

Design and Development of a Web-Based Whistleblowing System at the Faculty of Engineering, Udayana University

I Kadek Arta Diva^{a1}, Gusti Made Arya Sasmita^{a2}, Putu Veda Andreyana^{a3}

^aDepartment of Information Technology, Faculty of Engineering, Udayana University, Jimbaran, Badung, Bali, Indonesia

¹artadiva@student.unud.ac.id, ²aryasasmita@unud.ac.id, ³putuveda@unud.ac.id

Abstrak

Proses pelaporan dugaan pelanggaran di Fakultas Teknik Universitas Udayana belum dikelola secara optimal sehingga menyebabkan pengelolaan dan pemantauan laporan menjadi kurang efektif. Penelitian ini bertujuan untuk merancang dan membangun Whistleblowing System berbasis web dengan menggunakan pendekatan confidential whistleblowing, di mana pelapor diwajibkan memberikan identitasnya dengan tetap menjamin kerahasiaannya. Sistem dikembangkan menggunakan metode Waterfall. Sistem ini menyediakan fitur pengajuan laporan, unggah bukti, formulir dinamis, pelacakan status, verifikasi laporan, komunikasi, serta riwayat penanganan laporan. Sistem dievaluasi menggunakan Black Box Testing dan User Acceptance Testing (UAT). Hasil pengujian menunjukkan bahwa seluruh fungsi sistem telah berjalan sesuai dengan kebutuhan yang ditentukan. Selain itu, hasil UAT memperoleh tingkat penerimaan pengguna sebesar 86,17% dari pelapor dan 86,13% dari administrator departemen, yang keduanya termasuk dalam kategori Sangat Baik.

Kata kunci: Sistem Pelaporan Pelanggaran, Waterfall, Pelaporan Pelanggaran Rahasia, Black Box Testing, User Acceptance Testing.

Abstract

The reporting process for suspected violations at the Faculty of Engineering, Udayana University, has not been managed optimally, resulting in ineffective report management and monitoring. This study aims to design and develop a web-based Whistleblowing System using a confidential whistleblowing approach, in which reporters are required to provide their identities while ensuring their confidentiality. The system was developed using the Waterfall method. It provides features for report submission, evidence upload, dynamic forms, status tracking, report verification, communication, and report handling history. The system was evaluated using Black Box Testing and User Acceptance Testing (UAT). The results showed that all system functions operated according to the specified requirements. Furthermore, the UAT results achieved user acceptance scores of 86.17% from reporters and 86.13% from department administrators, both categorized as Very Good.

Keyword: Whistleblowing System, Waterfall, Confidential Whistleblowing, Black Box Testing, User Acceptance Testing.

1. Introduction

The rapid development of information technology has encouraged organizations, including higher education institutions, to adopt information systems that improve operational efficiency, transparency, and accountability [1]. One important implementation is the Whistleblowing System (WBS), which provides a secure and structured mechanism for reporting suspected violations while supporting proper documentation and follow-up processes [2]. The implementation of WBS also promotes organizational governance by facilitating transparent and accountable management of reported cases.

The Faculty of Engineering, Udayana University conducts various academic and administrative activities involving students, lecturers, educational staff, and external stakeholders. These activities may lead to violations such as academic misconduct, abuse of authority, discrimination, bullying, sexual harassment, and administrative fraud. However, the current reporting process has not been integrated into a centralized information system, making report submission, monitoring, and documentation less effective. As a result, the existing reporting mechanism has not fully supported transparency, accountability, and efficient handling of reported cases [3].

Previous studies have demonstrated that the implementation of a Whistleblowing System improves transparency, accountability, and organizational governance through secure reporting mechanisms [4]. Web-based Whistleblowing Systems developed using the Waterfall method have also been shown to simplify report submission and improve report management efficiency [5]. Furthermore, successful implementation requires integrated reporting procedures, continuous user awareness, and adequate protection of whistleblowers to encourage user participation [6]. Similar findings have been reported in web-based complaint management systems, where information technology enhances report submission, status tracking, and report handling processes [7], [8]. In addition, the effectiveness of a Whistleblowing System depends on the availability of supporting regulations, information technology infrastructure, and mechanisms that ensure the confidentiality of reporters throughout the reporting process [9].

Although previous studies have demonstrated the advantages of web-based Whistleblowing Systems, most existing implementations focus on government institutions and corporate organizations. Research addressing the implementation of Whistleblowing Systems in higher education institutions, particularly at the faculty level, remains limited. In addition, previous systems generally provide standard reporting features but rarely support configurable reporting forms, structured report handling workflows, and continuous communication between reporters and report administrators within an integrated platform.

Therefore, this study aims to design and develop a Web-Based Whistleblowing System for the Faculty of Engineering, Udayana University using the Waterfall software development method and a confidential whistleblowing approach, in which reporters are required to provide their identities while maintaining confidentiality [3]. The proposed system provides report submission, supporting evidence upload, dynamic reporting forms based on violation categories, report status tracking, report verification, communication between reporters and department administrators, and report history management. The developed system is expected to improve the effectiveness, transparency, and accountability of handling suspected violations within the Faculty of Engineering, Udayana University.

2. Research Method

This study adopted the Waterfall software development model to develop the proposed Web-Based Whistleblowing System for the Faculty of Engineering, Udayana University [10]. The research consisted of six sequential stages: data collection, requirement analysis, system design, implementation, testing, and maintenance. The overall research workflow is illustrated in Figure 1.

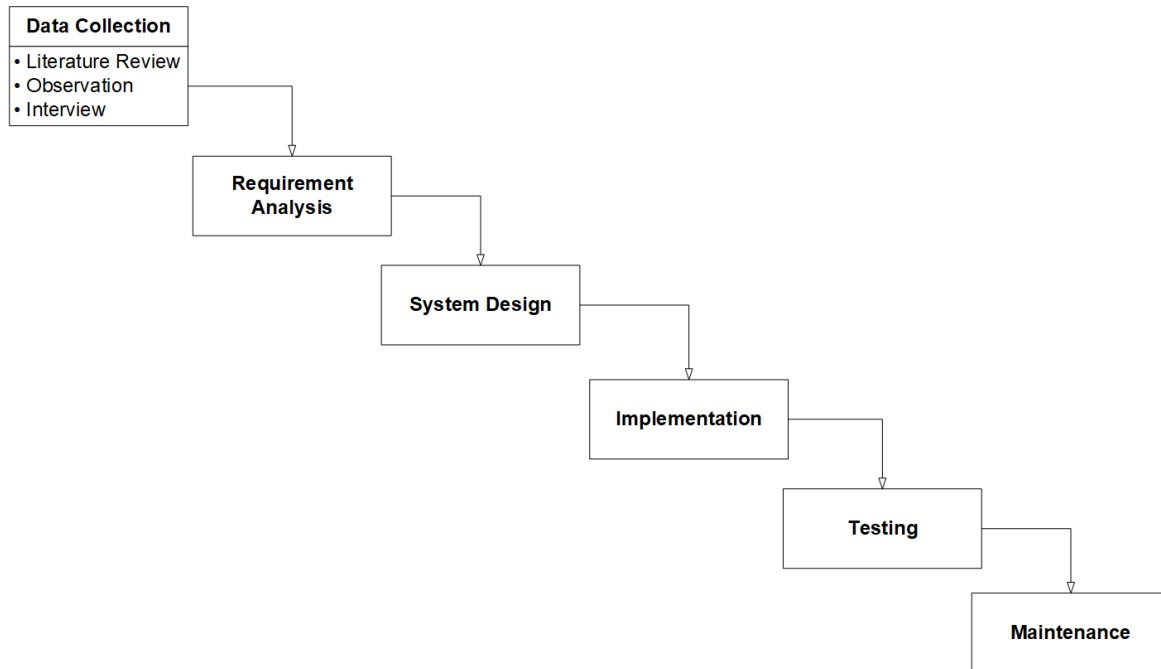


Figure 1. Research flow

The data collection stage was conducted through literature review, observation, and interviews to identify user requirements and existing problems [11]. Based on the collected data, the requirement analysis stage identified the functional and non-functional requirements of the proposed system. The system design stage produced the system architecture, database structure, and reporting workflow. The implementation stage developed the application using Laravel with PHP and MySQL. Subsequently, the developed system was evaluated using Black Box Testing to verify system functionality and User Acceptance Testing (UAT) to assess user acceptance [12], [13]. Finally, the maintenance stage focused on correcting identified errors and improving system performance.

3. Literature Study

The theoretical foundations used in this study were obtained through a literature review of scientific journals and other relevant references. These theories provide the basis for the design, development, and evaluation of the proposed Web-Based Whistleblowing System while supporting the discussion of the research findings.

3.1 Whistleblowing System

A Whistleblowing System (WBS) is a reporting mechanism that enables individuals to report suspected violations, unethical conduct, or illegal activities within an organization through secure and

structured reporting channels. The implementation of a WBS aims to improve transparency, accountability, and organizational governance by facilitating the early detection, reporting, and handling of misconduct while protecting the interests of both the organization and the whistleblower [2], [4].

A whistleblowing system generally supports several reporting mechanisms, including anonymous whistleblowing, confidential whistleblowing, and open whistleblowing. In anonymous whistleblowing, reporters do not disclose their identities, whereas open whistleblowing requires reporters to reveal their identities throughout the reporting process. In contrast, confidential whistleblowing requires reporters to provide their identities only to authorized personnel, who are responsible for maintaining confidentiality while facilitating report verification, communication, and investigation [3], [14].

This study adopts the confidential whistleblowing approach because it provides a balance between protecting whistleblowers and enabling effective report handling. By maintaining the confidentiality of reporters' identities, authorized administrators can perform clarification, verification, and follow-up actions more effectively while minimizing the risk of retaliation. Furthermore, implementing a web-based whistleblowing system enhances reporting accessibility, improves report management, and supports a more transparent and accountable complaint-handling process [3], [15].

3.2 Waterfall Model

The Waterfall model is a sequential software development methodology in which each development phase is completed before proceeding to the next phase. The model generally consists of requirement analysis, system design, implementation, testing, deployment, and maintenance. This structured approach provides clear documentation and well-defined deliverables at each stage, making the development process easier to manage and monitor [10].

The Waterfall model is widely applied in information system development projects with stable and well-defined requirements because it emphasizes systematic planning, comprehensive documentation, and sequential execution. The clear separation between development phases facilitates project control and reduces the possibility of significant requirement changes during implementation [10], [16].

In this study, the Waterfall model was selected because the functional and non-functional requirements of the proposed Web-Based Whistleblowing System were identified before the development process began. Therefore, the sequential development approach provided by the Waterfall model supports the systematic design, implementation, testing, and maintenance of the proposed system [16].

3.3 Black Box Testing

Black Box Testing is a software testing method that evaluates system functionality by examining whether the outputs produced match the expected results based on predefined functional requirements. This method focuses on validating system behavior from the user's perspective without considering the internal program code or implementation details [17], [12].

In this study, Black Box Testing was conducted to verify that all features of the proposed Web-Based Whistleblowing System functioned correctly according to the specified requirements. The testing covered major system functionalities, including user authentication, report submission, report

management, communication, and report tracking before the system was evaluated using User Acceptance Testing (UAT) [12].

3.4 User Acceptance Testing

User Acceptance Testing (UAT) is a testing method used to evaluate whether a developed system meets user requirements and is acceptable for operational use. This testing involves end users in assessing system functionality, usability, and overall satisfaction based on predefined evaluation criteria [18], [13].

In this study, User Acceptance Testing was conducted to measure user acceptance of the proposed Web-Based Whistleblowing System. The evaluation focused on the usability, functionality, and user experience of the system, and the results were used to determine whether the system met user expectations and was suitable for implementation [18].

4. Results And Discussion

This section presents the results obtained from the design, implementation, and evaluation of the proposed Web-Based Whistleblowing System for the Faculty of Engineering, Udayana University. The evaluation was conducted using Black Box Testing to verify system functionality and User Acceptance Testing (UAT) to assess user acceptance.

4.1 System Design

The system design of the proposed Web-Based Whistleblowing System was developed based on the identified requirements. It illustrates the overall workflow of the system, user interactions, and the scope of data exchange between external entities and the system. The system design is presented through the System Overview and Context Diagram.

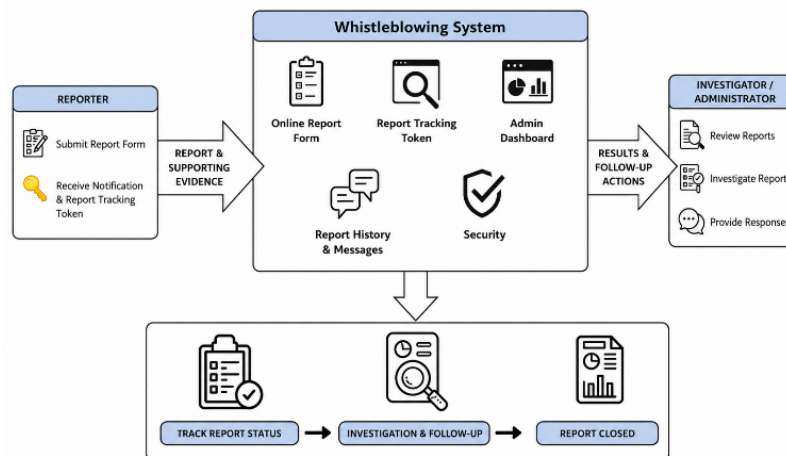


Figure 2. System Overview

Figure 2 illustrates the overall workflow of the proposed Web-Based Whistleblowing System. The system involves two main actors: the Reporter and the Investigator/Administrator. The Reporter submits a report along with supporting evidence through the online reporting form, after which the system generates a report tracking token for monitoring the report status. The Investigator/Administrator reviews the submitted reports, conducts investigations, provides

responses, and manages follow-up actions through the administrator dashboard. Throughout the reporting process, the system maintains report history, facilitates communication between both parties, and protects the confidentiality of the reporter's identity until the report is resolved and officially closed.

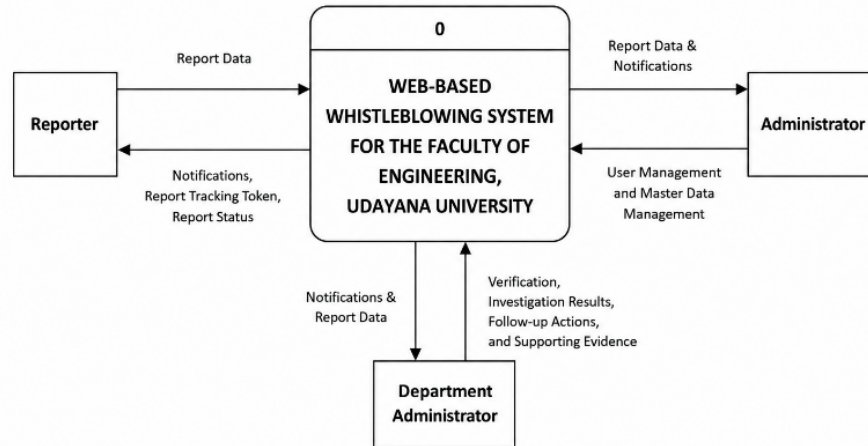


Figure 3. Context Diagram

Figure 3 illustrates the Context Diagram of the proposed Web-Based Whistleblowing System. The system interacts with three external entities: the Reporter, Administrator, and Department Administrator. The Reporter submits reports and receives notifications, a report tracking token, and report status updates. The Administrator manages users, master data, and overall system administration, while the Department Administrator is responsible for report verification, investigation, follow-up actions, and handling supporting evidence. These interactions enable an integrated and secure whistleblowing process from report submission to case resolution.

4.2 System Implementation

The proposed Web-Based Whistleblowing System was implemented based on the system design presented in the previous section. The application was developed using the Laravel framework with PHP as the programming language and MySQL as the database management system. The implemented system provides features for report submission, report tracking, report management, communication between reporters and administrators, user management, and master data management. The main interfaces of the system are presented in Figures 4–6

Figure 4. Report Submission Form

Figure 4 presents the Report Submission Form, which allows reporters to submit reports by providing the required information, including the report title, category, study program, incident location, report description, and supporting evidence. After a report is successfully submitted, the system automatically generates a report tracking token that enables reporters to monitor the progress and status of their reports.

Figure 5. Report Status Tracking

Figure 5 presents the Report Status Tracking page, which enables reporters to monitor the progress of their reports using the report tracking token generated during report submission. The page displays the current report status, report history, and communication between reporters and administrators, providing transparent updates throughout the report handling process.

The dashboard includes search filters for Kategori, Status, Tanggal Mulai, and Tanggal Akhir. Below the filters is a table titled 'Manajemen Laporan' with columns: Nomor, Judul, Kategori, Status, Departemen, Tanggal, and Aksi.

Nomor	Judul	Kategori	Status	Departemen	Tanggal	Aksi
WBS-20260625-QHNMN	pelecehan seksual	Kekerasan	Selesai	Kemahasiswaan	25 Jun 2026	Lihat
WBS-20260624-D2VAV	Perlakuan Berbeda Berdasarkan Asal Daerah	Kekerasan	Menunggu Verifikasi	Kemahasiswaan	24 Jun 2026	Lihat
WBS-20260624-FIUYP	Dugaan Pelecehan Seksual di Lingkungan Kampus	Kekerasan	Menunggu Verifikasi	Kemahasiswaan	24 Jun 2026	Lihat

Figure 6. Report Management Dashboard

Figure 6 presents the Report Management Dashboard, which serves as the main interface for administrators after logging into the system. The dashboard provides an overview of submitted reports, report statistics based on their status, and quick access to report management functions. These features enable administrators to efficiently monitor reports and manage the overall report handling process.

The detail page for report 'Perlakuan Berbeda Berdasarkan Asal Daerah' (WBS-20260624-D2VAV) shows the following information:

- Detail Laporan:** WBS-20260624-D2VAV
- Judul:** Perlakuan Berbeda Berdasarkan Asal Daerah
- Kategori:** Kekerasan | **Prodi:** Teknologi Informasi | **Lokasi Detail:** TI 101 | **Tanggal:** 24 Jun 2026 20:21 | **Prioritas:** Medium
- Deskripsi:** Mahasiswa merasa mendapatkan perlakuan yang berbeda dibandingkan mahasiswa lain karena berasal dari daerah tertentu.
- Informasi Tambahan Kategori:**
 - Jenis Kekerasan Yang Dialamati: Diskriminasi
 - Jenis Kelamin: Laki-laki
 - Tanggal Kejadian: 2026-06-16
 - Lokasi Terjadi Kekerasan: Di Dalam Kampus
 - Dalam Pelaksanaan Tridharma Perguruan Tinggi: Pembelajaran (perkuliahan, bimbingan skripsi, dll)
 - Kebutuhan Korban Terkait Pendampingan dan Pemulihan: Konseling Akademik
- Info Pelapor:**
 - Nama: jane
 - NIM: 0831098
 - Email: kadekdiva.ke2@gmail.com
- Riwayat Singkat:**
 - 24 Jun 2026 20:21: Diteruskan ke Kemahasiswaan (Tahap: Review)
 - Auto-disposisi oleh sistem berdasarkan kategori Kekerasan
- Aksi:**
 - Status Saat Ini: Menunggu Verifikasi
 - Tahap Saat Ini: 1
 - Departemen: Kemahasiswaan
 - Koreksi Kategori
 - Bukti (Optional): Choose File (No file chosen)
 - Verifikasi Laporan
 - Balas Laporan
 - Teruskan Laporan

Figure 7. Report Detail

Figure 7 presents the Report Detail page, which displays comprehensive information about a selected report, including reporter information, report details, supporting evidence, report history, and communication between the reporter and the administrator. The page also enables administrators to verify reports, provide responses, assign follow-up actions, and update the report status throughout the investigation process.

4.3 Black Box Testing Results

Black Box Testing was conducted to verify that the functional requirements of the proposed Web-Based Whistleblowing System operated as expected. The testing focused on the main system functionalities, including user authentication, report submission, report tracking, report management, and administrative functions. A summary of the testing results is presented in Table 1.

Table 1. Summary of Black Box Testing Results

No	Function Tested	Result
1	Login Admin	Pass
2	Report Submission	Pass
3	Report Tracking	Pass
4	Report Management	Pass
5	Administration	Pass

As presented in Table 1, all tested functionalities produced the expected results without any functional errors. The successful execution of user authentication, report submission, report tracking, report management, and administrative functions demonstrates that the proposed system satisfies the specified functional requirements. Therefore, the developed Web-Based Whistleblowing System is considered functionally reliable and suitable for implementation.

4.4 User Acceptance Testing Results

User Acceptance Testing (UAT) was conducted to evaluate user acceptance and the usability of the proposed Web-Based Whistleblowing System. The evaluation involved 15 respondents, consisting of 10 reporters representing the academic community of the Faculty of Engineering, Udayana University, and 5 department administrators responsible for managing whistleblowing reports. The assessment employed a five-point Likert scale questionnaire, where 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), and 5 = Strongly Agree (SA). The reporter questionnaire consisted of 12 statements, while the department administrator questionnaire consisted of 15 statements.

The acceptance score was calculated using the Likert scale method by comparing the total score obtained with the maximum possible score, as expressed in Equation (1).

$$\text{Acceptance Score} = \frac{\text{Total Score Obtained}}{\text{Maximum Score}} \times 100\% \quad (1)$$

where the Total Score Obtained represents the sum of all respondent scores, while the Maximum Score is calculated by multiplying the number of respondents, the number of questionnaire items, and the highest Likert scale value 5.

4.4.1 Reporter Group

The distribution of responses from the Reporter group is summarized in Table 2.

Table 2. Distribution of Reporter Responses

Likert Scale	SD (1)	D (2)	N (3)	A (4)	SA (5)
Number of Responses	0	4	4	63	49

The Reporter group obtained a total score of 517 out of the maximum possible score of 600, resulting in an acceptance score of 86.17%.

4.4.2 Department Administrator Group

The distribution of responses from the Department Administrator group is summarized in Table 3.

Table 3. Distribution of Department Administrator Responses

Likert Scale	SD (1)	D (2)	N (3)	A (4)	SA (5)
Number of Responses	0	0	0	52	23

The Department Administrator group obtained a total score of 323 out of the maximum possible score of 375, resulting in an acceptance score of 86.13%.

The acceptance scores were interpreted using the criteria presented in Table 4.

Table 4. Acceptance Score Interpretation

Acceptance Score	Category
81–100%	Very Good
61–80%	Good
41–60%	Fair
21–40%	Poor
0–20%	Very Poor

The overall UAT results are summarized in Table 5.

Table 5. Summary of User Acceptance Testing Results

Respondent	Respondents	Questionnaire Items	Total Score	Maximum Score	Acceptance Score	Category
Reporter	10	12	517	600	86.17%	Very Good
Department Administrator	5	15	323	375	86.13%	Very Good

As summarized in Table 5, the Reporter group achieved an acceptance score of 86.17%, while the Department Administrator group achieved 86.13%. Based on the interpretation criteria presented in Table 4, both scores fall within the Very Good category. These findings indicate that the proposed Web-Based Whistleblowing System is well accepted by both reporters and department administrators. The results also demonstrate that the system effectively supports report submission, report management, communication, and report monitoring while providing a satisfactory user experience.

5. Conclusion

This study successfully designed and developed a Web-Based Whistleblowing System for the Faculty of Engineering, Udayana University using the Waterfall method. The developed system provides features for report submission, report management, report tracking, and communication between reporters and administrators through an integrated web-based platform. The evaluation results demonstrated that all system functionalities operated correctly during Black Box Testing. Furthermore, the User Acceptance Testing (UAT) results showed acceptance scores of 86.17% from reporters and 86.13% from department administrators, both categorized as Very Good. These findings demonstrate that the proposed Web-Based Whistleblowing System effectively satisfies the identified user requirements and is suitable for implementation within the Faculty of Engineering, Udayana University. Future research may focus on enhancing system security, integrating notification services, and developing mobile-based access to improve usability and accessibility.

Reference

- [1] M. Fahmi, A. Manajemen, T. Keimigrasian, and P. Imigrasi, "Analisis Implementasi Sistem Informasi: Studi Literatur Analysis Of Information System Implementation: Literature Review," 2024.
- [2] N. Vebrianti, T. Setiawan, and A. Revisi, "Whistle Blowing System Based on Indonesia Case Study: Qualitatives Research," *Saudi Journal of Business and Management Studies*, vol. 9, no. 07, pp. 113–122, Jul. 2024, doi: 10.36348/sjbms.2024.v09i07.001.
- [3] A. Hoekstra and J. Talsma, "Introducing a New Key Player in Internal Whistleblowing Procedures: Examining the Position of Confidential Advisers," *Public Integrity*, vol. 23, no. 1, pp. 52–67, 2021, doi: 10.1080/10999922.2020.1775462.
- [4] A. Dwi Maharani and M. Djasuli, "Analisis Penerapan Whistleblowing System Guna Menciptakan GCG Perusahaan BUMN Bidang Jasa Asuransi Di Indonesia," *Media Komunikasi Ilmu Ekonomi*, vol. 39, no. 2, Dec. 2022, doi: 10.58906/melati.v39i2.82.
- [5] Y. Effendi, A. Rachman, I. T. Adhi, and T. Surabaya, "Rancang Bangun Aplikasi Whistleblowing System Pemerintah Kota Surabaya Pada CV Nur Teratai," *Prosiding Seminar Implementasi Teknologi Informasi dan Komunikasi*, vol. 1, no. 1, 2022, doi: 10.31284/p.semtik.2022-1.2463.
- [6] R. M. Fadilah and R. V Salomo, "OPTIMALISASI PENERAPAN WHISTLEBLOWER-SYSTEM (WBS) DI SEKRETARIAT KABINET," vol. 7, no. 2, p. 2023.
- [7] S. K. Lumanauw, G. D. P. Maramis, and E. R. S. Moningkey, "Sistem Pengelolaan Pengaduan Whistleblowing System Dengan Menggunakan Algoritma Naïve Bayes," *Remik: Riset dan E-Jurnal Manajemen Informatika Komputer*, vol. 9, no. 2, 2025, doi: 10.33395/remik.v9i2.14790.
- [8] R. L. Datau and L. Hadjaratie, "Sistem Pengelolaan Laporan Pengaduan Pelanggaran Internal Organisasi Berbasis Web Mobile," *Jambura Journal of Informatics*, vol. 3, no. 2, pp. 77–86, Nov. 2021, doi: 10.37905/jji.v3i2.11791.
- [9] M. Affandi and T. Kurniawan, "Implementasi Whistleblowing System dalam Meningkatkan Efektivitas Pengaduan Masyarakat (Studi Pada ACRC Korea)".

- [10] J. Alif Ramadhan, D. Tresya Haniva, and A. Suharso, "Systematic Literature Review Penggunaan Metodologi Pengembangan Sistem Informasi Waterfall, Agile, dan Hybrid," 2023.
- [11] I. Sannuba Sabrina, I. Fauzi, K. Amalia, I. Nurfarahin Afifah, U. Islam Negeri Kiai Haji Achmad Siddiq Jember, and R. Artikel, "ANALISIS TEKNIK PENGUMPULAN DATA DAN ANALISIS DATA DALAM METODOLOGI PENELITIAN TINDAKAN KELAS: TINJAUAN LITERATUR SISTEMATIS Artikel Info Abstrak," *JPK: Jurnal Pendidikan dan Kebudayaan*, no. 02, p. 3, 2026, doi: 10.56842.
- [12] M. Zen, Irwan, Hafni, and M. D. P. Ananda, "Implementasi dan Pengujian Menggunakan Metode BlackBox Testing Pada Sistem Informasi Tracer Study," *Bulletin of Computer Science Research*, vol. 4, no. 4, pp. 327–340, Jun. 2024, doi: 10.47065/bulletincsr.v4i4.359.
- [13] H. Hasugian, "USER ACCEPTANCE TESTING (UAT) PADA ELECTRONIC DATA PREPROCESSING GUNA MENGETAHUI KUALITAS SISTEM," vol. 4, no. 1, pp. 20–27, 2023.
- [14] S. Wangi Puspita *et al.*, "Keefektifan Anonymous Reporting sebagai Jalur Pelaporan dalam Penerapan Whistleblowing System," *JURNAL MANEKSI*, vol. 11, no. 2, 2022, [Online]. Available: <http://sinta.ristekbrin.go.id>
- [15] H. D. Perdana, A. Muktiyanto, R. D. Hadiwidjaja, and R. E. Widyaningsih, "Implementasi Sistem Whistleblowing Berbasis Web-Based dalam Rangka Memitigasi Risiko Fraud oleh Inspektorat Daerah," *Reviu Akuntansi dan Bisnis Indonesia*, vol. 9, no. 3, pp. 623–637, Nov. 2025, doi: 10.18196/rabin.v9i3.28083.
- [16] A. Puspita, Y. Yuningsih, H. Amalia, and A. F. Lestari, "Penerapan Metode Waterfall dalam perancangan aplikasi sistem pembelian alat kesehatan berbasis Dekstop," *Infotek: Jurnal Informatika dan Teknologi*, vol. 6, no. 2, pp. 311–318, Jul. 2023, doi: 10.29408/jit.v6i2.12974.
- [17] F. Izzan Hafidz Jihaadi, "Analisis Penerapan Metode Waterfall dan Pengujian Sistem Aplikasi Persewaan Peralatan Pesta Berbasis Mobile Menggunakan Black Box Testing," 2024. [Online]. Available: <https://jurnalteknik.unisla.ac.id/index.php/informatika>
- [18] Aliyah Aliyah, Nahrin Hartono, and Asrul Azhari Muin, "Penggunaan User Acceptance Testing (UAT) Pada Pengujian Sistem Informasi Pengelolaan Keuangan Dan Inventaris Barang," *Switch : Jurnal Sains dan Teknologi Informasi*, vol. 3, no. 1, pp. 84–100, Dec. 2024, doi: 10.62951/switch.v3i1.330.