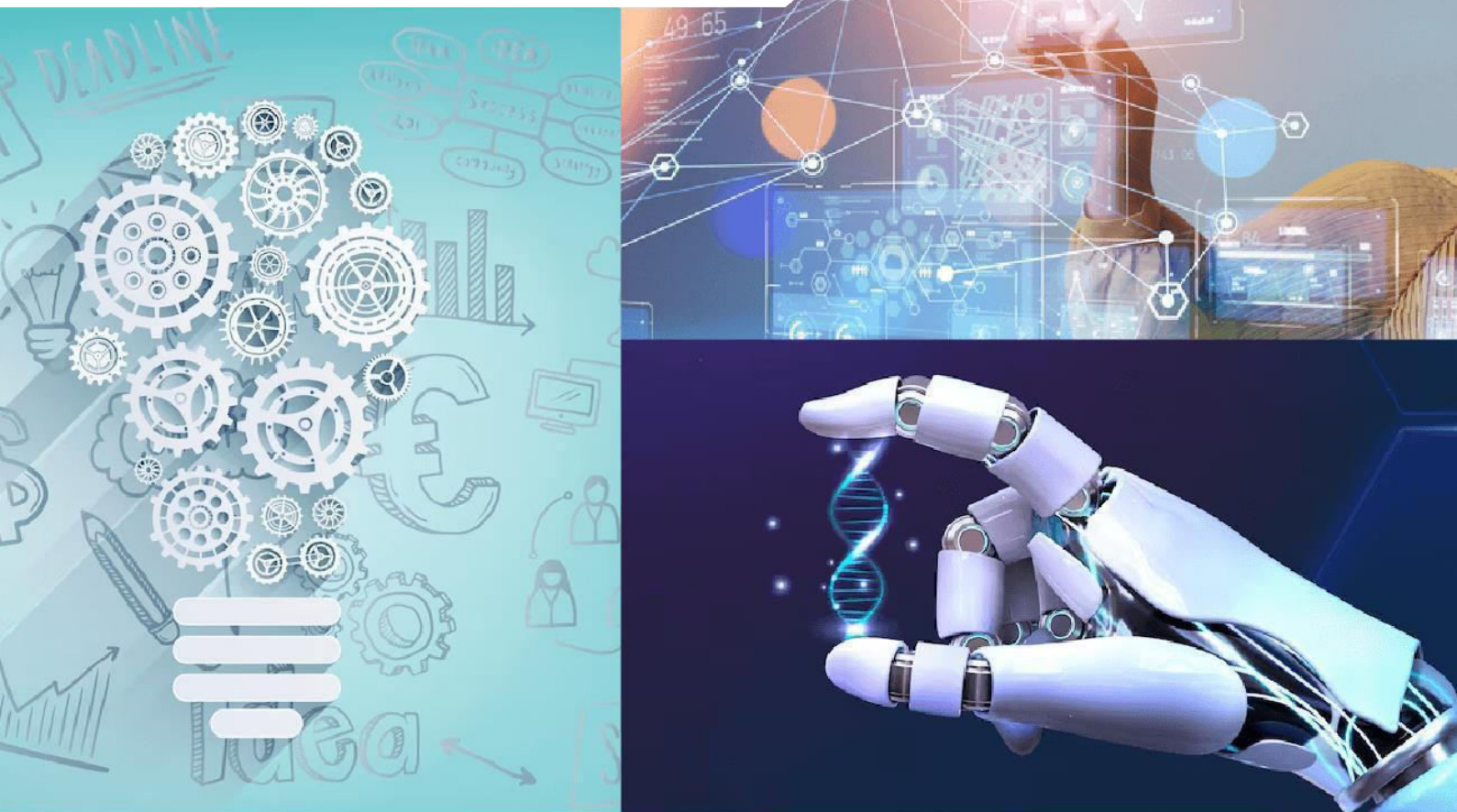




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Advanced Web Based Community Questions and Answering System

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ABSTRACT: This project presents a web-based Community Question and Answering System that allows users to ask questions and receive responses from multiple users within an interactive online platform. Since a single question can generate numerous answers, the system is designed to automatically collect, organize, summarize, and present the most relevant and useful information in a clear and concise manner. This helps users quickly understand the key ideas and obtain reliable knowledge without going through every individual response. The platform also addresses important challenges such as incorrect information, variation in answer quality, spam content, and the need for effective moderation. By encouraging meaningful discussions, knowledge sharing, and collaborative learning, the system improves the overall quality of information exchange among users. In addition, the project focuses on enhancing user interaction and building a supportive online community where users can easily share ideas, learn from one another, and access trustworthy answers efficiently.

I. INTRODUCTION

The proposed Community Question Answering (CQA) system aims to develop an efficient and structured web-based platform for knowledge sharing and collaborative problem solving. The system is designed to enable users to post questions, provide answers, and access relevant information in an organized manner. It focuses on improving the quality, relevance, and accessibility of answers by incorporating features such as user authentication, answer management, question organization, and administrative moderation. The system also addresses challenges such as duplicate questions, inefficient information retrieval, and inconsistent answer quality by providing a centralized environment for managing questions and responses. Furthermore, it enhances user engagement through interactive functionalities including helpful answer marking, solved question tracking, trending questions, and feedback mechanisms. By ensuring secure access control, efficient data management, and scalable system performance, the proposed platform supports effective information exchange across educational, technical, and knowledge-sharing communities while promoting collaborative learning and reliable problem resolution.

1.1 SCOPE OF THE PROJECT

The scope of the proposed Community Question Answering (CQA) system is to provide a structured and efficient platform for posting, managing, and answering questions. The system ensures secure user participation through admin authorization, supports multiple users, and maintains content quality through answer evaluation and moderation. It is designed to handle large volumes of questions and answers with scalable performance. The system can also incorporate intelligent answer ranking, real-time interaction, and future integration with educational and knowledge-sharing platforms to enhance accessibility and collaborative learning.

II. LITERATURE SURVEY

A Model for Voter Scoring and Best Answer Selection in Community Q&A Services, Lee C. Rodrigues, E. Kazai, G. Milic-Frayling(2013), participation and self-regulate the quality of the content contributed by the users. In order to encourage quality contributions, community members are asked to nominate the 'best' among the answers provided to a question. The service then awards extra points to the author who provided the winning answer and to the voters who cast their vote for that answer. The best answers are typically selected by plurality voting, a scheme that is simple, yet vulnerable to random voting and collusion. We propose a weighted voting method that incorporates information about the voter's behavior. It assigns a score to each voter that captures the level of agreement with other voters. It uses the voter scores to aggregate the votes and determine the best answer. The mathematical formulation leads to the application of the Brouwer Fixed Point Theorem which guarantees the existence of a voter scoring function that satisfies the starting axiom. We demonstrate the robustness of our approach through simulations and analysis of real cQA service data.

On the Evolution of the Yahoo! Answers QA Community, Liu, Y, Agichtein, E (2024), While question answering communities have been gaining popularity for several years, we wonder if the increased popularity actually improves or degrades the user experience. In addition, automatic QA systems, which utilize different sources such as search engines and social media, are emerging rapidly. QA communities have already created abundant resources of millions of questions and hundreds of millions of answers. The question whether they will continue to serve as an effective source is of information for web search and question answering is of vital importance. In this poster, we investigate the temporal evolution of a popular QA community - Yahoo! Answers, with respect to its effectiveness in answering three basic types of questions: factoid, opinion and complex questions. Our experiments show that Yahoo! Answers keeps growing rapidly, while its overall quality as an information source for factoid question-answering degrades. However, instead of answering factoid questions, it might be more effective to answer opinion and complex questions.

A Sophisticated Library Search Strategy Using Folksonomies and Similarity Matches, Pera, M.S. Lund, W, Ng, Y.-K (2022), Libraries, private and public, offer valuable resources to library patrons. As of today, the only way to locate information archived exclusively in libraries is through their catalogs. Library patrons, however, often find it difficult to formulate a proper query, which requires using specific keywords assigned to different fields of desired library catalog records, to obtain relevant results. These improperly formulated queries often yield irrelevant results or no results at all. This negative experience in dealing with existing library systems turns library patrons away from directly querying library catalogs; instead, they rely on Web search engines to perform their searches first, and upon obtaining the initial information (e.g., titles, subject headings, or authors) on the desired library materials, they query library catalogs. This searching strategy is an evidence of failure of today's library systems. In solving this problem, we propose an enhanced library system, which allows partial, similarity matching of (a) tags defined by ordinary users at a folksonomy site that describe the content of books and (b) unrestricted keywords specified by an ordinary library patron in a query to search for relevant library catalog records.

A Web-Based Kernel Function for Measuring the Similarity of Short Text Snippets, Sahami, M. Heilman, T, (2023), Determining the similarity of short text snippets, such as search queries, works poorly with traditional document similarity measures (e.g., cosine), since there are often few, if any, terms in common between two short text snippets. We address this problem by introducing a novel method for measuring the similarity between short text snippets (even those without any overlapping terms) by leveraging web search results to provide greater context for the short texts. In this paper, we define such a similarity kernel function, mathematically analyze some of its properties, and provide examples of its efficacy. We also show the use of this kernel function in a large-scale system for suggesting related queries to search engine users.

An Enhanced 8x8 Vedic Multiplier Design By Applying Urdhva-Tiryakbhyam Sutra, M. Sakthi Mohan, J. Deny, (2023), Multiplication is one of the most essential parts in arithmetic operations. It is applied in many fields such as digital signal processing, convolution, microprocessor and Fourier transform etc. According to an ancient Indian Vedic mathematics a rapid multiplication methodology provides as to solve problems very quickly. The Vedic mathematics has an exclusive practice of calculations constructed on 16 sutras. By using this it is possible to reframe the entire mathematics. By taking this as motivation, in our proposed work, one of the best sutras has been chosen i.e., Urdhva – Tiryakbhyam. It performs an optimized multiplication in terms of power and delay. This paper provides an enhanced design of 8*8 Vedic multiplier which completely different from traditional method of multiplication i.e., add and shift. The multiplier was designed using VHDL and implemented by Xilinx ISE series tool. From the implementation, achieved an enhanced multiplier in terms of area, delay and power.

An Optimistic Design of 16-Tap FIR Filter with Radix-4 Booth Multiplier Using Improved Booth Recoding Algorithm, Sakthi Mohan M, Deny J, (2022), This work focuses on improving digital Finite Impulse Response (FIR) filters used in signal processing applications. Since multipliers are the most power-intensive component, the study proposes a 16-tap FIR filter using a Radix-4 Booth Multiplier with an improved recoding algorithm. This approach reduces multiplication steps, delay, and power consumption. FPGA-based results show significant improvements over traditional designs, achieving about 52% lower power usage and 22% better resource efficiency, leading to reduced area and overall enhanced performance.

III. EXISTING SYSTEM

Existing Community Question Answering systems mainly depend on keyword matching and basic search methods to retrieve answers. Since users may ask similar questions using different wording, these systems often fail to identify relevant queries accurately. Although Question Answer Retrieval (QAR) techniques improve retrieval by analyzing question similarity, limitations in efficiency, answer quality, and intelligent processing still remain.

Disadvantages of Existing System:

- Lack of User Credibility Assessment: User expertise and contribution quality are not considered.
- High Chance of Collusion: Users may manipulate voting and influence answer ranking unfairly.
- Inefficient Query Handling: Difficulty in managing and prioritizing large numbers of questions.
- Poor Answer Quality Control: Low-quality or irrelevant answers are not effectively filtered.
- No Intelligent Analysis: Absence of Machine Learning techniques for behavior analysis and ranking.
- Scalability Issues: Performance and accuracy decrease as the number of users grows.
- Lack of Personalization: No support for user preferences or customized answer recommendations.

IV. PROPOSED SYSTEM

The proposed Community Question Answering (cQA) system aims to improve the quality, security, and reliability of online question-answer platforms by introducing controlled access and intelligent interaction mechanisms. Unlike traditional systems, this model ensures that only authorized users can participate, thereby reducing spam and improving content credibility. The system allows users to post questions and share answers, where each question remains open until a suitable or correct response is identified. To maintain system integrity, users cannot directly access or log in without admin approval. The administrator verifies and grants permission, ensuring that only valid users participate in the platform.

Advantages of Proposed System:

- The system ensures a safe environment by restricting access through admin authorization.
- Only verified users can participate, improving the quality and reliability of content.
- Controlled participation reduces spam and irrelevant answers.
- The system supports a growing number of users and queries without performance issues.
- Can be extended with intelligent answer ranking and recommendation techniques.

V. SYSTEM ARCHITECTURE

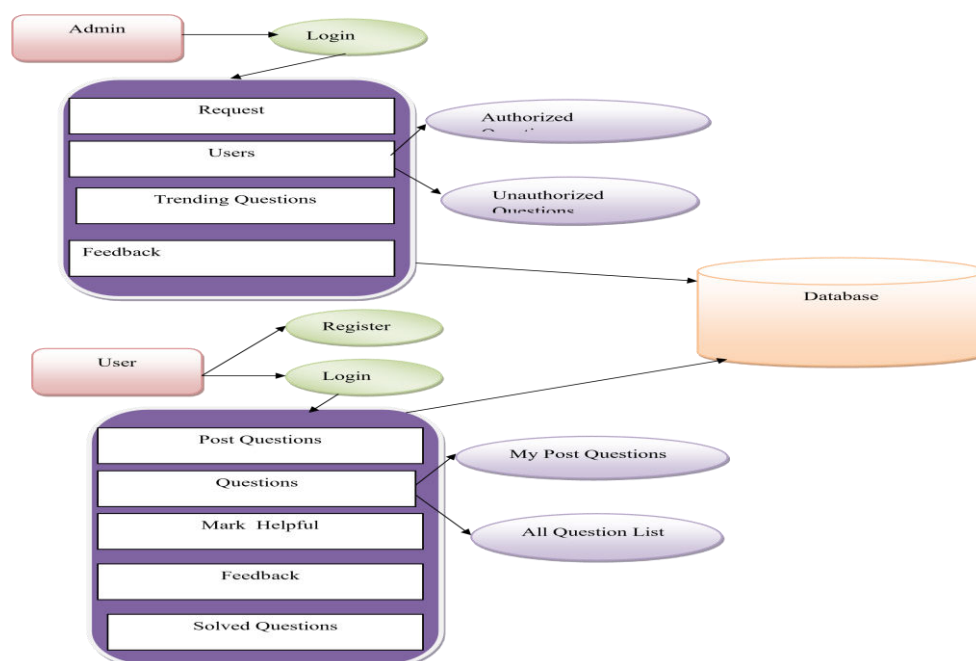


Fig 1.1 System Architecture

The system has two roles: **Admin** and **User**. The Admin manages the system by approving user registrations, handling user access, monitoring trending questions, and viewing feedback. The User can register, log in, post questions, view questions, give answers, mark helpful answers, mark questions as solved, and submit feedback. The system supports easy knowledge sharing while ensuring proper management and security through the Admin.

VI. METHODOLOGY

Modules Name:

- User Interface Design
- Users
- Admin

1) User Interface Design:

In this module we design the windows for the project. These windows are used for secure login for all users. To connect with server user must give their username and password then only they can able to connect the server. If the user already exists directly can login into the server else user must register their details such as username, password and Email id, into the server. Server will create the account for the entire user to maintain upload and download rate. Name will be set as user id. Logging in is usually used to enter a specific page.

2) User :

This is the first module Data User can register and Login. After login User can post a question. User can also have a question it will be post questions and it see all question list. User can also have a mark question. User can also have a solved question. User can give a feedback.

3) Admin :

Admin can directly login. Admin can also accept the user request. Admin can also have a user's authorized and unauthorized users can see the admin. Admin can also have a trending question. Admin can also have a get the feedback of a user's. Admin can view all users feedback.

VII. ANALYSIS AND DISCUSSION

The proposed system, **Advanced Web Based Community Questions and Answering System**, is analyzed in terms of functionality, efficiency, scalability, usability, and practicality. The implementation results show that the system effectively improves knowledge sharing, user interaction, and information management in an online community environment.

1. Functional Analysis

The system successfully provides a platform where users can post questions, share answers, and interact with other users in a collaborative environment. Features such as user registration, login, question posting, answering, marking helpful responses, and solving questions are integrated effectively. The admin module ensures proper monitoring, user management, and moderation of content. The system addresses common challenges in community platforms such as information organization, answer relevance, and user engagement.

2. Performance and Efficiency

The implementation demonstrates efficient handling of user requests and system operations. Users can quickly post questions, browse available discussions, and access relevant answers without delays. The organized structure of questions and answers improves information retrieval and reduces the time required for users to find useful knowledge. The system efficiently manages multiple operations such as authentication, question management, answer submission, and feedback collection.

3. Scalability Analysis

The system is designed with a web-based architecture that supports multiple users and continuous interaction. It can handle increasing numbers of users, questions, and answers without major performance issues. The modular design, consisting of frontend, backend, and database components, allows easy maintenance and future expansion. This makes the system suitable for educational communities, discussion forums, professional support platforms, and knowledge-sharing environments.

4. Usability and Practical Implementation

The system provides a simple and user-friendly interface for both users and administrators. Users can easily register, log in, post questions, provide answers, and participate in discussions. The admin can efficiently manage users, approve registrations, monitor activities, and maintain platform security. The use of technologies such as **Java, JSP, Servlets, HTML, CSS, JavaScript, and MySQL** ensures that the system is practical, reliable, and suitable for real-world deployment.

5. Comparison with Existing Systems

Compared to traditional discussion forums and basic Q&A platforms, the proposed system offers several improvements:

- Better organization of questions and answers
- Improved user interaction and collaborative learning
- Efficient administration and content moderation
- Support for feedback collection and helpful answer identification
- Enhanced control through role-based access (Admin and User)

However, the current system has certain limitations, such as the absence of automated answer summarization, recommendation mechanisms, and advanced filtering options. These areas can be enhanced in future development.

6. Discussion

The overall discussion highlights that the proposed system effectively balances **knowledge sharing, usability, and administrative control**. The platform encourages meaningful discussions and collaborative problem-solving while maintaining an organized and secure environment. The results indicate that the system improves the accessibility of information and enhances user participation within the community.

Future enhancements may include **AI-based answer summarization, recommendation systems, sentiment analysis, spam detection, advanced search functionality, and mobile application support** to further improve system intelligence, performance, and user experience.

VIII. CONCLUSION

The Web-Based Community Question Answering (CQA) system developed in this project provides an effective platform for users to share knowledge by asking and answering questions. The system enables structured communication between users, allowing them to post queries, provide answers, mark helpful responses, and track solved questions. The inclusion of an admin module ensures proper control, security, and moderation by managing user access, monitoring activities, and maintaining content quality. The system reduces the effort required to search for relevant information by organizing questions and answers in a centralized and accessible manner. Built using Java (J2EE) and MySQL, the application is reliable, scalable, and suitable for real-world use. It enhances user interaction, promotes collaborative learning, and serves as a valuable knowledge-sharing platform for academic and general purposes. In conclusion, this project successfully addresses the challenges of information sharing by providing a simple, efficient, and user-friendly solution. It lays a strong foundation for further improvements and advanced features in the future.

IX. FUTURE ENHANCEMENT

The **Advanced Web Based Community Questions and Answering System** can be improved in the future by adding advanced features to make the platform more efficient and user-friendly. Artificial Intelligence can be used to automatically summarize answers, helping users quickly understand important information. Better search options, recommendation features, and spam detection can improve information retrieval and content quality. The system can also include stronger security measures, real-time notifications, mobile support, and multilingual features to enhance accessibility, user interaction, and data protection. These improvements can make the system more intelligent, secure, scalable, and suitable for real-world knowledge-sharing environments.

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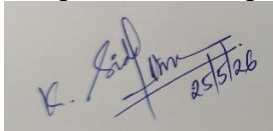
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