

[Python] Connect 4

- [main.py](#)

main.py

```
board=[[' '*7],
        [' '*7],
        [' '*7],
        [' '*7],
        [' '*7],
        [' '*7]]

fin=False
valid=True
r=0

def display():
    global board
    row=' '
    for i in range(6):
        row=''+board[i][0]
        for j in range(6):
            row=row+''+board[i][j+1]
        row=row+' '
        print(row)

def check_horizontal():
    global board
    global fin
    for i in range(6):
        for j in range(4):
            if board[i][j]!=' ':
                if board[i][j]==board[i][j+1] and board[i][j+1]==board[i][j+2] and
board[i][j+2]==board[i][j+3]:
                    fin=True

def check_vertical():
    global board
    global fin

    for j in range(7):
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        for i in range(3):
            if board[i][j]!=' ':
                if board[i][j]==board[i+1][j] and board[i+1][j]==board[i+2][j] and
board[i+2][j]==board[i+3][j]:
                    fin=True

def check_diagonal_right():
    global board
    global fin

    for i in range(3):
        for j in range(4):
            if board[i][j]!=' ':
                if board[i][j]==board[i+1][j+1] and board[i+1][j+1]==board[i+2][j+2] and
board[i+2][j+2]==board[i+3][j+3]:
                    fin=True

def check_diagonal_left():
    global board
    global fin

    for i in range(3):
        for j in range(4):
            if board[5-i][j]!=' ':
                if board[5-i][j]==board[4-i][j+1] and board[4-i][j+1]==board[3-i][j+2] and
board[3-i][j+2]==board[2-i][j+3]:
                    fin=True

def check_win():
    global board
    global fin
    check_horizontal()
    check_vertical()
    check_diagonal_right()
    check_diagonal_left()

def enter(x,lim):
    while True:
        try:

```

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        x=int(input('type column(1~7):'))
        if x>=0 and x<=lim:
            x-=1
            break
        else:
            print('out of range')
    except ValueError:
        print('wrong format')
return x

def put(x,n):
    global board
    global valid
    found=False
    i=0
    while not(found) and i<=5:
        if board[5-i][x]==' ':
            found=True
        else:
            i+=1

    if found:
        if n==1:
            board[5-i][x]='R'
        else:
            board[5-i][x]='Y'
        valid=True
    else:
        print('column already full')

while not(fin):

    display()
    check_win()
    if fin:
        print('player 2 win')
        break
    valid=False
    turn=1
    print('player 1 turn (Red)')

```

```
while not(valid):
    put(enter(r,7),1)

display()
check_win()
if fin:
    print('player 1 win')
    break
valid=False
turn=2
print('player 2 turn (Yellow)')
while not(valid):
    put(enter(r,7),2)
```