FinshedWorkingVersion

February 18, 2018

1 Tic Tac Toe

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


        drawBoard(board)
```

2 My Code

3 Finished Working Version 3

3.1 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 [ ]: def drawboard(board):
            print ("\n")
            for i in range(3):
                print (" |  ".join(str(x) for x in board[i])) # to place the characters within
                if i<2:
                    print("-------------") # to create the tic tac toe template


        def Winner(board):
```

```python
    for i in range(3):
        horizontal = set(board[i])
        if len(horizontal)==1 and board[i][2]!=0:
            return board[i][2] # to check if there is three in a row

    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] # to check if there is three in a column

    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] # to check if there is three in a diagonal

    return "No One"


if __name__=="__main__":

    Continue='yes' # to allow the player to stop or contiue the game
    count_x=0
    count_o=0

    while Continue!='no':
        board=[[" "," "," "], [" "," "," "], [" "," "," "]] #the empty spaces within the

        drawboard(board)

        count = 0
        chance = True

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

            spot = spot.split(",") # to split the string into to separate for the rows a

            horizontal = int(spot[0]) -1 # Converted into a integer for the character to
            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
```

2

```python
            drawboard(board)
            # Gives the player 1 two tries before it switches to player 2


        else:
            print ("\nPlayer 2 chance!")
            if board[horizontal][vertical]==" ":
                board[horizontal][vertical]='O'
            else:
                print ("Already Filled. Try Again!")
                count-=1
            drawboard(board)
             # Gives the player 2, two tries before it switches to player 1

        count+=1


        if " " in board[0] or " " in board[1] or " " in board[2]:
            chance = True
        else:
            chance = False
            print ("Chances Over!")
            # Check if it is a tie when the spaces are filled


        if Winner(board)=='X':
            print ("Winner is ",Winner(board))
            count_x+=1 # Checks how many rounds the player has won
            break
        elif Winner(board)=='O':
            print ("Winner is ",Winner(board)) # Displays the winner
            count_o+=1
            break
        else:
            print ("No winner yet! Carry on.")
            # There is not a winner yet the game continues


    Continue=input("Do you want to play again (y/n): ") # PLayer can stop or continu

print ("Thank you for playing!")
print ("Score is... \nPlayer 1: %s \nPlayer 2: %s"%(count_x, count_o)) # Allows play
```