

University class table system

Project ID: WP4

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Introduction

The web-based University Schedule Management System functions as a tool to make university schedule management simpler. The system features both an administrator dashboard to control courses and rooms while creating timetables plus a student portal to display personal class schedules. The administrative dashboard lets users handle resources effectively which produces schedules that avoid clashes and are correct. The system presents each student's schedule through a simple interface that matches what they are taking.

The system operates through PHP backend functions with MySQL database management and presents user content using HTML CSS and JavaScript. The platform solves room conflicts and course overlaps while providing a secure and expandable system for university scheduling needs. With user authentication the system safeguards personal information and gives access permission based on user roles. The system proves how we can boost both university staff productivity and student satisfaction through design.

Technical Decisions

The development of the University Schedule Management System involved several key technical decisions to ensure the system's functionality, scalability, and security:

Core Functionalities

Room Management:

The system allows administrators to build new rooms modify existing room details and remove outdated room information.

Rooms have essential features like ID, location, floor level, maximum guests, plus special equipment like projectors and whiteboards with wheelchair access.

Home View Schedule Admin Dashboard									
Manage Rooms									
Add New Room									
Room Number	Building	Floor	Capacity	Room Type	Projector	Whiteboard	Computer	Accessible	Actions
101	Science Building	1	50	lecture_hall	Yes	Yes	No	Yes	Edit Delete
202	Arts Building	2	30	classroom	No	Yes	No	Yes	Edit Delete
303	Technology Building	3	25	lab	Yes	Yes	Yes	No	Edit Delete
404	Seminar Hall	4	100	seminar_room	Yes	Yes	No	Yes	Edit Delete

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Figure 1: Room management

Course Management:

Administrators control courses through their entry of identification information such as code, name, description, credits, and either undergraduate or graduate options.

Home View Schedule Admin Dashboard					
Manage Courses					
Add New Course					
Course Code	Course Name	Description	Credits	Level	Actions
CS101	Introduction to Programming	Learn the basics of programming using Python	3	undergraduate	Edit Delete
CS201	Data Structures	Study various data structures and their applications	4	undergraduate	Edit Delete
HIS101	World History	Overview of world history from ancient to modern times	3	undergraduate	Edit Delete
LIT201	Modern Literature	Explore literature from the 20th century onward	3	graduate	Edit Delete

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Figure 2: Course Management

Timetable Management:

Staff members have full control to make and change all schedule entries in the system.

The timetable links together pieces of information about courses, teaching spaces, instructors, and available time periods.

Home View Schedule Admin Dashboard							
Manage Timetables							
Add New Timetable							
Course ID	Instructor ID	Room	Day	Time	Start Date	End Date	Actions
1	2	101 (Science Building)	Monday	09:00:00 - 10:30:00	2025-09-01	2025-12-15	Edit Delete
2	3	202 (Arts Building)	Tuesday	11:00:00 - 12:30:00	2025-09-01	2025-12-15	Edit Delete
3	2	303 (Technology Building)	Thursday	14:00:00 - 15:30:00	2025-09-01	2025-12-15	Edit Delete

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Figure 3: Timetable management page

Development Environment:

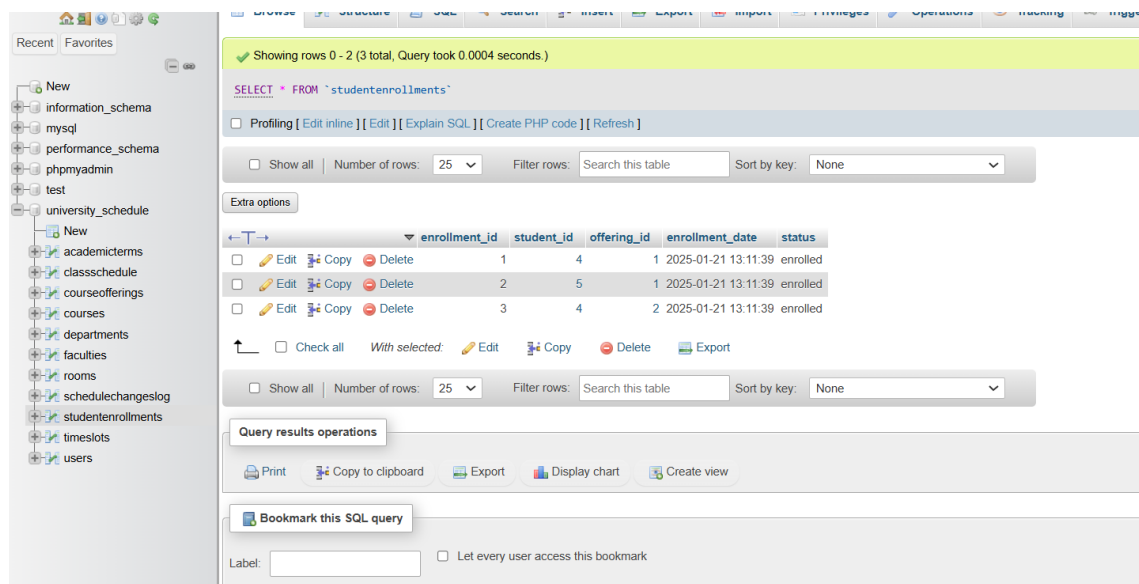


Figure 4: database tables in Xampp

I used XAMPP to build and test the system at the development stage.

I set up three important project areas (admin, student, assets) to simplify management and allow growth over time.

The platform choices resulted in a platform that delivers strong performance benefits alongside accessible features for universities and their students.

Database

MySQL: The database includes all data for users, their courses, rooms, timetable information, and associated data points.

Key Tables:

Rooms: Apps the data storage function for room specifications and qualities.

Courses: Manages course data.

Class Schedule: Creates links between courses and their corresponding rooms plus time assignments.

Student Enrollments: The system stores which students take which courses.

Authentication System:

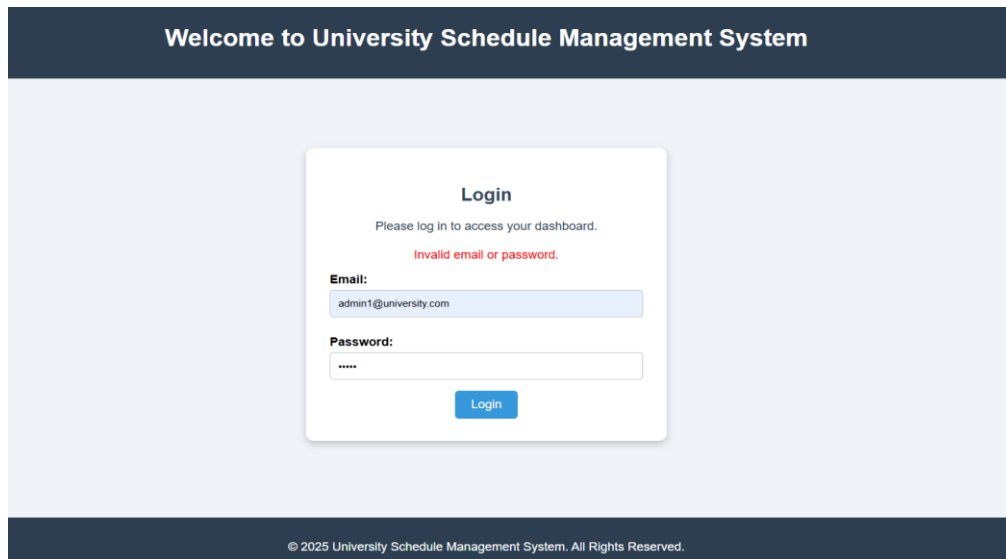
The image shows a web application interface for a "University Schedule Management System". At the top, a dark blue header bar contains the text "Welcome to University Schedule Management System" in white. Below this, the main content area has a light blue background. In the center, there is a white login form with a subtle drop shadow. The form is titled "Login" and includes the instruction "Please log in to access your dashboard." Below this, a red error message "Invalid email or password." is displayed. The form contains two input fields: "Email:" with the value "admin1@university.com" and "Password:" with masked characters "*****". A blue "Login" button is positioned at the bottom of the form. At the very bottom of the page, a dark blue footer bar contains the copyright notice "© 2025 University Schedule Management System. All Rights Reserved." in white.

Figure 5: Login page

The system authenticates users through checking their login details at login time. After users type in their email and password the system searches the database for their user information. The

system keeps user information in the session during authentication then sends users to specific dashboards based on their assigned roles. System protection provides users access to restricted pages after validating their roles through sessions and directs unconfirmed users to the login screen.

Directory Structure:

Admin Directory: The admin directory enables administrators to handle educational resources using classroom facilities and session plans.

Student Directory: Provides landing pages that let students see their daily schedules.

Assets Directory: Holds multiple CSS and JavaScript files which every component can access available from one source.

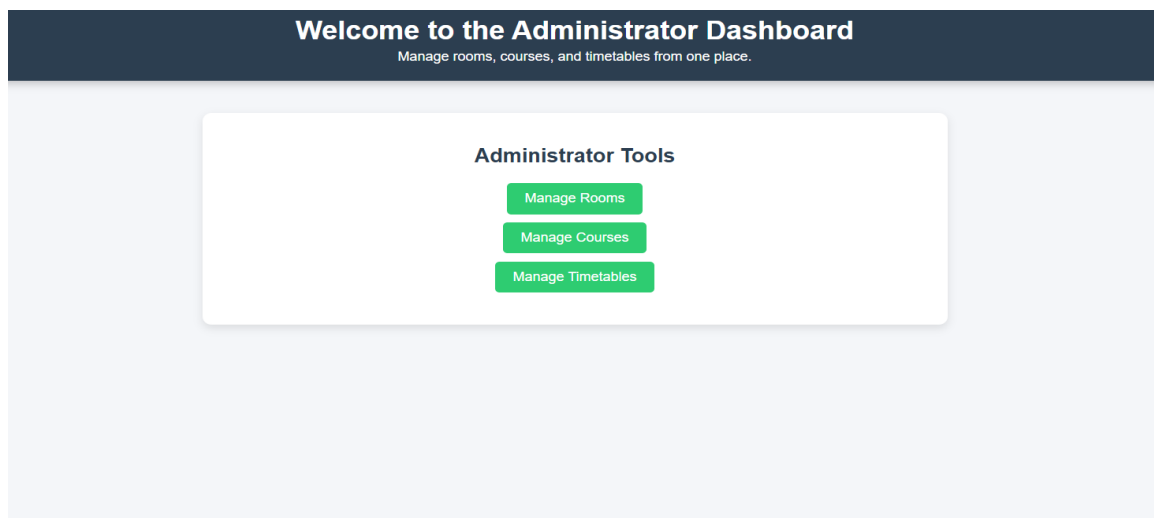
Includes Directory: Stores communicable page components such as side bars and top menus to save development time.

Admin Interface:

My project contained several PHP files that let users manage resources through add course, edit course, delete course among other PHP files.

Established interactive forms that enable users to add or modify all system elements including rooms, courses, and schedules.

AJAX built-in features let students see updates immediately without reloading the entire page.



Student Interface:

Created view schedule page to let students access their custom class schedule using their ID.

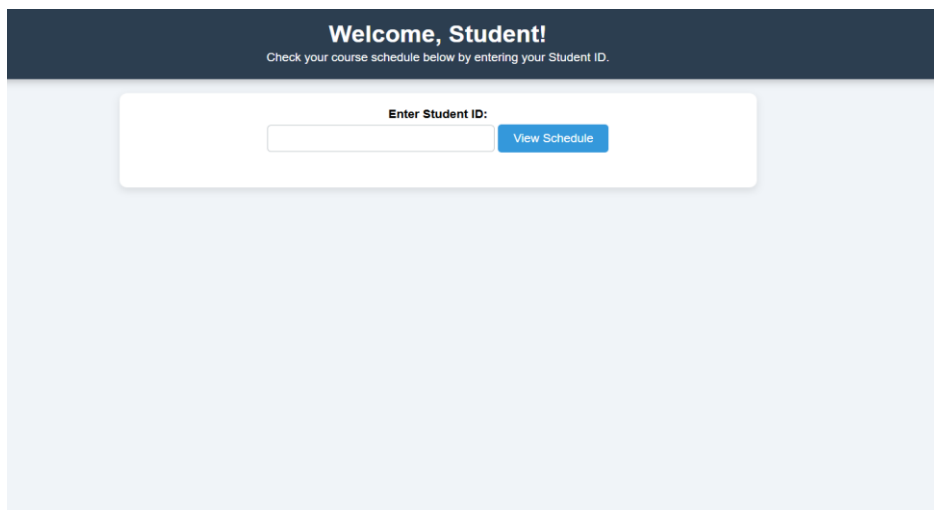
A screenshot of a web application interface for students. At the top, a dark blue header contains the text "Welcome, Student!" in white, followed by a smaller line of text: "Check your course schedule below by entering your Student ID." Below the header, on a light blue background, is a white rectangular box. Inside this box, the text "Enter Student ID:" is positioned above a text input field. To the right of the input field is a blue button with the text "View Schedule" in white.

Figure 7 Student interface

Conclusion

The University Schedule Management System is an advanced tool that makes it easier to handle academic resources and grows with the university. Secure access controls protect data as users explore the simple yet friendly system interface that benefits students, faculty, and administrators. Future development will transform this system into a complete administrative tool for educational institutions.