



*Mini Project Report On*

## **UNIGRAM**

*Submitted in partial fulfillment of the requirements for the  
award of the degree of*

**Bachelor of Technology**

*in*

**Computer Science & Engineering**

**By**

Vijay KV(U2103213)

Powell Moothedan(U2103165)

Shaun Mammen John(U2103194)

**Under the guidance of**

**Mr. Sandy Joseph**

**Department of Computer Science & Engineering  
Rajagiri School of Engineering & Technology (Autonomous)  
(Affiliated to APJ Abdul Kalam Technological University)**

**Rajagiri Valley, Kakkanad, Kochi, 682039**

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# CERTIFICATE

*This is to certify that the mini project report entitled "**UNIGRAM**" is a bonafide record of the work done by **Vijay KV(U2103213)**, **Powell Moothedan(U2103165)**, **Shaun Mammen John(U2103194)**, submitted to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology (B. Tech.) in Computer Science and Engineering during the academic year 2023-2024.*

Mr. Sandy Joseph  
Asst Professor  
Dept. of CSE  
RSET

Dr. Uma Narayanan  
Asst Professor  
Dept. of CSE  
RSET

Dr. Preetha K.G.  
Head of the Department  
Dept. of CSE  
RSET

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**Vijay KV**  
**Powell Moothedan**  
**Shaun Mammen John**

## **Abstract**

This is a closed social platform designed exclusively for college students to interact, learn, and share knowledge about new technologies. Students engage in peer learning groups, sharing feedback on courses, technical skills, and assisting others. The platform fosters connections between juniors and seniors, facilitating mentorship and knowledge exchange.

Accessible only to college students, the platform serves as a hub for learning and collaboration, empowering students to stay updated, connect with peers, and contribute to a vibrant community of learners.

Students can join various channels on the platform to explore and learn about different technologies. These channels serve as virtual spaces where students can interact with each other, ask questions, share resources, and engage with posts related to specific topics or interests.

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## **List of Abbreviations**

UI - User Interface

API - Application Programming Interface

HTTP - Hypertext Transfer Protocol

SMTP - Simple Mail Transfer Protocol

# **Chapter 1**

## **Introduction**

### **1.1 Background**

In today's educational landscape, college students face challenges in accessing centralized resources and fostering meaningful connections within their academic community, particularly in the realm of technology. Current scenarios depict a fragmented digital environment where students navigate disparate platforms and social media channels for learning and collaboration. This scattered approach often results in a lack of tailored experiences and limited engagement opportunities. Recognizing this gap, our project aims to address these challenges by creating a dedicated social platform exclusively for college students interested in technology.

The importance of such a platform lies in its ability to provide a centralized hub for learning, collaboration, and community engagement. By curating a space where students can interact, share knowledge, and seek assistance from peers and mentors, we empower them to enhance their educational experience and prepare for future endeavors. Overall, our project seeks to revolutionize how college students engage with technology, offering a comprehensive solution that addresses their unique needs and aspirations.

### **1.2 Problem Definition**

The project aims to address the fragmented nature of available resources and limited community engagement among college students interested in technology by creating a dedicated social platform for learning, collaboration, and mentorship. College students lack a centralized platform for accessing quality resources and fostering meaningful connections within their academic community, particularly in the realm of technology.

### **1.3 Scope and Motivation**

The scope of this project encompasses the development and implementation of a closed social platform exclusively for college students interested in technology. The platform will facilitate peer learning, mentorship, and knowledge exchange through various channels and discussion forums. The platform will also offer robust community engagement tools to meet the diverse needs of its users. The scope also includes ongoing maintenance, updates, and scalability to accommodate future growth and evolving user requirements.

The motivation behind this project stems from the recognition of the challenges faced by college students in accessing quality resources and fostering meaningful connections within the technology community. By creating a dedicated social platform, we aim to empower students to enhance their learning experience, collaborate with peers, and seek guidance from mentors. The desire to provide a centralized hub for learning and collaboration, drives our motivation to develop this platform. Furthermore, we are inspired by the potential impact of creating a safe and inclusive space where students can freely express themselves, engage in constructive discussions, and pursue their passion for technology.

### **1.4 Objectives**

- Develop a user-friendly closed social platform exclusively for college students interested in technology, providing a centralized hub for learning, collaboration, and mentorship.
- Facilitate peer learning, mentorship, and knowledge exchange through various channels, discussion forums, and community engagement tools.
- Offer robust community engagement features to meet the diverse needs of users and enhance their educational experience.
- Ensure UNIGRAM offers robust security measures to protect user data and privacy while facilitating seamless collaboration and communication among students, promoting trust and confidence in the platform.

- Ensure ongoing maintenance, updates, and scalability to accommodate future growth and evolving user requirements, maintaining the platform's relevance and effectiveness over time.

## **1.5 Challenges**

Balancing user privacy and safety concerns presents a significant challenge, requiring careful consideration of ethical implications and robust data protection measures. Ensuring active user participation and engagement in a crowded digital landscape poses a challenge, requiring innovative strategies to attract and retain users while fostering a vibrant and inclusive community atmosphere.

## **1.6 Assumptions**

In the development of our project, we are operating under several key assumptions. Firstly, we assume that college students possess a genuine interest in technology and are motivated to actively participate in peer learning, mentorship, and knowledge sharing activities within the platform. We assume that the platform's features and functionalities will adequately meet the diverse needs of users, fostering an engaging and supportive community atmosphere conducive to learning and collaboration, informed by ongoing user feedback and iterative improvements throughout the development process.

## **1.7 Societal / Industrial Relevance**

The project's application extends to both societal and industrial domains, offering significant relevance and impact. Within society, the platform serves as a valuable educational resource, empowering college students to access quality learning materials, engage in peer learning, and foster meaningful connections within the technology community. By facilitating mentorship and knowledge exchange, the platform contributes to the development of a skilled workforce equipped with relevant technical expertise and collaborative capabilities.

In the industrial context, the platform offers potential applications for talent acquisition, professional development, and industry-academia collaboration. Employers can leverage

the platform to identify and recruit top talent, assess candidates' technical skills, and engage with potential future employees. Additionally, the platform can serve as a conduit for industry professionals to share insights, offer guidance, and collaborate with students on real-world projects, bridging the gap between academia and industry and fostering innovation and skills development.

Overall, the project's application extends beyond the confines of academia, offering value to both society and industry by fostering a culture of learning, collaboration, and skill development among college students interested in technology.

## **1.8 Organization of the Report**

The report is structured as follows:

- **Chapter 1- Introduction:** Provides background, objectives, and challenges of the project.
- **Chapter 2- Software Requirements Specification:** Describe the project's overall description, including system features and nonfunctional requirements.
- **Chapter 3- System Architecture and Design:** Presents the project's architecture, user interfaces, and implementation strategies.
- **Chapter 4- Results and Discussions:** Provides Overview, Testing and Discussion.
- **Chapter 5- Conclusion:** Provides conclusion, Future Scope and Bibliography.

# **Chapter 2**

## **Software Requirements Specification**

### **2.1 Introduction**

#### **2.1.1 Purpose**

The Software Requirements Specification (SRS) outlines the requirements for the development of UNIGRAM, a closed social platform tailored exclusively for college students to interact, learn, and share knowledge about new technologies.

#### **2.1.2 Product Scope**

UNIGRAM aims to provide a secure and collaborative environment for college students to engage in peer learning groups, share feedback on courses, and assist each other in developing technical skills.



Figure 2.1: logo

### **2.2 Overall Description**

#### **2.2.1 Product Perspective**

UNIGRAM is a standalone platform designed to meet the specific needs of college students seeking to engage in tech-related discussions, peer learning, and mentorship opportunities. While it may integrate with existing educational systems, it operates independently as a closed social network.

### **2.2.2 Product Functions**

- **Share Content:** Allows users to create and share content dedicated to specific technology topics with others, also they can like and add their perspective in other's posts.
- **Channel Creation and Management:** Admins can create and manage channels dedicated to specific technology topics.
- **Peer Learning Groups:** Facilitates the formation and participation of peer learning groups where students can collaborate and share knowledge.
- **Profile Management:** It enables users to create and maintain detailed personal profiles. These include name, email, profile photo, academic details, linkedin and github.

### **2.2.3 Operating Environment**

UNIGRAM will be operated on web-based platforms, compatible with major operating systems such as iOS and Android. It is supported on Google Chrome, Internet Explorer 10, 11, Microsoft Edge, Mozilla Firefox. It requires access to the internet for full functionality.

### **2.2.4 Design and Implementation Constraints**

Scalability is a crucial aspect of UNIGRAM's design, necessitating a robust architecture capable of handling a potentially large user base concurrently. By implementing scalable architecture and efficient resource allocation, we ensure the platform can accommodate growth without sacrificing performance. Compatibility is also a priority, with UNIGRAM designed to be accessible across a wide array of devices and operating systems commonly used by college students. Support for popular web browsers and mobile apps ensures seamless accessibility across different platforms. Furthermore, performance optimization measures such as performance testing, load balancing, caching mechanisms, and code optimization are employed to deliver responsive and reliable service, minimizing latency and downtime even during peak usage periods, thereby enhancing the overall user experience.

### **2.2.5 Assumptions and Dependencies**

#### **Assumptions:**

Several assumptions underpin UNIGRAM's design and functionality. Firstly, it's assumed that college students will actively engage with the platform's peer learning groups, discussions, and course feedback mechanisms, fostering a collaborative learning environment. Additionally, users are expected to possess a baseline level of technology proficiency, encompassing basic computer skills and familiarity with social networking platforms, to effectively navigate UNIGRAM's features. These assumptions collectively shape UNIGRAM's user experience and strategic direction, driving its mission to empower college students through collaborative learning and technology-driven educational initiatives.

#### **Dependencies:**

UNIGRAM's functionality relies heavily on its technological infrastructure, encompassing servers, databases, and networking components. This infrastructure serves as the backbone of the platform, supporting its operations and facilitating seamless user interactions. Furthermore, UNIGRAM's dependency on robust security measures and protocols is paramount. These measures are indispensable for safeguarding user data and maintaining a secure environment for interaction and collaboration among users. Without adequate security measures in place, the platform's integrity could be compromised, potentially exposing sensitive user information to security threats and breaches. Thus, both technological infrastructure and security measures are fundamental dependencies that underpin UNIGRAM's ability to deliver a reliable, secure, and user-friendly experience to its users.

## **2.3 External Interface Requirements**

### **2.3.1 User Interfaces**

The user interface for UNIGRAM adheres to a clean and modular design, featuring a homepage dashboard with announcements and recommendations. User profiles provide clear displays of information and privacy settings, while channels and groups offer intuitive

navigation and interaction. Interactive learning materials, secure communication, and a notification center contribute to a cohesive, user-friendly platform following established design principles..

### **2.3.2 Hardware Interfaces**

UNIGRAM's software interfaces seamlessly with hardware components, supporting web browsers and mobile devices. Its logical characteristics include web-based and mobile-friendly designs and touchscreen optimization. The platform relies on stable internet connections and adapts to diverse screen sizes. Security is ensured through HTTPS, emphasizing secure data transmission. Overall, UNIGRAM facilitates a versatile and user-friendly experience across a variety of devices and input methods.

### **2.3.3 Software Interfaces**

Unigram relies heavily on software interfaces to ensure smooth interactions among its components. Built upon the MERN stack (MongoDB, Express.js, React.js, Node.js), it offers a sturdy foundation, complemented by Tailwind CSS for enhanced styling. Interfaces between the frontend (React.js) and backend (Node.js, Express.js) enable seamless data exchange, while integration with MongoDB optimizes data management. Additionally, tools like Postman, Git, and GitHub streamline development and ensure version control management.

### **2.3.4 Communications Interfaces**

The Unigram project necessitates robust communications interfaces to facilitate seamless interactions. Utilizing HTTP for web browser communication and SMTP for email functionalities, it ensures standardized message formatting. Additionally, real-time synchronization mechanisms maintain data consistency across the platform.

## **2.4 System Features**

This template organizes the functional requirements of UNIGRAM by system features, providing a clear outline of the major services and functionalities offered by the platform.

Each feature is accompanied by its corresponding functional requirements, ensuring a systematic approach to product development.

#### **2.4.1 Content Creation and Management**

##### **Description and Priority**

The Content Creation and Management feature in UNIGRAM is regarded as a high-priority component crucial for user engagement and knowledge sharing. Its significance lies in facilitating seamless content creation and effective management. This feature plays a vital role in enhancing the overall user experience and fostering a collaborative environment within the platform. As a high-priority element, it underscores UNIGRAM's commitment to supporting robust content creation and management functionalities.

##### **Stimulus/Response Sequences**

Users initiate content creation by clicking "Create Post," crafting posts with optional multimedia, and sharing. They can edit or delete posts as needed. For channel creation, admins click "Create Channel," providing details to generate a new thematic space. Channel owners manage content by moderating posts and discussions. Participants engage by interacting within channels. These sequences ensure an intuitive and interactive content creation and management experience on UNIGRAM.

#### **Functional Requirements**

##### **REQ-1:Post Creation**

- Users must be able to initiate content creation by clicking "Create Post." Department
- The system should provide a user-friendly interface for composing text and attaching multimedia.

##### **REQ-2: Channel Creation**

- Admins have the ability to create a new channel by clicking "Create Channel."
- The system should prompt users to input a channel theme, name, and purpose.

- Channel creation errors or incomplete information should trigger informative prompts for correction.

### **REQ-3: Manage Channel**

- Admins should access management options by clicking "Manage Channel."
- The system must provide tools for moderating posts, removing inappropriate content, and guiding discussions.
- Actions taken within channel management should be reflected in real-time updates to the channel.

### **REQ-4: Participate in Channel**

- Users should engage with channels by clicking on a specific channel of interest.
- The system must display posts, discussions, and interactive elements within the selected channel.
- Error conditions, such as inability to load channel content, should prompt informative messages for users.

### **REQ-5: Profile Management**

- Users can provide name and mail id.
- Users can provide profile photo and academic details.
- Users can provide linkedin and github links.

## **2.4.2 Collaborative Study Groups**

### **Description and Priority**

Collaborative Study Groups in UNIGRAM stand as a high-priority feature, emphasizing peer-to-peer interaction and cultivating a dynamic learning environment. With a focus on collaborative learning, knowledge exchange, and the valuable mentorship provided by seniors, students actively engage in shared learning experiences. Overall, the prioritization of Collaborative Study Groups enhances the collaborative and supportive nature of the learning community, making it a cornerstone element within UNIGRAM.

## **Stimulus/Response Sequences**

In UNIGRAM's Collaborative Study Groups, users can seamlessly join groups, fostering peer-to-peer learning. Joining involves a user-clicked "Join Group," with the system confirming access. Creating groups includes theme and privacy settings, with invitations sent to peers. Participation encompasses engaging discussions and resource-sharing, while users can leave groups by clicking "Leave Group." These interactions create a dynamic and collaborative learning environment.

## **Functional Requirements**

### **REQ-1: Join a Study Group**

- Users must be able to click "Join Group" on a specific study group.
- The system should confirm the user's addition to the group, providing a clear confirmation message.
- Anticipated errors, such as unsuccessful join attempts, should prompt informative error messages for users

### **REQ-2: Create a Study Group**

- Admins should initiate group creation by clicking "Create Group."
- The system must prompt users to input a theme, purpose, and privacy settings for the new study group.
- Creation errors, like incomplete information, should trigger informative prompts for correction.

### **REQ-3: Participate in Discussions**

- Users should be able to engage in discussions within a study group by posting comments or questions.
- The system must notify users of new responses in real-time
- Anticipated errors, such as posting failures, should be addressed with clear error messages.

## **REQ-4: Share Resources**

- Users must upload and share educational resources within the study group.
- The system should categorize and organize shared resources for easy accessibility.
- Error conditions, like unsuccessful uploads, should prompt informative messages guiding users.

## **REQ-5: Leave a Study Group**

- Users should have the capability to exit a study group by clicking "Leave Group."
- The system must confirm the user's departure, providing a clear notification to remaining group members.
- Error handling should address scenarios like attempting to leave without confirmation.

### **2.4.3 Admin Page**

#### **Description and Priority**

The admin page enables administrators to create new channels and introduce internship opportunities, ensuring the platform remains organized, relevant, and beneficial for students. This feature is high priority as it maintains the quality and engagement of the platform, supports students' academic and professional growth, and ensures that content and opportunities are continuously aligned with users' needs.

#### **Stimulus/Response Sequences**

When an admin logs into the control panel, they are presented with various options. If they choose to create a new channel, they input details like the channel name and description. Once submitted, the system generates the channel and confirms its creation. Similarly, when introducing internship opportunities, admins input relevant details which are then added to the platform. Admins also review and manage user-reported content, taking necessary actions and logging outcomes. Additionally, they can check platform analytics, viewing usage statistics and engagement metrics to inform decision-making.

## **Functional Requirements**

### **REQ-1: User Authentication and Authorization**

- Admins must log in with secure credentials.
- Admins have access to a control panel with various management options.

### **REQ-2: Channel Management**

- Admins can create new channels by providing details such as name, description, and visibility settings.
- Admins can edit or delete existing channels.
- Admins can assign or remove channel moderators.

### **REQ-3: Internship Management**

- Admins can create and post new internship opportunities by inputting details like title, company, description, requirements, application deadline, and contact information.
- Admins can edit or remove existing internship postings.

### **REQ-4: Content Moderation**

- Admins can review user-reported content and take actions such as deleting posts, warning users, or banning users.
- Admins can view a log of all moderation actions taken.

### **REQ-5: User Management**

- Admins can approve or reject new user registrations.
- Admins can reset user passwords.
- Admins can assign or revoke user roles and permissions.

## **2.5 Other Nonfunctional Requirements**

### **2.5.1 Performance Requirements**

The system must exhibit robust scalability, accommodating a minimum of 500 concurrent users while maintaining optimal performance. It should gracefully handle increasing user activity and data volume without compromising responsiveness. For image upload and files up to 10MB should be processed within 10 seconds, ensuring efficient data transfer. Real-time communication performance is another paramount. Additionally, users should receive instant notifications ensuring seamless interaction and timely responses within the platform. Overall, the system must prioritize both scalability and real-time performance to deliver a smooth and responsive user experience.

### **2.5.2 Safety Requirements**

In our platform, we prioritize maintaining a safe and respectful online space through comprehensive content moderation tools and policies. We employ a combination of automated filters and manual review processes to actively monitor user-generated content and prevent the spread of harmful or inappropriate material, such as hate speech, harassment, and misinformation. Moreover, we place a strong emphasis on data privacy and security by implementing robust encryption methods to safeguard all user data, including personal information and communications. Additionally, we ensure that all communication channels within the platform are encrypted to thwart unauthorized access, thereby providing users with secure means of interaction and protecting sensitive information from potential breaches or leaks.

### **2.5.3 Security Requirements**

In ensuring robust data encryption and privacy, our platform employs industry-standard encryption algorithms to encrypt sensitive user data, including personal information and messages, both during transit and while at rest. Additionally, we proactively implement measures to safeguard against common web vulnerabilities like Cross-Site Scripting (XSS) and SQL Injection, thereby fortifying our defenses against potential cyber threats. To bolster secure communication, we utilize secure communication protocols such as HTTPS to safeguard data transmitted between users' devices and our servers. Furthermore, for

private messages, we implement end-to-end encryption, ensuring that only the intended recipients have access to the content, further enhancing user privacy and data security across our platform.

#### **2.5.4 Software Quality Attributes**

To fortify user data and privacy on our platform, we've implemented robust security measures. This includes encryption for both data in transit and at rest, ensuring that sensitive information remains protected from unauthorized access. Furthermore, we actively mitigate common web vulnerabilities like XSS and SQL injection, minimizing the risk of exploitation and data breaches. Additionally, we prioritize usability by designing an intuitive and user-friendly interface. Clear navigation and well-organized content enhance the user experience, facilitating seamless interaction with our platform. For maintainability, we adhere to best coding practices, writing clean, modular, and well-documented code. We employ version control systems for efficient code management and collaboration, ensuring transparency and accountability in our development process. Furthermore, we try to implement automated testing and continuous integration to streamline development and deployment processes, enhancing reliability and scalability while minimizing downtime.

# Chapter 3

## System Architecture and Design

### 3.1 System Overview

Unigram facilitates peer learning groups, mentorship, and discussions in various technology channels. The platform promotes community engagement, privacy, and security, fostering a collaborative and safe environment for learning and knowledge sharing.

### 3.2 Architectural Design

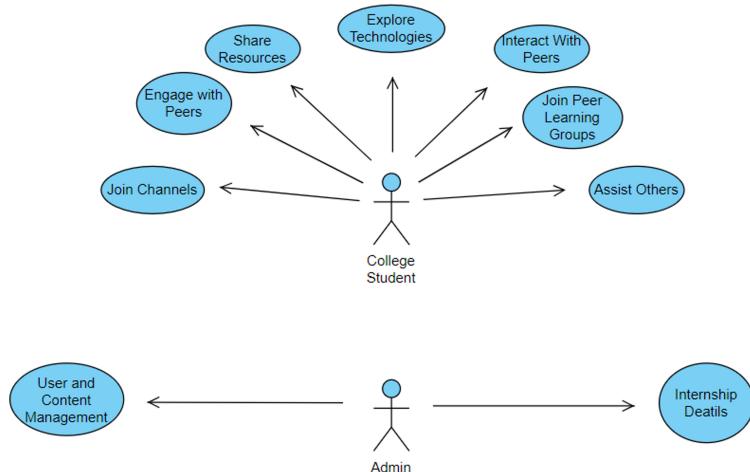


Figure 3.1: Use Case Model

### 3.3 User Interface Design

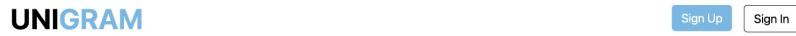


Figure 3.2: Landing Page

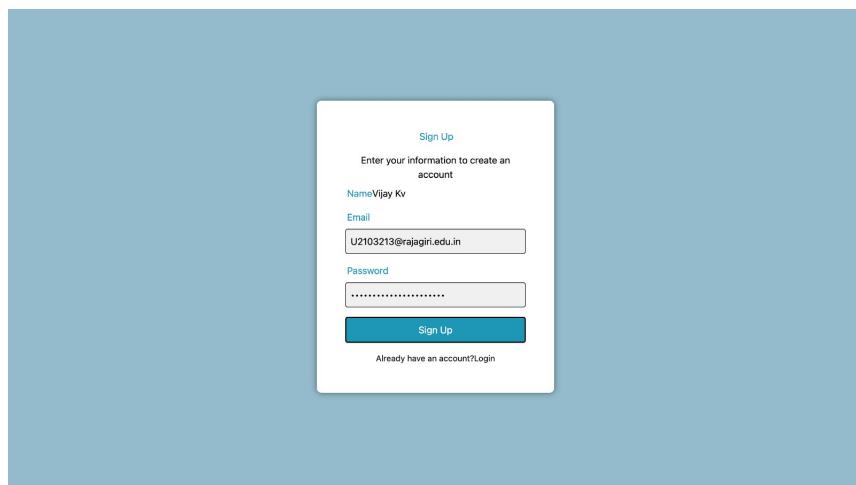


Figure 3.3: SignUp Page

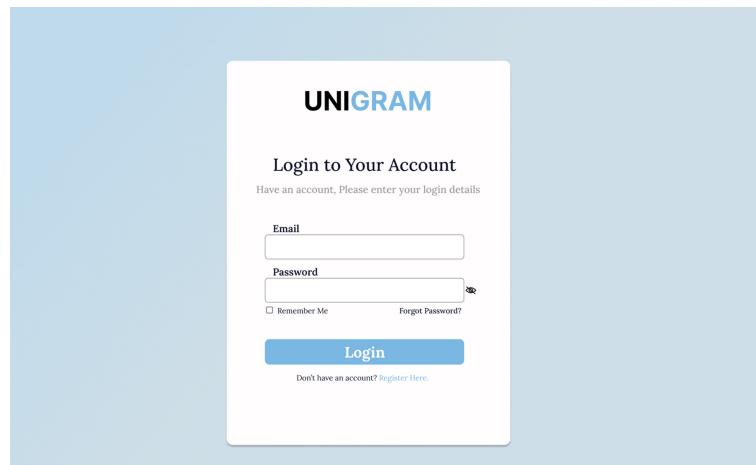


Figure 3.4: Login Page

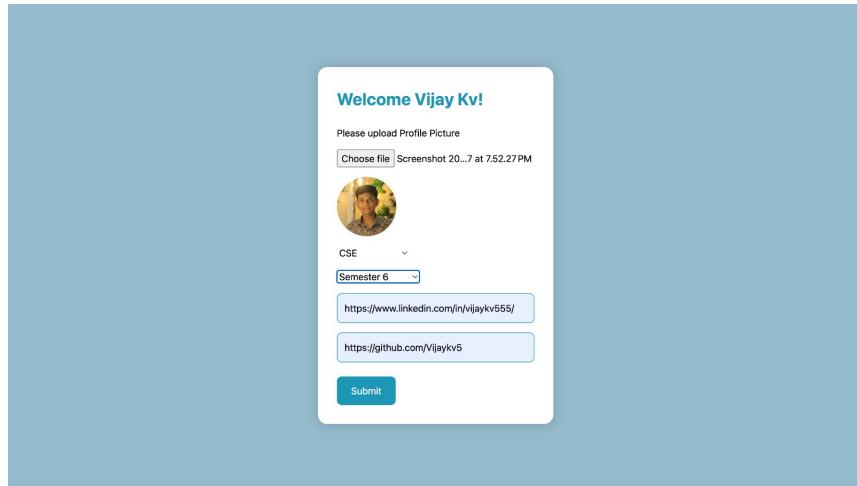


Figure 3.5: UI Design

A screenshot of a social media feed page titled "UNIGRAM". The header includes links for "Community" and "Internships" and a user profile for "Vijay Kv". On the left, there's a sidebar titled "Channels" with options like "Go", "Javascript", "TypeScript", and "AI". The main content area shows a post from "Vishnu" dated "21/05/2024, 17:46:00" with the text "I would love to connect with people who are Starting to do DSA". It has 2 upvotes and 0 comments. To the right is a "Trending Topics" sidebar with hashtags: "#internship", "#DSA", "#webinars", "#react", and "#typescript".

Figure 3.6: Feed Page

The screenshot shows a channel page titled "TypeScript". On the left, there's a sidebar with a "Channels" header and a list of programming languages: Go, Javascript, TypeScript (which is highlighted in blue), and AI. The main area displays a conversation between two users, Sanoy Boby and Neha Davis. Sanoy Boby says, "I'll be working on Type script for my new company! any body like to collaborate with me?" at 13:50. Neha Davis replies, "I would love to join in @sanoy" at 13:52. Below the conversation is a message input field with placeholder text "Type your message..." and a send button.

Figure 3.7: Channel Page

The screenshot shows a profile page for Thomas John. At the top, there's a circular profile picture of him, his name, and some basic information: Branch: CSE, Semester: Semester 6, and an email address tj11@rajagiri.edu.in. Below this is a section titled "Your Posts". It shows a post by Thomas John from 21/05/2024 at 13:57:19. The post content is: "Rajagiri is hosting webinars for Business entrepreneur. After the webinar, Internship opportunity will be provided". It includes a thumbnail image for a webinar titled "Liceria & Co. LIVE WEBINAR BUSINESS WEBINAR Empowering Success Through Knowledge. Join Our Business Webinar Sunday, 20 July 2024 1.00 PM - 3.00 PM".

Figure 3.8: Profile Page

The screenshot shows the "Internship Opportunities" page. At the top, there's a header with the UNIGRAM logo, a "Community" link, an "Internships" link, and a user profile for Vijay Kv. Below the header is a banner with the text "Explore exciting internship opportunities at RSET to gain valuable experience and kickstart your career!". The page features three job listings in cards:

- Looking for MERN stack developers!**

Description: Our company is looking for mern stack devs with 2+ years of exp for our company Company: Microsoft Skills: MongoDB, nodejs, expressjs, reactjs preferred year: 4th year Duration: 3 months Stipend: 20000

**Apply**
- Lokking for React JS devs**

Description: We are hiring a react js dev for our company Company: google Skills: react.js preferred year: 4th year Duration: 2 months Stipend: 4000-

**Apply**
- New react js**

Description: nsns Company: ols Skills: java preferred year: 3rd year Duration: 2 months Stipend: 30000

Figure 3.9: Internship Page

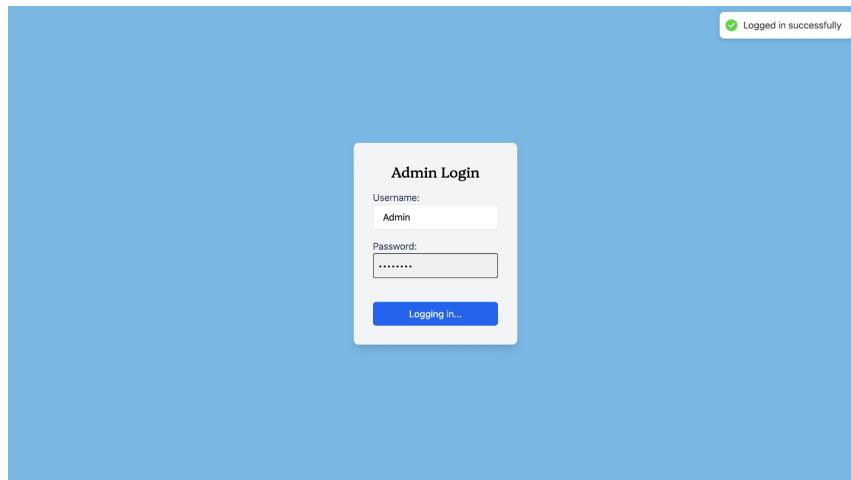


Figure 3.10: Admin Page

A screenshot of the UNIGRAM admin interface, specifically the "Users" section. The left sidebar has a dark theme with white icons and text: "UNIGRAM", "Users" (selected), "channels", "Posts", and "Settings". The main area has a dark header with the title "Users" and the subtitle "Total number of users: 13". Below this is a table of user data, divided into three columns. The first column lists Varun yadav, Neha Davis, Ananthakrishnan Pradeep, test, and Vijay Kv. The second column lists Powell Moothedan, Thomas John, fghjk, sanoy, and u2103213@rajagiri.edu.in. The third column lists Sanoy Boby, Krithika, Sssf, vds, and testing@rajagiri.edu.in. Each row includes an email icon and the user's email address.

Figure 3.11: Admin Page

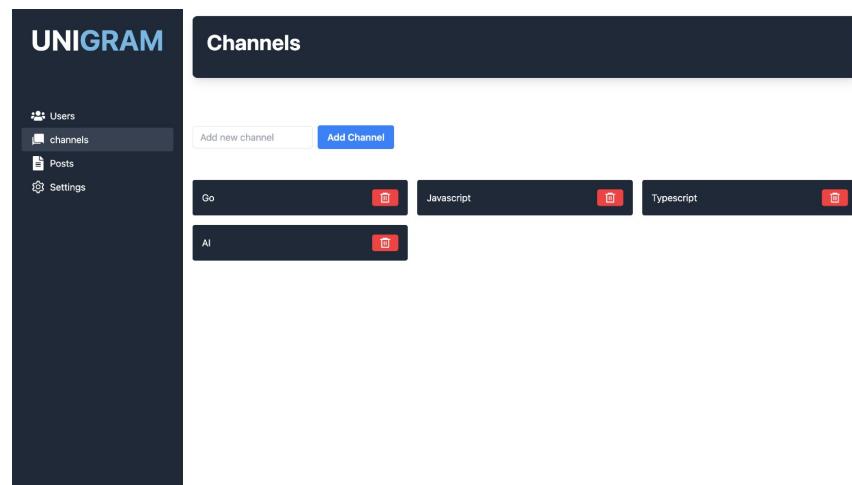


Figure 3.12: Admin Page

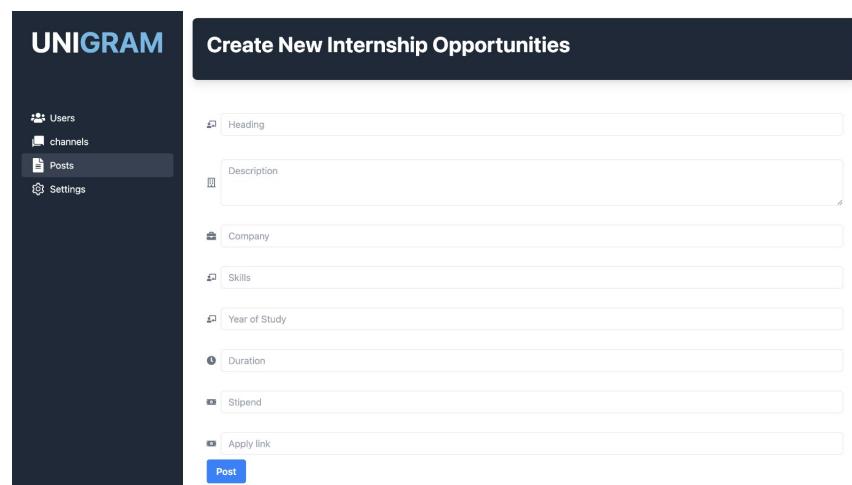


Figure 3.13: Admin Page

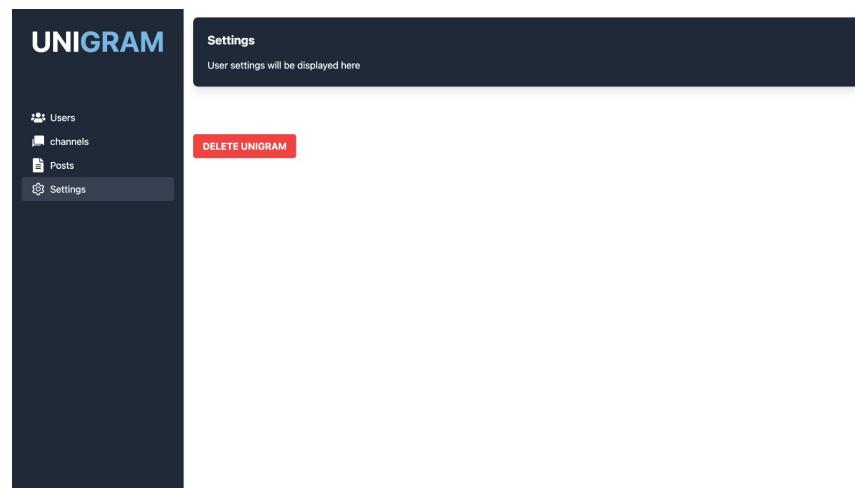


Figure 3.14: Admin Page

### 3.4 Database Design

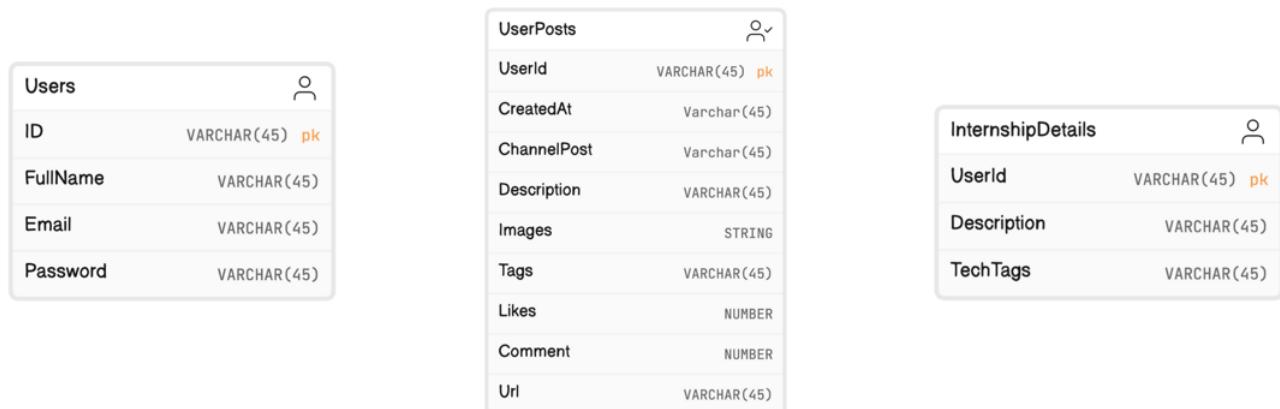


Figure 3.15: Database Design

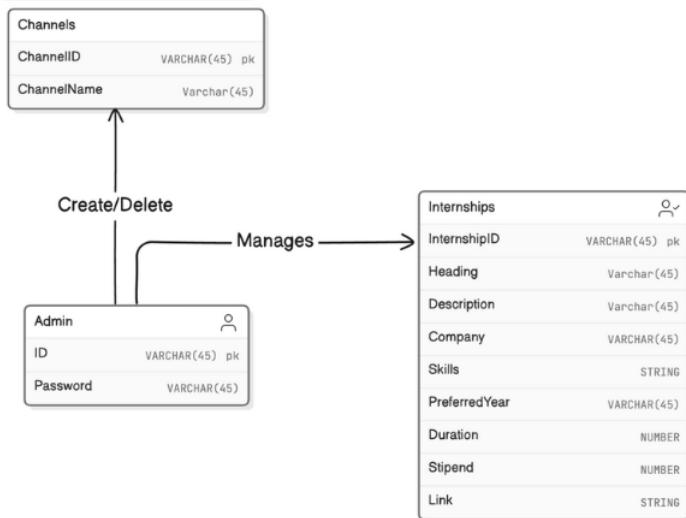


Figure 3.16: Database Design

### 3.5 Description of Implementation Strategies

The frontend is developed using ReactJS, while the backend utilizes Node.js and Express.js for API development. Data is stored in a MongoDB database. User posts are stored in the third-party service "Cloudinary."

### 3.6 Module Division

#### 3.6.1 MODULE 1-Community and Interaction

- Exclusive Access: Only college students can join the platform, creating a focused community
- Peer Learning Groups: Students can form groups to collaborate on projects, share resources, and support each other in their learning journeys.
- Mentorship Opportunities: Facilitate connections between junior and senior students to encourage mentorship and knowledge exchange
- Virtual Channels: Dedicated spaces where students can interact, ask questions, and share insights on specific topics or interests

### **3.6.2 MODULE 2-Profile Management**

- User Profiles: Allow students to create and customize their profiles with information
- Activity Tracking: Display a user's activity history, includes posts

### **3.6.3 MODULE 3-Admin Dashboard**

- User Management: Provide administrators with tools to manage user accounts
- Channel Management: Enable admins to create and delete channels
- Allow admins to post internship listings, including details such as company name, position, duration, requirements, and application deadlines.

## **3.7 Work Schedule - Gantt Chart**



Figure 3.17: Gantt Chart

# Chapter 4

## Results and Discussions

### 4.1 Overview

Unigram has successfully created a dynamic and engaging platform for college students, achieving significant end results in terms of user engagement and knowledge sharing. Analysis indicates that the virtual channels dedicated to specific technologies have become particularly popular, with a marked increase in resource sharing and peer assistance, underscoring Unigram's effectiveness in fostering a supportive and thriving educational community.

### 4.2 Testing

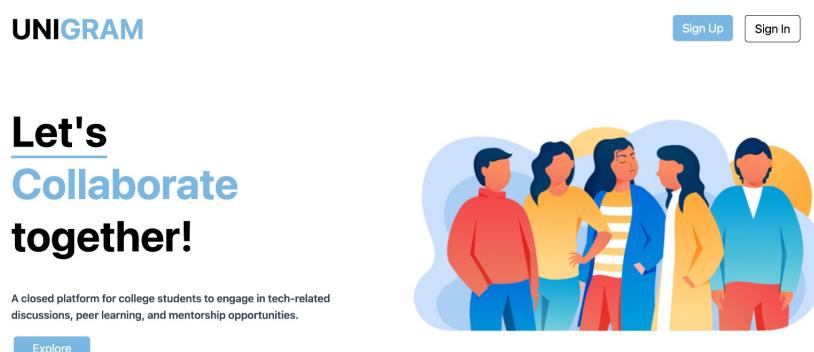


Figure 4.1: Landing Page

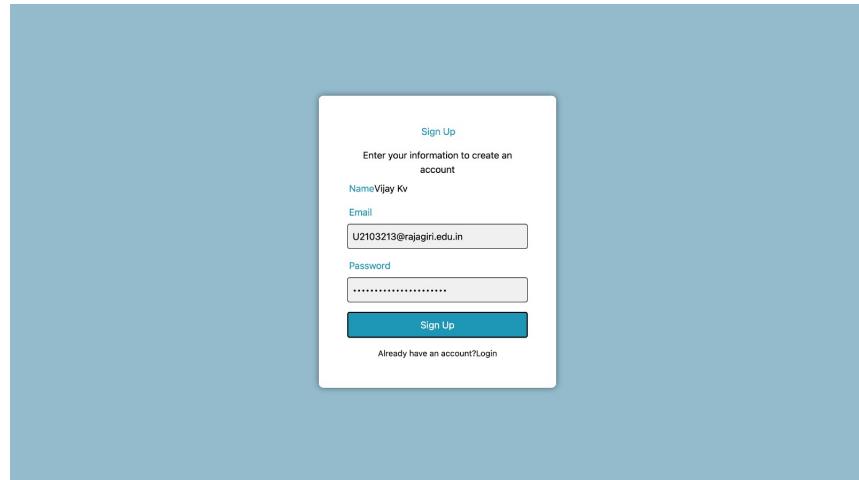


Figure 4.2: SignUp Page

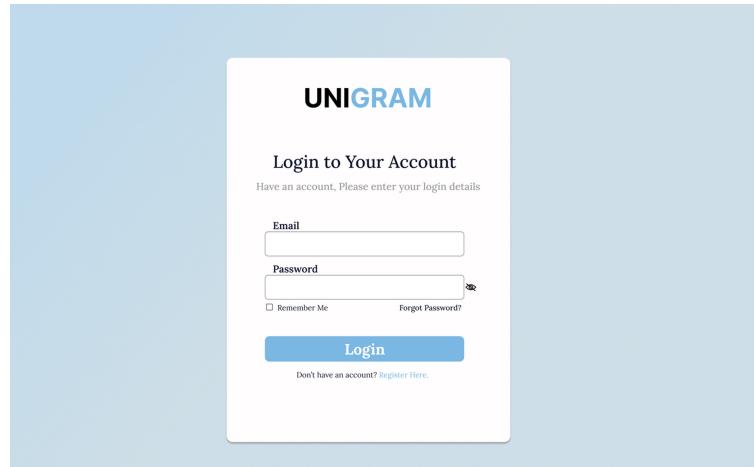


Figure 4.3: Login Page

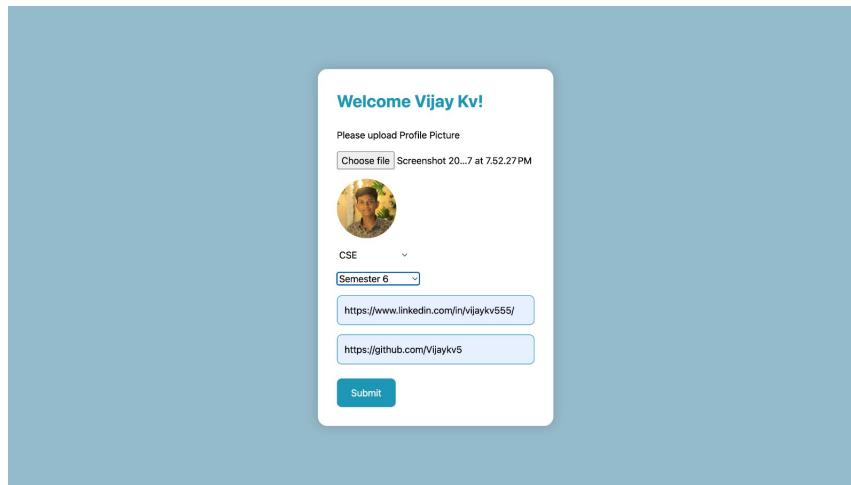


Figure 4.4: UI Design

A screenshot of a feed page titled "UNIGRAM". The top navigation bar includes "Community", "Internships", and a user profile for "Vijay Kv". On the left, a sidebar titled "Channels" lists "Go", "Javascript", "TypeScript", and "AI". The main feed area shows a post by "Vishnu" from May 21, 2024, at 17:46:00. The post content is "I would love to connect with people who are Starting to do DSA". Below the post are interaction buttons for "up 2" and "comment 0". To the right, a sidebar titled "Trending Topics" lists "#internship", "#DSA", "#webinars", "#react", and "#typescript".

Figure 4.5: Feed Page

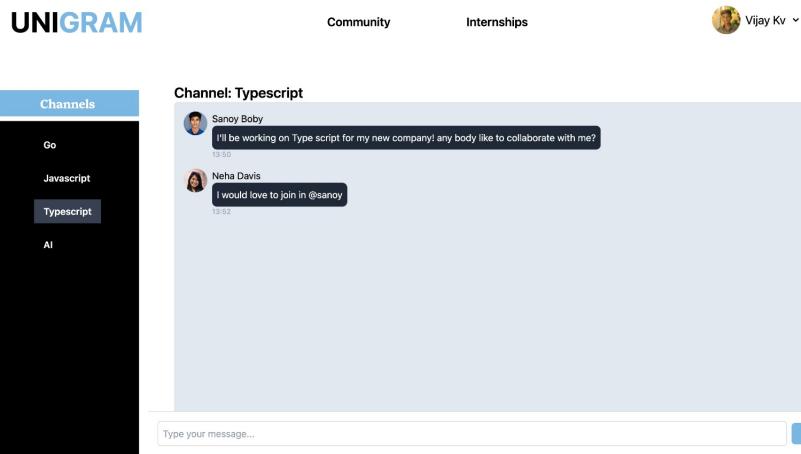


Figure 4.6: Channel Page

Figure 4.7: Profile Page

Figure 4.8: Internship Page

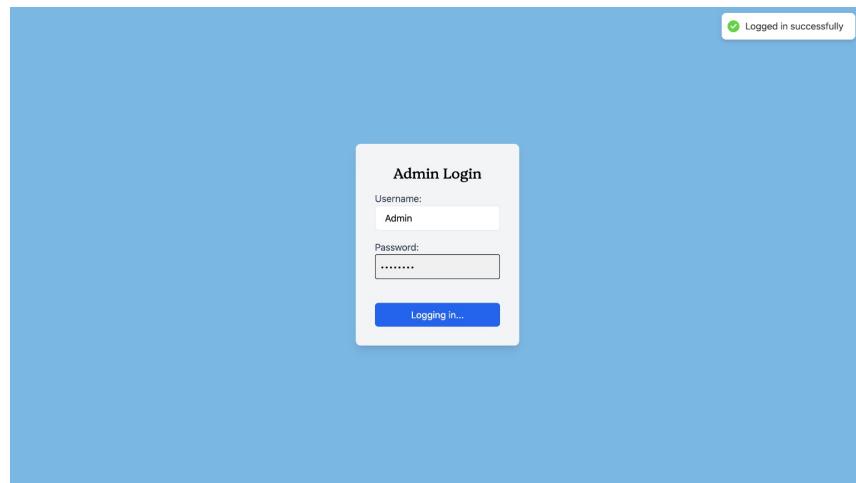


Figure 4.9: Admin Page

A screenshot of the UNIGRAM admin interface, specifically the "Users" section. The header "UNIGRAM" is at the top left. On the left, a sidebar menu has "Users" selected, along with "channels", "Posts", and "Settings". The main area has a dark header bar with the title "Users" and the text "Total number of users: 13". Below this is a grid of user profiles, each consisting of a name, email address, and a small profile picture. The users listed are:

Name	Email
Varun yadav	Varun123@rajagiri.edu.in
Varun yadav	Varun123@rajagiri.edu.in
Neha Davis	neha123@rajagiri.edu.in
Ananthakrishnan Pradeep	tw21se009@rajagiri.edu.in
test	testuser@rajagiri.edu.in
Vijay Kv	U2103213@rajagiri.edu.in
Powell Moothedan	Powell123@rajagiri.edu.in
Thomas John	tj11@rajagiri.edu.in
fghjk	ghj@gmail.com
sanoy	u2103190@rajagiri.edu.in
Sanoy Boby	sanoyboby@rajagiri.edu.in
Krithika	krithi@rajagiri.edu.in
Sssf	ddas124@rajagiri.edu.in
vds	testing@rajagiri.edu.in

Figure 4.10: Admin Page

The screenshot shows the UNIGRAM admin interface. On the left is a sidebar with 'UNIGRAM' at the top, followed by 'Users', 'channels' (which is highlighted in blue), 'Posts', and 'Settings'. The main area is titled 'Channels' and contains a search bar 'Add new channel' and a 'Add Channel' button. Below this are four channels listed in cards: 'Go' (with a trash icon), 'Javascript' (with a trash icon), 'TypeScript' (with a trash icon), and 'AI' (with a trash icon).

Figure 4.11: Admin Page

The screenshot shows the UNIGRAM admin interface. On the left is a sidebar with 'UNIGRAM' at the top, followed by 'Users', 'channels', 'Posts' (which is highlighted in blue), and 'Settings'. The main area is titled 'Create New Internship Opportunities' and contains a form with the following fields: 'Heading' (with a file icon), 'Description' (with a file icon), 'Company' (with a file icon), 'Skills' (with a file icon), 'Year of Study' (with a file icon), 'Duration' (with a file icon), 'Stipend' (with a file icon), and 'Apply link' (with a file icon). At the bottom is a 'Post' button.

Figure 4.12: Admin Page

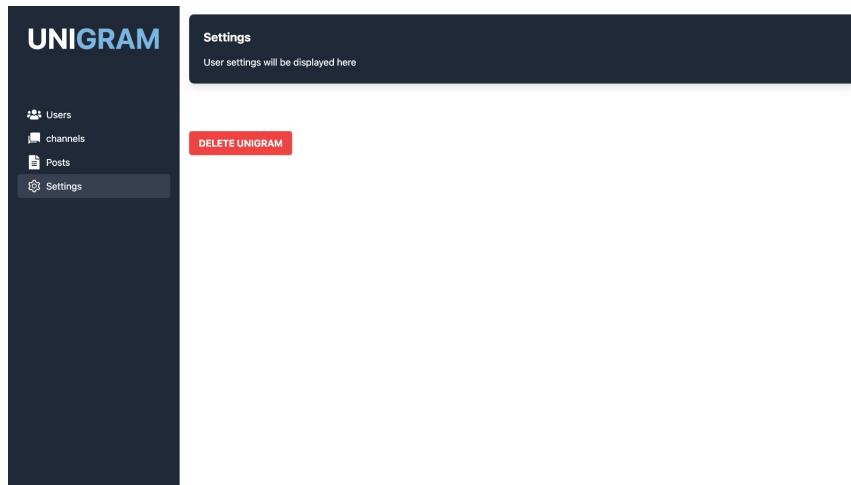


Figure 4.13: Admin Page

### 4.3 Discussion

Unigram has successfully created an engaging and collaborative platform for college students, which will yield impressive results in user engagement and knowledge sharing. The platform will see a marked increase in active participation and the establishment of mentorship connections between juniors and seniors. Users will report an improved technical skills and better course performance due to the collaborative learning environment. These positive outcomes can be attributed to the platform's exclusive access for college students, its effective peer learning groups, and the popular virtual channels dedicated to specific technologies. While the overall results will meet expectations, there will be slight deviations, such as lower initial engagement from first-year students, likely due to their unfamiliarity with the platform. This suggests the need for targeted onboarding and introductory sessions for newcomers to maximize Unigram's impact.

# **Chapter 5**

## **Conclusion**

### **5.1 Conclusion**

In conclusion, Unigram has proven to be a valuable platform for college students, facilitating a robust environment for collaborative learning and knowledge sharing. By offering exclusive access to a focused community, fostering meaningful mentorship connections, and providing dynamic virtual channels for specific technologies, Unigram has significantly enhanced student engagement and technical skill development. While there are areas for improvement, such as better onboarding for first-year students, the overall success of Unigram underscores its potential to continue empowering students and enriching their educational experiences. With its strong foundation, Unigram is well-positioned to evolve and further support the academic and professional growth of its users.

### **5.2 Future Scope**

The platform will incorporate AI recommendation systems and machine learning algorithms to enhance user experience and facilitate efficient knowledge exchange. It will be responsive across all devices, ensuring seamless access whether users are on desktops, tablets, or smartphones. Additionally, a dedicated mobile application will be available, providing convenient and intuitive access to all the platform's features on the go.

## Bibliography

- [1] J. Kurhila; M. Miettinen; P. Nokelainen; H. Tirri. The role of the learning platform in student-centred e-learning.
- [2] Guizhen Wang. An Online Learning Platform for College Students.

## **Appendix A: Presentation**

# **UNIGRAM**

**Mr Sandy Joseph**

**Vijay KV  
Powell Moothedan  
Shaun Mammen John**

## **CONTENTS**

1. Introduction
2. Problem Definition
3. Objectives
4. Scope and Relevance
5. System Design
6. Work Division – Gantt Chart
7. Software/Hardware Requirements
8. Results
9. Conclusion
10. Future Enhancements
11. References

# INTRODUCTION

- UNIGRAM aims to provide a secure and collaborative environment for college students to engage in peer learning groups and assist each other in developing technical skills.
- It offers an exclusive social platform tailored to the needs of college students, providing a dedicated space for interaction, learning, and collaboration centered around technology education
- Through peer learning groups and mentorship opportunities, UNIGRAM fosters a supportive community where students exchange knowledge, and connect with both peers and experienced students

2

# PROBLEM DEFINITION

- UNIGRAM addresses the challenge of facilitating meaningful interactions and knowledge sharing among college students in the field of technology. It aims to create a secure and collaborative space where students can engage in peer learning, share feedback on courses, and assist each other in developing technical skills.

3

# OBJECTIVES

**Interact, Learn, and Share Knowledge:** Enable college students to engage in discussions, learn from peers, and share knowledge on new technologies within a secure and supportive environment, fostering collaboration and active participation.

**Provide a Secure and Collaborative Environment:** Ensure UNIGRAM offers robust security measures to protect user data and privacy while facilitating seamless collaboration and communication among students, promoting trust and confidence in the platform.

4

# SCOPE AND RELEVANCE

- Designed exclusively for college students
- Community engagement and collaboration
- Focused Discussions and Exploration
- Technical Skill Development

5

# FUNCTIONAL REQUIREMENTS

- User Authentication: Implement secure login using college credentials.
- Profile Management: Allow users to create and edit profiles, including personal info and interests.
- Peer Learning Groups: Users can join groups to share feedback and assistance.
- Content Sharing: Allow users to share posts, articles, and resources related to tech.
- Channel Exploration: Enable users to explore and join channels dedicated to various technologies.

6

# SYSTEM OVERVIEW

- Unigram facilitates peer learning groups, mentorship, and discussions in various technology channels.
- The platform promotes community engagement, privacy, and security, fostering a collaborative and safe environment for learning and knowledge sharing.

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# MODULE 1-Community and Interaction

- Exclusive Access: Only college students can join the platform, creating a focused community.
- Peer Learning Groups: Students can form groups to collaborate on projects, share resources, and support each other in their learning journeys.
- Mentorship Opportunities: Facilitate connections between junior and senior students to encourage mentorship and knowledge exchange.
- Virtual Channels: Dedicated spaces where students can interact, ask questions, and share insights on specific topics or interests

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# MODULE 2-Profile Management

- User Profiles: Allow students to create and customize their profiles with information
- Activity Tracking: Display a user's activity history, includes posts

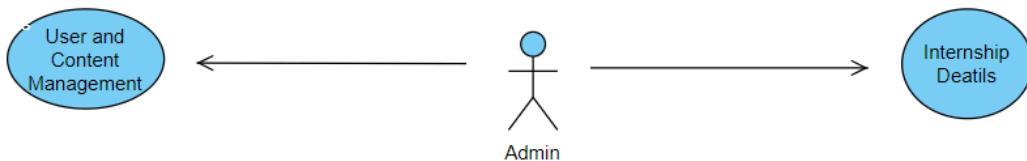
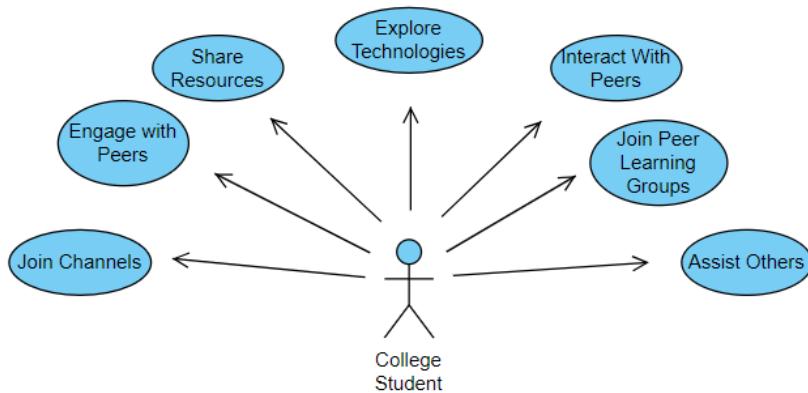
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# MODULE 3-Admin Dashboard

- User Management: Provide administrators with tools to manage user accounts.
- Channel Management: Enable admins to create and delete channels.
- Allow admins to post internship listings, including details such as company name, position, duration, requirements, and application deadlines.

10

## DESIGN MODEL



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# DATABASE DESIGN

**Users**

Users	
ID	VARCHAR(45) <b>pk</b>
FullName	VARCHAR(45)
Email	VARCHAR(45)
Password	VARCHAR(45)

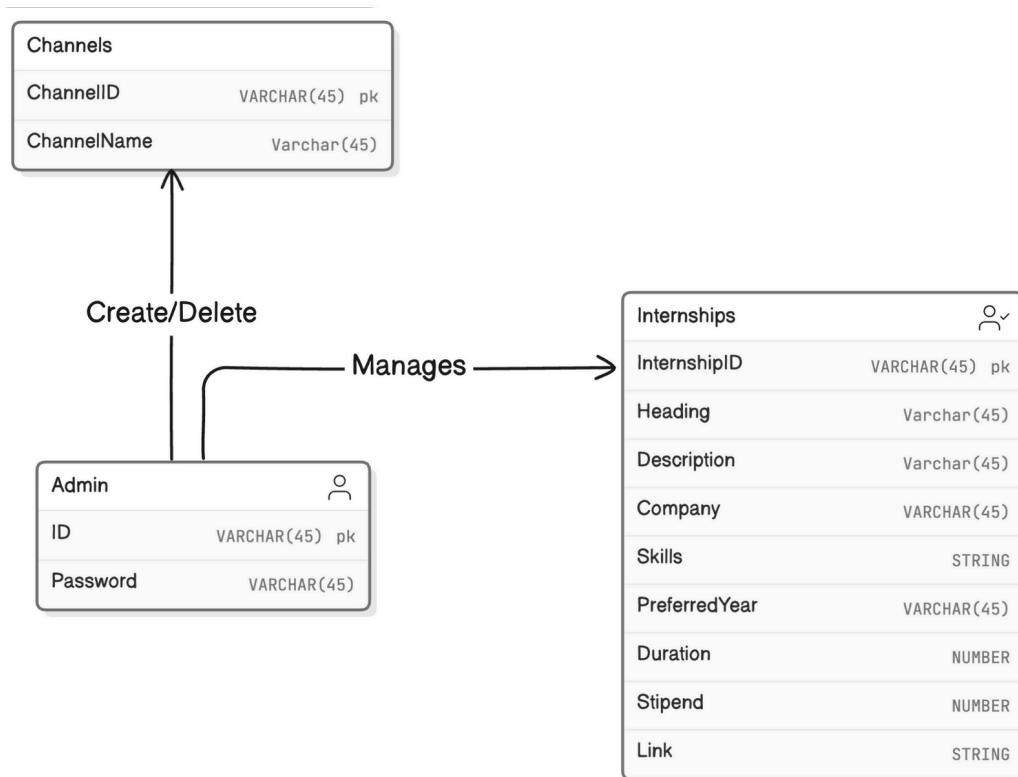
**UserPosts**

UserPosts	
<b>UserId</b>	VARCHAR(45) <b>pk</b>
CreatedAt	VARCHAR(45)
ChannelPost	VARCHAR(45)
Description	VARCHAR(45)
Images	STRING
Tags	VARCHAR(45)
Likes	NUMBER
Comment	NUMBER
Url	VARCHAR(45)

**InternshipDetails**

InternshipDetails	
<b>UserId</b>	VARCHAR(45) <b>pk</b>
Description	VARCHAR(45)
TechTags	VARCHAR(45)

12



13

# WORK DIVISION



14

# SOFTWARE/HARDWARE REQUIREMENTS

- UNIGRAM is developed using MERN stack (MongoDB, Express.js, React.js, Node.js).
- UNIGRAM will be operated on web based platform, compatible with major operating systems such as iOS and Android.

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# RESULTS

**UNIGRAM**

About      Contact      [Signin](#)      [SignUp](#)

**Let's  
Collaborate  
together!**

A closed platform for college students to engage in tech-related discussions, peer learning, and mentorship opportunities,

[Explore](#)

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# RESULTS

**UNIGRAM**

**Login to Your Account**

Have an account, Please enter your login details

Email

Password  

Remember Me      [Forgot Password?](#)

[Login](#)

Don't have an account? [Register Here.](#)

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# RESULTS

UNIGRAM

Community

Internships



Vijay Kv

Channels

- Go
- Javascript
- TypeScript
- AI

Share an Update

What do you want to talk about? **Your paragraph text**

Mention up to 5 tags (max. 12 characters)

+ Add Photo

Post

**Vishnu** 21/05/2024, 17:46:00

I would love to connect with people who are Starting to do DSA

Up 2 | 0

**Thomas John**

Trending Topics

- #internship
- #DSA
- #webinars
- #react
- #typescript

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# RESULTS

UNIGRAM

Community

Internships



Channels

- Go
- Javascript
- TypeScript
- AI

Channel: TypeScript

**Sanoy Boby** I'll be working on Type script for my new company! any body like to collaborate with me? 13:50

**Neha Davis** I would love to join in @sanoy 13:52

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# RESULTS

The screenshot shows the UNIGRAM application interface. On the left is a dark sidebar with the 'UNIGRAM' logo at the top. Below it are four navigation items: 'Users' (selected), 'channels', 'Posts', and 'Settings'. The main area has a dark header with the word 'Users' and a sub-header 'Total number of users: 13'. Below this is a grid of user profiles, each containing a name and an email address. There are two rows of three columns each, plus one additional profile at the bottom.

Name	Email
Varun yadav	Varun123@rajagiri.edu.in
Powell Moothedan	Powell123@rajagiri.edu.in
Sanoy Boby	sanoyboby@rajagiri.edu.in
Neha Davis	neha123@rajagiri.edu.in
Thomas John	tj1@rajagiri.edu.in
Krithika	krithi@rajagiri.edu.in
Ananthakrishnan Pradeep	tw21se009@rajagiri.edu.in
fghjk	ghj@gmail.com
Sssf	ddas124@rajagiri.edu.in
test	testuser@rajagiri.edu.in
sanoy	u2103190@rajagiri.edu.in
vds	testing@rajagiri.edu.in
Vijay Kv	U2103213@rajagiri.edu.in

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# CONCLUSION

- UNIGRAM, a community learning platform designed for college students to interact, learn and share knowledge about new technologies.
- UNIGRAM allow users to share content, create channels and manage peer learning groups.

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# FUTURE ENHANCEMENTS

- The platform will incorporate AI recommendation systems and machine learning algorithms to enhance user experience and facilitate efficient knowledge exchange.
- Responsive across all devices
- Mobile Application

22

# REFERENCES

1. J. Kurhila; M. Miettinen; P. Nokelainen; H. Tirri. The role of the learning platform in student-centred e-learning.
2. Guizhen Wang. An Online Learning Platform for College Students.

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## **Appendix B: Vision, Mission, Programme Outcomes and Course Outcomes**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
RAJAGIRI SCHOOL OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)  
RAJAGIRI VALLEY, KAKKANAD, KOCHI, 682039  
(Affiliated to APJ Abdul Kalam Technological University)**



## **Vision, Mission, Programme Outcomes and Course Outcomes**

### **Institute Vision**

To evolve into a premier technological institution, moulding eminent professionals with creative minds, innovative ideas and sound practical skill, and to shape a future where technology works for the enrichment of mankind.

### **Institute Mission**

To impart state-of-the-art knowledge to individuals in various technological disciplines and to inculcate in them a high degree of social consciousness and human values, thereby enabling them to face the challenges of life with courage and conviction.

### **Department Vision**

To become a centre of excellence in Computer Science and Engineering, moulding professionals catering to the research and professional needs of national and international organizations.

### **Department Mission**

To inspire and nurture students, with up-to-date knowledge in Computer Science and Engineering, ethics, team spirit, leadership abilities, innovation and creativity to come out with solutions meeting societal needs.

## **Programme Outcomes (PO)**

Engineering Graduates will be able to:

- 1. Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems:** Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. Individual and Team work:** Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.

**10. Communication:** Communicate effectively with the engineering community and with society at large. Be able to comprehend and write effective reports documentation. Make effective presentations, and give and receive clear instructions.

**11. Project management and finance:** Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team. Manage projects in multidisciplinary environments.

**12. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

### **Programme Specific Outcomes (PSO)**

A graduate of the Computer Science and Engineering Program will demonstrate:

#### **PSO1: Computer Science Specific Skills**

The ability to identify, analyze and design solutions for complex engineering problems in multidisciplinary areas by understanding the core principles and concepts of computer science and thereby engage in national grand challenges.

#### **PSO2: Programming and Software Development Skills**

The ability to acquire programming efficiency by designing algorithms and applying standard practices in software project development to deliver quality software products meeting the demands of the industry.

#### **PSO3: Professional Skills**

The ability to apply the fundamentals of computer science in competitive research and to develop innovative products to meet the societal needs thereby evolving as an eminent researcher and entrepreneur.

### **Course Outcomes**

After the completion of the course the student will be able to:

#### **CO1:**

Identify technically and economically feasible problems (Cognitive Knowledge Level: Apply)

**CO2:**

Identify and survey the relevant literature for getting exposed to related solutions and get familiarized with software development processes (Cognitive Knowledge Level: Apply)

**CO3:**

Perform requirement analysis, identify design methodologies and develop adaptable & reusable solutions of minimal complexity by using modern tools & advanced programming techniques (Cognitive Knowledge Level: Apply)

**CO4:**

Prepare technical report and deliver presentation (Cognitive Knowledge Level: Apply)

**CO5:**

Apply engineering and management principles to achieve the goal of the project (Cognitive Knowledge Level: Apply)

## **Appendix C: CO-PO-PSO Mapping**

## COURSE OUTCOMES:

After completion of the course the student will be able to

<b>SL. NO</b>	<b>DESCRIPTION</b>	<b>Blooms' Taxonomy Level</b>
CO1	Identify technically and economically feasible problems (Cognitive Knowledge Level: Apply)	Level 3: Apply
CO2	Identify and survey the relevant literature for getting exposed to related solutions and get familiarized with software development processes (Cognitive Knowledge Level: Apply)	Level 3: Apply
CO3	Perform requirement analysis, identify design methodologies and develop adaptable & reusable solutions of minimal complexity by using modern tools & advanced programming techniques (Cognitive Knowledge Level: Apply)	Level 3: Apply
CO4	Prepare technical report and deliver presentation (Cognitive Knowledge Level: Apply)	Level 3: Apply
CO5	Apply engineering and management principles to achieve the goal of the project (Cognitive Knowledge Level: Apply)	Level 3: Apply

## CO-PO AND CO-PSO MAPPING

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PS O3
C O1	3	3	3	3		2	2	3	2	2	2	3	2	2	2
C O2	3	3	3	3	3	2		3	2	3	2	3	2	2	2
C O3	3	3	3	3	3	2	2	3	2	2	2	3			2
C O4	2	3	2	2	2			3	3	3	2	3	2	2	2
C O5	3	3	3	2	2	2	2	3	2		2	3	2	2	2

3/2/1: high/medium/low

## JUSTIFICATIONS FOR CO-PO MAPPING

MAPPING	LOW/ MEDIUM/ HIGH	JUSTIFICATION
101003/CS6 22T.1-PO1	<b>HIGH</b>	Identify technically and economically feasible problems by applying the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
101003/CS6 22T.1-PO2	<b>HIGH</b>	Identify technically and economically feasible problems by analysing complex engineering problems reaching substantiated conclusions using first principles of mathematics.
101003/CS6 22T.1-PO3	<b>HIGH</b>	Design solutions for complex engineering problems by identifying technically and economically feasible problems.
101003/CS6 22T.1-PO4	<b>HIGH</b>	Identify technically and economically feasible problems by analysis and interpretation of data.
101003/CS6 22T.1-PO6	<b>MEDIUM</b>	Responsibilities relevant to the professional engineering practice by identifying the problem.
101003/CS6 22T.1-PO7	<b>MEDIUM</b>	Identify technically and economically feasible problems by understanding the impact of the professional engineering solutions.
101003/CS6 22T.1-PO8	<b>HIGH</b>	Apply ethical principles and commit to professional ethics to identify technically and economically feasible problems.
101003/CS6 22T.1-PO9	<b>MEDIUM</b>	Identify technically and economically feasible problems by working as a team.
101003/CS6 22T.1-PO10	<b>MEDIUM</b>	Communicate effectively with the engineering community by identifying technically and economically feasible problems.
101003/CS6 22T.1-P011	<b>MEDIUM</b>	Demonstrate knowledge and understanding of engineering and management principles by selecting the technically and economically feasible problems.
101003/CS6 22T.1-PO12	<b>HIGH</b>	Identify technically and economically feasible problems for long term learning.
101003/CS6 22T.1-PSO1	<b>MEDIUM</b>	Ability to identify, analyze and design solutions to identify technically and economically feasible problems.
101003/CS6 22T.1-PSO2	<b>MEDIUM</b>	By designing algorithms and applying standard practices in software project development and Identifying technically and economically feasible problems.
101003/CS6 22T.1-PSO3	<b>MEDIUM</b>	Fundamentals of computer science in competitive research can be applied to Identify technically and economically feasible problems.
101003/CS6 22T.2-PO1	<b>HIGH</b>	Identify and survey the relevant by applying the knowledge of mathematics, science, engineering fundamentals.

101003/CS6 22T.2-PO2	<b>HIGH</b>	Identify, formulate, review research literature, and analyze complex engineering problems get familiarized with software development processes.
101003/CS6 22T.2-PO3	<b>HIGH</b>	Design solutions for complex engineering problems and design based on the relevant literature.
101003/CS6 22T.2-PO4	<b>HIGH</b>	Use research-based knowledge including design of experiments based on relevant literature.
101003/CS6 22T.2-PO5	<b>HIGH</b>	Identify and survey the relevant literature for getting exposed to related solutions and get familiarized with software development processes by using modern tools.
101003/CS6 22T.2-PO6	<b>MEDIUM</b>	Create, select, and apply appropriate techniques, resources, by identifying and surveying the relevant literature.
101003/CS6 22T.2-PO8	<b>HIGH</b>	Apply ethical principles and commit to professional ethics based on the relevant literature.
101003/CS6 22T.2-PO9	<b>MEDIUM</b>	Identify and survey the relevant literature as a team.
101003/CS6 22T.2-PO10	<b>HIGH</b>	Identify and survey the relevant literature for a good communication to the engineering fraternity.
101003/CS6 22T.2-PO11	<b>MEDIUM</b>	Identify and survey the relevant literature to demonstrate knowledge and understanding of engineering and management principles.
101003/CS6 22T.2-PO12	<b>HIGH</b>	Identify and survey the relevant literature for independent and lifelong learning.
101003/CS6 22T.2-PSO1	<b>MEDIUM</b>	Design solutions for complex engineering problems by Identifying and survey the relevant literature.
101003/CS6 22T.2-PSO2	<b>MEDIUM</b>	Identify and survey the relevant literature for acquiring programming efficiency by designing algorithms and applying standard practices.
101003/CS6 22T.2-PSO3	<b>MEDIUM</b>	Identify and survey the relevant literature to apply the fundamentals of computer science in competitive research.
101003/CS6 22T.3-PO1	<b>HIGH</b>	Perform requirement analysis, identify design methodologies by using modern tools & advanced programming techniques and by applying the knowledge of mathematics, science, engineering fundamentals.
101003/CS6 22T.3-PO2	<b>HIGH</b>	Identify, formulate, review research literature for requirement analysis, identify design methodologies and develop adaptable & reusable solutions.

101003/CS6 22T.3-PO3	<b>HIGH</b>	Design solutions for complex engineering problems and perform requirement analysis, identify design methodologies.
101003/CS6 22T.3-PO4	<b>HIGH</b>	Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
101003/CS6 22T.3-PO5	<b>HIGH</b>	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools.
101003/CS6 22T.3-PO6	<b>MEDIUM</b>	Perform requirement analysis, identify design methodologies and assess societal, health, safety, legal, and cultural issues.
101003/CS6 22T.3-PO7	<b>MEDIUM</b>	Understand the impact of the professional engineering solutions in societal and environmental contexts and Perform requirement analysis, identify design methodologies and develop adaptable & reusable solutions.
101003/CS6 22T.3-PO8	<b>HIGH</b>	Perform requirement analysis, identify design methodologies and develop adaptable & reusable solutions by applying ethical principles and commit to professional ethics.
101003/CS6 22T.3-PO9	<b>MEDIUM</b>	Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.
101003/CS6 22T.3-PO10	<b>MEDIUM</b>	Communicate effectively with the engineering community and with society at large to perform requirement analysis, identify design methodologies.
101003/CS6 22T.3-PO11	<b>MEDIUM</b>	Demonstrate knowledge and understanding of engineering requirement analysis by identifying design methodologies.
101003/CS6 22T.3-PO12	<b>HIGH</b>	Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change by analysis, identify design methodologies and develop adaptable & reusable solutions.
101003/CS6 22T.3-PSO3	<b>MEDIUM</b>	The ability to apply the fundamentals of computer science in competitive research and prior to that perform requirement analysis, identify design methodologies.
101003/CS6 22T.4-PO1	<b>MEDIUM</b>	Prepare technical report and deliver presentation by applying the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
101003/CS6 22T.4-PO2	<b>HIGH</b>	Identify, formulate, review research literature, and analyze complex engineering problems by preparing technical report and deliver presentation.

101003/CS6 22T.4-PO3	<b>MEDIUM</b>	Prepare Design solutions for complex engineering problems and create technical report and deliver presentation.
101003/CS6 22T.4-PO4	<b>MEDIUM</b>	Use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions and prepare technical report and deliver presentation.
101003/CS6 22T.4-PO5	<b>MEDIUM</b>	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools and Prepare technical report and deliver presentation.
101003/CS6 22T.4-PO8	<b>HIGH</b>	Prepare technical report and deliver presentation by applying ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
101003/CS6 22T.4-PO9	<b>HIGH</b>	Prepare technical report and deliver presentation effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.
101003/CS6 22T.4-PO10	<b>HIGH</b>	Communicate effectively with the engineering community and with society at large by prepare technical report and deliver presentation.
101003/CS6 22T.4-PO11	<b>MEDIUM</b>	Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work by prepare technical report and deliver presentation.
101003/CS6 22T.4-PO12	<b>HIGH</b>	Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change by prepare technical report and deliver presentation.
101003/CS6 22T.4-PSO1	<b>MEDIUM</b>	Prepare a technical report and deliver presentation to identify, analyze and design solutions for complex engineering problems in multidisciplinary areas.
101003/CS6 22T.4-PSO2	<b>MEDIUM</b>	To acquire programming efficiency by designing algorithms and applying standard practices in software project development and to prepare technical report and deliver presentation.
101003/CS6 22T.4-PSO3	<b>MEDIUM</b>	To apply the fundamentals of computer science in competitive research and to develop innovative products to meet the societal needs by preparing technical report and deliver presentation.
101003/CS6 22T.5-PO1	<b>HIGH</b>	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
101003/CS6 22T.5-PO2	<b>HIGH</b>	Identify, formulate, review research literature, and analyze complex engineering problems by applying engineering and management principles to achieve the goal of the project.

101003/CS6 22T.5-PO3	<b>HIGH</b>	Apply engineering and management principles to achieve the goal of the project and to design solutions for complex engineering problems and design system components or processes that meet the specified needs.
101003/CS6 22T.5-PO4	<b>MEDIUM</b>	Apply engineering and management principles to achieve the goal of the project and use research-based knowledge including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
101003/CS6 22T.5-PO5	<b>MEDIUM</b>	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO6	<b>MEDIUM</b>	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities by applying engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO7	<b>MEDIUM</b>	Understand the impact of the professional engineering solutions in societal and environmental contexts, and apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO8	<b>HIGH</b>	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice and to use the engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO9	<b>MEDIUM</b>	Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO11	<b>MEDIUM</b>	Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team. Manage projects in multidisciplinary environments and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PO12	<b>HIGH</b>	Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PSO1	<b>MEDIUM</b>	The ability to identify, analyze and design solutions for complex engineering problems in multidisciplinary areas. Apply engineering and management principles to achieve the goal of the project.

101003/CS6 22T.5-PSO2	<b>MEDIUM</b>	The ability to acquire programming efficiency by designing algorithms and applying standard practices in software project development to deliver quality software products meeting the demands of the industry and to apply engineering and management principles to achieve the goal of the project.
101003/CS6 22T.5-PSO3	<b>MEDIUM</b>	The ability to apply the fundamentals of computer science in competitive research and to develop innovative products to meet the societal needs thereby evolving as an eminent researcher and entrepreneur and apply engineering and management principles to achieve the goal of the project.

