

17/11/23

1.

### Lab-3

Write a program for Tic-Tac-Toe game.

Algo :-

- Create an empty 3x3 array.
- Make the board of 3x3 tic-tac-toe.
- Then we will

import random

tic = [1, 2, 3, 4, 5, 6, 7, 8, 9]

def printboard (tic)

print (tic[0] + ' | ' + tic[1] + ' | ' + tic[2])

print (" - - - - -")

print (tic[3] + ' | ' + tic[4] + ' | ' + tic[5])

print (" - - - - -")

print (tic[6] + ' | ' + tic[7] + ' | ' + tic[8])

def winner (tic, pos)

if (tic[0] == tic[1] and tic[1] == tic[2] or  
tic[2] == tic[4] and tic[4] == tic[6])

return true

elif if

tic[pos-0] == tic[pos-3] & tic[pos-3] ==  
tic[pos-6]

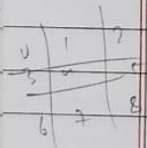
return true

elif if

tic[pos//3+1] == tic[pos//3+2] and tic[pos//3+2]  
== tic[pos+1]

return true

return false.



def update\_user (H):

n = int(input("Enter the value on board"))

while (num not in H):

num = int(input("Enter a no. on the board"))

H[n-1] = '0'

def update\_comp (H):

for i in H:

if 'i' != 'X' and i != '0':

H[i-1] = 'X'

if (isWinner (H, i-1) == True):

return

else:

H[i-1] = '0'

for i in H:

if i != 'X' and i != '0':

H[i-1] = '0'

if (winner (H, i-1) == False):

return

else

H[i-1] = '1'

num = random.randint(1, 9)

while (num not in H):

num = random.randint(1, 9)

H[num-1] = 'X'

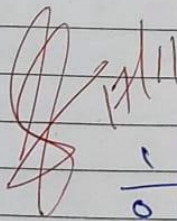
### Algorithm:-

- ① make a board and initialize the value.
- ② ~~make a~~ import the random library in order to get the random values.
- ③ Make a function for checking the winner:
  - ① check ~~the~~ both the diagonals whether they have same values.
  - ② Then check the columns & rows if all are same then return true.  
else return false.
- ④ Make a update user function:  
In this function user can input the value. ~~at~~ in array tic.
- ⑤ Make a update-comp function  
In this function comp can input its value depending upon the board.

Output:

1	2	3
4	5	6
7	8	9

1	2	3
4	x	6
7	8	9



1	2	□
0	x	6
7	8	2x

x	2	0
0	x	6
7	8	x

Output:

1	2	3
4	5	6
7	8	9

computer's turn :

1	2	3
4	X	6
7	8	9

Your turn :

enter a number on the board :3

Your turn :

enter a number on the board :4

1	2	0
0	X	6
7	8	X

computer's turn :

X	2	0
0	X	6
7	8	X

winner is X