Sure! Let's break down the PHP-based **Admin Dashboard** code for your Campus Management System step-by-step. This file is named something like dashboardadmin.php. It provides role-based access, loads data from the database, displays summary cards, and visualizes data using **Chart.js**.

**🔒 1. Access Control and Data Loading**

session\_start();

include 'auth.php';

checkRole('admin');

include 'db\_connect.php';

* session\_start() starts the session to access login data.
* auth.php is included to use the checkRole() function.
* checkRole('admin') ensures only admins can access this page.
* db\_connect.php connects to the database.

**📊 Data Queries**

$total\_students = $conn->query("SELECT COUNT(\*) AS total FROM students")->fetch\_assoc()['total'];

Similar queries for courses, exams, fees (paid/due), and attendance:

* COUNT(\*) gets the total number of records.
* fetch\_assoc() gets the result as an associative array.
* The data is saved in variables for dynamic use in HTML.

**🌐 2. HTML Structure**

**<head> Section**

<link rel="stylesheet" href="admin\_dashboard.css">

* External CSS file for styling
* Bootstrap & FontAwesome are loaded from CDNs
* Chart.js for graphs

**📱 3. Sidebar Toggle Button (Mobile)**

<button class="btn btn-outline-primary m-3 d-md-none" id="toggleSidebar">

* Only visible on small screens (d-md-none)
* Triggers JS to show/hide sidebar

**📚 4. Sidebar Navigation**

<div class="sidebar" id="sidebarMenu">

<img src="../images/logo.jpg" alt="IPHS Logo" class="logo">

<a href="../index.php"><i class="fas fa-home"></i> Home</a>

...

</div>

* Fixed vertical menu with links
* Icon with each link using Font Awesome

**🧩 5. Main Dashboard Content**

<div class="content">

<h2>Admin Dashboard</h2>

...

</div>

This section includes:

**📌 Summary Cards**

<div class="card bg-primary text-white p-4">

<h4><i class="fas fa-users"></i> Total Students</h4>

<h2><?= $total\_students; ?></h2>

</div>

* Bootstrap card components with background colors
* Icons and dynamic PHP values displayed

**📈 6. Chart Section**

<canvas id="studentChart"></canvas>

<canvas id="feesChart"></canvas>

These <canvas> elements render charts via Chart.js.

**📊 7. JavaScript (Chart.js + Interactivity)**

var studentChart = new Chart(ctx1, {

type: "doughnut",

data: {

labels: ["Total Students", "Total Courses", "Total Exams"],

datasets: [{ data: [...] }]

}

});

* Chart() initializes a **doughnut chart**
* Dynamically fills data from PHP variables using <?= ?>

**🌓 Dark Mode Toggle**

document.getElementById("darkToggle").addEventListener("click", function () {

document.body.classList.toggle("dark-mode");

});

Toggles the dark-mode class on the <body> to change themes (styled via CSS).

**📂 8. External Files**

* admin\_dashboard.css: Holds the main styles (sidebar, cards, dark mode, responsiveness).
* db\_connect.php: Database connection.
* auth.php: User authentication and role check.
* ../footer.php: Likely adds the common footer.

**✅ Summary**

| **Feature** | **Description** |
| --- | --- |
| **Role Restriction** | Only admin users can view this page |
| **Data Summary** | Shows total students, courses, exams, etc. |
| **Responsive UI** | Sidebar collapses on smaller screens |
| **Charts** | Visualizes student and fee data |
| **Dark Mode** | Toggle with one button |
| **Modular** | Uses external CSS, JS, DB, auth, and footer files |

Let me know if you'd like me to:

* Refactor this into components
* Add tooltips to graphs
* Make it work offline (PWA-style)
* Enhance accessibility / SEO

Or anything else you have in mind!