# method to print the tic tac toe board  
def printB():  
 #variables  
 global player  
 global moves  
 global spots  
 global won  
 global board  
 #print the board  
 for i in range(4):  
 for j in range(4):  
 print(board[i][j], end=' ')  
 print()#spacing  
 print()#spacing  
  
  
# method for checking to see if there is a winner  
def iswon():  
 global player  
 global moves  
 global spots  
 global won  
 global board  
 # possible winning combinations  
 if ((board[1][1] == board[1][2] == board[1][3] == player) | (  
 board[1][1] == board[2][1] == board[3][1] == player) | (  
 board[1][1] == board[2][  
 2] == board[3][3] == player) | (board[3][3] == board[3][2] == board[3][1] == player) | (  
 board[3][3] == board[2][3] == board[1][3] == player) |  
 (board[3][1] == board[2][2] == board[1][3] == player) | (  
 board[2][1] == board[2][2] == board[2][3] == player) | (board[1][2] ==  
 board[2][2] ==  
 board[3][2] == player)):  
 print('THE WINNER IS PLAYER ', player, '!') # Print the winner and change the boolean  
 won = True  
 return  
 else:  
 if moves >= 9: # a tie game  
 won = True  
 print('THE GAME IS A TIE')  
 return  
 return#not needed, but paranoid  
  
  
def turn():  
 global player  
 global moves  
 global spots  
 global won  
 global board  
 # get input from user  
 spot = input('Pick a position [row][col] (11,12,22): ')  
 # check to see if the spot is available  
 if spots.\_\_contains\_\_(spot) == False:  
 # no: print invalid and return  
 print('Invalid Location')  
 return  
 else:  
 # valid location, remove it from the list  
 spots.remove(spot)  
 # check to see which spot was given and fill it with the current player symbol  
 if spot == '11':  
 board[1][1] = player  
  
 if spot == '12':  
 board[1][2] = player  
  
 if spot == '13':  
 board[1][3] = player  
  
 if spot == '21':  
 board[2][1] = player  
  
 if spot == '22':  
 board[2][2] = player  
  
 if spot == '23':  
 board[2][3] = player  
  
 if spot == '31':  
 board[3][1] = player  
  
 if spot == '32':  
 board[3][2] = player  
  
 if spot == '33':  
 board[3][3] = player  
  
 # add to the amount of moves made  
 moves += 1  
  
 # check to see if the game is won  
 iswon()  
  
 # change players of the game  
 if player == 'X':  
 player = 'O'  
 else:  
 if player == 'O':  
 player = 'X'  
  
  
# tic tac toe board  
board = [[' ', '1', '2', '3'], ['1', ' ', ' ', ' '], ['2', ' ', ' ', ' '], ['3', ' ', ' ', ' ']]  
# list of possible spots left to use  
spots = ['11', '12', '13', '21', '22', '23', '31', '32', '33']  
# counter for the moves to check if there is a tie game  
moves = 0  
# player variable for changing players  
player = 'X'  
# boolean as a win condition/game over  
won = False  
  
# print the board to start the game  
printB()  
  
# while loop to continue taking turns  
while won == False:  
 turn()  
 printB() # show progression of board