IJIRCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 12, Issue 5, May 2024

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

Impact Factor: 8.379

International Journal of Innovative Research in Computer and Communication Engineering

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 12, Issue 5, May 2024 ||

| DOI: 10.15680/IJIRCCE.2024.1205362 |

NAAC Assistant Portal

Prof. Dipali Ghatge [1], Prof. Priyanka Salunkhe[2] , Anurag Choudhari [3], Pratiksha Gadankush[4] , Rutuja Dalavi[5], Priya Bhosale[6], Radhika Dadas[7]

Department of Computer Science and Engineering, Rayat Shikshan Sanstha's , Karmaveer Bhaurao Patil College Of Engineering, Satara, India[1-7]

ABSTRACT: The NAAC Assistant Portal aims to streamline and enhance the accreditation process for educational institutions by providing a comprehensive and user-friendly platform. This research paper outlines the development and implementation of the portal, which assists college libraries and information centers in preparing for the NAAC Bangalore assessment and accreditation process. The portal is designed to facilitate efficient data collection, verification, and reporting, thereby reducing the time and effort required for accreditation. Key features of the portal include user registration, data entry, data verification, and reporting modules, each tailored to meet the specific needs of different stakeholders involved in the accreditation process. By leveraging advanced technologies and a modular approach, the NAAC Assistant Portal significantly improves the accuracy and efficiency of accreditation-related activities, ultimately promoting higher standards of quality in educational institutions.

KEYWORDS: NAAC Accreditation, Educational Institutions, Accreditation Process, NAAC Assistant Portal, Data Collection, Higher Education Quality.

I. INTRODUCTION

The National Assessment and Accreditation Council (NAAC) is a government-funded entity responsible for evaluating and accrediting higher education institutions in India. It was founded in 1994 and is one of the most reputable accreditation agencies in the country, with recognition from the University Grants Commission (UGC). The NAAC evaluates universities and colleges based on a range of criteria, including academic performance, research output, infrastructure facilities, student services, and faculty development.

The goal of NAAC accreditation is to verify that higher education institutions provide quality education and meet the UGC's standards. The accrediting process enables universities to improve their educational quality and Competitiveness. It also serves as a standard for universities and colleges to compare their performance.

The NAAC accreditation process is voluntary, and institutions can choose whether or not to participate. However, NAAC-accredited universities are more likely to gain government financing and recognition. It is therefore critical for institutions to grasp the significance of NAAC.

II. LITERATURE SURVEY

1. There is scant literature available on the impact of the NAAC process on college libraries. According to Gumre and Veer's (2013) assessment of college library services in the Marathwada region, NAAC accreditation has had a significant impact.

   The library facility increased by 17% after NAAC accreditation. The library's services have doubled and increased by over 40% following NAAC accreditation.

2. Jisha (2015) performed a survey of NAAC-accredited arts and science colleges connected with Kannur University. The study examined the role of the NAAC in ensuring quality in higher education. Study 1 had one objective.

   The study examines the impact of NAAC on quality assurance in higher education, revealing significant changes in universities' academic environments and campuses following accreditation.

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

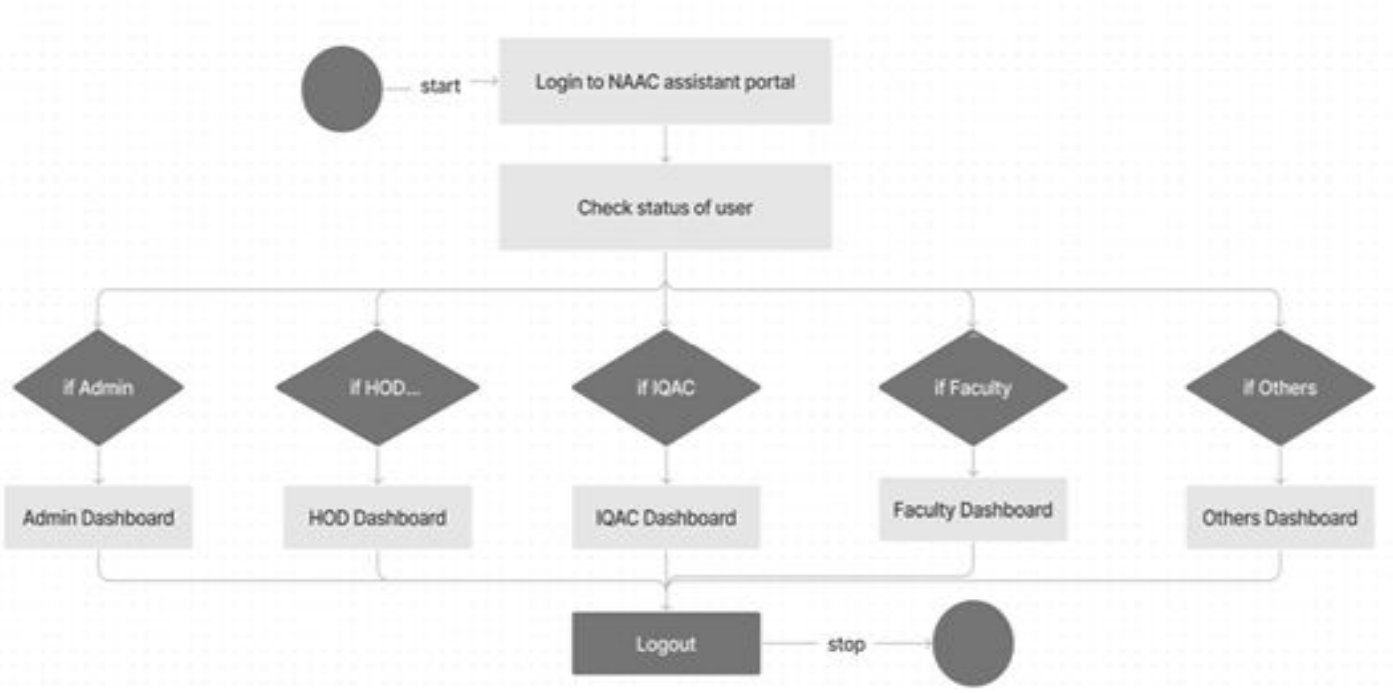
|| Volume 12, Issue 5, May 2024 ||

| DOI: 10.15680/IJIRCCE.2024.1205362 |

3. Shivakumar's (2017) study on the role of NAAC policy in college libraries revealed that it promotes modernization and high-quality service to consumers.

   This methodology is effective for identifying deficiencies in library services and achieving maximum scores based

4. Dr. K.S. Ravi and Dr. M. Chandrasekaran published paper on "Assessment and Accreditation of Higher Education Institutions in India: Evolution and Impact of NAAC" This paper provides an overview of the evolution of NAAC and its impact on higher education institutions in India. It discusses the accreditation process, criteria, challenges, and the role of NAAC in improving quality assurance.
5. Dr. P. Suresh, Dr. N. Selvaraj published paper on "Quality Assurance in Higher Education: A Study of NAAC Accreditation Process". This research study examines the NAAC accreditation process, focusing on its effectiveness in enhancing the quality of higher education. It discusses the criteria used for assessment, challenges faced by institutions, and the outcomes of accreditation.
6. "NAAC Accreditation: A Catalyst for Institutional Transformation" paper published by Dr. S. Priya This article explores the transformative impact of NAAC accreditation on higher education institutions. It presents case studies of accredited institutions, highlighting the changes and improvements brought about by the accreditation process.



International Journal of Innovative Research in Computer and Communication Engineering

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 12, Issue 5, May 2024 ||

| DOI: 10.15680/IJIRCCE.2024.1205362 |

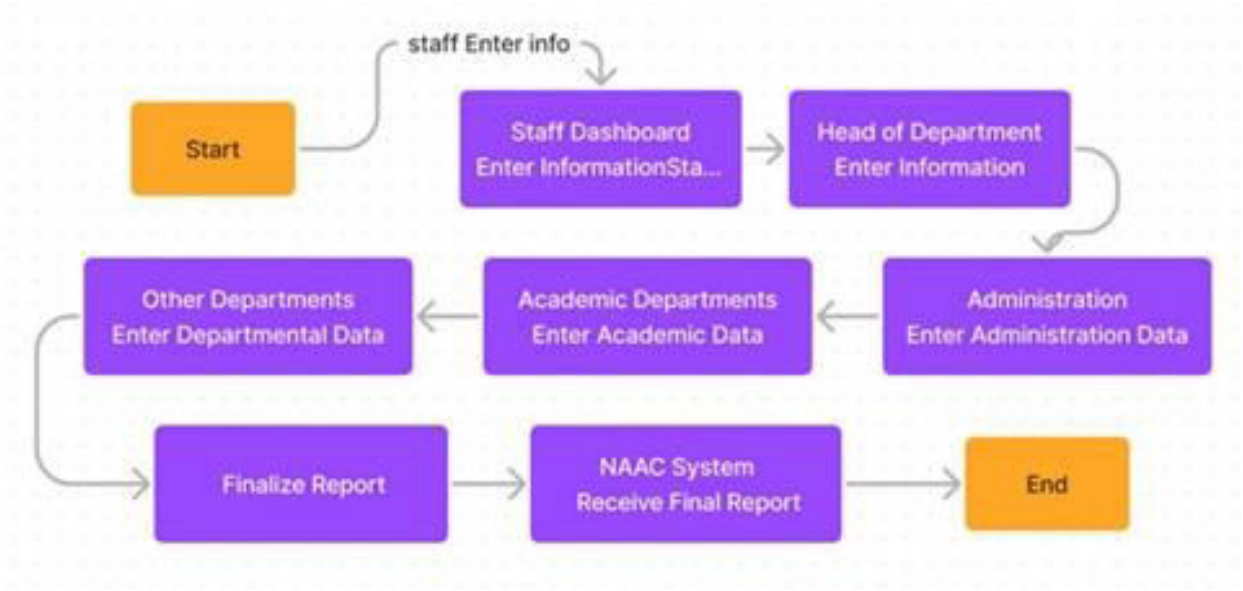


Figure 2. Activity dig. Of NAAC Assistant Portal

II. METHODOLOGY

A. Requirement Analysis: -

Requirement Gathering: -

Examined the existing NAAC accreditation process to identifying necessary functionalities and data requirements including functional and non-functional requirements.

Established project goals, identified the target audience (academic institutions, NAAC officials), and outlined key features required for the portal.

B. System Design: -

Architecture Design: -

Created high-level architectural diagrams to depict the system structure, including user interface, application logic, and database layers.

Database Design: -

Designed the database schema with Entity-Relationship (ER) diagrams to illustrate entities and their relationships.

Recognized an appropriate database management system (e.g., MySQL, PostgreSQL).

C. System Requirements: -

Hardware Requirements: -

- Recommended Processor: Intel Core i3 / Ryzen 3 or greater than that
- Recommended Space Hard Disk: 1GB

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 12, Issue 5, May 2024 ||

| DOI: 10.15680/IJIRCCE.2024.1205362 |

- Recommended RAM: 4GB

Software Requirements: -

- Web browser (Chrome Recommended).
- Operating system (Windows, Linux etc.).
- XAMPP Software installed with latest version available.
- Node js latest version.
- Database management tool – phpMyAdmin / MYSQL Workbench.
- IDLE – VSCODE, Sublime Text Editor etc.

D. Technology Stack Selection

Frontend Development: -

Selected HTML, CSS, and JavaScript for basic web development.

Semantic UI often used with Frontend framework/library like React to improve development efficiency and user experience.

Backend Development: -

Selected backend technologies (e.g., Node.js, Express.js) for server-side development.

Implemented RESTful APIs for effective communication between the frontend and backend.

Database Development: -

Secure database architecture MYSQL for the purpose of storing important data.

Ensure secure storage and management of accreditation-related data.

E. Implementation

Frontend Implementation: -

Developed responsive user interfaces using HTML, CSS frameworks (e.g., Bootstrap, Tailwind CSS), and JavaScript libraries.

Backend Implementation: -

Developed server-side logic, database interactions, and API endpoints.

Implemented robust authentication and authorization mechanisms to ensure secure access to the portal.

Ensure secure access to the system using Password management and security protocols.

Role-based access control (RBAC) to manage user permissions based on roles and defining permissions for staff, HOD and administrators based on roles.

Password management and security protocols.

International Journal of Innovative Research in Computer and Communication Engineering

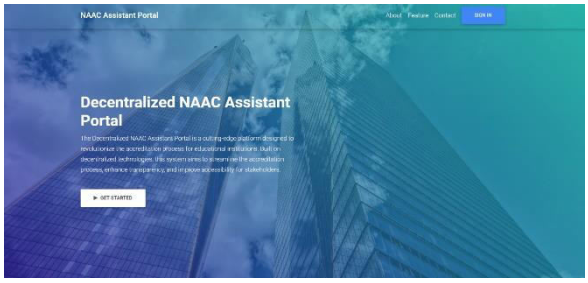
| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 12, Issue 5, May 2024 ||

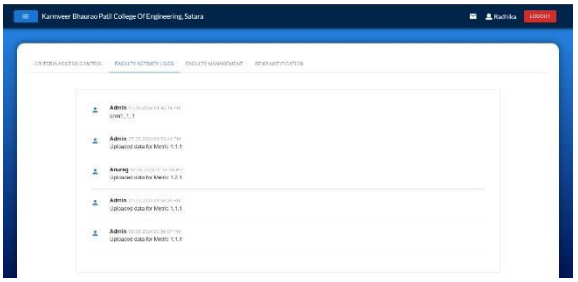
| DOI: 10.15680/IJIRCCE.2024.1205362 |

Integration: -

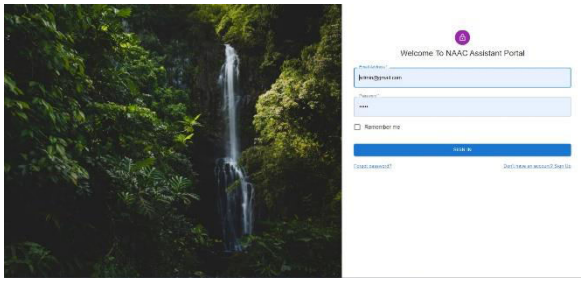
Integrated frontend and backend components to ensure seamless data flow and interaction.



Landing Page



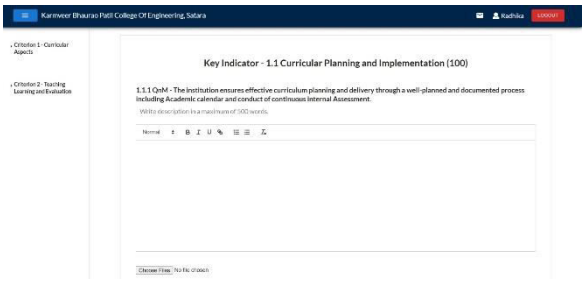
Faculty Activity Logs



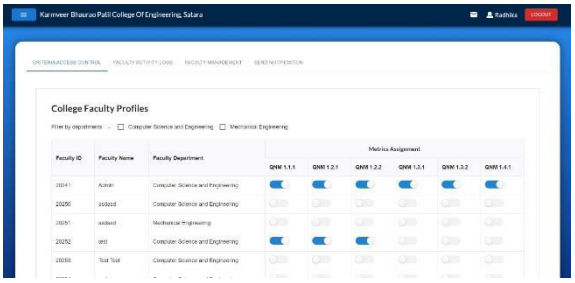
Login Page

Criteria/sub-criteria

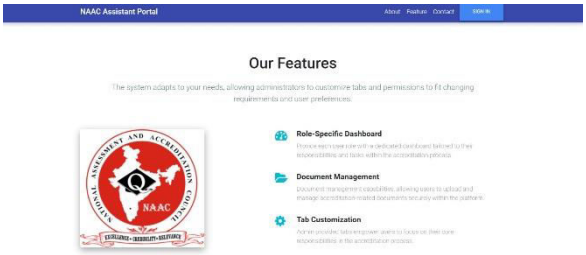
Sign up Page



Metric Wise Data Section



Admin Panel



Features

International Journal of Innovative Research in Computer and Communication Engineering

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 12, Issue 5, May 2024 ||

| DOI: 10.15680/IJIRCCE.2024.1205362 |

IV. MODULES

A. User Registration Module:

Admin Dashboard:

Centralized control panel for system administrators.

Overview of the entire accreditation process.

Access to user management and system configuration.

HOD Dashboard:

Department-specific information and tasks.

Submission and tracking of departmental accreditation data.

IQAC Dashboard:

Internal quality assurance metrics and data.

Tools for managing and preparing for accreditation.

Faculty Dashboard:

Individual faculty profiles and contributions.

Submission of academic and research data.

Other Dashboard:

Customized dashboards for various user roles as needed.

B. User Authentication and Access Control Module:

Objective: Ensure secure access to the system and manage user permissions based on roles.

Features: User login and Authentication

Role-based access control (RBAC) defining permissions for staff, HOD, administrators, IQAC etc.

Password management and security protocols.

C. Departmental Data Entry Module:

Objective: Enable departments to input their respective accreditation-related data securely.

Features: Dedicated dashboards for different departments.

Data entry is specific to each department's requirements.

Validation checks for data accuracy.

D. Data Verification and Approval Module:

Objective: Facilitate multi-level verification and approval of entered data.

Features: Workflow-driven data verification by administrators and designated personnel.

Verification status tracking and notifications for pending verifications.

Password management and security protocols.

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 12, Issue 5, May 2024 ||

| DOI: 10.15680/IJIRCCE.2024.1205362 |

E. Reporting and Analytics Module:

Objective: Generate comprehensive reports and analytics for accreditation tracking and assessment.

Features: Report generation tools compiling verified data from departments.

Visualization of progress using charts and graphs.

Comparative analytics for historical data assessment.

F. Data Storage and Security Module:

Objective: Ensure secure storage and management of accreditation-related data.

Features: Secure database architecture (e.g., MySQL) for data storage.

Encryption protocols for sensitive information.

Regular backups and data recovery mechanisms.

V. ADVANTAGES AND LIMITATIONS

A. Advantages:

1. Reduced time and effort required for accreditation.
2. Increased efficiency in the accreditation process.
3. Data collection will be easy.
4. Easily collect the data step by step throughout the year.
5. Take follow up of all activities and suggest improvisation regarding activities.
6. Tailoring the system to specific institution needs and goals.

B. Limitations:

1. Some institutions may require time to adapt to the system
2. Accreditation standards can evolve over time, requiring institutions to continuously adapt to new criteria.

VI. CONCLUSION

The NAAC (National Assessment and Accreditation Council) Assistant Portal project serves as a pivotal tool in streamlining and enhancing the accreditation process for educational institutions. Through the development and implementation of this portal, we have successfully addressed various challenges faced by institutions seeking accreditation. As we conclude this project, it is evident that the NAAC Assistant Portal not only simplifies the accreditation workflow but also promotes transparency, efficiency, and collaboration among stakeholders.

The NAAC certification process helps analyze and improve the quality of higher education institutions in India. This allows institutions to measure their performance and improve their competitiveness. It also motivates organizations to invest in quality improvement programs.

The NAAC accreditation procedure has helped improve the quality of higher education in India. The NAAC accreditation system is challenging due to its complexity, which involves multiple criteria and key indicators (KI). Creating thorough five-year reports in conformity with NAAC regulations takes time for institutes.

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 | Monthly Peer Reviewed & Referred Journal |

|| Volume 12, Issue 5, May 2024 ||

| DOI: 10.15680/IJIRCCE.2024.1205362 |

REFERENCES

1. http://naac.gov.in/index.php/en/
2. https://www.iitms.co.in/blog/complete-guide-to-naac-accreditation-for-higher- education-institutions.html
3. http://www.naac.gov.in/images/docs/Manuals/Revised-University-Manual-11th- December-2019.pdf
4. https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=7824&context=libphilprac

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

INNO SPACE SJIF Scientific Journal Impact Factor

doi crossref

निस्केयर NISCAIR

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

9940 572 462 6381 907 438 ijircce@gmail.com

www.ijircce.com

Scan to save the contact details