PRODIGY\_WD\_03

HTML CODE

HTML code

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8" />

  <title>Tic Tac Toe (Player vs AI)</title>

  <style>

    body {

      font-family: Arial, sans-serif;

      text-align: center;

      background-color: #f0f0f0;

    }

    h1 {

      margin-top: 20px;

    }

    #game {

      display: grid;

      grid-template-columns: repeat(3, 100px);

      gap: 5px;

      justify-content: center;

      margin-top: 20px;

    }

    .cell {

      width: 100px;

      height: 100px;

      font-size: 2.5rem;

      display: flex;

      align-items: center;

      justify-content: center;

      border: 2px solid #000;

      cursor: pointer;

      user-select: none;

      background-color: #fff;

      color: black;

    }

    .cell.x {

      background-color: red;

      color: black;

    }

    .cell.o {

      background-color: blue;

      color: black;

    }

    .hidden {

      display: none;

    }

    #winning-message {

      margin-top: 20px;

    }

  </style>

</head>

<body>

  <h1>Tic-Tac-Toe (vs AI)</h1>

  <div id="game">

    <div class="cell" data-index="0"></div>

    <div class="cell" data-index="1"></div>

    <div class="cell" data-index="2"></div>

    <div class="cell" data-index="3"></div>

    <div class="cell" data-index="4"></div>

    <div class="cell" data-index="5"></div>

    <div class="cell" data-index="6"></div>

    <div class="cell" data-index="7"></div>

    <div class="cell" data-index="8"></div>

  </div>

  <div id="winning-message" class="hidden">

    <p id="message-text"></p>

    <button onclick="startGame()">Restart Game</button>

  </div>

  <script>

    const cells = document.querySelectorAll('.cell');

    const messageBox = document.getElementById('winning-message');

    const messageText = document.getElementById('message-text');

    const WIN\_COMBOS = [

      [0,1,2], [3,4,5], [6,7,8],

      [0,3,6], [1,4,7], [2,5,8],

      [0,4,8], [2,4,6]

    ];

    let board = Array(9).fill('');

    let player = 'X';

    let ai = 'O';

    let gameOver = false;

    function startGame() {

      board = Array(9).fill('');

      gameOver = false;

      messageBox.classList.add('hidden');

      cells.forEach(cell => {

        cell.textContent = '';

        cell.className = 'cell';

        cell.addEventListener('click', handleClick, { once: true });

      });

    }

    function handleClick(e) {

      const index = e.target.getAttribute('data-index');

      if (gameOver || board[index]) return;

      makeMove(index, player);

      if (!gameOver) {

        setTimeout(aiMove, 400);

      }

    }

    function makeMove(index, currentPlayer) {

      board[index] = currentPlayer;

      const cell = cells[index];

      cell.textContent = currentPlayer;

      cell.classList.add(currentPlayer.toLowerCase());

      if (checkWin(currentPlayer)) {

        endGame(false, currentPlayer);

      } else if (board.every(cell => cell)) {

        endGame(true);

      }

    }

    function aiMove() {

      const emptyIndices = board.map((val, i) => val === '' ? i : null).filter(i => i !== null);

      const move = emptyIndices[Math.floor(Math.random() \* emptyIndices.length)];

      if (move !== undefined) {

        makeMove(move, ai);

      }

    }

    function checkWin(currentPlayer) {

      return WIN\_COMBOS.some(combo => combo.every(i => board[i] === currentPlayer));

    }

    function endGame(draw, winner = '') {

      gameOver = true;

      messageText.textContent = draw ? "It's a Draw!" : `${winner} Wins!`;

      messageBox.classList.remove('hidden');

    }

    startGame();

  </script>

</body>

</html>

OUTPUT

