

AI - lab Test 1

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Tic-tac - Toe - ~~A~~ A Comp vs Comp

```
def play():
    displayboard()
    flag = 1
    while(flag):
        algoPlay("X", "O") // X - Agent 1
                           // O - Agent 2
        displayboard()
        if checkWin("Agent 1") == 1:
            print("Agent 1 win")
            print("Agent 2 Playing")
            algoPlay("O", "X")
            displayboard()
            if checkWin("Agent 2") == 0:
                flag = 0
        else:
            flag = 0
```

```
def algoPlay ( x, y ) :
```

```
    n = algoWin ( x )           // to win
```

```
    if n == -1 :
```

```
        n = stopPlayer ( y )    // to stop opponent
```

```
    if n == -1 :
```

```
        n = algoTryWin ( x )    // to help win
```

```
    if n == -1 :
```

```
        n = randomPos ( )       // random place
```

```
    board [ n ] = x .
```

```
def algoWin ( player ) :
```

// check if player has put two places in the winning position hence select the third position to win .

```
def stopPlayer ( player ) :
```

// check if opponent has chosen two winning position hence select the position to block their win .

def algoTrywin(player):

// check for the positions which will help
player win in ~~the~~ next step atleast.

def randpos():

// select position from 0 to 8 which
is empty.

def checkwin(player):

// check if player has ~~atleast~~ atleast one
winning sequence.

def displayboard():

// 3x3 grid with player positions.