

# Cash Waqf Information System

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**Keywords:** Waqf, Cash Waqf, Information System, Payment Gateway, Automation.

**Abstract:** Waqf is a mobile or immobile thing that is provided for public importance as a charity. Cash waqf is highly potential in creating prosperity in the economic sector and able to contribute in economic development. Nevertheless, the great potency has not given its good effects yet in the real world circumstances, it happens because the activity of the waqf process is still complicated and conventional. Therefore, this research will produce a website and mobile based platform of management information system of cash waqf. This application will be integrated with the payment gateway system so that the payment process of cash waqf transaction can be automated. The first experiment shows that the cash waqf transaction process can be more efficient in time and the payment process is automatic as a result, it can ease waqif that will be having cash waqf payment.

## 1 INTRODUCTION

Waqf is a legal action of waqif (a person that has waqf activity) to separate and/or give part of his belongings to be utilized forever or for the desired certain time period with the importance of worship needs and/or public prosperity that is corresponding to sharia. Data derived from the minister of religious affairs in 2013 shows that 87.12% of Indonesian inhabitants are muslim. Indonesia, a country that has the muslim majority of its population, affects systems that are applied in the Republic of Indonesia, one of them is the economic system. Indonesia's economical system can't be separated from economical system in Islam which contains instrument of monetary in Islam, one of them is cash waqf.

Cash waqf is regarded as a highly potential to create economic prosperity and be able to contribute to economic development, some of them are decreasing rate of unemployed citizens, increasing society's prosperity and decreasing rate of poverty. In Indonesia, Cash waqf also has the same potency as several other countries that are able to manage cash waqf productively and afford to give contributions to the country's economic sector. These matters are supported with the existence of the acceptance rate of cash waqf in Indonesia that must have reached 77 trillion rupiahs by the year. Beside of that, in Indonesia active users of smartphone grew from 55 millions people in 2015 to 100 millions people in 2018 with those amount Indonesia is able to be a country with greatest total of

smartphone active users in the fourth position among other countries worldwide, it means that every citizen in Indonesia has high tendency to have his own smartphone and with the smartphone monetary transaction could be easier.

Considering several facts above, the writer makes this research focus on innovation in the sector of management information systems to collect cash waqf with mobile and website based applications that afford to utilize users to offer and monitor the distribution of collected cash waqf funds. The mobile and website based cash waqf information system are expected to be able to restore public trust towards cash waqf management.

There are some researches those are focused on the fundraising of waqf fund and cash waqf. Mohd Shahrul Nizam, et al. (Mohd Shahrul Nizam Mohd Danuri and Ahmad, 2019) The writer was using website platform with crowdfunding framework which the waqifs are able to propose the creation of waqf program which then the admin of official waqf institution could validate the program and the waqf program can be published then other waqifs could pay to the waqf program by several payment methods facilitated by payment gateway service. Ezra Berakon, et al. (Izra Berakon and Yasinta, 2017) Cash waqf Mobile application with E-Payment technology for cash waqf payment with self assessment system. Haneffa Muchlis Gazali, et al. (Haneffa Muchlis Gazali, 2019) Took advantages of blockchain technology and FPX payment gateway for cash waqf

collected funds distribution from waqifs directly to schools that need donation for educational purposes. Suhaili Alma'amun, et al. (Suhaili Alma'amun and Adnan, 2018) Adopted a case study of waqfworld.org which is a waqf crowdfunding platform as a mediator between waqifs and waqf official institution. Etsuaki Yoshida, et al. (Yoshida, 2019) Discussed about how cash waqf be used in maximal way with fintech (ICT Technology) and waqf management with ICT technology that relevant with islam guidelines. Mohd Hafiz bin Hj. Fauzi, et al. (Mohd Hafiz bin Hj. Fauzi and Zahrin, 2019) The paper aims to explore the cash waqf service of BMMB in relation to online facility and its role towards cash waqf contribution besides of that it also provides an input to the waqf institutional and practitioner on how technology plays a significant role in influencing cash waqf donors. J A Asyraf, et al. (Asyraf and Luckyardi, 2019) The study identifies the effectiveness of one of the online fundraising sites developed in Indonesia, as well as the benefits provided by the site. Farid Izda Iskandar, et al. (Iskandar, 2019) The research has a purpose to determine the method of fundraising cash waqf at Pondok Modern Tazakka and to find out the strategy development of fundraising by Laziswaf Pondok Modern Tazakka. Rahmatullah, et al. (Rahmatullah and Putra, 2020) The paper aims to offer solutions for Waqaf Institutions who want to make the watershed funds in digital but with several stages to note, they are Digital Analysis, Digital Vision, Digital Message, Digital Channel, Digital Campaign, and Digital Report.

## 2 SYSTEM DESIGN

Figure 1 is the visualization of system design in high level view which represents portrayal of the applications that will be developed in this research. There are two general kinds of actions that can be done by Admin and Wakif. The first one is ability of Wakif to access waqf program hence doing the transaction to pay for the cash waqf to the intended program, afterwards when the transaction successful, it will be stored in transaction history and Wakif is able to see the usage of the cash waqf usage report. Meanwhile the admin can manage some datas, they are cash waqf programs, cash waqf program categories and cash waqf transactions. Admin can manage the cash waqf program by having access for CRUD or modifying the data and creating cash waqf program report. For the cash waqf transaction admin has duty for reviewing the transaction, when the transaction is suc-

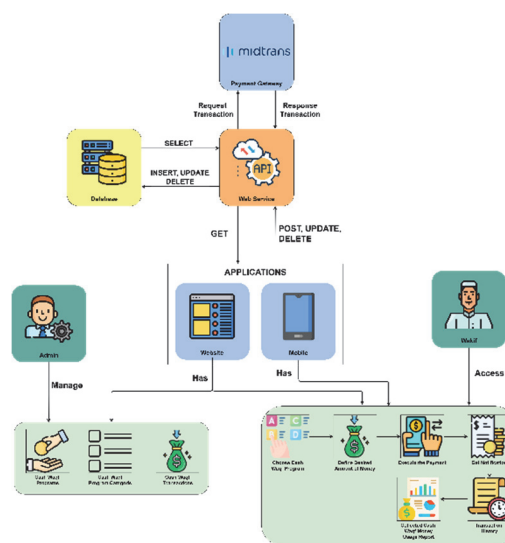


Figure 1: System Design.

cess and the money has been accepted then the waqf certificate and deed can be uploaded hence Wakif can download the uploaded documents.

### 2.1 Database

Database is a media for storing all of data that will be used in the applications, database has functions to store all of the cash waqf transactions, beside that it also can be utilized as storage for all of multimedia files that are needed by the applications. The system will use a relational database, MySQL.

### 2.2 Web Service

Web service is a service that is created to do all of the data exchange interaction between applications with the database. Web service will give data output from the database that will be sent to the application in JSON (JavaScript Object Notation) format. The system will use a web service that is built with Express.js framework.

### 2.3 Payment Gateway

Payment gateway is a system that authorizes every payment process from client to the company. The system will use Midtrans payment gateway service. The payment gateway will make cash waqf payment from waqifs verification process in automated way possible. When the payment is received by waqifs, it will notify the applications through integrated web service.

## 2.4 Web Application

Waqifs are able to pay for permanent and time period based cash waqf in the website platform by choosing a cash waqf program which then executes the payment process with the desired payment method. The website platform also provides dashboard for waqifs in which they are able to review the summary of cash waqf payment activities those have been done before such as how many times they have paid for cash waqf, total of all of paid cash waqf and the most current cash waqf payment. Admin page is also provided in the website platform where the admin of the official waqf institution (BWI) can manage cash waqf programs, categorization of cash waqf programs, and permanent and time period based cash waqf payment.

## 2.5 Mobile Application

Mobile application of cash waqf information system will be used by waqif for cash waqf payment transaction. To do the transaction of cash waqf payment, waqifs are able to choose the desired cash waqf program, and then complete the transaction with the chosen payment method. The payment that has been done by waqif will be verified automatically by Midtrans payment gateway that has been integrated with the application. After doing the transaction, waqifs are able to monitor the usage of the paid cash waqf money by report of cash waqf funds utilizations for the picked cash waqf program. On the other hand, waqif are also able to review their cash waqf payments in cash waqf payment history feature.

## 3 EXPERIMENTAL RESULT

This experiment will be conducted to ensure whether the website and mobile application have been working as expected.

### 3.1 Mobile Application

Figure 2 is the snapshot of waqf programs list available in the system, users are able to navigate to one of the desired waqf program to see the detail of the selected waqf program.

Figure 3 is the display of selected waqf program. The page contains some informations such as title of the waqf program, category of the waqf program, collected cash waqf funds, waqf program description, button to for viewing list of waqifs who have paid to the waqf program, and button to navigate list of waqf program monitoring report. Executing cash

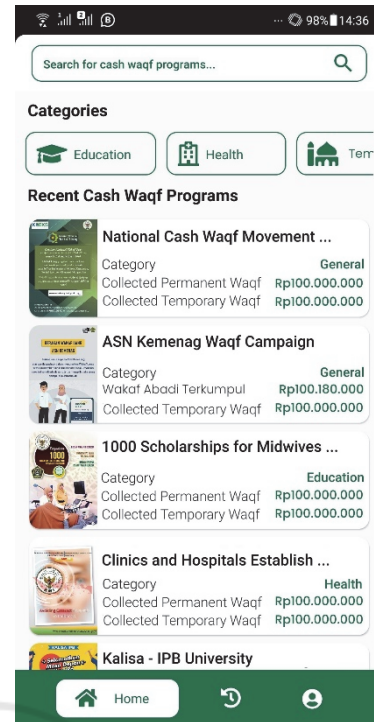


Figure 2: Display of Waqf Programs List.

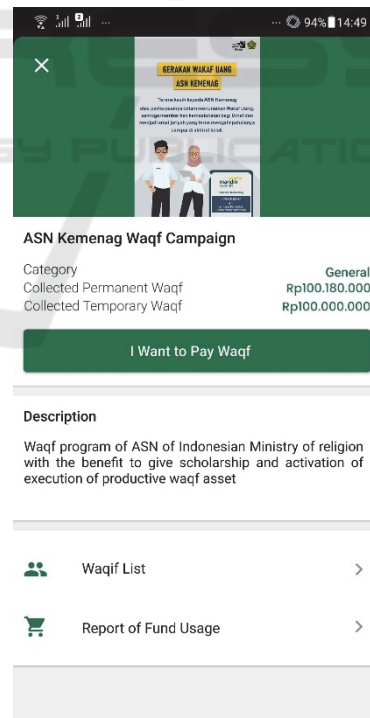


Figure 3: Display of Selected Waqf Program Detail.

waqf transaction can be directly done in the page by pressing the “Saya ingin berwakaf” labelled button



Figure 4: Display of Collected Cash Waqf Program Funds Usage.

Figure 4 is the display of monitoring report of collected cash waqf funds usages. There are some informations that can be seen in the page such as date and time from the report, description and image if available.

Figure 5 and Figure 6 show payment forms of cash waqf that have to be filled by waqif if he want to make payment to the desired waqf program. In the page waqif have to fill some fields such as amount of money to be paid, kind of cash waqf, waqif name, payment method, and other additional informations like bank account for paid cash waqf money reimbursement and period of time (in annual form) for time period based cash waqf.

Figure 7 is the snapshot of history of cash waqf payment that has been done by waqif. The page shows some informations those are date and time of the transaction, title of waqf program, category of cash waqf, payment status and amount of money paid for the waqf program.

Figure 8 and Figure 9 represent the details of cash waqf transaction. The page contains some informations such as date and time of the transaction, category of cash waqf, amount of money paid for the waqf program, waqif name, title of waqf program, payment code, status of the payment, buttons for downloading

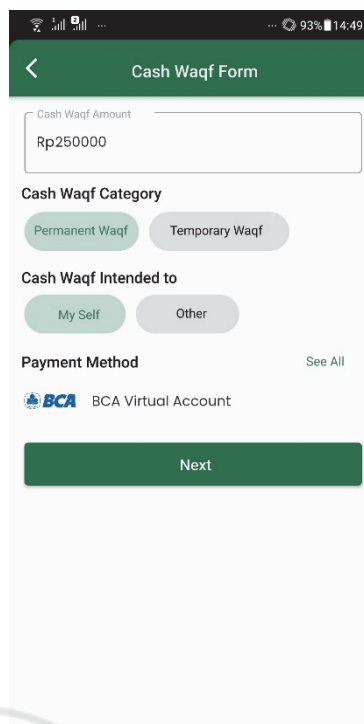


Figure 5: Display of Permanent Cash Waqf Payment Form.

the cash waqf certificate and cash waqf deed documents, and some other additional informations like period of time defined and the due date of the cash waqf reimbursement, and bank account for the reimbursement of time period based cash waqf.

### 3.2 Web Application

Fig 10 is the snapshot of waqf programs list available in the system, users are able to navigate to one of the desired waqf program to see the detail of the selected waqf program. Users are able to navigate to the desired waqf program by filtering from the categories of waqf program and by keyword of waqf program title. Fig 11 is the display of selected waqf program.

The page contains some informations such as title of the waqf program, category of the waqf program, collected cash waqf funds, tab for reading waqf program description, and tab to navigate list of waqf program monitoring report. Executing cash waqf transaction can be directly done in the page by pressing the "Berwakaf" labelled button.

Fig 12 is the display of monitoring report of collected cash waqf funds usages. There are some informations that can be seen in the page such as date and time from the report, description and image if available.

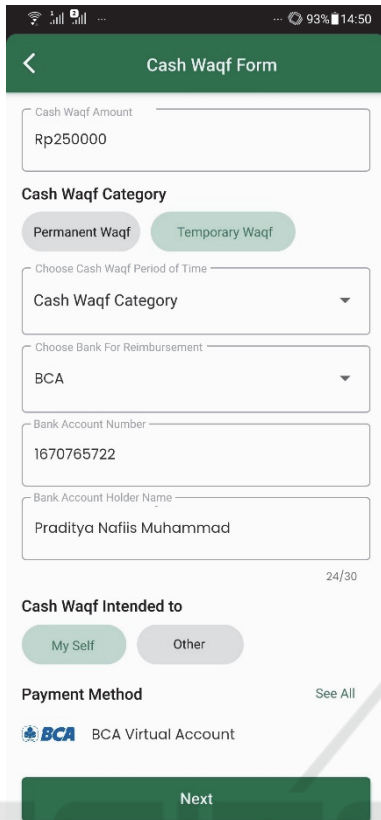


Figure 6: Display of Time Period Based Cash Waqf Payment Form.

Fig 13 and Fig 14 show payment forms of cashwaqf that have to be filled by waqif if he want to make payment to the desired waqf program. The website provided the same form as the mobile application does, but it displayed in the form of modal pop up containing the form.

Fig 15 is the display of history of cash waqf transaction that has been done by waqif. The figure is the history of permanent cash waqf, there is also menu provided for the time period based cash waqf. The feature can be found in waqif dashboard page.

Fig 16 and Fig 17 represent the detail of cash waqf transaction. Like the feature provided in the mobile application but the transaction detail is served in form of modal pop up that will be displayed when user clicks detail button of the selected history of cash waqf payment detail button.

### 3.3 Comparison

Table 1 shows the comparisons of the proposed system with related works in terms of features of the application.

Table 2 shows a comparisons of payment system using and without payment gateway.

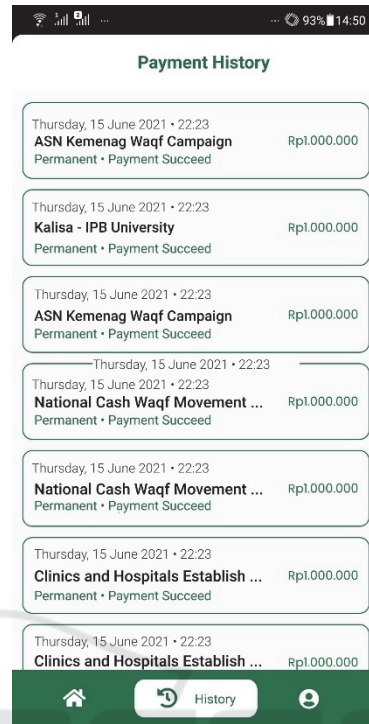


Figure 7: Display of History of Cash Waqf Payment.

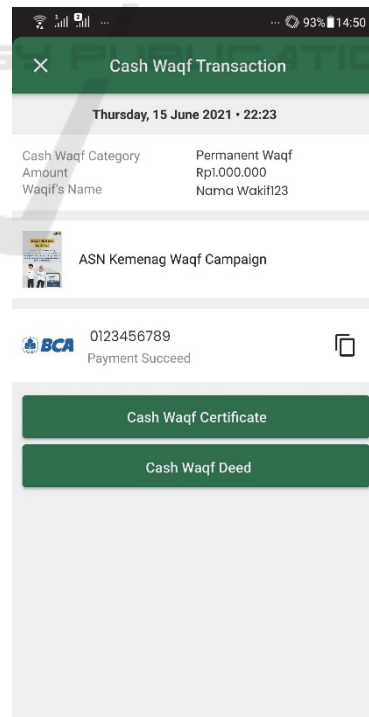


Figure 8: Display of Permanent Cash Waqf Transaction Detail.

Table 1: Related Works Comparison Table.

Title	Web App	Mobile App	Transaction History	Payment Gateway
(Mohd Shahrul Nizam Mohd Danuri and Ahmad, 2019)	C		C	C
(Izra Berakon and Yasinta, 2017)	C	C		
(Haneffa Muchlis Gazali, 2019)	C			
(Suhaili Alma'amun and Adnan, 2018)	C			C
Our Proposed System, 2021	C	C	C	C

Table 2: Payment System Comparison.

Feature	With Payment Gateway	Without Payment Gateway
Payment Method	Many Choices	Few Choices
Payment Confirmation	Automatic and Instant	Manual
Payment Expiration	24 hours	Not Specified

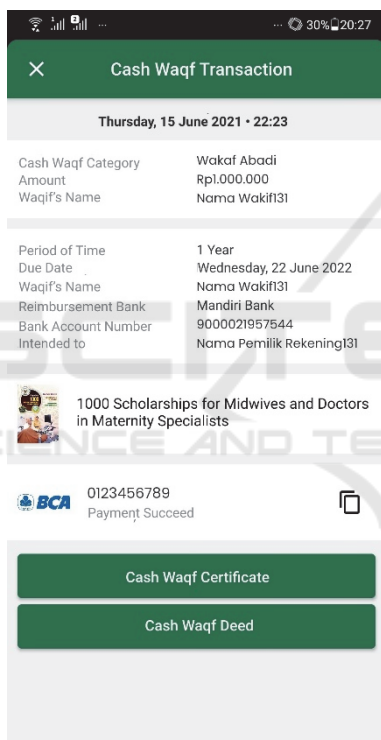


Figure 9: Display of Time Period Based Cash Waqf Transaction Detail.

## 4 CONCLUSION

Waqf is a mobile or immobile thing that is provided for public importance as a charity. Cash waqf is highly potential in creating prosperity in the economic sector and able to contribute in economic development. Nevertheless, the great potency has not given it's good effects yet in the real world circum-

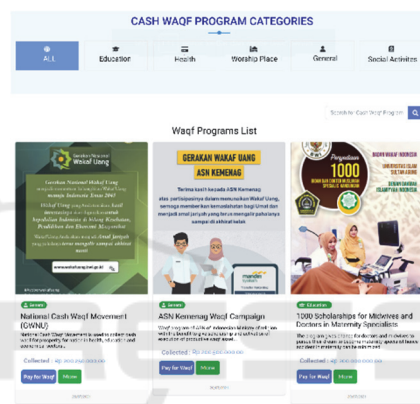


Figure 10: Display of Waqf Programs List.

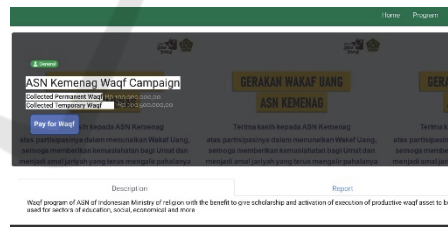


Figure 11: Display of Selected Waqf Program Detail.

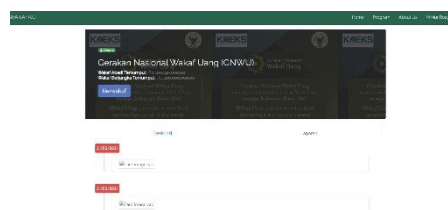


Figure 12: Display of Collected Cash Waqf Program Funds Usage.

stances, it happens because the activity of the waqf process is still complicated and conventional. Therefore, this research will produce a website and mobile

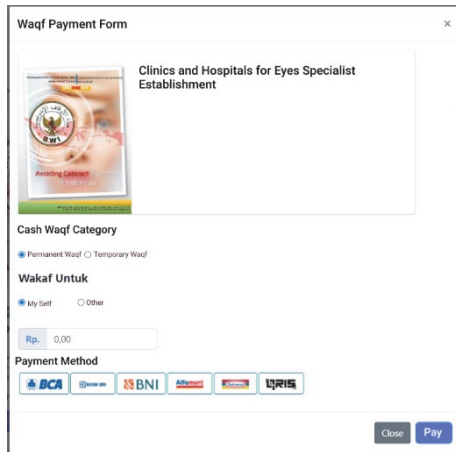


Figure 13: Display of Permanent Cash Waqf Payment Form.

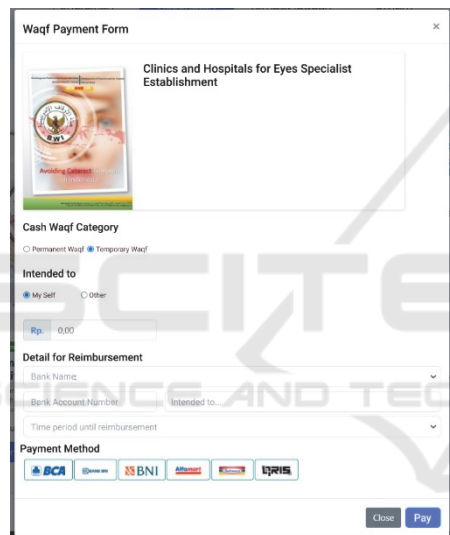


Figure 14: Display of Time Period Based Cash Waqf Payment Form.



Figure 15: Display of Cash Waqf Transaction History Page.

based platform of management information system of cash waqf. This application will be integrated with the payment gateway system so that the payment process of cash waqf transaction can be automated. The first experiment shows that the cash waqf transaction process can be more efficient in time and the payment process is automatic as a result, it can ease waqif that will be having cash waqf payment.

The applications only cover cash waqf fundraising, and are not able yet to cover all of the process

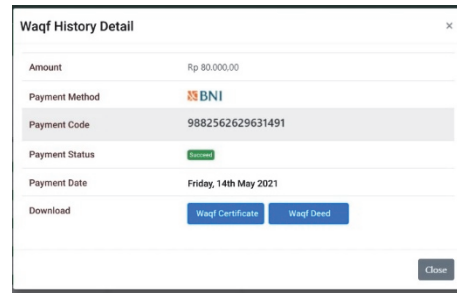


Figure 16: Display of Permanent Cash Waqf Transaction Detail.

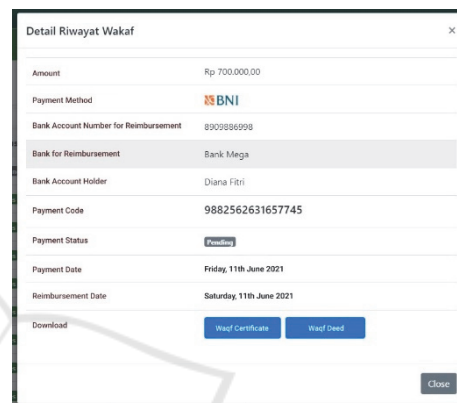


Figure 17: Display of Time Period Based Cash Waqf Transaction Detail.

of management of distribution of collected cash waqf funds in a solid way. For the future work, the writer suggests to widen the coverage of the applications until the distribution and management process of collected cash waqf funds. So that the problems of cash waqf in Indonesia entirely can be solved just by using the applications.

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