

# Version\_two

February 18, 2018

## 1 Tic Tac Toe - Version 2

### 1.0.1 Guidance Code

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

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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(",") #gives strings

        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!")
```