<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8" />

<meta name="viewport" content="width=device-width, initial-scale=1.0"/>

<title>EEESeaBoat Control Panel</title>

<link href="https://fonts.googleapis.com/css2?family=Inter:wght@400;600&display=swap" rel="stylesheet">

<style>

:root {

--accent: #3A86FF;

--bg: #0b0c10;

--card-bg: #1f2937;

--text: #f8f8f2;

--muted: #9ca3af;

--border: #374151;

--highlight: #00ffcc;

}

\* {

box-sizing: border-box;

margin: 0;

padding: 0;

}

body {

font-family: 'Inter', sans-serif;

background-color: var(--bg);

color: var(--text);

padding: 40px 20px;

}

h1 {

font-size: 2.5rem;

text-align: center;

margin-bottom: 40px;

color: var(--highlight);

}

.dashboard {

max-width: 1200px;

margin: auto;

display: grid;

grid-template-columns: repeat(auto-fit, minmax(320px, 1fr));

gap: 30px;

}

.card {

background-color: var(--card-bg);

border: 1px solid var(--border);

border-radius: 16px;

padding: 20px;

box-shadow: 0 4px 14px rgba(0,0,0,0.4);

display: flex;

flex-direction: column;

gap: 15px;

}

.card h2 {

font-size: 1.2rem;

color: var(--highlight);

}

.btn {

padding: 12px 20px;

border: none;

border-radius: 10px;

background: linear-gradient(90deg, var(--accent), var(--highlight));

color: #000;

font-weight: bold;

font-size: 1rem;

cursor: pointer;

transition: transform 0.2s ease;

}

.btn:hover {

transform: scale(1.05);

}

.status, .result {

padding: 12px;

background-color: #111827;

border: 1px solid var(--border);

border-radius: 8px;

font-weight: 600;

text-align: center;

}

.sensor-group {

display: flex;

justify-content: space-between;

align-items: center;

}

.sensor-label {

font-weight: 600;

}

.sensor-input {

width: 100px;

padding: 8px;

text-align: center;

border: none;

border-radius: 6px;

background-color: var(--bg);

color: var(--highlight);

font-weight: bold;

}

.duck-table {

width: 100%;

border-collapse: collapse;

font-size: 0.95rem;

margin-top: 20px;

}

.duck-table th, .duck-table td {

padding: 10px;

border-bottom: 1px solid var(--border);

}

.duck-table th {

text-align: left;

color: var(--muted);

}

.result {

font-size: 1.2rem;

color: var(--highlight);

margin-top: 20px;

}

.controls {

text-align: center;

margin-top: 40px;

}

.controls p {

margin-bottom: 10px;

}

.key-hint {

display: inline-block;

margin: 5px;

padding: 10px 20px;

background-color: var(--card-bg);

border: 1px solid var(--border);

border-radius: 8px;

font-weight: bold;

color: var(--highlight);

}

</style>

</head>

<body>

<h1>EEESeaBoat Control Panel</h1>

<div class="dashboard">

<div class="card">

<h2>LED Control</h2>

<button class="btn" onclick="ledOn()">Turn LED On</button>

<button class="btn" onclick="ledOff()">Turn LED Off</button>

<div class="status" id="ledStatus">LED is OFF</div>

</div>

<div class="card">

<h2>Ultrasonic Duck Name</h2>

<div class="sensor-group">

<label class="sensor-label" for="ultrasonicInput">UART Input:</label>

<input class="sensor-input" type="text" id="ultrasonicInput" maxlength="4" oninput="updateDuckName()">

</div>

<div class="result" id="duckName">Name: N/A</div>

</div>

<div class="card">

<h2>Species Detection</h2>

<div class="sensor-group">

<label class="sensor-label">Infrared (Hz):</label>

<input class="sensor-input" id="irInput" type="number" oninput="updateSpecies()">

</div>

<div class="sensor-group">

<label class="sensor-label">Radio (Hz):</label>

<input class="sensor-input" id="radioInput" type="number" oninput="updateSpecies()">

</div>

<div class="sensor-group">

<label class="sensor-label">Magnetic:</label>

<input class="sensor-input" id="magnetInput" type="text" placeholder="up/down" oninput="updateSpecies()">

</div>

<div class="status" id="irStatus">IR: N/A</div>

<div class="status" id="radioStatus">RF: N/A</div>

<div class="status" id="magnetStatus">Polarity: N/A</div>

<div class="result" id="speciesResult">Detected Species: Unknown</div>

<table class="duck-table">

<thead>

<tr>

<th>IR (Hz)</th>

<th>RF (Hz)</th>

<th>Polarity</th>

<th>Species</th>

</tr>

</thead>

<tbody>

<tr><td>457</td><td>-</td><td>down</td><td>Wibbo</td></tr>

<tr><td>-</td><td>100</td><td>down</td><td>Gribbit</td></tr>

<tr><td>293</td><td>-</td><td>up</td><td>Snorkle</td></tr>

<tr><td>-</td><td>150</td><td>up</td><td>Zapple</td></tr>

</tbody>

</table>

</div>

</div>

<div class="controls">

<h2>Rover Movement Controls</h2>

<p>Use <span class="key-hint">W</span> <span class="key-hint">A</span> <span class="key-hint">S</span> <span class="key-hint">D</span> to move the rover.</p>

<div class="status" id="moveStatus">Awaiting Command...</div>

</div>

<script>

function ledOn() {

document.getElementById("ledStatus").textContent = "LED is ON";

}

function ledOff() {

document.getElementById("ledStatus").textContent = "LED is OFF";

}

function updateDuckName() {

const val = document.getElementById("ultrasonicInput").value;

document.getElementById("duckName").textContent = val.length === 4 ? `Name: ${val}` : "Name: N/A";

}

function updateSpecies() {

const ir = parseInt(document.getElementById("irInput").value);

const rf = parseInt(document.getElementById("radioInput").value);

const mag = document.getElementById("magnetInput").value.trim().toLowerCase();

let species = "Unknown";

if (ir === 457 && mag === "down") species = "Wibbo";

else if (rf === 100 && mag === "down") species = "Gribbit";

else if (ir === 293 && mag === "up") species = "Snorkle";

else if (rf === 150 && mag === "up") species = "Zapple";

document.getElementById("irStatus").textContent = ir ? `IR: ${ir} Hz` : "IR: N/A";

document.getElementById("radioStatus").textContent = rf ? `RF: ${rf} Hz` : "RF: N/A";

document.getElementById("magnetStatus").textContent = `Polarity: ${mag || "N/A"}`;

document.getElementById("speciesResult").textContent = `Detected Species: ${species}`;

}

document.addEventListener("keydown", function(e) {

let statusText;

switch(e.key.toLowerCase()) {

case 'w': statusText = "Moving Forward"; break;

case 'a': statusText = "Turning Left"; break;

case 's': statusText = "Moving Backward"; break;

case 'd': statusText = "Turning Right"; break;

default: return;

}

document.getElementById("moveStatus").textContent = statusText;

});

</script>

</body>

</html>