

DATABASE MANAGEMENT SYSTEM PROJECT REPORT

Project Title: College Resource Management System

Course: Database Management Systems (DBMS)

Branch: B.Tech Artificial Intelligence

Semester: Third Semester

Institution: ICFAI Tech Hyderabad, Faculty of Science and Technology

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Abstract

The College Resource Management System is a web-based DBMS project developed using PHP and MySQL. It facilitates efficient management of institutional resources including departments, faculty, courses, rooms, and equipment. This project provides a centralized platform to allocate resources, schedule timetables, and maintain an organized log of room allocations. The system ensures data integrity, easy accessibility, and an intuitive user interface for administrators.

Introduction

Database Management Systems (DBMS) play a crucial role in organizing and managing institutional data efficiently. The College Resource Management System aims to automate and streamline academic resource allocation processes. This system enables the administration to monitor departments, assign rooms, and manage faculty and course details systematically.

Objectives

1. To design and implement a database for college resource management.

2. To create a user-friendly web interface for CRUD operations.
3. To maintain records of faculty, departments, courses, rooms, and equipment.
4. To enable effective allocation and monitoring of resources.
5. To demonstrate integration between PHP front-end and MySQL back-end.

System Design

The system consists of several relational tables interconnected through primary and foreign keys. Each module in the front-end corresponds to one relational entity such as Faculty, Course, Department, or Room. The relationships ensure referential integrity and allow cross-referencing between tables for reporting and analytics.

Database Schema

The database 'techietriosmr' contains the following tables: - department(Dept_ID, Dept_Name, HOD_Name) - faculty(Fac_ID, Fac_Name, Dept_ID, Email) - course(Course_ID, Course_Name, Dept_ID, Credits) - room(Room_ID, Room_Type, Capacity) - equipment(Equip_ID, Equip_Name, Room_ID, Status) - timetable(TT_ID, Course_ID, Fac_ID, Room_ID, Day, Time_Slot) - allocation_log(Log_ID, Fac_ID, Room_ID, Date, Action)

Front-End Overview

The front-end of the project was developed using HTML, CSS, PHP, and Bootstrap integrated through XAMPP. It features a simple dashboard interface allowing CRUD operations for each table in the system. All operations dynamically interact with the MySQL database, ensuring real-time updates.

Conclusion

The College Resource Management System demonstrates the practical application of DBMS concepts in managing academic resources. Through efficient use of relational database design and PHP-MySQL integration, the project provides a comprehensive

solution for resource allocation and management in educational institutions.

TechieTrios MR - DBMS Project

localhost/techietriasmr/view.php?table=faculty

TechieTrios MRDashboardDepartmentsFacultyCoursesRoomsEquipmentTimetableAllocation Log

Table: Faculty

+ Add

Dashboard

Fac_ID	Fac_Name	Dept_ID	Email	Actions
101	Prof. Aryan	1	aryan@college.edu	<div>EditDelete</div>
102	Prof. Kavya	1	kavya@college.edu	<div>EditDelete</div>
103	Prof. Raghav	2	raghav@college.edu	<div>EditDelete</div>
104	Prof. Sneha	3	sneha@college.edu	<div>EditDelete</div>
105	Prof. Dev	4	dev@college.edu	<div>EditDelete</div>
106	Prof. Priya	5	priya@college.edu	<div>EditDelete</div>
107	Prof. Aarav	1	aarav@college.edu	<div>EditDelete</div>
108	Prof. Ishita	2	ishita@college.edu	<div>EditDelete</div>
109	Prof. Vikram	3	vikram@college.edu	<div>EditDelete</div>
110	Prof. Neha	5	neha@college.edu	<div>EditDelete</div>

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Search

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TechieTrios MR - DBMS Project

localhost/techietriasmr/home.php

TechieTrios MRDashboardDepartmentsFacultyCoursesRoomsEquipmentTimetableAllocation Log

Dashboard

Simple admin interface for your DBMS project. Click a table to view / manage records.

Department

Records: 5

Faculty

Records: 10

Course

Records: 12

Room

Records: 10

Equipment

Records: 14

Timetable

Records: 14

Allocation Log

Records: 14

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