

INTRODUCTION

Tic Tac Toe is a classic two-player game that is simple yet engaging. Played on a 3x3 grid, each player takes turns marking a square with either an "X" or an "O," with the goal of getting three of their marks in a row—horizontally, vertically, or diagonally. The game is often used as a fun way to pass time and is popular among all age groups. Despite its straightforward rules, it offers strategic depth, as players must anticipate their opponent's moves while positioning their own marks to win. Tic Tac Toe has become a staple in early childhood learning, helping to develop critical thinking and problem-solving skills.

"Tic-Tac-Toe is a simple two-player game played on a 3x3 grid, where players take turns marking a square with either an "X" or an "O". The objective is to align three marks horizontally, vertically, or diagonally. A basic implementation of Tic-Tac-Toe in Java typically involves:

- Game Board Representation:** The board is usually a 2D array (3x3) to store the state of each cell, such as "X", "O", or an empty space.
- Gameplay Loop:** A loop that alternates between the two players, accepting their moves, updating the board, and checking for a win or a draw after each move.
- Win Condition:** After each move, the game checks whether a player has achieved three marks in a row (horizontally, vertically, or diagonally).
- Input Validation:** Ensures players input valid moves (e.g., selecting an empty cell).
- End Game Check:** After every turn, check if the game has ended (either someone wins or the board is full with no winner, resulting in a draw).

In the Tic-Tac-Toe game, you will see the approach of the game is implemented. In this game, two players will be played and you have one print board on the screen where from 1 to 9 number will be displayed or you can say it box number. Now, you have to choose X or O for the specific box number. For example, if you have to select any number then for X or O will be shown on the print board, and turn for next will be there. The task is to create a Java program to implement a 3x3 Tic-Tac-Toe game for two players. java, a powerful and versatile programming language, is ideal for building games and applications of all complexities. In this tutorial, you'll learn how to create a basic two-player tic-tac-toe game in the console. This project will help you understand fundamental Java concepts, particularly multidimensional arrays and game logic, while honing your problem-solving skills.