```html
 <!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8" />
<meta name="viewport" content="width=device-width, initial-scale=1" />
<title>Tic Tac Toe - Player vs AI or Player vs Player</title>
<link
href="https://fonts.googleapis.com/css2?family=Inter:wght@400;700&display=swap
" rel="stylesheet" />
<style>
  /* Reset and base */
  * {
    box-sizing: border-box;
  }
  body {
    margin: 0;
    font-family: 'Inter', sans-serif;
    background: #f9fafb;
    color: #374151;
    display: flex;
    flex-direction: column;
    min-height: 100vh;
  }
  .container {
    max-width: 480px;
    margin: 40px auto 64px;
    padding: 0 24px;
    display: flex;
    flex-direction: column;
    align-items: center;
  }

  h1 {
    font-weight: 800;
    font-size: 2.75rem;
    margin-bottom: 8px;
    text-align: center;
    color: #111827;
  }
  p.subtitle {
    font-weight: 500;
    font-size: 1rem;
    color: #6b7280;
    margin-bottom: 32px;
    text-align: center;
  }

  /* Mode selection */
```

```css
.mode-select {
  display: flex;
  justify-content: center;
  gap: 20px;
  margin-bottom: 32px;
}
.mode-button {
  cursor: pointer;
  background-color: #e0e7ff;
  border-radius: 12px;
  border: 1.5px solid transparent;
  padding: 12px 28px;
  font-weight: 600;
  font-size: 1rem;
  color: #3730a3;
  transition: background-color 0.3s ease, border-color 0.3s ease;
  user-select: none;
  min-width: 160px;
  text-align: center;
}
.mode-button:hover,
.mode-button:focus {
  background-color: #c7d2fe;
  outline: none;
}
.mode-button.active {
  background-color: #3730a3;
  color: #fff;
  border-color: #4f46e5;
}

/* Game board */
.board {
  display: grid;
  grid-template-columns: repeat(3, 1fr);
  grid-gap: 12px;
  width: 100%;
  max-width: 480px;
  aspect-ratio: 1/1;
  background: #e0e7ff;
  padding: 12px;
  border-radius: 16px;
  box-shadow: 0 8px 16px rgb(59 130 246 / 0.15);
}
.cell {
  background-color: #fff;
  border-radius: 12px;
  box-shadow: 0 2px 5px rgb(0 0 0 / 0.1);
  font-size: 4.5rem;
  font-weight: 800;
  color: #4338ca;
  display: flex;
  justify-content: center;
  align-items: center;
  cursor: pointer;
  transition: background-color 0.1s ease;
  user-select: none;
}
.cell:focus-visible {
  outline: 3px solid #6366f1;
  outline-offset: -3px;
}
.cell:hover:not(.disabled):not(.winner) {
  background-color: #c7d2fe;
}
.cell.disabled {
  cursor: default;
  color: #9ca3af;
}
.cell.winner {
  color: #2563eb;
  background-color: #dbE0ff;
  box-shadow: 0 0 12px 3px #2563ebaa;
}

/* Info & buttons */
.info {
  margin: 32px 0 24px;
  font-size: 1.25rem;
  font-weight: 600;
  color: #1e3a8a;
  text-align: center;
  min-height: 1.5rem;
}
.btn-reset {
  background-color: #4338ca;
  border: none;
  padding: 14px 32px;
  border-radius: 12px;
  color: white;
  cursor: pointer;
  font-weight: 700;
  font-size: 1rem;
  transition: background-color 0.3s ease;
  user-select: none;
}
```

```
  .btn-reset:hover,
  .btn-reset:focus {
    background-color: #3730a3;
    outline: none;
  }

  /* Responsive */
  @media (max-width: 440px) {
    .mode-button {
      min-width: 140px;
      padding: 10px 20px;
      font-size: 0.9rem;
    }
    .cell {
      font-size: 3.5rem;
    }
  }

</style>
</head>
<body>
  <main class="container" role="main" aria-label="Tic Tac Toe Game">
    <h1>Tic Tac Toe</h1>
    <p class="subtitle">Play against another player or challenge the AI
opponent</p>

    <section class="mode-select" role="region" aria-label="Game Mode
Selection">
      <button id="mode-pvp" class="mode-button active" aria-pressed="true"
type="button">Player vs Player</button>
      <button id="mode-pvai" class="mode-button" aria-pressed="false"
type="button">Player vs AI</button>
    </section>

    <section class="board" role="grid" aria-label="Game Board" tabindex="0"
aria-live="polite">
      <!-- 9 cells: will be populated by JS -->
    </section>

    <div class="info" aria-live="assertive" aria-atomic="true" id="game-
status" role="status">Current Turn: Player X</div>

    <button class="btn-reset" id="reset-btn" type="button" aria-label="Reset
game">Restart Game</button>
  </main>

  <script>
    (() => {
```

```javascript
const boardElement = document.querySelector('.board');
const statusElement = document.getElementById('game-status');
const resetBtn = document.getElementById('reset-btn');
const modePvpBtn = document.getElementById('mode-pvp');
const modePvAiBtn = document.getElementById('mode-pvai');

// Game variables
let board = ['', '', '', '', '', '', '', '', ''];
let currentPlayer = 'X';
let gameActive = true;
let gameMode = 'pvp'; // 'pvp' or 'pvai'
let winnerIndices = [];

// Winning combinations
const winningCombos = [
  [0,1,2], [3,4,5], [6,7,8], // rows
  [0,3,6], [1,4,7], [2,5,8], // columns
  [0,4,8], [2,4,6]           // diagonals
];

// Initialize board in DOM
function createBoard() {
  boardElement.innerHTML = '';
  for(let i=0; i<9; i++) {
    const cell = document.createElement('button');
    cell.className = 'cell';
    cell.setAttribute('data-cell', i);
    cell.setAttribute('role', 'gridcell');
    cell.setAttribute('aria-label', `Cell ${i+1}`);
    cell.addEventListener('click', handleCellClick);
    cell.disabled = false;
    boardElement.appendChild(cell);
  }
}

// Update board UI for current board state
function updateBoard() {
  const cells = boardElement.querySelectorAll('.cell');
  cells.forEach((cell, idx) => {
    cell.textContent = board[idx];
    if (winnerIndices.includes(idx)) {
      cell.classList.add('winner');
    } else {
      cell.classList.remove('winner');
    }
    cell.disabled = !gameActive || board[idx] !== '';
    if (cell.disabled) {
      cell.classList.add('disabled');
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     } else {
      cell.classList.remove('disabled');
     }
    });
   }

   // Check for win or draw
   function checkGameOver() {
    winnerIndices = [];
    for (const combo of winningCombos) {
     const [a,b,c] = combo;
     if (board[a] && board[a] === board[b] && board[b] === board[c]) {
      winnerIndices = combo;
      return board[a];
     }
    }
    if (!board.includes('')) {
     return 'draw';
    }
    return null;
   }

   // Switch player
   function switchPlayer() {
    currentPlayer = currentPlayer === 'X' ? 'O' : 'X';
   }

   // AI move logic: simple - tries to win, block, else random empty cell
   function aiMove() {
    if (!gameActive) return;

    // Check if AI can win in next move
    for (const combo of winningCombos) {
     const marks = combo.map(i => board[i]);
     if (marks.filter(m => m === 'O').length === 2 && marks.includes(''))
{
      const move = combo[marks.indexOf('')];
      makeMove(move);
      return;
     }
    }
    // Check if AI needs to block player
    for (const combo of winningCombos) {
     const marks = combo.map(i => board[i]);
     if (marks.filter(m => m === 'X').length === 2 && marks.includes(''))
{
      const move = combo[marks.indexOf('')];
      makeMove(move);
```
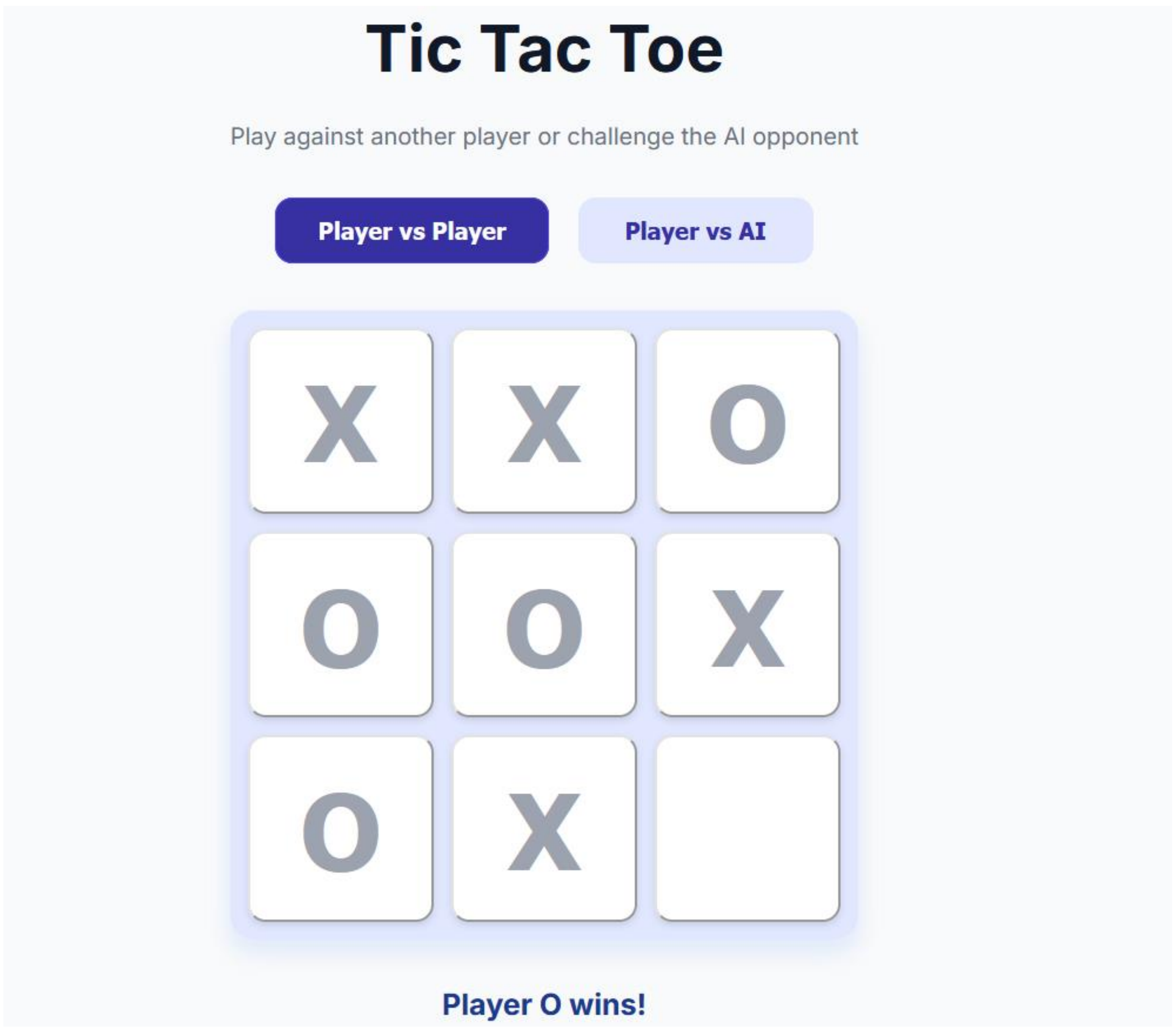

```
            return;
          }
        }
        // Otherwise, pick random empty cell
        const emptyIndices = board.flatMap((v,i)=>v === '' ? i : []);
        if (emptyIndices.length === 0) return;
        const move = emptyIndices[Math.floor(Math.random() *
emptyIndices.length)];
        makeMove(move);
      }

      // Make a move at the chosen cell index
      function makeMove(index) {
        if (!gameActive || board[index] !== '') return;
        board[index] = currentPlayer;
        updateBoard();
        const winner = checkGameOver();
        if (winner) {
          gameActive = false;
          if (winner === 'draw') {
            statusElement.textContent = 'Game ended in a draw.';
          } else {
            statusElement.textContent = `Player ${winner} wins!`;
          }
          return;
        }
        switchPlayer();
        statusElement.textContent = `Current Turn: Player ${currentPlayer}`;

        if (gameMode === 'pvai' && currentPlayer === 'O' && gameActive) {
          // Delay AI move for UX
          setTimeout(aiMove, 450);
        }
      }

      // Handle user click on cell
      function handleCellClick(e) {
        if (!gameActive) return;
        if (gameMode === 'pvai' && currentPlayer === 'O') return; // Ignore
user clicks on AI turn
        const index = Number(e.target.getAttribute('data-cell'));
        if (board[index] === '') {
          makeMove(index);
        }
      }

      // Reset game
      function resetGame() {
        board = ['', '', '', '', '', '', '', '', ''];
        currentPlayer = 'X';
        gameActive = true;
        winnerIndices = [];
        statusElement.textContent = 'Current Turn: Player X';
        updateBoard();
        // If AI starts first (optional), can trigger here
        if (gameMode === 'pvai' && currentPlayer === 'O') {
          setTimeout(aiMove, 350);
        }
      }

      // Switch mode between pvp and pvai
      function switchMode(mode) {
        if (mode === gameMode) return;
        gameMode = mode;
        if (mode === 'pvp') {
          modePvpBtn.classList.add('active');
          modePvAiBtn.classList.remove('active');
          modePvpBtn.setAttribute('aria-pressed', 'true');
          modePvAiBtn.setAttribute('aria-pressed', 'false');
        } else {
          modePvAiBtn.classList.add('active');
          modePvpBtn.classList.remove('active');
          modePvAiBtn.setAttribute('aria-pressed', 'true');
          modePvpBtn.setAttribute('aria-pressed', 'false');
        }
        resetGame();
      }

      // Initialize
      createBoard();
      updateBoard();

      // Event listeners
      resetBtn.addEventListener('click', resetGame);
      modePvpBtn.addEventListener('click', () => switchMode('pvp'));
      modePvAiBtn.addEventListener('click', () => switchMode('pvai'));

    })();
  </script>
</body>
</html>
```

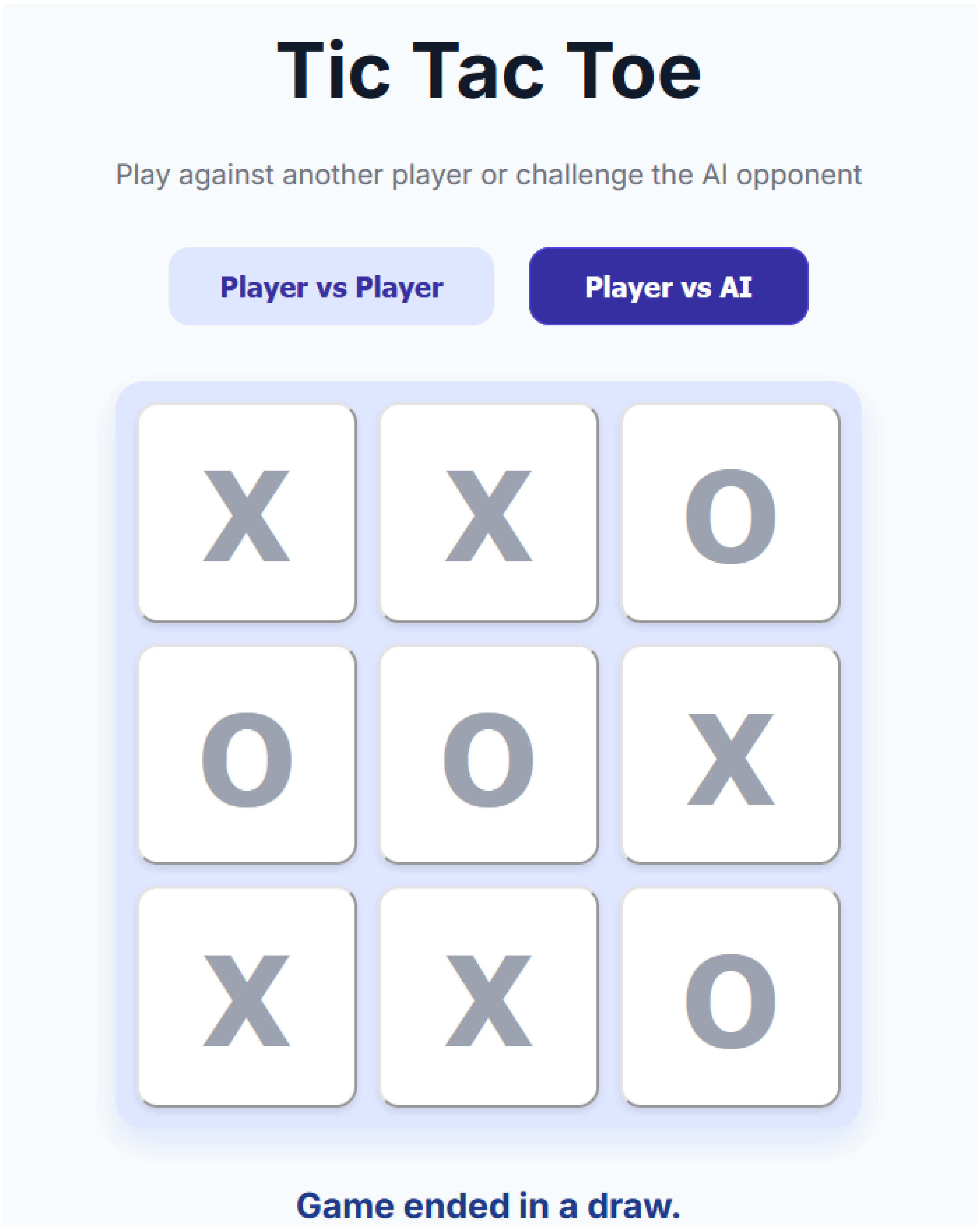


Tic Tac Toe

Play against another player or challenge the AI opponent

X	X	O
O	O	X
O	X	

Player O wins!



Tic Tac Toe

Play against another player or challenge the AI opponent

X	X	O
O	O	X
X	X	O

Game ended in a draw.