

A Project report on

GRIEVANCE CENTRAL HUB

A Dissertation submitted to JNTU Hyderabad in partial fulfillment of the academic requirements for the award of the degree.

Bachelor of Technology

in

Computer Science and Engineering

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CERTIFICATE

This is to certify that the Major Project report entitled "**Grievance Central Hub**" being submitted by Adki Ashlesha (20H51A0501), G Rohith Reddy (20H51A05E0), Avanaganti Ujwala (20H51A05M8) in partial fulfillment for the award of **Bachelor of Technology in Computer Science and Engineering** is a record of bonafide work carried out his/her under my guidance and supervision.

The results embodied in this project report have not been submitted to any other University or Institute for the award of any Degree.

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ABSTRACT

The Grievance Central Hub is a revolutionary approach to managing grievances within organizations. It offers a user-friendly, confidential, and transparent system, fostering open communication and accountability. The portal efficiently handles grievances raised by individuals in the organization, promoting efficiency and transparency.

Accessible to all with a user-friendly interface, it prioritizes confidentiality and security when handling complaints. Real-time tracking and updates on grievance status ensure that both students and faculty members are well-informed throughout the resolution process. The portal streamlines complaint management across various departments, providing a single point of contact for grievance submission.

Powered by technologies like PHP, PHP mailer (for email communication), MySQL (for database management), Apache Tomcat, HTML, CSS, and JavaScript (for an interactive user interface), this system offers a seamless and responsive solution. It contributes to a more harmonious and accountable organizational environment, making grievance management efficient and effective.

CHAPTER 1

INTRODUCTION

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INTRODUCTION

1.1 Problem Statement

The development of a centralized grievance system portal involves creating a comprehensive digital platform aimed at streamlining the entire grievance handling process, from initial submission to resolution. At its core, this portal features a user-friendly interface accessible to citizens, government officials, and administrators alike. Through this interface, citizens can effortlessly submit grievances using various channels, including online forms, mobile applications, email, or traditional methods like phone calls or letters. The system's automated workflow management capabilities ensure that submitted grievances are efficiently routed to the appropriate authorities based on predefined criteria such as type, location, or severity. This automation includes task assignment, escalation protocols, and priority handling to guarantee timely resolution. Furthermore, the portal offers transparent tracking functionalities, allowing citizens to monitor the status of their grievances in real-time and receive updates on progress. Effective communication mechanisms facilitate clear exchanges between citizens and officials at every stage, supported by automated notifications and feedback channels. Data analytics tools provide valuable insights into grievance trends, enabling informed decision-making and continuous process improvement. Integration with existing systems ensures seamless data exchange and interoperability, while robust security measures safeguard user data and privacy. Designed for scalability and flexibility, this portal promises to enhance transparency, responsiveness, and the overall quality of public services by modernizing the grievance management process.

1.2 Research Objective

The objective of a centralized grievance system portal is to establish an efficient, transparent, and user-centric platform for managing and resolving grievances, complaints, and concerns within an organization. The objectives of this project are:

- The aim of this portal is to efficiently address and resolve grievances raised by individuals within an organization. By providing a centralized platform, the portal are

ensures that grievances are handled promptly and effectively, fostering a positive work environment and enhancing organizational trust and morale.

- To achieve this objective, the portal is designed with a user-friendly interface accessible to all stakeholders, including employees, customers, and other relevant parties. This intuitive interface facilitates easy navigation and submission of grievances, ensuring that users can effectively communicate their concerns without encountering unnecessary barriers or complexities.
 - Furthermore, the portal prioritizes confidentiality and security to safeguard sensitive information related to grievances. Robust security measures are implemented to protect user data from unauthorized access or disclosure, instilling confidence among users that their privacy is respected and maintained throughout the grievance handling process.
 - Transparency is a key principle upheld by the portal, achieved through accessible tracking of grievance status. Users can monitor the progress of their grievances in real-time, gaining visibility into the actions taken and expected timelines for resolution. This transparency promotes accountability and trust, demonstrating the organization's commitment to addressing grievances openly and fairly.
 - Effective communication is facilitated by streamlining channels among stakeholders involved in grievance resolution. The portal serves as a centralized platform for exchanging information, enabling seamless coordination and collaboration to expedite the resolution process and prevent miscommunication or delays.
 - Detailed records of grievances are maintained within the portal to ensure accountability and facilitate analysis. By documenting key details such as submission dates, nature of grievances, actions taken, and resolutions achieved, organizations can identify trends, patterns, and areas for improvement in their grievance handling procedures.
- Empowering users with self-service options for common grievances enhances efficiency and user satisfaction. Through knowledge bases, FAQs, and interactive guides, users can find answers to their queries or resolve issues independently, reducing the burden on support staff and enabling faster resolution times.

- Finally, the portal cultivates a culture of feedback and improvement by encouraging user input. Users are encouraged to provide feedback on their grievance handling experiences, suggest improvements, and contribute ideas for enhancing organizational processes. This feedback loop promotes continuous learning and refinement, ensuring that the portal remains responsive to the evolving needs and expectations of its users.

1.3 Project Scope and Limitations

Project Scope:

- Single Point of Contact for Students: The primary aim of this portal is to serve as a centralized platform for students to register complaints related to college matters. By offering a single point of contact, it simplifies the process for students to voice their concerns, ensuring that no complaint goes unheard or unaddressed.
- Transparency and Accountability: One of the key objectives of the portal is to enhance transparency and accountability within the college environment. By allowing students to track the status of their complaints in real-time, the portal fosters transparency by providing visibility into the grievance resolution process. This not only keeps students informed but also holds college officials accountable for addressing complaints promptly and effectively.
- Streamlined Complaint Handling Process: The portal streamlines the complaint handling process by providing college officials with a centralized platform to receive, investigate, and resolve complaints. By consolidating all complaints onto one platform, it eliminates the need for manual handling of complaints through disparate channels, thereby increasing efficiency and reducing the likelihood of complaints being overlooked or mishandled.
- Enhanced Service Delivery: By addressing the grievances of students in a timely manner, the portal aims to enhance the delivery of services within the college. Timely redressal of complaints ensures that students' needs are met promptly, contributing to a positive college experience and fostering a supportive and conducive learning.

- Single Point of Contact for Internal Grievances: Beyond student complaints, the portal also serves as a single point of contact for individuals within the college to file grievances related to any issues within the organization. This ensures that all grievances, whether from students, faculty, or staff, are channeled through a unified platform for efficient resolution.
- Efficient Grievance Management: The portal efficiently manages grievances through various stages, including registration, tracking, monitoring, and resolution of conflicts. Automated workflows and notifications streamline the process, ensuring that grievances are promptly assigned to the appropriate authorities, monitored throughout the resolution process, and resolved in a timely manner.
- Overall, the portal plays a crucial role in promoting a culture of transparency, accountability, and effective grievance resolution within the college environment, ultimately contributing to a positive and supportive atmosphere for students and stakeholders alike.

Limitations:

- Limited Digital Inclusion: The assumption that all citizens have equal access to digital tools and the internet presents a significant limitation to the project. While the centralized grievance system aims to provide a streamlined platform for citizens to raise concerns, it inadvertently excludes individuals who lack digital literacy or access to computers or smartphones. This exclusion can disproportionately affect marginalized communities, including the elderly, low-income households, and rural populations who may already face barriers to accessing public services. As a result, the project risks exacerbating existing inequalities by further marginalizing segments of the population who are unable to participate in the digital grievance resolution process.
- Resource Constraints: The development and maintenance of a centralized grievance hub require significant financial resources, which may pose challenges in the context of limited government budgets. Furthermore Allocating the funds to support a project's

implementation and ongoing operation could divert resources from other critical areas such as healthcare, education, or infrastructure. Moreover, the sustainability and scalability of the project may be compromised if insufficient resources are allocated for maintenance, upgrades, and expansion. This limitation underscores the need for careful budget planning and prioritization to ensure that the project remains viable without compromising essential public services.

- **Bureaucratic Challenges:** Implementing a centralized grievance system within a government context is fraught with bureaucratic challenges that can impede progress. Government agencies and departments may resist adopting new technologies or processes due to entrenched bureaucratic structures, legacy systems, and resistance to change. Overcoming these internal hurdles requires strong leadership, effective communication, and collaboration across government entities. Gaining buy-in from stakeholders at various levels of the bureaucracy is essential for the successful implementation and adoption of the centralized grievance system. Additionally, navigating complex regulatory frameworks, legal requirements, and interdepartmental coordination can further complicate the implementation process, potentially leading to delays and setbacks. Addressing these bureaucratic challenges requires a concerted effort to streamline processes, build consensus, and overcome institutional inertia to ensure the effective deployment of the centralized grievance system.

CHAPTER 2

BACKGROUND

WORK

CHAPTER 2

BACKGROUND WORK

2.1 : Traditional Paper-Based Grievance Systems

2.1.1. Introduction:

Traditional paper-based grievance systems are deeply ingrained in the bureaucratic processes of many government organizations. In this method, citizens are required to fill out physical paper forms to report their complaints or grievances. These paper forms are subsequently processed and tracked manually by government agencies.

2.1.2. Merits, Demerits and Challenges:

Merits:

- Simplicity: The use of paper forms is straightforward and doesn't require advanced technology, making it accessible to citizens with varying degrees of digital literacy.
- Familiarity: Some citizens may be more comfortable with this method due to its long-standing presence in government processes.

Demerits:

- Prone to Errors and Delays: Manual data entry and processing can introduce errors, and the entire process can be time-consuming, resulting in delayed responses to citizens' concerns.
- Inefficiency: The lack of automation and digitization can lead to inefficiencies in tracking, routing, and managing grievances.
- Limited Accessibility: Traditional paper-based systems may not be easily accessible to citizens in remote areas or those with physical disabilities.
- Lack of Transparency: Citizens may not have real-time visibility into the status of their grievances, leading to a lack of transparency in the process.

Challenges:

- Inefficient Data Management: Managing large volumes of paper documents can be cumbersome and lead to difficulties in data retrieval and analysis.
- Limited Data Analytics: Traditional paper systems lack the capabilities for in-depth data analytics and reporting, making it challenging to identify trends or systemic issues in grievance management.

2.1.3. Implementation:

- Citizens fill out paper forms with details of their grievances.
- These paper forms are submitted physically to government offices or designated grievance collection points.
- Government employees manually process and respond to each complaint, which can involve routing the complaint to the relevant department.
- The entire process relies on physical documentation and is limited in terms of automation and digitization.

2.2 : Email and Phone-Based Grievance Handling

2.2.1 Introduction:

Some government agencies utilize email and phone-based methods to handle citizen grievances. In this approach, citizens can report their complaints and concerns through emails or phone calls, and government agencies designate human operators to manage these communications.

2.2.2 Merits, Demerits and Challenges:

Merits:

- Direct Communication Channel: Email and phone-based systems provide a direct communication channel for citizens to report their grievances

- Faster than Paper-Based Methods: Compared to traditional paper systems, email and phone-based methods are typically faster in terms of submitting grievances.
- Widespread Use: These channels are familiar and widely used, making them accessible to many citizens.

Demerits:

- Limited Automation: The process relies heavily on human operators, which may result in slower response times and an increased risk of human error.
- Lack of Centralized View: Email and phone-based methods do not provide a centralized view of all grievances, making it difficult for government agencies to track, manage, and analyze data.
- Potential Overload: Handling a high volume of incoming emails and calls can be overwhelming for government operators, leading to challenges in prompt response and efficient management.

Challenges:

- Handling Volume: Government agencies may face difficulties in managing a high volume of incoming emails and calls, which can result in delayed responses and backlogs.
- Tracking and Reporting: The lack of automated tracking and reporting systems can hinder government agencies' ability to generate insights from the data and identify patterns in grievances.

2.2.3 Implementation:

- Citizens report their grievances through emails or phone calls to government helplines or designated addresses.
- Human operators, often located in call centers or grievance offices, are responsible for handling and responding to these communications.
- The process involves manual data entry and response generation.

2.3 : Fragmented Digital Grievance Platforms

2.3.1 Introduction:

Some government agencies have developed their own digital grievance platforms, but these platforms are often fragmented and operate independently from each other. Each agency creates its own web-based or mobile-based system for citizens to report grievances.

2.3.2 Merits, Demerits and Challenges:

Merits:

- Digital and Accessible: These platforms offer a digital solution for citizens to report grievances, enhancing accessibility
- Potential Automation: Some of these platforms may incorporate basic automation for grievance tracking and response.
- Customization: Agencies can customize their platforms to suit their specific needs.

Demerits:

- Lack of Centralization: Fragmented digital platforms do not provide a centralized view of all grievances, leading to data silos and inefficiencies.
- Complex User Experience: Citizens may need to navigate multiple systems, resulting in inconsistent user experiences.
- Interoperability Issues: Lack of interoperability among different platforms can hinder data sharing and collaboration among government agencies.

Challenges:

- Data Silos: Each agency operates its system independently, resulting in separate databases and data silos that limit cross-agency data analysis.
- Inconsistency: Citizens may find it challenging to navigate multiple platforms with varying user interfaces and processes.

- Interoperability Issues: Integrating data and processes between different digital platforms can be complex and time-consuming.

2.3.3 Implementation:

- Denny et al. [1] implemented a centralized web portal leveraging modern web technologies for efficient grievance management consolidation.
- Prajapat et al. [2] developed a structured prototype utilizing programming languages like Java or Python, focusing on clear workflows to streamline grievance handling amid fragmentation.
- Buldak et al. [3] implemented an online grievance redressal system, possibly employing languages such as PHP or JavaScript, with an emphasis on incorporating governance principles to enhance fairness and transparency.

CHAPTER 3

PROPOSED SYSTEM

CHAPTER 3

PROPOSED SYSTEM

3.1 Objectives of Proposed System

The establishment of a centralized grievance system portal within an organization serves as a crucial mechanism for addressing various concerns and issues raised by individuals in an efficient, transparent, and user-centric manner. The objectives outlined for this project are fundamental in ensuring the effectiveness and success of such a system.

- **Efficient Handling of Grievances:** The primary aim of the portal is to streamline the process of managing and resolving grievances. This involves providing a structured framework for individuals to submit their complaints or concerns and ensuring that these are promptly addressed by the appropriate authorities within the organization. The system should include features such as automated workflows, ticketing systems, and escalation mechanisms to facilitate the efficient handling of grievances from submission to resolution.
- **User-Friendly Interface:** Accessibility and ease of use are key factors in ensuring the effectiveness of the grievance system. The portal should feature a user-friendly interface that is intuitive and easy to navigate, allowing individuals to submit their grievances with minimal effort. This may include features such as clear instructions, simple forms, and multi-channel access options (e.g., web-based interface, mobile app) to cater to diverse user preferences and accessibility needs.
- **Confidentiality and Security:** Maintaining confidentiality and ensuring the security of sensitive information is paramount in building trust and confidence in the grievance system. The portal should incorporate robust security measures, such as encryption protocols, access controls, and data privacy policies, to safeguard the confidentiality of grievance submissions and protect against unauthorized access or disclosure. Additionally, mechanisms should be in place to allow individuals to submit grievances anonymously if they choose to do so, further enhancing confidentiality.

3.2 Requirements Used for Proposed System

3.2.1 Hardware Requirements

- Processor - Core i3 and above: This specification ensures that the system is compatible with modern processors, providing sufficient processing power to handle the portal's operations efficiently. A Core i3 processor or higher is capable of executing the necessary computations and tasks required by the grievance system without experiencing performance bottlenecks.
- RAM – 4GB: The RAM (Random Access Memory) requirement of 4GB ensures that the system has an adequate amount of memory to support concurrent user interactions, database operations, and application processes. Sufficient RAM helps prevent system slowdowns and ensures responsive performance, especially during peak usage periods.
- OS – Windows 10 and above, Linux: Compatibility with Windows 10 and above, as well as Linux operating systems, ensures flexibility and accessibility for users with different platform preferences. It allows organizations to deploy the grievance system on a wide range of hardware configurations and operating environments, catering to diverse organizational IT infrastructures.

3.2.2 Software Requirements

- HTML, CSS, PHP, PHP mailer: These are essential web development technologies used for building the user interface (HTML and CSS) and implementing server-side logic (PHP). PHP mailer facilitates the sending of emails from the system, enabling communication with users regarding grievance submissions, updates, and resolutions.
- Apache Tomcat Web Server: Apache Tomcat is a widely used open-source web server and servlet container that supports Java-based web applications. While not explicitly mentioned in the hardware requirements, it's assumed that the server hosting the grievance system will be capable of running Apache Tomcat to serve web pages and process user requests.
- JavaScript libraries – jQuery: jQuery is a popular JavaScript library that simplifies client-side scripting and enhances the interactivity and responsiveness of web applications. Its inclusion in the software requirements indicates the use of dynamic and interactive features within the grievance system's user interface, improving usability and user experience.
- Database – MySQL: MySQL is a relational database management system (RDBMS) used for storing and managing the data related to grievances, user accounts, and system configurations. It provides a robust and scalable storage solution, supporting efficient retrieval, manipulation, and querying of data essential for the functioning of the grievance system.

3.3 Designing

A. User Authentication Module

- Implements secure authentication protocols like OAuth or JWT to verify user identities during the login process. This ensures that only authorized users can access the system, enhancing overall security.
- Utilizes role-based access control (RBAC) to ensure that only authorized users can access specific features and resources within the system.
- Provides password hashing and encryption techniques to safeguard user credentials and protect against unauthorized access. By encrypting passwords and utilizing hashing algorithms, the module ensures that sensitive information remains secure even in the event of a data breach.

B. Student Dashboard Module

- Implements secure authentication protocols like OAuth or JWT to verify user identities during the login process. This ensures that only authorized users can access the system, enhancing overall security.
- Utilizes role-based access control (RBAC) to ensure that only authorized users can access specific features and resources within the system.
- Provides password hashing and encryption techniques to safeguard user credentials and protect against unauthorized access. By encrypting passwords and utilizing hashing algorithms, the module ensures that sensitive information remains secure even in the event of a data breach.

C. Faculty Dashboard Module

- Presents a consolidated view of all grievances submitted by students, categorized by status or priority level, to facilitate efficient management. This comprehensive view enables faculty members to prioritize and address grievances effectively.
- Enables faculty members to assign grievances to themselves or other faculty members for resolution, along with adding comments or updates. This feature streamlines the grievance resolution process by enabling faculty collaboration and communication.
- Offers feature for faculty to communicate with students regarding their grievances request additional information and provide status updates on resolution progress. By facilitating communication between faculty and students, the module fosters transparency and ensures timely resolution of grievances.

D. Admin Dashboard Module

- Provides administrative functionalities for managing user accounts, including creating new accounts, resetting passwords, and deactivating inactive accounts. This administrative control ensures that user accounts are properly managed and maintained.
- Allows admins to review and modify the status of grievances, such as marking them as resolved or escalating them for further investigation.
- Offers tools for maintaining and updating the student and faculty lists, including adding new members, updating contact information, and managing permissions.

3.3.1 UML Diagrams

- **Use Case Diagram:** The Use Case Diagram shows the interactions between the Student, Teacher, Admin and the Centralized Grievance System Portal. The student can perform operations like login and submit a grievance. The Teacher can view the submitted grievances, resolve them and then update them. The database admin can delete any irrelevant grievances and also assign grievances to proper authorities. This diagram provides a clear view of the system's functionalities.



Fig:3.3.1.1 Use case Diagram

- **Class Diagram:** This Diagram illustrates the attributes and the operations that can be performed by any user of the centralized grievance system portal. The class "Student" has unique attributes like "StudentID" and name to help recognize them. Student can perform operations like Login, Submit and View. Whereas, the database admin class can perform operations like Assign and Delete. The faculty can view the grievances and resolve them, then finally update the grievances.

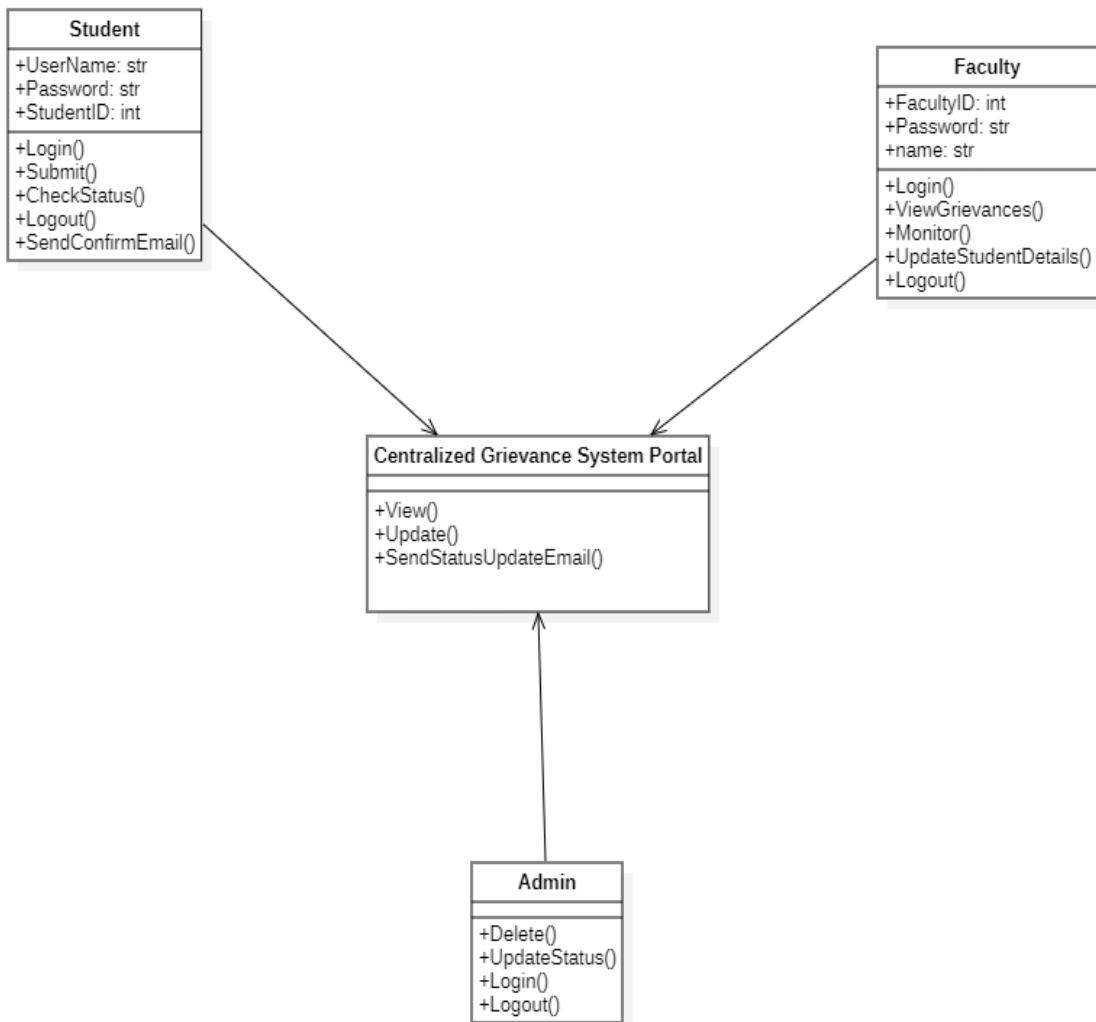


Fig:3.3.1.2 Class Diagram

- **Activity Diagram:** The activity diagram showcases the workflow and sequential steps involved in the centralized grievance system portal.

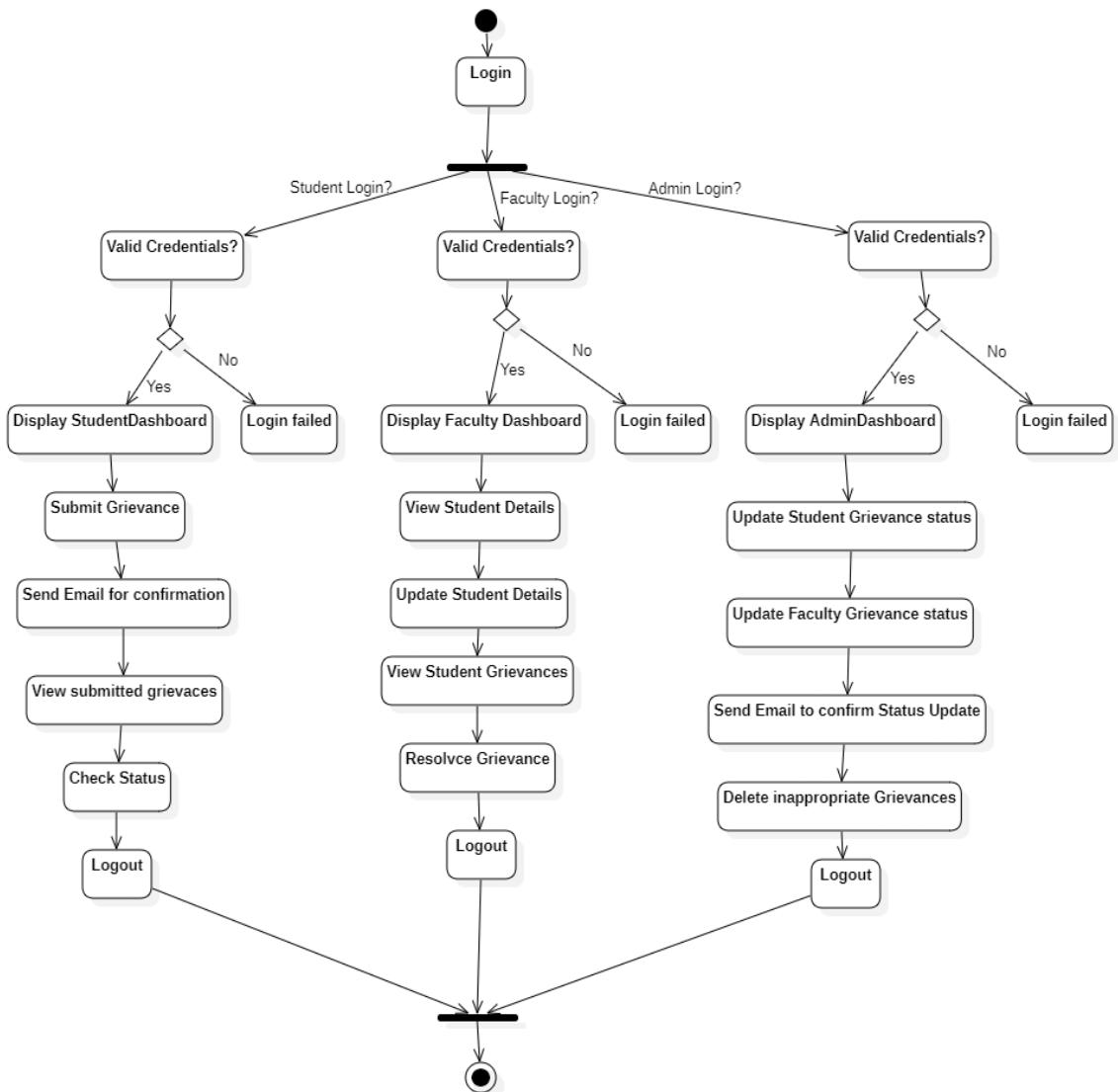


Fig:3.3.1.3 Activity Diagram

- **Sequence Diagram:** The sequence diagram showcases the interactions between different components during specific scenarios. It presents a dynamic view of the system's behavior and the sequence of messages exchanged between objects.

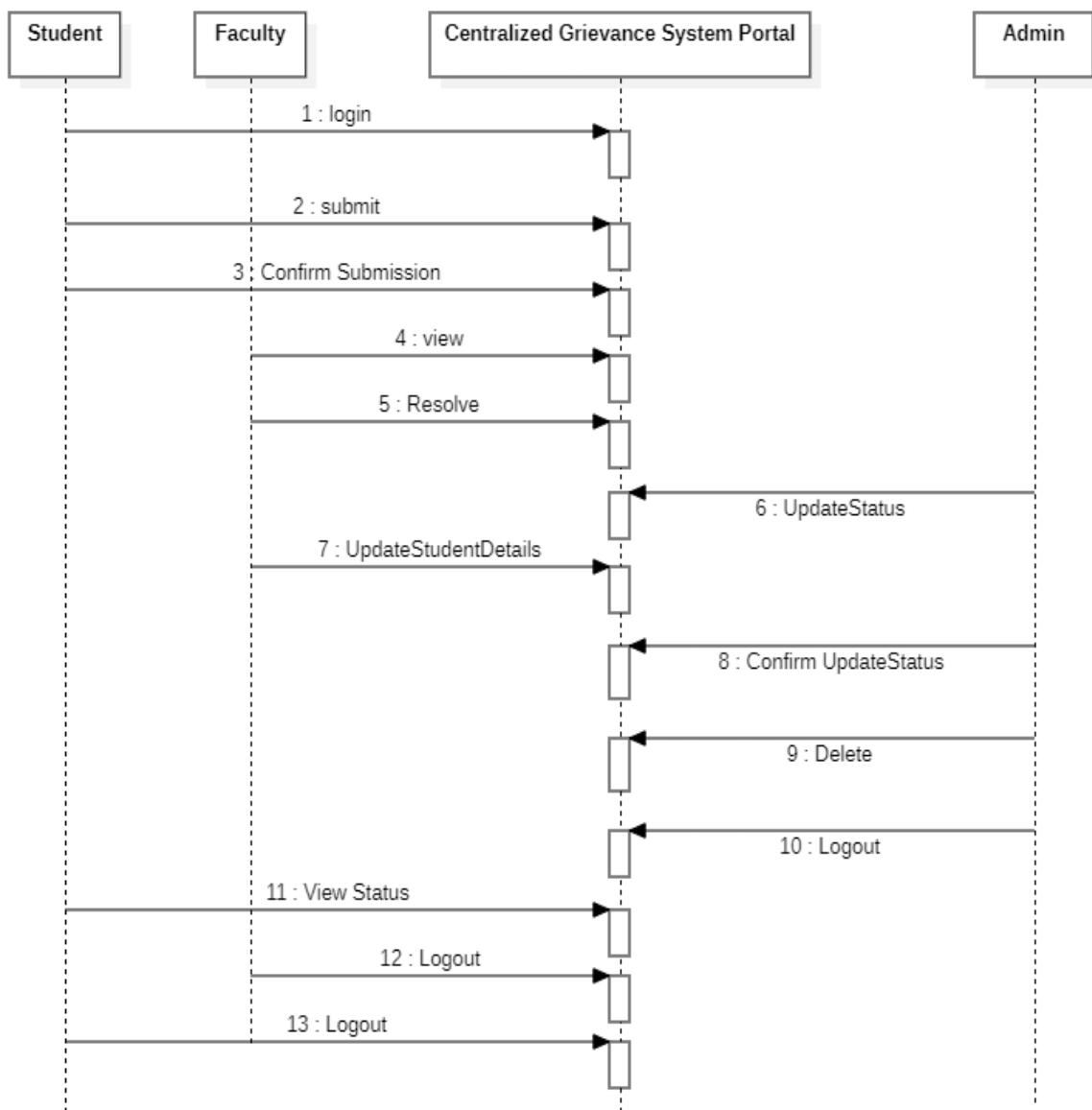


Fig:3.3.1.4 Sequence Diagram

- **Component Diagram:** A component diagram is a type of structural diagram that shows how the components of a system are organized and interact with each other.

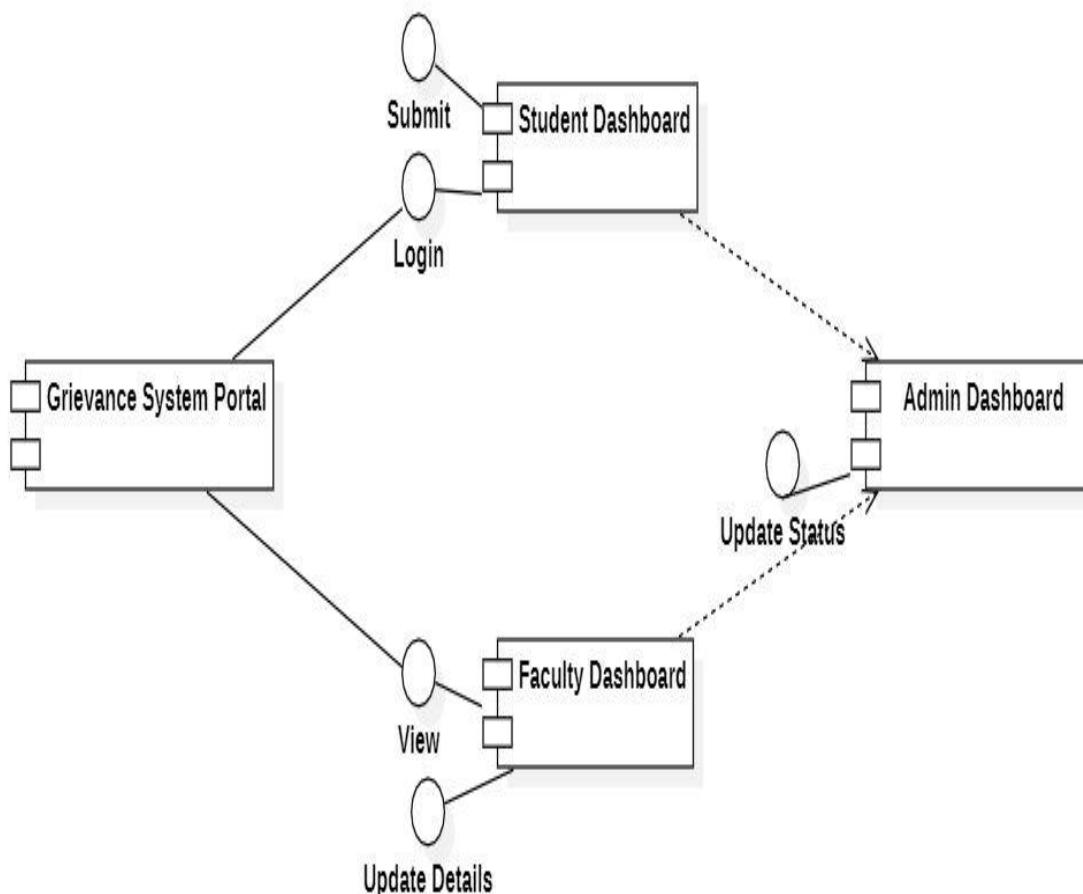


Fig:3.3.1.5 Component Diagram

- **Architectural Diagram:** An architectural diagram is a visual representation that maps out the physical implementation for components of a software system.

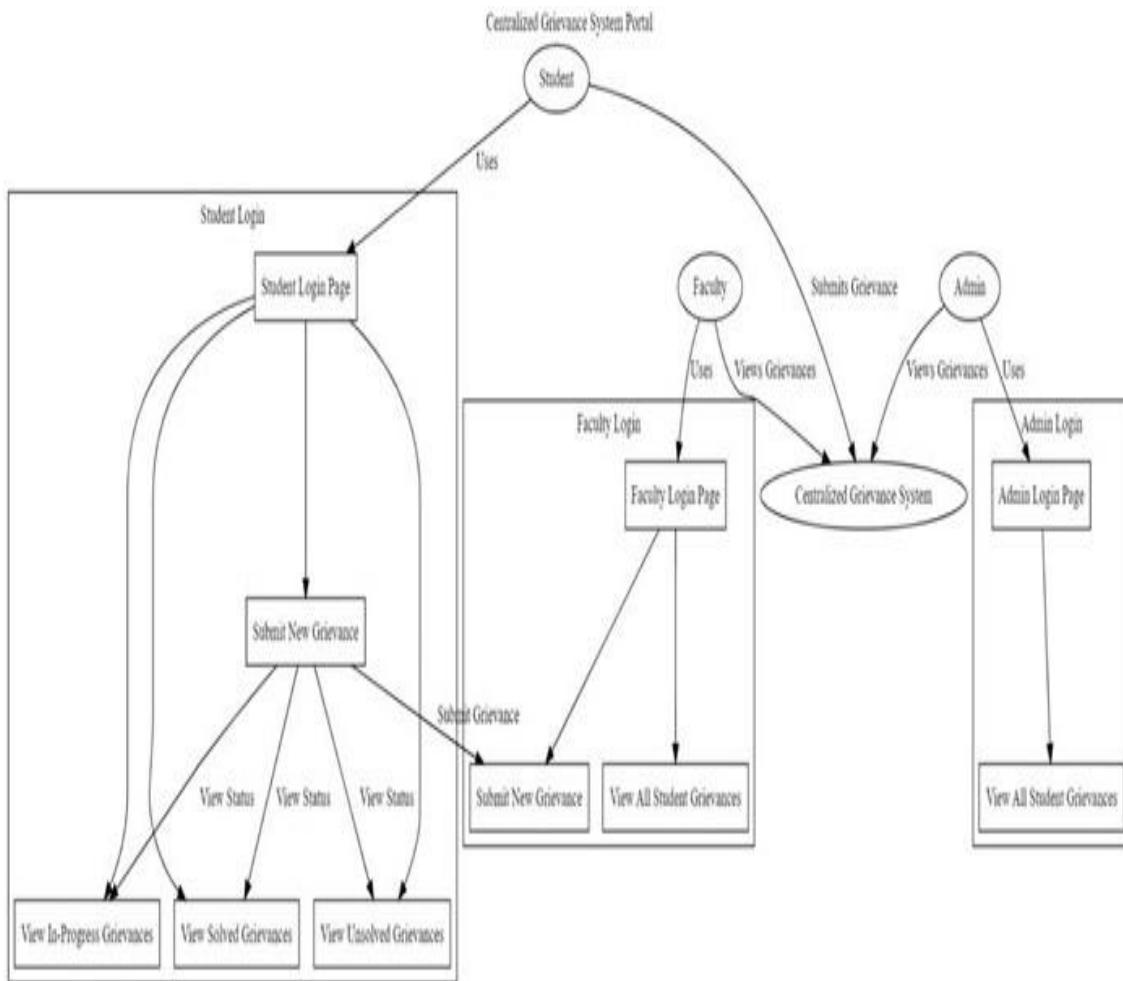


Fig:3.3.1.6 Architecture Diagram

3.4 Stepwise Implementation and code

The steps provided outline the process for setting up and exploring a grievance system portal on a local system using XAMPP.

Step-1: Install and Setup XAMPP

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends. It includes Apache HTTP Server, MariaDB database (MySQL replacement), and interpreters for scripts written in PHP and Perl. You need to download and install XAMPP on your local system. Once installed, you can start the XAMPP control panel to manage the server components.

Step-2: Clone the Repo in XAMPP->htdocs Folder

After installing XAMPP, navigate to the 'htdocs' folder within the XAMPP installation directory. This folder is where you'll place your web application files. Clone the repository containing the source code of the grievance system portal into this directory. This ensures that the portal files are accessible to the Apache server for hosting.

Step-3: Start XAMPP Server

Launch the XAMPP control panel and start the Apache server. XAMPP provides a convenient graphical interface for starting and stopping server components. Once the Apache server is running, it will be able to serve the web application files from the 'htdocs' directory.

Step-4: Copy Path of Index.js File

Locate the 'index.php' file within the repository you cloned into the 'htdocs' folder. The 'index.php' file is typically the entry point of a web application. Copy the path to this file, which will be used to access the portal in the browser.

Step-5: Paste Localhost in Place of Start to Htdocs in Browser

Open a web browser and paste the copied path to the 'index.php' file into the address bar. Replace 'start' with 'localhost' in the path. This tells the browser to access the local Apache server running on your system and serve the web application located in the 'htdocs' folder.

Step-6: Explore the Portal

Once you've entered the correct URL in the browser, you should see the landing page or login screen of the grievance system portal. From here, you can explore the different features and functionalities of the portal, including submitting grievances, viewing grievances, and accessing administrative tools.

Step-7: Login Credentials

The portal likely includes different user roles, such as students, administrators, colleges, and universities. The provided login credentials are used to authenticate users and grant access to specific features based on their roles. Use the respective username and password combinations provided to log in as a student, admin, college, or university user.

CODE:

index.php:

```
<!DOCTYPE html>
<html>
<head>
<title>GRIEVANCE CENTRAL HUB | CENTRALIZED RESOLUTION | CMR COLLEGE OF
ENGINEERING AND TECHNOLOGY</title>
<style>
body {
    font-family: "Lora", serif;
    margin: 0;
    padding: 0;
}
.container {
    max-width: 1200px;
    margin: 0 auto;
    padding: 0 20px;
}
.center-content {
    display: flex;
    justify-content: center;
    align-items: center;
    min-height: calc(100vh - 160px);
}
.banner {
    background-color: #3498db; /* Attractive Banner Color: Blue */
    color: #fff;
    text-align: center;
    padding: 2rem;
}
.banner h1 {
    font-family: "Work Sans", sans-serif;
    font-size: 32px;
    margin: 0;
    padding: 1rem;
    text-transform: uppercase;
}
.login-option {
    text-align: center;
    background-color: #fff;
    padding: 2rem;
    border-radius: 10px;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
    transition: transform 0.3s ease, box-shadow 0.3s ease;
    width: 300px;
```

```
margin: 20px;
}
.login-option:hover {
  transform: translateY(-5px);
  box-shadow: 0 6px 12px rgba(0, 0, 0, 0.15);
}
.login-option img {
  width: 150px;
  margin-bottom: 20px;
}
.login-option h2 {
  color: #333;
  font-size: 24px;
  margin-bottom: 10px;
}
.login-option a {
  display: inline-block;
  padding: 10px 20px;
  background-color: #3498db;
  color: #fff;
  text-decoration: none;
  border-radius: 5px;
  transition: background-color 0.3s ease;
}
.login-option a:hover {
  background-color: #2980b9;
}
.app-footer {
  background-color: #333;
  color: #fff;
  padding: 4rem 0;
  text-align: center;
}
.app-footer .container {
  max-width: 800px;
  margin: 0 auto;
}
.app-footer h6 {
  font-size: 20px;
  margin-bottom: 1.5rem;
  text-transform: uppercase;
}
.app-footer ul {
  list-style: none;
```

```
padding: 0;
}
.app-footer li {
  margin-bottom: 1rem;
}
.app-footer a {
  color: #fff;
  text-decoration: none;
  transition: color 0.3s ease;
}
.app-footer a:hover {
  color: #3498db;
}
.app-footer .border {
  height: 1px;
  background-color: #fff;
  margin-bottom: 1.5rem;
  width: 100%;
}
.app-footer .social-media {
  margin-top: 20px;
}
.app-footer .social-media a {
  display: inline-block;
  width: 36px;
  height: 36px;
  margin-right: 10px;
  background-color: #fff;
  color: #333;
  text-align: center;
  line-height: 36px;
  border-radius: 50%;
  transition: background-color 0.3s ease;
}
.app-footer .social-media a:hover {
  background-color: #3498db;
  color: #fff;
}
.footer-bottom {
  font-size: 14px;
  margin-top: 2rem;
}
</style>
</head><body><link>
```

```
href='https://fonts.googleapis.com/css?family=Lora:400,400italic|Work+Sans:300,400,500,600'
rel='stylesheet'

<div class="banner">
  <h1>GRIEVANCE CENTRAL HUB | CENTRALIZED RESOLUTION | CMR COLLEGE OF
ENGINEERING AND TECHNOLOGY</h1>
</div>
<div class="center-content">
  <div class="login-option">
    
    <h2>Student Login</h2>
    <a href="student/userlogin.php">Login</a>
  </div>
  <div class="login-option">
    
    <h2>Faculty Login</h2>
    <a href="college/cllglogin.php">Login</a>
  </div>
  <div class="login-option">
    
    <h2>Admin Login</h2>
    <a href="admin/adminlogin.php">Login</a>
  </div>
</div>
<div class="app-footer">
  <div class="container">
    <div class="row">
      <div class="col-md-3 mb-5">
        <ul class="list-unstyled list-spaced">
          <li class="mb-2"><h6 class="text-uppercase">About MECS-ConnectX</h6></li>
          <div class="border"></div>
          <li>
            A platform for comprehensive problem-solving, Central Grievance Hub | Centralized
Resolution, proudly associated with CMR College of Engineering and Technology.
          </li>
        </ul>
      </div>
      <div class="col-md-2 offset-md-1 mb-5">
        <ul class="list-unstyled list-spaced">
          <li class="mb-2"><h6 class="text-uppercase">Quick Links</h6></li>
          <div class="border"></div>
          <li><a href="#home">Home</a></li>
          <li><a href="knowmore.php">About Us</a></li>
          <li><a href="knowmore.php">Colleges & University</a></li>
          <li><a href="knowmore.php">Portfolio</a></li>
        </ul>
      </div>
    </div>
  </div>
</div>
```

```
</div>
<div class="col-md-3 mb-5">
    <ul class="list-unstyled list-spaced">
        <li class="mb-2"><h6 class="text-uppercase">Important Links</h6></li>
        <div class="border"></div>
        <li><a href="https://cmrcet.edu.in/">CMRCET</a></li>
        <li><a href="https://www.ugc.ac.in/">UGC</a>
        <li><a href="https://www.aicte-india.org/">AICTE</a></li>

db.php
<?php
$db = mysqli_connect("localhost", "root", "", "sihh");
if (mysqli_connect_errno()){
    echo "server not connected" . mysqli_connect_error();
}
?>
newregister.php
<?php
include('includes/db.php');
error_reporting(0);
if(isset($_POST['submit']))
{
$fullname=$_POST['fullname'];
$email=$_POST['email'];
$password=md5($_POST['password']);
$contactno=$_POST['contactNo'];
$status=1;
$query=mysqli_query($con,"insert into student(fullName,userEmail,password,contactNo,status)
values('$fullname','$email','$password','$contactno','$status')");
$msg="Registration successfull. Now You can login !";
}
?>
<script>
function GFG_FUN() {
    var input = document.getElementById("input");

    input.addEventListener("mousewheel",
        function(event){
            this.blur()
        });
</script>
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

GRIEVANCE CENTRAL HUB

```
<meta name="description" content="">
<meta name="author" content="Dashboard">
<meta name="keyword" content="Dashboard, Bootstrap, Admin, Template, Theme,
Responsive, Fluid, Retina">
<title>SGS | User Registration</title>
<link href="assets/css/bootstrap.css" rel="stylesheet">
<link href="assets/font-awesome/css/font-awesome.css" rel="stylesheet" />
<link href="assets/css/style.css" rel="stylesheet">
<link href="assets/css/style-responsive.css" rel="stylesheet">
<script>
function userAvailability() {
    $("#loaderIcon").show();
    jQuery.ajax({
        url: "check_availability.php",
        data: 'email=' + $("#email").val(),
        type: "POST",
        success: function(data) {
            $("#user-availability-status1").html(data);
            $("#loaderIcon").hide();
        },
        error: function () {}
    });
}
</script>
</head>
<body>
<div id="login-page">
    <div class="container">
        <h3 align="center" style="color:#fff">Complaint Management System</h3>
        <hr />
        <form class="form-login" method="post" >
            <h2 class="form-login-heading">  User Registration</h2>
            <p style="padding-left: 1%; color: green">
                <?php if($msg){>
                    echo htmlentities($msg);
                }?>
            </p>
            <div class="login-wrap">
                <input type="text" class="form-control" placeholder="COLLEGE ID" id="fullname" name="fullname" required="required" autocomplete="off" autocomplete="off">
                <br>
                <input type="text" class="form-control" placeholder="ENROLMENT NUMBER" id="email" onBlur="userAvailability()" name="email" required="required" autocomplete="off">
                <span id="user-availability-status1" style="font-size:12px;"></span><br>
```

GRIEVANCE CENTRAL HUB

```
<input type="password" class="form-control" placeholder="Password"
required="required" name="password"
pattern="(?=.*\d)(?=.*[a-z])(?=.*[A-Z]).{8,}" title="Must contain at least one
number and one uppercase and lowercase letter, and at least 8 or more characters" required>
<br>
<input type="tel" class="form-control" onLoad="GFG_FUN()"
minlength="10" maxlength="10" name="contactNo" placeholder="Contact no"
required="required" autocomplete="off">
<br>
<button class="btn btn-theme btn-block" type="submit" name="submit"
id="submit" ><i class="fa fa-user" ></i> Register</button>
<hr
<div class="registration">
    Already Registered<br/>
    <a class="" href="index.php">
        Sign in
    </a>
</div>
</div>
</form>
</div>
</div>
<!-- js placed at the end of the document so the pages load faster -->
<script src="assets/js/jquery.js"></script>
<script src="assets/js/bootstrap.min.js"></script>
<!--BACKSTRETCH-->
<!-- You can use an image of whatever size. This script will stretch to fit in any screen
size.-->
<script type="text/javascript" src="assets/js/jquery.backstretch.min.js"></script>
<script>
    $.backstretch("assets/img/ani10.gif", { speed: 500 });
</script>
</body>
</html>
```

Knowmore.php

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <!-- Required meta tags -->
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-
fit=no">
        <!-- Bootstrap CSS -->
        <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
integrity="sha384-"/>
```

Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm"
crossorigin="anonymous">

```
<title>Know More | GrivoTech</title>
</head>
<body>
    <!-- <section class="container" id="navigate">
        <nav class="navbar navbar-expand-lg navbar-dark bg-dark">
            <a class="navbar-brand" href="#">GrivoTech</a>
            <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle navigation">
                <span class="navbar-toggler-icon"></span>
            </button>

            <div class="collapse navbar-collapse" id="navbarSupportedContent">
                <ul class="navbar-nav ml-auto">
                    <li class="nav-item">
                        <a class="nav-link" href="#">Home</a>
                    </li>
                    <li class="nav-item">
                        <a class="nav-link" href="#AboutUs">About us</a>
                    </li>
                    <li class="nav-item">
                        <a class="nav-link" href="#Use">How to use</a>
                    </li>
                    <li class="nav-item">
                        <a class="nav-link" href="#Colleges">College List</a>
                    </li>
                </ul>
            </div>
        </nav>
    </section>-->
    <section class="container">
        <div class="jumbotron" id="AboutUs">
            <center><h1 class="display-4">About GrivoTech</h1></center>
            <p class="lead">GrivoTech is an online 24/7 Grievance Redressal System that is governed and controlled by Education Department, Government of Telangana.</p>
        <hr class="my-4">
        <p>GrivoTech facilitates almost all Colleges in Telangana, India. We are associated with Governemnt Colleges, Deemed Universities, Autonomous Institutes, Private College, covering the entire state. We here aims to provide the fastest and safest way to solve the Grievance(s). The Head authority of our system is Chief Secretary, Education Department, Govt of Telangana.</p>
        <center><p class="lead">
```

GRIEVANCE CENTRAL HUB

```
<a class="btn btn-primary btn-lg" href="#" role="button">Read more</a>
</p></center>
</div>
</section>
<section class="container">
<div class="jumbotron" id="Use">
<center><h1 class="display-4">How to Use</h1></center>
<p class="lead">We aim to provide you the comfort, Student while filing the
grievance, Faculty and College while solving the grievance, and Admin/Head while
reviewing and keeping track of the entire
system day-to-day.</p>
<hr class="my-4">
<p>
    Website: <strong>www.grivotech.com</strong><br>
    Application: Available only for Android. Download it from Google Store
"‐<strong>GrivoTech</strong>".<br>
</p><hr>
<p>
    <center><b>Steps to register, view and track Grievance(s):</b></center><br>
    <u>Step 1:</u> Login as Student [Registration required for first time user]<br>
    <u>Step 2:</u> Go to 'Register New Grievance' section.<br>
    <u>Step 3:</u> Fill the 'Grievance' Form. Please fill all correct details. If any
illegal act observed, then Strict action will be taken against you.<br>
    <u>Step 4:</u> Go to 'View Filed Grievance' section to "View Grievance
History, Track your Grievance Status, etc".<br>
    <u>Step 5:</u> Keep Update your Profile. You will not be allowed to make
changes to many provided information once after you confirm those with us. If you still wish
to change, then 'Please contact to College Administration Incharge'. They would help you to
update your information.
</p><hr>
<p>
    <center><b>Steps to View, Solve, and update Grievance(s):</b></center><br>
    <u>Step 1:</u> Login as College [College will be registered once only].<br>
    <u>Step 2:</u> Go to 'Grievance' section.<br>
    <u>Step 3:</u> Faculties will open their respective Grievance department.<br>
    <u>Step 4:</u> They will update status, provide Review to students from
here.<br>
    <u>Step 5:</u> Keep Update college Profile. Update profile on as per the
requirement. Faculties should provide their details, and changes should be made, if required.
</p>
<center><p class="lead">
    <a class="btn btn-primary btn-lg" href="#" role="button">How to use? | Read
More</a>
</p></center>
</p>
```

```
</section>
</div>
<section class="container">
    <div class="jumbotron" id="Colleges">
<center><h1 class="display-4">List of College, University, Institutes</h1></center>
    <p class="lead">Most of our college use this portal to help Students.</p>
    <hr class="my-4">
    <p>You can find college list in the document attached here. Please Go through
that to find more.</p>
    <center><p class="lead">
        <a class="btn btn-primary btn-lg" href="#" role="button">Associated College(s)
List</a>
        </p></center>
    </div>
</section> -->
<!-- Footer -->
<?php include('foot.php'); ?>
<!-- Optional JavaScript -->
<!-- jQuery first, then Popper.js, then Bootstrap JS -->
<script src="https://code.jquery.com/jquery-3.2.1.slim.min.js" integrity="sha384-KJ3o2DKtIkYIK3UENzmM7KCkRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN"
crossorigin="anonymous"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q"
crossorigin="anonymous"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"
integrity="sha384-
JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYI"
crossorigin="anonymous"></script>
</body>
</html>
```

CHAPTER 4

RESULTS AND

DISCUSSION

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Results and Discussions

The implementation of an enhanced citizen engagement platform has yielded transformative results across multiple dimensions of public service delivery. By improving accessibility for grievance reporting, government agencies have witnessed increased citizen participation, resulting in a broader range of issues being addressed. Moreover, streamlined processes and advanced technologies have led to faster response times, enhancing overall citizen satisfaction. The integration of data analysis tools has empowered data-driven decision-making, facilitating targeted interventions and proactive improvements in public services. Concurrently, cost savings have been achieved through the reduction of manual processes and paper-based workflows. Most notably, the platform's emphasis on transparency has bolstered citizen trust in governmental operations, ensuring a more accountable and responsive governance framework. These collective outcomes underscore the platform's pivotal role in fostering a more efficient, inclusive, and trusted relationship between citizens and their government.



Fig 4.1.1 Login Page - login interface catering to students, faculty, and admin, streamlining access and management of grievances.

GRIEVANCE CENTRAL HUB

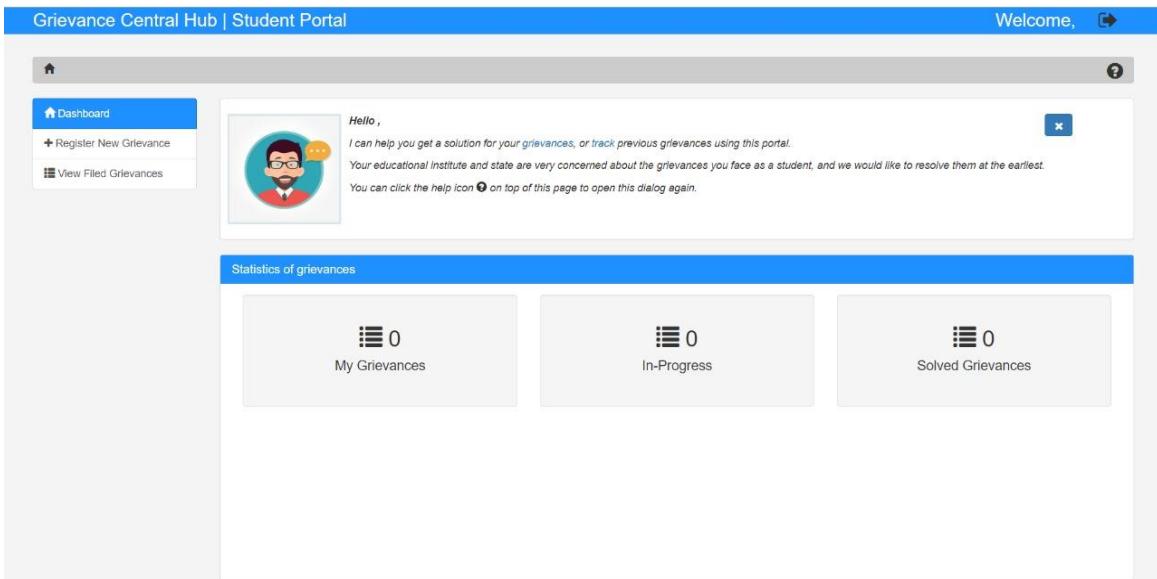


Fig 4.1.2 Student Login Dashboard - offers students a user-friendly interface to submit and track grievances.

A screenshot of the "Register Grievance Form" page. The top navigation bar is dark blue with the text "Grievance Central Hub | Student Portal" on the left and "Welcome, [User Name]" on the right. Below the navigation bar is a breadcrumb trail: "Back" → "Register Grievance". To the left is a sidebar with three buttons: "Dashboard" (selected), "+ Register New Grievance" (highlighted in blue), and "View Filed Grievances". The main content area has a blue header "Register Grievance Form". It contains fields for "Grievance Type *", "Select Category", "Complaint Details *", "Add Supporting Document (If any)" (with a file input field and a checkbox for anonymous filing), and a large orange "Submit" button. At the bottom, there is a note: "Note: * are mandatory to be filled."

Fig 4.1.3 Register New Grievance - interface for registering new grievances, enabling users to efficiently document and submit their concerns for resolution within the system.

GRIEVANCE CENTRAL HUB

The screenshot shows the 'Grievance Central Hub' interface. On the left, a sidebar menu includes 'Dashboard', '+ Register New Faculty Grievance', 'View Filed Faculty Grievances', 'Grievance Section', and 'Student's Details'. The main area is titled 'Grievance Overview' and contains a table of filed grievances:

Complaint Category	Complaint Description	Reg Date	Status
Salary	not given in time	2024-02-24 20:27:05	In Process
Leaves	leave sanction	2023-08-05 13:09:28	Closed
Salary	increment of salary	2023-08-05 12:35:38	Closed
Time table	clash	2023-08-05 12:34:53	In Process

Fig 4.1.4 View Filed Grievances - the interface allowing users to conveniently view all filed grievances.

The screenshot shows the 'Grievance Central Hub' interface with a 'Dashboard Overview' section. The sidebar menu is identical to Fig 4.1.4. The dashboard displays various grievance categories with their counts:

Ragging: 3	Harassment: 1	Faculty Behaviour: 0
Academic Probations: 1	Hostel: 4	Canteen: 7
Transport: 0	Cleanliness: 2	Fees: 1

Fig 4.1.5 Faculty Dashboard - presenting faculty members with an organized overview of grievances assigned to them, facilitating timely review and response to student concerns within the grievance system.

GRIEVANCE CENTRAL HUB

The screenshot shows the 'Register Grievance Form' page. On the left, a sidebar menu includes 'Dashboard', '+ Register New Faculty Grievance', 'View Filed Faculty Grievances', 'Grievance Section', and 'Student's Details'. The main form area has a blue header 'Register Grievance Form'. It contains fields for 'Grievance Type *' (dropdown menu), 'Complaint Details *' (large text area), 'Add Supporting Document (If any)' (file input field showing 'No file chosen'), and a checkbox for 'File complaint anonymously'. A green 'Submit' button is at the bottom. A note at the bottom states: 'Note: * are mandatory to be filled. Supported Document types: "jpeg, jpg, png, pdf, mp4, flv, mkv". Please Upload the file of this type only. Don't use Offensive language. If you are found doing so, Strict actions will be taken against you.'

Fig 4.1.6 Register New Faculty Grievance - interface for faculty members to register new grievances, facilitating efficient documentation and resolution of faculty-related issues within the system.

The screenshot shows a table titled 'STUDENT DETAILS' with a blue header. Below the header are two buttons: 'Add User' and 'Dashboard'. The table has columns for 'ID', 'Name', 'Password', and 'Action'. The 'Action' column contains 'Update' and 'Delete' buttons for each row. The data in the table is as follows:

ID	Name	Password	Action
65	sam	1234	<button>Update</button> <button>Delete</button>
96	siddhu	12345	<button>Update</button> <button>Delete</button>
110	harsha	123456789	<button>Update</button> <button>Delete</button>
111	shreya	12345	<button>Update</button> <button>Delete</button>
127	Teja	Swaroop	<button>Update</button> <button>Delete</button>
20733062	User	12345	<button>Update</button> <button>Delete</button>
20733065	User	12345	<button>Update</button> <button>Delete</button>
20733068	User	12345	<button>Update</button> <button>Delete</button>

Fig 4.1.7 Student Details Update Page - offering students a user-friendly platform to update their personal information, ensuring accuracy and completeness of their records within the system.

GRIEVANCE CENTRAL HUB

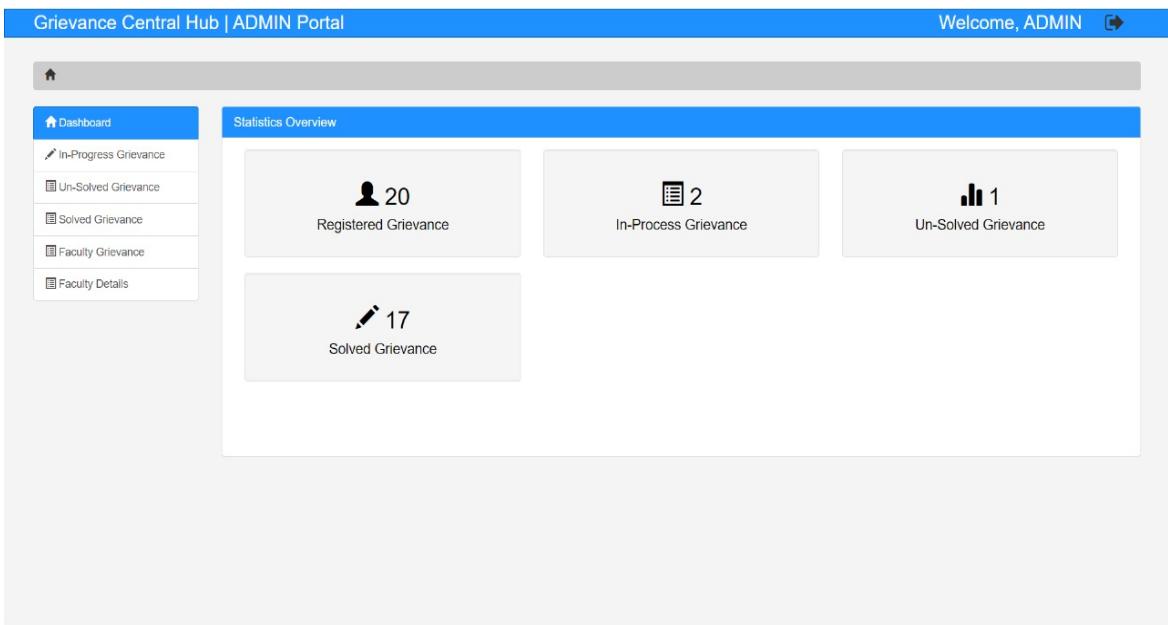


Fig 4.1.8 Admin Login Dashboard - providing administrators with comprehensive access to manage and oversee the grievance system.

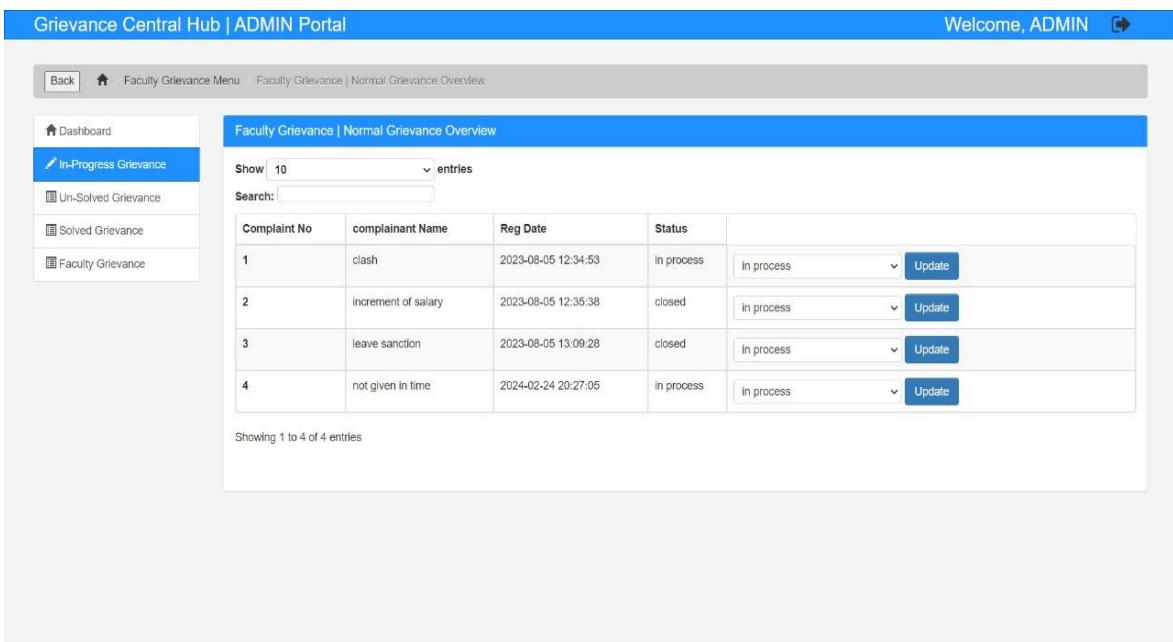


Fig 4.1.9 Status of Grievances - provides a succinct overview of the status of grievances, categorizing them as pending, unsolved, or solved.

4.2 Performance Metrics

- **Resolution Time:** Measure the average time taken to resolve grievances from the moment they are submitted until they are successfully resolved. This metric helps assess the efficiency and responsiveness of the grievance resolution process.
- **Resolution Rate:** Track the percentage of grievances that are successfully resolved within a specified timeframe (e.g., within 7 days). This metric indicates the effectiveness of the grievance resolution process in addressing stakeholders' concerns promptly.
- **Customer Satisfaction Score:** Conduct surveys or feedback assessments to evaluate stakeholders' satisfaction with the grievance resolution process and outcome. This metric provides qualitative insights into stakeholders' perceptions and experiences.
- **Response Time:** Monitor the average time taken for the system to respond to grievance submissions or user interactions. This metric helps assess the system's responsiveness and user experience.
- **System Availability:** Measure the uptime and downtime of the grievance system portal to ensure it is consistently accessible to users. This metric indicates the reliability and availability of the system for stakeholders to submit grievances and access resolution updates.
- **Error Rate:** Track the frequency of errors or issues encountered during the grievance resolution process, such as submission failures or system errors. This metric helps identify areas for improvement and ensures the system operates smoothly without disruptions.
- **User Activity:** Monitor user engagement and activity within the portal, including the number of grievances submitted, resolved, and pending. This metric provides insights into user behavior and the demand for grievance resolution services.
- **Feedback Response Rate:** Measure the percentage of feedback or survey responses received from stakeholders. This metric indicates the level of stakeholder engagement and the effectiveness of feedback collection mechanisms.
- **Scalability:** Assess the system's ability to handle increasing volumes of grievances and user interactions without experiencing performance degradation. This metric ensures the system can scale to meet growing demands and maintain optimal performance.
- **Resource Utilization:** Monitor the utilization of system resources, such as CPU, memory, and storage, to ensure efficient resource management and identify potential bottlenecks or constraints.

CHAPTER 5

CONCLUSION

CHAPTER 5

CONCLUSION

5.1 Conclusion and Future Enhancement

A Centralized grievance system portal can be a highly effective tool for managing complaints and grievances in a streamlined and efficient manner. By providing a single platform for individuals to register complaints, the system can help ensure that complaints are addressed promptly and appropriately. It has the potential to improve the handling of complaints and grievances and promote transparency and accountability. The application interface of the centralized grievance system portal provides a user-friendly experience, allowing individuals to easily register complaints and track their status. With intuitive navigation and responsive design, the application ensures accessibility across various devices and platforms. Through push notifications and alerts, users stay updated on the progress of their complaints in real time. Advanced security measures safeguard sensitive information and ensure confidentiality throughout the complaint resolution process. The student module allows for seamless complaint submission, tracking, and feedback, enhancing transparency and accountability in addressing student concerns. Faculty members benefit from a dedicated module that streamlines the management of academic-related grievances, fostering a conducive learning environment. The admin module provides centralized oversight and control, facilitating efficient resolution processes and ensuring compliance with regulatory standards.

The future scope for a centralized grievance system portal is quite promising, especially as technology continues to advance and societies become more digitally interconnected. Such a portal can serve as a vital tool for efficient complaint handling, transparency, and accountability in various sectors, including government, business, education, healthcare, and more.

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REFERENCES

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GIT HUB LINK:

https://github.com/AshleshaAdki/MajorProject_GrievanceCentralHub

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Grievance Central Hub

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Abstract: The Grievance Central Hub is a revolutionary approach to managing grievances within organizations. It offers a confidential, user-friendly, transparent system, fostering open communication and accountability. This portal efficiently handles grievances raised by individuals in the organization, promoting transparency and efficiency. Accessible to all with a user-friendly interface, it prioritizes security and confidentiality when handling complaints. Real-time tracking and updates on grievance status ensure that both students and faculty members are well-informed throughout the resolution process. The portal streamlines complaint management across various departments, providing a single point of contact for grievance submission. Powered by technologies like PHP, PHP mailer (for email communication), MySQL (for database management), Apache Tomcat, HTML, CSS, and JavaScript (for an interactive user interface), this system offers a seamless and responsive solution. It contributes to a more harmonious and accountable organizational environment, making grievance management efficient and effective.

Keywords: Web Development, Grievance Management System

I. INTRODUCTION

A Grievance Central Hub is a comprehensive and streamlined digital platform designed to facilitate the submission, management, and resolution of grievances, complaints, and concerns within an organization, institution, or government body. This portal serves as a centralized hub where individuals, whether they are employees, customers, citizens, or other stakeholders, can submit their grievances electronically, track their progress, and receive timely updates on their resolution. The primary goal of a centralized grievance system portal is to enhance the efficiency, transparency, and fairness of the grievance-handling process. By consolidating all grievance-related activities into a single digital interface, the portal eliminates the need for individuals to navigate through multiple channels or departments, thus reducing complexities and administrative burdens. The objective of a centralized grievance system portal is to establish an efficient, transparent, and user-centric platform for managing and resolving grievances, complaints, and concerns within an organization. Our objective is to develop a centralized grievance system portal that streamlines the entire grievance handling process, from submission to resolution. Such a portal should provide a seamless, user-friendly interface that facilitates the submission of grievances, automates workflow management, and ensures clear communication at every stage.

II. LITERATURE SURVEY

The paper titled "A Web Portal for Student Grievance Support System" by Denny [1], presents a comprehensive solution for managing student grievances within educational institutions. Through the development of a web portal, the authors aim to streamline the process of grievance submission and resolution, enhancing transparency and efficiency in handling student concerns. The portal facilitates communication between students and administrators, allowing for the timely submission of grievances and real-time tracking of their resolution status. By providing a user-friendly interface, the system promotes open dialogue and accountability, ultimately contributing to a more harmonious organizational environment. In a similar vein, the paper titled "A Prototype for Grievance Redressal System" by Prajapat [2] introduces a prototype aimed at automating the grievance redressal process within organizations. The authors emphasize the importance of moving away from manual systems towards automated solutions to address the shortcomings of traditional grievance-handling methods. Through features such as online registration, user activation, and personalized communication, the system aims to improve the efficiency and effectiveness of grievance resolution. By automating various aspects of the grievance handling process, the prototype offers a solution to the challenges posed by manual systems, such as time-consuming processes and limited notification methods. Furthermore, the paper titled "Online Grievance Redressal System" by Buldak [3] presents an innovative approach to addressing grievances through an online platform. By leveraging technology, the authors propose a system that enables users to submit grievances electronically and track their resolution progress. The system aims to streamline the grievance redressal process, ensuring timely response and resolution to user concerns. Through features such as user-friendly interfaces and automated notifications, the online grievance redressal system offers a modern and efficient solution to the challenges faced by traditional grievance-handling methods.

III. EXISTING SYSTEMS

- 1) Traditional paper-based grievance systems- These are deeply ingrained in the bureaucratic processes of many government organizations. In this method, citizens are required to fill out physical paper forms to report their complaints or grievances. These paper forms are subsequently processed and tracked manually by government agencies.
- 2) Email and phone-based grievance handling- Some government agencies utilize email and phone-based methods to handle citizen grievances. In this approach, citizens can report their complaints and concerns through emails or phone calls, and government agencies designate human operators to manage these communications.
- 3) Fragmented digital grievance platforms- Some government agencies have developed their digital grievance platforms, but these platforms are often fragmented and operate independently from each other. Each agency creates its own web-based or mobile-based system for citizens to report grievances. Example CPGRAMS (Centralized Public Grievance Readdress and Monitoring System)

A. Disadvantages Of Existing Systems

- 1) Inefficient data management practices hinder the organization's ability to effectively organize and utilize its information resources.
- 2) Limited data analytics capabilities restrict the organization's capacity to derive meaningful insights and make informed decisions from its data.
- 3) A potential overload of information poses a risk of overwhelming the organization's systems and personnel, leading to inefficiencies and reduced productivity.
- 4) Lack of centralization in data storage and management leads to fragmentation and duplication of efforts across different departments or systems.

B. Proposed System

1. The portal provides two different types of accounts, one for users to submit their grievances and the other for the authorities/officials of different departments.
2. Any user can create an account on our portal and then submit grievances.
3. Grievances will then be submitted to the accounts of the appropriate officials, who will then try to resolve the issues.
4. During this period, there will be constant updates on the status of the grievance on the user portal.

C. Advantages of Proposed Systems

- 1) Provides a single point of contact for students to register complaints related to college.
- 2) Improves transparency by allowing students to track the status of their complaints in real time.
- 3) Streamline the complaint-handling process by providing a centralized platform for college officials to receive, investigate, and resolve complaints.
- 4) Enhance the delivery of services by addressing the grievances of students and ensuring timely redressal of their complaints.
- 5) The portal manages grievances efficiently by registering, tracking, monitoring, and resolution of conflicts.

IV. DESIGN METHODOLOGY

A. User Authentication Module

- 1) Implements secure authentication protocols like OAuth or JWT to verify user identities during the login process. This ensures that only authorized users can access the system, enhancing overall security.
- 2) Utilizes role-based access control (RBAC) to ensure that only authorized users can access specific features and resources within the system.
- 3) Provides password hashing and encryption techniques to safeguard user credentials and protect against unauthorized access. By encrypting passwords and utilizing hashing algorithms, the module ensures that sensitive information remains secure even in the event of a data breach.

B. Student Dashboard Module

- 1) Implements secure authentication protocols like OAuth or JWT to verify user identities during the login process. This ensures that only authorized users can access the system, enhancing overall security.

- 2) Utilizes role-based access control (RBAC) to ensure that only authorized users can access specific features and resources within the system.
- 3) Provides password hashing and encryption techniques to safeguard user credentials and protect against unauthorized access. By encrypting passwords and utilizing hashing algorithms, the module ensures that sensitive information remains secure even in the event of a data breach.

C. Faculty Dashboard Module

- 1) Presents a consolidated view of all grievances submitted by students, categorized by status or priority level, to facilitate efficient management. This comprehensive view enables faculty members to prioritize and address grievances effectively.
- 2) Enables faculty members to assign grievances to themselves or other faculty members for resolution, along with adding comments or updates. This feature streamlines the grievance resolution process by enabling faculty collaboration and communication.
- 3) Offers feature for faculty to communicate with students regarding their grievances request additional information and provide status updates on resolution progress. By facilitating communication between faculty and students, the module fosters transparency and ensures timely resolution of grievances.

D. Admin Dashboard Module

- 1) Provides administrative functionalities for managing user accounts, including creating new accounts, resetting passwords, and deactivating inactive accounts. This administrative control ensures that user accounts are properly managed and maintained.

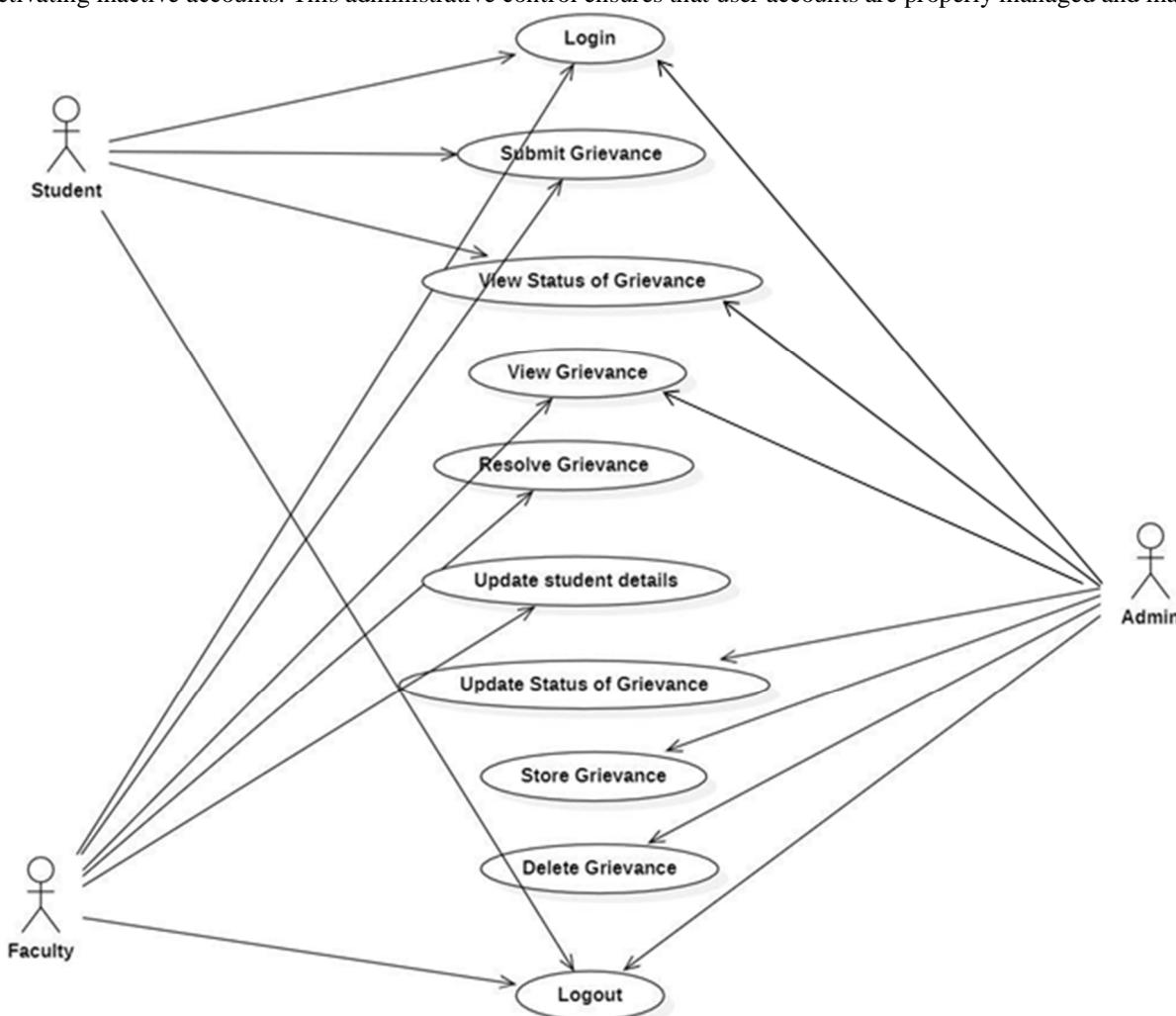


Fig 1: Flow Diagram

- 2) Allows admins to review and modify the status of grievances, such as marking them as resolved or escalating them for further investigation.
- 3) Offers tools for maintaining and updating the student and faculty lists, including adding new members, updating contact information, and managing permissions.

V. RESULTS AND DISCUSSIONS



Fig 2: Login Page - login interface catering to students, faculty, and admin, streamlining access and management of grievances.

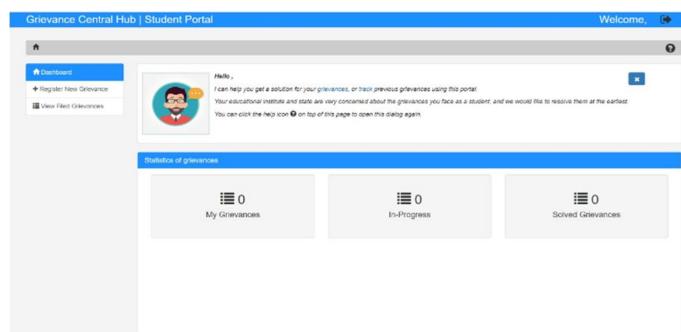


Fig 3: Student Login Dashboard - offers students a user-friendly interface to submit and track grievances.

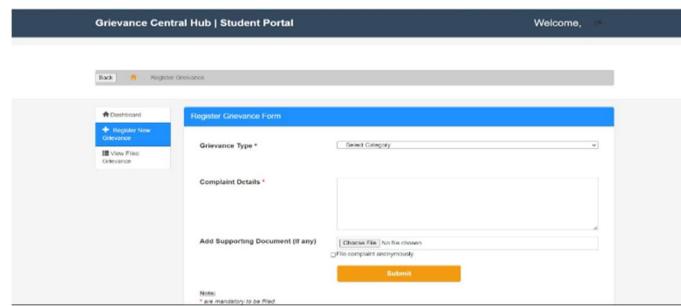


Fig 4: Register New Grievance - interface for registering new grievances, enabling users to efficiently document and submit their concerns for resolution within the system.

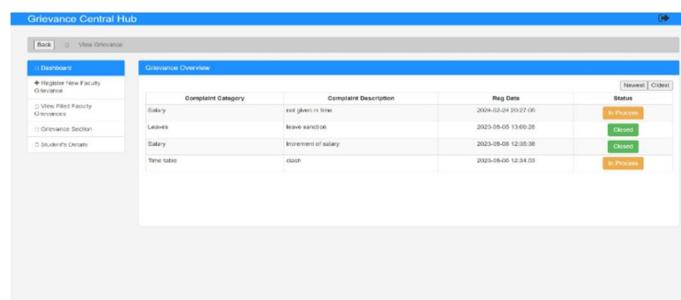


Fig 5: View Filed Grievance - interface allowing users to conveniently view all filed grievances.

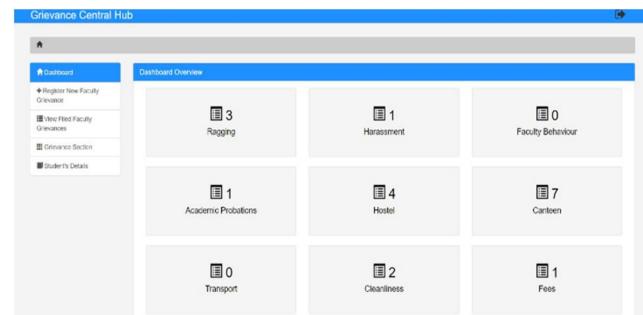
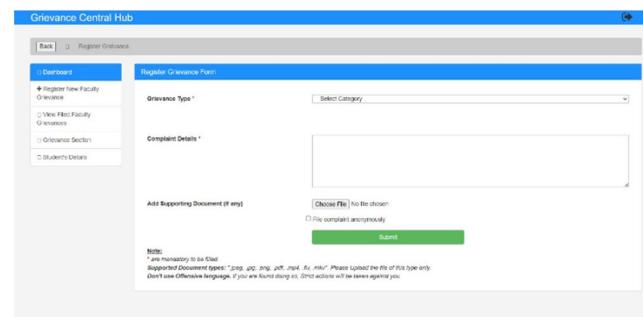


Fig 6: Faculty Dashboard - presenting faculty members with an organized overview of grievances assigned to them, facilitating timely review and response to student concerns within the grievance system.



The screenshot shows a form titled 'Regular Grievance Form' under 'Grievance Central Hub'. It includes fields for 'Grievance Type' (with a dropdown menu), 'Complaint Details' (a large text area), 'Add Supporting Document (if any)' (with a file upload button and a note about supported file types: jpg, pdf, jpg, pdf, mp4, m4v), and a 'Submit' button. A note at the bottom states: "Note: * are mandatory to be filled. Supported Document types: * jpg, pdf, jpg, pdf, mp4, m4v*. Please upload the file of this type only. Don't use offensive language. If you are found doing it, strict actions will be taken against you."

Fig 7: Register New Faculty Grievance - interface for faculty members to register new grievances, facilitating efficient documentation and resolution of faculty-related issues within the system.



The screenshot shows a table titled 'STUDENT DETAILS' under 'Grievance Central Hub'. The table has columns for 'ID', 'Name', 'Password', and 'Action'. It lists several student records with IDs ranging from 65 to 29733068. Each row contains 'Update' and 'Delete' buttons. The table header includes 'Add User' and 'Dashboard' buttons.

ID	Name	Password	Action
65	sam	1234	<button>Update</button> <button>Delete</button>
96	siddhu	12345	<button>Update</button> <button>Delete</button>
110	Narshe	123456789	<button>Update</button> <button>Delete</button>
111	shreya	12345	<button>Update</button> <button>Delete</button>
127	Tanya	Swaroop	<button>Update</button> <button>Delete</button>
29733062	User	12345	<button>Update</button> <button>Delete</button>
29733065	User	12345	<button>Update</button> <button>Delete</button>
29733068	User	12345	<button>Update</button> <button>Delete</button>

Fig 8: Student Details Update Page - offering students a user-friendly platform to update their personal information, ensuring the accuracy and completeness of their records within the system.

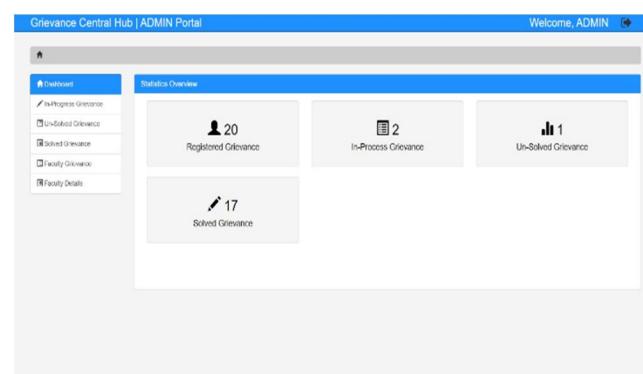


Fig 9: Admin Login Dashboard - providing administrators with comprehensive access to manage and oversee the grievance system.

Complaint No.	complainant Name	Reg Date	Status	Action
1	clash	2023-08-05 12:34:53	In process	Update
2	increment of salary	2023-08-05 12:38:58	closed	Update
3	leave sanction	2023-08-05 13:09:28	closed	Update
4	not given in time	2024-02-24 20:27:05	In process	Update

Fig 10: Status of Grievances - provides a succinct overview of the status of grievances, categorizing them as pending, unsolved, or solved.

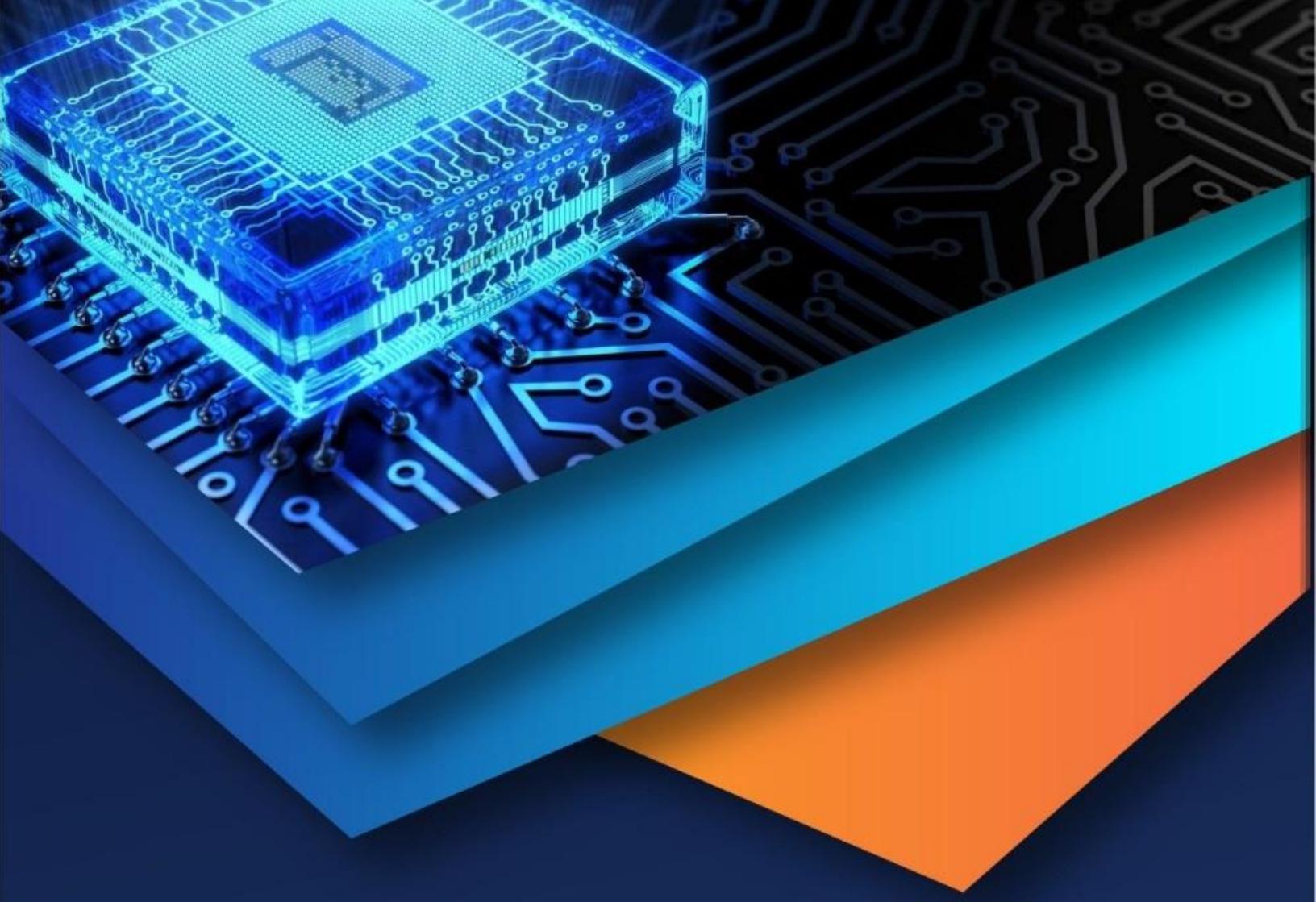
VI. CONCLUSION

A Centralized grievance system portal can be a highly effective tool for managing complaints and grievances in a streamlined and efficient manner. By providing a single platform for individuals to register complaints, the system can help ensure that complaints are addressed promptly and appropriately. It has the potential to improve the handling of complaints and grievances and promote transparency and accountability. The application interface of the centralized grievance system portal provides a user-friendly experience, allowing individuals to easily register complaints and track their status. With intuitive navigation and responsive design, the application ensures accessibility across various devices and platforms. Through push notifications and alerts, users stay updated on the progress of their complaints in real time. Advanced security measures safeguard sensitive information and ensure confidentiality throughout the complaint resolution process. The student module allows for seamless complaint submission, tracking, and feedback, enhancing transparency and accountability in addressing student concerns. Faculty members benefit from a dedicated module that streamlines the management of academic-related grievances, fostering a conducive learning environment. The admin module provides centralized oversight and control, facilitating efficient resolution processes and ensuring compliance with regulatory standards.

The future scope for a centralized grievance system portal is quite promising, especially as technology continues to advance and societies become more digitally interconnected. Such a portal can serve as a vital tool for efficient complaint handling, transparency, and accountability in various sectors, including government, business, education, healthcare, and more.

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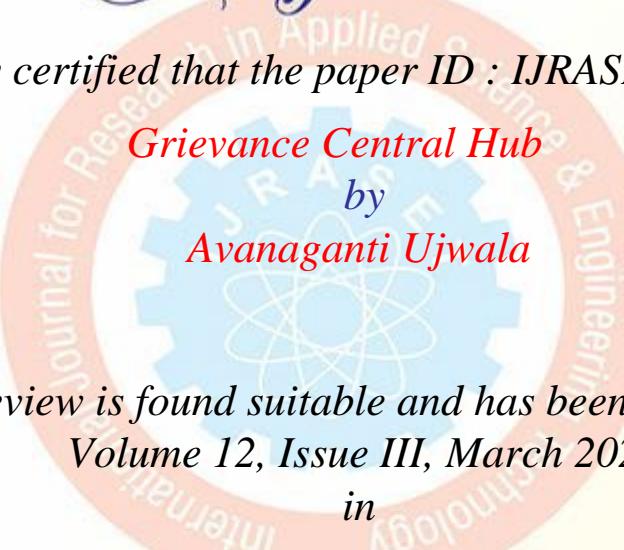
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