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Development of a Web-Based Broadcast Script Management Information System at RRI Medan

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Abstrak

This research discusses the Development of a Web-Based Broadcast Script Management Information System at RRI Medan. The system is designed to facilitate the management process of broadcast scripts, ranging from writing, submission, validation, to scheduling. The main problems frequently encountered include time- consuming manual processes, high risk of errors, and limited information accessibility among involved roles such as announcers, editors, administrators, and managers. By adopting a web-based system, all processes can be integrated centrally, supporting work efficiency and improving team collaboration in program production. The results of this study indicate that the developed system improves the effectiveness of script management by providing features such as user management, script submission, editor revisions, validation, and comprehensive reporting. The implementation of the MySQL database management system and PHP framework ensures secure and fast data processing, while the Waterfall methodology guarantees a systematic development process. The system implementation has proven to enhance efficiency, accuracy and transparency in broadcast script management at RRI Medan.

Keyword: Development, Information System, Management, Script, Website

1. INTRODUCTION

Radio Republik Indonesia (RRI) Medan, as part of the national public broadcasting institution, plays a strategic role in delivering quality information and entertainment to the public. Within its production process, the management of broadcast scripts is a crucial component that determines the smoothness and professionalism of broadcasting activities.

However, based on preliminary observations and interviews with internal staff, it was found that the script management process at RRI Medan is still carried out manually or in a semi-digital manner. Several key issues were identified, including the absence of a centralized repository, slow distribution of scripts, difficulties in tracking revisions, limited transparency across departments, and weak archival documentation.

These challenges negatively impact the efficiency of the editorial and broadcasting teams, and potentially reduce the overall quality of the broadcast. In the era of digital transformation, where society demands faster and more accurate information, RRI must adopt a more modern and integrated approach to script management.

As a solution, this research proposes the development of a Web-Based Broadcast Script Management Information System, which integrates the processes of script creation, revision, validation, and distribution into a single digital platform. This system is expected to improve production efficiency, strengthen collaboration between departments, and support real-time documentation and tracking of broadcast scripts.

2. RESEARCH METHOD

2.1 Management Information System

A Management Information System (MIS) is a system designed to manage data and information within an organization in order to support effective decision-making processes. According to Laudon and Laudon (2022), MIS plays a crucial role in enhancing work efficiency by integrating business processes and providing accurate real-time information. Research by Pratama et al. (2021) indicates that the implementation of IT-based MIS can improve productivity and reduce errors in data processing. This finding is in line with Nurhayati (2022), who emphasizes that the adoption of MIS in service companies has significantly improved the speed of information access for managers in making strategic decisions.

In the context of information system development, recent studies by Setiawan and Putra (2023) highlight that relational databases such as MySQL and PostgreSQL are the primary choices for managing structured and secure data. Additionally, web-based frameworks such as Laravel and CodeIgniter are frequently used to develop responsive and easily accessible user interfaces. Rachmawati (2021) also stresses that system design methodologies such as Waterfall and Prototype are among the most dominant approaches in MIS development, as both provide flexibility for system testing and iterative improvement.

Based on these studies, it can be concluded that MIS is not merely a data processing tool, but also a central component in creating an integrated organizational workflow. The effectiveness of MIS implementation relies on robust database management, appropriate software development frameworks, and the application of suitable design methodologies to meet organizational needs. The author argues that the success of MIS development is

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highly dependent on a deep understanding of user requirements, ensuring that the system enhances efficiency, accuracy, and decision-making speed.

2.2 Web-Based Information System

A web-based information system is an application that operates through a browser, making it accessible from various devices without requiring special installation. According to Nugroho (2021), the main advantage of web-based systems lies in their platform-independent nature, allowing them to run across different operating systems. Research conducted by Setyawan and Rahma (2022) emphasizes that the adoption of web-based systems enhances flexibility in information access and reduces dependency on specific devices. Meanwhile, a study by Lestari (2023) highlights that modern web technologies such as HTML5, CSS3, and JavaScript have further strengthened the capabilities of web-based applications to support more dynamic interactions.

In developing web-based information systems, databases play a critical role. Andriani and Kusuma (2022) state that MySQL remains a dominant choice due to its open-source nature and high performance in data processing. In addition, PHP frameworks such as Laravel and CodeIgniter are commonly used to build structured and well-organized application architectures. According to Wibowo (2021), system design methodologies such as Waterfall and Prototyping are widely applied in web-based system development, as they provide clear control over each development stage.

From this literature review, it can be concluded that web-based information systems are an effective solution to improve organizational accessibility and performance. The use of open-source technologies and supportive frameworks ensures faster development, making them an appropriate choice for successful implementation. Therefore, in developing a web-based management information system, selecting a reliable database, an appropriate framework, and a suitable design methodology are key factors to ensure optimal system performance and to meet user needs.

3. RESULT AND DISCUSSION

3.1 Result

The developed web-based broadcast script management information system is designed to meet user needs based on their respective roles: admin, announcer, editor, and supervisor. The following section presents the system implementation results and its main interface components.

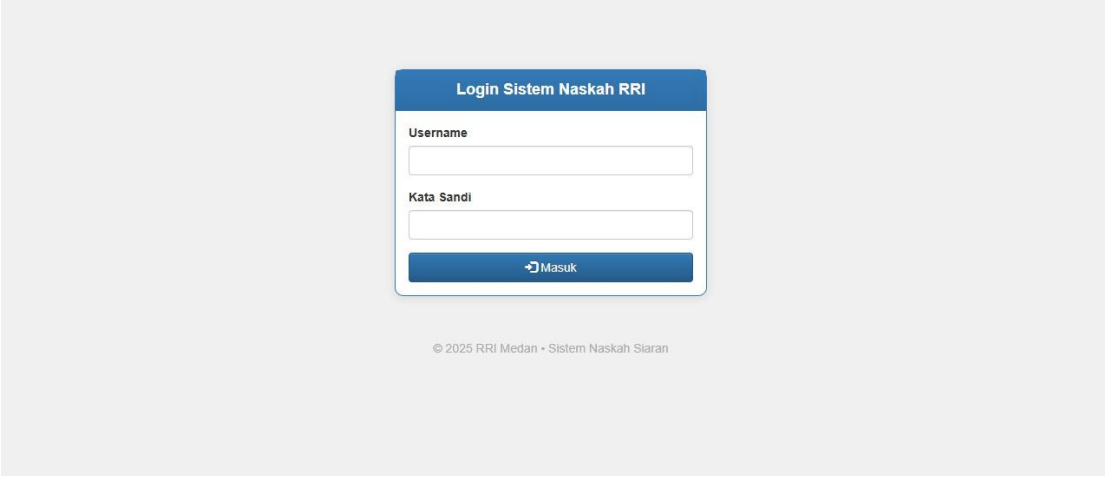

Figure 1 Login Page

The login page serves as the entry point to the system. Users are required to enter a valid username and password, which are verified through account status validation (active/inactive) and password hashing. The design is simple and responsive to support multi-device access. A “Login” button is placed below the input fields to send authentication data to the server. The system also provides validation messages when incorrect data is entered or mandatory fields are left empty. Once authenticated, users are directed to their respective dashboards according to their roles.

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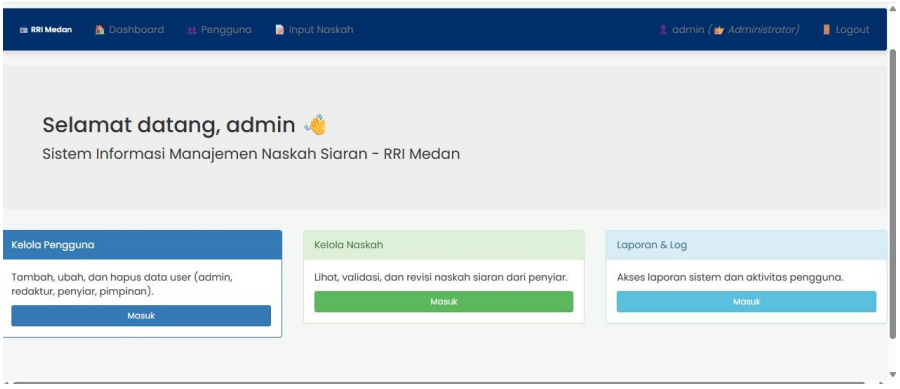

Figure 2 Admin Dashboard

The admin dashboard functions as the central control panel. The left-side navigation menu provides quick access to features such as user management, script management, broadcast schedules, and reports. The main section displays summaries such as pending scripts, upcoming broadcasts, and important notifications. This layout enables admins to manage activities efficiently and effectively.

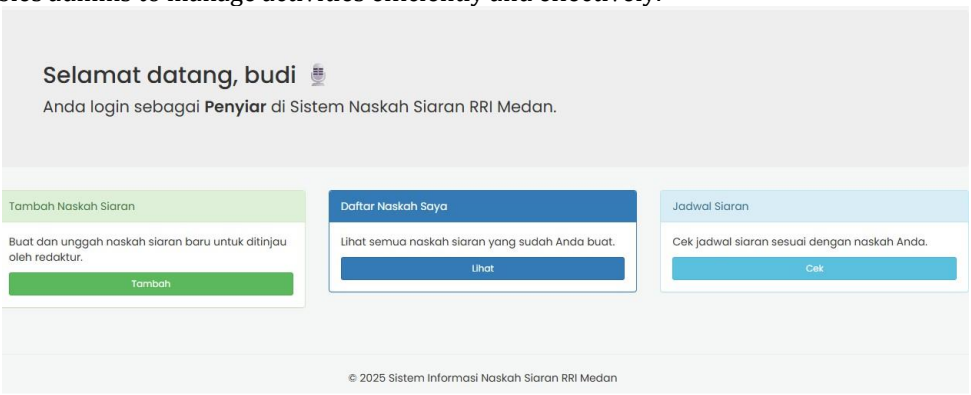

Figure 3 Announcer Dashboard

The announcer dashboard allows announcers to submit new scripts, view submitted scripts, and edit scripts that are still under revision. The interface is designed to be straightforward, with navigation menus on the left and the script list in the center, making it easy for announcers to manage their tasks efficiently.

Figure 4 Editor Dashboard

The editor dashboard provides access to review submitted scripts. Editors can approve, reject, or request revisions before the scripts are broadcast. The interface includes status indicators, action buttons (approve, reject, revise), and a comment section for revision notes, ensuring a more structured validation process.

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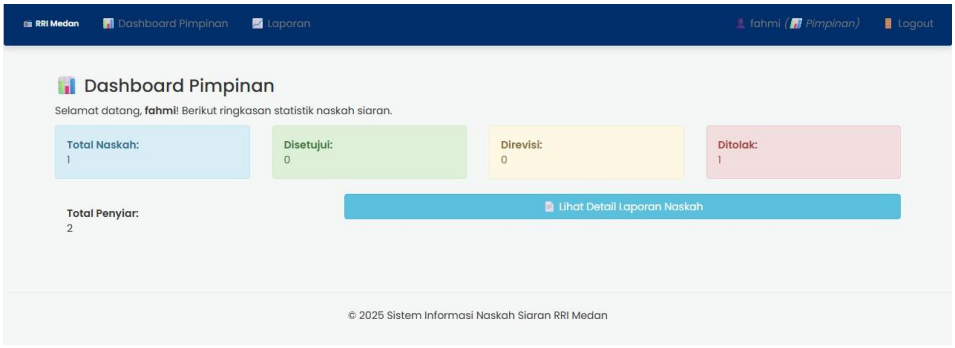

Figure 5 Supervisor Dashboard

The supervisor dashboard serves as the central reporting page. It presents data on the number of submitted, revised, approved, and rejected scripts in both graphical and tabular formats. This concise and informative interface helps supervisors quickly evaluate editorial performance and make data-driven decisions.

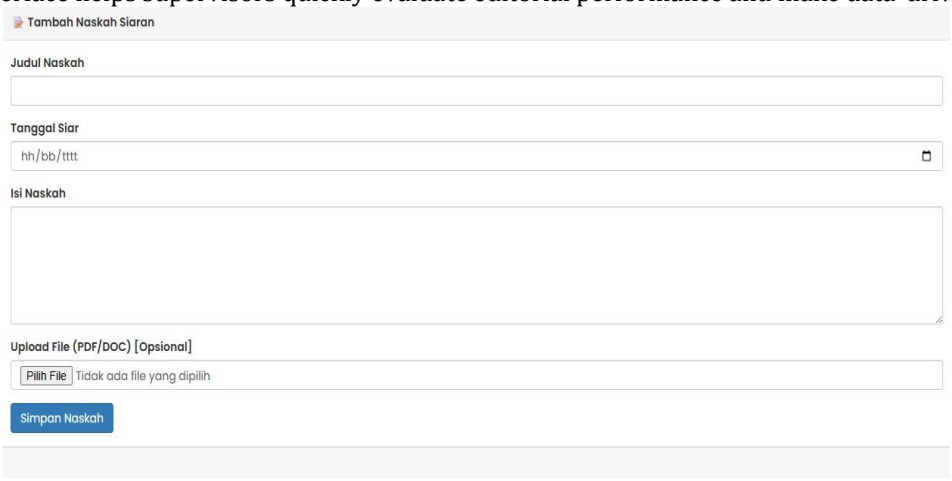

Figure 6 Script Submission Form

This form enables announcers to submit broadcast scripts by entering the title, content, broadcast date, and uploading supporting files. By default, each submitted script is assigned a *pending* status. Validation rules ensure that required fields are not left empty. The clean and structured design supports ease of use.

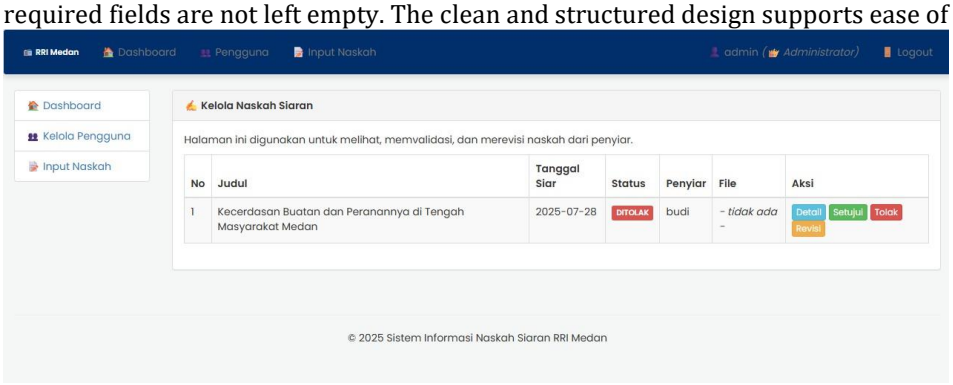

Figure 7 Announcer's Script List

This page displays all scripts uploaded by announcers along with their statuses (*pending*, *approved*, *rejected*). Announcers can edit or delete scripts as long as they have not been approved. The interface ensures better autonomy for announcers in managing their content.

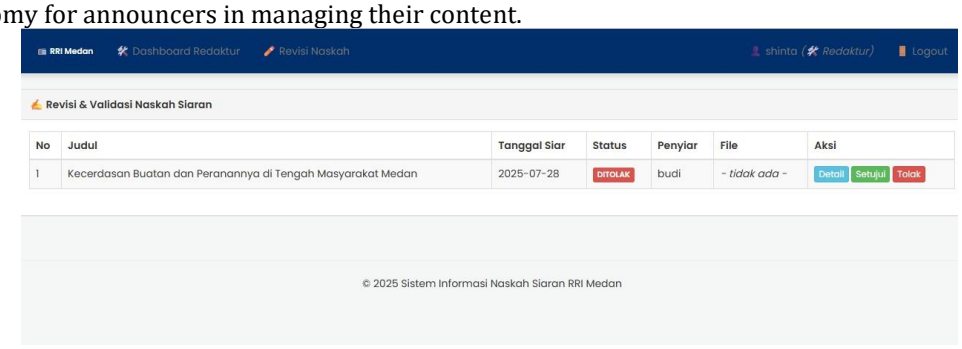

Figure 8 Script Validation by Editors

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This interface is used by editors to validate scripts. Editors can review scripts in detail and then approve, reject, or provide revision notes. The structured design enhances content quality management and ensures a professional workflow.

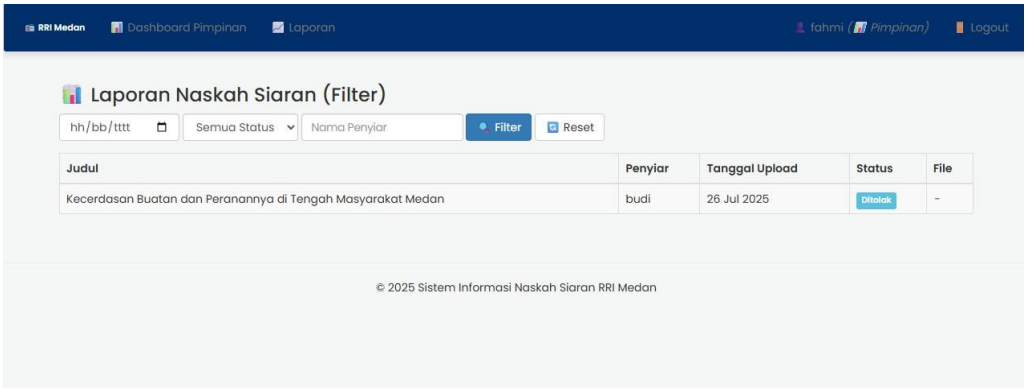

Figure 9 Reports and Statistics for Supervisors

This page presents a comprehensive overview of script reports, including counts of pending, approved, revised, and rejected scripts. Graphs and tables are provided to support monitoring of editorial performance and script validation processes.

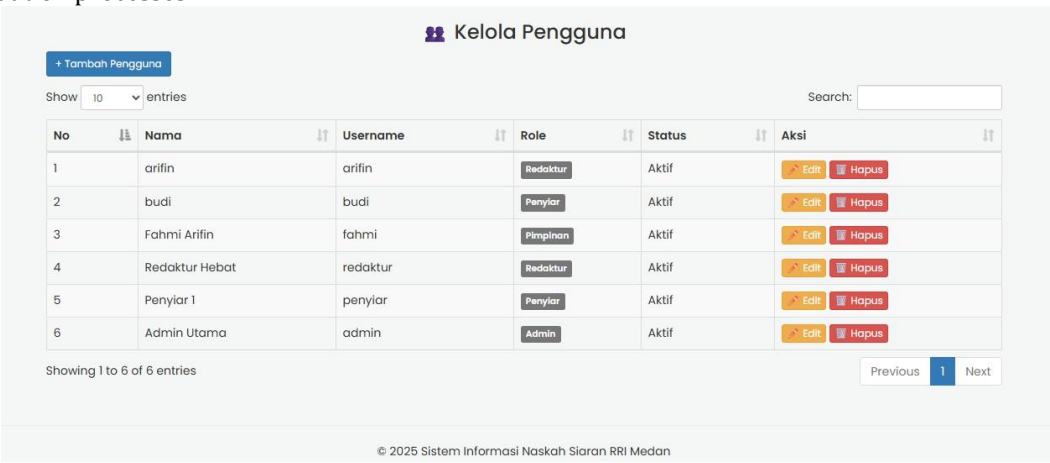

Figure 10 User Management by Admin

This feature enables admins to add, edit, or delete user accounts, as well as set active or inactive status. User management is essential for ensuring security and regulating access to the system.

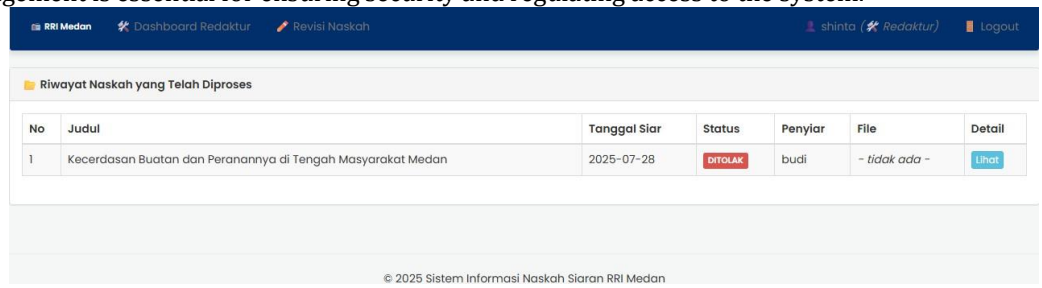

Figure 11 Broadcast History and Schedule

This page displays validated script histories along with their final status and broadcast dates. Additionally, upcoming broadcast schedules are provided, assisting both announcers and supervisors in planning and evaluating future broadcasts.

3.2 Discussion

The web-based broadcast script management information system that has been designed and developed aims to facilitate the management, distribution, and validation of broadcast scripts at RRI Medan. This subsection discusses the system's functions, the roles of each user, and how the system addresses the previously identified problems.

The system significantly improves the efficiency of script management processes that were previously carried out manually. With features such as script uploading, digital validation, and status tracking, the time required for the script management cycle is considerably reduced.

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1. The implementation of role-based access (admin, announcer, editor, and supervisor) ensures that users can only access features according to their respective responsibilities. This enhances both security and order in system usage.
2. The validation process, which was previously conducted through informal communication, is now structured and well-documented within the system. Editors can assign statuses such as approved, rejected, or revised, along with additional notes when necessary.
3. Announcers can easily check the status of their scripts (pending, revised, approved, or rejected), thereby increasing workflow transparency and minimizing communication errors.
4. Supervisors are able to access reports on the number of scripts based on their status and view activity logs within the system. This feature is particularly important for evaluation and internal audit purposes.
5. As a web-based system, it can be accessed anytime and from any device with an internet connection and a browser, enabling more flexible and real-time work opportunities.
6. Furthermore, broadcast scripts can be uploaded in digital file format and stored directly on the server. This ensures organized archiving while reducing the risk of document loss.

4. CONCLUTION

Based on the research and implementation of the web-based broadcast script management information system at RRI Medan, several conclusions can be drawn. The system successfully accommodates the needs of users across different roles (admin, broadcaster, editor, and manager) by providing relevant features according to their respective responsibilities. Broadcasters can submit, edit, and manage broadcast scripts digitally, making the submission process more efficient and well-documented. Editors are facilitated in validating scripts (approving, rejecting, or requesting revisions) directly through the system, eliminating the need for manual methods. Managers can access comprehensive reports and script statistics that support decision-making and editorial performance evaluation. Administrators have full control over user management and can monitor system activities through the provided activity log feature. The use of web technology and a database ensures easier integration, accessibility, and data security for broadcast scripts.

REFERENCES

Andriani R, Kusuma H. 2022. Pemanfaatan MySQL sebagai database open-source untuk pengembangan sistem informasi berbasis web. J Teknol Inf. 8(2):55–63.

Bagus D, Astid R, Hadi WP, Abidin Z. 2024. Implementasi peningkatan psikologis literasi dan kreativitas siswa tunanetra berbantuan kartu uno kimia unsur berbasis braille. 8(6):6354–6366.

Dan H, Tunanetra K. 2023. Strategi pembelajaran berbasis teknologi bagi peserta didik berkebutuhan khusus. J Pendidik Khusus. 7(2):77–86.

Jogiyanto H. 2020. Sistem Informasi Manajemen: Teori dan Praktik. Yogyakarta: Andi Offset.

Laudon KC, Laudon JP. 2022. Management Information Systems: Managing the Digital Firm. Ed ke-16th. Pearson Education.

Lestari D. 2023. Implementasi teknologi web modern dalam sistem informasi berbasis web. J Sist Inf. 11(1):77–86.

Novrima harianto, Emi Handrina, Yohani. 2023. Sistem Layanan Pengembangan Usaha Di Lembaga Penyiaran Publik Radio Republik Indonesia Bukittinggi. JAPan J Adm Dan Pemerintah. 1(1). doi:10.55850/japan.v1i1.75.

Nurhayati S. 2022. Pengaruh penggunaan sistem informasi manajemen terhadap kecepatan pengambilan keputusan. J Ilm Ekon dan Bisnis. 9(3):122–133.

Patralihan H, Zein SA, Zahara C, Ahmad FN, Anasya A, Fauziah AA. 2024.
Analisis Program Tayangan TVRI dan RRI Sumut Menjelang Pilpres dan Pileg 2024. J PIKMA Publ Ilmu Komun Media Dan Cine. 6(2):355–367. doi:10.24076/pikma.v6i2.1463.

Pratama B. 2022. Penerapan sistem informasi manajemen pada industri penyiaran untuk meningkatkan efisiensi kerja. J Manaj Media. 5(2):88–97.

Pratama R, Nugroho A, Sari I. 2021. Implementasi sistem informasi manajemen berbasis TI dalam meningkatkan produktivitas kerja. J Teknol Inf dan Sist. 10(1):44–53.

Pressman RS. 2020. Software Engineering: A Practitioner's Approach. Ed ke-8th. McGraw-Hill Education.

Rachmawati N. 2021. Analisis metode perancangan sistem informasi manajemen: Studi perbandingan antara Waterfall dan Prototype. J Rekayasa Sist. 7(2):34–45.

Setiawan D, Putra A. 2023. Pemanfaatan database relasional dalam pengembangan sistem informasi manajemen. J Inform. 14(1):101–112.

Setyawan R, Rahma A. 2022. Pemanfaatan sistem berbasis web untuk meningkatkan fleksibilitas akses informasi. J Ilmu Komput. 6(2):65–73.

Tairas MJ, Taroreh RN. 2024. Pengaruh Motivasi dan Kemampuan Kerja terhadap Kinerja Pegawai dengan Integritas sebagai Variabel Moderasi pada Lembaga Penyiaran Publik Radio Republik Indonesia (LPP RRI) Manado. J EMBA. 12(2):136–147.

Wibowo T. 2021. Penerapan metode perancangan dalam sistem informasi berbasis web. J Teknol dan Sist Inf. 9(3):211–220.

Wibowo T. 2022. Pemanfaatan cloud computing dalam sistem informasi manajemen produksi siaran. J Inform Multimed. 12(2):56–64.