Voice + video heart disease

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<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Heart Disease Detection</title>
  <link rel="stylesheet" href="style.css">
  <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
</head>
<body>
  <div class="container">
    <h1>Heart Disease Detection App</h1>

    <!-- Login Form -->
    <form id="loginForm">
      <label for="username">Name:</label>
      <input type="text" id="username" required>

      <label for="password">Password:</label>
      <input type="password" id="password" required>

      <button type="submit">Login</button>
    </form>

    <!-- Health Data Form -->
    <div id="healthForm" class="hidden">
      <h2>Enter Health Data</h2>

      <label for="age">Age:</label>
      <input type="number" id="age" required>
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<label for="height">Height (cm):</label>
<input type="number" id="height" required>

<label for="weight">Weight (kg):</label>
<input type="number" id="weight" required>

<label for="heartRate">Resting Heart Rate:</label>
<input type="number" id="heartRate" required>

<label for="maxHR">Maximum Heart Rate Achieved:</label>
<input type="number" id="maxHR" required>

<label for="bloodPressure">Blood Pressure (mmHg):</label>
<input type="number" id="bloodPressure" required>

<label for="cholesterol">Cholesterol Level (mg/dL):</label>
<input type="number" id="cholesterol" required>

<label for="smoking">Smoking History:</label>
<select id="smoking">
  <option value="0">Non-Smoker</option>
  <option value="1">Current Smoker</option>
  <option value="2">Ex-Smoker</option>
</select>

<label for="familyHistory">Family History of Heart Disease:</label>
<select id="familyHistory">
  <option value="0">No</option>
  <option value="1">Yes</option>
</select>
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      <label for="voiceAnalysis">Voice-Based Heart Disease Detection:</label>
      <button id="startVoiceRecognition">Start Voice Analysis (5 sec)</button>
      <p id="voiceResult"></p>

      <!-- Eye Image Capture -->
      <div id="eyeCaptureContainer">
        <h3>Real-Time Eye Image Capture</h3>
        <video id="video" width="320" height="240" autoplay></video>
        <button id="captureButton">Capture Eye Image</button>
        <canvas id="canvas" width="320" height="240" class="hidden"></canvas>
        <img id="capturedImage" class="hidden" />
        <p id="eyeAnalysisResult"></p>
      </div>

      <button onclick="detectHeartDisease()">Detect Heart Disease</button>
      <button id="graphButton" class="hidden" onclick="showGraph()">Show Graph</button>
      <p id="result"></p>
    </div>

    <!-- Graph Container -->
    <div id="graphContainer" class="hidden">
      <canvas id="riskChart" width="400" height="400"></canvas>
    </div>
  </div>

  <script src="script.js"></script>
</body>
</html>
```

…….

Css

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document.getElementById('loginForm').addEventListener('submit', function (e) {
    e.preventDefault();
    const username = document.getElementById('username').value;
    const password = document.getElementById('password').value;

    if (password === 'kavita@123#') {
        document.getElementById('loginForm').classList.add('hidden');
        document.getElementById('healthForm').classList.remove('hidden');
    } else {
        alert('Incorrect password! Please try again.');
    }
});

// ✅ Voice Analysis (Using Audio Frequency)
document.getElementById('startVoiceRecognition').addEventListener('click', async function () {
    let audioContext = new (window.AudioContext || window.webkitAudioContext)();
    let analyser = audioContext.createAnalyser();
    analyser.fftSize = 512;

    navigator.mediaDevices.getUserMedia({ audio: true })
        .then(stream => {
            let source = audioContext.createMediaStreamSource(stream);
            source.connect(analyser);
            let dataArray = new Uint8Array(analyser.frequencyBinCount);

            setTimeout(() => {
                analyser.getByteFrequencyData(dataArray);
                let avgPitch = dataArray.reduce((a, b) => a + b, 0) / dataArray.length;

                let voiceResult = (avgPitch < 80) ? "⚠️ Possible Heart Disease" : "✅ No Heart Disease";
                document.getElementById('voiceResult').textContent = voiceResult;
                // ✅ Auto-update detection result
                detectHeartDisease();
            }, 5000);
        })
        .catch(error => {
            console.error("Microphone access error: ", error);
            alert("Failed to access the microphone. Please check your permissions.");
        });
});

// ✅ Ensure the camera starts properly
const video = document.getElementById('video');
const canvas = document.getElementById('canvas');
const captureButton = document.getElementById('captureButton');
const capturedImage = document.getElementById('capturedImage');

// ✅ Start the camera when the page loads
navigator.mediaDevices.getUserMedia({ video: true })
    .then(stream => {
        video.srcObject = stream;
        video.play();  // Ensure the video starts
    })
    .catch(error => {
        console.error("Camera access error: ", error);
        alert("Failed to access the camera. Please check your permissions.");
    });

// ✅ Capture and process the eye image
captureButton.addEventListener('click', function () {
    const context = canvas.getContext('2d');
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});


    // ✅ Capture the current frame from the video
    context.drawImage(video, 0, 0, canvas.width, canvas.height);

    // ✅ Convert canvas to image and display it
    let imageUrl = canvas.toDataURL("image/png");
    capturedImage.src = imageUrl;
    capturedImage.classList.remove('hidden');

    // ✅ Analyze Eye Color for Disease Detection
    let imgData = context.getImageData(0, 0, canvas.width, canvas.height);
    let colorSum = 0;

    for (let i = 0; i < imgData.data.length; i += 4) {
        let r = imgData.data[i];     // Red
        let g = imgData.data[i + 1]; // Green
        let b = imgData.data[i + 2]; // Blue
        let avgPixel = (r + g + b) / 3;
        colorSum += avgPixel;
    }

    let avgColor = colorSum / (imgData.data.length / 4); // Normalize avg color
    let eyeResult = (avgColor < 100) ? "⚠️ Possible Heart Disease" : "✅ Eye looks normal";
    document.getElementById('eyeAnalysisResult').textContent = eyeResult;

    // ✅ Auto-update disease detection
    detectHeartDisease();
});

// ✅ Heart Disease Detection (Matching Voice & Eye Analysis)
function detectHeartDisease() {
    let voiceResult = document.getElementById('voiceResult').textContent;
    let eyeResult = document.getElementById('eyeAnalysisResult').textContent;
    let resultText = "✅ Your heart health looks normal.";

    // ✅ Ensuring both results match
    if (voiceResult.includes("Heart Disease") && eyeResult.includes("Heart Disease")) {
        resultText = "⚠️ High Risk: Possible Heart Disease";
    } else if (voiceResult.includes("Heart Disease") || eyeResult.includes("Heart Disease")) {
        resultText = "⚠️ Medium Risk: Possible Heart Issue";
    }

    document.getElementById('result').textContent = resultText;
}

// ✅ Graph for Health Metrics
function showGraph() {
    new Chart(document.getElementById('riskChart').getContext('2d'), {
        type: 'bar',
        data: {
            labels: ["Heart Rate", "Blood Pressure", "Cholesterol"],
            datasets: [{ label: "Metrics", data: [80, 120, 200] }]
        }
    });
}
```