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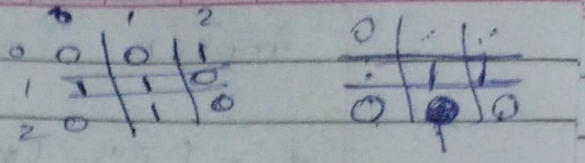
Tic Tac Toe



- Initialize 2D list with empty symbol (underscore)
- Initialize a map to: [0,1] ... }
- Initialize step = 0
- Input user symbol
- other symbol for bot
turn = Randomly choose user or bot & display.
- for i = 0 to 8
  if step%2 == 0 or turn = 1)
    input ("~~two~~ cells 0 to 8)
    ~~check~~ print (matrix)
    ~~random()~~
    check(sym) step ++
  ~~elif~~ (~~turn = 2~~ ~~or~~

check(sym)
  if two of the winning condition satisfies put in third place

  else if random()
    Check for computer win()
  else if ~~draw~~ step == 9

0 : [[0,1,2], [0,3,6], [0,4,7]]
1 : [[0,1,2], [1,4,7],
2 : [[0,1,2], [2,4,6], [2,5,8]]
3 : [

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```
import random

d = [["-"]*3 for _ in range(3)]
turn = {0:[0,0], 1:[0,1], 2:[0,2], 3:[1,0],
        4:[1,1], 5:[1,2], 6:[2,0], 7:[2,1],
        8:[2,2]}

r0 = [0,1,2]; r1 = [3,4,5]; r2 = [6,7,8],
c0 = [0,3,6]; c1 = [1,4,7]; c2 = [2,5,8],
d1 = [0,4,8]; d2 = [2,4,6]

avoid_win_turns = { 0:[r0,r1,c0], 1:[r0,c1],
  2:[r0,c2,d2], 3:[r0,c1], 4:[d1,d2,c1,r1],
  5:[r2,c1], 6:[c0,r2,d2], 7:[c2,r1],
  8:[c2,r2,d1] }

p1 = input("player symbol (o or x)".strip().
                                lower()

if p1 == "x":
    p2 = "o"
else:
    p2 = "x"

def player_move():
    while True:
        move = int(input("Enter your move
                          (0-8) :"))
        if move in turn and d[turn[move][0]
                [turn[move][1]] == "-":
            d[turn[move][0]] [turn[move][1]] = p1
            break
```

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    else:
        print("Invalid")


def computer_move():
    available_moves = []
    for i in range(9):
        if d[turn[i][0]][turn[i][1]] == "-":
            available_moves.append(i)
    if not available_moves:
        return

    for move in available_moves:
        if move in avoid_win_turns:
            possible_moves = avoid_window_
                             turns[move]

    filtered_moves = [m for sublist
        in possible_moves for m
            in sublist if m in
                available_moves]
        if filtered_moves:
            computer_choice =
                random.choice(filtered_moves)
            d[turn[computer_choice][0]]
             [turn[computer_choice][1]] = p2
            return


def print_board():
    for row in d:
        print(" ".join(row))
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for i in range(5):
    print_board()
    player_move()
    if any(row.count(p1) == 3 for row in
                    d) or
       any(col.count(p1) == 3 for col in
           zip(*d)) or \

       d[0][0] == d[1][1] == d[2][2] == p1 or\
       d[0][2] == d[1][1] == d[2][0] == p1:
           print_board()
           print("player wins!")
           break.

    computer_move()
    if any(row.count(p2) == 3 for row in d) or \
       any(col.count(p2) == 3 for col in zip(*d)) or
       d[0][0] == d[1][1] == d[2][2] == p2 or \
       d[0][2] == d[1][1] == d[2][0] == p2:
           print_board()
           print("Computer wins!")
           break

    else:
        print_board()
        print("Draw
```

```
Player enter your symbol (x/o): x
- - -
- - -
- - -
Enter your move (0-8): 0
x - -
- - -
- o -
Enter your move (0-8): 1
x x o
- - -
- o -
Enter your move (0-8): 2
Invalid move. Try again.
Enter your move (0-8): 3
x x o
x - -
o o -
Enter your move (0-8): 8
x x o
x o -
o o x
Computer wins!
>>>
```