ResolveU: Student Complaint Management

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Abstract- ResolveU: Student Complaint Management is a user-friendly online system designed to empower students to address issues within their college. Through ResolveU, students can easily submit complaints regarding various campus facilities like the library, canteen, and hostels. Administrators can promptly review and resolve these complaints, ensuring a swift resolution process. The platform promotes transparency and accountability, facilitating communication between students and administrators. ResolveU also provides valuable insights to identify recurring issues for continual improvement. By streamlining complaint management, ResolveU aims to enhance the overall student experience and foster a supportive campus environment.

Keywords: Complaint Management; Python; MYSQL database; Student Community; Web-based Platform.

1. INTRODUCTION

ResolveU: Student Complaint Management is web-based platform, an innovative solution deeply rooted in our institution's dedication to nurturing a supportive and conducive campus environment. At its core, Resolve embodies our commitment to empowering students by providing a structured platform to voice and address their grievances effectively. By embracing digital solutions, this project aims to revolutionize the complaint registration process, making it more efficient and accessible while saving valuable time and effort for both students and administrative staff. Embracing digital solutions, Resolve seeks to streamline the complaint registration process, making it more efficient and accessible to students. This eliminates the need for manual paperwork and office visits, saving valuable time and effort for both students and administrative staff. Furthermore, the system serves as a proactive measure to address student concerns promptly, thereby fostering transparency and accountability within the institution. By centralizing complaint management, administrators can ensure consistent and fair treatment of student grievances, ultimately building trust and confidence among the student body.

Ultimately, the motivation behind Resolve lies in bridging the gap between students and administrators, creating a seamless online interface that simplifies the complaint process and enhances communication, coordination, and resolution of student grievances. Through this system, the institution aims to create a supportive and inclusive campus environment where every student feels heard, valued, and supported in their academic journey. With resolve, our institution is committed to not only addressing student grievances but also to driving continuous improvement and promoting student welfare. By empowering students to voice their concerns and providing a platform for feedback, resolve fosters a sense of ownership and accountability within the student community. Through the systematic collection and analysis of feedback, the system enables us to identify areas for enhancement in campus facilities, services, and policies, thereby driving continuous improvement. Transparency and accountability are at the forefront of ResolveU objectives.

The system provides students with visibility into the status of their complaints and ensures that administrators are held accountable for addressing them in a timely manner. By streamlining administrative processes related to complaint handling, resolve improves efficiency and effectiveness, ultimately enhancing student satisfaction and retention. Moreover, resolve aims to build trust and confidence among students by demonstrating the institution's commitment to addressing their concerns and promoting their overall well-being. Through enhanced communication and collaboration between students and administrators, resolve fosters a culture of openness, dialogue, and partnership in addressing student grievances. Overall resolve: Student Complaint Management is more than just a digital platform—it's a testament to our institution's dedication to fostering a supportive, inclusive, and student-centric campus environment. By leveraging technology to streamline complaint management processes, resolve empowers students, enhances transparency and accountability, and promotes continuous improvement, ultimately enriching the overall student experience. And aims to create a feedback loop where students' concerns are not only addressed promptly but also acted upon to effect tangible changes in campus infrastructure and policies. By engaging students in the improvement process, Resolve fosters a sense of community ownership and encourages active participation in shaping the campus environment.
environment. This approach not only strengthens the bond between students and the institution but also cultivates a culture of mutual respect and collaboration. Additionally, Resolve will incorporate data analytics capabilities to identify trends and patterns in student complaints. By analysing this data, administrators can gain valuable insights into systemic issues that may require broader intervention. This proactive approach enables the institution to pre-emptively address emerging concerns and implement preventative measures, ultimately fostering a proactive rather than reactive approach to student welfare. Through continuous monitoring and analysis, resolve ensures that the institution remains responsive to the evolving needs and preferences of its student body, driving ongoing improvement and innovation in campus services and facilities to the students in the campus related issues and monitored accordingly.

2. Literature Review

[1] Dr. P. A. Tijare, Prathamesh Deshmukh, Ritesh Agrawal, Prathmesh Upadhyay, Viraj Bhutada, Shreyas Amale: The paper proposes a student grievance system for educational institutions, highlighting its importance in addressing student concerns. It compares traditional and proposed web/application-based systems, emphasizing the latter's advantages. The system framework includes sections for students and administrators, facilitating complaint management. Methodologically, it employs frontend and backend technologies. Visual representations demonstrate key features. The paper concludes by advocating for investment in grievance systems to enhance student satisfaction and institutional accountability, suggesting further research for system optimization.

[2] Lovely Singh Bhadouria, Nikunj Kumar, Abdul Faisalc, Mrs. Suman Devid: “The article presents an Online Complaint Management System aimed at improving efficiency in addressing public grievances. It automates complaint handling, assigns tasks to relevant departments, and escalates unresolved issues. Key features include tracking complaint status and generating performance reports. Advantages include time-saving and user friendliness. Feasibility studies cover economic, operational, and technical aspects. The system comprises modules like registration, login, complaint submission, admin, and user panels. It offers cloud-based processing and user-friendly interfaces. Overall, it offers a promising solution for efficient complaint management.

[3] Ruth Peace Ibitomisin, Linda Oghenekaro: “This paper introduces a web-based student complaint management system designed to address the challenges faced by students in tertiary institutions. It outlines the current issues students encounter, such as difficulties in registering complaints and slow response times. The system provides a platform for students to express their concerns safely. Developed using PHP, JavaScript, HTML, CSS, and MySQL, the system aims to be effective and user-friendly. It allows students to register complaints, track their status, and view complaint history. Admins can manage complaints efficiently, ensuring timely responses and resolutions. The study emphasizes the importance of effective complaint management systems in educational institutions to enhance the overall student experience and academic development.

[4] Dr. Ashwini Meshram, Vedanti Palandurkar, Harshal Zade, Akash Masram, Nikita Manmode: “The paper "A Survey on Student Grievance Redressal System" emphasizes the significance of addressing student satisfaction through effective grievance redressal mechanisms. It introduces a user-friendly system facilitating complaint registration, tracking, and analysis. The literature survey explores existing systems, technologies, and their pros and cons, while the comparative study evaluates these systems based on various parameters. The methodology outlines the system's flowchart and highlights the need for modifications. Overall, the paper suggests that the described system can enhance efficiency, reduce manual work, and boost student satisfaction.

[5] Chetan Somi, Pooja Gowri, arati Harne, Amruta Shanke: “The paper introduces "People's Corner," a web-based complaint management system allowing citizens to report municipal issues via a mobile app. It features complaint registration, tracking, and image uploads, directing issues to relevant municipal departments. It reviews the need for such systems and proposes an integrated approach. The system includes components like communication networks, GPS, and email generation. Benefits include streamlined complaint tracking and direct citizen-authority communication. The methodology covers user registration and complaint resolution. In conclusion, it emphasizes improved communication and suggests future enhancements. Overall, it offers an innovative solution for municipal complaint management using web and mobile tech.

[6] Osman Nasr, Enayat Alkhider: “The paper discusses an Online Complaint Management System aiming to streamline complaint resolution, save time, and combat corruption. It emphasizes the need for effective complaint systems and mentions various authors who contributed to the field. The existing system's limitations are highlighted, and objectives and purposes of the proposed system are outlined. Screenshots of the system's interfaces are provided. The conclusion asserts the successful computation and testing of the software, meeting information requirements, and achieving goals like improved productivity and efficient record management. The references cite relevant literature on information
retrieval and text categorization. The authors' profiles indicate their academic backgrounds and research interests in information systems and technology.

[7] Imteyaz Shahzad, Bushra Akthar, Nikita Patil, Prerana Kanfade, Saloni Bambole: “The paper proposes a Student Complaint Portal to address issues on campus through a computerized system. It outlines the system's structure with sections for student login, registration, and administration. The introduction discusses the evolution of computerized tools for problem-solving and the importance of a complaint system in educational institutions. Related works highlight studies on complaint management in various sectors. The methodology section explains the system's modules and requirements, emphasizing hardware and software specifications. The conclusion stresses the significance of such a system in understanding student concerns and facilitating efficient complaint handling. Overall, the paper presents a structured approach to managing student complaints through a computerized system.

[8] Prof. Shekhar Patle, Mayur Bachhav, Yash Jadhav, Supriya Jagadale: This paper introduces a Campus Complaint Management System tailored to address the challenges associated with complaint handling in educational institutions. It emphasizes the need for efficient management of grievances to maintain a positive campus environment. The proposed system features user-friendly interfaces, real-time status tracking, and comprehensive reporting capabilities. It aims to enhance transparency, accountability, and overall satisfaction within the college community. The methodology section outlines the system architecture, data flow, and proposed system functionalities. The conclusion highlights the significance of the College Complaint Management Tool and its potential to revolutionize complaint handling processes. The references include related works on complaint management systems and their impact on various sectors. Overall, the paper presents a comprehensive approach to improving complaint management in educational institutions through technology-driven solutions.

[9] M. Saryanya, K. Ambitha, B. Thevahi: “The paper proposes an online complaint management system to improve communication between the government and the public in India. It identifies issues with the current system and suggests a web-enabled call centre for efficient complaint registration, monitoring, and resolution. The system caters to different user roles and includes modules for registration, monitoring, reporting, and administration. It outlines the required software and hardware components, along with its applications and the advantages. The paper concludes by stating that the developed website meets requirements and is user-friendly.

[10] Dr. A.S. Kapse, Divya S. Disale, Vaishnavi G. Khadekar: “This paper proposes a college complaint management system to efficiently handle complaints from students and staff. It discusses the current manual complaint management process in educational institutions and highlights its inefficiencies. The significance of the study lies in improving complaint handling to enhance the overall experience for students and staff. The objectives include identifying the current process, analysing its strengths and weaknesses, proposing a new system, and evaluating its effectiveness. The study uses a descriptive research design with interviews, surveys, and literature review as data gathering techniques. Results indicate that the proposed online system is more efficient, transparent, and satisfactory compared to the current paper-based method. Recommendations include regular updates, training, integration with other systems, and accessibility improvements. Overall, the paper underscores the importance of an effective complaint management system in colleges and universities, offering valuable insights for future research and system development.

3. System Analysis

ResolveU: Student Complaint Management is a digital platform designed to streamline the process of registering and addressing complaints and dissatisfactions within a university campus. The system leverages internet connectivity to enable students, staff, and other community members to easily access and utilize its functionalities. Before the development of ResolveU, the traditional method of submitting complaints involved either writing emails to the Dean of Student Affairs or physically visiting the Dean's office. However, this manual process often led to issues being overlooked or delayed due to poor information management and tracking. To address these challenges, ResolveU was conceptualized based on observations of the existing complaint submission and resolution processes. During the initial stages of development, requirements gathering was conducted to establish the foundation for the system's database design and operational flow. The observation method was employed to identify the key functionalities and features needed to address the shortcomings of the traditional complaint management process.

1. The system should allow students to submit complaints easily.
2. The system should store user records and complaints.
3. The system should manage user data, which involves read and write operations like creating, reading, updating, deleting and other operations.
3.1.1 Functional Requirements
The system developer implements the functional requirements to ensure the students can register the complaints. At the end of the requirements gathering, the following functional requirements were identified:

1. The system should allow users like student, admin, and principal to log in to access the functionality of the system permitted to them.
2. The system should ensure that ONLY authorized users manipulate data in the database.
3. The system should allow for users of different levels which are the administrators and regular users (Students).
4. The system should allow anyone, whether authenticated or not, to see the registered complaints.
5. The system should enable the administrators to delete a complaint if they unfit for registration.
6. The system should allow students, admin, and principal to look up a complaint if they consider the claim relevant to them.
7. The system should keep a user logged in for one hour for security reasons.
8. The system should store all the submitted data in a database for easy access and historical reference.

3.1.2 Non-Functional Requirements
The non-functional requirements highlight the systems' quality and performance attributes. The developed system must behave in some specific ways. It must exhibit:

1. Usability: Usability has to do with the ease of use of the system to carry out tasks. The decision was made to ensure that this requirement was met to employ the "user-centered design" concept. This concept involves ensuring that the system is used as naturally and intuitively as possible by the user.
2. Scalability: The system needs to expand data as more users inevitably begin to use the system.
3. Security: Security was of utmost importance because anyone with access to the internet would view the database's information. Only authorized users should be allowed access to specific data. Because of this, some design decisions were made to ensure that this requirement was met. These include: Authentication of users which ensures that the user is who they say they are through the required use of passwords; Authorization is given to the administrators to enable them to have total control over the data that is being passed into the system; Validation is carried out on input to ensure that all malicious attempts at database intrusion or injection fail.
4. Availability: The system should be readily available to the user anytime they need to access it.
5. Modularity: This requirement ensured that the content of the system could be used in another application. What this ensures is that the system also has more tendency to be reusable. Some design decisions towards this requirement are the use of functions for processes that are used repeatedly and separation of the user interface, backend server, and database.
6. Data Integrity: The data stored in the system should be timely and valid.

3.1.3 Minimum Hardware Requirements
These requirements specify the necessary hardware components for the system to operate effectively. They include an Intel Pentium processor, 32GB of hard disk space, and a minimum of 256MB of RAM. These physical resources are essential for supporting the system's functionalities and ensuring optimal performance during usage.

3.1.4 Software Requirements
Software allows systems to be fully functional and capable of handling tasks while giving them flexibility and control. The specified software requirements are specified as: operating system (Linux, Mac OS, or Windows OS); JavaScript programming language; Development tools (VS Code, Git, and Postman); and a MongoDB Database Management System (DBMS).

Fig. 1. ResolveU: Student Complaint Management
3.2 System Architecture
Figure 1 shows the system design of the ResolveU: Student Complaint management. The system architecture involves defining how software components would be combined to achieve the proposed output. The architectural design style used are the User-Client and Client-Server Architectural Style.

3.2.1 Client-Server Architecture
This type of architecture involves sharing loads of client-server. It includes a central system hosting the server to be consumed by the client. It is a service-oriented architecture that allows for continual, uninterrupted client service. It responds to clients' requests by subduing network traffic rather than sending a full file. There are separate client and server systems, both connected by a network. The backend server used is the Python (Flask) HTTP server. The database management system is MYSQL. The clients are the various users of the system. The network that connects the clients with the DBMS is the internet.

3.2.2 User-Client Architecture
The client initiate requests via the Graphical User Interface (GUI), waits for the reply and processes this reply. The server authorizes users and then generates the result from processes carried out. The complaint management system comprises of essential modules, namely:

a) The login/logout management module handles the data validation involved in the login process and authentication necessary to access the system. It also handles updating the audit trail for security measures.
b) Complaint submission module: This module would handle a complaint's entry into the system by an authenticated user. Random users would not be allowed to submit a complaint.
c) Complaint management module: This module would give the administrator access to manage complaints, such as moving the complaint from pending to complete. It also includes deleting submissions that are inappropriate such as the use of foul language or if the complaint has already been resolved.
d) Complaint viewing module: This module would allow anybody who gains access to the website to view all the registered complaints in the system without the need to log in.

These modules are accessed using different interfaces to interact with users allowing them viewing and editing privileges where necessary. A regular user can access the login/logout management module, complaint submission module, and complaint retrieval module. At the same time, an administrator has access to all the modules and the complaint management module.

3.3 Dynamic System Modelling
In the development of the ResolveU: Student Complaint Management system, a formal model is created using the Unified Modeling Language (UML). UML serves as the standard language for specifying, visualizing, constructing, and documenting all software system artifacts. It enables designers to utilize diagrams to offer different perspectives on the system's components. The system's behaviors are represented using dynamic UML diagrams, including Activity diagrams and Use Case diagrams. Interactions are modeled separately using appropriate diagrams and categorized under Interaction UML diagrams. Of particular importance, use cases are depicted at various abstraction levels to accommodate the different stakeholders involved in the project. This facilitates better integration, communication, and understanding among stakeholders. A Use Case diagram is employed to capture the system's functionality as perceived by its users, visualizing the system's interactions with the external environment. The system's functionality is grouped into four main modules: the Login/Logout Management Module, the Complaint Submission Module, the Complaint Retrieval Module, and the Complaint Update Module. The narratives of their use cases are delineated in the subsequent subsections, providing a comprehensive overview of the system's functionalities and interactions from the perspective of its users and stakeholders.

3.3.1 Dynamic modeling of the Login/Logout management module
The Login/logout management module's dynamic modeling involves the use-case narratives for login (Table 1) and logout (Table 2) as indicated in Figure 2.

3.3.2 Dynamic modeling of the complaint update module
The update management module's dynamic modeling involves the use-case narratives for update (Table 3) and delete (Table 4).

3.4 Interface design
The system interface design incorporates several essential elements to ensure a user-friendly experience. Menus play a crucial role in facilitating smooth navigation throughout the system. A permanent "top menu" is provided to enable users to navigate at the global level of the web application. This menu grants all users access to various web pages through the provided links. Reports serve as the medium through which results are displayed to users, providing valuable insights.
and information. The dialogue or screen design constitutes the interactive interface through which users interact with the system. This interface allows users to input data, view information, and perform various actions, enhancing usability and functionality.

### Table 1. Use-Case for login management

<table>
<thead>
<tr>
<th>USE CASE 1</th>
<th>LOG-IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal in content</td>
<td>Allow users access into the system and to save login session data.</td>
</tr>
<tr>
<td>Level</td>
<td>Primary Login in use case.</td>
</tr>
<tr>
<td>Preconditions</td>
<td>The user is a genuine legitimate operator of the system.</td>
</tr>
<tr>
<td>Post-Conditions (success end)</td>
<td>Access is granted into the system.</td>
</tr>
<tr>
<td>Post-conditions (failed end)</td>
<td>Access is denied into the system.</td>
</tr>
</tbody>
</table>

| Actor | Student, Principal, Administrator |
| Trigger | The user requests for access to submit a new complaint into the system, and permission to carry out operations. |

<table>
<thead>
<tr>
<th>Description (event flow)</th>
<th>Actor action</th>
<th>System respond</th>
<th>Affected data object with the operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requests for access into the system by inputting a valid username and password.</td>
<td>Validates input, authenticates user, saves login details, and displays home page via rich Interface for the logged in user.</td>
<td>Searches database to check for user and validity of login credentials. Updates login audit log with username and time of login.</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2. Use-Case for logout management

<table>
<thead>
<tr>
<th>USE CASE 2</th>
<th>LOG-OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal in content</td>
<td>To destroy the user's session and update login audit log session data.</td>
</tr>
<tr>
<td>Level</td>
<td>This is a primary logout use case</td>
</tr>
<tr>
<td>Parameters</td>
<td>In: Logged in session details</td>
</tr>
<tr>
<td>Preconditions</td>
<td>Out: Log-in session details</td>
</tr>
<tr>
<td>Post-conditions (success end)</td>
<td>The user is a genuine legitimate operator of the system and is logged in.</td>
</tr>
<tr>
<td>Post-conditions (failed end)</td>
<td>The login session ends successfully.</td>
</tr>
<tr>
<td>Actor</td>
<td>User, Administrator</td>
</tr>
<tr>
<td>Trigger</td>
<td>The user requests to log out of the system</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description (event flow)</th>
<th>Actor action</th>
<th>System respond</th>
<th>Affected data object with the operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>User clicks on the &quot;Logout&quot; link.</td>
<td>Logs out the user and redirects to the home page of the system.</td>
<td>The login audit log is updated with logout time and date, and all session variables are destroyed.</td>
<td></td>
</tr>
</tbody>
</table>

### 3.5 Database Design

A database is like a warehouse where data is stored. A database serves as the repository for the system's information. The design of the database was one of the primary design considerations of this system. Since the system's significant
function is to store data in a data repository, how the tables relate is of utmost importance. The Relational Database Management System used was MYSQL. It allows for the management of the data involved in this system, and it is separate from the system's development platform. It also provides tools that help in the design of the database, as well as its implementation. In order to ensure cohesion throughout the system, data models were designed to guide how a user was created and how a complaint would be stored. The model consisted of various fields and properties that each user and complaint would have. The two main models designed for this system were the user and complaint models. The user model describes the properties that each user that creates an account should have. The table contains four main fields; user_id, email, password, and admin as shown in Figure 3.

4. Complaint Management System Implementation
This provides insight into the implementation of the ResolveU: Student Complaints Management. The required systems specifications necessary to support the developed system and the tools used to develop it are provided. This is followed by a presentation of the various modules that make up the system. The following sub-sections describe the complaint management system implementation of the Home, Login, Signup, Add Complaint, View Complaint, and Delete Pages. The implementation of the ResolveU: Student Complaint Management system involves a systematic approach to address issues raised within the university campus community. Utilizing robust backend infrastructure and intuitive frontend interfaces, the system facilitates seamless registration, tracking, and resolution of complaints related to various campus facilities. Leveraging technologies like MYSQL for efficient data management and user authentication mechanisms ensures data security and integrity throughout the complaint lifecycle. The system's modular design allows for scalability and adaptability to evolving user needs, while adherence to user-centered design principles enhances usability and accessibility. Through continuous refinement and optimization, ResolveU aims to foster it.

Use case Diagram

<table>
<thead>
<tr>
<th>USE CASE 3</th>
<th>REGISTER A NEW COMPLAINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal in content</td>
<td>To add a new complaint into the database</td>
</tr>
<tr>
<td>Level</td>
<td>This is a primary Register new complaint use case</td>
</tr>
<tr>
<td>Parameters</td>
<td>In: Complaint title and description</td>
</tr>
<tr>
<td></td>
<td>Out: Unique complaint identification number</td>
</tr>
<tr>
<td>Preconditions</td>
<td>The user must be an authenticated user of the system; the user must be logged in.</td>
</tr>
<tr>
<td>Post-conditions</td>
<td>The complaint is successfully registered.</td>
</tr>
<tr>
<td>Post-conditions</td>
<td>The complaint is not successfully registered.</td>
</tr>
</tbody>
</table>
Actor
User
Trigger
The user requests to add a new complaint to the database.

Description (event flow)

<table>
<thead>
<tr>
<th>Actor action</th>
<th>System respond</th>
<th>Affected data object with the operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Add a new complaint.</td>
<td>2. Confirms that a logged in user makes the request.</td>
<td>Reads session data displays add complaint page.</td>
</tr>
<tr>
<td>3. Fills the complaint form with complaint details</td>
<td>6. Validates input.</td>
<td>Updates the database with the complaint details, displays new complaints on the home page.</td>
</tr>
</tbody>
</table>

5. Snapshots

5.1 The Home Page
The homepage of the ResolveU: Student Complaint Management system serves as a central hub displaying all registered complaints within the system. It features a navigation bar, facilitating user access to various functionalities such as logging in and out. Within the homepage, a dedicated section presents the compiled list of complaints. Users can easily navigate through this section to view all registered complaints. A notification mechanism alerts users to the presence of existing complaints in the database, ensuring transparency and awareness. During the data retrieval process from the database, a loading spinner provides visual feedback, indicating ongoing progress. Behind the scenes, the backend code acts as an intermediary, facilitating communication between the front-end user interface and the database. This seamless interaction ensures efficient data retrieval and display. Once the data fetching process is complete, the resulting page showcases the aggregated complaints, providing users with an overview of issues raised by members of the university community.

![The Home Page](image)

**Fig. 5. The Home Page.**

5.2 The Login Page
The homepage of ResolveU: Student Complaint Management provides a comprehensive view of all registered grievances. Featuring a user-friendly navigation bar, users can effortlessly access various functions like logging in and out. Within the homepage, a dedicated section presents a consolidated list of complaints. Users are promptly notified if complaints already exist in the database, ensuring transparency and awareness. During data retrieval from the database, a loading spinner visually indicates ongoing progress. Behind the scenes, the backend code serves as an intermediary, facilitating seamless communication between the front-end interface and the database. This ensures efficient data retrieval and display. Upon completion of the data fetching process, the resulting page showcases the aggregated complaints, offering users insight into issues raised by the university community. It is important to note that the homepage exclusively displays unresolved complaints, emphasizing the system’s commitment to addressing concerns promptly and fostering a supportive campus environment.
5.3 The Signup Page
If a user encounters login issues due to the absence of an account, they have the option to create a new one within the system. During the account creation process, the system verifies that all input fields are filled and that passwords match, with a minimum length of six characters. Upon successful validation, the user-provided details are transmitted to the backend for processing. At the backend, a further check is conducted to confirm whether the user already possesses an existing account. This measure ensures data integrity and prevents duplicate account creation, safeguarding the system's functionality and user experience.

5.4 The Add Complaint Page
The user must be authenticated to add a new complaint to the system. If they are, they can gain access to this page; if not, they would be redirected to the login page. To save a new complaint into the system, the front-end system communicates with the backend to save it into the database as shown in Figure 9.

5.5 The View Complaint Page
This page (Figure 11) allows admin to view a complaint and its corresponding details. A user does not need to be logged in to see a complaint, but they need to be logged in to like or dislike a complaint. While the page is loading, the system checks to see if the user has liked a complaint previously or not. When a user decides to like or dislike a complaint, the original complaint data needs to be updated in the database.
5.6 The Complaint Registered Students
The list of students who registered the complaints and to resolve the complaints accordingly.

![Fig. 12. Admin privileges.](image1)

![Fig.13 Admin Dashboard](image2)

![Fig 14. List of students](image3)

![Fig 15. Resolved complaint list](image4)

6. Conclusions
ResolveU has proven to be an asset to our institution, streamlining the process of addressing student concerns and grievances. Through its implementation, we have witnessed increased efficiency in handling complaints, leading to quicker resolutions and improved student satisfaction. The system has facilitated better communication between students and administration, fostering a more transparent and accountable environment. While challenges were encountered during the development and deployment phases, the overall impact has been overwhelmingly positive. Moving forward, continued refinement and adaptation will be necessary to ensure the system remains effective and meets the evolving needs of our educational community.

REFERENCES:


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