

AI Lab test 1  
Program No. 3

classmate

Date \_\_\_\_\_  
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1 BM18CS152

5th Sem B

```
def printboard(a):  
    print(a);
```

```
def startgame():  
    t = 0
```

```
    for i in range(9):
```

```
        if (t % 2 == 0)
```

```
            print("player 1")
```

```
            v = 'x'
```

```
            pos[h] = v
```

```
            printboard(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
```

```
            printboard(pos)
```

```
            win = checkwin(v)
```

```
            if win == "nobody":
```

```
                t = 1
```

```
                continue
```

```
            else
```

```
                print("Player 2 wins")
```

```
                break
```

(1)

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else

print ("draw")

def compwin(i)

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

if pos[1] == " "

return 1

elif pos[3] == " "

return 7

elif has[9] == " "

return 9

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

return 1

for t in winning conditions

if pos[t[0]] == "X" and has

[t[1]] == 'X' and

pos[t[2]] == " "

return t[2]

if pos[t[0]] == " " and

pos[t[1]] == 'X'

and pos[t[2]] == " "

return t[0]

if pos[t[0]] == "X" and pos

[t[1]] == " " and

has[t[2]] == " "

return t[1]

if has[7] == " " and has[5] ==

return 7

else

return pos.index(" ")

(7) Shivam

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def checkwin (v)

```

for i in winning-conditions:
    if [ pos[i[0]], pos[i[1]], pos[i[2]]
        == (v, v, v):

```

```

    winner = player[0]
    break

```

```

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

```

```

    winner = player[1]

```

```

    break

```

```

else

```

```

    winner = "nobody"

```

```

return winner

```

def logic (v):

```

if "0" not in pos:
    if pos[5] == " "
        return 5

```

```

    else

```

```

        return 1

```

```

else

```

```

    for t in winning-conditions:

```

```

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

```

```

            return t[2]

```

```

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

```

```

            return t[1]

```

```

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

```

```

            return t[0]

```

③ Review

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```
if pos[3] == " "  
    return 3  
elif pos[6] == " "  
    return 6  
elif pos[9] == " "  
    return 9  
return pos.index(" ")
```

pos = [ " " ] \* 9

winning conditions = [ (1,2,3), (4,5,6),  
(7,8,9), (1,4,7), (2,5,8), (3,6,9),  
(1,5,9), (3,5,7) ]