

**Project Synopsis**  
**On**  
**DoubtMate**  
**In Partial Fulfilment of**  
**Master of Computer Application**  
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# **DoubtMate**

## **Project Objectives:**

The primary goal of **DoubtMate** is to create a collaborative platform that bridges the gap between students and teachers, making doubt resolution and academic collaboration more efficient. **DoubtMate** allows students to ask academic questions and seek clarification from teachers in a controlled environment. Teachers can answer queries, provide guidance, and even collaborate with students in private study groups. The platform encourages interaction, peer learning, and provides tools like live video sessions for real-time doubt resolution.

### Specific objectives include:

- Facilitate direct communication between students and teachers within a department.
- Allow students to post academic questions and get answers from teachers and peers.
- Provide a controlled platform where inappropriate content can be moderated, ensuring a safe academic space.
- Enable live video sessions for real-time teaching and doubt resolution.

## **Existing System and Need for Current System:**

In traditional learning environments, students rely on face-to-face classroom sessions or scheduled doubt-clearing periods to resolve their academic questions. Existing online platforms such as general-purpose forums or social media groups are not always academic-focused, lack specific departmental or subject-level filtering, and do not offer structured guidance from teachers. Some existing systems also do not provide a clear mechanism for moderating inappropriate content, which can lead to distractions or off-topic discussions.

### **Need for DoubtMate:**

- **Personalized Learning Environment:** Unlike generalized platforms, DoubtMate focuses on creating a department-specific space where questions are targeted at the appropriate academic level and subjects.
- **Collaborative Problem Solving:** Through private study groups, students and teachers can collaborate on specific academic problems, ensuring focused learning.

- **Real-time Interaction:** Teachers can host live sessions for doubt resolution, which ensures that students get real-time feedback and guidance.

## Scope of Work:

The scope of the project includes designing and developing the **DoubtMate** platform with three core user modules: Student, Teacher, and Admin. Each module will have distinct functionalities tailored to the user role:

- **Students** can post questions, share notes, upvote/downvote questions and answers, participate in private study groups, and join live video doubt-clearing sessions.
- **Teachers** can respond to student queries, moderate questions in private study groups, host live sessions, and post answers that will always appear at the top of the response feed.
- **Admins** can monitor all activities, moderate posts, and delete inappropriate content to maintain academic integrity.

## Technology Used:

- **Frontend:** HTML5, CSS, JavaScript for developing the user interface.
- **Backend:** Firebase for user authentication, data storage, and video hosting. Firebase's real-time database will also manage the upvote/downvote feature and post management.
- **Content Moderation:** A moderation system will be used to detect and filter inappropriate language and content to maintain the integrity of the platform.

## Proposed System:

**DoubtMate** aims to deliver a comprehensive solution for academic collaboration within a department. The proposed system includes the following features:

- **Content Posting and Moderation:** Students and teachers can post questions and answers, while the admin can moderate and delete

inappropriate content. Additionally, teachers' answers are automatically positioned at the top to ensure they are easily accessible.

- **Private Study Groups:** A key focus of DoubtMate is the ability to create private study groups where teachers and students can work on academic problems together. These groups allow real-time collaboration and serve as virtual classrooms.
- **Live Video Sessions:** Teachers can host live video sessions where students can join in to resolve doubts or discuss academic concepts.
- **Upvote/Downvote System:** Users will be able to upvote or downvote posts, making the most relevant content more visible and helping to prioritize quality discussions.
- **Inappropriate Content Filtering:** The platform will automatically moderate and filter out inappropriate content, ensuring the platform remains an academic-focused and safe environment.

## Module Specification:

- **Student Module:**
  - Post questions, share notes, and participate in private study groups.
  - Upvote and downvote questions and answers.
  - Join live video doubt-clearing sessions.
- **Teacher Module:**
  - Post answers to student questions and share academic resources.
  - Create and moderate private study groups for collaborative problem solving.
  - Host live video sessions for interactive teaching and doubt resolution.
- **Admin Module:**
  - Monitor content posted on the platform, ensuring it adheres to academic standards.
  - Moderate and delete posts or comments flagged as inappropriate.
  - View reports or flagged content for review and take action.
  - Manage user accounts, permissions.