

## Post Lab Question

- 1)  $\Rightarrow$  The easiest trick to win Tic Tac Toe is to always start in the center square (if available), then aim to create a winning pattern by occupying the corner and edges. This strategy maximizes the number of winning combinations.
- 2)  $\Rightarrow$  The algorithm to win  $5 \times 5$  Tic Tac Toe game is similar to the standard  $3 \times 3$  version but with more complexities due to the increase in the board size. You need to prioritize controlling edges and corner pieces, while creating a winning pattern, while blocking your opponent's attempt to do the same.
- 3)  $\Rightarrow$  There is a way to never lose at Tic-tac-Toe if both players play optimally. This is achieved by following strategy known as "perfect play", where each player makes the best possible move at every turn.
- 4)  $\Rightarrow$  Tic-Tac-Toe can help with several cognitive skills, including strategic thinking, pattern recognition, decision-making, and spatial reasoning. It also promotes critical thinking and problem-solving abilities, making it a valuable tool for educational purposes, especially for teaching children basic game theory concepts. Additionally, playing Tic Tac Toe can improve memory, concentration and attention span, as players need to remember the state of the board and anticipate their opponent's moves.