# **Introduction**

As mentioned in the topic presented in the google drive, we are making a College Management System. The project is mainly focused on students, while studying in this college; NCMT I have faced a huge problem of not having an integrated system; to have notes I have to go google drive, also google drive doesn’t have proper set up. There are many folders and its confusing. Similarly, I have to go to individual google classroom for notes etc. also I have to join them individually through a link that’s sent through WhatsApp group. Talking about WhatsApp group its main focus is to send message of college but it’s mainly used for gossiping and the official message is lost somewhere in those messages. The main aim of this project to integrate all those in a single web page.

# **2. Problem Statement**

1. Lack of integrated system for students of NCMT. Notes in google drive, some send notes in google classroom, official messages in WhatsApp group.

# 3. **Objectives**

1. Making notes easily assessable though the web app.
2. A separate page for sending official messages from college to students.
3. Students have easier time navigating college events, talking with teachers and sending message to the college management team on why they are absent
4. Making a separate page for sending projects, assignments and homework with deadline with respective teachers.

# **4. Literature Review**

To understand the existing solutions for managing academic resources and communication in colleges, we explored a few commonly used platforms: Google Classroom, Google Drive, and WhatsApp. These tools are frequently used by students and faculty at NCMT, but they also highlight several limitations that our system aims to address.

### 1. Google Classroom

Google Classroom is a popular platform for managing class assignments, sharing resources, and communicating with students.

**Features:**

* Allows teachers to post announcements, assignments, and materials.
* Students can submit homework and receive feedback.
* Integrated with Google Drive for file sharing.

**Limitations:**

* Each subject has a separate classroom, which means students need to join multiple classrooms manually.
* There is no centralized dashboard for all subjects, making navigation time-consuming.
* Lacks features for real-time communication with the management team or handling college-wide events.

### 2. Google Drive

Google Drive is often used for sharing notes, documents, and other learning materials.

**Features:**

* Provides cloud storage for files and folders.
* Easy sharing with links or user permissions.

**Limitations:**

* Poorly organized when used without a consistent folder structure.
* Hard to find specific notes or resources due to clutter and lack of categorization.
* No system to notify students of updates or new materials.

### 3. WhatsApp Groups

WhatsApp is mainly used for sending college-wide announcements or group messages.

**Features:**

* Instant communication.
* Easy to form groups and broadcast messages.

**Limitations:**

* Not designed for academic use.
* Official messages often get lost in casual or off-topic conversations.
* No way to categorize or store information like notes, assignments, or events.

## Our Contribution

Unlike the systems above, our proposed College Management System aims to:

* Centralize all academic resources (notes, assignments, messages) in one platform.
* Organize content clearly by subject, teacher, and type (notes, assignments, deadlines).
* Provide dedicated modules for messaging, event updates, teacher communication, and student self-reporting (e.g., absence reasons).
* Reduce reliance on scattered third-party apps, improving ease of use and academic focus.

This unified platform will improve accessibility, streamline communication, and create a more structured digital environment for students and faculty alike.

# 5. Feasibility Study

### 1. Technical Feasibility

The proposed system will be developed using standard web technologies such as HTML, CSS, and JavaScript for the frontend.

All tools and technologies chosen are open-source and widely supported, with ample documentation and community support. The development team is already familiar with these technologies or currently learning them as part of their academic journey, making the implementation realistic and technically achievable.

## 2. Economic Feasibility

The development of this project will rely heavily on free or open-source tools, such as:

* Visual Studio Code (Code Editor)
* GitHub (Version Control & Hosting)

As this is a student project, there are no labor or licensing costs involved.

### 3. Operational Feasibility

The platform will be designed with simplicity and usability in mind. Users (students, teachers, and administrators) will be able to:

* Access notes and assignments from a single dashboard
* Send and receive official messages
* View deadlines, events, and attendance features
* Report absences or communicate with teachers directly

The system will have a clean user interface, mobile compatibility, and easy navigation. Since it centralizes many tools, students already use, it will improve workflow and reduce confusion. Maintenance will be simple as the system will be modular and easy to update.

### 4. Legal Feasibility

All technologies and libraries used in this project will be open-source license. The project will not collect or misuse personal data; user inputs (e.g., name, messages, files) will only be used for internal academic purposes.

If any third-party materials (e.g., icons, fonts, libraries) are used, they will be properly credited and sourced from open-license providers such as Google Fonts or Font Awesome. The project follows basic principles of data privacy and ethical use of technology.

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# 6. Methodology

### Software Development Life Cyle (SDLC) model used: Agile Mode

For the development of your college management System, we have chosen the Agile SDLC model. This approaches emphasized iterative development, continuous feedback and frequent improvements, which aligns well with our team’s workflow and the nature of this academic project.

### Why Agile?

We selected Agile over other models (like Waterfall) for the following reasons:

1. Flexibility: Requirements might change based on user feedback (from teachers or students), and Agile allows us to adapt easily.
2. Incremental Progress: The system can be developed and tested in small functional parts, ensuring that core features are ready early.
3. Collaborative Development: Agile promotes regular discussions among team members, making coordination easier.
4. Faster Feedback Loop: We can quickly gather feedback from users (e.g., classmates or faculty) after each sprint and improve features accordingly.

## How the Process Will Be Managed

The project will be divided into sprints, each lasting about 1 to 3 week. Here's how we plan to structure the process:

| **Sprint** | **Duration** | **Goals** |
| --- | --- | --- |
| Sprint 1 | Week 1-3 | Requirements gathering, UI design, and tech stack setup |
| Sprint 2 | Week 4 | Implementing core features (e.g., Notes module, login system) |
| Sprint 3 | Week 5 | Attendance/absence reporting, and events module |
| Sprint 4 | Week 6 | Testing, bug fixing, feedback collection |
| Sprint 5 | Week 7-9 | Final improvements, documentation, and deployment |

Each sprint will end with:

* A review of progress
* A planning meeting for the next sprint
* Bug fixes or adjustments based on test feedback

This structure ensures that we stay on track while remaining adaptable.

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# **7. System Requirements Specification (SRS)**

Functional Requirements: Notes management, official massaging, event management, absence communication, profile management

Non-Functional Requirements: page must load fast, UI should be simple, responsive and mobile friendly, should be maintainable

User Types: Admin, teachers, students, guests(optional)

# 9. Implementation Plan

We are dividing our work between us. We are using GitHub to share our code.

#### Our GitHub: <https://github.com/karan-dangol0/college-management-system-college-project->



# 11. Testing Plan

We will test each page manually on both PC and mobile. We will check if the site is responsive on the small and large devices; Similarly, we will check if teachers can upload files or not and if the students can access those files or not. We will also check if the students can contact teachers or not. Also, we will check if the student can send absence communication.

# 12. Expected Output

By the end of the project, we hope to have a fully working website where students can access the notes and teaches can upload the notes properly. Also, there is a communication platform for that. There can be a calendar with college events. And a main home page for the college to post official messages.

# 13. Future Scope

There are several areas in which this project can be expanded in the future. One major improvement is communication of jr. students to senior students. Additionally, a proper user registration and login system with user role management can be added. Other enhancements include inventory for selling notes from senior students to junior students. In terms of scalability, the project can also be hosted on cloud platforms and made mobile responsive for wider accessibility.

# 14. Conclusion

This project has provided us with an excellent opportunity to apply our theoretical knowledge in a practical setting. By building an management system, we not only addressed a relevant real-world problem but also improved our skills in frontend and backend web development. We learned how to collaborate as a team, follow a structured development methodology, and produce a working system within a given timeline. We believe this project lays a solid foundation for more complex applications in the future and prepares us for industry-level challenges.