



Development of Sharia-based Financial: An Implementation in the Halal Food Industry

Iwan Hermawan^{1*}, Gita Hindrawati¹, Sartono Sartono¹
¹ Politeknik Negeri Semarang, Indonesia

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Abstract

Islamic studies in Indonesia are rapidly expanding in the financial realm. Sharia-based financial calculations are an important element in ensuring compliance with Islamic Sharia in various financial products and services affiliated with the halal food industry. The principle of sharia calculation in the halal industry includes the formulation of prohibitions such as interest (*riba*), gambling, fraud, and loss. As a Muslim-majority nation, Indonesia holds significant potential to lead in Islamic economics, particularly in finance. However, the management of information systems in the halal food sector remains underdeveloped, with many halal companies relying on conventional systems instead of Sharia-compliant solutions. This study seeks to address the identified issue by developing a Sharia-compliant information system for the food and beverage industry where the existing information system acquires halal, infaq, sadaqah, and waqf calculations by uploading without involving tax obligations. Data collection was conducted from halal-certified companies with branch offices in Semarang and Surakarta, while user requirements were defined through technical discussions with main managers and branch heads to ensure system relevance. Implementation of system development methods using a prototype approach by acquiring system development theory. In its contribution, feedback from users who are business people in the halal industry includes sharia after tax, displaying suppliers of products that have the legality of halal certification and product prices that are above the price of potential products: so that even though halal production costs more, the resulting information system will be able to control these costs. This system is able to reduce and control costs so that the company remains in the profit corridor.

Keywords *Food and Beverage, Halal Industry, Halal Process, Sharia-based finance, Information System*

INTRODUCTION

Islamic studies in Indonesia are experiencing rapid development, not least in the field of finance. The advancement of sharia-based calculations in the financial sector represents significant progress in the practical implementation of Islamic principles. These calculations play a critical role in ensuring that various financial products and services adhere to the requirements of Islamic sharia. The principles of Sharia calculation include prohibitions such as interest (*riba*), gambling, fraud, and loss. According to [Alshater et al. \(2022\)](#), Islamic financial technology is expected to continue to experience significant growth in the next five years, given the increasing moving average trend. This increase is triggered by the increasing use of technology in the financial sector. Through Islamic Financial Technology, Sharia principles and rules can be applied through innovation, one of which is in information systems ([Financial Stability Board, 2019](#)).

As a Muslim-majority nation, Indonesia holds significant potential to establish itself as a global leader in sharia studies, particularly in the realm of finance. The demand for the application of sharia principles within the country is notably high ([Yahya, 2021](#)), as evidenced by the rapid expansion of the halal industry. Furthermore, the Islamic finance sector has demonstrated consistent growth over the past four decades, underscoring its resilience and increasing prominence ([Atasayar & Ramadan, 2020](#)). This trend is influenced by the increase in the Muslim population in Indonesia, where a report by [Royal Islamic Strategic Studies Centre \(2023\)](#) stated that the total Muslim population in Indonesia reached 237.55 million last year, accounting for

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Corresponding author's email: iwanpolines@gmail.com

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86.7% of the country's total population, as earlier highlighted by Jones (2006). A study by Altarturi et al. (2021) noted that the large Muslim population represents a potential development of Islamic finance combined with information system technology – nonetheless, the application of information system technology in the Islamic field is still lagged. Many processes are still performed manually, which increases the time-consuming and risky errors. This hampers the efficiency and effectiveness of the Islamic financial system. The gap between high demand and lack of technological support creates a vast market with limited supply. This opens up great opportunities for technology developers to create innovative solutions that can address the needs of Islamic studies in Indonesia (Rochaya & Baharuddin, 2024). Thus, the halal needs system is wide open in the Indonesian market (Syamsiyah & Ardana, 2022).

Related to the gap in past issues, the relevant thing that can be done now is to modify the sharia-based financial system (Hibatullah et al., 2023), by ensuring that the obligation of zakat and infat has been completed, by acquiring state tax relief. This issue is relevant to current needs and the needs of the halal system in the future, which should eliminate conventional business system calculation methods to achieve *kaffah*. Considering the great potential of Sharia-based financial development in Indonesia, it will provide wide opportunities to build qualified information systems because the calculation of halal financial systems is different from conventional finance. Shariah calculations, such as *sadaqah* and zakat, are imposed on it, thus requiring special calculations. In particular, there is a need for the application of law to create a system that complies with sharia law (Hussain et al., 2016). Therefore, in response to this critical issue, this study aims to understand and discuss how to build a Sharia-based information system in halal companies. By constructing a web-based system that adheres to Sharia law, this research aims to contribute to the body of knowledge in the field of Islamic finance. Specifically, the study intends to address the existing gap in the application of Sharia-based financial systems.

LITERATURE REVIEW

Functional Requirement

According to Lee and Kozar (2006), a good information system must have complete features that function effectively to meet customer needs. The required criteria comprise several modules such as: table, reservation, course, order, and user available on web-based reservations (Hishamudin & Abdullah, 2022). A web-based information system is ideal if it fulfills the modules that have been determined.

Islamic Accounting Theory

According to Rahman (2010), Islamic accounting is used to describe a distinctive collection of accounting concepts and practices. Islamic accounting theory is derived from Islamic sources and traditions, is inspired by the Islamic worldview and ethics, and is based on Sharia (Islamic law). Islamic accounting processes aim to ensure transparency, accuracy, and adequacy of financial information in every business activity, as well as the company's compliance with Sharia law and social and economic regulations (Khoramin, 2012). Islamic accounting should serve not only as a source of financial information for users and the general public, but also as a means of providing information that enables people to follow Allah's commands (Rahman, 2010). Islamic accounting theory also considers the special characteristics of Islamic financial instruments, such as *mudharabah*, *musyarakah*, and *murabahah*. Therefore, Islamic accounting theory is relevant to Islamic finance research.

Concept of the Halal Food Industry

Halal in Arabic means permitted, meaning all objects or activities permitted in Islamic

teachings. In Islam, the Qur'an specifically regulates the things that are issued. In this case, food must be "halal" and food must be "*tayyib*" which means "good" (Aniqoh & Hanastiana, 2020). Halal food is synonymous with food safety, hygiene, and human health (Haleem & Khan, 2017). According to the Indonesian Ministry of Religious Affairs, Halal food must fulfill Islamic law: (a) Does not contain pork and the ingredients are not derived from pork; (b) Does not contain ingredients that are haram, such as ingredients derived from human organs, blood, and feces; (c) All of these ingredients come from halal animals slaughtered under Islamic law; (d) All storage areas, points of sale, processing facilities, and transportation and processing areas are not used for pork and other non-halal foods. If it has been, it must be cleaned in the manner of Islamic law; (e) All food and beverages should not contain alcohol. Requirements regarding halal food must be met by the industries that produce halal food. The halal food industry refers to the production, processing, distribution, and delivery of halal food under Sharia law (Aziz et al., 2015). The halal food industry strengthens the confidence of Muslims in consuming halal food. This research is related to the concept of the halal food industry because it relates to financial management in the implementation of the halal food industry following Sharia law.

Empirical Review

A review of relevant literature reveals several sources that can serve as references and comparisons for the application the author intends to develop. Firstly, Yulandha et al. (2020) conducted a case study that resulted in the development of a website-based accounting application for PT. Arbunco Wira Pandega. The sales accounting system designed in this study streamlined the process for both the sales and finance departments, enabling them to generate accurate sales and financial reports in a timely manner. This enhancement not only improved operational efficiency but also facilitated more effective internal control evaluations by leadership. In a similar vein, Yuliafitri and Nurhayati (2019) developed a straightforward web-based accounting information system tailored for Islamic hotels, utilizing Sarah contracts. This system can be easily installed and implemented in Islamic hotel settings.

Then, another study by Meilano and Chandra (2020) which produces a Web-based Financing Management System Design application at PT Bank BNI Syariah so that it can be a solution in carrying out financing simulations in a more systemized and simple way. The existence of a web-based financing simulation system for PT Bank BNI Syariah itself is to make it easier for marketing to simulate financing without having to process it first manually. This application can be a solution for PT Bank BNI Syariah because it is simple and can be used anywhere and anytime. A related study by Ulya et al. (2022) also explores this topic, in which they developed an accounting information system designed to manage and provide information on member data, deposit records, as well as the tracking of savings and loan transactions at the Al-Falah Polban Sharia Microfinance Institution. This application aims to simplify the recording of financial transactions, presenting reports on cash deposits, cash withdrawals, member data, deposit data, and general journals at the Al-Falah Polban Sharia Microfinance Institution.

A thorough review of previous studies exploring similar topics to the current research reveals, as illustrated in Table 1, that website-based information systems incorporating sharia accounting calculations for application within the halal food industry remain relatively uncommon. By overcoming this scarcity, the author developed an Islamic financial information system for the halal food industry.

Table 1. Comparison of Features in the Application in this Study and Other Web-based Systems

No	System	[1]	[2]	[3]	[4]
1	Design Information System Accounting Sales Website-Based (Case Study: PT Arbunco Wira Pandega) (Yulandha et al., 2020)	0	X	0	X
2	Designing an Accounting Information System with Ijarah Akad at Sharia Hotels in Bandung (Yuliafitri & Nurhayati, 2019)	0	X	0	0
3	Accounting Information System for Consumer Financing at PT BANK BNI SYARIAH KC JAMBI (Meilano & Chandra, 2020)	0	X	0	0
4	Design of Web-Based Financial Information System Applications: Case Study at Al-Falah POLBAN Sharia Microfinance Institution ('Ulya et al., 2022)	0	X	0	0

Description: [1] Web-based system; [2] System implementation the halal food industry; [3] System for admin; [4] Sharia accounting calculation

*The 0 mark indicates that it meets the description

*The X marks indicate that it does not meet the description

RESEARCH METHOD

This research includes the stages of designing a web-based application using the SDLC methodology with modeling using a prototype. According to English grammar, the meaning of Software Development Life Cycle Methodology is a software development life cycle methodology, which means it is a methodology used for the process of making and changing systems. A system is usually a computer or information system (Ruparelia, 2010).

The prototype method is a process model that is applied when conducting communication with the client to create an application. The prototype does not present the original form of the system completely, but the prototype method plays an important role in research to provide an accurate application description to the client (Fernando, 2020). In this prototype model, developers and clients will greatly benefit in making an application because this prototype model provides an approach between developers and clients to continue communicating during application development, and developers will get feedback from clients that will be used to improve the application made (Baxter, 2006). Ichwani et al. (2021) highlight several advantages of the prototyping method, including its ability to facilitate the development of a more effective system by incorporating user feedback throughout the process. This approach allows for greater flexibility, enabling users to adjust their requirements as the prototype evolves. Additionally, it provides ample opportunities for continued interaction between users and designers, ensuring that the final system aligns closely with the users' needs and expectations.

This prototype method has several stages that have their respective roles during the software design process (Rahman & Basuki, 2023), which can be explained by each of these stages in the Figure 1 below.

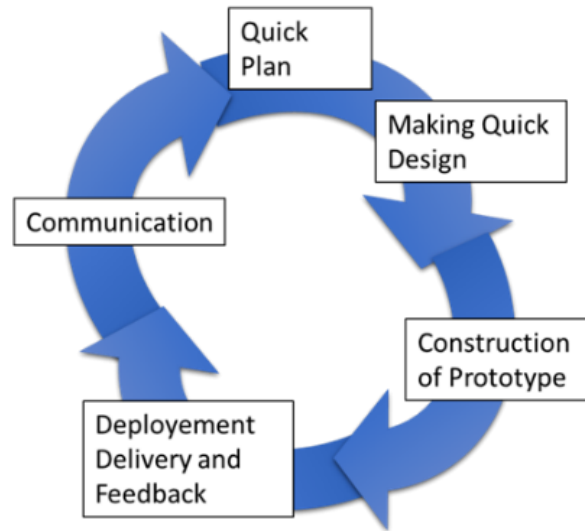


Figure 1. Stages of the Prototype Method

Source: Baxter (2006)

1. Communication

The communication stage identifies various needs according to the wishes of the client concerned. In this stage, there is a discussion between the developer and the client to adjust the calculations and formulations of Islamic finance so that the balance sheet and income statement appear.

2. Quick Plan

At this quick plan stage, the software designer undertakes quick planning according to the specifications of user needs based on the data collected during the communication stage. In this stage, the developer will design the required Islamic financial information system and other supporting needs.

3. Modeling a quick design

At this stage, the design team will create UML or other required models with effective design time to describe client needs based on an analysis of previously conducted Islamic financial information systems.

4. Construction of the prototype

Furthermore, at this stage, the designer will start building software based on the Islamic financial system data that has been collected. This development process focuses more on the main aspects of the software in the form of balance sheets and income statements with the intention that in the next process, the designer can quickly receive feedback from the client about the software created.

5. Deployment Delivery and Feedback

In this stage, the prototype will be submitted to the client to receive feedback from the results

of the Islamic financial information system prototype. The feedback will be used as a basis for improving the prototype to match the client's requirements specifications.

FINDINGS AND DISCUSSION

Data Collection Technique

The data collection technique used is qualitative, where the objects of this data collection are at 3 Halal Tsabita branches in Semarang, Indonesia: Halal Tsabita Tembalang, Halal Tsabita Kedungmundu, and Halal Tsabita Semarang. Data were collected through interviews with a duration of 60 minutes from August 11-23, 2023. The interview technique involves asking several questions directly to the manager responsible for the halal business. Then, this literature study was conducted by collecting information related to the sales system website application, which will help study problems and making decisions about designing this application.

System Requirements Analysis

This stage aims to identify system requirements through the analysis of both functional and nonfunctional requirements, with the details outlined below.

Functional Needs

The functional needs of the system include the following:

1. The system can be accessed through a login process consisting of an admin
2. This system can input piece management data
3. This system can import cashier, sales, order, and expense data
4. The system can search for cashier reports and income statements within a certain time range
5. This system generates income statement reports

Nonfunctional Needs

The non-functional needs of the system include the following:

1. This system requires a computer with 4 GB of memory RAM and 500 GB of hard disk
2. The application requires at least a Windows 7 operating system
3. This application is developed using PHP, Java, CI, and Bootstrap, and the database is stored in MySQL

Application Development

The application development stage was performed using the prototype method.

1. Communication

The following are important points resulting from the interview process with business owners, namely the bookkeeping process in the halal food business, which is still conventional and has not adopted sharia law in its calculations.

2. Quick Plan

In the quick plan stage, the design needs are determined using the data obtained in the communication stage.

3. Modeling a quick design

The Modeling Quick Design stage will use UML (Unified Modeling Language) such as Context Diagram, Use Case, and activity diagram, with one actor involved, namely the admin who will play a role in the system being built, as presented in the Figures below.

a. Context Diagram

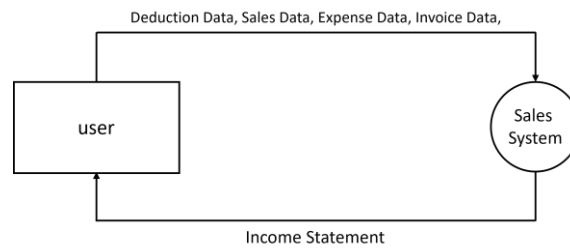


Figure 2. Context Diagram

Users can input deduction, sales, expense, and invoice data to get an automatic calculation of profit and loss statements that have been adjusted according to Sharia law.

b. Use Case

Use Case is useful for showing the sequence of activities in the system, describing the process of a system, and even displaying the sequence of activities in a process.

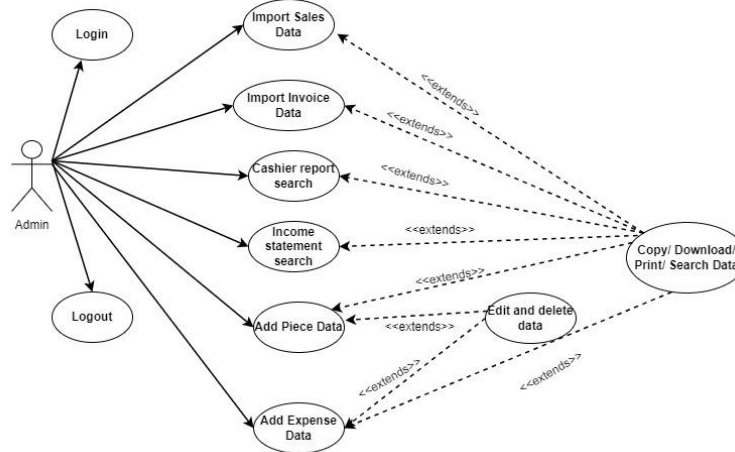


Figure 3. Use Case Diagram

As presented in the Figure 3, there is one actor, namely, Admin. The admin can login, add deduction data, search for cashier reports, import sales data, add expense data, import invoice data, search for profits and losses, and log out. When the activity conditions are met, actors can edit and delete data, as well as copy, download, print, and search the data table.

c. Activity Diagram

An activity diagram can be used to model processes occurring in a system. The process sequence of a system is described vertically. An activity diagram represents the development of a use case with a flow of activities. Activity diagrams are used to analyze use case diagrams by describing the actors, actions that need to be performed, and when they must occur.

- (i) Login Activity Diagram

Activity Diagram Login for users to enter username and password. The system then checks the account. If this is incorrect, the system will return to display the login page; if it is correct, the system will display the home page. The login

activity diagram is shown in Figure 4.

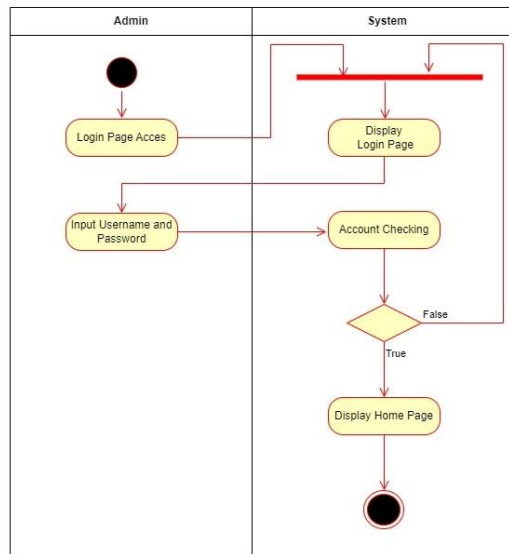


Figure 4. Login Activity Diagram

- (ii) Activity Diagram of Adding Deduction Data

Activity Diagram of Adding Deduction Data for users to enter the name of the deduction, percent deduction, and rupiah deduction. Then, the system will check. If the data are valid, the system will save the deduction data. If the data input is invalid, the system returns to display the deduction page. The Activity Diagram of Adding Piece Data is shown in Figure 5. Relevant to the needs of the current system, the zakat calculation process is carried out after finding the production cost and deducting taxes. Zakat, Infaq, and Sodaqoh are included in the income model after earning after tax.

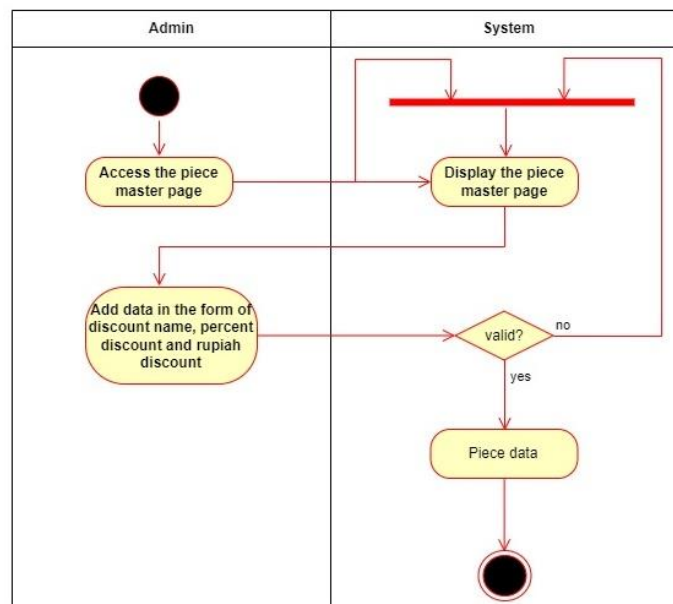


Figure 5. Activity Diagram of Adding Piece Data

- (iii) Activity Diagram of the Cashier Report Search
 Cashier Report Search Activity Diagram for users to search by selecting available outlets and selecting the desired time range. The system displays a data table based on the existing cashier data. The Cashier Report Search Activity Diagram is shown in Figure 6.

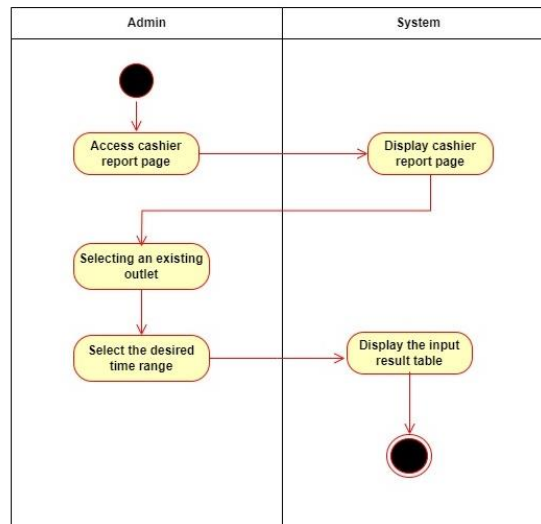


Figure 6. Activity Diagram of Cashier Report Search

- (iv) Sales Data Import Diagram Activity
 Activity Diagram Import Sales Data for users to import sales data. The system then checks whether the data imported in.csv format are correct. If correct, the system saves the sales data. If the system fails, it returns to the sales data page. The Activity Diagram of the Sales Data Import is shown in Figure 7.

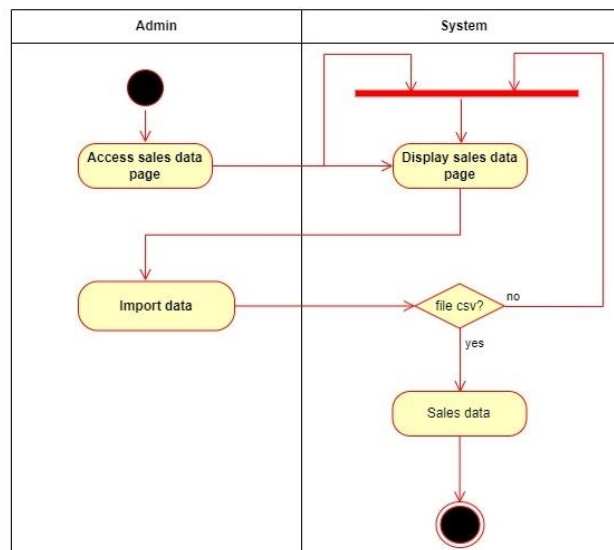


Figure 7. Activity diagram of import

- (v) Activity Diagram of Adding Expenditure Data

Activity Diagram of Adding Expenditure Data for users to add expense data in the form of name, nominal, date, and description. Then, the system will check. If the data are valid, the input data are stored as expense data. If the response is invalid, it will be returned to the expense page. The Activity Diagram of Adding Expense Data is shown in Figure 8.

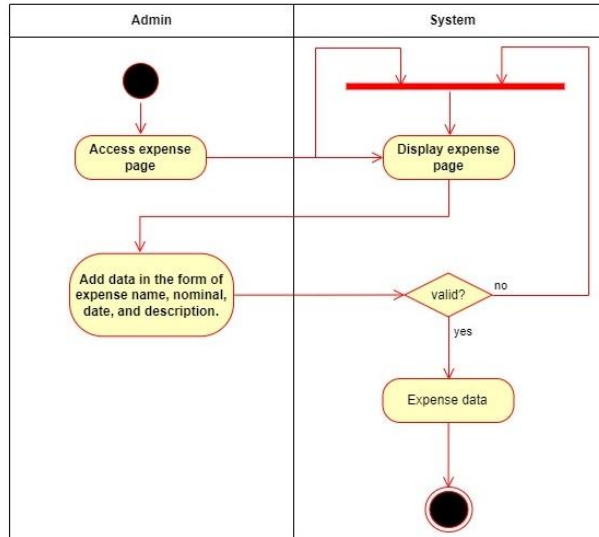


Figure 8. Activity Diagram of Adding Expense Data

- (vi) Invoice Data Import Diagram Activity

Activity Diagram of Import Data Invoice for users to import invoice data in .cs file format. The system will check. If correct, it will be saved in the database. If this is incorrect, the invoice data page. The Activity Diagram of the Invoice Data Import is shown in Figure 9.

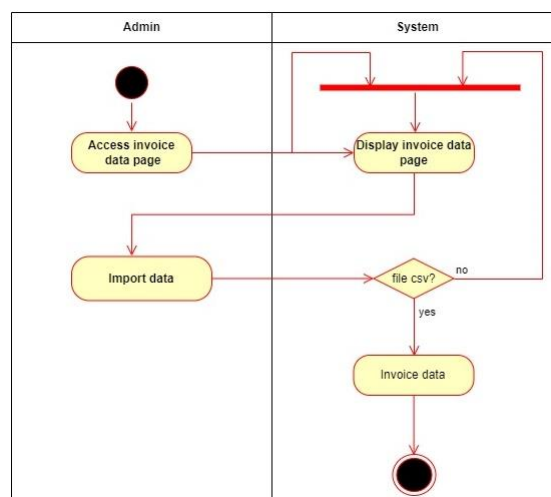


Figure 9. Activity Diagram of Import Invoice Data

- (vii) Activity Diagram of Income Statement Report Search
 Activity Diagram of Income Statement Report Search for users to search by selecting the desired time range. Then, the system displays revenue data based on sales data. Next, the system displays expense data and calculates and displays gross profit. Then, the system displays deduction data and calculates and displays net profit. The activity diagram of the Income Statement Report Search is shown in Figure 10.

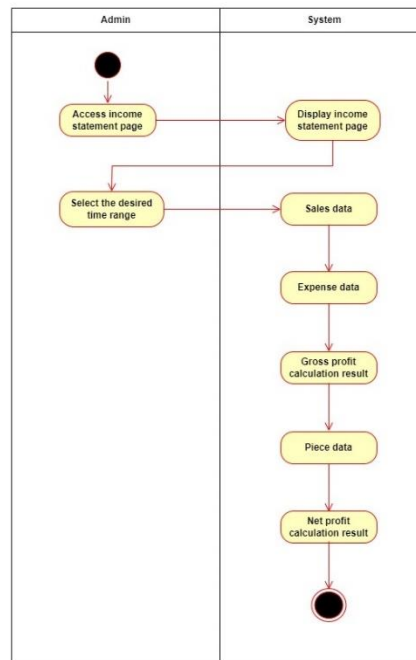


Figure 10. Activity Diagram of Income Statement

- (viii) Activity Diagram Log out
 Activity Diagram for users who log out or exit the account is shown in Figure 11.

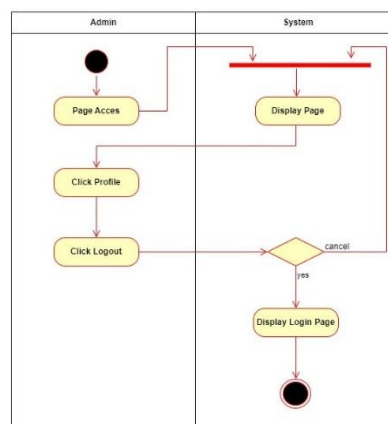


Figure 11. Activity diagram of the logout

d. Construction of the prototype

The process performed at this stage involves coding and testing using black-box and white-box testing.

- (i) System Testing Table with Black Box Method

System trials conducted on web-based applications of sales report information systems are conducted to evaluate the functional features contained in the system. Testing was performed using the black box method to ensure the system was free of errors (bugs). The following Table 2 shows the processes contained in the system mockup, which were tested using the black box method. This test attempts to identify errors such as incorrect or missing functions, interface errors, data structure or database access errors, and performance errors.

Table 2. Process in the System Mock-Up

No.	Test Case	Expected results	Testing Results
1	Login	Users can login using their username and password. If you login using an incorrect username and password, the login fails.	Success
2	Home	Users will be shown a dashboard in the form of a welcome greeting and directions to open the menu.	Success
3	Master Piece (<i>Master Potongan</i>)	Users can add the names of deductions, percent deductions, and rupiah deductions. Users can edit and delete data that have been added. Users can copy the data table on the page. Users can download data tables in CSV, Excel, and PDF. Users can print data. Users can search for data on the page.	Success
4	Cashier Report	Users can select existing outlets. Users	Success

No.	Test Case	Expected results	Testing Results
5	Sales Data	<p>can set the date range to search for searching cashier reports. Users can copy the data table on the page. Users can download data tables in CSV, Excel, and PDF. Users can print data. Users can search for data on the page.</p>	Success
6	Expenses	<p>Users can add expense names, amounts, dates, and descriptions. Users can edit and delete data that have been added. Users can copy the data table on the page. Users can download data tables in CSV, excel, and pdf. Users can print data. Users can search for data on the page.</p>	Success
7	Income Statement	<p>Users can search for income statements within a certain time period. After setting up the search, it obtains get the output of income, expenses, gross profit, sharia</p>	Success

No.	Test Case	Expected results	Testing Results
		deductions, and net profit.	
8	Invoice Data	Users can import invoice data. Users can copy the data table on the page. Users can download data tables in CSV, excel, and PDF. Users can print data. Users can search for data on the page.	Success
9	Logout	Users can log out.	Success

- (ii) System Testing Table with White Box Method
System testing using the white box method is a test to determine mathematical calculations on menus on websites. The detail of this process is presented in the Table 3 below.

Table 3. System Testing Table with White Box Method

No	Test Case	Expected results	Test Result
1	Cashier Report	Correct calculation	Success
2	Sales Data	Correct calculation	Success
3	Expenses	Correct calculation	Success
4	Income Statement	Correct calculation	Success

4. Deployment Delivery and Feedback

This Deployment Delivery and Feedback stage will submit the prototype to the Halal business owner to determine whether the results of the needs have run properly when implemented into this website.

a. Login Page

After entering the correct username and password, the main admin menu appears. If you enter the wrong username and password, login failure notification will appear. The user interface design of the main page is as follows.

b. Home Page

The main page is a user-logged in page. after the user has successfully logged in. Users will enter a page containing page which contains a welcome greeting and instructions to use for using features to process data. The user interface design of the home page is presented in the Figure 12.



Figure 12. Home Page

c. Master Piece (*Master Potongan*)

The deduction master page is a page where users can input deductions based on percentages or in rupiahs. The following figure is the design of the deduction master page.

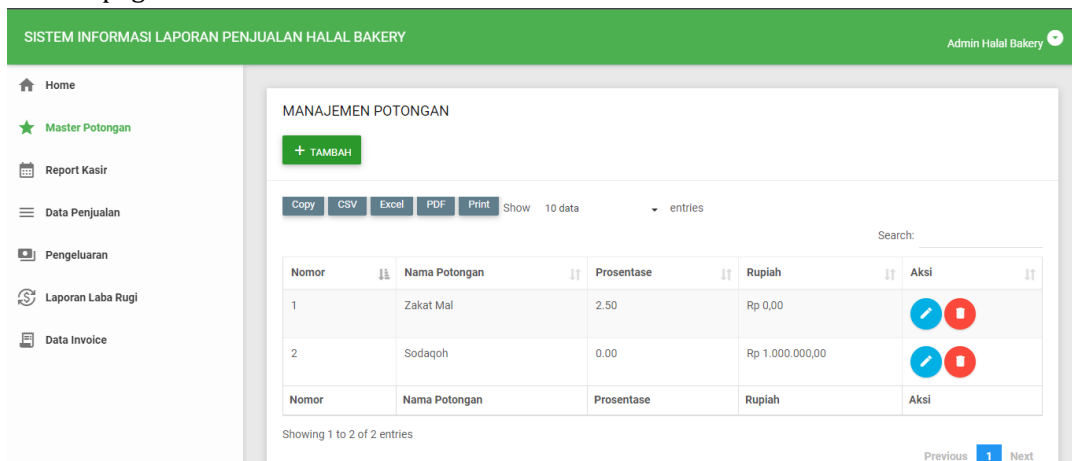


Figure 13. The page of Master Piece

Relevant to the needs of the current system, before a company's profits are truly defined in the conversion of profits, the deductions of obligations in the Shari'a are fulfilled in this section [Kurniawan et al \(2023\)](#). The Financial Accounting Standards Board and the Indonesian Sharia Council are constantly updating financial accounting standards. To address accounting problems faced by Islamic Financial Institutions, this system refers to the Financial Accounting Standards Statement No. 101-107 ([Rustiana, 2011](#)).

d. Cashier Report Page

On the cashier report page, users can search for cashier reports based on existing outlets within the desired time range. The user interface design of the cashier report page is presented in Figure 14.

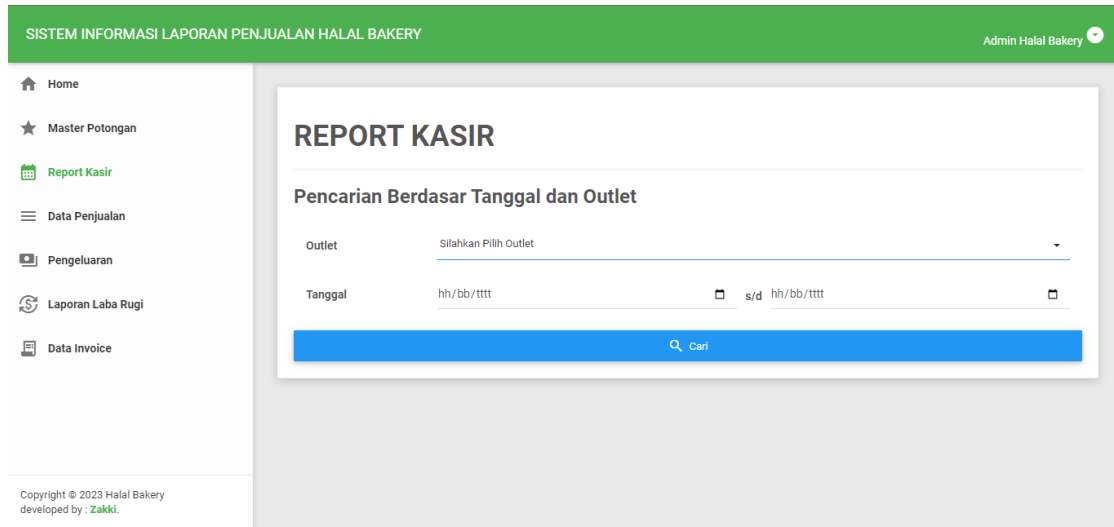


Figure 14. Cashier Report Page

e. Sales Data Page

Users can import sales data from this page. The user interface design of the sales data page is presented in Figure 15.

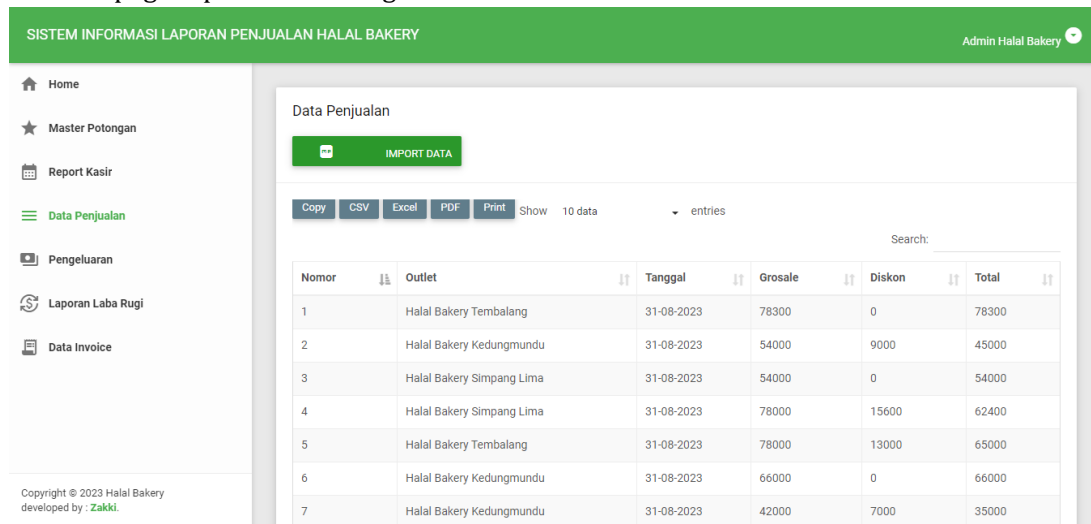


Figure 15. Sales Data Page

f. Expenses Page

Users can add expense data by entering the expense name, date details, nominal, and description. The user interface design of the expense data page as presented in the Figure 16 below.

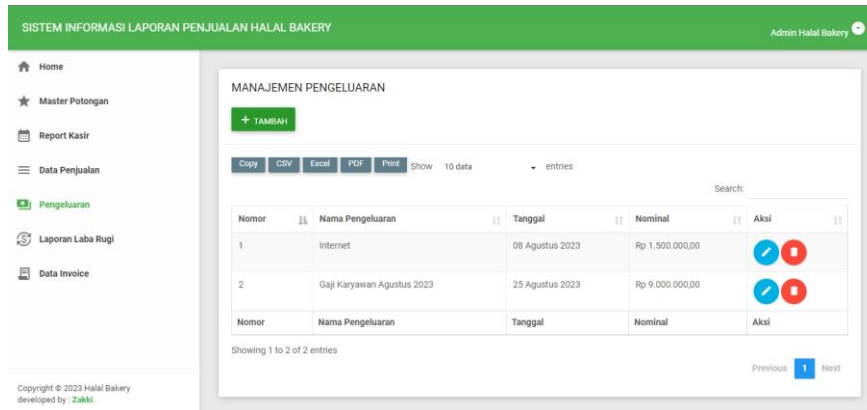


Figure 16. Expenses Page

- g. Income Statement Page
On this page, users can search for profit and loss statements in the desired time range. The user interface design of the profit and loss statement page is as follows.

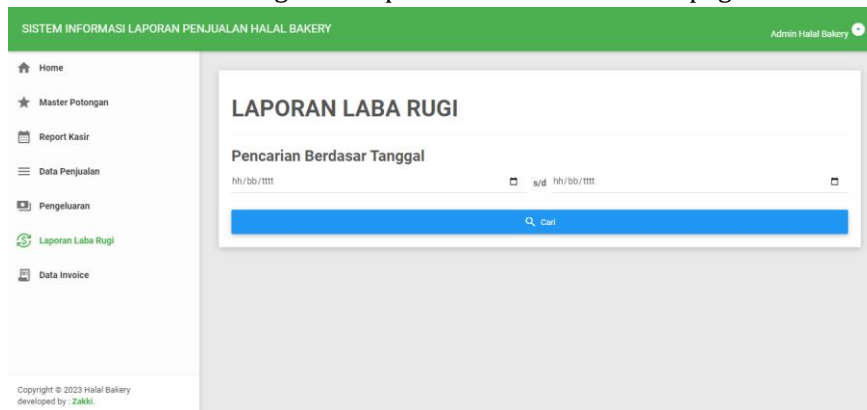


Figure 17. Income Statement

- h. Invoice Data Page
The invoice data page is a page where users can import invoice (order) data. The user interface design for the invoice data page.

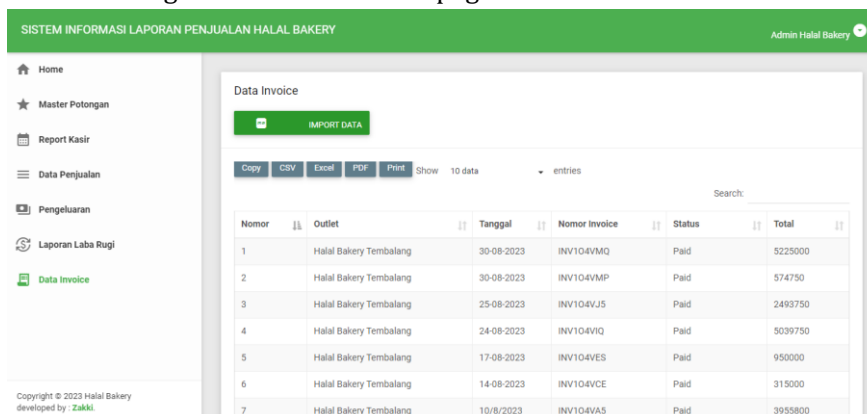


Figure 18. Invoice Data Page

i. Logout Page

The logout page is a page where the user logs out of the account and returns to the login page. Users can log out of the app on any page. This is because the logout button is in the upper right corner with a round sign and downward arrow. The user interface design for the logout page.



Figure 19. Logout Page

There are two opinions on the concept of sharia calculation provisions. The first opinion is profit calculation, and then processed zakat is taxed, and the second opinion is the calculation of profit calculations, tax burdens are then reduced by zakat obligations (Obaidullah, 2016). These two differences in opinion have different foundations that have been the focus of previous studies. The concept of reducing zakat from taxes occurs when zakat that has been paid to the zakat agency or zakat institution can be deducted from the remaining taxable profit of the taxpayer concerned. The requirements for reducing zakat from tax only apply if the zakat is paid to the zakat institution formed or authorized by the government (Marpaung, 2020).

In the context of this study, which is aligned with the concept of a second opinion, the purchase of production is taxed. Income profit after tax is charged, which becomes an obligation that becomes more practical to apply because the materials for making food that has been taxed and guaranteed halal will determine the cost of production, while the sales results have been subject to value-added tax so that in the profit and loss calculation system, profit can be calculated immediately after tax and zakat, which can be calculated through monthly calculations. In practice, when reporting the Annual Income Tax Return (Davies et al., 1984), taxpayers who deduct zakat must attach a photocopy of proof of payment. In Indonesia, regulations regarding zakat or religious donations as a deduction from gross income can be found in the Regulation of the Minister of Finance, No. 254/PMK.03/2010 (Sirait et al., 2017).

In line with the more developed Sharia concept in countries with a Muslim majority, there is a similar concept in previous studies such as Social Responsibility Accounting (SRA), where, like the Sharia approach, the focus of the SRA approach is on the presence of transparency, accountability, decision making, and improving reputation. The same aspect of both Sharia and SRA financial concepts is that both carry social responsibility in sharing company profits, but the difference is that in the Sharia context, the moral responsibility from the company's side is not only in horizontal relations between humans but also in spiritual responsibility to God as a vertical religious relationship.

From a theoretical perspective, consistent with the prototype system development approach, the developer finalizes the system, while industry stakeholders, as users of the halal system, provide feedback. This feedback aligns with two viewpoints on tax processing, specifically regarding the sequence in which zakat processing occurs after taxes are deducted. Once the system is completed and tested, it proves conducive to implementation. Furthermore, the testing of the system's validity and reliability demonstrates that the halal system operates effectively, adhering to the financial governance standards of the companies involved in the study.

CONCLUSIONS

The results of this research show that system development can be built well and produce satisfactory trials. Therefore, the scarcity of Sharia-based financial systems can be overcome by presenting an information system based on Website Applications. This website application

presents seven menus consisting of home, discount master, cashier report, sales data, expenses, invoice data, and income statement. Sharia law is implemented in the Master's deduction menu and income statement. Users can add zakat, *infaq*, and *sadaqah* deductions to the deduction master feature. Then, on the income statement menu, the system performs calculations based on Sharia law. This research fills the concept of the halal food industry with Islamic accounting and Sharia calculations by presenting the General System, a website-based information system.

This study contributes to the theory of halal-based information system development by developing a different approach to explain the halal financial understanding in the food and beverage business sector. On the managerial side, several important points are derived as follows: first, business owners must build and define business processes clearly so that additional costs due to the halal process can be clearly defined in advance. Second, tax burdens must be paid and reported to obtain the legality of the business so that the tax liability process can be calculated after the profit amount can be determined. Both practical implications will facilitate the implementation of sharia-based information systems, in addition to, of course, building an accounting training approach and the use of software that needs to be evaluated periodically.

LIMITATION & FURTHER RESEARCH

The author realizes that this Sharia-based financial information system research is far from perfect. Therefore, the authors want to provide suggestions to researchers who will conduct research in the same field that should be considered. The limitation of this study is that the halal system model refers to the business processes in the food and beverage sector. This system refers to food suppliers and production processes related to the bread-making process, and this may be different and irrelevant when applied to other industrial sectors, such as furniture manufacturing, the craft industry, and the banking sector, among others:

1. Complete the application that has been made so that the application not only presents information about the income statement, but is also connected to the sales system and raw materials in the warehouse.
2. There needs to be support and maintenance from the company for the development of this Sharia financial calculation application.
3. For other researchers who want to develop programs or write research results, such as adding and completing other features.

REFERENCES

- Alshater, M. M., Saba, I., Supriani, I., & Rabbani, M. R. (2022). Fintech in Islamic Finance Literature: A Review. *Heliyon*, 8(9), e10385. <https://doi.org/10.1016/j.heliyon.2022.e10385>.
- Altarturi, B. H. M., Altarturi, H. H., & Othman, A. H. A. (2021). Applications of financial technology in Islamic finance: a systematic bibliometric review. In *Artificial Intelligence and Islamic Finance* (pp. 138-161). Routledge.
- Aniqoh, N. A. F. A. & Hanastiana, M. R. (2020). Halal Food Industry: Challenges and Opportunities in Europe. *Journal of Digital Marketing and Halal Industry*, 2(1). <https://doi.org/10.21580/jdmhi.2020.2.1.5799>.
- Atasayar, L. & Ramadan, M. (2020). *Islamic vs. Conventional Corporate Finance: A Comparison* [Thesis, Lucerne University]. <https://doi.org/10.13140/RG.2.2.29946.11202>.
- Aziz, N. N. A., Aziz, N. A. A., Aziz, N. A. A., Omar, Z., & Hassan, W. H. A. W. (2015). A Review on the Emergence and Growth of Halal Studies. *Procedia Economics and Finance*, 31, 325-332. [https://doi.org/10.1016/S2212-5671\(15\)01204-6](https://doi.org/10.1016/S2212-5671(15)01204-6).
- Baxter, S. M., Day, S. W., Fetrow, J. S., & Reisinger, S. J. (2006). Scientific Software Development Is

- Not an Oxymoron. *PLOS Computational Biology*, 2(9), e87. <https://doi:10.1371/journal.pcbi.0020087>.
- Davies, J., St-Hilaire, F., & Whalley, J. (1984). Some calculations of lifetime tax incidence. *The American Economic Review*, 74(4), 633-649.
- Fernando, F. (2020). Implementasi E-Commerce Berbasis Web pada Toko Denia Donuts Menggunakan Metode Prototype. *JUSIFO (Jurnal Sistem Informasi)*, 6(2), 66-77. <https://doi.org/10.19109/jusifo.v6i2.6532>.
- Haleem, A. & Khan, M. I. (2017). Towards successful adoption of halal logistics and its implications for the stakeholders. *British Food Journal*, 119(7), 1592-1605. <https://doi.org/10.1108/BFJ-12-2016-0637>.
- Hibatullah, K. R. A., Ramadhan, N. L., & Panggiarti, E. K. (2023). Implementation of Sharia-Based Financial System by OJK: Promoting a Sustainable and Inclusive Economy. *Current Advanced Research on Sharia Finance and Economic Worldwide*, 2(3), 407-417. <https://doi.org/10.55047/cashflow.v2i3.666>.
- Hishamudin, N. H., & Abdullah, N. A. (2022). Secured Restaurant Reservation System. *Applied Information Technology and Computer Science*, 3(2), 165-184.
- Hussain, M., Shahmoradi, A., & Turk, R. (2016). An overview of Islamic finance. *Journal of International Commerce, Economics and Policy*, 7(01), 1650003. <https://doi.org/10.1142/S1793993316500034>.
- Ichwani, A., Anwar, N., Karsono, K., & Alrifqi, M. (2021). Sistem Informasi Penjualan Berbasis Website dengan Pendekatan Metode Prototype. *Prosiding SISFOTEK*, 5(1), 1 - 6.
- Jones, G. W. (2006). A demographic perspective on the Muslim world. *Journal of Population Research*, 23, 243-265. <https://doi.org/10.1007/BF03031818>.
- Khoramin, M. (2012). The Conceptual Framework of Islamic Accounting. *Academic Journal of Accounting and Economic Researches*, 1(1), 21-30.
- Kurniawan, R., Sukmana, E. T., & Dakhoir, A. (2023). Transformation of Sharia Financial Institutions the Case of Aceh: Politics, Strategy and Implementation. *Finansial Jurnal Akuntansi dan Perbankan Syariah*, 6(2), 131-152. <https://doi.org/10.31436/iiumlj.v27i1.469>.
- Lee, Y., & Kozar, K. A. (2006). Investigating the effect of website quality on e-business success: An analytic hierarchy process (AHP) approach. *Decision Support Systems*, 42(3), 1383-1401. <https://doi.org/10.1016/j.dss.2005.11.005>.
- Marpaung, A. (2020). Zakat Regulation as a Reduction of Income Tax in Indonesia. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 3(3), 2109-2116. <https://doi.org/10.33258/birci.v3i3.1143>.
- Meilano, R., & Chandra, E. (2020). Sistem Informasi Akuntansi Persediaan Barang Habis Pakai Di Politeknik Jambi. *Journal of Applied Accounting and Business*, 2(1), 25-32. <https://doi.org/10.37338/jaab.v2i1.51>.
- Obaidullah, M. (2016). Revisiting estimation methods of business zakat and related tax incentives. *Journal of Islamic Accounting and Business Research*, 7(4), 349-364. <https://doi.org/10.1108/JIABR-10-2014-0035>.
- Rahman, A. R. A. (2010). *An Introduction to Islamic accounting: Theory and Practice*. CERT Publications.
- Rahman, F., & Basuki, B. M. (2023). Implementation Model Prototyping In Application Design of Halal Food Product Detection For Overseas Muslim Students. *Inspiration: Jurnal Teknologi Informasi dan Komunikasi*, 13(2), 96-102. <https://doi.org/10.35585/inspir.v13i2.56>
- Rochaya, S., & Baharuddin, I. M. (2024). Development of Online Platforms that are Responsive to the Needs of Students in Building the Future of Islamic Education. *International Conference*

- on *Actual Islamic Studies*, 3(1), 1330-1345.
- Royal Islamic Strategic Studies Centre. (2023). *The Muslim 500*. <https://databoks.katadata.co.id/datapublish/2023/03/28/ini-jumlah-populasi-muslim-di-kawasan-asean-indonesia-terbanyak>
- Ruparelia, N. B. (2010). Software development lifecycle models. *ACM SIGSOFT Software Engineering Notes*, 35(3), 8-13. <https://doi.org/10.1145/1764810.1764814>.
- Rustiana, S. H. (2011). *The development of syariah accounting in Indonesia. Indicator*, 2012(2013), 2014-2015. https://www.ijbel.com/wp-content/uploads/2016/06/KLiISC_55.pdf.
- Sirait, R., Hutajulu, F. M., & Lumbantoruan, R. (2017). The Analysis Fiscal Correction in The Calculation of Income Tax Agency. *Fundamental Management Journal*, 2(2), 85-98. <https://doi.org/10.33541/fjm.v2i2.562>.
- Syamsiyah, N., & Ardana, Y. (2022). Halal industry in Indonesia: Opportunities, challenges and strategies. *IEB: Journal of Islamic Economics and Business*, 1(2), 36-46. <https://doi.org/10.19109/ieb.v1i2.13318>.
- 'Ulya, Q. A.-I., Mayasari, I., Arifulsyah, H., & Yuliantoro, H. R. (2022). Perancangan Aplikasi Sistem Informasi Keuangan Berbasis Web: Studi Kasus di Lembaga Keuangan Mikro Syariah Al-Falah POLBAN. *Journal of Applied Islamic Economics and Finance*, 3(1), 165-177. <https://doi.org/10.35313/jaief.v3i1.3871>
- Yahya, A. (2021). Sharia fintech development in Indonesia. *Proceedings of the 1st International Conference on Economics Engineering and Social Science*. <https://doi.org/10.4108/eai.17-7-2020.2302984>.
- Yulandha, N., Saputro, J. I., & Nissa, N. K. (2020). Design Information System Accounting Sales Website-Based (Case Study: PT Arbunco Wira Pandega). *APTISI Transactions on Management*, 4(2), 157-167. <https://doi.org/10.33050/atm.v4i2.1263>.
- Yuliafitri, I., Nurhayati, E., & Prima A, G. K. (2019). Perancangan Sistem Informasi Akuntansi Dengan Akad Ijarah Pada Hotel Syariah Di Bandung. *Banque Syar'i: Jurnal Ilmiah Perbankan Syariah*, 5(1). <https://doi.org/10.32678/bs.v5i1.1936>.