



WEB APPLICATION DEVELOPMENT FOR HANDLING INTERNET SERVICE DISRUPTION COMPLAINTS AT PT. INTEGRA KREASITAMA SOLUSINDO

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ABSTRACT

The development of information technology encourages service providers to improve the quality of customer service, especially in handling complaints about disruptions. PT. Integra Kreasitama Solusindo faces challenges in managing service complaints manually, which impacts technician responsiveness and customer satisfaction. This study aims to design and build a web-based complaint information system that allows customers to report service disruptions online. The method used is the SDLC waterfall model approach. The system was designed using the CodeIgniter framework with a MySQL database and tested using functional testing methods. The test results show that the system runs according to requirements, is able to speed up complaint handling, and facilitate monitoring by technicians and admins. This system is expected to improve efficiency, transparency, and customer satisfaction at PT. Integra Kreasitama Solusindo.

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1. INTRODUCTION

The rapid advancement of information technology has influenced nearly all aspects of life, including business operations and customer service. In this digital era, service providers are expected to offer customers both accessible and high-quality services. However, in practice, customers often encounter various issues or disruptions when using these services. Customer complaints regarding service interruptions have become a common occurrence across multiple sectors, including the information technology industry.

Efficient and responsive complaint management is a crucial factor in maintaining customer satisfaction and strengthening a company's reputation. Therefore, an information system is needed that can facilitate customers in submitting complaints, monitoring their status, and ensuring prompt responses from the technical support team.

PT. Integra Kreasitama Solusindo, an information technology company, faces similar challenges. In an effort to improve service quality, the company requires a structured, fast, and easily accessible complaint information system to handle customer service disruption reports.

This research was also inspired by the work of Herfandi et al. (2021) in a journal titled Design and Development of a Web-Based Facilities and Infrastructure Service Complaint Information System at the University of Technology Sumbawa. The study developed a responsive web-based complaint system using Single Page Application (SPA) technology and email notifications, allowing users to report issues online with high performance and broad accessibility. This concept served as a reference in developing the service disruption complaint system for PT. Integra Kreasitama Solusindo.

Considering this background, the aim of this study is to design and develop a web-based complaint information system that can enhance the effectiveness of handling service disruptions at PT. Integra Kreasitama Solusindo. The system is expected not only to simplify the complaint reporting and monitoring process for customers, but also to improve operational efficiency and overall service quality.

2. RESEARCH METHOD

This research uses the Waterfall model System Development Life Cycle (SDLC) approach which consists of five stages, namely needs analysis, system design, implementation, testing, and maintenance.

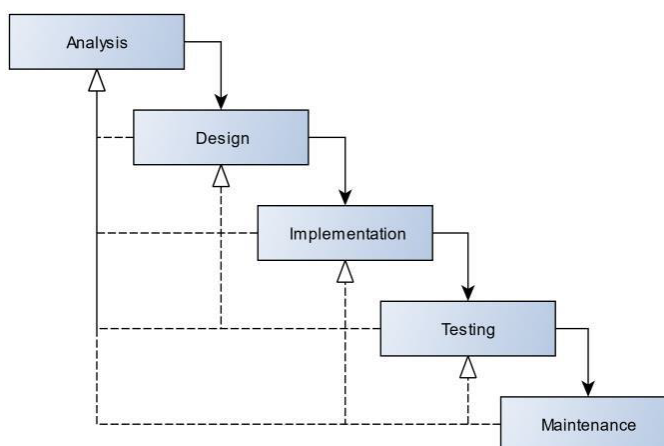


Figure 1. Development Stages

Data collection was conducted through literature review, direct observation of the service complaint process at PT. Integra Kreasitama Solusindo, and interviews with relevant parties such as administrators and technicians. The information system developed is web-based using the CodeIgniter framework and MySQL database, with a focus on easy customer access in submitting complaints and monitoring their status. The system design is depicted in several UML diagrams such as use case, activity, sequence, and class diagrams, which illustrate the flow and functional structure of the system.

B

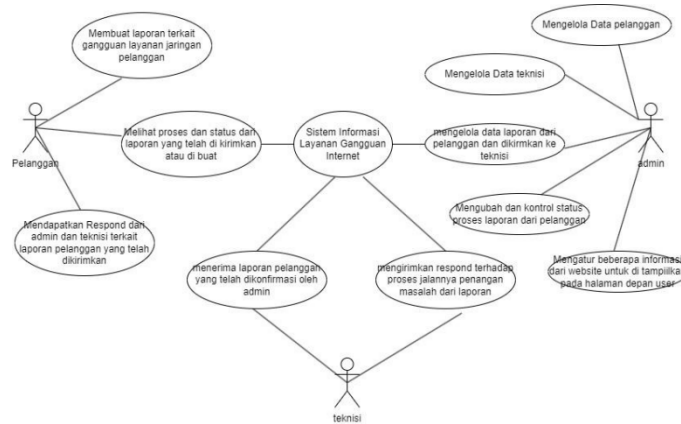


Figure 2. Use Case Diagram

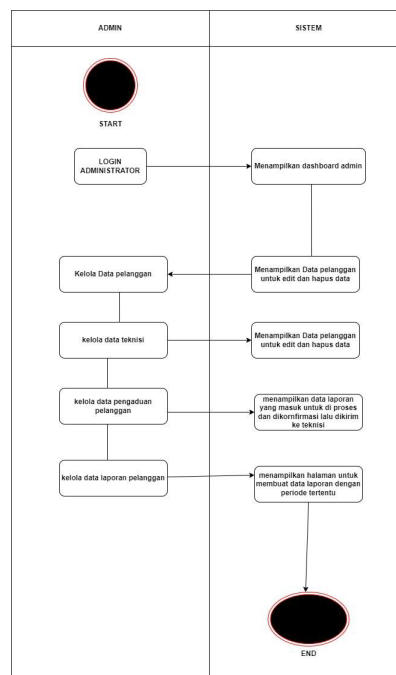


Figure 3. Admin Activity Diagram

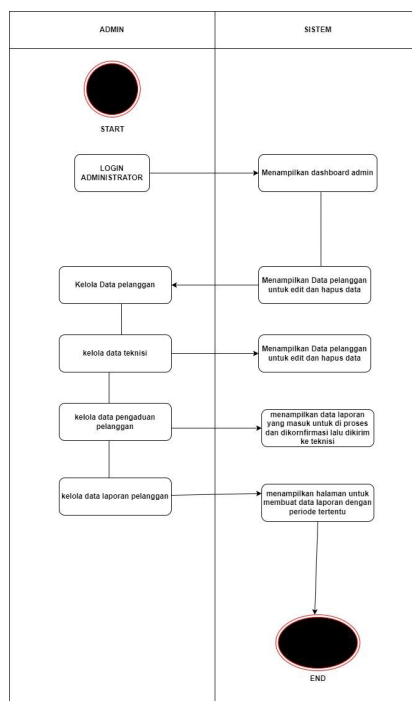


Figure 4. Customer Activity Diagram

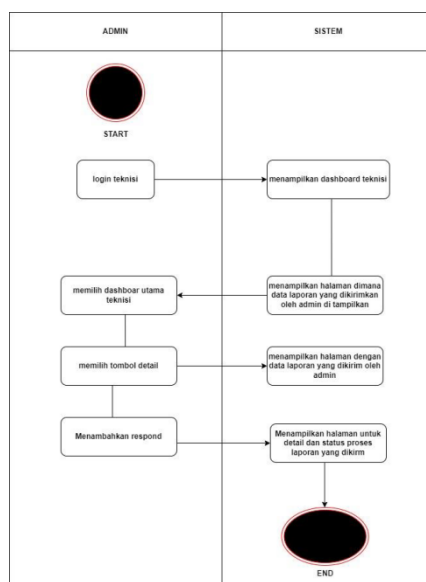


Figure 5. Technician Activity Diagram

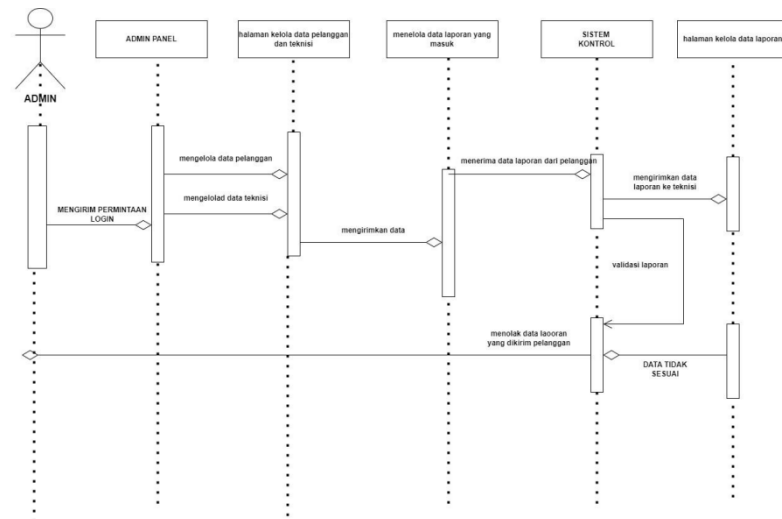


Figure 6. Admin Sequence Diagram

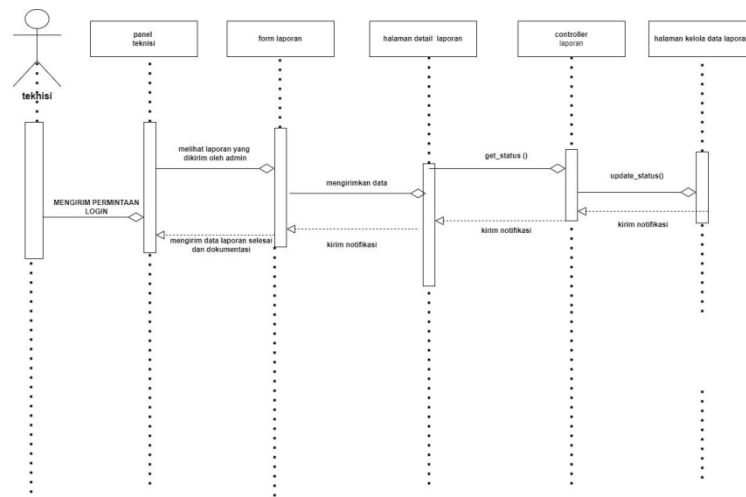


Figure 7. Technician Sequence Diagram

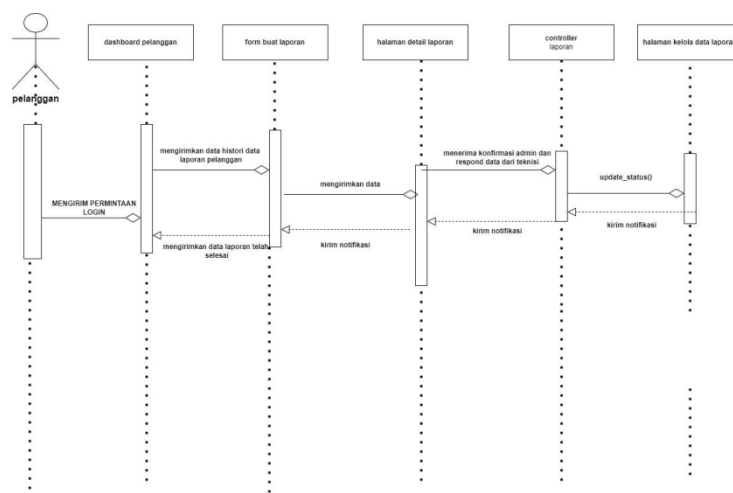


Figure 8. Customer Sequence Diagram

Additionally, the interface is designed responsively for access across multiple devices, while the database is relational to ensure consistency and efficiency in complaint data management. Functional testing is conducted to ensure that all system features operate according to user requirements.

PT. INTEGRA KREASITAMA SOLUSINDO

HOME LOGIN REGISTRASI

Login User

USERNAME

PASSWORD

LOGIN

Figure 9. Login Page Design

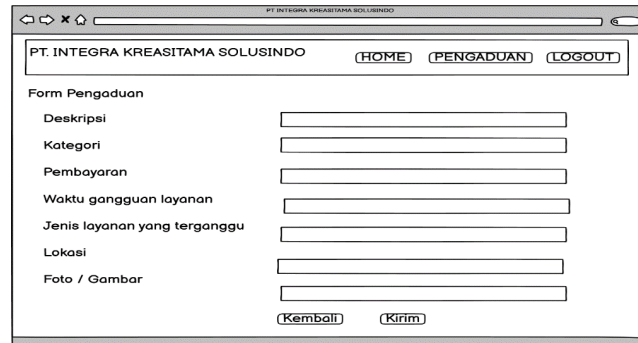


Figure 10. Complaint Form Page Design

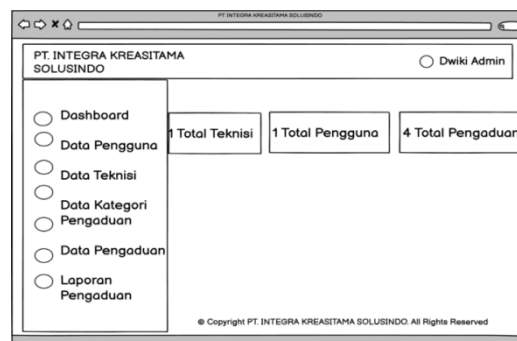


Figure 11. Admin Dashboard Page Design

3. RESULTS AND DISCUSSIONS

Testing of the web-based service complaint information system at PT. Integra Kreasitama Solusindo was conducted to ensure that each feature operates according to user requirements. The results indicate that the login page, registration, complaint form, and dashboards for customers, administrators, and technicians function properly. The system is capable of accurately verifying data, receiving complaints, and displaying real-time complaint status. Administrators can efficiently manage user and technician data, while technicians are able to respond to reports, provide resolution descriptions, and upload work evidence. All system functionalities operate stably and responsively across various devices, with proper data validation and notification handling. The developed system is considered to have fulfilled both functional and non-functional requirements, and has improved the efficiency of customer complaint handling.

PT. INTEGRA KREASITAMA SOLUSINDO

Home Login Registrasi

Login User

Login

Username

Password

Login

Figure 12. Customer Login Page Interface

PT. INTEGRA KREASITAMA SOLUSINDO

Home Pengaduan Logout

Form Pengaduan

Home / Form Pengaduan

Deskripsi

Kategori

Pembayaran

Waktu gangguan layanan

dd/mm/yyyy --

Jenis layanan yang terganggu

Lokasi

Foto / Gambar

NO IMAGE AVAILABLE

Choose File No file chosen

Kembali Kirim

Figure 13. Complaint Form Page Interface

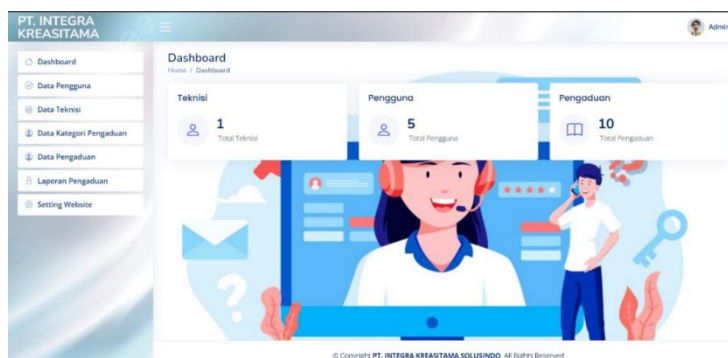


Figure 14. Admin Dashboard Page Interface

Figure 15. Complaint Report Page Interface

4. CONCLUSION

This research resulted in a web-based internet service complaint information system specifically designed for PT Integra Kreasitama Solusindo. This system is able to replace the previously inefficient manual reporting process, by providing convenience for customers to submit complaints online and enabling administrators and technicians to handle reports in a structured and responsive manner. Through a simple user interface and integration with the company's internal processes, this system can improve operational efficiency and expedite complaint handling. The system implementation has been proven to increase customer satisfaction and make a positive contribution to the company's image and service quality.

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