

```
import random
```

```
lis=["."]*9
```

```
i=0
```

```
l=1
```

```
a=0
```

```
v=2
```

```
c=[0,1,2,3,4,5,6,7,8]
```

```
t=0
```

```
w=0
```

```
def complog():
```

```
    q=0
```

```
    #elif(n==1 or n==2 or n==3):
```

```
        if(lis[0]==lis[1]=="O" and lis[0]==lis[1]!="."): 
```

```
            if(lis[2]=="."): 
```

```
                lis[2]="O"
```

```
                q+=1
```

```
                return q,2;
```

```
        if(lis[0]==lis[2]=="O" and lis[0]==lis[2]!="."): 
```

```
            if(lis[1]=="."): 
```

```
                lis[1]="O"
```

```
                q+=1
```

```
                return q,1;
```

```
        if(lis[1]==lis[2]=="O" and lis[1]==lis[2]!="."): 
```

```
            if(lis[0]=="."): 
```

```
                lis[0]="O"
```

```
                q+=1
```

```
                return q,0;
```

```
    #elif(n==1 or n==4 or n==7):
```

```

if(lis[0]==lis[3]=="O" and lis[0]==lis[3]!="."):
    if(lis[6]=="."):
        lis[6]="O"
        q+=1
        return q,6;
if(lis[0]==lis[6]=="O" and lis[0]==lis[6]!="."):
    if(lis[3]=="."):
        lis[3]="O"
        q+=1
        return q,3;
if(lis[3]==lis[6]=="O" and lis[3]==lis[6]!="."):
    if(lis[0]=="."):
        lis[0]="O"
        q+=1
        return q,0;
#elif(n==1 or n==5 or n==9):
if(lis[0]==lis[4]=="O" and lis[0]==lis[4]!="."):
    if(lis[8]=="."):
        lis[8]="O"
        q+=1
        return q,8;
if(lis[0]==lis[8]=="O" and lis[0]==lis[8]!="."):
    if(lis[4]=="."):
        lis[4]="O"
        q+=1
        return q,4;
if(lis[4]==lis[8]=="O" and lis[4]==lis[8]!="."):
    if(lis[0]=="."):
        lis[0]="O"
        q+=1
        return q,0;

```

```

# elif(n==2 or n==5 or n==8):

    if(lis[1]==lis[4]=="O" and lis[4]==lis[1]!="."):

        if(lis[7]=="."):

            lis[7]="O"

            q+=1

            return q,7;

    if(lis[4]==lis[7]=="O" and lis[4]==lis[7]!="."):

        if(lis[1]=="."):

            lis[1]="O"

            q+=1

            return q,1;

    if(lis[1]==lis[7]=="O" and lis[7]==lis[1]!="."):

        if(lis[4]=="."):

            lis[4]="O"

            q+=1

            return q,4;

# elif(n==4 or n==5 or n==6):

    if(lis[3]==lis[4]=="O" and lis[3]==lis[4]!="."):

        if(lis[5]=="."):

            lis[5]="O"

            q+=1

            return q,5;

    if(lis[3]==lis[5]=="O" and lis[3]==lis[5]!="."):

        if(lis[4]=="."):

            lis[4]="O"

            q+=1

            return q,4;

    if(lis[4]==lis[5]=="O" and lis[4]==lis[5]!="."):

        if(lis[3]=="."):

            lis[3]="O"

            q+=1

```

```

        return q,3;
    #elif(n==3 or n==6 or n==9):
        if(lis[2]==lis[5]=="O" and lis[2]==lis[5]!="."):
            if(lis[8]=="."):
                lis[8]="O"
                q+=1
                return q,8;
        if(lis[5]==lis[8]=="O" and lis[5]==lis[8]!="."):
            if(lis[2]=="."):
                lis[2]="O"
                q+=1
                return q,2;
        if(lis[2]==lis[8]=="O" and lis[2]==lis[8]!="."):
            if(lis[5]=="."):
                lis[5]="O"
                q+=1
                return q,5;
    #elif(n==7 or n==8 or n==9):
        if(lis[6]==lis[7]=="O" and lis[6]==lis[7]!="."):
            if(lis[8]=="."):
                lis[8]="O"
                q+=1
                return q,8;
        if(lis[6]==lis[8]=="O" and lis[6]==lis[8]!="."):
            if(lis[7]=="."):
                lis[7]="O"
                q+=1
                return q,7;
        if(lis[7]==lis[8]=="O" and lis[7]==lis[8]!="."):
            if(lis[6]=="."):
                lis[6]="O"

```

```

        q+=1
        return q,6;
    #elif(n==3 or n==5 or n==7):
    if(lis[2]==lis[4]=="O" and lis[2]==lis[4]!="."):
        if(lis[6]=="."):
            lis[6]="O"
            q+=1
            return q,6;
    if(lis[6]==lis[2]=="O" and lis[6]==lis[2]!="."):
        if(lis[4]=="."):
            lis[4]="O"
            q+=1
            return q,4;
    if(lis[6]==lis[4]=="O" and lis[6]==lis[4]!="."):
        if(lis[2]=="."):
            lis[2]="O"
            q+=1
            return q,2;
    else:
        q=0
        return q,10;

```

```

def comp():

```

```

    w,re=complog()
    if(re<10):
        c.remove(re)
    if(w==0):
        #elif(n==1 or n==2 or n==3):
        if(lis[0]==lis[1]=="X" and lis[0]==lis[1]!="."):
            if(lis[2]=="."):

```

```

        lis[2]="O"
        c.remove(2)
        return 0;
    if(lis[0]==lis[2]=="X" and lis[0]==lis[2]!="."):
        if(lis[1]=="."):
            lis[1]="O"
            c.remove(1)
            return 0;
    if(lis[1]==lis[2]=="X" and lis[1]==lis[2]!="."):
        if(lis[0]=="."):
            lis[0]="O"
            c.remove(0)
            return 0;
    #elif(n==1 or n==4 or n==7):
        if(lis[0]==lis[3]=="X" and lis[0]==lis[3]!="."):
            if(lis[6]=="."):
                lis[6]="O"
                c.remove(6)
                return 0;
        if(lis[0]==lis[6]=="X" and lis[0]==lis[6]!="."):
            if(lis[3]=="."):
                lis[3]="O"
                c.remove(3)
                return 0;
        if(lis[3]==lis[6]=="X" and lis[3]==lis[6]!="."):
            if(lis[0]=="."):
                lis[0]="O"
                c.remove(0)
                return 0;
    #elif(n==1 or n==5 or n==9):
        if(lis[0]==lis[4]=="X" and lis[0]==lis[4]!="."):

```

```

    if(lis[8]=="."):
        lis[8]="O"
        c.remove(8)
        return 0;
    if(lis[0]==lis[8]=="X" and lis[0]==lis[8]!="."):
        if(lis[4]=="."):
            lis[4]="O"
            c.remove(4)
            return 0;
        if(lis[4]==lis[8]=="X" and lis[4]==lis[8]!="."):
            if(lis[0]=="."):
                lis[0]="O"
                c.remove(0)
                return 0;
# elif(n==2 or n==5 or n==8):
    if(lis[1]==lis[4]=="X" and lis[4]==lis[1]!="."):
        if(lis[7]=="."):
            lis[7]="O"
            c.remove(7)
            return 0;
    if(lis[4]==lis[7]=="X" and lis[4]==lis[7]!="."):
        if(lis[1]=="."):
            lis[1]="O"
            c.remove(1)
            return 0;
    if(lis[1]==lis[7]=="X" and lis[7]==lis[1]!="."):
        if(lis[4]=="."):
            lis[4]="O"
            c.remove(4)
            return 0;
# elif(n==4 or n==5 or n==6):

```

```

if(lis[3]==lis[4]=="X" and lis[3]==lis[4]!="."):
    if(lis[5]=="."):
        lis[5]="O"
        c.remove(5)
        return 0;
if(lis[3]==lis[5]=="X" and lis[3]==lis[5]!="."):
    if(lis[4]=="."):
        lis[4]="O"
        c.remove(4)
        return 0;
if(lis[4]==lis[5]=="X" and lis[4]==lis[5]!="."):
    if(lis[3]=="."):
        lis[3]="O"
        c.remove(3)
        return 0;
#elif(n==3 or n==6 or n==9):
if(lis[2]==lis[5]=="X" and lis[2]==lis[5]!="."):
    if(lis[8]=="."):
        lis[8]="O"
        c.remove(8)
        return 0;
if(lis[5]==lis[8]=="X" and lis[5]==lis[8]!="."):
    if(lis[2]=="."):
        lis[2]="O"
        c.remove(2)
        return 0;
if(lis[2]==lis[8]=="X" and lis[2]==lis[8]!="."):
    if(lis[5]=="."):
        lis[5]="O"
        c.remove(5)
        return 0;

```



```

#elif(n==7 or n==8 or n==9):
    if(lis[6]==lis[7]=="X" and lis[6]==lis[7]!="."):
        if(lis[8]=="."):
            lis[8]="O"
            c.remove(8)
            return 0;
    if(lis[6]==lis[8]=="X" and lis[6]==lis[8]!="."):
        if(lis[7]=="."):
            lis[7]="O"
            c.remove(7)
            return 0;
    if(lis[7]==lis[8]=="X" and lis[7]==lis[8]!="."):
        if(lis[6]=="."):
            lis[6]="O"
            c.remove(6)
            return 0;
#elif(n==3 or n==5 or n==7):
    if(lis[2]==lis[4]=="X" and lis[2]==lis[4]!="."):
        if(lis[6]=="."):
            lis[6]="O"
            c.remove(6)
            return 0;
    if(lis[6]==lis[2]=="X" and lis[6]==lis[2]!="."):
        if(lis[4]=="."):
            lis[4]="O"
            c.remove(4)
            return 0;
    if(lis[6]==lis[4]=="X" and lis[6]==lis[4]!="."):
        if(lis[2]=="."):
            lis[2]="O"
            c.remove(2)

```

```
return 0;
```

```
#special case:
```

```
if(lis[0]=="X" or lis[2]=="X" or lis[6]=="X" or lis[8]=="X"):
```

```
    if(lis[4]=="."):
```

```
        lis[4]="O"
```

```
        c.remove(4)
```

```
    return 0;
```

```
#special case:
```

```
if(lis[0]==lis[8]=="X" or lis[2]==lis[6]=="X"):
```

```
    if(lis[1]=="."):
```

```
        lis[1]="O"
```

```
        c.remove(1)
```

```
    return 0;
```

```
    elif(lis[3]=="."):
```

```
        lis[3]="O"
```

```
        c.remove(3)
```

```
    return 0;
```

```
    elif(lis[5]=="."):
```

```
        lis[5]="O"
```

```
        c.remove(5)
```

```
    return 0;
```

```
    elif(lis[7]=="."):
```

```
        lis[7]="O"
```

```
        c.remove(7)
```

```
    return 0;
```

```
#not matching cases
```

```
else:
```

```
    u=random.choice(c)
```

```
    lis[u]="O"
```

```

def check():
    if(lis[0]==lis[1]==lis[2] and lis[0]==lis[1]==lis[2]!="."):
        r=1
        return r
    if(lis[0]==lis[3]==lis[6] and lis[0]==lis[3]==lis[6]!="."):
        r=1
        return r
    if(lis[0]==lis[4]==lis[8] and lis[0]==lis[4]==lis[8]!="."):
        r=1
        return r
    if(lis[1]==lis[4]==lis[7] and lis[1]==lis[4]==lis[7]!="."):
        r=1
        return r
    if(lis[3]==lis[4]==lis[5] and lis[3]==lis[4]==lis[5]!="."):
        r=1
        return r
    if(lis[2]==lis[4]==lis[6] and lis[2]==lis[4]==lis[6]!="."):
        r=1
        return r
    if(lis[2]==lis[5]==lis[8] and lis[2]==lis[5]==lis[8]!="."):
        r=1
        return r
    if(lis[6]==lis[7]==lis[8] and lis[6]==lis[7]==lis[8]!="."):
        r=1
        return r

for k in range(3):
    for j in range(3):
        print(l, '\t', end=" ");

```

```

        l+=1;

    print("\n");

draw=0

while(i<9):
    if(i%2==0):
        print("\t\t\tUSER (X)")
        n=int(input('enter position : '));

        c.remove(n-1)

        if(lis[n-1]=="X" or lis[n-1]=="O" or n==0 or n>10):
            print('plz enter other position ');
            continue;

        lis[n-1]="X";

    else:
        print("\t\t\tCOMPUTER (O)")
        comp();

if(True):

    l=0

    for k in range(3):
        for j in range(3):
            print(lis[l],"\t",end=" ");

            l+=1;

        print("\n");

    a=check();

```

```

if(a==1):
    draw+=1
    if(i%2==0):
        print("\t\t\tUSER IS WINNER")
        break
    else:
        print("\t\t\tCOMPUTER IS WINNER")
        break
    i+=1;

```

```

if(draw==0):
    print("\t\t\tMATCH DRAW")

```

## OUTPUT:

```

Jupyter Untitled29 Last Checkpoint: 2 minutes ago (autosaved)
File Edit View Insert Cell Kernel Widgets Help Trusted
+ ⌕ ↺ ↻ ⬆ ⬇ ⬆ ⬇ Run ⏏ ⏏ Code ⌵ ⌨
. . X
COMPUTER (O)
O 10
O . O
. X .
. . X
USER (X)
enter position : 2
O X O
. X .
. . X
COMPUTER (O)
O 10
O X O
. X .
. O X
USER (X)
enter position : 7
O X O
. X .

```

```
File Edit View Insert Cell Kernel Widgets Help Trusted Python 3
[Icons] [Run] [Code]

1 2 3
4 5 6
7 8 9

USER (X)
enter position : 5
. . .
. X .
. . .

COMPUTER (O)
0 10
. . O
. X .
. . .

USER (X)
enter position : 9
. . O
. X .
. . X

COMPUTER (O)
0 10
. . O
```

```
Jupyter Untitled29 Last Checkpoint: 2 minutes ago (autosaved) Logout
File Edit View Insert Cell Kernel Widgets Help Trusted Python 3
[Icons] [Run] [Code]

enter position : 7
O X O
. X .
X O X

COMPUTER (O)
0 10
O X O
. X O
X O X

USER (X)
enter position : 4
O X O
X X O
X O X

MATCH DRAW

In [ ]:
```