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Chapter 1

Introduction

A discussion forum is a web application that provides a virtual environment supporting discussion and debate among student peers, as well as between teacher and student without temporal or geographical barriers. The asynchronous nature of discussion forums, meaning that all participants are not required to be present or logged on at the same moment in time, allows students to work at times and places of their own choice, providing more flexibility in scheduling for the students. Discussion forums also extend student–teacher interactions allowing academic dialogues and social interactions to occur outside of a traditional classroom. These advantages allow discussion forums to supplement or even totally replace face-to-face interaction, particularly in large-sized courses and web-based courses. [1].

Understanding this need, CUET Forum is developed as a dedicated web-based community-driven platform. It serves as a virtual meeting point for students, faculty, and enthusiasts within the CUET community. The platform enables users to engage in topic-based conversations, explore categorized content, and participate in forum discussions. The interface is intuitive and user-friendly, with distinct sections for navigating topics, viewing forum statistics, and interacting with other users. The forum also features a robust admin panel that allows administrators to manage topics, categories, and user interactions effectively. With a focus on simplicity and functionality, the CUET Forum ensures seamless communication within the academic community while providing an accessible interface for both desktop and mobile users. Through this project, we aim to build a cohesive environment that supports academic growth, peer collaboration, and community engagement within CUET.

Chapter 2

Project Review

2.1 Design

CUET Forum provides distinct interfaces for different user roles. The system creates interface for two main types of users:

- General Users (Students, Faculty, and Alumni)
- Administrators

The flowcharts demonstrated below outlines the access details for the system, highlighting the flow for users, admins, and the index page.

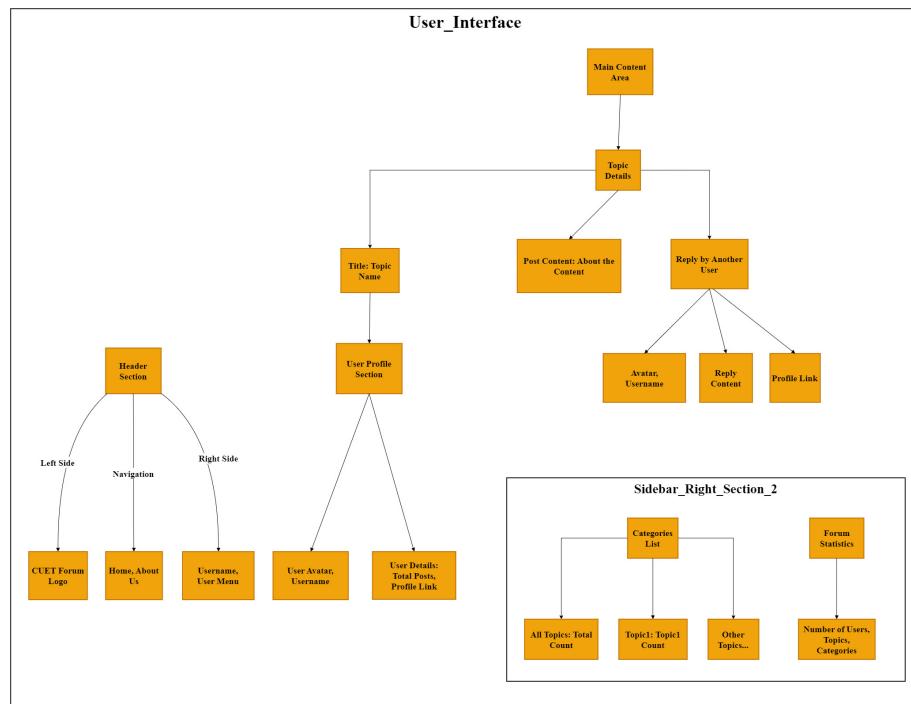


Figure 2.1: Flowchart of User Interface

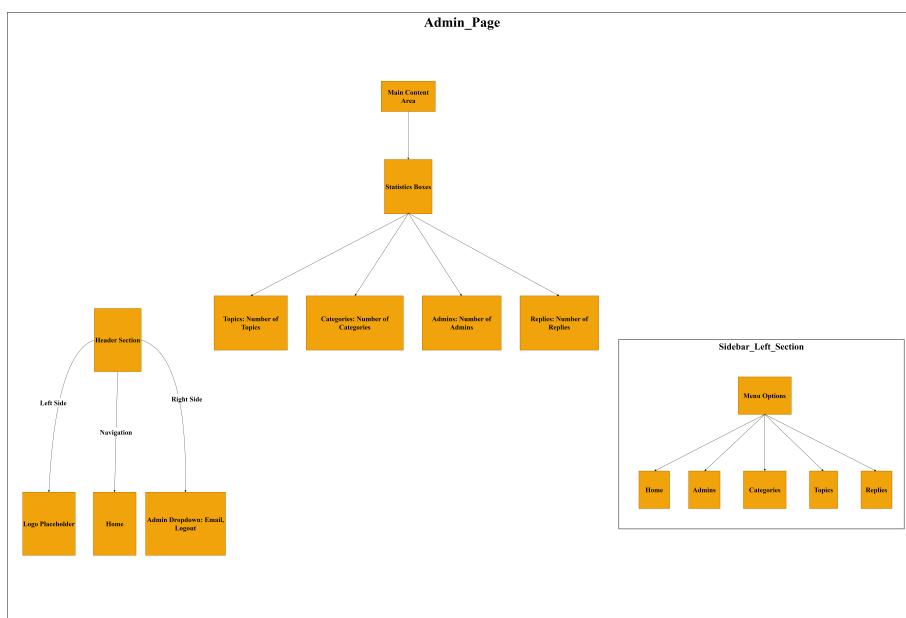


Figure 2.2: Flowchart of Admin Interface

2.2 Role of General Users

General users in the CUET Forum, including students and faculty, have the following roles and capabilities:

- **Profile Management:** Users can view and update their profile details, including adding a profile picture and modifying personal information.
- **Browse and Search Topics:** Users can explore various topics categorized by interest and search for specific discussions or posts.
- **Create and Reply to Posts:** Users can initiate new topics for discussion and reply to existing posts to engage with other members.
- **View Forum Statistics:** Users have access to statistics such as the total number of users, topics, and categories.
- **Interact with Other Members:** Users can engage in discussions, provide feedback, and interact with other members through comments and replies, fostering a collaborative environment.
- **Content Filtering:** Users can filter topics based on categories, authors, or popularity to find relevant discussions easily.

2.3 Role of Administrators

Administrators in the CUET Forum have several key responsibilities to ensure smooth operation and moderation of the platform:

- **User Management:** Administrators can add, update, and remove users from the forum, as well as manage user permissions and roles.
- **Topic and Category Management:** Administrators are responsible for creating, editing, and deleting categories and topics to maintain an organized forum structure.
- **Content Moderation:** Administrators monitor user-generated content to ensure compliance with community guidelines and take action against inappropriate or harmful content.
- **Forum Statistics and Reporting:** Administrators can access comprehensive statistics and generate reports related to user activity, content engagement, and forum health.
- **Role Assignment:** Administrators have the authority to assign specific roles, such as moderators, to trusted users for better management and oversight.
- **System Configuration:** Administrators manage system settings, including privacy policies, terms of service, notification preferences, and overall forum configurations to ensure a secure and efficient user experience.

Chapter 3

Front-end Resources

3.1 HTML

HTML (HyperText Markup Language) serves as the foundational markup language for creating web pages. Primarily utilized on the client side, HTML employs various tags to structure content. It provides the basic framework for web designs, which are then implemented using programming languages. Known for its flexibility and efficiency, HTML is straightforward to maintain and update.

3.2 CSS

CSS (Cascading Style Sheets) is essential for designing the layout and appearance of web pages. It dictates how HTML elements are displayed across various media, such as screens and print. By leveraging CSS, developers can manage the styling of multiple web pages efficiently through external style sheets, promoting consistency and ease of maintenance.

Several frameworks enhance CSS functionality:

3.2.1 Bootstrap

Bootstrap is a widely-used front-end framework that offers a collection of pre-designed components and a responsive grid system. It simplifies the development of modern, responsive websites with its extensive set of built-in styles and components.

3.2.2 Tailwind CSS

Tailwind CSS is a utility-first CSS framework that provides a broad range of low-level utility classes for building custom designs. Unlike traditional frameworks that offer pre-designed components, Tailwind allows for more granular control over styling by applying utility classes directly within HTML elements.

3.2.3 Integration of Tailwind CSS with Bootstrap

When using Tailwind CSS alongside Bootstrap, it is essential to manage potential conflicts between their class names. To avoid clashes and ensure that Tailwind's utility classes do not interfere with Bootstrap's styles, you can add a prefix to Tailwind classes. This prefix differentiates Tailwind's classes from those of Bootstrap, ensuring that both frameworks can coexist without issues.

For example, configure Tailwind to use a specific prefix, such as 'tw-', so that its utility classes are written as 'tw-bg-blue-500', 'tw-text-center', etc. This approach prevents any overlap with Bootstrap's class names, allowing you to utilize both frameworks effectively within the same project.

3.2.4 Importing Tailwind CSS Locally

To use Tailwind CSS in your project, you need to import it locally. First, ensure that Tailwind is installed via npm or yarn. Then, configure your project to include Tailwind by creating a 'tailwind.config.js' file and adding the necessary configuration.

Chapter 4

System Overview

4.1 Index Page:

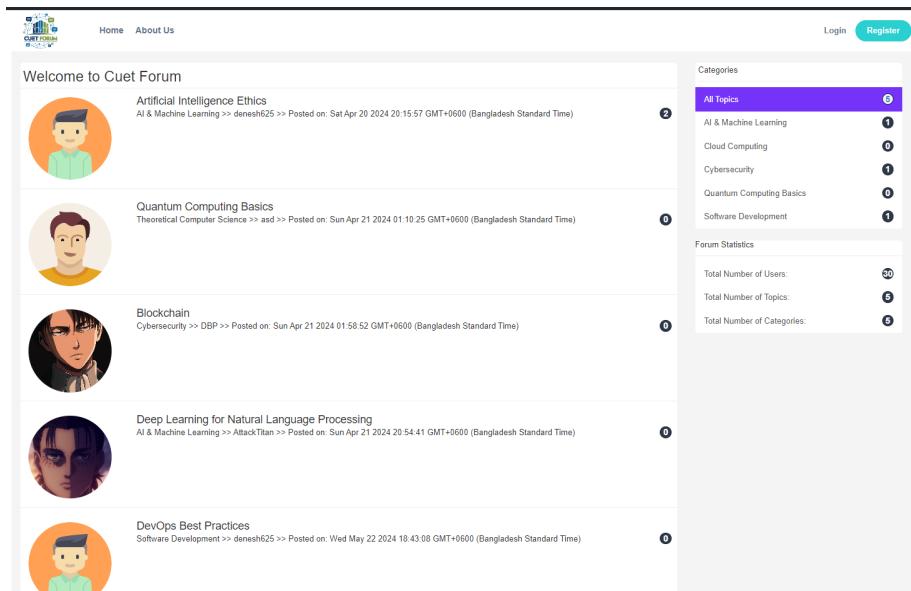


Figure 4.1: Index Page

Before logging in, users can navigate through the Forum and view the available posts categorized by various topics. However, interaction with these posts, such as replying or commenting, is restricted to registered users who are logged in.

4.2 Login:

The system contains a single user login interface. This interface is used by all types of users, including General Users and Administrators. To log in, users must enter their valid email address and password.

Once logged in, users can access various features of the platform , such as: can create new posts , modify their own posts and respond to existing ones. Administrators,

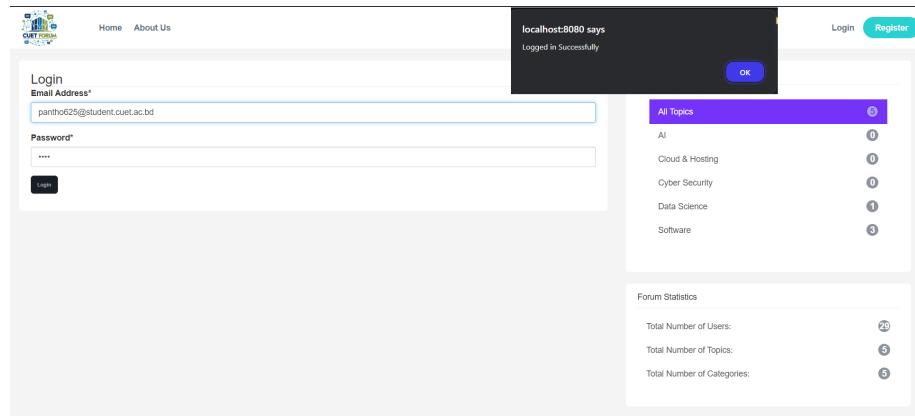
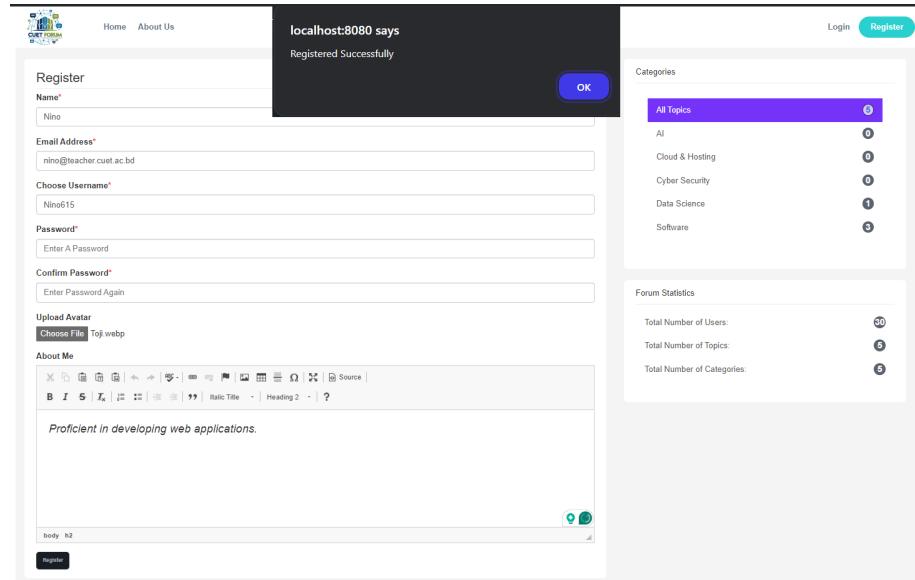


Figure 4.2: Login Page

in addition to these capabilities, have additional permissions such as managing user accounts and moderating content.

4.3 Registration:

To register on the CUET Forum, users need to complete a form providing their name, a valid email address for notifications and access, a unique username, and a secure password (entered twice for confirmation). Users may also upload an avatar as a profile image and write a brief introduction in the "About Me" section, which supports rich text formatting using CKEditor.



4.4 User Home Page (Post-Login)

Upon logging in, users are directed to the home page, which provides an overview of the forum's content and features. The main content area lists discussion topics

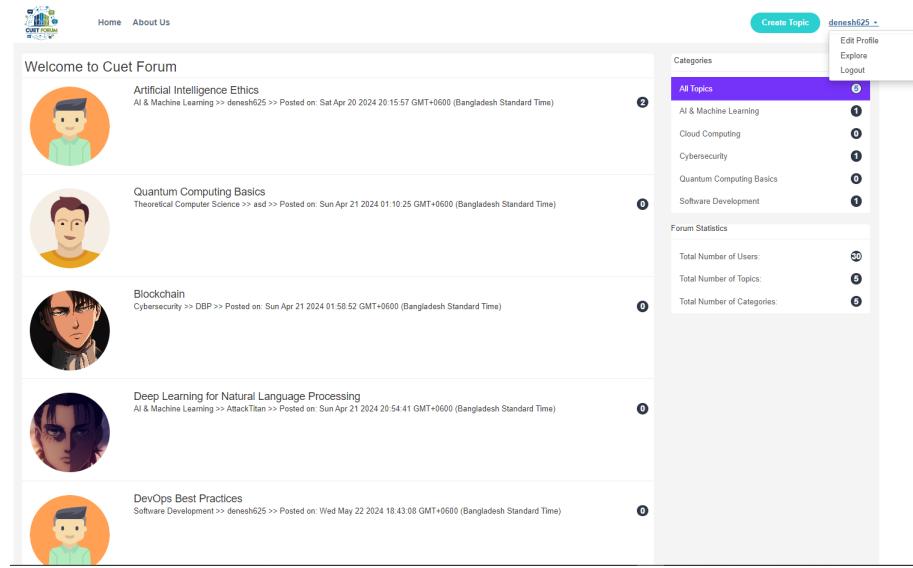


Figure 4.3: General User Home Page Interface

with details such as title, category, author, date, and reply count, helping users quickly assess activity. A sidebar allows filtering by categories and displays forum statistics, such as the total number of users, topics, and categories. The header includes navigation links and a dropdown menu for account management. A prominent *Create Topic* button encourages new discussions, enhancing user engagement and community interaction.

4.5 Admin Home Page:

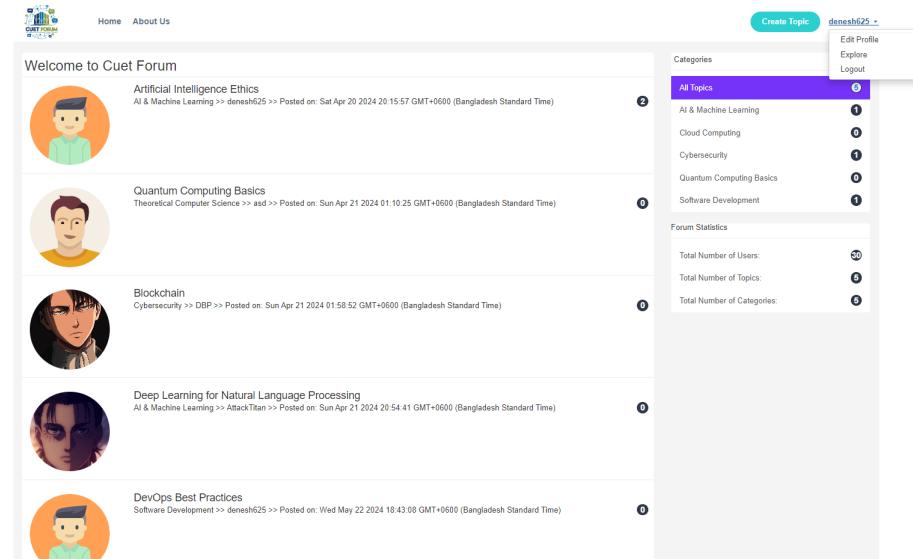


Figure 4.4: Home page for teacher

Nino Admin Add kris

[ADMIN ADD KRIS NINO]

4.6 Topic Section

4.6.1 Creating New Topic

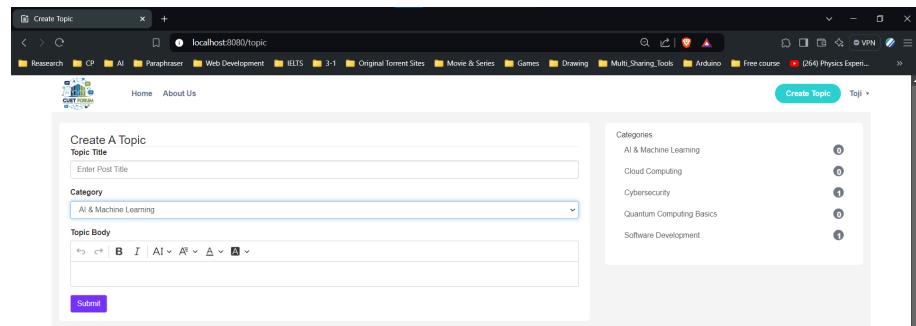


Figure 4.5: Interface for creating new topic

Users who are logged in have the ability to create new topics by choosing a specific category.

4.6.2 Topic Discussion

A screenshot of a web page showing a discussion thread. The first post is from 'Elric' asking about supervised vs unsupervised learning. The second post is from 'Tanjirō' explaining supervised learning. The third post is from 'Ryomen' asking about unsupervised learning. The fourth post is from 'Eren625' responding to Ryomen's question. On the right, there is a sidebar titled 'Categories' listing: AI & Machine Learning, Cloud Computing, Cybersecurity, Quantum Computing Basics, and Software Development.

Figure 4.6: Courses

In the 'Topic Discussion' section, users have the opportunity to ask questions on specific topic. Other users can respond with answers, insights, or follow-up questions, creating a collaborative environment for knowledge sharing and learning.

4.7 User Profile and Statistics

4.7.1 About User

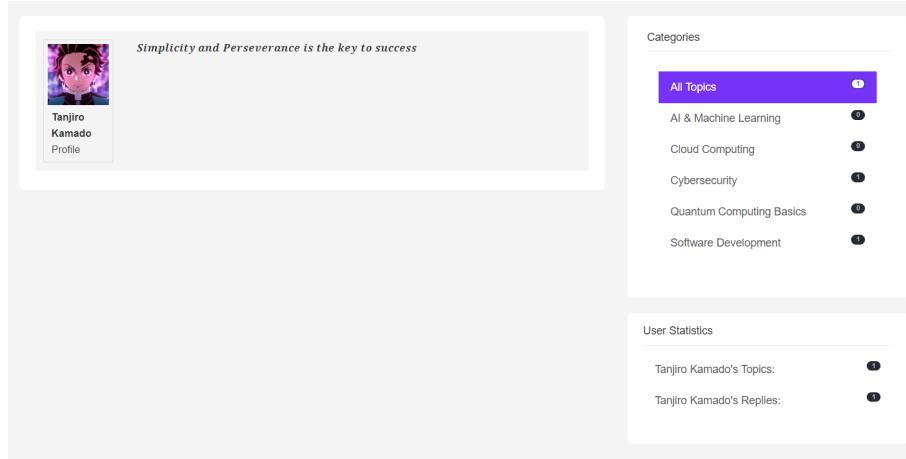


Figure 4.7: About User interface

This section displays a user's profile, along with their personal description added in about us while registering. It also includes quick access to key user statistics, such as the number of topics they've posted and the replies they've made.

4.7.2 Edit Profile

A screenshot of the 'Edit Profile' interface. At the top, there's a navigation bar with a logo, 'Home', 'About Us', 'Create Topic' (button), and 'Eren625' (dropdown). The main area is titled 'Edit Profile' and contains four input fields: 'Name' (placeholder 'Enter Name'), 'User Name' (placeholder 'Enter Username'), 'About' (placeholder 'About Yourself'), and 'Email' (placeholder 'Enter Email'). Below these is a file upload field for 'Upload Avatar' with a placeholder 'Choose File' and 'No file chosen'. At the bottom is a 'Submit' button. To the right of the form is a 'Categories' section identical to Figure 4.7, showing the same topic counts.

Figure 4.8: Edit Profile interface

This section allows users to update their personal information, including their name, username, and email. Users can also add a brief "About" section to describe themselves and upload an avatar to personalize their profile.

Chapter 5

Conclusion

NINO CONCLUSION ADD KRIS

Online education is here and is highly likely to stay and grow. The review of its history clearly shows online education has developed rapidly, fueled by Internet connectivity, advanced technology, and a massive market. It has evolved from 19th century correspondence programs to the 21st century's vibrant and well-designed institutional online offerings. We can well anticipate that online education will continue to increase its presence and influence higher education through a vigorous process of reshaping, refining, and restructuring. It is unlikely, however, to replace traditional higher education but merely to be an alternative. But, owing to its flexibility, accessibility and affordability, online education is gaining in popularity, especially for people who are otherwise unable to obtain education because of physical distance, schedule conflicts, and unaffordable costs [?].

This system is designed to overcome the manual process of class activity. It aims to provide a platform for both teachers and student to find each other more efficiently and conveniently. The teachers can provide enough information about himself to be searched easily. The features of the system is quite limited here as it is designed to build the platform of this type of online platform. But the system can be modified to include a lot of features which will increase the range of the activity.

As this system is for limited features, this system can be updated with lot more features. Some of the recommendation is provided as:

- To include checking system of information
- To include teacher-student chatting system
- To include password recovery system
- To include each progress record for both teacher and student.

Bibliography

- [1] C. K. Cheng, D. E. Paré, L.-M. Collimore, and S. Joordens, “Assessing the effectiveness of a voluntary online discussion forum on improving students’ course performance,” *Computers Education*, vol. 56, no. 1, pp. 253–261, 2011. Serious Games.