WEBSITE BASED SCHEDULING SYSTEM FOR THE LIVING WORD COMMUNITY

Kevin Jasson Lie[1], Zyad Rusdi[2], Darius Andana Haris[3]

[1]Information System Study Programs, Faculty of Information Technology, Tarumanagara University
Email: kevin.825200075@stu.untar.ac.id
[2] Faculty of Information Technology, Tarumanagara University
Email: zyadr@fti.untar.ac.id
[3]Faculty of *Information Technology, Tarumanagara University*
Email: dariush@fti.untar.ac.id

ABSTRACT

Christian community in Indonesia has advanced in a lot of ways. From the stages, sound systems and audio visuals has evolved to another level. The Living Word Community is one example of a new church that has a lot of potential to become a big one. However, The Living Word Community has not adapted their own management system. Managing every week's events still be done in conventional ways and is ineffective. Because of this specific problem, we create our own management system so the staff handling all the tasks will have an easier and simpler time. In the creation of the management system, we are using Visual Studio Code and Laravel. SDLC Waterfall methodology is used and certainly every user requirements for the church management system get discussed beforehand. Hopefully the new management system will give significant impact on this community.

Keywords: *website; tlw; scheduling system; sdlc waterfall*

PREFACE

Introduction
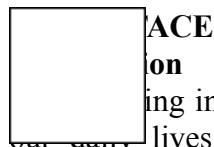
We are living in the era where technology has evolved. Information technology has been part of our daily lives. Data processed from information technology could also help for religious practices. In the few years back, information technology has been utilized for the source of communication in churches [1].

At this moment, religious communities such as churches are also using information technology. Regarding information technology, process of managing information can be done with ease. That being said, time consumed for doing all the management process has been significantly reduced. But as the technology grows, we strive to make a better system that is more cost efficient and time efficient.

The Living Word Community is a church located in central Jakarta. Established in 20 January 2017 and was one a small community consisting of a few people. This year, in 2023, we are planning to take a step forward to build a better community.

The communication media used by The Living Word community are mostly free app services such as Whatsapp and Google Office. While the app services we are currently using offers convinience, they are not time efficient. Most of the applications are scattered and we must open

several applications to do one task. That being said, youths in the community aim to make a better tool that will provide all the essentials for the community.

Problem Formulation

On the basis of the current issues, it may be said that miscommunication has occurred for a lengthy period. The procedure require the user to run some applications simultaneously. Miss inputs have been the main factor keeping the events from going as planned.

2. RESEARCH METHOD

application design using the SDLC Waterfall method, the SDLC (System Development Life Cycle) method using the Waterfall model is used in designing cashier systems, this method is a software development process carried out sequentially from top to bottom, where the first stage is completed then it will be continued second stage then third and so on. Because of this method, making software will prioritize quality [2].
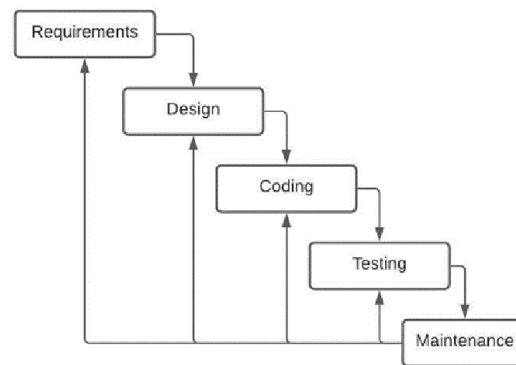
Figure 1. SDLC Waterfall

Image Source: Dicoding (Rony Setiawan, 2021)

· **Requirements**

The initial stage is to carry out on-site observations, interview and has discussion for the user requirements to procure accurate information related to the system

· **Design**

The Second stage is a stage where mock up designs are created before the making of the scheduling system. Interface designs and function per each pages are designed accordingly.

· **Coding**

The third stage is creating the system by coding. User interface designed in the previous stage will be coded using bootstrap while using Laravel for the framework. The code is written in Visual Studio Code made by Microsoft plus MySQL application for the database.

· **Testing**

The fourth stage is testing that's carried out by the creator, where the creator determine whether all of the program's components such as buttons, access, and the database run flawlessly without occurring any errors.

· **Maintenance**

The maintenance of the designed program is done in the fifth and final step because unexpected erros can occur when a user uses it. If there is no errors occurred, system checkups will still be done once per month.

3. RESULT AND DISCUSSION

The design of a system is a group of elements that are closely related to achieving certain goals [3]. Therefore, system design is the primary key in developing a system, because design will determine the success of the system.

The following is the design of the cashier system

Requirement Gathering

Before the system is created, it is crucial to collect all the necessary information. The informations are gathered by conducting interviews with TLW managers. The gathered details will act as the outline of the system

Design

Design stage is the initial design before actually creating the system. Below is the design concept for the system.

· **Use Case Diagram**

Use Case Diagram is a type of diagram that is useful in a system that describes interactions between actors and the system [4] (Prasetya , Sintia, & Putri, 2022), the use cases in the system created are admin and cashier.
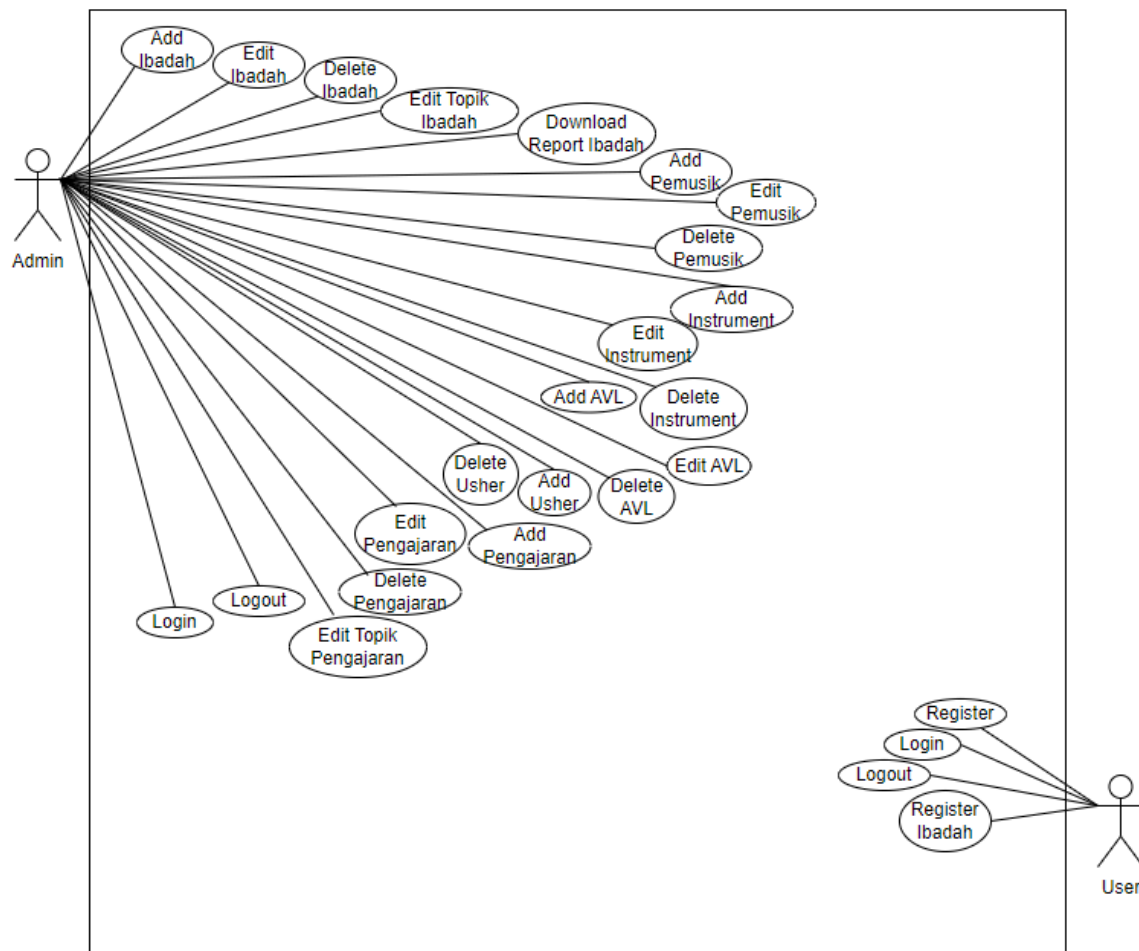
Figure 2. Use Case Diagram
Image Source: Personal Documentation

· **Activity Diagram**

Activity Diagram is a detail about the processes that occur in a system based on the Use Case Diagram that has been created.
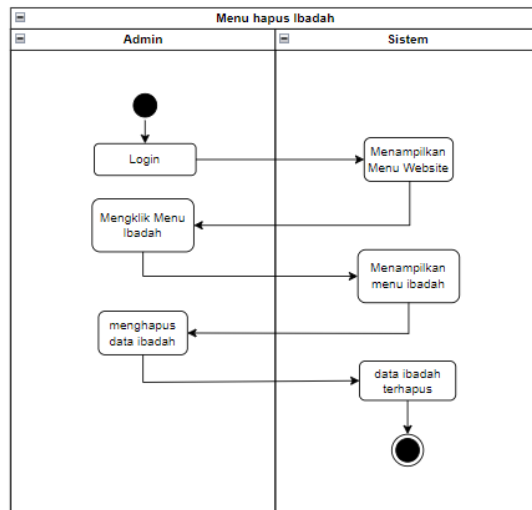
Figure 2. Activity Diagram Login

Image Source: Personal Documentation

· **Class Diagram**

A Class Diagram is a type of diagram that is useful for describing the description of the classes of a system, the methods it has, its attributes, and the relationships between classes in detail (Prasetya , Sintia, & Putri, 2022).
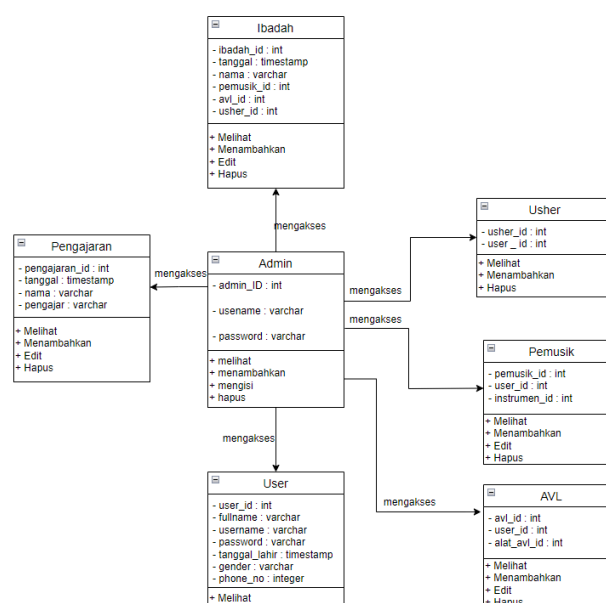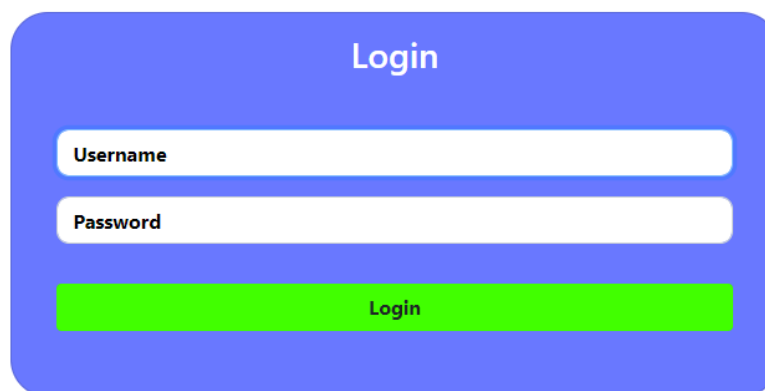
Figure 3. Class Diagram

Image Source: Personal Documentation

Coding

After completing designing phase, the next phase is to create the scheduling system. This scheduling system is a web based application that's made using Laravel and MySQL.

Figure 4. Login Display
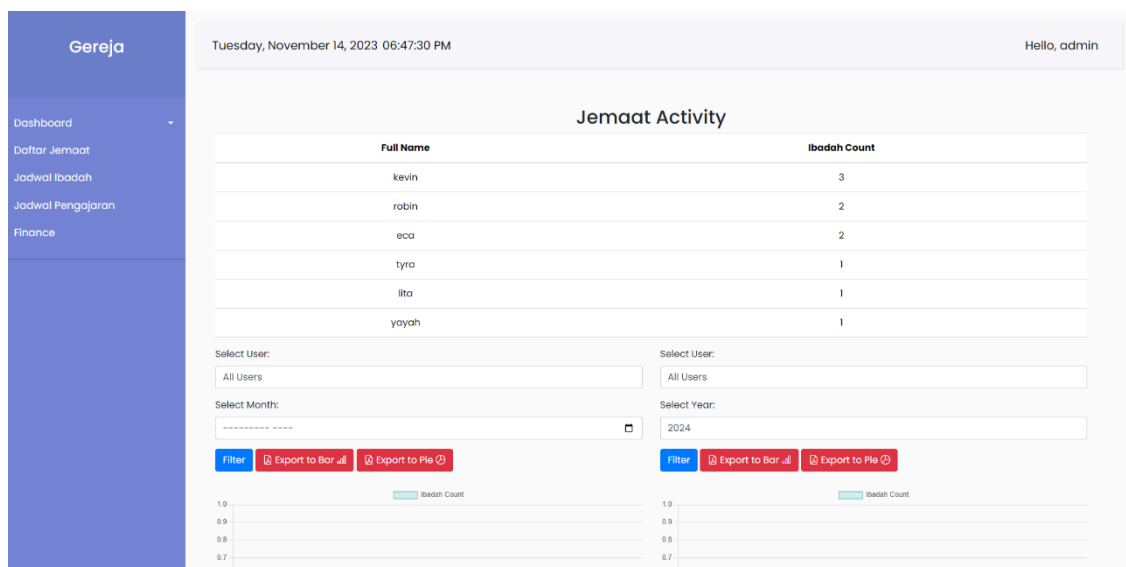
Figure. 5 Admin Dashboard Display

After admin logged in, the web will show dashboard page where admin can see graph of active members and volunteers. Dashboard display can be seen in figure 5.

Figure 6. Admin Scheduling Display

Figure 6 is the scheduling display that can only be accessed by the admin. This feature is used to schedule weekly sermons and add the details to every sermons listed.

Figure 7. Create Sermon Display

Figure 7 is the display when admin inputs the data of the weekly sermons. From the theme, volunteer list and date will be added. Upon listing, admin can also edit and delete each details of the sermons. Sermon edit display shown on figure 8.

Figure 8. Sermon Edit Display

Figure 9. Finance Display

Figure 9 is the finance display where all income and outcome will be listed to make financial reports. Each name, description, date and numbers will be recorded.

Figure 10. User Main Page

Once user has logged in to the web, user main page will be shown. In this page user will be able to participate in the upcoming sermons by registering.

Testing

The scheduling system created must be tested in order to prevent occurring errors. In case of error occurring in the run, immediate fix will be held. Below listed several things done in the test which can see in the table 1.

Table 1. Scheduling System Test

No	Function Test	Success	Error
1	Admin and user has the right access when logging in	v	
2	Create, edit and delete button working properly	v	
3	Each button works as it intended	v	
4	Data input connected to the correct database	v	
5	Dashboard graph are showing accurate numbers	v	
6	Finance features working properly	v	
7	Excel export working properly	v	
8	Logout button working properly	v	

Maintenance

The use of this stage is to ensure the system used for scheduling is working as it is intended. In this stage, overall checking will be carried out once a month to check every part of the system is working properly.

4. CONCLUSIONS AND RECOMMENDATIONS

The conclusion obtained from designing scheduling system is a website with a purpose of making workflows more efficient and less time consuming. It is hoped that with this design, The Living Word community could have smoother run on the events with the existence of this system. This research is not and not near perfect and needs to be improved. With the suggestions given to the author, further improvements could be made to achieve a better goods.

REFERENCE

[1] Rupilele, F. G. J. (2018). Perancangan sistem informasi manajemen pelayanan anggota jemaat, baptisan, dan pernikahan berbasis web (Studi Kasus: Gekari Lembah Pujian Kota Sorong). Jurnal Teknologi Informasi dan Ilmu Komputer, 5(2), 144-152.

[2] Usnaini, M., Yasin, V., & Sianipar, A. Z. (2021). Perancangan sistem informasi inventarisasi aset berbasis web menggunakan metode waterfall. Jurnal Manajamen Informatika Jayakarta, 1(1), 36-55.

[3] Sari, I. I. A. K., & Tanone, R. (2021). Perancangan Sistem Informasi Registrasi Ibadah Online Berbasis QR Code Menggunakan Framework Laravel. (JurTI) Jurnal Teknologi Informasi, 5(1), 53-63.