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Tribhuwan University

Institute of Science and Technology

Patan Multiple Campus

**Bachelor in Information Technology (BIT)**

**Project Report on**

**CLASS SYNC**

Assignment and collaboration system

**SUBBITTED TO:**

**Patan Multiple Campus**

**Bachelor in Information Technology (BIT)**

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# Chapter-1: Introduction

## Introduction

In many developing countries like **Nepal**, especially in colleges and universities, the management of academic tasks such as assignment distribution, submission tracking, and student collaboration remains heavily dependent on traditional, manual systems. Assignments are often communicated verbally or posted on notice boards, which students may easily miss due to absence, class schedule clashes, or other reasons.

Additionally, peer collaboration typically happens through informal social media groups like **Messenger**, **WhatsApp**, or **Viber**, where academic discussions are mixed with casual conversations, leading to poor information management and missed deadlines. This lack of a dedicated academic platform creates significant communication gaps between students and teachers, affecting overall academic productivity.

To address these issues, this project proposes **Class Sync**, a web-based application developed using the **MERN (MongoDB, Express.js, React, Node.js) stack**. The platform aims to centralize assignment management, note-sharing, and student collaboration in one accessible system — making academic coordination smoother, especially in the context of **college.**

## Problem Statement

In colleges across Nepal, the absence of an organized, dedicated platform for academic communication and task management has led to several recurring problems:

* Students often miss assignment deadlines due to unreliable verbal notices and scattered social media announcements.
* There’s no centralized source for students to access assignment details, track their submission status, or retrieve study materials.
* Collaboration between students is chaotic and unorganized, as academic discussions happen on informal messaging apps mixed with personal conversations.
* Teachers lack a straightforward medium to distribute assignments and follow up on student submissions.

These challenges highlight the need for a user-friendly, centralized academic platform like **Class Sync** to efficiently manage assignments, enable note-sharing, and support student collaboration in the specific context of **Nepali colleges**.

## Objectives

The primary objectives of this project are:

* To develop a web-based application that allows teachers to post and manage assignments digitally.
* To enable students to track their assignment status, deadlines, and submission history.
* To provide a real-time chat feature tailored for academic discussions, minimizing dependency on informal apps.
* To offer a note-sharing feature for students to easily upload, access, and collaborate on study materials.
* To improve academic communication and organization within colleges in Nepal by introducing a digital platform built with the MERN stack.

## Scope

* The application is specifically designed for academic institutions, with a focus on **colleges in Nepal**.
* It will support role-based access for teachers (for assignment management) and students (for assignment tracking and collaboration).
* Core features include **assignment management**, **note-sharing**, and **real-time academic chat**.
* The system will be accessible via any modern web browser and mobile-friendly devices.