

Write-up.

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IBM18CS013

AI lab-1

```
def print_board(a):  
    print(a)
```

```
def startgame():  
    t = 0  
    for i in range(9):  
        if (t % 2 == 0):  
            print("Player 1")  
            v = 'x'  
            pos[i] = v  
            print_board(pos)  
            win = checkwin(v)  
            if win == "nobody":  
                t = 1  
                continue  
            else:  
                print("Player 1 wins")  
        else:  
            print("Player 2")  
            h = compwin(i)  
            v = 'o'  
            pos[h] = v
```


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AI Lab - 1

print board (has)

win = checkwin(b)

if win == "Nobody":

t = 1

continue

else

print("Player 2 wins")

break

else

print("Draw")

def compwin (board i):

if has[5] == " " and i == 2:

if has[1] == " "

return 1

elif has[3] == " "

return 7

elif has[9] == " "

return 9

if has[5] != " " and i == 2:

return 1

for t in winning-conditions:

if has[t[0]] == 'x' and has[t[1]] == 'x' and has[t[2]] == " "

return t[2]

if has[t[0]] == 'o' and has[t[1]] == 'o' and has[t[2]] == " "

return t[0]


```
if pos[t[0]] == 'x' and pos[t[1]] == " " and pos[t[2]] == 'x':  
    return t[1]
```

```
if pos[7] == " " and pos[5] == " ":
```

returns 7

```
else:  
    return pos.index(" ")
```

```
def checker(v)
```

```
for i in winning-conditions:
```

```
    if (pos[i[0]], pos[i[1]], pos[i[2]]) == (v, v, v):
```

```
        winner = players[i]
```

```
        break
```

```
    elif (pos[i[0]], pos[i[1]], pos[i[2]]) == (v, v, v):
```

```
        winner = players[i]
```

```
        break
```

```
    else
```

```
        winner = "nobody"
```

```
    return winner
```

```
def logic(v)
```

```
    if "o" not in pos:
```

```
        if pos[5] == " ":
```

```
            return 5
```

```
        else
```

```
            return 1
```

else:

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AI lab-1

for t in winning-combination:

if pos[t[0]] == "o" and pos[t[1]] == "o" and pos[t[2]] == "o"
return t[2]

elif pos[t[0]] == "o" and pos[t[1]] == " " and pos[t[2]] == "o"
return t[1]

elif pos[t[0]] == " " and pos[t[1]] == "o" and pos[t[2]] == "o"
return t[0]

if pos[3] == " " :
return 3

elif pos[6] == " " :
return 6

elif pos[9] == " " :
return 9

return pos.index(" ")

pos = [' ']*9

winning-combination [(1,2,3), (4,5,6), (7,8,9), (1,4,7), (2,5,8), (3,6,9),
(1,5,9), (3,5,7)]