

Tic-Tac-Toe

Winning combinations:

combinations: $[[0, 1, 2], [3, 4, 5], [6, 7, 8], [0, 3, 6],$
 $[1, 4, 7], [2, 5, 8], [0, 4, 8], [2, 3, 6]]$
 $mat = [0] * 9$ // initialise mat with 0

input player symbol ('x', 'o')

while (True) do

$x \neq$ index of to change

start game (x, player symbol)

end while

start game (index, value)

if $\& mat[index] == 0$:

mat[index] = value

else

print ("already chosen this position")

return

check winner (value)

computer idx = random.choice (available pos)

mat [computer choice] = Computer symbol

check winner (value)

for el in combinations:

if $mat[el[0]] == mat[el[1]] == mat[el[2]]$

return True

return False

Output:

Enter your symbol (x or o): x

~~Enter~~ Enter pos (0-8): 0

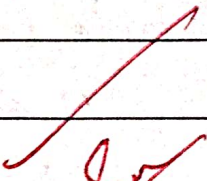
Enter pos (0-8): 1

Enter pos (0-8): 2

player with symbol 'x' won!

final board:

['x', 'x', 'x', 'o', 'o', 'o', 'o', 'o', 'o']


~~Sum~~
1/10/2021

Vacuum cleaner:

percept sequence	Actions
[A, clean]	right
[A, Dirty]	suck
[B, clean]	left
[B, Dirty]	suck
[A, clean], [A, clean]	right
[A, clean], [A, Dirty]	suck
⋮	---
[A, clean], [A, clean], [A, clean]	right
[A, clean], [A, clean], [A, clean]	suck

Function vacuumCleaningAgent(state)

while state is not [L, clean] and state is not
[R, clean, clean];

if location == "L";

if left cell == "Dirty";

suck()

state = [L, clean, right cell]

else;

Move Right()

state = [R, left cell, right cell]

else if location == "R";

if right cell == "Dirty";

suck()

state = [R, left cell, clean]

else;

Move Left()

state = [L, left cell, right cell]

return "Environment clean"


```
function suck():
```

```
    print(" move suck: cleaning cell")
```

```
function moveleft():
```

```
    print("move left: Moving to left cell")
```

```
function moveright():
```

```
    print("Move right: Moving to the right cell")
```

Output

The vacuum cleaner is at (0,0) & it is dirty, cleaning.
The vacuum cleaner is at (0,1) & it is clean, moving.
The vacuum cleaner is at (1,0) & it is dirty, cleaning.
The vacuum cleaner is at (1,1) & it is dirty, cleaning.
All locations are clean, The vacuum cleaner is finished.