International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 08 Issue: 02 | February - 2024 SJIF Rating: 8.176 ISSN: 2582-3930

Digital Platform for Confidential Complaint Resolution: Empowering Anonymity in Online Reporting

[1]Janhavi Bhausaheb Bagul, [2]Aniruddha Bharat Patil, [3]Akshada Ajay Mane, [4]Atharv Yogesh Khalkar, [5]Prof.Datta Shingate

[1] janhavibagul62@gmail.com, Student of BE. Dept. of Information Technology MET-IOE, Nashik, India
[2]panirudha11@gmail.com, Student of BE. Dept. of Information Technology MET-IOE, Nashik, India
[3] akshadamane88@gmail.com, Student of BE. Dept. of Information Technology MET-IOE, Nashik, India
[4] atharvkhalkar09@gmail.com, Student of BE. Dept. of Information Technology MET-IOE, Nashik, India
[5]Internal Guide Dept. of Information Technology MET's Institute of Engineering, Nashik, India

---

Abstract - This report explores an innovative anonymous authentication system designed for academic services within the university environment. The primary objective of this proposed system is to safeguard students' identities when reporting instances of academic misconduct within the university system. The system comprises two fundamental sub-systems: one dedicated to user management and the other focusing on file management for feedback submitted by students.

The "User Management" system facilitates tasks such as new enrollment, registration verification, and key distribution to system users. Meanwhile, the "Student Feedback" system assists users in providing feedback, encrypting and describing files, and submitting feedback. The file encryption process employs the Attribute-Based Encryption (ABE) algorithm. Both systems are interconnected through a confidential API.

In the testing phase of this study, data from Pune University's community service participants in the year 2023 were utilized. The tests covered processes such as anonymous authentication, encryption, file description, key distribution, feedback submission, and feedback status. The evaluation produced positive results, indicating that the user authentication process takes only 4.6 seconds, while sending feedback requires 6.4 seconds.

Key Words: *Anonymous Authentication, Student Feedback, Academic Service, Distributed System,MD5, online , complaint , management , respond.*

1. INTRODUCTION

An anonymous complaint management system is a vital tool for organizations and institutions to effectively address and resolve issues, concerns, or grievances raised by individuals who prefer to remain anonymous. This system provides a secure and confidential platform for reporting various problems or misconduct within the organization, promoting transparency, accountability, and a safe environment for whistleblowers. The anonymous complaint resolver system is a web-based application designed to track complaints registered by college students, staff, and other faculty members, requiring a distributed platform-independent web application.

Administrator executives can oversee all activities in the system and register Heads of Departments. User registration is open to all students and faculty members, allowing them to update their information post-registration. The system can send notifications regarding department-wise pending complaints, individual student complaints, and complaint statuses. The complaint management system will primarily be utilized by students, staff, and other faculty members, who must register before submitting a complaint. After registration, a student can submit a complaint through their login and update their profile.

The student has the autonomy to choose whether to address the complaint to the Head of Department or the Principal. The user interface of the complaint management system should be intuitively designed to be simple, user-friendly, and self-explanatory. The Administrator or Head of Department sends an acknowledgment to the mobile phone of the student/staff/faculty upon receiving the complaint, takes appropriate action, and updates the status accordingly.

Objectives:

• The following are the main goals of the Anonymous Complaint Management System:

• To provide a safe, user-friendly platform where people can anonymously file concerns.

• To employ strong security measures in order to safeguard the complainants' identity.

• To create a methodical procedure for receiving, examining, and handling anonymous complaints.

• To abide by moral and legal requirements, such as those pertaining to whistleblower protection.

• To encourage openness and responsibility inside the company;

• To preserve data integrity and provide an audit trail for accountability.

• To provide a welcoming and safe atmosphere where people feel at ease sharing issues in an anonymous manner.

2. LITERATURE SURVEY

2.1 Online Complaint Management System

This is one of the process for students to complete higher education by living, socializing, and adapting to society. Uniting students with lecturers and the community as well as an opportunity for students to apply science, technology, work culture and tolerance among the fellows and the community. Surely there problems arise during the activity. Mostly students are afraid to report if they face problem with their supervisor or other officials. Therefore the University should provide the system that can be accessed by the students to report securely and protect their identity. Then the system must be secured from unauthorized access. Thus this paper proposes anonymous authentication system and its implementation in the subject in Udayana University is as a study case.

2.2 Aspiration and Complaint System : From Literature Survey to Implementation

In organizations, there already exist conventional facilities withwhich the employees can deliver aspirations and complaints, forexample by contacting the customer service via phone or email,and directly meet the organization's head. The complaints can be of a serious type, e.g. corruption, fraud and unethical acts. Inthe context of academic community, any form of violations by the university leaders is a bad example for the civitas, especiallystudents who takes a lecturer as their role model.

Since the report and reporter may require high confidentiality, the conventional way of conveying aspirations and complaints is a less efficient and a less effective procedure. The employeestend to become hesitant in informing any serious complaints performed by their colleagues since they are afraid their identities are unprotected. Even if the organization guarantees that their report remains anonymous, they require time and effort to make an arrangement and further meet their boss [2].

The conventional way of conveying aspirations and complaintsyields drawbacks to the organization. It hinders the achievementof the organization's vision and mission. It may also weaken thevalues of the organization. Moreover, it can cause bad image tothe organization since misguided human characters can beformed.

2.3 Smart Complaint Management System

Customer Relationship Management (CRM) is the business strategy for relationship management between the organizations and customers, so the organizations would learn the customer information from using CRM, which is designed to maximize the customer satisfaction [1]. The effectiveness of using CRM is the customer loyalty, and the organization would lead to higher revenue. According to the statistic of using CRM in the organizations, the customers are likely to spend 20-40% more the next time they make a purchase with the particular company and the revenue is increased by 41% per each individual sales representative [2]. Furthermore, the customer service is also one of the CRM, which has the responsibility to take care of a customer, listen to customer' s opinion, and receive the customer complaint. Therefore, the organization is able to improve the quality of products and services.

2.4 Cloud based alumni network for Alumni Database

The Cloud Based Alumni Association website for communication with Alumni encapsulates one of numerous ways how college can keep following with its pass out understudies. Except for communication between college and its pass outs, the Alumni Association System should allow communication between pass outs themselves and their personal presentation in public. The system also should collect actual information about working experience of pass outs students, which can improve faculty credits and teaching process. The aim of this paper is to build an Alumni of Institute online website, it is intended to manage especially the Alumni of college of Engineering with their respective fields. The project mange the fresh as well as old graduate pass outs with their respective information in actively participating in making registering, searching, managing the alumni information for sharing their expertise, network, jobs opportunities and resources. This participation has evolved into multiple dimensions; and is now eager to formally enter into the domain of mentorship to students through a regular program.

3. MODULE DESCRIPTION

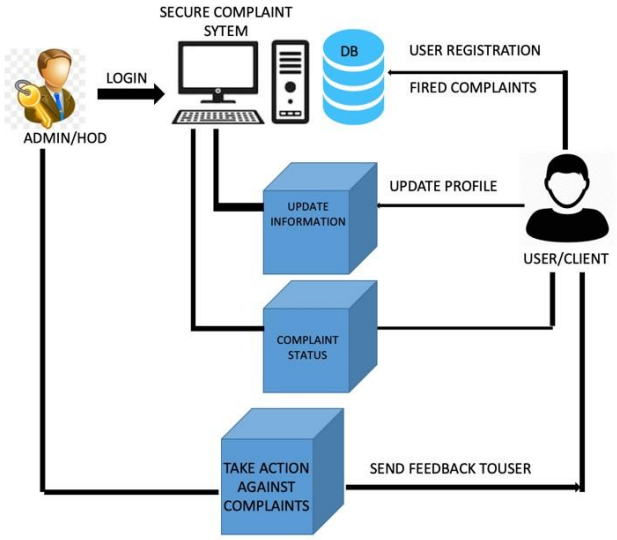

Figure 3.1. System Architecture

The system architecture diagram above represents the flow of a grievance management system primarily used by students, staff, and other faculty. Students/faculty/other faculty members must register before filing a complaint. After registration, students can also submit complaints and update their profile through login. Students have the right to decide whether to complain to the HOD or the principal. The user interface of a complaint management system should be intuitively designed to be relatively simple, easy to use, and self-explanatory. The administrator or her HOD will acknowledge receipt of the complaint on the mobile phone of the student/faculty/other faculty member. We will also take appropriate action on your complaint and update you on its status.

The main components are:

1. Administrator:

High-level access and control over the system. Responsible for system configuration, maintenance, and monitoring. Define deduplication policies and rules. Manage user access and permissions. Monitor system performance and generate reports.

2. Data Manager:

Responsible for data management and deduplication processes. Configure and schedule the deduplication job. Review flagged duplicates and approve deletion. Ensure data consistency and integrity. Work with your administrator to optimize deduplication settings.

3. End User:

A regular employee or team member who uses the system. Use the system to access and manage your data. Collaborate on shared documents and files. Permissions may be limited (mainly read and edit access). Get information and training on how the system impacts your business.

4. Legal and Compliance Professional:

Focuses on legal and compliance aspects of data management. Monitor and ensure data protection compliance. Manage e-discovery and data retention processes. Work with administrators and data managers to implement governance policies. Use machine learning and data analysis to identify patterns and predict potential landslides. Combine sensor data with weather and geological information for more accurate forecasts. Send alerts and send alerts based on predefined risk thresholds. Continuously improve predictive models through data feedback loops.

5. IT Support and Help Desk:

Provides technical and end-user support. Troubleshoot issues related to the duplicate removal system. Ensure system availability and respond to user requests. Work with administrators to resolve technical challenges.

4. GUI/WORKING MODULES

Fig4.1: User Dashboard

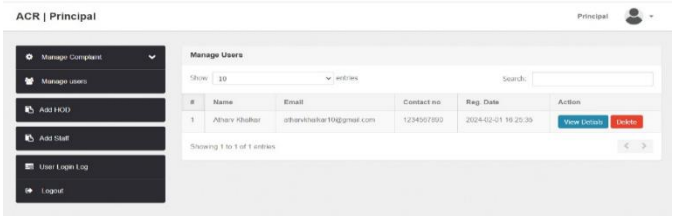

Fig4.2: Manage Users by principle

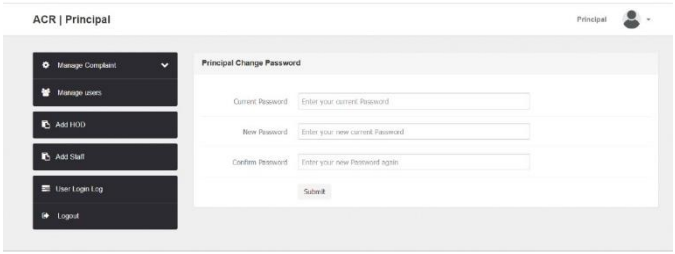

Fig4.3: Change Password

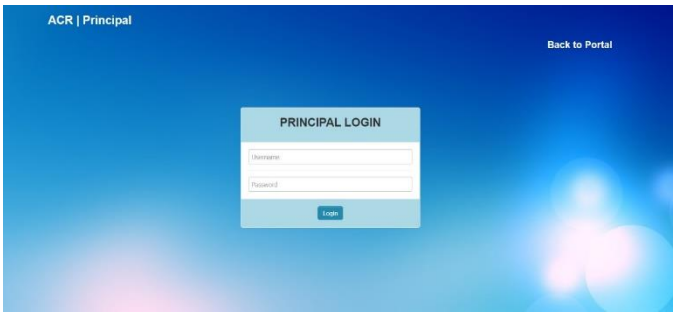

Fig4.4: Login Window

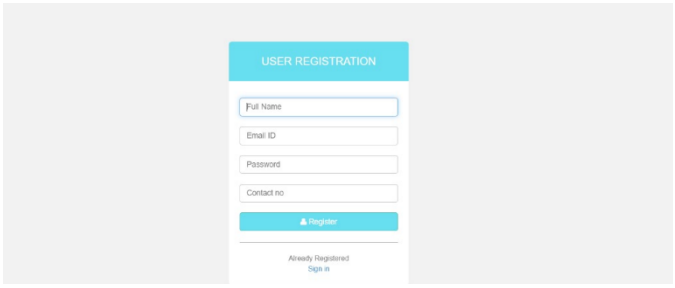

Fig4.5: User Registration

5. CONCLUSION

Development of a web application which can effectively find data, share data and remove data duplicates in the cloud using file checksum. The web application is useful for organizations dealing with highly redundant operations that requires constant copying and storing of data for future reference or recovery purpose. The technique is a part of backup and disaster recoverysolution as it allows enterprises to save data repeatedly and promotes fast, reliable and cost-effective data recovery. For instance, a file that is backed up every week results in a lot of duplicate data and thus, eats up considerable disk space. Data duplicate removal using file checksum run an analysis and eliminates these sets of duplicate data and keeps only what is unique and essential, thus significantly clearing storage space. The key obstacle was all files stored in the database should not contain duplicates of itself. That was encountered by using a software called PHP (Hypertext Pre-processor). The educational benefit of the developed system is a new system was developed to efficiently find data, shares data and remove data duplicates using file checksum in the cloud.

6. REFERENCES

[1] Osman Nasr , Enayat Alkhider, \Online Complaint Management System", IJISET - International Journal of Innovative Science, Engineering Technology, Vol. 2 Issue 6, June 2015.

[2] Admin, “Prosedur Pelaporan Pelanggaran (Whistleblowing System) Rajawali Nusindo”, 4 Agustus 2015. [Online]. Available: http://nusindo.co.id/prosedur-pelanggaran-whistleblowing-system- rajawali-nusindo/. [Accessed: 4 September 2017]

[3] Devika Radhakrishnan, Nisarg Gandhewar, Ruchita Narnaware,Prayas Pagade, Arpan Tiwari and Pooja Vijaywargi, Smart Complaint Management System", International Journal of Trend in Research and Development, Volume 3(6), ISSN: 2394-9333 Nov-Dec 2016.

[4] Yooncheong Cho Il Im ,Roxanne Hiltz , Jerry Fjermestad , An Analysis of Online Customer Complaints:Implications for Web Complaint Management",Proceedings of the 35th Hawaii International Conference on System Sciences

[5] Amy J.C. Trappey, Ching-Hung Lee, Wen-Pin Chen, Charles V. Trappey, "A FRAMEWORK OF CUSTOMER COMPLAINT HANDLING SYSTEM," 978-1-4244-6487-6/10/2010 IEEE.