

Research Article

Information System Audit on the Catatmak Application on the Web and Playstore Using the Cobit Framework for Financial Recording (Study Case: Application Note)

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Abstract: PT Jadi Kaya Raya Bersama, founded in 2024 in Banyumas, Indonesia, focuses on providing reliable financial recording solutions for Micro, Small, and Medium Enterprises (MSMEs) through fintech-based applications. The platform is designed to support transaction recording, financial monitoring, and reporting processes to improve MSME financial management. Despite its significant potential, several technical issues have hindered the application's performance and service quality. Key problems identified include disruptions in the WhatsApp Bot API, user authentication errors, and the lack of integration with banking systems and digital wallet services. These challenges affect transaction recording accuracy, operational efficiency, and the security of user financial data. To identify the root causes of these issues and propose appropriate solutions, a system audit was conducted using the COBIT framework as a governance and management evaluation tool. The audit process involved assessing system performance, control mechanisms, and IT service management practices. The results indicate that API disruptions were primarily caused by network instability and configuration errors, which led to interruptions in automated transaction recording services. Meanwhile, authentication problems were associated with weak login mechanisms and insufficient identity verification processes. In addition, the application's inability to integrate with banking and e-money services created limitations in transaction synchronization and reduced overall user convenience. Based on these findings, several strategic recommendations are proposed. These include optimizing API performance, strengthening authentication systems through the implementation of Two-Factor Authentication (2FA), and developing integration capabilities with banking institutions and digital wallet platforms. The implementation of these improvements is expected to enhance system efficiency, data security, and service quality. Ultimately, strengthening the fintech application's performance will support MSMEs financial management and contribute to sustainable digital economic growth in Indonesia.

Keywords: Fintech Application; MSMEs; COBIT; WhatsApp Bot API; Authentication.

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1. Introduction

In this digital age, the role of technology is crucial in supporting the progress of the Micro, Small, and Medium Enterprises (MSMEs) sector. Fintech platforms, which utilize technology to offer financial services, present alternatives for challenging financial problems faced by MSMEs. One of them from fintech applications that are currently being developed is PT Jadi Kaya Raya Bersama, which is a provider of a mobile application for managing finances. Although the application has its own potential for supporting the MSME sector (Arner et al., 2020), there are a number of technical obstacles to its performance, including issues with the WhatsApp Bot API, authentication issues for users who do not right, and difficulty in integrating with service banking or digital wallet. PT Jadi Kaya Raya Bersama, which was founded in 2024 in Banyumas, Indonesia, has an objective to offer efficient and

transparent solutions in recording finance for Micro, Small, and Medium Enterprises (MSMEs) (Lee & Shin, 2020). With fintech innovation, applications created by companies try to simplify financial management for MSMEs, who often face problems in recording and managing finances.

Although the application shows significant potential For help MSME sector, several technical performance-related problems have been identified, namely WhatsApp Bot API issues, constraints on user authentication, and the inability of the application to connect with system banking or digital wallet. Disruption of a technical kind. This can affect operational efficiency, data security, and the accuracy of recording transactions, which ultimately can reduce trust from users in the application (Nguyen & Dang, 2022). This was motivated by various challenging technical issues faced by the PT Jadi Kaya Raya Bersama application. Disruptions to the WhatsApp Bot API resulted in disruptions in recording transactions, while errors in authentication caused users to be to be connected with accounts that are not appropriate. Besides that, the shortcomings in integration application with system banking or digital wallets make things worse in the effective use of Applications (Chatterjee et al., 2021). Technical issues. This is what the PT Jadi Kaya Raya Bersama fintech application experienced to reduce trust in users and inhibit achievement of objectives in increasing management of UMKM finance (Vives, 2021).

Therefore, research aiming to evaluate technical problems on the PT Jadi Kaya Raya Bersama application and provide a solution through system audit use COBIT framework, ISACA (2019). The COBIT framework is used to conduct system audits and evaluate management technology information in the PT Jadi Kaya Raya Bersama application. Besides that, approaching this expectation can give recommendation For optimize API, improving system authentication, and repairing integration with service banking as well as digital wallet. Objective study This is For identify and analyze problems that exist in the PT Jadi Kaya Raya Bersama application, as well as give the right solution to increase pthe erformance application. In a specific purpose study, this is :

1. Analyze the WhatsApp Bot API connection disruption and its impact on recording transactions.
2. Identifying the reason for the authentication error that causes incorrect data recording.
3. Analyze obstacles that cause the application No integrated with system banking or digital wallet.
4. Give recommendation repair for increased effectiveness of fintech applications in support of MSMEs.

2. Preliminaries

2.1. Technology Information and Management MSME

Financial technology plays a crucial role in improving financial management efficiency, particularly for Micro, Small, and Medium Enterprises (MSMEs) that often face limitations in professional financial administration. The integration of information technology into financial systems enables MSMEs to streamline transaction recording, financial planning, and reporting processes more systematically and transparently (Alam et al., 2021). Fintech solutions provide cost-effective and scalable digital financial services that enhance operational efficiency and financial inclusion for small businesses. Furthermore, the adoption of secure digital payment systems and integrated financial platforms allows MSMEs to conduct transactions more transparently while reducing manual errors and improving financial accountability (Rabbani et al., 2021). Therefore, the implementation of fintech-based financial recording systems represents a strategic approach to strengthening MSME competitiveness and sustainability in the digital economy era.

2.2 COBIT and IT

Management The COBIT (Control Objectives for Information and Related Technology) framework is one of the frameworks used to evaluate and ensure management of technology information walk in accordance with objective organization. According to ISACA (2019), COBIT guides IT management with the objective of achieving good control of risk, efficiency, and operational effectiveness. COBIT also helps in the evaluation of IT controls and governance with fintech applications for increased performance and data security.

2.3 API and Service Integration Finance

Application Programming Interfaces (APIs) represent a critical component in the development of fintech applications, particularly in enabling integration with external services such as banking systems and digital wallets. APIs facilitate secure communication and structured data exchange between different software systems, thereby supporting seamless transaction processing and interoperability across financial platforms (Zachariadis & Ozcan, 2020). In fintech ecosystems, API-based architectures enhance operational efficiency by allowing real-time data synchronization, automated payment processing, and cross-platform connectivity (Brodsky & Oakes, 2021). Furthermore, the implementation of secure and well-managed APIs contributes to improved scalability, service reliability, and innovation within digital financial services. Therefore, optimizing API infrastructure is essential to ensure stable transaction flows and maintain user trust in fintech applications. However, API integration must be done with care to ensure its security. In research by Siahaan (2020), explained that the API is not stable and not managed well, which can hinder the operational fintech system, as happened with the PT Jadi Kaya Raya Bersama WhatsApp Bot API.

2.4 Authentication and Data Security Data

Security and user authentication are critical components in fintech applications, particularly because these platforms process highly sensitive financial and personal data. Robust authentication mechanisms are essential to prevent unauthorized access, data breaches, and financial fraud. Recent studies highlight that multi-factor authentication (MFA), including Two-Factor Authentication (2FA), significantly enhances system security by requiring users to verify their identity through multiple independent credentials (Aloul et al., 2020). The implementation of 2FA adds a protection layer beyond traditional password-based systems, thereby reducing the risk of account compromise due to phishing, credential theft, or brute-force attacks (Sabillon et al., 2021). In fintech environments, strong authentication frameworks also contribute to regulatory compliance, customer trust, and operational integrity. Therefore, strengthening authentication systems through secure verification protocols and adaptive authentication strategies is essential to ensure data confidentiality, integrity, and availability within digital financial services. Without strong system authentication, user data and transactions can be easily hacked by unauthorized parties. For increased security, it is important to apply more sophisticated techniques and maintain strict password policies, as described by (Krebs 2020).

3. Materials and Method

This aims to analyze and evaluate technical issues that occur in the system PT Jadi Kaya Raya Bersama fintech application, which influences recording transactions and performance applications in a way overall. This approach is qualitative with a design case study for the dig problems that occur in the system PT Jadi Kaya Raya Bersama application. Research done with system audit analysis based on the COBIT (Control Objectives for Information and Related Technology) framework, which aims to evaluate the effectiveness of the control system information applied to the company. Through this approach, researchers will analyze technical problems in a deep way and give recommendations for repair.

a) Population and Sample

Population in study: This is the user PT Jadi Kaya Raya Bersama application, which consists of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. Sample study This was chosen purposively, with a select 10 users active and have been experiencing problems regarding WhatsApp Bot API, authentication accounts, and integration with system banking or digital wallet. Selected informants consist of the interacting parties directly involved with the application and can give relevant information about technical issues.

b) Collection and Development Techniques Instrument

Data collection techniques used in the study: This includes in-depth interviews, observations, and study documentation

- **Interview In-depth:** Researchers do interviews with user application to get information about the experience they relate to problems that occur in the system application. Interviews are also

done with team developers and parties' technical companies to obtain a technical perspective from the technical side.

- **Observation:** Researchers do observation to operation system applications to identify technical in a way directly, especially related with WhatsApp Bot API and authentication user authentication.
- **Study Documentation:** Researchers gather documentation related to API management, system authentication, and reporting related to technical issues that has been occurs in the application. Instruments used in the study. These are guidelines for an interview-based approach to problem formulation research, with a focus on questions that can dig into the causes and effects of technical issues, as well as suggested solutions.

c) Data Analysis Techniques

Data obtained from interviews, observations, and study documentation will be analyzed using thematic analysis. Researchers will identify the main thing that appears from data to give a description about problem technical issues faced by the application. In this, researchers will also use the COBIT framework to evaluate the control of existing systems and assess their effectiveness. The findings obtained will then be made into a base to give recommendation more improvements.

d) Presence Researcher, Subject Research, and Research Informants

play an active role in doing interviews, observations, and conducting an analysis of the data obtained. Presence researcher in the study. This is important for digging deeper into the existing technical problem. Subject study consists of the user application, team developers, and parties who have involvement in the operation system. Informants in the study are those who can give an outlook on the technical problem, ranging from experience user until evaluation existing systems.

e) Location and Duration of Research

This was implemented in Banyumas, Indonesia, which became a location operational for PT Jadi Kaya Raya Bersama. The data collection process is ongoing for 2 months, starting from the beginning of January 2025 to the end of February 2025.

f) Checking the Validity of Research Results

Validity results study checked through the technique of data triangulation, with comparison results, interviews, observations, and study documentation to ensure consistency of the information obtained. In addition, validity findings were also tested through discussion with experts in the field of system audit information and management fintech application, to ensure that recommendations given are based on appropriate and feasible analysis applied practically.

4. Results and Discussion

An audit of the WhatsApp Bot application belonging to PT Jadi Kaya Raya Bersama revealed a number of problems significantly impacting experienced users and financial accuracy. WhatsApp API is experiencing unstable consequences, the internet connection is not reliable, overloaded servers cause delays, and the Updates API configuration is not coordinated well. This results in recording transactions that are not accurate, which affects report finance and the trust of users. The solutions provided cover optimization API infrastructure, an automatic monitoring system, and updates routine with comprehensive testing. The critical second is authentication for weak users. No existence authentication with two factors creates vulnerability, which reflects findings in (Aloul et al., 2020) and Krebs (2020) related to fintech security. Mechanism for weak authentication and management sessions that is not efficient cause recording wrong transactions for the user. This causes error reporting, finance, and improvement risk data breaches. Implementing two-factor authentication, managing efficient sessions, and verifying biometrics are important.

Integration with the Indonesian banking and electronic money are also lacking, so that hinder functionality of the application. API mismatch, expertise that is not adequate, and budget constraints prevent smooth integration. This is a manual process of recording transactions, which reduces efficiency and improves potential errors. Selecting the appropriate API, developing module integration, and providing training for developers are necessary steps for repair matter. In general, technical problems are a very influential quality of service and affect user trust. Reporting finances that are not accurate, compromised data security, and declining user satisfaction threaten the growth and sustainability of the company. Overcoming the problem this needs a comprehensive approach, which includes improving infrastructure, steps enhanced security, and integrating capabilities across more systems.

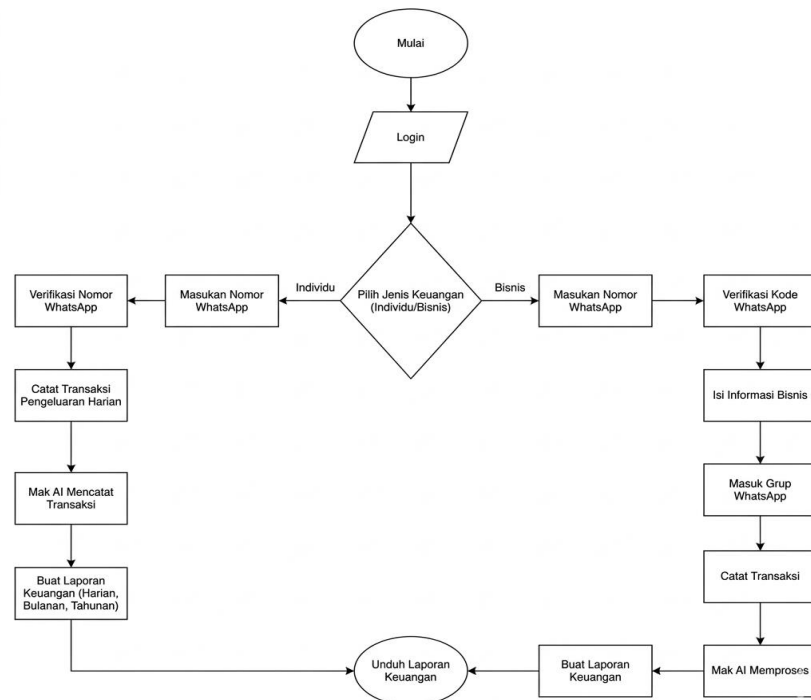


Figure 1. Flowchart Sequence.

Flowchart Sequence Image Explanation :

- Start: The process starts when the user opens the application note.
- Login: User logs in to enter the application.
- Choose Type Finance (Individual / Business): After logging in, the user is requested to choose the type of finance that they want managed: Individual or Business.
 - **If You Choose Individual :**
 - a) Enter WhatsApp Number: User requested to enter WhatsApp number to verify identity.
 - b) Verification WhatsApp Number: System send code verification via WhatsApp. Users enter the code to continue.
 - c) Note Transaction Expenditure Daily: Users can take notes on expenditure daily directly in the application or with upload receipt shopping.
 - d) Mak AI Takes Notes Transaction: an AI system (Mak AI) online, automatically processes and recording transaction based on the uploaded data.
 - e) For Report Finance (Daily, Monthly, Yearly): The application will produce a report of finance based on transactions that have been noted.

- f) Download Report Finance: Users can download the report finance for personal needs or to continue the analysis.
- **If You Choose Business :**
 - a) Enter WhatsApp Number: User enters WhatsApp Business Number.
 - b) WhatsApp Code Verification: System send code verification via WhatsApp, and users must enter the code to continue.
 - c) Information Content Business: Users fill in information about a business, such as :
 - Business name.
 - Type product or services sold.
 - City/district location business.
 - Company code (optional).
 - d) Enter WhatsApp Group: Users will enter the WhatsApp group Catatmak and get the group ID.
 - e) Note Transaction: User takes notes on transaction expenditure, good through the application Catatmak or WhatsApp group.
 - f) Mak AI Processing: Mak AI will process and record transactions in a way automatic.
 - g) For Report Finance (Daily, Monthly, Yearly): The system produces a report of finance according to recorded transaction data.
 - h) Download Report Finance: Users can download the report finance for objective reporting or management finance to continue.

6. Conclusion

This study aims to analyze the technical problems encountered in the fintech application developed by PT Jadi Kaya Raya Bersama, which provides financial record-keeping solutions for Micro, Small, and Medium Enterprises (MSMEs). The application is designed to support transaction recording, financial monitoring, and reporting processes to improve MSME financial management. However, based on the results of a system audit conducted using the COBIT framework, several critical technical issues were identified that significantly affect system performance and service quality.

The audit findings reveal three primary problem areas. First, disruptions in the WhatsApp Bot API infrastructure frequently cause transaction recording failures and data synchronization delays. These disruptions lead to inaccurate financial records, which may affect business decision-making for MSME users. Second, user authentication challenges were identified, particularly weaknesses in login mechanisms and account verification processes. These vulnerabilities not only result in recording errors but also expose the system to potential security breaches and unauthorized access. Third, the application currently lacks integration capabilities with banking systems and digital wallets. This limitation prevents automatic transaction synchronization, reduces operational efficiency, and forces users to perform manual data input, increasing the risk of human error.

To address these issues, several strategic recommendations are proposed. API infrastructure optimization is required to improve system stability, including server capacity upgrades, better configuration management, and network reliability enhancement to handle high transaction volumes. Furthermore, strengthening the authentication system through the implementation of Two-Factor Authentication (2FA) is recommended to enhance account security and minimize hacking risks. Lastly, developing secure and scalable APIs to enable integration with banking services and digital wallet platforms is essential to improve transaction automation and user convenience. Through these improvements, the fintech application of PT Jadi Kaya Raya Bersama is expected to achieve higher efficiency, stronger data security, and better service quality, ultimately supporting the financial digitalization and sustainable growth of MSMEs in Indonesia.

Author Contributions: A short paragraph specifying their individual contributions must be provided for research articles with several authors (**mandatory for more than 1 author**). The following statements should be used: “Conceptualization: X.X. and Y.Y.; Methodology: X.X.; Software: X.X.; Validation: X.X., Y.Y., and Z.Z.; Formal analysis: X.X.; Investigation: X.X.; Resources: X.X.; Data curation: X.X.; Writing—original draft preparation: X.X.;

Writing—review and editing: X.X.; Visualization: X.X.; Supervision: X.X.; Project administration: X.X.; Funding acquisition: Y.Y.”

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