



Q-1. Write a program to implement Tic Tac Toe game.

```
theBoard = {'7': ' ', '8': ' ', '9': ' ',  
            '4': ' ', '5': ' ', '6': ' ',  
            '1': ' ', '2': ' ', '3': ' '}
```

```
board_keys = []
```

```
for key in theBoard:  
    board_keys.append(key)
```

```
def printBoard(board):  
    print(board['7'] + ' | ' + board['8'] +  
          ' | ' + board['9'] +  
          ' | ' + board['4'] + ' | ' + board['5'] +  
          ' | ' + board['6'] +  
          ' | ' + board['1'] + ' | ' + board['2'] +  
          ' | ' + board['3'])
```

```
def game():
```

```
    turn = 'X'  
    count = 0
```

```
    for i in range(10):
```

```
        printBoard(theBoard)
```

```
        print("It's your turn," + turn +  
              "Move to which place?")
```




```
move = input()
```

```
if theBoard[move] == ' ' ;  
    theBoard[move] = turn  
    count += 1
```

```
else :
```

```
    print("That place is already filled.  
          In Move to which place?")  
    continue
```

```
if count >= 5 :
```

```
    if theBoard['7'] == theBoard['8']  
        == theBoard['9'] != ' ' :
```

```
        printBoard(theBoard)  
        print("In Game Over\n")  
        print("****" + turn + " won. ****")  
        break
```

```
elif theBoard['4'] == theBoard['5'] == theBoard['6'] != ' ' :
```

```
    printBoard(theBoard)  
    print("In Game Over\n")  
    print("****" + turn + " won. ****")
```

```
elif theBoard
```

```
elif theBoard['1'] == theBoard['2'] == theBoard['3'] != ' ' :
```

```
    printBoard(theBoard)  
    print("In Game Over\n")  
    print("****" + turn + " won. ****")  
    break
```




```
elif theBoard['1'] == theBoard['4'] == theBoard['7'] != ' ':  
    printBoard(theBoard)  
    print("In Game Over\n")  
    print("****" + turn + " won. ****")  
    break
```

```
elif theBoard['2'] == theBoard['5'] == theBoard['8'] != ' ':  
    printBoard(theBoard)  
    print("In Game Over\n")  
    print("****" + turn + " won ****")  
    break
```

```
elif theBoard['3'] == theBoard['6'] == theBoard['9'] != ' ':  
    printBoard(theBoard)  
    print("In Game Over\n")  
    print("****" + turn + " won. ****")  
    break
```

```
elif theBoard['7'] == theBoard['5'] == theBoard['3'] != ' ':  
    printBoard(theBoard)  
    print("In Game Over\n")  
    print("****" + turn + " won. ****")  
    break
```

```
elif theBoard['1'] == theBoard['5'] == theBoard['9'] != ' ':  
    printBoard(theBoard)  
    print("In Game Over\n")  
    print("****" + turn + " won. ****")  
    break.
```




```
if count == 9:  
    print C"\n Game Over \n")  
    print C"It's a Tie!!")
```

```
if turn == 'X':  
    turn = 'O'  
else:  
    turn = 'X'
```

```
restart = input C"Do you want to play Again?(y/n)")  
if restart == "y" or restart == "Y":  
    for key in board_keys:  
        theBoard[key] = ""
```

```
game()
```

```
if __name__ == "__main__":  
    game()
```