

Web-Based Zakat Information and Calculation System at Badan Amil Zakat Nasional (BAZNAS) of the Kendari City Using the Laravel Framework

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Abstract

Badan Amil Zakat Nasional (BAZNAS), or the National Amil Zakat Agency, is housed in Kendari City, particularly in the Anduonohu area. BAZNAS is a non-structural government institution independent and responsible to the Ministry of Religious Affairs. It faces several issues with data processing using Microsoft Excel, such as the difficulty of zakat data administration, the time and effort required to create reports, the slowness of search results, and the absence of a database. By developing a web-based zakat information and calculation system at BAZNAS of Kendari City with the Laravel framework, this study aims to discover solutions to issues experienced. The research framework for addressing the issues raised at BAZNAS of Kendari City included problem identification, theoretical foundation-based information searches, data collection through observation and interviews, and application development. Prototyping was utilized as a part of the system development, employing PHP, the Laravel framework and a MySQL database. Black-box testing was applied to ensure everything was working as intended. The test findings unveiled that the web-based zakat information and calculation system at BAZNAS of Kendari City functioned properly.

Keywords: *Web, PHP, Laravel*

1. Introduction

One of the obligatory duties of a Muslim is to practice zakat—the third pillar of Islam. Similar to other forms of devotion like prayer, fasting, and the Hajj, governed in great detail by the Qur'an and the Sunnah, likewise is the practice of giving zakat. However, some Muslims have not contributed to the zakat fund from their material wealth. It is because most people have limited knowledge about zakat and making zakat payments online and offline. Some Muslims are confused about how, when, and where to disperse their zakat.

The government established the Badan Amil Zakat Nasional (BAZNAS), or the National Amil Zakat Agency, under Presidential Decree No. RI. 8 of 2001 to be responsible for collecting and distributing zakat, infaq, and alms (ZIS) on a national scale. By codifying its authority to handle zakat on a national scale, BAZNAS has been given a boost by Law No. 23 of 2011 concerning Zakat Management. According to the legislation, BAZNAS is a non-structural government organization that is both autonomous and accountable to the President through the Minister of Religion. In light of this, BAZNAS, in conjunction with the government, is tasked with supervising the administration of zakat under the following Islamic principles: Islamic law, trustworthiness, expediency, fairness, legal certainty, integration and accountability.

The city of Kendari is only one of several locations where BAZNAS is active across the country. An information system that would streamline the amil's ability to analyze data and produce reports has yet to be available at BAZNAS of Kendari City. According

to conversations with BAZNAS of Kendari, the procedure for muzakki wanting to pay zakat requires them to visit the BAZNAS office to fill out the zakat payment form depicted in Figure 1.

* Semoga Allah SWT membalas apa saja yang telah kamu tetorkan dan Allah SWT memberikan berkah pada harta yang masih tersisa



BAZNAS
Badan Amil Zakat Nasional

Bukti Setor Zakat
Nomor :

Lembar 1
Untuk Anshiq Wajib Zakat

BADAN AMIL ZAKAT NASIONAL

Nama : _____
 Email : _____
 Alamat : _____
 No. Telp. : _____
 No. Hp. : _____
 Alamat : _____
 No. Telp. : _____
 No. Hp. : _____
 Zakat : / _____

| Objek Zakat | Dasar Pengenaan Zakat (Rp) | Kadar(%) | Jumlah Zakat (Rp) |
|-------------|----------------------------|----------|-------------------|
| | | | |
| | | | |
| Total | | | |

* Dapat dipergunakan sebagai pengurang Penghasilan Kena Pajak Penghasilan sesuai kadar yang berlaku (Pasal 9 ayat (1) huruf g Undang-Undang Nomor 7 Tahun 1983 tentang Pajak Penghasilan sebagaimana telah beberapa kali diubah terakhir dengan Undang-Undang nomor 17 tahun 2000).

Figure 1. Zakat Payment Form

BAZNAS staff input the data provided by the muzakki into a Microsoft Excel file. However, there are still several flaws in how data are gathered using Microsoft Excel.

- a) Manual entry;
- b) A risk of making a typo and losing data;
- c) No history of data changes made or data logs;
- d) No notifications;
- e) Difficulty in using simultaneously;
- f) Doubtful data accuracy;
- g) Time-consuming data reconciliation

After discussing with BAZNAS of Kendari and identifying the deficiencies, this study developed a web-based information system with the Laravel framework. The muzakki would have an easier time figuring out and making payments thanks to this website. It is simple for muzakki to make a zakat payment at any moment. It is the same for amil, who can input and obtain data and generate reports at any time from anywhere.

Literature review

Research conducted by entitled “Sistem Informasi Pengelolaan Zakat, Infaq, dan Sedekah Berbasis Web pada BAZNAS Kabupaten Barru” aims to design a management information system for zakat, infaq, and web-based alms that address the problem of managing zakat, infaq, and alms to BAZNAS Barru Regency. Making web using language PHP programming and with MySQL database [1].

Research conducted by entitled “Pengembangan Subsistem Aplikasi Zakat Online Berbasis Web pada BAZNAS Kota Bogor Menggunakan Model Waterfall” aims to

provide clarity on rights access between users, both muzakki and amil, providing a special page for muzakki, and can be a means to facilitate the public in the payment of zakat without being limited by distance and time and can help manage zakat by structured and well organized so that reporting data givers and zakat recipients can be reported quickly and accurately. Web creation using the PHP programming language and MySQL database [2].

Research conducted by entitled berjudul “Perancangan Sistem Aplikasi Pengolahan Zakat Berbasis Web Studi Kasus: Badan Amil Zakat Masjid Raya Andalas Kota Padang” aims to produce zakat processing application system at the Mosque Amil Zakat Agency such as at the Mosque Raya Andalas Padang. Making a web using PHP language and database MySQL [3].

Research conducted by entitled “Perancangan Sistem Informasi Pengelolaan Zakat Berbasis Web Pada Lembaga Amil Bakrie Amanah Jakarta” aims to make it easier for muzakki to make donations online, register to become a web-based donor, and help all sections in The Amil Bakrie Amanah Institute, Jakarta. Making web using language PHP programming and MySQL database [4].

Research conducted by entitled “Sistem Informasi Pengelolaan Zakat Profesi pada Badan Amil Zakat Nasional (BAZNAS) Kabupaten Bogor” aims to create an information system zakat payments online, provide information on BAZNAS programs or activities Bogor Regency to the community, and can view report information zakat income that is always updated. Making web using language PHP and database programming [5].

Theoretical basis

Zakat is a certain part of the assets that must be issued by every person. Muslims when they have reached the nisab or the conditions set. Zakat included one of the pillars of Islam. Zakat is also paid to those who are eligible accept it. In the Al-Quran it is stated, "Take zakat from some of their wealth, with that zakat you clean and purify them" (QS. at-Taubah [9]: 103) [6].

Information Systems

Information system is a system that is combination of software, hardware, infrastructure, and resources man.

Web Based Application Development

Web-based application is a program or application that runs on a web server and is accessed via a web browser [7].

Laravel framework

Laravel is an open framework source web applications with expressive and elegant syntax. They design creative and fun development to be really easy to use by developers [8,9].

PHP Programming Language

PHP: Hypertext Preprocessor is a Server-Side Programming language. PHP is a language or script usually embedded in HTML. PHP is widely used to create a web be more dynamic [10].

2. Method

The prototyping approach was applied to this research, producing a system prototype to facilitate communication between the developer and users.

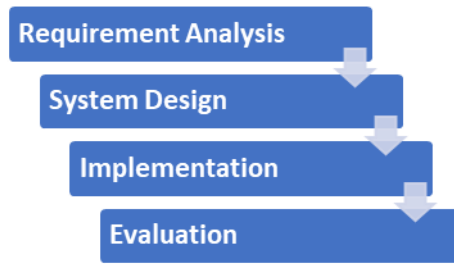


Figure 2. Flowchart

This research underwent several stages.

a. Requirement Analysis

The authors compiled the requirements for developing the application—the discussion results between the authors and BAZNAS staff.

b. System Planning

A system design was developed using the Use Case Diagram, the Entity Relationship Diagram, the Class Diagram, and the Activity Diagram to describe the system’s structure. Furthermore, the design for the system’s user interface was also created.

c. Implementation

Coding was performed to implement the system design and bring the application into existence.

d. Evaluation

Black-box testing was run for evaluation purposes.

3. Analysis Results

| No | Case Study | Expected Result | Result Obtained | Status |
|----------------|---|---|---|---------|
| Muzakki | | | | |
| 1 | Home menu | The muzakki will be redirected to the Home page. | After clicking the button, the muzakki was redirected to the Home page. | Succeed |
| 2 | Enter menu | The muzakki will be directed to the Login page. | After clicking the button, the muzakki was redirected to the Login page. | Succeed |
| 3 | Pay button | The muzakki will be directed to the Login page before paying. | After clicking the button, the system detected whether the muzakki had logged in. Then, the muzakki was directed to the page. | Succeed |
| 4 | The Zakat Calculation button with not logged-in muzakki | The muzakki will be directed to the Zakat Calculation page. | After clicking the button, the muzakki was directed to the Zakat Calculation page. | Succeed |

| No | Case Study | Expected Result | Result Obtained | Status |
|----|--|--|---|---------|
| 5 | status Register Now link on the Login page | The muzakki will be directed to the Register page. | After clicking the link, the muzakki was directed to the Register page. | Succeed |
| 6 | Register button on the Register page with complete data | The system will save the muzakki data and redirect him to the Home page. | After clicking the button, the muzakki was automatically registered and directed to the Home page with a logged-in status. | Succeed |
| 7 | Register button on the Register page with incomplete data | The system will direct the muzakki to the Home page with logged-in status. | After clicking the button with incomplete data, the system automatically notified the incomplete data, and the data were not saved. | Succeed |
| 8 | Login button on the Login page with valid authentication | The system will give notification on incomplete data. | After clicking the button by entering the correct data, the system redirected the muzakki to the Home page with a logged-in status. | Succeed |
| 9 | Login button on the Login page with an incorrect username and password | The system will perform validation. If the data do not match, the system will notify that the username and password are incorrect. The muzakki is still on the Login page with a not logged-in status. | After clicking the button and there were incorrect data in the username and password, the system automatically notified the incorrect username and password. The muzakki was still on the Login page with a not logged-in status. | Succeed |
| 10 | Exit menu | The system will remove the muzakki from the system. | After clicking the Exit menu, the muzakki automatically exited the system. | Succeed |
| 11 | Account menu | The muzakki will be directed to the Account page. | After clicking the Account menu, the muzakki was directed to the Account page. | Succeed |
| 12 | Pay Zakat button with logged-in | The system will direct the muzakki to the | After clicking the Pay Zakat button, the muzakki was directed | Succeed |

| No | Case Study | Expected Result | Result Obtained | Status |
|----|--|--|--|---------|
| 13 | muzakki status on the Home page Zakat Calculation button with logged-in muzakki status on the Home page | Zakat Calculation page as the first step before paying zakat. The system will direct the muzakki to the Zakat Calculation page. | to the Zakat Calculation page as the first stage of zakat payment. After clicking the Zakat Calculation button, the muzakki was directed to the Calculate Zakat page. | Succeed |
| 14 | Zakat Calculation button on the Zakat Calculation page with complete data | The system will automatically perform zakat calculations. | After clicking the zakat calculation button and the data entered were complete, the muzakki obtained the zakat calculation results. | Succeed |
| 15 | Zakat Calculation button on the Zakat Calculation page with incomplete data | The automatic system does not perform calculations and gives notifications on incomplete data. | After clicking the Zakat Calculation button, but the data were incomplete, the system automatically notified the incomplete data. | Succeed |
| 16 | Recalculate button on the Zakat Calculation page | The system will clear the entered data. | After clicking the Recalculate button, the entered data were cleared. | Succeed |
| 17 | Pay Zakat Monthly button with the not logged-in muzakki status | The system will automatically direct muzakki to the Login page. | After clicking the Pay Zakat Monthly button, but the muzakki had not logged in to the system, the muzakki was directed to the Login page. | Succeed |
| 18 | Login to the Zakat Calculation page | The system will redirect the muzakki to the Zakat Payment Confirmation page. | After clicking the Zakat Calculation button and the data entered were complete, the muzakki obtained zakat calculation results. | Succeed |
| 19 | Pay Zakat Annually button with not logged-in | The system will automatically redirect the muzakki to the | After clicking the Pay Zakat Annually button, but the muzakki had not | Succeed |

| No | Case Study | Expected Result | Result Obtained | Status |
|----|---|--|---|---------|
| 20 | muzakki status on the Zakat Calculation page Pay Zakat Annually button with the logged-in muzakki status on the Zakat Calculation page | Login page. The system will redirect the muzakki to the Zakat Payment Confirmation page. | logged in to the system, the muzakki was directed to the Login page to fill in the incomplete data. After clicking the Pay Zakat Annually button with the logged-in status, the muzakki was directed to the Zakat Payment Confirmation page. | Succeed |
| 21 | Confirm Now button with complete data on the Zakat Payment Confirmation page | The system will save confirmation data for zakat payments, and the muzakki will be directed to the Success page. | After clicking the Confirm Now button and completing the form, the muzakki was directed to the Success page. | Succeed |
| 22 | Confirm Now button with incomplete data on the Zakat Payment Confirmation page | The system will automatically provide notifications on incomplete data. | After clicking the Confirm Now button, but the form was not completed, the muzakki was notified of the incomplete data. | Succeed |
| 23 | Back button on the Zakat Payment Confirmation page | The system will redirect the muzakki to the Zakat Calculation page. | After clicking the Back button on the Zakat Payment Confirmation page, the muzakki was redirected to the Zakat Calculation page. | Succeed |
| 24 | Back to Account button on the Success page | The system will redirect the muzakki to the Account page. | After clicking the Back to Account button, the muzakki was directed to the Account page. | Succeed |
| 25 | Invoice button on the Account page | The system will direct the muzakki to the Preview Invoice page. | After clicking the Invoice button, the muzakki was directed to the Preview Invoice page. | Succeed |
| 26 | Search button on the Account Page after filling in the searched | The system will display the searched data. | After clicking the Search button and the searched data were filled in, the system displayed the | Succeed |

| No | Case Study | Expected Result | Result Obtained | Status |
|-------------|---|---|--|---------|
| | data | | searched data. | |
| Amil | | | | |
| 27 | Dashboard menu | The system will display data on total muzakki, total zakat, total transactions, verification process, gold price, expenditure, total finance, and statistics on zakat payments. | After clicking the Dashboard menu, the amil was directed to the Dashboard page, and the system displayed data on total zakat, total muzakki, total transactions, verification process, gold price, expenditure, total finance, and statistics on zakat payments. | Succeed |
| 28 | Zakat Data menu | The system will direct the amil to the Zakat Data page. | After clicking the Zakat Data menu, the amil was directed to the Zakat Data page. | Succeed |
| 29 | Gold Price menu | The system will direct the amil to the Gold Price page. | After clicking the Gold Price menu, the amil was directed to the Gold Price page. | Succeed |
| 30 | Expenditure menu after filling in the searched data | The system will direct the amil to the Expenditure page. | After clicking the Expenditure menu, the amil was directed to the Expenditure page. | Succeed |
| 31 | Zakat Report menu | The system will direct the amil to the Zakat Report page. | After clicking the Zakat Report menu, the amil was directed to the Zakat Report page. | Succeed |
| 32 | Expenditure Report menu | The system will direct the amil to the Expenditure Report page. | After clicking the Expenditure Report menu, the amil was directed to the Expenditure Report page. | Succeed |
| 33 | Deleted Zakat Data button on the Zakat Data page | The system will direct the amil to the Deleted Zakat Data page. | After clicking the Deleted Zakat Data button, the amil was directed to the Deleted Zakat Data page. | Succeed |
| 34 | Search feature on the Zakat Data page | The system will automatically perform a search and then display the searched data. | After clicking the Search button, the amil obtained the searched results. | Succeed |

| No | Case Study | Expected Result | Result Obtained | Status |
|----|---|--|---|---------|
| 35 | Pagination feature on the Zakat Data page | The system will automatically perform pagination. | After clicking the Pagination button, the amil was directed to the next or previous page containing the data. | Succeed |
| 36 | Update button on the Zakat Data page | The system will direct the amil to the Update Zakat Data page. | After clicking the Update button, the amil was directed to the Update Zakat Data page. | Succeed |
| 37 | Delete button on the Zakat Data page | The system will notify the amil about confirming the data to be deleted. | After clicking the Delete button, the amil received notification of approval for the zakat data deletion. | Succeed |
| 38 | Back button on the Deleted Zakat Data page | The system will direct the amil to the Zakat Data page. | After clicking the Back button, the amil was directed to the Zakat Data page. | Succeed |
| 39 | Search feature on the Deleted Zakat Data page | The system will display the searched data. | After clicking the Search button, the amil obtained the search results. | Succeed |
| 40 | Search feature on the Zakat Data page | The system will automatically perform a search and then display the searched data. | After clicking the Search button, the amil obtained the search results. | Succeed |
| 41 | Pagination feature on the Deleted Data Zakat page | The system will automatically perform pagination. | After clicking the Pagination button, the amil was directed to the next or previous page containing the data | Succeed |
| 42 | Save button on the Update Zakat Data page | The system will save the updated zakat data. | After clicking the Save button, the system saved the recently updated zakat data. | Succeed |
| 43 | Create Gold Price button on the Gold Price page | The system will direct the amil to the Create Gold Price page. | After clicking the Create Gold Price button, the amil was directed to the Create Gold Price page. | Succeed |
| 44 | Update button on the Gold Price page | The system will direct the amil to the Update Gold Price page. | After clicking the Update button, the amil was directed to the Update Gold Price page. | Succeed |
| 45 | Search | The system will | After clicking the | Succeed |

| No | Case Study | Expected Result | Result Obtained | Status |
|----|---|---|---|---------|
| 46 | feature on the Gold Price page Pagination feature on the Gold Price page | display the searched data. The system will automatically perform pagination. | Search button, the amil obtained the search results. After clicking the Pagination button, the amil was directed to the next or previous page containing the data. | Succeed |
| 47 | Save button if the form is not filled on the Create Gold Price page | The system will provide an incomplete data notification. | After clicking the Save button, but the form was incompletely filled, the amil received an incomplete data notification. | Succeed |
| 48 | Save button if the form is filled on the Create Gold Price page | The system will save gold price data. | After clicking the Save button with the data filled in completely, the gold price has been successfully saved. | Succeed |
| 49 | Save button on the Update Gold Price page | The system will save gold price data. | After clicking the Save button, the data were successfully saved. | Succeed |
| 50 | Create Expenditure button on the Expenditure page | The system will direct the amil to the Create Expenditure page. | After clicking the Create Expenditure button, the amil was directed to the Create Expenditure page. | Succeed |
| 51 | Deleted Expenditure Data button on the Expenditure page | The system will direct the amil to the Deleted Expenditure Data page. | After clicking the Delete Expenditure Data button, the amil was directed to the Deleted Expenditure Data page. | Succeed |
| 52 | Search feature on the Expenditure page | The system will display the searched data. | After clicking the Search button, the amil obtained the search results. | Succeed |
| 53 | Pagination feature on the Expenditure page | The system will automatically perform pagination. | After clicking the Pagination button, the amil was directed to the next or previous page containing the data. | Succeed |
| 54 | Update button on the Expenditure page | The system will direct the amil to the Update Expenditure page. | After clicking the Update button, the amil was directed to the Update Expenditure page. | Succeed |

| No | Case Study | Expected Result | Result Obtained | Status |
|----|--|---|--|---------|
| 55 | Delete button on the Expenditure page | The system will provide notification of approval for expenditure data deletion. | After clicking the Delete button, the amil received notification of approval for the expenditure data deletion. | Succeed |
| 56 | Save button if the form is not filled out on the Create Expenditure page | The system will provide an incomplete data notification. | After clicking the Save button, but the form was incompletely filled out, the amil received an incomplete data notification. | Succeed |
| 57 | Save button if the form is filled out on the Create Expenditure page | The system will save the expenditure data. | After clicking the Save button, and the form was completely filled out, the expenditure data were successfully saved. | Succeed |
| 58 | Save button on the Update Expenditure page | The system will save the expenditure data. | After clicking the Save button, the expenditure data were successfully saved. | Succeed |
| 59 | Back button on the Deleted Expenditure Data page | The system will direct amil to the Expenditure page. | After clicking the Expenditure button, the amil was directed to the Expenditure page. | Succeed |
| 60 | Search feature on the Deleted Expenditure Data page | The system displays the searched data. | After clicking the Search button, the amil obtained the search results. | Succeed |
| 61 | Pagination feature on the Deleted Expenditure Data page | The system will automatically perform pagination. | After clicking the Pagination button, the amil was directed to the next or previous page containing the data. | Succeed |

4. Conclusion

The web-based zakat information and calculation system for BAZNAS of Kendari using the PHP programming language, Laravel framework and MySQL database equipped with a zakat calculator, payment methods, information, and web-based reports functioned properly. Features such as the zakat calculation system, zakat information, and income and expenditure reports on the web also worked as intended.

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