In [2]:
```
#prints board
import numpy as np
def board(ele):
    print('   0   1   2\n')
    print('0 ',ele[0][0],'|',ele[0][1],'|',ele[0][2])
    print('   --+---+--')
    print('1 ',ele[1][0],'|',ele[1][1],'|',ele[1][2])
    print('   --+---+--')
    print('2 ',ele[2][0],'|',ele[2][1],'|',ele[2][2])
b_content = [['0','0','0'],['0','0','0'],['0','0','0']]
board(b_content)
#chooses random starting player
import random
message=print("selecting random player to start")
player=random.randint(1,2)
p1='x'
p2='o'
print('its '+str(player)+"'s turn")
#checks win conditions
def result(t,item):
    if(item[0][2] == item[2][0] == item[1][1]) and (item[0][2] == 'x' or ite
m[0][2] == 'o'):
        return t,'wins'
    if(item[0][0] == item[1][1] == item[2][2]) and (item[0][0] == 'x' or ite
m[0][0] == 'o'):
        return t,'wins'
    for i in range(len(item)):
        if item[i] == ['x','x','x'] or item[i] == ['o','o','o']:
            return t,'wins'
    item=np.array(item).T.tolist()
    for i in range(len(item)):
        if item[i] == ['x','x','x'] or item[i] == ['o','o','o']:
            return t,'wins'
    return 0,0
#turn based input/output
turn = player
t_turns = 0
while t_turns < 9:
    print(turn,'enter your position')
    try:
        row = int(input())
        col = int(input())
    except:
        print('make sure to enter row index followed by column index')
    try:
        if b_content[row][col] == 'x' or b_content[row][col] == 'o':
            print('position occupied')
        else:
            if turn == 1:
                b_content[row][col] = 'x'
                t_turns += 1
                a,b = result(turn,b_content)
                if b == 'wins':
                    print(a,'wins')
                    break
                turn = 2
            elif turn == 2:
                b_content[row][col] = 'o'
                t_turns += 1
                a,b = result(turn,b_content)
                if b == 'wins':
                    print(a,'wins')
                    break
                turn = 1
    except:
        print('invalid index')
```

```
   0   1   2

0  0 | 0 | 0
   --+---+--
1  0 | 0 | 0
   --+---+--
2  0 | 0 | 0
selecting random player to start
its 2's turn
2 enter your position
1
1
   0   1   2

0  0 | 0 | 0
   --+---+--
1  0 | o | 0
   --+---+--
2  0 | 0 | 0
1 enter your position
0
0
   0   1   2

0  x | 0 | 0
   --+---+--
1  0 | o | 0
   --+---+--
2  0 | 0 | 0
2 enter your position
2
1
   0   1   2

0  x | 0 | 0
   --+---+--
1  0 | o | 0
   --+---+--
2  0 | o | 0
1 enter your position
2
0
   0   1   2

0  x | 0 | 0
   --+---+--
1  0 | o | 0
   --+---+--
2  x | o | 0
2 enter your position
0
1
2 wins
```

In [ ]: