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# **Project Report**

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**Course:** Database Systems (DBS)

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**Project Title:** Air Learning & Training Information System - ALTIS

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## **1. Introduction**

The existing student portal at Air University has long been criticized for its outdated design, unresponsive interface, slow performance, and lack of modern features. Furthermore, students are burdened with the use of multiple platforms such as the AU Portal for administrative tasks (like results and attendance) and Google Classroom (GCR) for academic activities (like assignments and class resources). Recognizing these issues, this project introduces **ALTIS** (Air Learning & Training Information System), a centralized, fully integrated digital campus solution.

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## **2. Problem Statement**

Feedback collected from a sample of Air University students revealed several recurring issues:

- The current portal has a poor GUI/UX.
- It is prone to frequent lagging and bugs.
- It lacks responsiveness on modern devices.
- Academic and administrative features are split between different platforms.
- No unified system exists for seamless interaction among students, faculty, and administration.

These problems cause inefficiencies, frustration, and a fragmented learning experience.

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### **3. Project Objectives**

The main goals of this project were to:

- Redesign the existing university portal with a modern, responsive, and user-friendly interface.
- Integrate class-related functionalities (previously managed through GCR) into the main portal.
- Centralize all academic and administrative operations into a single platform.
- Enable seamless interaction and data management among students, faculty, and administrators.
- Lay the groundwork for future enhancements such as group chats, online exams, and real-time notifications.

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### **4. Proposed Solution – ALTIS**

**ALTIS** is a fully integrated academic management platform with the following modules:

#### **Admin Portal**

- Manages students, faculty, and course data.
- Handles result generation and updates.
- Manages system-wide announcements and oversight.

#### **Faculty Portal**

- Create and manage virtual classrooms.
- Upload assignments and course resources.
- Mark attendance and post announcements.
- View and manage course allocations and results.

#### **Student Portal**

- Access classroom content and submit assignments.
- View attendance and academic results.

- Interact with faculty announcements and course updates.

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## 5. Key Features

Feature	Description
Centralized Platform	One-stop solution for all academic and administrative needs.
Digital Classrooms	Built-in classrooms for resource sharing, assignment tracking, and more.
Secure Authentication	Role-based access control with encrypted login.
Responsive Interface	Mobile-friendly, modern UI supporting all screen sizes.
Announcements Module	Allows real-time updates from admins or faculty to students.
Assignment System	End-to-end assignment upload, submission, and feedback management.

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## 6. Technology Stack

Layer	Tools & Technologies
Backend	ASP.NET Core, SQL Server
Frontend	HTML/CSS/JavaScript, Windows Forms
Tools	Visual Studio, Entity Framework, NuGet Packages

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## 7. Research Findings

Surveys and interviews conducted with students and faculty at Air University concluded:

- Over 80% of respondents rated the current portal as outdated.
- A majority expressed difficulty navigating and using the portal on mobile.
- Students disliked using separate platforms (AU Portal + GCR).

- There was strong demand for a single system that could handle all academic and administrative needs.

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## 8. Future Enhancements

While ALTIS is already a robust solution, several potential upgrades have been outlined for future development:

- **Group Chats for Students**  
To encourage peer-to-peer learning and team collaboration.
- **Online Class Meetings**  
Integration with video conferencing tools for virtual lectures.
- **Online Exams and Quizzes**  
Secure assessment environment within the portal.
- **Live Assignment Monitoring**  
For real-time evaluation during practical assessments.
- **Roll Number Slips and Date Sheets**  
Downloadable academic documents managed centrally.
- **Fee Management System**  
Transparent fee challan and payment tracking.
- **Faculty Feedback & Reporting**  
Collect performance reviews and allow teachers to report academic concerns.

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## 9. Impact and Conclusion

ALTIS successfully bridges the gap between fragmented systems by offering a unified, secure, and responsive virtual campus experience. By replacing outdated legacy platforms, it enhances productivity, communication, and data management within the university.

This project not only solves real-world problems faced by Air University but also sets a strong foundation for future educational digitization initiatives.

So, here comes ALTIS : Air Learning & Training Information System; where Students learn, Faculty trains, and Admin manages information systems, all at one centralized system.