Tic Tac Toe Game Documentation

Project Title

Tic Tac Toe Game Using Front-End Technologies

Objective

The goal of this project is to build an interactive Tic Tac Toe game playable in a browser using HTML, CSS, and JavaScript.

Tools and Technologies Used

HTML5
CSS3
JavaScript (ES6)

Description

Tic Tac Toe is a classic 2-player game where players take turns marking the spaces in a 3×3 grid with X or O. The player who places three of their marks in a horizontal, vertical, or diagonal row wins the game.

Features

- Clean and simple UI
- Responsive grid layout
- Player switch handling
- Win/draw detection logic
- Reset game functionality

File Structure

tic-tac-toe/
■■■ index.html
■■■ style.css
■■■ script.js

Code Description

- index.html: Sets up the grid, buttons, and game UI
- style.css: Adds styles, colors, and layout using flexbox/grid
- script.js: Contains the main game logic including:
- Game state array
- Check for winner function
- Player turn switch
- Restart button functionality

Sample Code Snippet

```
function checkWinner() {
const winConditions = [
[0,1,2], [3,4,5], [6,7,8],
[0,3,6], [1,4,7], [2,5,8],
[0,4,8], [2,4,6]
];
winConditions.forEach(condition => {
const [a, b, c] = condition;
if (cells[a] && cells[a] === cells[b] && cells[a] === cells[c]) {
// Declare winner
}
});
}
```

Conclusion

This project served as a great way to strengthen core front-end skills and understand interactive web game logic using JavaScript.