

- **Initial State:** *The initial can configuration of the tic-tac-toe board, usually represented as an empty grid or a 3x3 matrix.*
- **Successor Function:** *Players take turns marking X OR O in the table cells.*
- **Goal State:** *When all the table cells are filled or when either player has three symbols in a row.*
- **Path Cost:** *Is calculated with certain assumptions, the first is we concentrate in how to make player one (O) win, the second assumption is the player one will always offensive tactic, which is creating chance in every move, and the last assumption is the opponent (X) knows how to play correctly. These assumptions are made to avoid useless moves like placing in dead end position or letting the opponent win easily.*