Game Rule:

Tic Tac Toe

OX game – 2 Player games, either one pick first, then the other pick second, who can connect the 3 box in a line first, who WIN; If there are no any box leave, the game is DRAW.

Description:

Whatever user pick first or second, AI will only WIN or DRAW the OX game.

X = Player’s pick

O = AI’s pick

Steps:

1. Player pick row & col
2. Check picked position
   1. OK -> 3
   2. Reject -> 1
3. Update maze
4. A

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

Case 1:

1. Player : [edge]

AI : [center middle]

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

1. Player : [edge] -> [next to the edge]

AI : [center middle] -> [the line end of Player’s pick(against Player to win)]

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

1. Player : [edge] -> [next to the edge] -> [(against AI to win)]

AI : [center middle] -> [the line end of Player’s pick(against Player to win)] -> [pick the box next to 2 boxes picked by AI]

Result: AI will WIN, whatever Player’s pick.

Case 2:

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

1. Player : [center middle]

AI : [edge]

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

1. Player : [center middle] -> [box between AI’s and Player’s pick]

AI : [edge] -> [against]

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

1. Player : [center middle] -> [box between AI’s and Player’s pick] -> [middle of the column which no box picked]

AI : [edge] -> [against] -> [against]

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

1. Player : [center middle] -> [box between AI’s and Player’s pick] -> [middle of the column which no box picked] -> [against] -> [against]

AI : [edge] -> [against] -> [against] -> [against]

Result: Game must be draw.