Tic Tac Toe

1. Traditionally the first player plays with "X". So you can decide who wants to go with "X" and who wants to go with "O".
2. Only one player can play at a time.
3. If any of the players have filled a square then the other player and the same player cannot override that square.
4. There are only two conditions that may match will be draw or may win.
5. The player that succeeds in placing three respective marks (X or O) in a horizontal, vertical, or diagonal row wins the game.

In [40]:
```
# import all the necessary files

import time

board = [' ' for i in range(10)]
player = 1

# win flags:
win = 1
draw = -1
running =0

game = running
mark = 'X'

#This function draws the game board
def drawboard():
    print(' %c | %c | %c ' %(board[1], board[2], board[3]))
    print('___|___|___')
    print(' %c | %c | %c ' %(board[4], board[5], board[6]))
    print('___|___|___')
    print(' %c | %c | %c ' %(board[7], board[8], board[9]))
    print('   |   |   ')

# This function checks position is empty or not
def checkposition(x):
    if (board[x] == ' '):
        return True
    else:
        return False

# This function checks player has won or not
def checkwin():
    global game

    # Horizontal winning condition
    if (board[1] == board[2] and board[2] == board[3] and board[1] != ' '):
        game = win
    elif (board[4] == board[5] and board[5] == board[6] and board[4] != ' '):
        game = win
    elif (board[7] == board[8] and board[8] == board[9] and board[7] != ' '):
        game = win

    # Vertical winnig condition
    elif (board[1] == board[4] and board[4] == board[7] and board[1] != ' '):
        game = win
    elif (board[2] == board[5] and board[5] == board[8] and board[2] != ' '):
        game = win
    elif (board[3] == board[6] and board[6] == board[9] and board[3] != ' '):
        game = win

    # Diagonal Winning condition
    elif (board[1] == board[5] and board[5] == board[9] and board[5] != ' '):
        game = win
    elif (board[3] == board[5] and board[5] == board[7] and board[5] != ' '):
        game = win
```

```
    #Match tie or draw condition
    elif(board[1]!=' ' and board[2]!=' ' and board[3]!=' ' and board[4]!=' ' and
        game = draw
    else:
        game = running

print('Tic-Tac-Toe Game ')
print('Player 1 [X] --- Player 2 [O]\n')
print()
print()
print('Please wait...')
time.sleep(2)
while (game == running):

    drawboard()
    if (player %2 != 0):
        print('Player 1\'s chance [X]')
        mark = "X"
    else:
        print('Player 2"s chance [O]')
        mark = 'O'
    choice = int(input("Enter the position between [1-9] whre you want to mark: '
    if (checkposition(choice)):
        board[choice] = mark
        player += 1
        checkwin()

#     drawboard()

    if (game == draw):
        print('Game Draw')
    elif (game == win):
        player -=1
        if (player%2!=0):
            print('Player 1 won')
        else:
            print('Player 2 won')
```

```
Tic-Tac-Toe Game
Player 1 [X] --- Player 2 [O]



Please wait...
   |   |
___|___|___
   |   |
___|___|___
   |   |
   |   |
Player 1's chance [X]
Enter the position between [1-9] whre you want to mark: 1
 X |   |
___|___|___
   |   |
___|___|___
```

```
   |   |
   |   |
Player 2"s chance [O]
Enter the position between [1-9] whre you want to mark: 2
 X | O |
___|___|___
   |   |
___|___|___
   |   |
   |   |
Player 1's chance [X]
Enter the position between [1-9] whre you want to mark: 3
 X | O | X
___|___|___
   |   |
___|___|___
   |   |
   |   |
Player 2"s chance [O]
Enter the position between [1-9] whre you want to mark: 4
 X | O | X
___|___|___
 O |   |
___|___|___
   |   |
   |   |
Player 1's chance [X]
Enter the position between [1-9] whre you want to mark: 5
 X | O | X
___|___|___
 O | X |
___|___|___
   |   |
   |   |
Player 2"s chance [O]
Enter the position between [1-9] whre you want to mark: 6
 X | O | X
___|___|___
 O | X | O
___|___|___
   |   |
   |   |
Player 1's chance [X]
Enter the position between [1-9] whre you want to mark: 7
Player 1 won
```

In [ ]:

In [37]:

In [ ]: