**DESCRIPTION:**

The “Research and publication management system of the University of Burdwan” is a web based platform which is developed to manage the research and publication related details of the research scholars in an organized way. Using this platform the users can view the profiles of research scholars, their ongoing research work as well as their completed research works. The users can also view the publication of the research works and the academic progress of the scholars. The major functionality of the system is the calculation of API (Academic Performance Indicator) scores of the research scholars. The API Score is calculated on the basis of the research works and publications of the scholars.

It is a user-friendly and interactive platform. HTML, CSS, Javascript are used for front-end side. For backend functionality Flask framework is used which makes the system more efficient. For managing structured and semi structured data MongoDB is used which the makes the system robust.

For security purpose this system includes admin-level controls. It allows only authorized users to verify the details of the scholars and review their research works and manage user access.

**FEATURES:**

This system is developed to support the research and publication management system of the University of Burdwan. It includes various features such as:

* **User Friendly Dashboard:**

It provides a user-friendly interface to researchers and administrators.

* **API Score Calculation:**

It calculates the API Score based on the details of the researchers.

* **Secure:**

It provides secure login and data access system.

* **Efficient Data Handling:**

This system has the efficient data handling system using MongoDB.

* **Efficient Backend Mechanism:**

It uses Flask as backend mechanism.

* **Reduces Time:**

It reduces the manual effort and saves time.

* **Performance Tracking:**

It helps in performance tracking of the research scholars.

* **Accuracy:**

It improves data accuracy.

* **Academic Growth:**

This system ultimately contributes to the academic growth of the university.

**SCOPE OF THE PROJECT:**

**What the website will do:**

* This will help the research scholars to create their accounts and update their research related information.
* It will also help the faculty members to check and mange these records.
* This system will allow the scholars to upload their research papers and publications.
* This system will help the scholars to search and update the research works.

**What the website will not do:**

* It is just a website. So the users will not be able to access from their mobiles.
* It has not advanced security mechanisms.

**ADVANCED SCOPE:**

“The Research and Publication Management System of the University of Burdwan “is an interactive platform which provides various scope to the researchers. By adopting some advanced features this system can become more reliable, efficient and secure. Such features include-

* **Smart Suggestion:**

This system can include a feature which may suggest journals or conferences based on the scholar’s research area using AI.

* **More user Roles:**

The system can provide separate login facilities with permissions for faculty members, HODs or department staffs.

* **Notification Alerts:**

The system can notify the users using emails and notification alerts when their research work is approved or declined. It can also notify the researchers about deadlines.

* **Cloud Storage:**

It can store the files uploaded by the researches and their details in the cloud to keep the data safe and backed up.

* **Multiple Language Support:**

This system can extend its popularity by providing multiple language support. The users will be able to access the website in their regional languages such as Bengali or Hindi.

* **Digital Certificates:**

When a thesis or publication is approved this system can generate digital certificates to the researchers.

* **Mobile Application:**

This system can expand its reliability and robustness by making it mobile application based.

* **Advanced Security Features:**

This system can become more reliable by providing advance security features.

* **Graphical Dashboard:**

This system can add charts and graphs to display research trends, number of publications or department –wise data.

**USERS:**

This system is developed for different types of users. This user has specific responsibilities and access powers. The categories of the users are described below:

* **Research Scholars:**
* They are the primary users of this system.
* They can register and login using their user ID and password.
* They can update their research works.
* They can upload their publications.
* They can view and update their profiles
* **Faculty Members:**
* They can supervise the work of research scholars.
* They can review the research work of the scholars.
* **Administrative Users:**
* Admins are the users who can manage the whole system.
* They can review works of the research works of the scholars.
* They can approve or reject the uploaded works of the researchers.
* They can generate reports on the basis of the research works.
* Admins ensure that the system runs smoothly and securely

**CONSTRAINTS:**

While developing this system some constraints were considered such as:

* **Limited Resources:**

This system was developed by a small team. The access of testing tools and resources was limited.

* **Time** **Constraint**:

The main constraint of developing this project was limited time frame. As a result, some of the advanced features are not included in it.

* **Security Constraints:**

This system provides the basic security functionalities such as login authentication and input validation. But due to time and technical limitations advanced security features were not included.

* **Technical Limitations:**

This system was built using web technologies such as HTML, CSS, JavaScript, Flask and MongoDB. This system is working efficiently. But in future if we want to expand the system with more user details and features then the system may cause some technical uses. Also the feature of plagiarism detection is not available in this system.

* **Deployment Environment:**

This system is designed to run on standard web servers. The system’s deployment depends on the availability of university-hosted or free hosting platforms.

**DESIGN STRATEGY:**

**1. DATA FLOW DIAGRAM (DFD):**

Admin

Researchers

**Level -0 DFD**

Check

Research Database

**Level -1(Admin Level)**

Research Database

Check

**Level -1(Student Level)**