

Assignment week 5

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Team group : group 8

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Topic: Tic- Tac –Toe

gitHub address: <https://github.com/lixie88/assignment--week-5> (<https://github.com/lixie88/assignment--week-5>)

In [11]:

```
#replace numbers with x or o
def replaceNumber(number, playerName, basicList):
    #Determine whether the number is included (does not include continuing to ask for the correct number)
    while (not str(number) in basicList):
        if playerName == "player1":
            number = input("please input correct number 【player1: 0】 : ");
        else:
            number = input("please input correct number 【player2: X】 : ");
    #The input value is compared with the value in the array to replace X and 0
    if (int(number) == int(basicList[int(number)-1])):
        if playerName == "player1":
            basicList[int(number)-1] = "0";
        else:
            basicList[int(number)-1] = "X";
    return number;

#arrList=["1","2","3","4","5","6","7","8","9"];
#number = input("please input number: ");
#replaceNumber(number,"player2")
```

In [12]:

```
#Determine whether it is successful (as long as the player's list has it)
def isWinner(playerList):
    #all possibilities
    toWin = [("1", "2", "3"), ("4", "5", "6"), ("7", "8", "9"), ("1", "4", "7"), ("2", "5", "8"), ("3", "6", "9"), ("1", "5", "9"), ("3", "5", "7")];
    # If the possibility has a set of three numbers in the player array, win
    if(len(playerList) >= 3):
        for t in range(len(toWin)):
            if(toWin[t][0] in playerList and toWin[t][1] in playerList and toWin[t][2] in playerList):
                return True;
    return False;

player1 = ["5", "1", "7", "3"];
print(isWinner(player1))
```

True

In [13]:

```
#show
def show(arrList):
    print("    "+arrList[0]+"_|"+arrList[1]+"_|"+arrList[2]+"_");
    print("    "+arrList[3]+"_|"+arrList[4]+"_|"+arrList[5]+"_");
    print("    "+arrList[6]+"_|"+arrList[7]+"_|"+arrList[8]);
    print("- player1:0;      player2:X");
```

In [14]:

```

import random;
print("- welcome to game");
#Checkerboard
basicList=["1","2","3","4","5","6","7","8","9"];
show(basicList);
#player1 array
player1=[];
#player2 array
player2=[];
#Determine whether to jump out of the loop If someone wins, jump out of the loop
win = False;
#First and then (random)
count = random.randint(0,1);

#cycle
while(not win):
    # draw
    if len(player1) + len(player2) == 9:
        print("draw!!!");
        break;
    if(count%2 == 0):
        # start input
        number = input("please input number 【player1: 0】 : ");
        # replace the dial and put the entered numbers into the player's array
        player1.append(replaceNumber(number,"player1", basicList));
        # Determine if it is successful
        win = isWinner(player1);
        if (win == True):
            print("congratulation! player1 is winner");
            show(basicList);
            break;
    elif(count%2 == 1):
        number = input("please input number 【player2: X】 : ");
        player2.append(replaceNumber(number,"player2", basicList));
        win = isWinner(player2);
        if (win == True):
            print("congratulation! player2 is winner");
            show(basicList);
            break;
    count+=1;
    show(basicList);

```

- welcome to game

```

_1_|_2_|_3_
_4_|_5_|_6_
_7_|_8_|_9_

```

- player1:0; player2:X

please input number 【player2: X】 : 1

```

_X_|_2_|_3_
_4_|_5_|_6_
_7_|_8_|_9_

```

- player1:0; player2:X

```
please input number 【player1: 0】 : 2
  X | 0 | 3
  4 | 5 | 6
  7 | 8 | 9
- player1:0;      player2:X
please input number 【player2: X】 : 3
  X | 0 | X
  4 | 5 | 6
  7 | 8 | 9
- player1:0;      player2:X
please input number 【player1: 0】 : 4
  X | 0 | X
  0 | 5 | 6
  7 | 8 | 9
- player1:0;      player2:X
please input number 【player2: X】 : 5
  X | 0 | X
  0 | X | 6
  7 | 8 | 9
- player1:0;      player2:X
please input number 【player1: 0】 : 6
  X | 0 | X
  0 | X | 0
  7 | 8 | 9
- player1:0;      player2:X
please input number 【player2: X】 : 7
congratulation! player2 is winner
  X | 0 | X
  0 | X | 0
  X | 8 | 9
- player1:0;      player2:X
```