<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Dynamic Disease Prediction</title>

    <style>

        body {

            font-family: sans-serif;

            margin: 20px;

            background-color: #f4f4f4;

        }

        .container {

            background-color: #fff;

            padding: 30px;

            border-radius: 8px;

            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

        }

        h1, h2 {

            color: #333;

        }

        .input-group {

            margin-bottom: 15px;

        }

        label {

            display: block;

            margin-bottom: 5px;

            font-weight: bold;

        }

        input[type="number"], select {

            width: 100%;

            padding: 8px;

            border: 1px solid #ddd;

            border-radius: 4px;

            box-sizing: border-box;

        }

        button {

            padding: 10px 15px;

            background-color: #007bff;

            color: white;

            border: none;

            border-radius: 4px;

            cursor: pointer;

            font-size: 16px;

        }

        button:hover {

            background-color: #0056b3;

        }

        #prediction-output {

            margin-top: 20px;

            padding: 15px;

            border: 1px solid #ddd;

            border-radius: 4px;

            background-color: #f9f9f9;

        }

        .high-risk {

            background-color: #ffe0e0;

            color: #d32f2f;

        }

        .low-risk {

            background-color: #e0ffe0;

            color: #388e3c;

        }

        .probability {

            font-weight: bold;

            margin-top: 10px;

        }

    </style>

</head>

<body>

    <div class="container">

        <h1>Dynamic Disease Prediction</h1>

        <div class="input-group">

            <label for="age">Age:</label>

            <input type="number" id="age" name="age" required>

        </div>

        <div class="input-group">

            <label for="blood\_pressure">Blood Pressure (mmHg):</label>

            <input type="number" id="blood\_pressure" name="blood\_pressure" required>

        </div>

        <div class="input-group">

            <label for="cholesterol">Cholesterol (mg/dL):</label>

            <input type="number" id="cholesterol" name="cholesterol" required>

        </div>

        <div class="input-group">

            <label for="blood\_sugar">Blood Sugar (mg/dL):</label>

            <input type="number" id="blood\_sugar" name="blood\_sugar" required>

        </div>

        <div class="input-group">

            <label for="has\_fever">Fever:</label>

            <select id="has\_fever" name="has\_fever">

                <option value="0">No</option>

                <option value="1">Yes</option>

            </select>

        </div>

        <button onclick="predictDisease()">Predict Disease</button>

        <div id="prediction-output" style="display: none;">

            <h2>Prediction Result</h2>

            <p><strong>Predicted Disease:</strong><span id="predicted-disease"></span></p>

            <p><strong>Probability:</strong><span id="prediction-probability"></span>%</p>

            <p id="prediction-explanation"></p>

        </div>

    </div>

    <script>

        const ageInput = document.getElementById('age');

        const bloodPressureInput = document.getElementById('blood\_pressure');

        const cholesterolInput = document.getElementById('cholesterol');

        const bloodSugarInput = document.getElementById('blood\_sugar');

        const hasFeverSelect = document.getElementById('has\_fever');

        const predictionOutputDiv = document.getElementById('prediction-output');

        const predictedDiseaseSpan = document.getElementById('predicted-disease');

        const predictionProbabilitySpan = document.getElementById('prediction-probability');

        const predictionExplanationParagraph = document.getElementById('prediction-explanation');

        function predictDisease() {

            const age = parseInt(ageInput.value);

            const bloodPressure = parseInt(bloodPressureInput.value);

            const cholesterol = parseInt(cholesterolInput.value);

            const bloodSugar = parseInt(bloodSugarInput.value);

            const hasFever = parseInt(hasFeverSelect.value);

            // Simulate AI model prediction to get a specific disease

            const prediction = simulateDiseasePrediction(age, bloodPressure, cholesterol, bloodSugar, hasFever);

            // Update the output area

            predictedDiseaseSpan.textContent = prediction.disease;

            predictionProbabilitySpan.textContent = (prediction.probability \* 100).toFixed(2);

            predictionExplanationParagraph.textContent = prediction.explanation;

            // Apply styling (you can customize this based on the predicted disease)

            predictionOutputDiv.className = '';

            predictionOutputDiv.classList.add('prediction-output');

            if (prediction.probability > 0.7) {

                predictionOutputDiv.classList.add('high-risk');

            } else if (prediction.probability > 0.4) {

                // You can add a 'moderate-risk' class if needed

            } else {

                predictionOutputDiv.classList.add('low-risk');

            }

            // Show the output div

            predictionOutputDiv.style.display = 'block';

        }

        // This is a highly simplified simulation of disease prediction.

        // A real AI model would involve complex algorithms and much more data.

        function simulateDiseasePrediction(age, bloodPressure, cholesterol, bloodSugar, hasFever) {

            let disease = "No specific disease predicted (low risk)";

            let probability = 0.2;

            let explanation = "Based on the provided data, the indicators do not strongly suggest a specific disease.";

            if (bloodPressure > 150 && cholesterol > 250 && age > 60) {

                disease = "Possible Cardiovascular Disease";

                probability = 0.8;

                explanation = "The combination of high blood pressure, high cholesterol, and older age suggests a higher likelihood of cardiovascular disease.";

            } else if (bloodSugar > 180 && age > 45 && hasFever === 0) {

                disease = "Possible Type 2 Diabetes";

                probability = 0.7;

                explanation = "Elevated blood sugar and age over 45, without fever, could indicate a risk of Type 2 Diabetes.";

            } else if (hasFever === 1 && bloodPressure < 120 && age < 35) {

                disease = "Possible Viral Infection";

                probability = 0.6;

                explanation = "Fever and lower blood pressure in a younger individual might suggest a viral infection.";

            } else if (cholesterol > 280 && age < 50) {

                disease = "Possible Hyperlipidemia";

                probability = 0.5;

                explanation = "Very high cholesterol in a younger individual could indicate hyperlipidemia.";

            }

            return {

                disease: disease,

                probability: probability,

                explanation: explanation

            };

        }

    </script>

</body>

</html>