Version_two

February 18, 2018

1 Tic Tac Toe - 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.

1.1.1 Guidance Code

```
In [ ]: # Winning Combonations winner_is_2 = [[2, 2, 0], [2, 1, 0], [2, 1, 1]] winner_is_1 = [[1
        winner_is_also_1 = [[0, 1, 0], [2, 1, 0], [2, 1, 1]]

        no_winner = [[1, 2, 0], [2, 1, 0], [2, 1, 2]]

        also_no_winner = [[1, 2, 0], [2, 1, 0], [2, 1, 0]]

        print(checkGrid(also_no_winner))
```

```
In [3]: def horizontal(n): # to print the horizontal lines of the board
            for horiz in range (3):
                print (" ---",end="")

        def vertical(n):# to print the vertical lines of the board
            for vert in range (3):
                print ("|   ", end=" ")
            print ("|", end="")

        def drawBoard(n):# to make compile the two function to create the board
            for board in range(n):
                horizontal(n)
                print("")
                vertical(n)
```

```
                print("")
            horizontal(n)

        drawBoard(3)

        board = [[" "," "," "],[" "," "," "],[" "," "," "]] #board co-ordinates placeholde for t
```

```
 --- --- ---
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 --- --- ---
|   |   |   |
 --- --- ---
|   |   |   |
 --- --- ---
```

```
In [1]: board = [[" "," "," "],[" "," "," "],[" "," "," "]]
        def drawBoard(board):
            for i in range(3):
                print(" |  ".join (str(x) for x in board[i]))
                if i<2:
                    print("----------")


        drawBoard(board)
```

```
  |    |
----------
  |    |
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  |    |
```

2 My Code = Runtime Error

```
In [3]: def drawboard(board):
            print ("\n")
            for i in range(3):
                print ("  |  ".join(str(x) for x in board[i]))
                if i<2:
                    print("-------------")


        def Winner(board):

            for i in range(3):
                horizontal = set(board[i])
                if len(horizontal)==1 and board[i][2]!=0:
                    return board[i][2]
```

```
for j in range(3):
    vertical = set([board[0][j], board[1][j], board[2][j]])
    if len(vertical)==1 and board[1][j]!=0:
        return vertical[1][j]

diag1 = set([board[0][0], board[1][1], board[2][2]])
diag2 = set([board[0][2], board[1][1], board[2][0]])
if len(diag1)==1 or len(diag2)==1 and board[1][1]!=0:
    return board[1][1]

Continue='yes'
count_x=0
count_o=0

while Continue!='no':
    board=[[" "," "," "], [" "," "," "], [" "," "," "]]

    drawboard(board)

    count = 0
    chance = True

    while chance:
        spot = input("Enter the row,column in same format as given: ")

        spot = spot.split(",")

        horizontal = int(spot[0]) -1
        vertical = int(spot[1]) -1


        if count%2==0:
            print ("\nPlayer 1 chance!")
            if board[horizontal][vertical]==" ":
                board[horizontal][vertical] = 'X'
            else:
                print ("Already Filled. Try Again!")
                count-=1
            drawboard(board)


        else:
            print ("\nPlayer 2 chance!")
            if board[horizontal][vertical]==" ":
                board[horizontal][vertical]='O'
            else:
                print ("Already Filled. Try Again!")
```

```
                count-=1
            drawboard(board)

        count+=1


        if " " in board[0] or " " in board[1] or " " in board[2]:
            chance = True
        else:
            chance = False
            print ("Chances Over!")


        if Winner(board)=='X':
            print ("Winner is ",Winner(board))
            count_x+=1
            break
        elif Winner(board)=='O':
            print ("Winner is ",Winner(board))
            count_o+=1
            break
        else:
            print ("No winner yet! Carry on.")



    Continue=input("Do you want to play again (y/n): ")

print ("Thank you for playing!")
```