
Development Of The SI LAPOR Website As An Aspirations And Complaint Platform To Support The Integrity Zone At The Faculty Of Mathematics And Natural Sciences, Sam Ratulangi University

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Abstract

This study aims to develop the SI LAPOR! website as a web-based platform for student aspirations and complaints to support the implementation of the Integrity Zone at the Faculty of Mathematics and Natural Sciences, Sam Ratulangi University. The system was developed using a qualitative system development approach with the Agile Scrum framework, including requirements analysis, system design, implementation, testing, and evaluation. The website was built using PHP, MySQL, HTML, CSS, and JavaScript and supports three user roles: reporters (students and lecturers), administrators, and designated officers. Key features include complaint submission, anonymous and sensitive reporting, report status tracking, an aspiration forum with like and comment features, activity history, and a digital bulletin board. System evaluation was conducted using Black-box Testing and User Acceptance Testing. The results show that all core features functioned as expected and were positively evaluated by users. Therefore, the SI LAPOR! website provides an effective, transparent, and well-documented platform for managing aspirations and complaints while supporting integrity-driven campus services.

Keywords: SI LAPOR, Student Complaints, Aspiration Platform, Website, Integrity Zone.

INTRODUCTION

The rapid advancement of information technology has transformed information management in higher education, including the need for platforms that facilitate effective, secure, and structured complaint and aspiration services (Ipnuwati et al., 2024). Complaints refer to reports containing information or indications of violations submitted to authorized institutions, while information systems have become essential for improving organizational performance in the globalization era (Tresnawati & Latifah, 2023; Latifa et al., 2024).

Conventional complaint mechanisms are often poorly documented, difficult to monitor, and lack transparency, which may reduce trust among students and lecturers, particularly for sensitive cases. Complaint management is also a key element in implementing the Integrity Zone to strengthen supervision, improve public services, and promote good governance within higher education institutions (Fakultas Hukum ULM, 2023).

To address these issues, this study develops the SI LAPOR! website as an integrated complaint and aspiration platform for the Faculty of Mathematics and Natural Sciences, Sam Ratulangi University. The system supports three user roles—reporters (students and lecturers), administrators, and designated officers—and provides features such as complaint submission, anonymous and sensitive reporting, report tracking, an aspiration forum, and a digital bulletin board. The study aims to develop a system that enhances transparency, accountability, and service quality while supporting the implementation of the Integrity Zone and improving communication between the academic community and the faculty.

RESEARCH METHODS

This study employed a system development research approach with a qualitative method to design, develop, and evaluate the SI LAPOR! website as a web-based complaint and aspiration platform. The research was conducted at the Information Systems Study Program, Faculty of

Mathematics and Natural Sciences, Sam Ratulangi University. Data were collected through observation of the existing complaint process, interviews with the Integrity Zone (ZI) Team and the Complaint Unit, and literature studies from books, scientific journals, previous studies, and institutional standard operating procedures.

System development followed the Agile Scrum framework, consisting of problem identification, requirements analysis, system design, implementation, testing, and evaluation. Requirements analysis identified three user roles: reporters (students and lecturers), administrators, and designated officers. Functional requirements included user authentication, complaint submission, anonymous and sensitive reporting, report tracking, aspiration management, digital bulletin board management, and role-based access control. Non-functional requirements focused on security, usability, availability, system performance, and transparency.

The Scrum framework was implemented through the roles of Product Owner, Scrum Master, and Developer, with the Product Goal of developing an integrated complaint and aspiration system that supports transparency, accountability, and service quality within the Integrity Zone. Product Backlog Items were prioritized and implemented iteratively across six sprints, covering user authentication, complaint management, report monitoring, sensitive report handling, aspiration features, digital bulletin boards, user management, and system refinement. Daily progress was monitored through self-review, while Sprint Review and Sprint Retrospective were conducted to evaluate each increment and incorporate stakeholder feedback.

System modeling was performed using Data Flow Diagrams (DFD), Entity Relationship Diagrams (ERD), and user interface prototypes designed with Figma. The website was implemented using PHP, MySQL, HTML, CSS, and JavaScript. System evaluation employed Black-box Testing to verify functional requirements and User Acceptance Testing (UAT) involving students, lecturers, administrators, and designated officers to assess whether the developed system met user requirements and was suitable for practical implementation.

RESULTS AND DISCUSSION

System Implementation

The SI LAPOR! website was successfully developed as a web-based complaint and aspiration platform for the Faculty of Mathematics and Natural Sciences, Sam Ratulangi University. The system supports transparency, accountability, and service quality through three user roles: reporters (students and lecturers), administrators, and designated officers. Reporters can submit complaints, track report status, manage aspirations, and access digital bulletin board information. Administrators manage general complaints, aspirations, and digital content, while designated officers handle sensitive reports through role-based access control.

Table 1. User Roles and Main Functions

User Role	Main Functions
Reporter	Registration, login, complaint submission, anonymous/sensitive reports, report tracking, aspirations, comments, likes, digital bulletin board
Administrator	Complaint verification, report status management, aspiration management, digital bulletin board management
Designated Officer	Sensitive report verification, investigation, follow-up, and management

Sprint Implementation

The system was developed iteratively using the Agile Scrum framework across six sprints. Each sprint delivered functional increments based on prioritized Product Backlog Items until all planned features were completed.

Table 2. Sprint Implementation Summary

Sprint	Main Features	Status
Sprint 1	User authentication and profile management	Completed
Sprint 2	Complaint submission and anonymous reporting	Completed
Sprint 3	Report tracking and complaint management	Completed
Sprint 4	Sensitive report management	Completed
Sprint 5	Aspiration platform and digital bulletin board	Completed
Sprint 6	User management, system integration, and refinement	Completed

The completed sprints produced an integrated system featuring secure authentication, complaint management, report tracking, aspiration services, digital information dissemination, and role-based access control. The integration of these modules resulted in a functional website that improves complaint management while supporting transparency, accountability, and the implementation of the Integrity Zone.

System Interface Implementation

The system interface was implemented based on the designed user interface to ensure usability, clarity, and compatibility with the requirements of each user role.

Login Page

The login page allows students and lecturers to access the SI LAPOR! system using registered accounts.

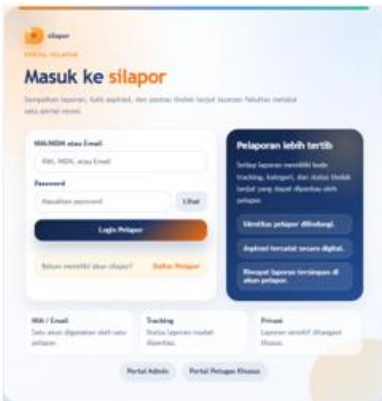


Figure 1. Reporter Login Page

Registration Page

The registration page enables new users to create an account using institutional identity data.

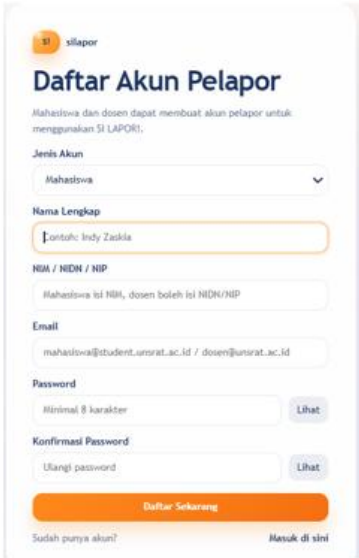


Figure 2. Registration Page

Profile Page

The profile page allows users to view and update their account information.

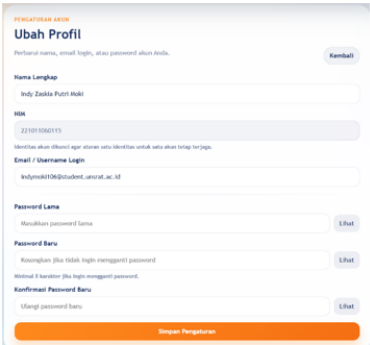


Figure 3. User Profile Page

Reporter Dashboard

The dashboard provides quick access to complaint submission, aspirations, report tracking, activity history, and the digital bulletin board.

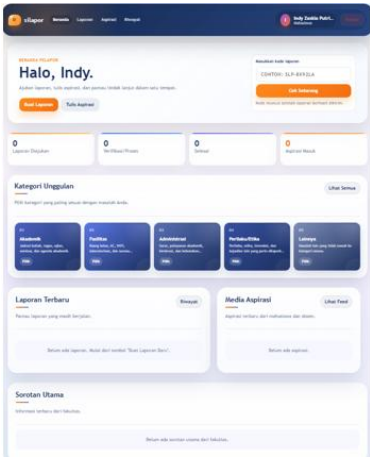


Figure 4. Reporter Dashboard

Complaint Form

The complaint form enables users to select complaint categories, enter report details, upload supporting documents, and choose anonymous or sensitive reporting options.

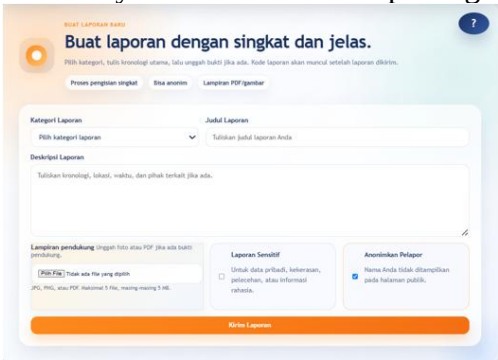


Figure 5. Complaint Submission Form

Aspiration Platform

The aspiration platform provides an online space for submitting suggestions, criticism, and aspirations.

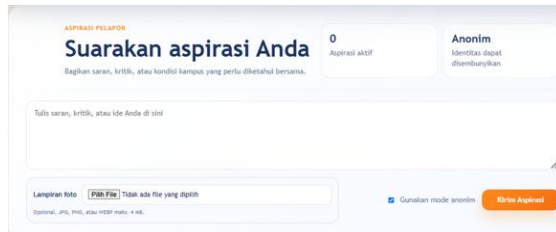


Figure 6. Aspiration Platform

Activity History

The activity history page displays users' complaint and aspiration records.

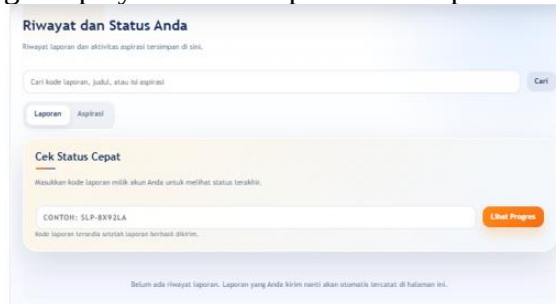


Figure 7. Activity History

Digital Bulletin Board

The digital bulletin board presents campus announcements, news, and other information managed by administrators.



Figure 8. Digital Bulletin Board

Administrator Login

The administrator login page provides secure access for managing complaints, aspirations, and digital bulletin board content.

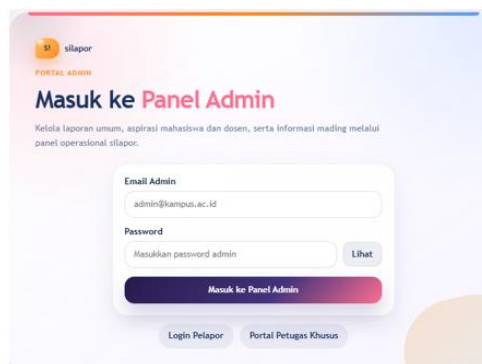


Figure 9. Administrator Login

Administrator Dashboard

The administrator dashboard supports complaint verification, report status updates, aspiration management, digital bulletin board management, and report statistics.

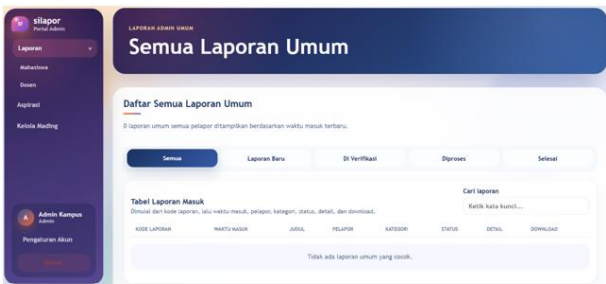


Figure 10. Administrator Dashboard

Designated Officer Login

The designated officer login page provides secure access to the sensitive report management module.

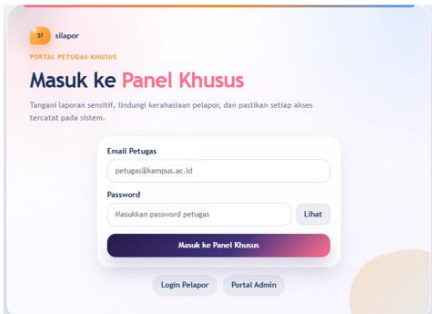


Figure 11. Designated Officer Login

Designated Officer Dashboard

The designated officer dashboard enables sensitive report handling, user management, aspiration and digital bulletin board management, and report monitoring.



Figure 12. Designated Officer Dashboard

System Testing Results

System testing was conducted to verify that the SI LAPOR! website operates according to user requirements and research objectives. The evaluation consisted of Black Box Testing and User Acceptance Testing (UAT).

Black Box Testing

Black Box Testing was performed to evaluate each system function based on the designed functional requirements.

Table 3. Black Box Testing Results

No.	Feature Tested	Test Scenario	Expected Result	Result
1	Reporter Registration	Register with valid data	Account successfully created	Successful
2	NIM Validation	Register using an existing NIM	Registration rejected	Successful
3	Student/Lecturer Login	Login with valid credentials	User redirected to dashboard	Successful
4	Administrator Login	Login with valid account	Administrator dashboard displayed	Successful
5	Designated Officer Login	Login with valid account	Officer dashboard displayed	Successful
6	Logout	Click logout	Session terminated and login page displayed	Successful
7	Profile Management	Update profile information	Profile updated successfully	Successful

8	Complaint Submission	Submit complaint form	Complaint saved successfully	Successful
9	Complaint Category	Select complaint category	Category recorded correctly	Successful
10	Supporting File Upload	Upload attachment	File uploaded successfully	Successful
11	Anonymous Report	Enable anonymous option	Reporter identity hidden	Successful
12	Sensitive Report	Enable sensitive option	Accessible only to designated officer	Successful
13	Report Tracking	Enter tracking code	Report status displayed	Successful
14	Aspiration Submission	Submit aspiration	Aspiration published	Successful
15	Like Feature	Click like	Like recorded successfully	Successful
16	Comment Feature	Submit comment	Comment saved successfully	Successful
17	Report History	Open report history	Report history displayed	Successful
18	General Report Verification	Verify complaint	Verification updated	Successful
19	Sensitive Report Verification	Verify sensitive report	Verification updated	Successful
20	Complaint Category Management	Add, edit, or delete category	Category updated	Successful
21	Report Status Management	Change report status	Status updated	Successful
22	Report Response	Submit response	Response saved	Successful
23	Digital Bulletin Board Management	Manage bulletin board	Information displayed successfully	Successful
24	User Management	Manage user data	User data updated	Successful

The Black Box Testing results indicate that all system functions operated successfully according to the specified functional requirements.

User Acceptance Testing

User Acceptance Testing (UAT) was conducted with 25 respondents consisting of students and lecturers. Each respondent evaluated the system using a five-point Likert scale after completing the provided usage scenarios.

Table 4. User Acceptance Testing Results

No.	Evaluation Aspect	Result
1	The SI LAPOR! system is easy to use	Good
2	The user interface is easy to understand	Good
3	Registration and login functions operate properly	Good
4	The complaint submission process is easy to understand	Good
5	Anonymous and sensitive reporting features function properly	Good
6	The aspiration platform facilitates suggestions and feedback	Good
7	Like and comment features support user interaction	Good
8	Information on the digital bulletin board is easily accessible	Good
9	The digital bulletin board supports information transparency	Good
10	Overall, SI LAPOR! is suitable as a complaint and aspiration platform	Good

The UAT calculation was based on 25 respondents, 9 evaluation items, a total score of 968, and a maximum score of 1,125.

$$\text{Persentase UAT} = \frac{968}{1125} \times 100\%$$

$$= 0,8604 \times 100\%$$

$$= 86,04\%$$

Figure 13. User Acceptance Testing Results

Overall, the UAT results demonstrate that the SI LAPOR! website meets user needs by facilitating online complaint and aspiration submission while enabling administrators and designated officers to manage reports more effectively and systematically.

CONCLUSION

This study successfully designed, developed, and implemented the SI LAPOR! website as a web-based complaint and aspiration platform for the Faculty of Mathematics and Natural Sciences, Sam Ratulangi University, using the Agile Scrum framework. The system provides core functionalities, including general complaints, anonymous and sensitive reporting, report tracking, an aspiration platform, a digital bulletin board, and role-based management for reporters, administrators, and designated officers. Developed using Native PHP and MySQL, the system adopts a modular architecture that supports authentication, security, database management, and user interface components. The Black Box Testing results confirmed that all functional requirements were successfully implemented, while the User Acceptance Testing results indicated that the system was well accepted by users and considered easy to use and suitable for practical implementation. Overall, the SI LAPOR! website achieved the research objective by providing an effective, transparent, and accountable complaint and aspiration system that supports the implementation of the Integrity Zone within the Faculty of Mathematics and Natural Sciences, Sam Ratulangi University.

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