ISSN 2797-7889

Design of Web-Based Journalist News Data Collection Application with Scrum Method

Rico Imanta Ginting[1], Andri Dwi Andhika[2]
Politeknik Ganesh Medan
Email: imantarico@gmail.com

Analisatoday.com is a leading news portal focusing on political, economic and social issues. This portal aims to provide media solutions for public leaders and political figures in publicizing their activities and activities more effectively and professionally. By promoting the principles of transparency and information disclosure, Analisatoday.com plays an important role in delivering information about the work programs, visits, meetings, and activities of leaders to the public. In the process of news publication, the use of technology has grown, including in terms of data collection and information management. However, the news data collection system at Analisatoday.com is still not optimal. Currently, the data collection process is still mixed with news uploading activities, and is less efficient and not well organized. In addition, the lack of user understanding of the existing system is also an obstacle. To overcome these problems, the author designed a web-based journalist news data collection application using the Scrum method. This system is designed to be simpler, more efficient, and accurate in supporting the work process of journalists. Through this application, journalists can collect, verify, and manage news data in an integrated manner. With website-based technology and the utilization of PHP and MySQL as tools, this system is expected to improve performance and effectiveness in managing news data in Analisatoday.com.
Keywords: Application, News data collection, Website, PHP, MySQL.

Corresponding Author:
Rico Imanta Ginting
Politeknik Ganesha Medan
imantarico@gmail.com

1. Introduction

The development of Information Systems and Technology, especially in the field of web application development, has brought significant changes in various sectors, including the media and journalism industry. Technology now serves not only as a tool, but also an important part in supporting information management, automating work processes, and increasing operational efficiency. In the world of modern journalism, the use of web-based information systems is indispensable for managing news data in a fast, accurate, and organized manner. This system allows journalists to collect data, verify, and archive news digitally and centrally, so that the distribution of information to the public becomes more effective and professional (Harni, Ahmadi, & Akbar, 2023).

Various previous studies also support the importance of developing a web-based news data collection information system. (Purwati, Pradana, & Iswahyuni, 2022) shows that a website-based news system with journalist profile features can increase content credibility and facilitate journalist membership management using the prototype method. Meanwhile, (Khoiriyah, Sari, & Triaji, 2022) confirms that a web-based e-archive information system is able to improve accuracy, time efficiency, and ease of monitoring data in an integrated manner in managing news documents. These two studies reinforce the importance of using development methods such as Scrum to create systems that are adaptive, efficient, and in line with the needs of news data management in the digital era.

 ISSN 2797-7889

One of the media that faces similar challenges is Analisatoday.com, a news portal that focuses on political, economic and social issues. Despite having a website as a means of publication, the internal news data collection system is still manually integrated with the content upload process, which causes unstructured data, difficult to trace, and makes it difficult to verify news before it is published. This condition has the potential to reduce the quality of published information and hinder the principle of transparency promoted by the company.

Based on these problems, the design of a web-based journalist news data collection information system using the Scrum method is a solution that is expected to improve work efficiency, data collection accuracy, and quality of news management in the Analisatoday.com environment. With a phased approach from Scrum, this system is designed to answer user needs on an ongoing basis, while supporting the digital transformation process in a more professional and structured media information management.

2. Methods

Scrum Method

The research flow at PT Metaverse Ekosistem Digital Indonesia was carried out using the Scrum method.

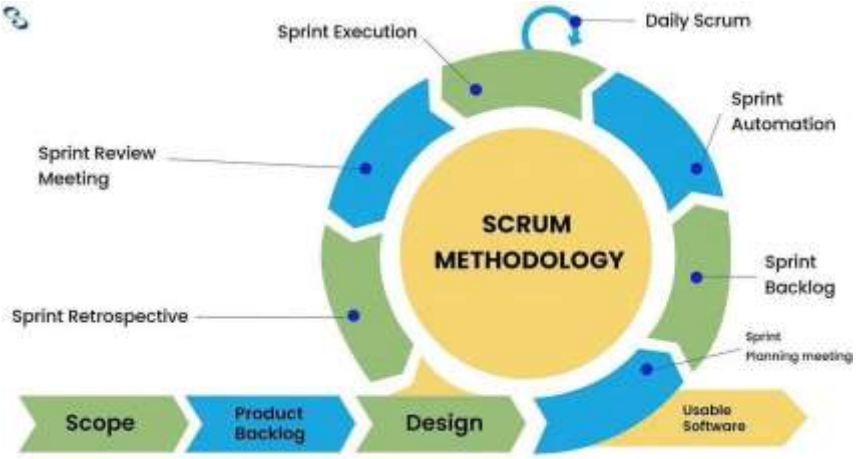

Figure 1. *Scrum* Method Flow

Product Planning (Product Backlog)

At this early stage, the system developer compiled a product backlog containing a list of general system requirements, including the functionality of news data collection, journalist account management, reporting, and news category management. This list was created based on initial interviews and observations of user needs. All items are prioritized and subject to change based on stakeholder dynamics and feedback.

Sprint Planning

Each development cycle starts with a sprint planning activity, where the author selects a few prioritized items from the product backlog to work on in one sprint period. In this report, sprints are organized over a specific time duration (e.g. two weeks), and each sprint focuses on a specific feature, such as news input, user management, or report display.

Sprint Execution

During the sprint, the author developed system features iteratively. This stage includes the technical design of the user interface (UI), database structure, and program coding using the PHP programming

language, appropriate frameworks, and the MySQL database system. The whole process is carried out in stages and adjusts the sprint target.

Daily Scrum

Although this project was done by an individual, the author still conducted daily evaluations independently as a form of daily Scrum simulation, to ensure that every work progress was monitored and obstacles could be resolved immediately. These daily notes are also useful for documenting progress and additional technical needs.

Sprint Review

After each sprint is completed, the author reviews the features that have been developed, checks the functionality thoroughly, and conducts a demo to the supervisor or related parties if needed. The results of this review are used to measure the extent to which the system meets the needs of users and stakeholders.

Sprint Retrospective

After the sprint review, the author conducts an internal evaluation of the work process in the sprint that has been carried out. This evaluation includes technical constraints, time efficiency, and improvements that can be made in the next sprint to optimize the development process.

Implementation and Maintenance

The features that have been developed are gradually implemented into the system as a whole. This implementation includes adjustments to the local (XAMPP) and online servers if needed. Maintenance is carried out to ensure the system is running properly, including bug fixes, feature updates, and response to new user requirements.

3. Results and Discussion

Implementation of Results

The implementation stage is the process of applying the results of the system design into the form of program code that can be run. Implementation is carried out with reference to the interface design and database structure that has been made previously. This system was built using PHP, HTML, and CSS programming languages, with MySQL database as data storage media. The web server used is Apache through the XAMPP application, while the coding process is done using Visual Studio Code. The following are the results of the implementation of a web-based news data collection system:

1. Main Page

The Main Page is the initial page displayed when users access the website. On this page there is a registration form that is used to register a journalist account in order to access the features available in the system. Users are asked to fill in personal data such as full name, username, email, and password on the registration form. After a successful registration process, the user account will be saved in the system and can be used to log in and access pages according to their respective roles and access rights.

 ISSN 2797-7889

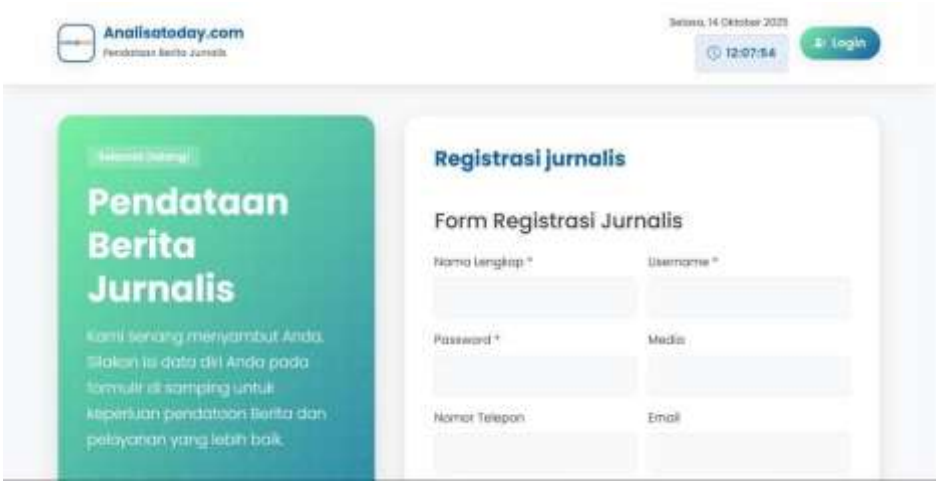

Figure 2. Main Page

2. Dashboard Page

This page is the initial display that appears after the admin has successfully entered the system. The admin dashboard displays information in the form of the amount of incoming news data, so that admins or journalists can find out how much news has been uploaded by journalists.

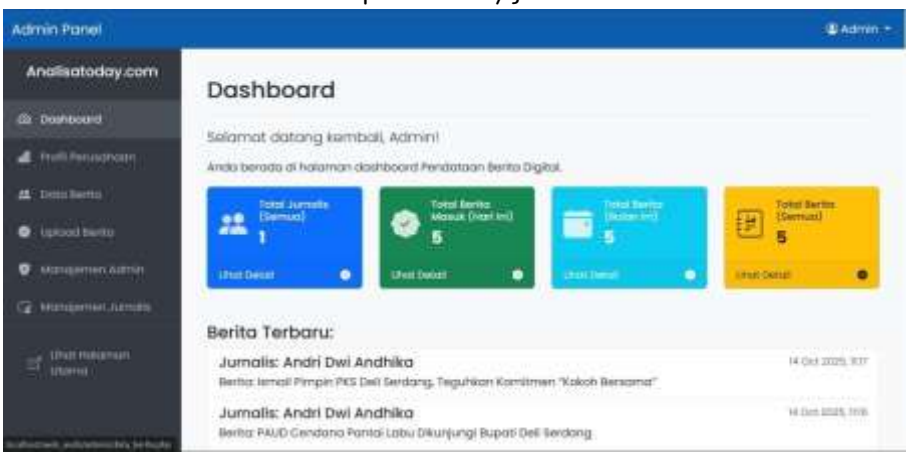

Figure 3. Dashboard Page

3. News Data Page

This page displays all news data that has been uploaded by journalists, and only admins can accept or reject news.

Figure 4. News Data Page

 ISSN 2797-7889

4. News Upload Page

This page serves to upload news by journalists, which contains information such as headlines and includes photos needed in the news.

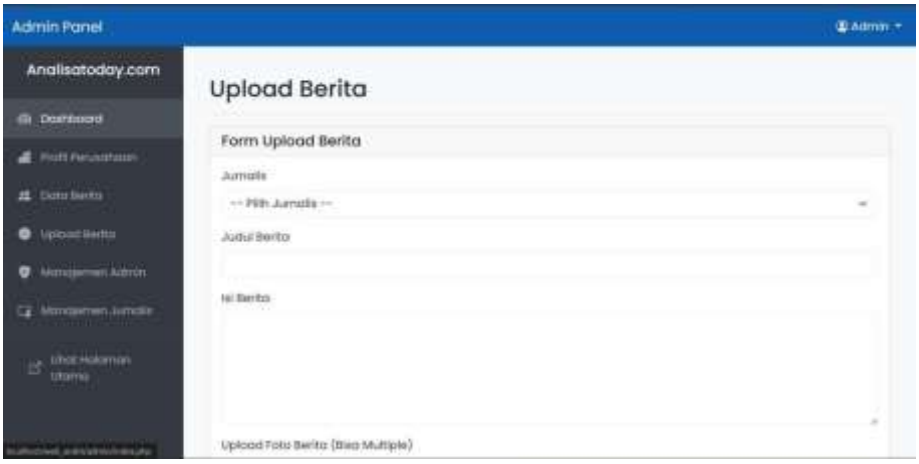

Figure 5. News Data Page

Testing

System testing is carried out to ensure that the system that has been designed and implemented can run according to its function and meet user needs. At this stage, testing is carried out using the *Blackbox Testing* method, which is a testing method that focuses on system functions and outputs without paying attention to the internal logic processes of the program.

Table 1. System Testing

No	Testing	Scenario Test	Input	Output	Result Test	Description.
1	*Login*	Admin enters username and password	Username :admin, password : admin.	Enter the admin dashboard page	Success	As per
2	Admin Management	Admin adds and changes user	Name, username, password , role	Data added, changed in database	Success	As per
3	Journalist Management	Journalists Perform Account Registration	Name, Username, Password and Journalist information	Journalist data added to the database	Success	Corresponding
4	News Upload	Journalist Upload News	Input news information such as title, news content and photos.	News data and news photos are added to the database	Success	As per

Maintenance

The *maintenance* stage is a process carried out after the system has passed the testing stage. The purpose of this stage is to ensure that the web-based news data collection system can operate optimally,

stably, and adjust to changes in user needs and work environment conditions. The maintenance activities carried out include several steps, namely:

a. Bug or error fixing, which is identifying and fixing errors that arise during system use so that all functions can run as expected.
b. Periodic system backup, which is backing up data and system files to prevent data loss in the event of disruption or damage to the main system.
c. Improving system security, by regularly updating passwords and adding validation to the user authentication process to prevent unauthorized access.
d. Optimization of system performance, through cleaning up unused data.

By carrying out regular *maintenance* activities, it is hoped that the web-based news data collection system built can continue to function properly, safely, and provide optimal performance in supporting data archiving activities in the company.

Discussion

The web-based journalist news data collection system developed at PT Metaverse Ekosistem Digital Indonesia was built using the Scrum method as an iterative and adaptive software development approach. This method allows the development process to be carried out in stages with a focus on collaboration, flexibility, and continuous improvement based on user feedback.

In the Product Backlog stage, all system needs were identified, such as news data collection features, journalist account management, news category management, and data reporting. This list of needs was compiled based on the results of interviews and observations of journalist activities in the field, then sorted based on development priorities.

The next stage is Sprint Planning, where developers determine priority items from the product backlog to be worked on in one sprint period. Each sprint has a specific development focus, such as creating news input features, managing users, or displaying reports. During Sprint Execution, the development process is carried out in stages, including designing the user interface, creating the database structure, and coding the program using the PHP language and MySQL database system.

Although the project was developed individually, Daily Scrum activities were conducted in the form of self-evaluation to monitor the progress of the work and identify technical issues that arose during the sprint. After one sprint cycle is completed, a Sprint Review is conducted to assess the results of feature development, ensure functionality is running as designed, and obtain feedback from the supervisor or related parties.

Next, a Sprint Retrospective is conducted to evaluate the effectiveness of the work process during the sprint, identify obstacles encountered, and plan improvements so that the next sprint can run more efficiently. After all sprints are completed, the Implementation and Maintenance phase is carried out to integrate all features into the system as a whole. Implementation is done on a local server (XAMPP) and can be further developed to an online server. The maintenance stage includes system testing, bug fixes, and feature updates according to user needs.

4. Conclusion

Based on the results of research, design, implementation, and testing that have been carried out, it can be concluded that the web-based journalist news data collection information system developed at Analisatoday.com is able to be an effective solution in overcoming the problem of managing news data that was previously done manually. This system helps journalists and editorial admins in recording,

organizing, and verifying news in a more structured, efficient, and accurate manner. The application of the Scrum method in the system development process allows the development stages to be carried out in stages and iteratively, so that each feature developed can be adjusted to user needs. Through the stages of product backlog, sprint planning, sprint execution, sprint review, and sprint retrospective, system development runs adaptively and measurably, ensuring that the final result is in accordance with stakeholder expectations. From the results of testing using the Black Box Testing method, all the main features of the system, both for journalists and admins, have functioned properly as designed. Journalists can add, edit, and delete news data, while admins have access to verify and manage data thoroughly. Thus, this system successfully meets the research objectives, namely creating a web-based news data collection application that supports work efficiency, transparency, and digitization of news management in the Analisatoday.com environment.

5. Reference

Bratha, W. G. E. (2022). Literature review of management information system components: Software, database, and brainware. *Journal of Information Systems Management Economics*, 346-347.

Dalimunthe, A. L. (2022). Web-based e-learning information system at SMA Negeri 1 Rantau Se- latan. *Journal of Student Development Informatics Management (JoSDIM)*, 3-5.

Darlin, W., Putra, A. D., & Hendrastuty, N. (2023). Web-based management information system of Putra Trisula boarding house (Case study: Putra Trisula boarding house). Journal of Infor- mation Technology and Systems, 241-242.

Fauzan, F. M., & Ahmadi, D. (2024). Forms of citizen journalism in online media reporting. Journal of Journalism and Digital Media Research, 1-8.

Harni, Ahmadi, A., & Akbar, T. (2023). Web-based School Information System at SMP Islam NW Bilakembar (Case Study: SMP Islam NW Bilakembar). Journal of Informatics and Computer Engineering Development, 182-193.

Hermiati, R., & Kanedi, I. (2021). Making e-commerce at Raja Komputer using the PHP program- ming language and MySQL database. Journal of Media Infotama, 55.

Khoiriyah, K., Sari, J., & Triaji, A. (2022). DESIGN OF DATA PROCESSING APPLICATIONS (E- ARCHIVES) OF WEB-BASED GOODS DELIVERY MINUTES DOCUMENTS. JOURNAL OF SWADHARMA INFORMATION ENGINEERING (JRIS), 61-68.

Noviantoro, A., Silviana, A. B., Fitriani, R. R., & Permatasari, H. P. (2022). Design and implementa- tion of a web-based badminton court rental application for Depok areaJournal of Engineering and Science, 91–92.

Primawanti, E. P., & Ali, H. (2022). The effect of information technology, web-based information systemsand knowledge management on employee performance (Literature review executive support system (ESS) for business). Journal of Information Systems Management Economics, 273-284.

Purwati, N., Pradana, H. B., & Iswahyuni, D. (2022). Design of Website-Based News Information System of PT Garda Revolusi TV Madiun. CONTEN: Computer and Network Technology, 108-117.

Safwandi, Fadlisyah, Aulia, Z., & Z. (n.d.). Information system design analysis of 1 Gandapura Vo- cational High School with context diagram and data flow diagram Informatics Engineering Malikussaleh University Lhokseumawe, 537.

Tumini, & Fitria, M. (2021). Application of the Scrum method to STMIK Cikarang using PHP and MySQL. SIMANTIK Informatics Journal, 14.

Yustika, W., Siregar, N. T., Barus, V. A., Hasibuan, M. A., & N. (2023). The role of the database sys- tem in the management information system at UINSU. Journal of Economics and Business, 188–196.