Tribhuvan University

Faculty of Humanities and Social Sciences

PROJECT MANAGEMENT TOOL

A PROJECT REPORT

Submitted to

Department of College Application

Triton International College

In partial fulfillment of the requirements for the Bachelors in Computer Application

Submitted By

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Date: 2080/02/08

Under The Supervision of

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Faculty of Humanities and Social Sciences

Supervisor's Recommendations

I hereby recommend that this project prepared under my supervision by Pemba Tamang and Rosham Bajgain entitled "**PROJECT MANAGEMENT TOOL**" in partial fulfillment of the requirements for the degree of Bachelor of Computer Application is recommended for the final evaluation.

SIGNATURE

Dharma Raj Poudel

SUPERVISOR

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Balkumari, Kathmandu

Tribhuvan University

Faculty of Humanities and Social Sciences

Triton International College

LETTER OF APPROVAL

This is to certify that this project prepared by Pemba Tamang and Rosham Bajgain entitled "**PROJECT MANAGEMENT TOOL**" in partial fulfillment of the requirements for the degree of Bachelor in Computer Application has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

SIGNATURE of Supervisor Dharma Raj Poudel Academic Coordinator BCA Department, Balkumari, Kathmandu	**SIGNATURE of Supervisor** Dharma Raj Poudel Academic Coordinator BCA Department, Balkumari, Kathmandu
SIGNATURE of Supervisor <Internal Examiner>	**SIGNATURE of External Examiner** <External Examiner>

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Chapter 1: Introduction

1.1 Introduction

In the contemporary high-speed landscape, the adept management of projects stands as an indispensable factor for the triumph of enterprises and institutions alike. As projects become progressively intricate, the demand for tools that can adeptly streamline the orchestration, implementation, and teamwork involved becomes more pronounced. Consequently, this endeavor is oriented towards the creation of a project management tool that is not only user-friendly but also holds the potential to simplify the intricate choreography of handling tasks, marshaling teams, and adhering to timelines. This tool aims to act as an enabler, ultimately elevating the overall outcomes of diverse projects.

In the modern context characterized by rapid advancements, the efficient administration of projects has assumed a pivotal role in the prosperity of businesses and organizations. The rising intricacies embedded within projects have ushered in an escalating requirement for adept tools capable of harmonizing the phases of project planning, execution, and collaborative efforts. The central aspiration of this undertaking lies in the development of a project management tool that resonates with user-friendliness while simultaneously wielding the power to uncomplicate the multifaceted orchestration encompassing task management, team synchronization, and temporal adherence. The crux of this tool's purpose rests in its potential to serve as a catalyst, invariably enhancing the ultimate outcomes that disparate projects yield.

In today's rapidly evolving environment, the efficient oversight of projects has assumed a paramount status in the triumph of businesses and organizations. The spiraling intricacies embedded within projects have accentuated the necessity for adept tools adept at harmonizing project planning, execution, and collaborative endeavors. The fundamental essence of this initiative revolves around the conception of a project management tool that resonates with user-friendliness whilst concurrently wielding the capability to demystify the intricate ballet associated with task administration, team harmonization, and temporal adherence. This instrument aspires to serve as a catalyst, thereby augmenting the eventual yields procured across a spectrum of projects.

1.2 Problem Statement

In the realm of project management, existing tools often fall short in providing a holistic and efficient solution. Many current systems lack a seamless integration of project tasks, team collaboration, and comprehensive progress tracking. These tools often struggle to provide real-time insights into project timelines and task dependencies, leading to confusion and delays. Additionally, the absence of a user-friendly interface and intuitive features hampers user adoption and inhibits effective communication among team members.

Furthermore, a significant gap exists in addressing the specific needs of small to medium-sized teams and individual project managers. The limited customization options and rigid structures of prevailing tools hinder the adaptability required for diverse project workflows. This can result in inefficient resource allocation, missed deadlines, and suboptimal project outcomes.

1.3 Objectives

1. To create a user-friendly interface that allows users to easily create, assign, and manage tasks.
2. To enable real-time collaboration among team members by providing tools for communication and document sharing.
3. To develop a dashboard that provides an overview of project progress, timelines, and upcoming tasks.
4. To ensure the tool is accessible from various devices, promoting flexibility and remote work.
5. To implement security measures to protect user data and project information.
6. To gather user feedback and make iterative improvements to enhance the tool's usability and functionality.

1.4 Scope and Limitations

The scope of the project management tool encompasses a range of key functionalities tailored to address the diverse demands of efficient project administration. The tool will facilitate task creation, assignment, and monitoring, providing a structured framework for teams to collaborate seamlessly. Moreover, it will feature an intuitive user interface designed to enhance user experience, enabling hassle-free navigation and engagement. The scope extends to generating insightful project progress reports, aiding decision-making and tracking overall project health. The project management tool's reach will encompass individuals, small teams, and organizations seeking an accessible solution for optimizing project management processes.

On the other hand, it's important to acknowledge the inherent limitations of the project management tool. While the tool strives to cater to various project management needs, it might not fully accommodate exceptionally complex project workflows. Additionally, its effectiveness could be impacted by connectivity issues in areas with limited internet access. The tool may require users to possess a certain level of digital proficiency, potentially posing a learning curve for individuals less familiar with technology. Furthermore, as the tool operates within a digital environment, it might not entirely replicate the interpersonal aspects of in-person collaboration. Lastly, regular updates and maintenance will be necessary to ensure optimal performance, which could entail additional effort and resources.

1.5 Report Organization

Chapter 1: Introduction

This chapter offers a glimpse into the project, underlining its importance, background, and objectives. It outlines the project's boundaries as well as the extent of what it can achieve. Furthermore, it acknowledges both the range of possibilities and the constraints that come with the project.

Chapter 2: Background Study and Literature Review

In this chapter, we conduct a comprehensive background study to explain the basic theories, general ideas, and terms relevant to the project. Furthermore, we perform a detailed review of existing literature, looking into similar projects and theories explored by other researchers.

Chapter 3: System Analysis and Design

This chapter is dedicated to analyzing and designing the system. It starts with a thorough examination of the system, beginning with a detailed analysis of the requirements. This includes functional requirements, which are presented using use case diagrams or lists, and non-functional requirements. After that, the feasibility of the project is assessed. This involves evaluating technical, operational, economic, and schedule-related factors.

Following the feasibility analysis, the chapter moves on to modeling the data. This is done through the creation of an Entity-Relationship (ER) Diagram. Additionally, the process of the system is modeled using Data Flow Diagrams (DFDs). The next part of the chapter is about designing the system. This encompasses various aspects, such as the architectural design, the design of the database schema, and the design of the user interface. This user interface design includes Interface Structure Diagrams, which visually represent how different parts of the interface are organized. Finally, the chapter concludes with the creation of physical Data Flow Diagrams that depict the actual flow of data within the system.

Chapter 4: Implementation and Testing

This chapter explores the practical application and testing stages of the project. It commences by examining the tools employed, including CASE tools, programming languages, and database platforms. This is followed by a breakdown of the implementation specifics of various modules, offering insights into procedures and functions. Subsequently, the chapter shifts focus to testing, elucidating the test scenarios for both unit testing and system testing.

Chapter 5: Wrapping up and Additional Suggestions

The last chapter functions as the report's conclusion. Within it, there's a portion dedicated to lessons gleaned and results yielded from the project. This conclusion encapsulates the

primary discoveries and consequences of the project, accentuating its successes and positive impacts. Lastly, suggestions for future enhancements are offered, outlining possible avenues for refinement or additional exploration.

Chapter 2: Background Study and Literature Review

2.1. Background Study

Online Community Platforms: Online community platforms have revolutionized communication and knowledge sharing by providing virtual spaces for individuals to interact, collaborate, and exchange information in various domains. These platforms have become essential in fostering vibrant communities and enabling collective learning.

Moderation and Spam Control: Moderation is crucial in ensuring a healthy and productive online community. It involves overseeing and managing user-generated content to maintain community guidelines and standards. Effective moderation techniques help prevent the dissemination of misinformation, offensive content, and spam.

User Engagement and Interaction: User engagement is a key aspect of online community platforms. It refers to the level of user participation, activity, and interaction within the community. Features such as likes, comments, and discussions facilitate user engagement, fostering a sense of belonging and community building. Active user engagement promotes knowledge sharing, collaboration, and overall community growth.

User Interface and Experience: User interface (UI) and user experience (UX) design significantly impact the success of online community platforms. Well-designed and intuitive interfaces enhance the user experience, making it easy for users to navigate, interact, and contribute to the platform. Effective UI/UX design ensures a seamless and enjoyable user experience, encouraging sustained engagement and participation.

Localization and Cultural Considerations: When developing an online community platform for a specific region or country, it is essential to consider localization and cultural factors. This involves adapting the platform to suit the local language, customs, and user preferences. By addressing cultural considerations, the platform can foster familiarity and inclusivity, encouraging greater user engagement and participation.

Web-Based Project: A web-based project refers to an application that operates on the internet and can be accessed through web browsers. In the context of the Online Tech

Forum system, it signifies that the platform will be developed as a web-based application accessible via web browsers, allowing users to interact, share information, and collaborate online without requiring specific software installations.

2.2. Literature Review

Online Community Platforms: Online community platforms have revolutionized knowledge sharing and collaboration among tech enthusiasts worldwide. Internationally recognized platforms like Stack Overflow and Reddit have played a significant role in fostering vibrant tech communities.

Stack Overflow, a popular platform for programming and software development discussions, has gained immense traction. As of September 2023, it reported over 100 million plus unique visitors per month and over 23 million registered users worldwide [1]. Stack Overflow's active community of developers and experts actively engage in sharing knowledge, solving coding challenges, and seeking advice.

Reddit, a widely used social news aggregation and discussion platform, covers a wide range of topics, including technology. With over 1 billion unique monthly visits and over 140,000 active communities as of September 2023, Reddit provides a diverse space for tech enthusiasts to participate in discussions, share insights, and seek advice [2].

Local Tech Community Platforms in Nepal: Upon searching the term "Tech forum" in Google, the top results primarily yield international communities and Facebook groups, indicating the limited availability of dedicated local platforms. However, searching for the term "Nepali Forms" reveals articles and mentions from international creators rather than actual forum sites. It is interesting to note that political forums tend to be highlighted more prominently rather than authentic tech forums.

Among the local results, Ask-Mitra stands out as a community created by experts that aimed to foster joyful interactions among its members. However, due to the lack of effective moderation and spam control measures, the community faced challenges. As a result, the platform began removing all posts to maintain a healthy environment, which led to a decline in user engagement and participation.

These findings highlight the existing gaps in the local tech community platforms in Nepal. There is a need for a comprehensive and well-moderated online community platform

tailored to Nepal's tech community. Such a platform would provide a secure and engaging space for tech enthusiasts to connect, collaborate, their knowledge and experiences.

Chapter 3: System Analysis and Design

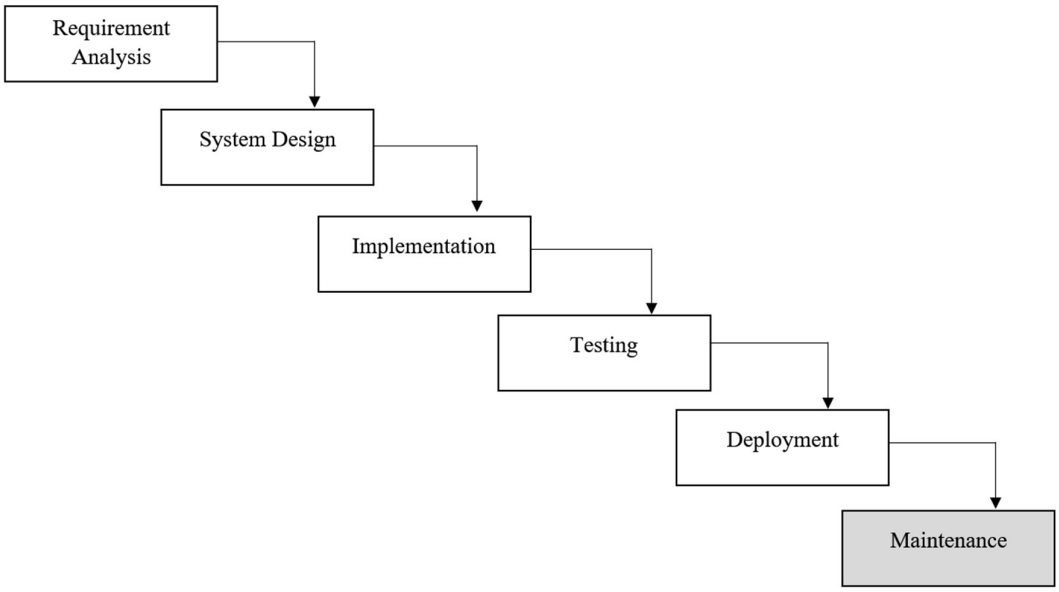
3.1. System Analysis

The project is being developed using the waterfall model, which follows a step-by-step and sequential approach to software development. This model includes distinct stages such as gathering requirements, designing the system, implementing, testing, deploying, and maintaining.

The waterfall model emphasizes a thorough planning phase at the project's outset to establish clear requirements and goals. Each stage progresses systematically, with the completion of one phase serving as input for the next.

In terms of maintenance, while the project's primary focus may lie in development and deployment, there is a chance of addressing maintenance and updates in the future. Although the extent of maintenance might be influenced by time limitations, the importance of ongoing support, fixing errors, and potential improvements is acknowledged. This ensures the system's continuous functionality and relevance.

Consequently, the project is following the waterfall model for development, while also taking into account potential future maintenance and updates to ensure the Online Tech Forum system remains effective and up-to-date.



3.1.1 Requirement Analysis

i. Functional Requirements:

As per the system, the following are the functional requirements for different users:

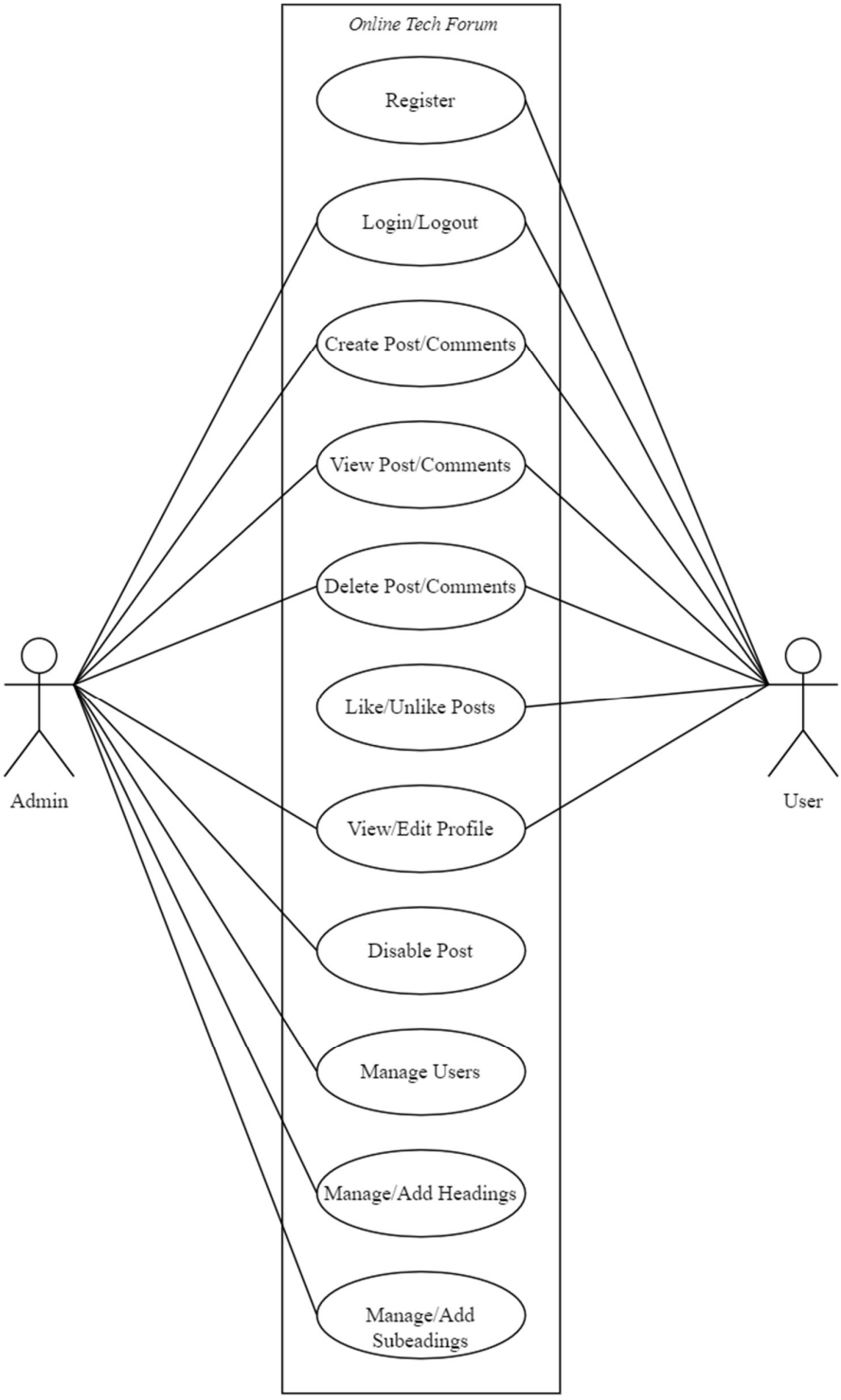
Regular Users:

1. Registration: Regular users should be able to register by providing their name, username, email, phone number, and password.
2. Login: Users should be able to log in to their accounts using their registered email/username and password.
3. View Posts: Users should have access to view posts created by other users.
4. Like Posts: Users should be able to like posts to show their appreciation or agreement.
5. Comment on Posts: Users should be able to leave comments on posts to express their opinions or ask questions.
6. Edit Profile: Users should have the ability to edit their profile information, including name, username, email, phone number, and profile picture.
7. Delete Account: Users should be able to delete their accounts if they choose to do so. (Temporarily unavailable)

Admin Users:

1. Admin Privileges: Admin users should have additional privileges and capabilities compared to regular users.
2. Post Management: Admin users should be able to create, edit, and delete posts.
3. Disable Posts: Admin users should have the ability to disable posts, temporarily removing them from public view.
4. User Management: Admin users should have the ability to manage user accounts, including suspending or banning users if necessary.
5. Heading and Subheading Management: Admin users should be able to create, edit, and delete headings and subheadings for organizing posts.

Use Case Diagram



ii. Non-Functional Requirements

Performance: The system should provide fast response times and efficient handl ing of user interactions. This ensures that users can quickly access the platform, browse posts, and engage in discussions without experiencing frustrating delays. A well-performing system contributes to a positive user experience and encourages active participation.

Security: The system should implement robust security measures to protect user data and ensure the privacy and integrity of user information. This involves using encryption techniques to secure data transmission, implementing user authentication and authorization mechanisms, and safeguarding against common security threats such as SQL injection or cross-site scripting. By prioritizing security, the system instills user trust and confidence, fostering a safe environment for knowledge sharing and collaboration.

Usability: The system should have a user-friendly interface and intuitive navigation, enabling users to easily access features, create and browse posts, and interact with other users. Usability considerations include clear and consistent design, proper information hierarchy, and intuitive interactions. By emphasizing usability, the system ensures that users can effectively engage with the platform, contributing to increased user satisfaction, engagement, and overall adoption.

3.1.2 Feasibility Analysis

i. Technical Feasibility Study:

The system exhibits strong technical feasibility as the necessary hardware and software for development are readily accessible. The project utilizes a suitable programming language, supported by libraries capable of achieving the desired results. Leveraging existing resources for system development and maintenance is feasible.

Ii. Operational Feasibility Study:

The system is designed to be user-friendly, requiring only basic computer and internet knowledge to operate. Extensive training is not necessary, as the system's interface is intuitive and user-friendly. The system fulfills all the requirements for a sponsorship system, making it operational and easily adaptable for implementation. Administrators find the system user-friendly and straightforward to navigate.

Iii. Economic Feasibility Study:

The system is economically feasible and cost-effective, leveraging open-source tools and resources. No additional expenditure is required for hardware or software deployment after system completion. Existing resources can be effectively utilized, ensuring economic viability throughout the project lifecycle.

iv. Schedule Feasibility Study:

The system is completed within the defined schedule, adhering to project timelines and successfully meeting project milestones. The development process is efficiently managed to prevent any delay beyond the scheduled timeframe.

3.1.3 Data Modeling (ER-Diagram)

The ER diagram used for the Online Tech Forum system is a Conceptual Entity-Relationship Diagram (ERD). As a Conceptual ERD, it focuses on capturing the high-level business concepts and relationships within the system. The diagram presents an abstract representation of the entities, their attributes, and the relationships between them, without delving into specific implementation details.

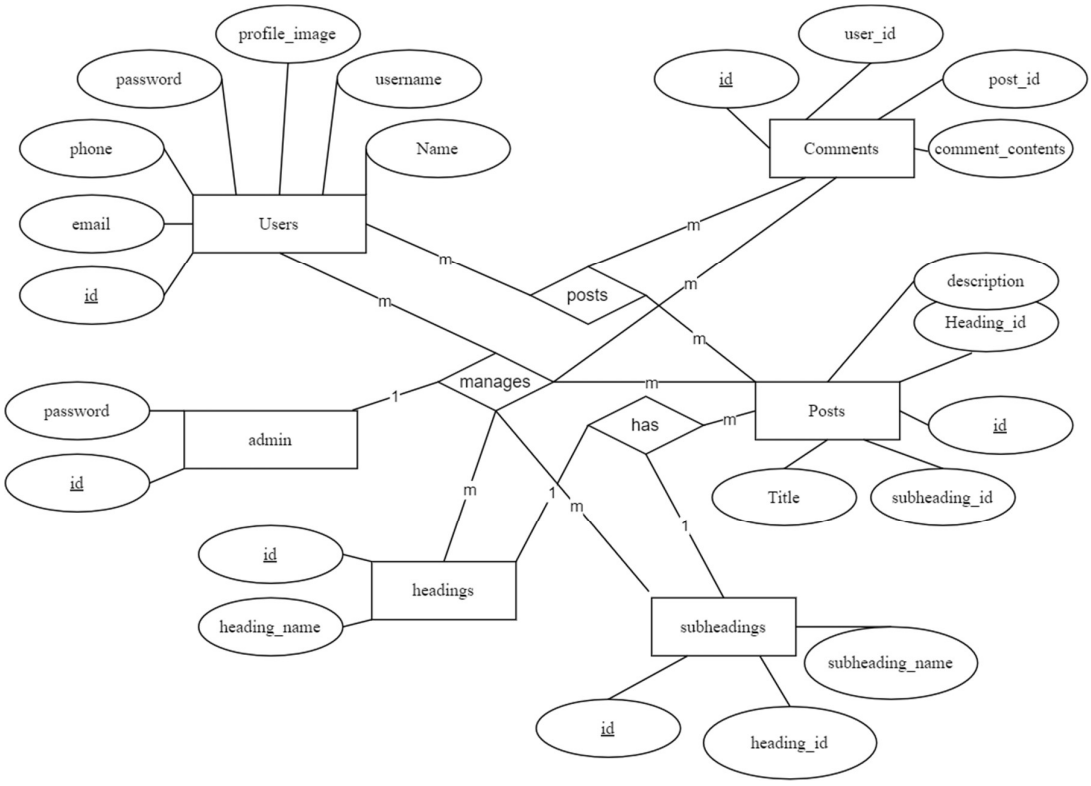
The purpose of the Conceptual ERD is to provide a clear understanding of the system's data requirements and the relationships among the entities at a conceptual level. It serves as a foundation for the subsequent design and implementation phases of the database system. By visualizing the entities and their relationships, the Conceptual ERD helps stakeholders, designers, and developers to communicate and align their understanding of the system's data structure.

In the Online Tech Forum system's Conceptual ERD, you will find entity boxes representing entities such as "users," "heading," "subheading," "posts," and others. The attributes specific to each entity are listed within the respective entity boxes. The relationships between entities, such as the relationship between "heading" and "subheading" or "user" and "posts," are depicted using lines connecting the entities. These relationships are classified as one-to-one, one-to-many, or many-to-many, based on how the entities are associated.

By utilizing a Conceptual ERD, the Online Tech Forum system can establish a clear and shared understanding of the data requirements and relationships, guiding the subsequent design and implementation phases of the database system.

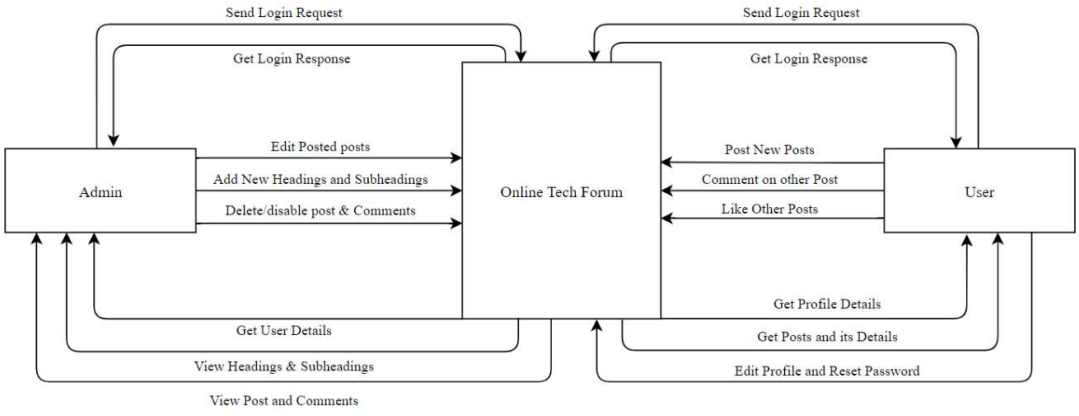
3.1.4 Process Modeling (DFD):

The Data Flow Diagram (DFD) for the Online Tech Forum project illustrates the flow of data and interactions within the system. The DFD represents a high-level view of the system's components and their relationships, focusing on the data movements between external entities. In this project, we are following a specific DFD that is designed to capture the essential data flows and interactions within the Online Tech Forum system.



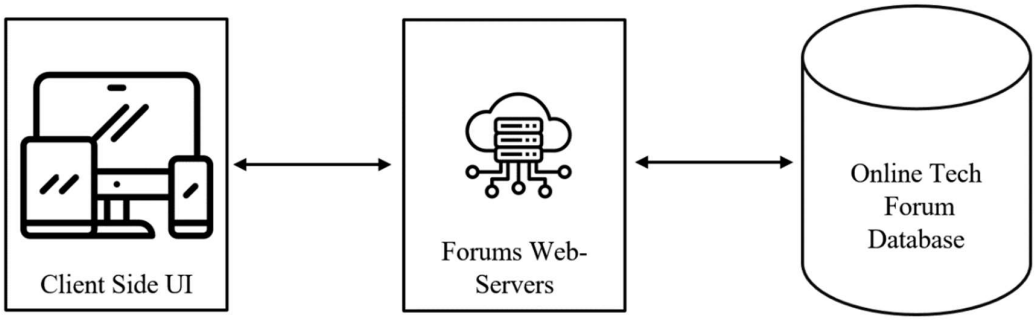
3.1.3 Conceptual ERD of Online Tech Forum

3.2 System Design



3.2.1 Architectural Design

The architecture design for the Online Tech Forum system follows a client-server model. It comprises a Forums database for data storage, a Forums web server for handling requests and processing logic, and a client-side User Interface (UI) for user interaction. This design enables efficient communication and ensures a seamless user experience.



3.2.1 Architecture design for the Online Tech Forum

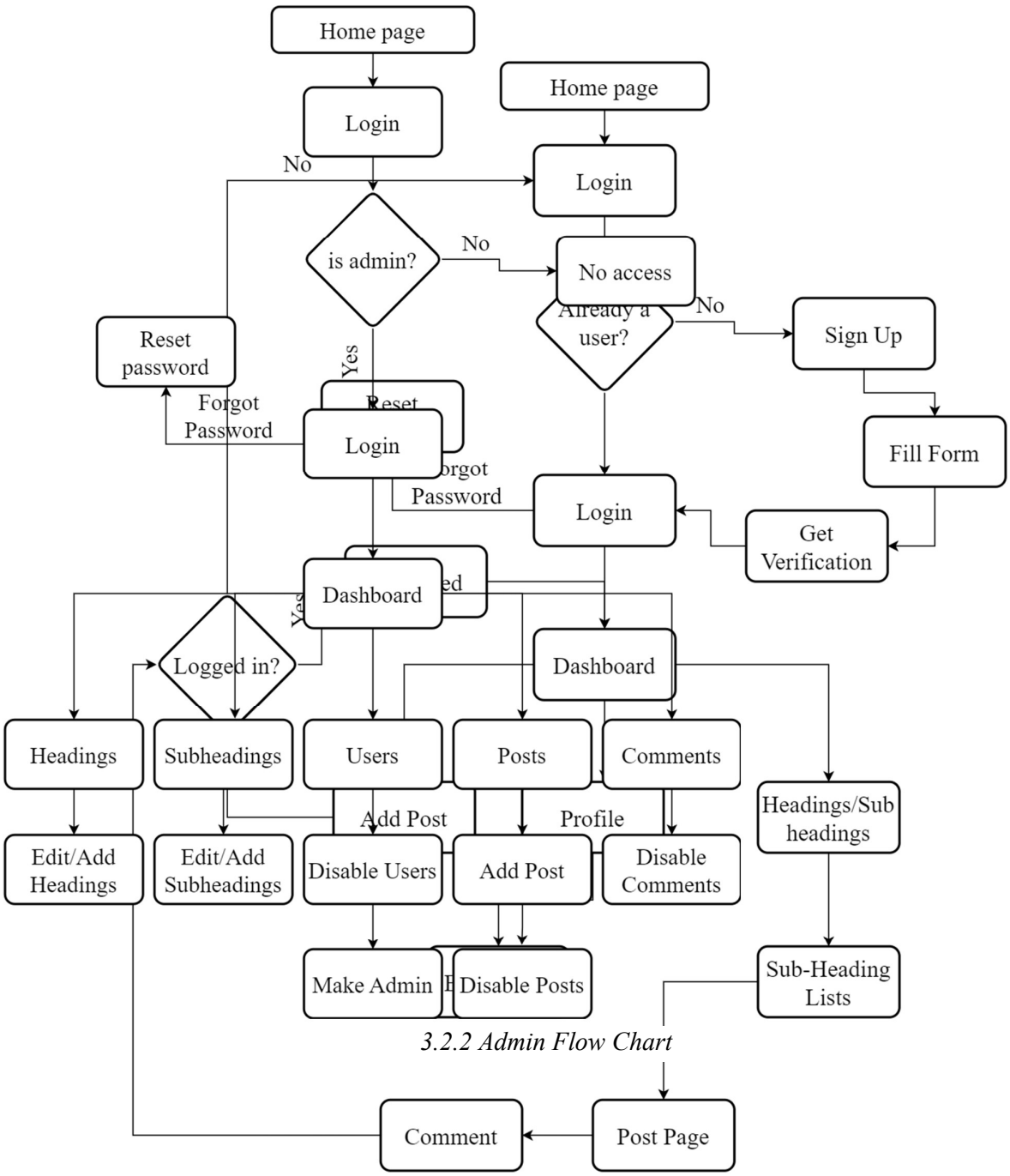
3.2.2 System Flowchart

The system flow chart for the Online Tech Forum system provides an overview of the sequential steps involved in user interactions and administrative tasks.

For users, the system flow chart begins with the registration and login process. Once logged in, users can navigate through the forum's various sections, browse existing posts, and search for specific topics of interest. They can create new posts, comment on existing posts. Users can also like posts, bookmark them for later reference, and update their account information as needed. The flow chart outlines the user's journey within the system, highlighting the options and actions available at each stage.

For the admin, the system flow chart focuses on administrative tasks and privileges. Admins have access to additional functionalities for managing the forum's content and users. They can moderate posts and comments, delete inappropriate content, and handle

user-reported issues. The flow chart illustrates the administrative actions available, such as managing user accounts, monitoring system activity.

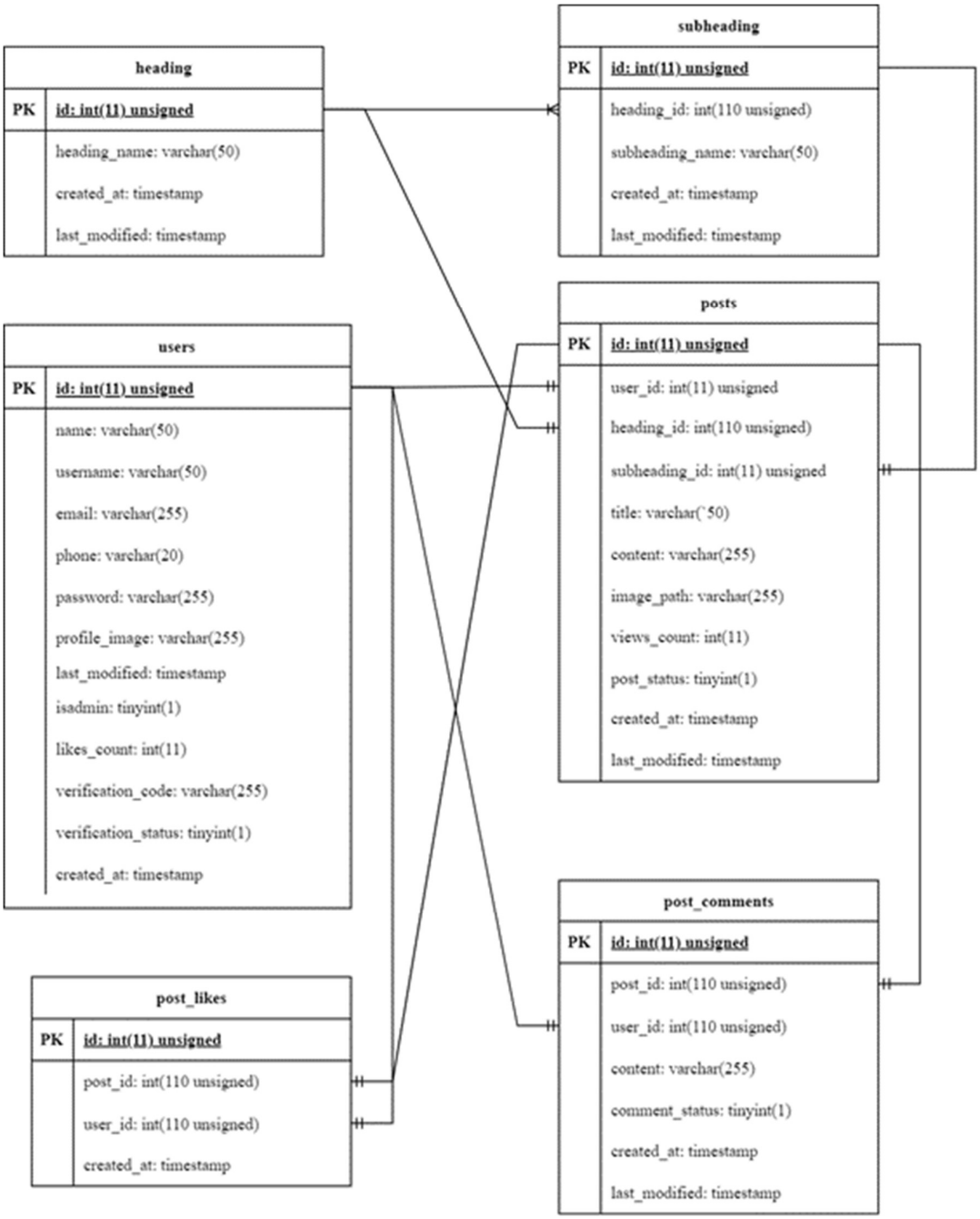


3.2.2 Admin Flow Chart

3.2.3 Database Schema Design

Database schema design for the Online Tech Forum system involves creating an organized structure to store and manage data efficiently. The schema design defines the tables, their columns, data types, relationships, and constraints. It ensures that the data is organized

logically, enabling seamless retrieval and manipulation. The database schema includes tables such as "users," "posts," "comments," and "categories," each with their respective

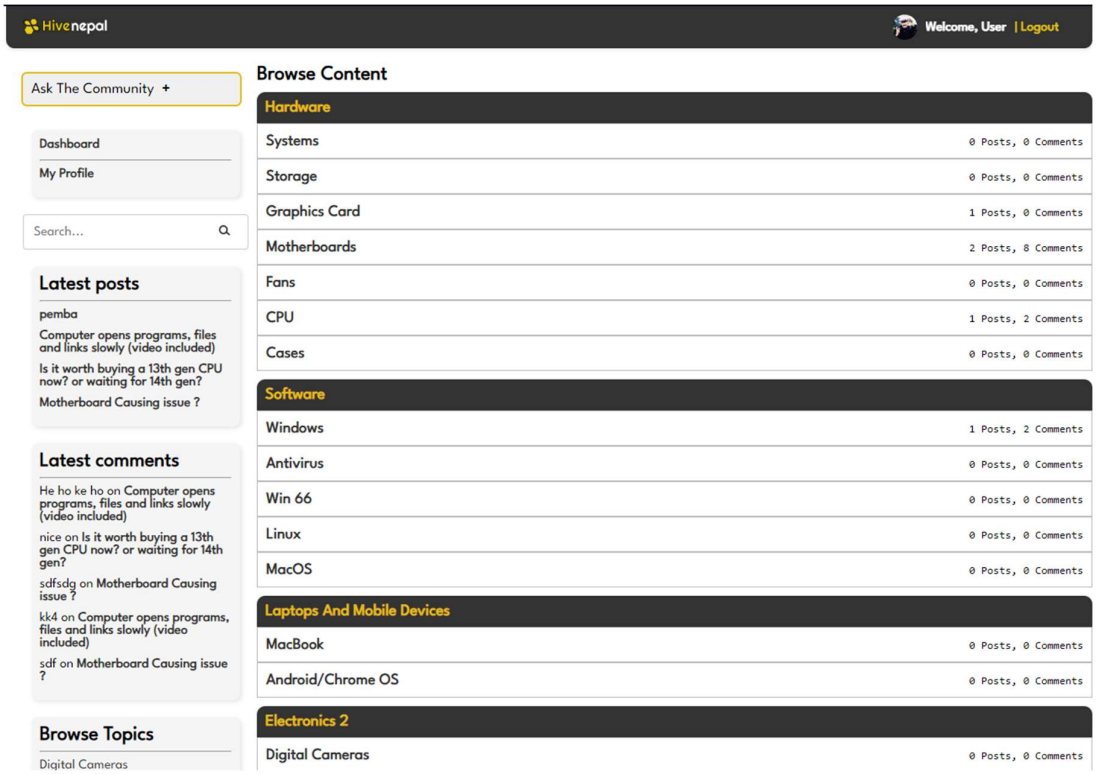


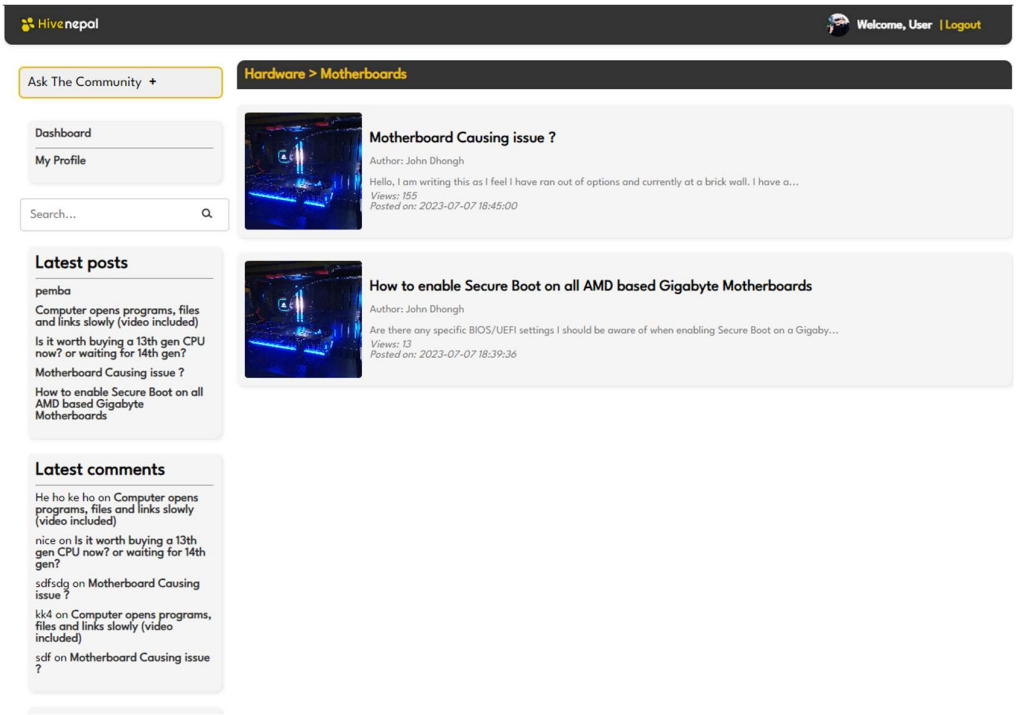
columns to capture relevant information. Relationships, such as one-to-many associations between users and posts or posts and comments, are established using foreign key constraints. Additionally, appropriate indexing and normalization techniques are employed to optimize performance and reduce data redundancy. The database schema design plays a crucial role in ensuring data integrity, facilitating efficient data access, and supporting the system's overall functionality.

3.2.4 Interface Design

The User Interface (UI) for the Online Tech Forum system focuses on delivering a user-friendly and intuitive experience. It incorporates a visually appealing design, clear navigation menus, and interactive elements to enhance user engagement. The UI aims to

provide easy access to features, seamless content browsing, and convenient interaction with posts, comments, and user profiles.





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How to enable Secure Boot on all AMD based Gigabyte Motherboards

Latest comments

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nice on Is it worth buying a 13th gen CPU now? or waiting for 14th gen?

sdfsdg on Motherboard Causing issue ?

Forums > Hardware > CPU

Is it worth buying a 13th gen CPU now? or waiting for 14th gen?

No. of Views: 96

Hi, Quick 2 questions on the same topic.

- Title, is it worth buying a 13th gen now, or are 14th imminent, and worth waiting / paying for , for gaming / blender, 3D printing, and VR?PC is used for nothing else really, apart from the above, and the usual browsing,
- streaming etc. Will 14th gen have AI, and would that affect, to any great degree the usage listed above.

I really appreciate any help, or information, and pointers.Thank you.

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Hardware

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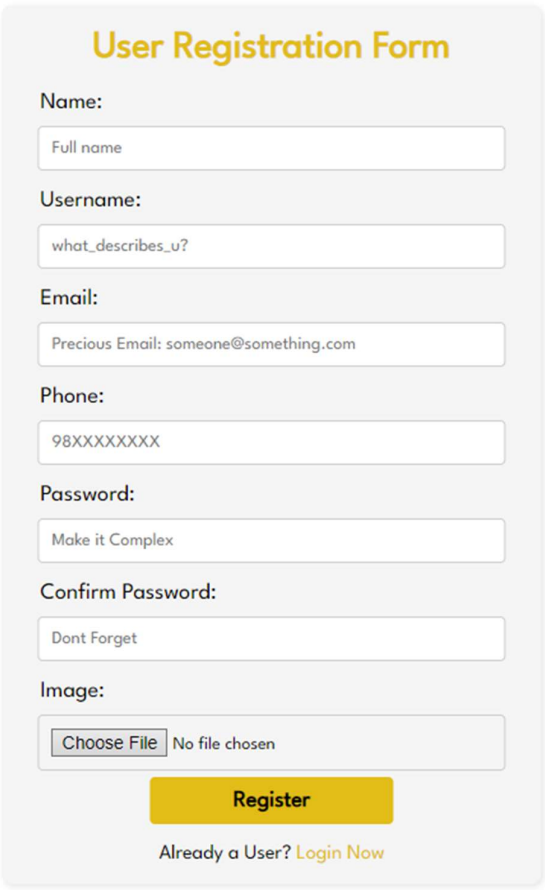
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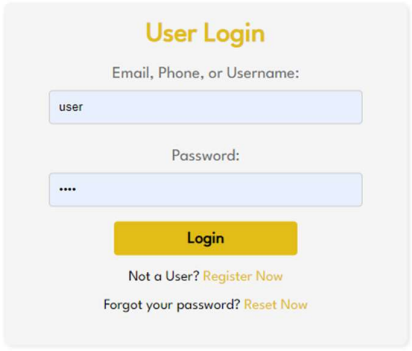
Already a User? Login Now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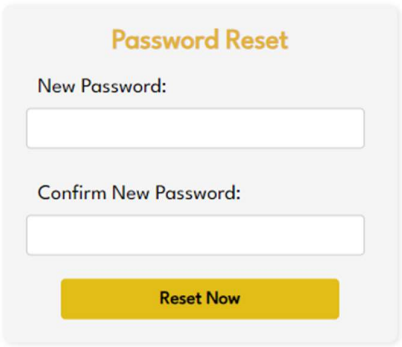
Not a User? Register Now
Forgot your password? Reset Now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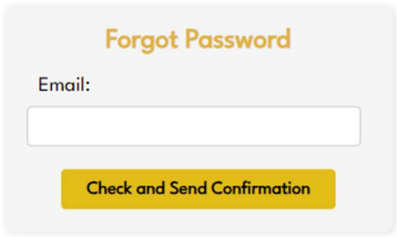
Confirm New Password:
Reset Now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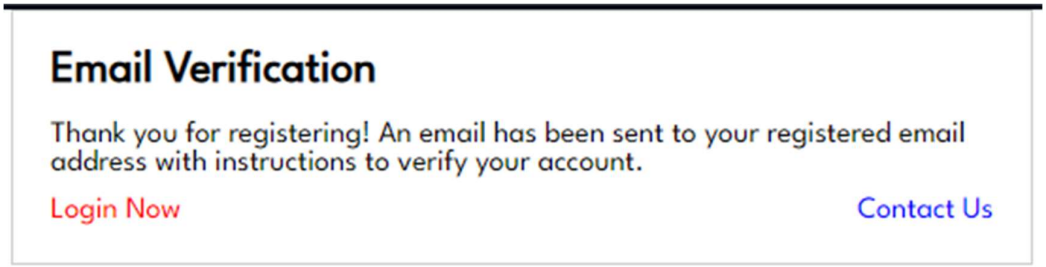
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Thank you for registering! An email has been sent to your registered email address with instructions to verify your account.
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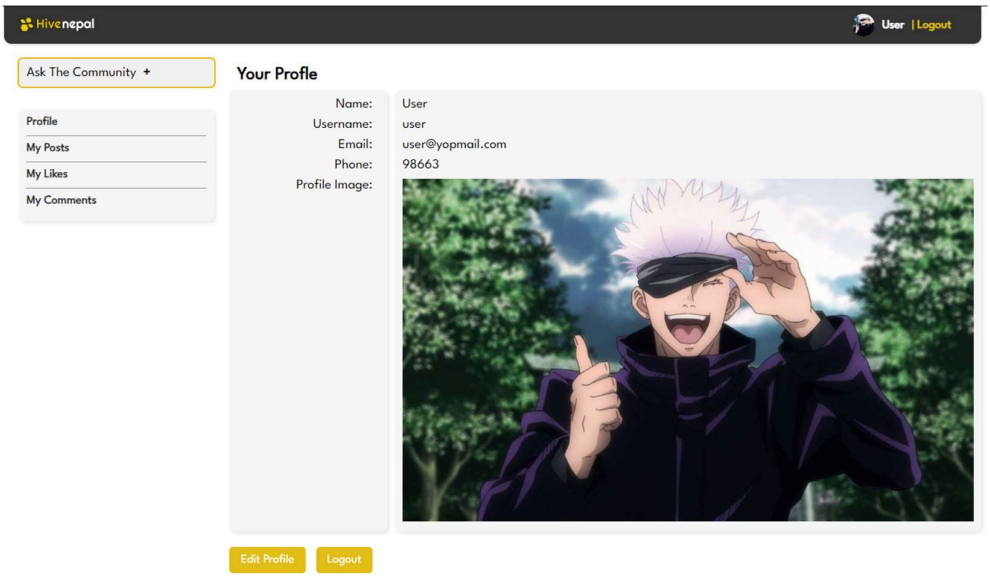
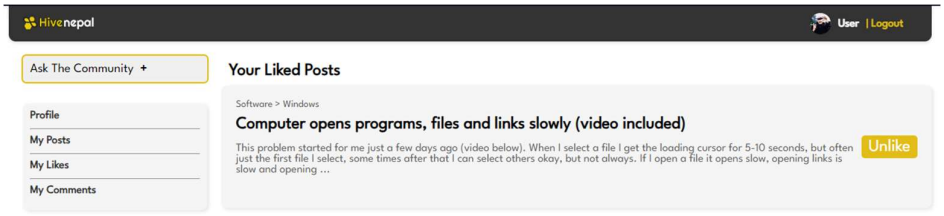
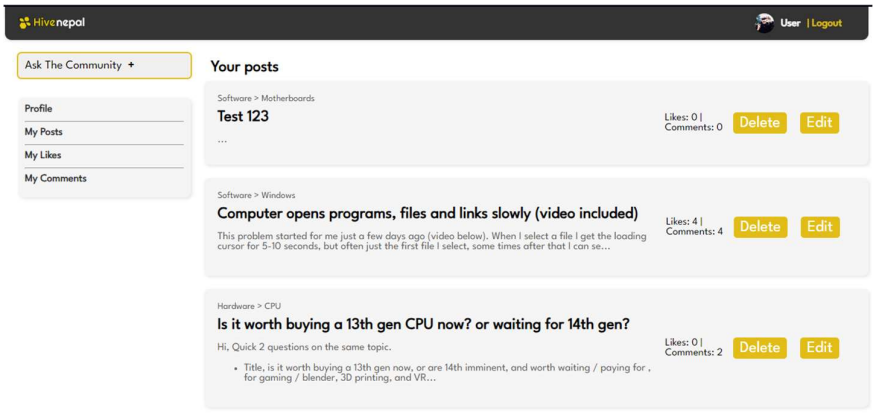
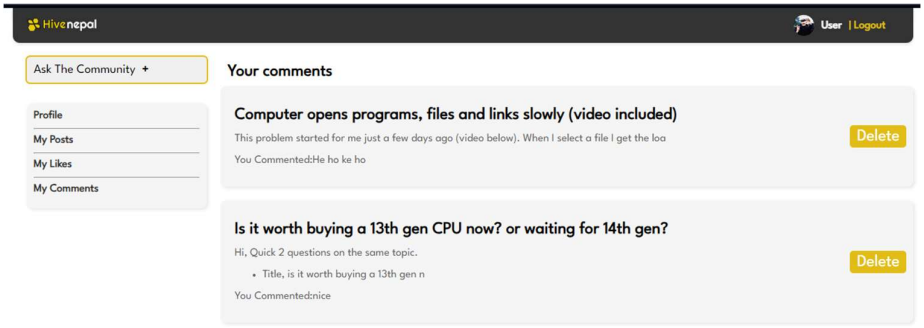
Contact Us



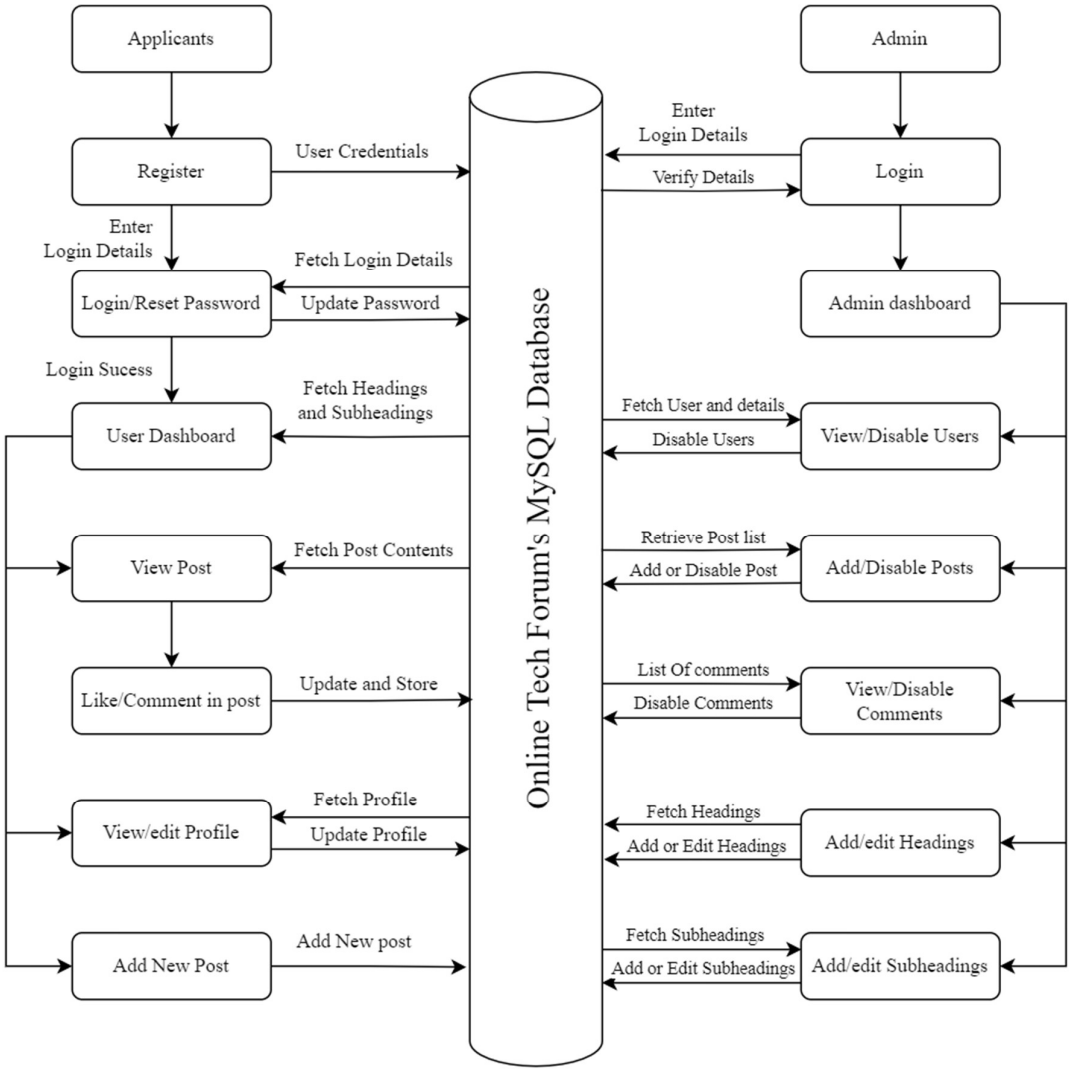






SEQ Figure * ARABIC 23.2.4.10 User Profile and Actions

3.2.5 Physical DFD



Chapter 4 Implementation and Testing

4.1 Implementation

4.1.1 Tools Used

Front-end Tools:

• Figma is a web-based tool for designing and making prototypes, creating attractive and user-friendly interfaces. Designers can collaborate, make wireframes, and create visuals for the Project Management Tool.

• HTML: HTML (Hypertext Markup Language) is used to structure and show content on web pages. It defines the elements and tags that form the user interface of the Project Management Tool.

• CSS: CSS (Cascading Style Sheets) is used to style and enhance the look of HTML elements. It's used to create appealing layouts, add colors, fonts, and other visual aspects to the Project Management Tool's UI.

• JavaScript: JavaScript (JS) is used for checking inputs on the user's side. It helps implement immediate feedback and error checks for what users enter into the Project Management Tool.

Backend Tool:

• PHP: PHP is a scripting language used on the server's side for processing and making dynamic content in the Project Management Tool. It takes care of database actions, checks on the server, and putting business rules into action.

Server:

• Apache Server: Apache Server is open-source software that runs the Project Management Tool's website. It takes care of handling requests that come in and sending back the right web pages to people's web browsers.

Database:

• MySQL: MySQL is an open-source database system used to store and manage data in the Project Management Tool. It's a reliable way to store user details, tasks, comments, and other needed info.

Documentation Tools:

• MS Word 2016: MS Word 2016 is a popular tool for creating project documents, like plans, requirements, and user guides.

• Draw.io: Draw.io is a web tool for making diagrams of how the system works. It's useful for showing how the parts of the Project Management Tool fit together and how data moves around.

4.1.2 Implementation Details of Modules

1. User Registration: The user registration module is responsible for facilitating the sign-up process and creating user accounts. When a user decides to register, they provide their name, username, email, phone number, and password. The module performs input validation to ensure the accuracy and completeness of the provided information. It also checks for the uniqueness of the username and email address to avoid duplicate registrations. Once validated, the user data is securely stored in the database with a unique user ID. A verification process will be implemented to validate the user's email address and activate the account.
2. User Login: The user login module allows registered users to access their accounts. Users provide their login credentials, including their username/email and password, on the login form. The module verifies the provided credentials against the stored user data in the database. If the credentials are valid, the user is granted access to their account and redirected to the main forum page. To maintain user authentication during their session, session management techniques like cookies and session has been employed.
3. Post Creation: The post creation module enables users to create new posts on various tech-related topics. Users enter a title and content for their post and select the appropriate heading and subheading from predefined options. They may also have the option to upload an accompanying image. The module performs input validation to ensure the completeness and correctness of the post data. Once validated, the post data is stored in the database, associated with the corresponding

user and relevant headings/subheadings. Each post is assigned a unique post ID, allowing for easy retrieval and identification.

4. Commenting on Posts: The commenting module allows users to add comments to existing posts, facilitating discussions and interactions within the community. Users enter their comment text in the comment form and submit it. The module ensures that the comment is not empty and meets any specified length requirements. The comment data is then stored in the database, linked to the corresponding post and the user who made the comment. This allows for easy retrieval and display of comments alongside the respective post, fostering user engagement and discussion.
5. Post Likes: The post likes module enables users to express their appreciation for posts they find interesting or valuable. Each post is associated with a "like" button, and users can click on it to indicate their liking. The module records the user's like action and increments the post's likes count. To maintain fairness and prevent abuse, users can only like a post once. This functionality encourages positive feedback and helps in identifying popular or trending posts within the community.
6. Search and Filtering: The search and filtering module provides users with the ability to search for specific posts or filter posts based on specific criteria. Users can enter keywords in the search bar to find posts related to their interests.
7. Admin Dashboard: The admin dashboard serves as a centralized control panel for system administrators. It provides a comprehensive overview of system activities, user statistics, and the contents.
8. User Management: The user management module enables administrators to manage user accounts. They can view and edit user profiles, activate or deactivate accounts, and handle user-related issues. Administrators have the authority to assign user roles, such as moderators.
9. Content Moderation: The content moderation module allows administrators to review and moderate user-generated content. They can view posts, comments, and content to ensure compliance with community guidelines and policies. Administrators have the power to remove or edit inappropriate or spammy content, promoting a healthy and respectful environment for users.
10. System Configuration: The system configuration module empowers administrators to manage various system settings and configurations. They can modify general site settings, such as forum categories, headings, and subheadings.

4.2 Testing

Different training and testing datasets are used to perform system testing, aiming to assess the accuracy of the system's summaries. Throughout the system's development phase, multiple rounds of testing are conducted. The testing process follows this sequence:

4.2.1. Test Cases for Unit Testing

User Registration

Table 4.1: Test case for User Register and Login

S.No	Test name	Input	Expected Outcome	Actual Output	Test Result
1	Opening Application	http://localhost/hivenepal	Index Page	Index Page	Passed
2	Enter Invalid details or miss some details in the form	Blank email Address A letter in Phone Number	Enter Email Address & Incorrect Number format	Enter Email Address & Incorrect Number format	Passed
3	Enter Valid Details In the Form	All Fields Filled with correct format	Registration Success, Verify your Email Page	Registration Success, Verify your Email Page	Passed

User Login (Same for admin as well)

S.No	Test name	Input	Expected Outcome	Actual Output	Test Result
1	Opening Application	http://localhost/hivenepal	Index Page	Index Page	Passed
2	Enter invalid Username and Or password	Blank email Address A letter in Phone Number	Invalid Login Details	Invalid Login Details	Passed
3	Enter Valid Details In the Form	All Fields Filled with correct information	Login success Dashboard	Login success Dashboard	Passed

4.2.2 Test Case for System Testing

Test Case for posting a forum Post (Success)

Table 4.2 Test case for post addition success

Test case 1	**Post Added Successfully**
Test Data	**Heading: Chosen Among The dropdown** **Subheading: Chosen Among The dropdown** **Title Of the question** **Properly Edited Contents** **A Image attachments**
Expected result	**Post Added Successfully**
Test Result	**Passed**

Table 4.3 Test case for post addition Failed

Test case 1	**Post Addition Unsuccessful**
Test Data **(Incorrect)**	**Heading: Not chosen** **Subheading: Chosen Among The dropdown** **Title Of the question** **Properly Edited Contents** **A Image attachments**
Expected result	**"A heading Must be given"**
Test Result	**Passed**

Chapter 5: CONCLUSION AND FUTURE RECOMMENDATIONS

5.1 Lesson Learnt / outcome

In this project, several valuable lessons were learned, and they can be summarized as follows:

- Learning and Knowledge Gain: Each project provides an opportunity to learn and gain knowledge in various aspects. Through this particular project, the team members were able to acquire new skills and insights.
- Problem-Solving Skills: The project presented numerous challenges that enabled the team to develop problem-solving skills. They learned how to identify different issues within the system and implement solutions to overcome them.
- Communication and Writing Skills: Effective communication is crucial in any project. Through this project, the team improved their communication skills, both in verbal interactions and written documentation. They learned to prepare proposals and project-related documentation. Additionally, they gained proficiency in using various case tools for diagrams like use case diagrams, schema diagrams, data flow diagrams, and ER diagrams.
- Time Management: One of the most important lessons learned from this project was the significance of time management. The team realized the importance of prioritizing tasks based on the complexity of system components. This skill helped them optimize their workflow and meet project deadlines efficiently.

5.2 Conclusion

In conclusion, the development of "Online Tech Forum" has been a transformative journey, creating a dynamic platform where tech enthusiasts can share knowledge and engage in meaningful discussions. The project's multifaceted approach encompassed the design and implementation of a robust database schema, user authentication system, and various interactive features, such as post creation, commenting, and liking. Through careful planning and attention to detail, the project successfully achieved its goal of fostering a vibrant online community. With a user-friendly interface and a seamless integration of key

functionalities, the forum provides an intuitive and enjoyable experience for users. As a collaborative effort that embraced cutting-edge technologies and best practices, the Online Tech Forum stands as a testament to the power of innovation and teamwork in creating a space that empowers knowledge sharing and promotes a passion for technology.

5.3 Future Recommendations

Some of the future recommendations for this system are:

- Adding Self Content Detection for Headings and Sub headings
- Recommendations based on users behavior, content's ranking and interests.
- Include a formidable dashboard and advanced report generation
- Make an application native to android and IOS.

References

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