Marwadi University Marwadi Chandarana Group NAAC A+	**Marwadi University** **Faculty of Engineering & Technology** **Department of Information and Communication Technology**	
Subject: CP (01CT0715)	**Aim: Project Definition and Scope - Intermediate Review**	
	Date:	**Enrollment No: 92200133036**

Introduction

In many institutions, management and administration rely on web-based platforms to record and track student activities such as attendance, fees, and inquiries. While these systems provide strong support to faculty and administrators, students often face limitations when they need quick access to their academic information on mobile devices. To bridge this gap, our project introduces a **student-centered mobile application** that complements the existing Acadexa web app.

The mobile app, developed in **Flutter with a PHP backend and SQL database**, is designed to bring essential academic services directly to the student's smartphone. It empowers learners to view their attendance, fees, and batch details, while also enabling assignments, exams, study material access, and peer communication.

Problem Statement

The current Acadexa system allows **administrators and faculty** to manage student records effectively, but **students remain dependent on web access or offline communication** to stay updated. This creates problems such as delays in receiving study materials, difficulties in submitting assignments, or limited opportunities for peer collaboration.

With most students relying on smartphones, there is a clear need for a **dedicated mobile application** that integrates all key academic activities into one platform. The absence of such a student-focused mobile solution leads to reduced convenience, poor communication, and lower engagement in academic workflows.

Objectives

The main objective of this project is to design and implement a **student-focused mobile application** that seamlessly integrates with the Acadexa system. The specific objectives are:

1. To provide students with **real-time access** to batch details, attendance records, and fee updates.
2. To enable **assignment submissions and online examinations** within the mobile app.
3. To implement **chat functionality** for students within the same batch to enhance communication.
4. To make **study material and faculty details** easily accessible anytime, anywhere.
5. To build a **personalized student profile dashboard** for managing academic information.

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Relevance to the ICT Domain

The project falls within the ICT domain of **mobile application development and database-driven systems**, integrating multiple areas:

- **Mobile Computing:** Development of cross-platform applications using Flutter.
- **Web Services & Databases:** Use of PHP for backend processing and SQL for structured data management.
- **Software Development Trends:** Emphasis on mobile-first solutions in educational technology (EdTech).

The relevance lies in extending an existing ICT system (web app) into a mobile application that enhances student interaction, aligning with current trends in **digital learning ecosystems** and **mobile accessibility**.

Feasibility Analysis

Technical Feasibility

The technologies selected ensure technical viability:

- **Flutter:** Cross-platform development for Android and iOS.
- **PHP:** Server-side scripting to handle logic and integration with the database.
- **MySQL Database:** Storage of structured student data such as attendance, fees, and assignments.

All tools are open-source and widely supported, ensuring a stable development environment.

Economic Feasibility

The project requires minimal financial investment since all core technologies are free. Costs are limited to:

- Hosting/server for backend (~₹2000–4000 annually).
- Optional cloud storage if the institution scales.
  This makes the project affordable within academic and institutional settings.

Ethical Considerations

The app handles sensitive data such as student profiles, exam details, and chat messages. Ethical issues include **data security, privacy, and user consent**. To mitigate risks, the project will implement:

- Secure login and authentication.
- Encrypted communication between the app and server.
- Consent-based use of student communication features.

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Market/User Needs Analysis

The direct users of this mobile application are **students enrolled in classes managed through Acadexa**. With an increasing preference for mobile-first solutions in education, students expect anytime access to their academic information.

According to professional and academic studies:

1. Mobile platforms increase **student engagement and satisfaction** (IEEE, 2023).
2. Chat-based academic tools encourage **peer-to-peer collaboration** (Springer, 2022).
3. Cross-platform frameworks like Flutter reduce development costs while ensuring wide reach (ACM, 2022).
4. Mobile access to study materials improves **learning efficiency** (IEEE, 2021).
5. Institutions using integrated student apps report improved **communication and transparency** (EdTech Research Report, 2023).

This analysis confirms that students need a mobile platform to stay academically connected, and the proposed application meets that need.

Literature Review

Several popular platforms, such as **Google Classroom, Moodle, and Blackboard**, already provide digital learning environments. However, these platforms often lack localized features like **fees records or batch-specific student chats**, which are critical for institutions like Acadexa.

The **novelty of this project** lies in:

- Offering a **student-only app** that complements the existing admin web app.
- Combining local institutional requirements (fees, attendance) with modern digital learning tools (assignments, study materials, peer chat).
- Providing an integrated yet lightweight mobile experience compared to bulkier EdTech systems.

Conclusion

The **Acadexa Student Mobile Application** is designed to bring convenience, accessibility, and collaboration into the hands of learners. By extending the web app's functionality to a mobile platform, the project addresses a key gap in student engagement.

The solution is **technically feasible, economically affordable, ethically responsible, and highly relevant to ICT trends** in mobile learning. Its originality lies in delivering a **student-first app** tailored for institutional workflows, making it an impactful addition to the educational technology landscape.