_2,board): # Check if one of the players have consecutive
            if winner(Player_1,board):                # Prints out which player wins
                print("Player 1 wins!!!")
            elif winner(Player_2,board):
                print("Player 2 wins!!!")
                return True
            else:
                return False

        def Game():

            global board
            board = clear_board() # Create a clear board
            print("---------- START -----------")
            while not player_win(Player_1,Player_2,board): # if there is no winner the game will
                print("Player One:")
                placement = int(input("Select a position"))
                board[placement] = Player_1
                print_board(board)
                player_win(Player_1,Player_2,board)
                print("Player Two:")
                placement = int(input("Select a position"))
                board[placement] = Player_2
                print_board(board)
                player_win(Player_1,Player_2,board)

        Game()
```

```
---------- START -----------
Player One:
Select a position5
     |   |
---------------
     | X |
---------------
```

```
     |   |
Player Two:
Select a position3
     |   |  O
---------------
     | X |
---------------
     |   |
Player One:
Select a position1
  X  |   |  O
---------------
     | X |
---------------
     |   |
Player Two:
Select a position7
  X  |   |  O
---------------
     | X |
---------------
  O  |   |
Player One:
Select a position9
  X  |   |  O
---------------
     | X |
---------------
  O  |   |  X
Player 1 wins!!!
Player Two:
```