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Implementation of Zakat Collection and Distribution System in Ibadan Metropolis Using WordPress Core Architecture and Architectonics

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Abstract

Zakat and Sadaqah are primary forms of charity in Islam meant to help the poor and needy. However, the collection and distribution of these forms of charity can be beset by challenges. The challenges include inadequate infrastructure for collecting and disbursing funds, a lack of transparency and accountability, corruption, and cultural and social barriers to giving. The study argues that addressing these challenges requires a technological approach that involves implementing forms for collecting and distributing Zakat and Sadaqah using WordPress core files. The study's key objective is to ensure transparency, accountability and avoid the corrupt practice of multi-collection of Zakat and Sadaqah funds using digital platforms to collect, manage, and distribute zakat, which is very useful because it provides much convenience for its users. Therefore, the study presents a technological (software) solution to some challenges that Zakat and Sadaqah institutions face while collecting and distributing Zakat and Sadaqah using an existing content management system (WordPress) core architecture. In achieving this, we used the Design Thinking method. The design process adopted the Agile software design steps in the implementation of the system. The study resulted to revolutionized management of zakat funds and created a more efficient and accountable ecosystem for the collection and distribution of Zakat in Ibadan.

Keywords: Zakat and Sadaqah, Islam, WordPress, Charity, Poverty alleviation, System Implementation

Introduction

Zakat and Sadaqah are among the most essential forms of charity in Islam and play a crucial role in alleviating poverty and suffering. Zakat is the obligatory charity that all able-bodied Muslims must pay, while Sadaqah is a voluntary charity that is encouraged but not compulsory. These forms of charity provide significant resources for helping the poor and needy and promoting social justice and solidarity. One of the most fundamental components of Islam is zakat. Its nature, structure, and purpose can be more fully understood in the context of the Islamic way of life. Therefore, it is crucial to clarify Islam's fundamental principles and emphasise zakat as a fundamental institution of social order Abdullah & Suhaib (2011).

However, despite the importance of Zakat and Sadaqah, their collection and distribution can be beset by some challenges. These challenges may be due to various factors, including inadequate

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infrastructure, a lack of transparency and accountability, corruption, and cultural and social barriers to giving. Zakat distribution and collection may face some challenges including poor management, a lack of coordination, and ineffective collection and distribution. Studies has also revealed that most Zakat institutions have started to use technology systems within their businesses, particularly regarding Zakat payments, even though they lack technological usage for Zakat distribution.

The architecture and design of WordPress play a critical role in the system's performance, scalability, and flexibility. WordPress is built on a modular architecture consisting of several core components, including the core, themes, plugins, widgets, templates, and APIs. However, this efficient architecture has yet to be used as a solution to the collection and distribution of zakat, most especially in Ibadan and the Metropolis.

This study tends to look at the development of a solution that will solve some of the challenges being faced by institutions who distribute zakat and the process of collection in order to make judicious use of zakat in alleviating poverty in the society.

The study is significant because it is able to identify some of the challenges in the collection of zakat and sadaqah and proffers solution to it through the usage of WordPress plugins to provide solutions to collection and distribution issues faced by stakeholders in Ibadan metropolis.

Literature Review

Zakat, one of the Five Pillars of Islam, is a mandatory form of charitable giving that holds significant importance in Islamic finance. This literature review covers researches conducted on zakat collection and distribution, focusing on its role within Islamic finance, the functioning of zakat institutions, its impact on poverty alleviation, comparative studies across different countries, and its overall impact on economic development. It covers contextual review of studies done on the usage of technologies for the collection and distribution of zakat.

Zakat collection and distribution mechanisms are fundamental to ensuring effective utilization of zakat funds. Bari and Naeem (2016) empirically analyze the role of zakat in reducing poverty in Muslim majority countries, shedding light on the importance of proper collection and distribution channels. Elgari (2008) examines the relationship between zakat and

poverty alleviation, emphasizing the potential impact of zakat in addressing societal welfare needs. The principles of zakat are deeply intertwined with Islamic finance. Siddiqi (2008) provides a comprehensive survey of Islamic banking and finance, highlighting the role of zakat as a pillar of the Islamic economic system. Mohieldin, Iqbal, and Rostom (2017) explore the relationship between Islamic finance and economic growth, emphasizing the significance of institutional development for the effective implementation of zakat.

Zakat institutions play a crucial role in the collection, management, and distribution of zakat funds. Chapra (1992) examines the broader economic challenges faced by Islamic societies and discusses the role of zakat institutions in addressing these challenges. Zaman and Suleman (2016) focus on zakah-based microfinance as a poverty alleviation tool, shedding light on the potential of zakat institutions to drive socioeconomic development. It is widely recognized as a means to alleviate poverty and reduce socioeconomic disparities. Alhabshi and Almawardi (2019) explore the role of zakat in poverty alleviation and promoting inclusive growth, emphasizing its potential impact on marginalized communities. Suharto and Kassim (2018) analyze the relationship between zakat, governance, and poverty alleviation, providing lessons learned from the Indonesian context.

WordPress is a popular content management system (CMS) that powers millions of websites worldwide. The architecture and design of WordPress (figure) play a critical role in its performance, scalability, and flexibility.

Several studies have explored the architecture and design of WordPress, highlighting the key components and features of the system. For example, a study by Yang *et al*. (2018) explored the architecture of WordPress and proposed a new architecture based on microservices. The study found that a microservices-based architecture could improve WordPress's scalability, flexibility, and security. Similarly, a study by Kim *et al*. (2020) explored using artificial intelligence (AI) in

WordPress design. The study found that AI could be used to create personalised user experiences and improve the efficiency of WordPress development.

Literature above, were reviewed in various areas surrounding the study such as Zakat collection and distribution, finances and zakat, institution of zakat, poverty alleviation through zakat, wordpress architecture and architectonics etc. and from the reviewed studies, it showed that there is a gap of adopting technology, especially using wordpress core in confronting the challenges this pillar of Islam faces in Ibadan metropolis, making this study to contribute to knowledge, based on the existing studies.

Materials and Methods

In the implementation of this study, we used the Agile Design Methods (Figure 1). Table 1 shows the design and implementation setup wherein xampp control panel to serves as the localhost, using apache as web server, MySQL for the database and PHP as the core running program. The application was installed, dropping the core WordPress on httdoc, and running the database to import all necessary tables needed for the core WordPress installation. Default WordPress theme (Twenty Twenty) was deployed for the presentation of layouts and widgets. For the collection of data, the researcher used gravity form plugins and also installed gravity view for the front view of data collected via the form. Contents were created with page, one of the WordPress' core architectures (Figure 2). To ensure maximum security, Centum SSL was subscribed to for the implementation.

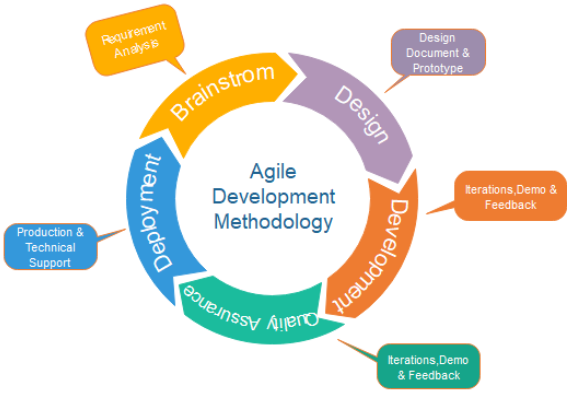

Figure 1: The Agile methodology used in the implementation of the study

This study adopted Design Thinking method in providing solution to the challenges involved in the collection and distribution of zakat in Ibadan Metropolis. Design thinking is a formal method of solution-focused thinking. It employed Literature Review and Secondary Research method in gathering and synthesizing existing knowledge, research papers, patents, industry reports, and other relevant sources of information in order to understand the state-of-the-art in Zakat distribution, identify gaps, and build upon the existing knowledge.

Table 1: The Design and Implementation Setup

WordPress Version	6.0
PHP Version	5.6
Database	MySql (SQL)
Server	Apache
Core Programming Language	PHP
Architectonics	Forms, Pages and Webhooks
Plugins	Gravity Forms, WP Statistics,

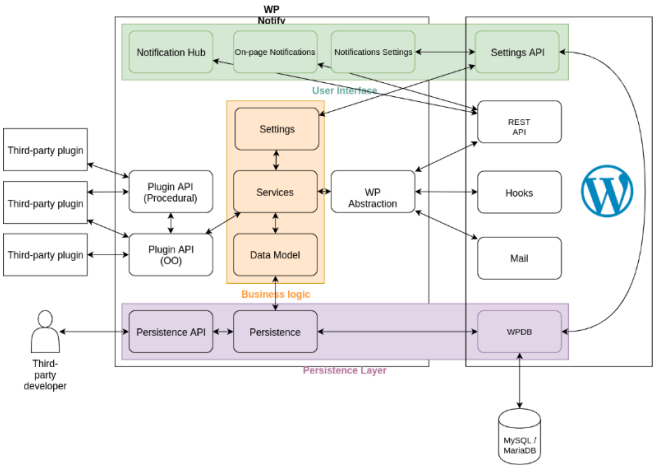

Figure 2: Login architecture of core WordPress (raaaahman, 2020)

Agile Methodology Design

The Agile software development cycle can be broken down into the following six steps:

- concept
- inception
- iteration/construction
- release
- production

Concept: Each possible project's business opportunities are identified in the first step, idea, along with an estimate of the amount of time and labor needed to finish the project. Based on technical and financial viability, this information was then used to rank initiatives and decide which ones are worth pursuing.

Inception: Team members that will be involved in the project are chosen, and the initial requirements are discussed during this second step, called inception. The numerous tasks that teams are responsible for should also be listed on a timetable, along with dates by which each sprint's work is to be finished. A sprint is a predetermined time frame during which a certain amount of work must be finished and prepared for review.

Iteration and Inception: At this stage**,** teams, comprising of data collectors and entry personnel and software developers begin building working software during iteration/construction based on specifications and ongoing feedback. Iterations, also known as single development cycles, are the foundation of the Agile software development cycle. Each iteration serves as a springboard for the subsequent stage of the broader development process, which continues until the project is finished. Every iteration has a predetermined end date and normally lasts between two and four weeks. At the conclusion of each iteration, a usable product should be ready for release.

Release: The final QA testing, correction of any outstanding issues, completion of the system and user documentation, and finally the deployment of the last version into production comprise the fourth and final step, release.

Production: The fifth step, production, focuses on the continuing support required to sustain the software after the release. The software's development teams must ensure that it functions properly and instruct users on how to utilize it. Up until the support has expired or the product is scheduled for retirement, the production phase is ongoing.

Discussions On Implementation

The system is designed to provide a solution to the collection and distribution of zakat; two significant modules are essential to the design.

Collection Module

In order to have a harmonised system, Zakat and Sadaqah institutions are meant to register on the system to have a centralised database of Zakat and Sadaqah institutions in Ibadan. The registration of institutions is done on the system (Figure 3), wherein an ID will be generated for the institution to log in to do other operations, such as viewing requests and distribution of zakat to individuals or groups of the registered institute interested in collecting zakat.

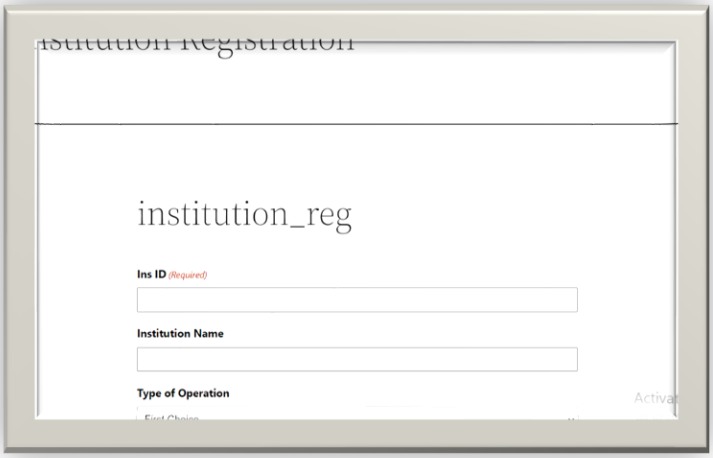

Figure 3: The institutions' registration form for Zakat institution

Admins allocated to this implementation can view all institutions registered for collecting and distributing zakat. This view is searchable using any of the parameters supplied (Figure 4).

Distribution Module

Distribution of Zakat is given only to registered collection groups or individuals duly keyed into the system (Figure 5) for proper monitoring of funds. This collectors' data can also be viewed by an admin and also searchable by any of the parameters supplied during registration (Figure 6). Each person is allocated a key or application number upon registering; while keying in funds collected, the collectors' ID is also keyed to avoid entry and double

collection duplication (Figure 7). The super zakat administrator can also get the detailed data and values collected through the collection view (Figure 8).

Institution Database View

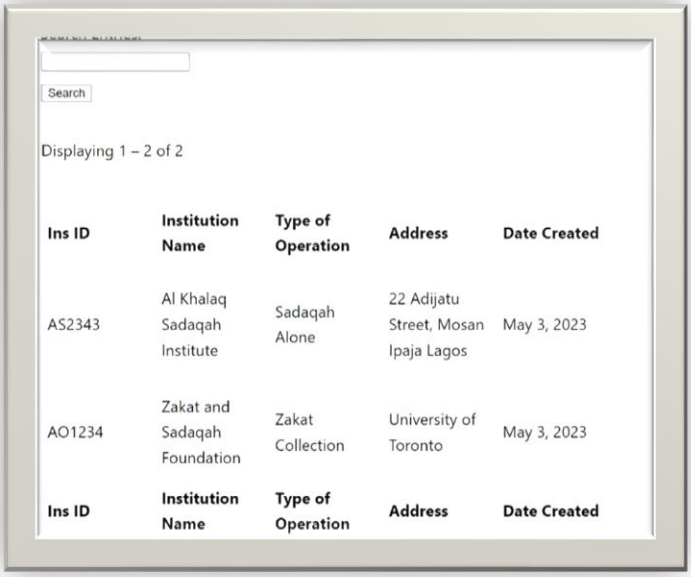

Figure 4: Database table showing the data fetched from institution registration table

Figure 5: form showing the collectors' registration as both individual or group

Any individual given zakat to is recorded in the system against his or her ID and the value he or she has collected for a particular distribution year. The system attached collectors' ID in order to avoid duplication by individuals or institute.

In this implementation, admin can check collectors based on their ID, name, type of zakat collected or date to streamline the database.

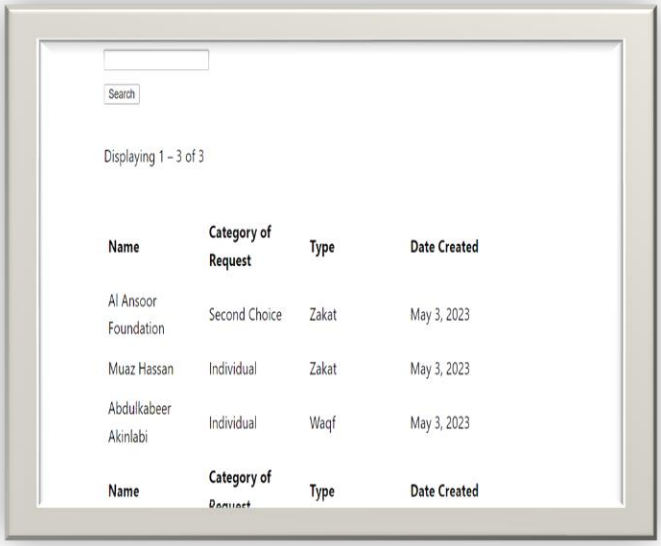

Figure 6: showing the presentation of the collectors' database

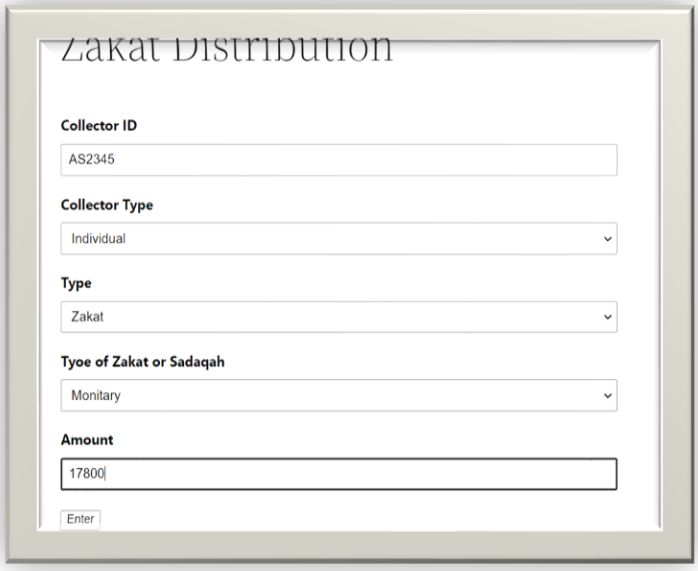

Figure 7: Main distribution form, disallowing double collection.

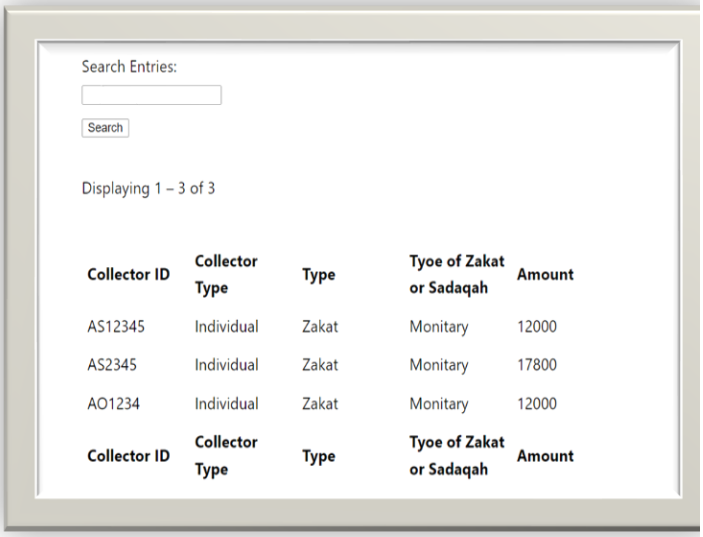

Figure 8: view section of collections' data table

Conclusion and Recommendation

Digitisation of Zakat and Sadaqah distribution refers to using technology to facilitate these charitable funds' collection, management, and distribution. Here are some potential benefits of digitisation:

Improved transparency and accountability: Digitization allows for tracking Zakat and Sadaqah funds from the point of collection to the point of distribution, making it easier to ensure that the funds are being distributed to the intended beneficiaries.

Increased efficiency: Digitization can streamline the distribution process, reducing the administrative burden and minimizing the risk of errors.

Greater reach: Digitization can help reach the needy by making collecting and distributing funds easier. It can also facilitate cross-border transactions, transferring funds to areas that are difficult to access.

Enhanced donor engagement: Digitization can give donors greater visibility into how their donations are being used, making it easier for them to track their contributions and feel more connected to their supporting causes.

Overall, digitisation of Zakat and Sadaqah distribution has the potential to improve the efficiency, transparency, and effectiveness of charitable giving, ultimately helping to alleviate poverty and support those in need. On this background, the study recommends that:

1. It is essential to ensure that any digital platform used for collecting and distributing Zakat and Sadaqah is secure and compliant with relevant data protection and privacy regulations. It can help build trust with donors and ensure the integrity of the process.
2. Zakat and Sadaqah Foundations should conduct a needs assessment to identify the specific requirements and challenges of the organisation in terms of Zakat and Sadaqah collection and distribution. It can help inform the selection of appropriate digital tools and platforms and ensure that they meet the organisation's and its stakeholders' needs.
3. To engage with experts and stakeholders in the field to identify best practices and lessons learned from other organisations that have implemented similar digital platforms. It can help identify potential challenges and opportunities and inform the development of effective strategies and processes for Zakat and Sadaqah collection and distribution.
4. To develop a comprehensive communication and outreach plan to inform donors and other stakeholders about the benefits of digital platforms for Zakat and Sadaqah collection and distribution. It can help build trust, encourage participation, and ensure the process is transparent and accountable.

In summary, the digitization of Zakat and Sadaqah collection and distribution has the potential to enhance efficiency, transparency, and accountability. However, it is important to ensure that any digital platform is secure, meets the specific needs of the organisation, and is supported by effective communication and outreach strategies.

References

Alhabshi, S. O., & Almawardi, R. (2019). "The role of zakat in poverty alleviation and promoting inclusive growth." International Journal of Economics, Management and Accounting, 27(1), 29-49.

Askari, H., Iqbal, Z., & Mirakhor, A. (2014). "Introduction to Islamic economics: Theory and application." Singapore: John Wiley & Sons.

Baele, L., Farooq, M. O., & Ongena, S. (2018). "Of religion and redemption: Evidence from default on Islamic loans." Journal of Corporate Finance, 50, 44-68.

Bari, A. I., & Naeem, M. (2016). "The role of zakat in reducing poverty in Muslim majority countries: An empirical analysis." Al-Iqtishad: Journal of Islamic Economics, 8(2), 199-216.

Chapra, M. U. (1992). "Islam and the economic challenge." Leicester, UK: The Islamic Foundation.

Elgari, M. A. (2008). "Zakat and poverty alleviation." Jeddah, Saudi Arabia: Islamic Research and Training Institute.

Mohieldin, M., Iqbal, Z., & Rostom, A. (2017). "Islamic finance and economic growth: The role of institutional development." Review of Development Finance, 7(2), 131-141.

Siddiqi, M. N. (2008). "Islamic banking and finance in theory and practice: A survey of thestate of the art." Islamic Economic Studies, 15(2), 1-48.

Suharto, Y., & Kassim, S. (2018). "Zakat, governance and poverty alleviation: Lessons from Indonesia." International Journal of Islamic and Middle Eastern Finance and Management, 11(2), 185-200.

Zaman, A. (2014). "Zakat and poverty alleviation: A comparative analysis of the performance of zakat institutions in eight Muslim countries." International Journal of Islamic and Middle Eastern Finance and Management, 7(3), 285-303.

Zaman, A., & Suleman, T. (2016). "Zakah-based microfinance: Realizing the poverty alleviation potential." Journal of Islamic Accounting and Business Research, 7(2), 145-161.

Zulkifli, Z. (2012). "Zakah: The paradigm shift." Singapore: CERT Publications.