Updated Roadmap (with HTML, CSS, JS + PHP + MySQL)

Got it ✅ — the roadmap below expands the backend + database + PHP flow to include exactly where HTML, CSS, and JavaScript fit and what to build.

# Phase 1: Setup & Planning

Create project folder:

attendance\_system/  
 ├── index.php  
 ├── login.php  
 ├── register.php  
 ├── dashboard.php  
 ├── create\_session.php  
 ├── scan.php  
 ├── reports.php  
 ├── css/  
 ├── js/  
 ├── qrcodes/  
 └── includes/ (db.php, auth.php, etc.)

Add `css/` for styling and `js/` for front-end logic.

# Phase 2: Frontend (HTML, CSS, JS)

## 1. Login & Registration Pages

• HTML: `login.php` and `register.php` forms.

• CSS: Style with Flexbox/Grid for centered forms.

• JS: Add form validation (e.g., check if email format is valid before submitting).

Example Login Form (HTML + CSS):

<form method="POST" action="login.php" class="login-form">  
 <h2>Login</h2>  
 <input type="email" name="email" placeholder="Email" required>  
 <input type="password" name="password" placeholder="Password" required>  
 <button type="submit">Login</button>  
</form>  
  
<style>  
 .login-form {   
 width: 300px; margin: auto; padding: 20px;  
 border: 1px solid #ddd; border-radius: 8px;  
 display: flex; flex-direction: column; gap: 10px;  
 }  
</style>

## 2. Teacher Dashboard

• HTML: `dashboard.php` → navigation bar (Create Session | Reports | Logout).

• CSS: Use a grid layout for cards (Upcoming Sessions, Recent Attendance, etc.).

• JS: Add dynamic charts for attendance (use Chart.js).

Example Teacher Dashboard Card:

<div class="card">  
 <h3>Total Students Today</h3>  
 <p id="studentCount">25</p>  
</div>

## 3. Create Session + QR Code

• HTML: `create\_session.php` form → choose class, date, start/end time.

• CSS: Style the form.

• PHP: On submit, generate QR code.

• JS: Validate that end time > start time before submitting.

## 4. Student Attendance (QR Scanning)

• HTML: `scan.php` → button “Scan QR Code”.

• JS: Use JavaScript QR Scanner library (`html5-qrcode`). Example:

<div id="reader"></div>  
<script src="https://unpkg.com/html5-qrcode/minified/html5-qrcode.min.js"></script>  
<script>  
 function onScanSuccess(decodedText) {  
 window.location.href = "attendance.php?session=" + decodedText;  
 }  
 new Html5QrcodeScanner("reader", { fps: 10, qrbox: 250 })  
 .render(onScanSuccess);  
</script>

• CSS: Make scanner area centered and neat.

## 5. Reports & Analytics

• HTML: `reports.php` → dropdown filters (class, date, student).

• PHP: Fetch data from DB with queries.

• JS: Use Chart.js to display graphs.

• Example: Bar chart of attendance per session.

<canvas id="attendanceChart"></canvas>  
<script src="https://cdn.jsdelivr.net/npm/chart.js"></script>  
<script>  
 const ctx = document.getElementById('attendanceChart');  
 new Chart(ctx, {  
 type: 'bar',  
 data: {  
 labels: ['Session 1', 'Session 2', 'Session 3'],  
 datasets: [{ label: 'Attendance', data: [20, 18, 25] }]  
 }  
 });  
</script>

# Phase 3: Backend (PHP + MySQL)

• Handles login, session creation, saving attendance, generating reports.

• Connect using `db.php`:

<?php  
$conn = new mysqli("localhost", "root", "", "attendance\_system");  
if ($conn->connect\_error) die("Connection failed: " . $conn->connect\_error);  
?>

# Phase 4: Testing

• Test form validation (JS).

• Test QR scan on desktop + phone.

• Test reports load with different filters.

# Phase 5: Polishing

• Add animations/transitions with CSS.

• Make it mobile responsive (Bootstrap/Tailwind CSS).

• Add JavaScript alerts/notifications for better UX.

✅ Final Deliverable:

• Frontend (HTML, CSS, JS): Pages for login, dashboard, create session, QR scan, reports.

• Backend (PHP): Login/authentication, QR generation, attendance saving, report queries.

• Database (MySQL): Users, Classes, Sessions, Attendance.

👉 Would you like me to map out exactly which files to create and what code each should contain (like a full file-by-file structure with example snippets), so you can follow it step by step when coding?