

Lab - 01

Tic-Tac-Toe Game - [1-9] board

Algorithm:

Step 1: To quickly access board, we will use array

BEGIN Tic-Tac-Toe game

// Initialize game state

board = [] for i in range (9)

scoreboard = { }

player1 = prompt "Enter Player 1 name."

player2 = prompt "Enter Player 2 name."

scoreboard [player1] = 0

scoreboard [player2] = 0

Step 2:

win-combination [[0,1,2], [3,4,5], [6,7,8],
[0,3,6], [1,4,7], [2,5,8],
[0,4,8], [2,4,6]]

Step 3:

while true do

current-player = player1

while do

Display board

Step 4: ~~Display the board~~~~move = prompt "Player" + current-player + "
enter your move (1-9):"~~

Step 5:

if move < 1 or move > 9 or board [move-1] != " "

Display "Invalid move"

continue

board[move-1] = current-player

Step 6:

if checkwin(board, current-player, win-combination) then
 display board
 display current-player + "wins!"
 scoreboard[current-player] += 1
 break

if checktie(board) then
 display board
 display "It's tie"
 break

Step 7: // Switch player

if current-player == player 1 then
 current-player = player 2
else

 current-player = player 1

Step 8:

Replay = prompt "Do you want to play again? (y/n)"

if replay == "no" then
 display scoreboard
 break

board = [" " for i in range(9)] // Reset

end Tic Tac Toe

Output:

The first player name

Please mention your name: mowith

The second player name

Please mention your name:

ScoreBoard for TIC TAC TOE

mowith 0

mowithain 0

mowith, get the chance to make the choice

Please press 1 for X

Please press 2 for O

Please press 3 for exit

```

|   |   |
|---|---|
|   |   |
|---|---|
|   |   |
|---|---|

```

The player X turn to choose Block: 1

```

X |   |   |
|---|---|
|   |   |
|---|---|
|   |   |
|---|---|

```

~~Run
11/01/24~~

The player O turn to choose Block: 2

```

X | O |   |
|---|---|
|   |   |
|---|---|
|   |   |
|---|---|

```