SISTEM LAYANAN INFORMASI MAINTENANCE OF PESMA KH MAS MANSUR UMS (SLIM PESMA)

SCIENTIFIC PUBLICATION

Compiled as one of the requirements to complete the Strata Study Program I on Informatics Study Program, Faculty of Communication and Informatics

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APPROVAL PAGE

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On Monday, May 31, 2021

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I hereby declare that in this publication article there are no works that have been submitted to obtain a bachelor's degree in a tertiary institution and to the best of my knowledge there are also no works or opinions that have been written or published by other people, unless in writing they are referred to in the text and mentioned in the list References.

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Surakarta, 31 May 2021

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SISTEM LAYANAN INFORMASI MAINTENANCE OF PESMA KH MANSUR (SLIM PESMA)

Abstract

Pesantren Mahasiswa Internasional KH Mas Mansur (Pesma) has good management in developing its resources with the help of various facilities that are in it, and has a mission to digitize each system that has been implemented to date. but unfortunately in managing the maintenance of each facility is very poorly conditioned so that it creates a very slow response and an environment that is less conducive. therefore, the authors conducted this research to conduct a case study of facilities with constraints in pesma, especially in the maintenance of facilities that are in each mahasantri room such as cupboards and other furniture in certain rooms. This Web based application was created using Bootstrap and Laravel Framework. The method used in this study is the Waterfall SDLC (System Development Life Cycle) Method. this application is named with "SLIM Pesma".

Keywords*: bootstrap, laravel, web, slim pesma, facility.*

Abstrak

Pesma memiliki manajemen yang bagus dalam pengembangan sumber dayanya dengan bantuan berbagai macam fasilitas yang ada didalamnya, dan memiliki misi untuk men-digitalisasi tiap-tiap sistem yang telah diberlakukan hingga saat ini. namun sayangnya dalam memanajemen pemeliharaan tiap tiap fasilitasnya itu sangat kurang terkondisikan sehingga terciptalah respon yang sangat lamban dan lingkungan yang kurang kondusif. oleh karena itu, penulis melakukan penelitian ini untuk melakukan studi kasus terhadap fasilitas yang berkendala di pesma, terutama dalam pemeliharaan fasilitas-fasilitas yang berada didalam masing-masing kamar mahasantri seperti almari meja ranjang dan furnitur lainnya yang berada didalam kamar tertentu. aplikasi yang berbasis web ini dibuat menggunakan Bootstrap dan Framewok Laravel. Metode yang digunakan dalam penelitian ini adalah Metode SDLC (System Development Life Cycle) Waterfall. aplikasi ini diberi nama dengan "SLIM Pesma".

Kata Kunci*: bootstrap, laravel, web, slim pesma, facility.*

1. PRELIMINARY

Information technology in Indonesia is currently experiencing very rapid progress compared to a few years ago. The development of information technology has become a part of human life in providing unlimited information. So important is this information technology that every progress and new discovery will be something that can be useful for industry and science (Mead et al., 2007).

People are using various types of information technology and devices to obtain information. One of the devices that widely used is smartphone with android operating system(Zhao et al., 2016). They are using the devices for accessing news online,

studying independently online at a site which offers various tutorials such as a tutorial on how to install a LAN cable on a router, a tutorial on how to make a LAN cable properly and correctly, there is also a conversation with two or more people by using applications without the need to meet face to face like Whatsapp(Gasaymeh, 2017), instagram (Journal, 2015), facebook(Ross et al., 2009). Thus, it is obvious that the used of smartphone brings more benefits. In addition, there are some other benefits of using such applications for example doing video call, playing online games, writing journal. The current technologies that are embedded in to smartphones are smart photos features, recognizing finger print for unlock something in our smartphone, location detection, tracking apps when our smartphone gone (Álvaro et al., 2013).

With the various developments in information technology as exemplified above, this research aims to develop an application program to support maintenance information service systems at a Pesantren Mahasiswa KH MAS MANSUR (Pesma). Pesma is a place to stay like dormitory. However, in pesantren students learn more subject related to Islamic religion, spiritual knowledge and other subjects to improve various academic abilities. Therefore support the students learning process with respect to religious knowledge, spiritual, soft skills and academic abilities on campus, they are provided various facilities such that students are feeling comfortable to learn. The facilities provided are also diverse, such as cupboards, tables, beds, mattresses, wall and so on. In order to the existence of the facilities, student is expected to be able to support its learning activities optimally so that it can carve out an achievement in its own campus and in the pesantren. However, when the facilities suffer some damages due to lack of care and maintenance, it impacts the student learning environment. The situation becoming even worst when the responsible employees who take care of maintaining the existing facilities, such as repairing damaged cupboards, brittle doors, and peeling walls. work very slow without time management. Therefore, in this research we propose to develop an website application program called "SLIM Pesma". This application will regulate the entire maintenance procedure of the existing pesantren facilities in each room. In order to avoid the reparation and maintenance delay we design the application in which it emerges a continuous notification (Sposaro & Tyson, 2009) if a report of damage facilities from students has not been resolved. As the results, a good and conducive atmosphere will be achieved when the damage facilities can be repaired in a manageable time.

2. METHOD

The method used by the authors in this study refers to the System Development

Life Cycle (SDLC). System Development Life Cycle (SDLC) is a general methodology used to develop information systems. SDLC consists of several phases starting from the planning, analysis, design, implementation and maintenance of the system phase. This SDLC concept underlies various types of software development models to form a framework for planning and controlling information systems (Radack, 2002). SDLC models that are often used are Waterfall, Agile, V- Mod el, and Prototyping.

In building this study, the authors used the SDLC waterfall model (Nugraha et al., 2018). Waterfall method has a systematic approach starting from the sequence based on system requirements and then goes to the stage of data analysis, design, coding of the system, testing or verification between the two systems and maintenance so that research is structured. The SDLC picture can seen in figure 1.

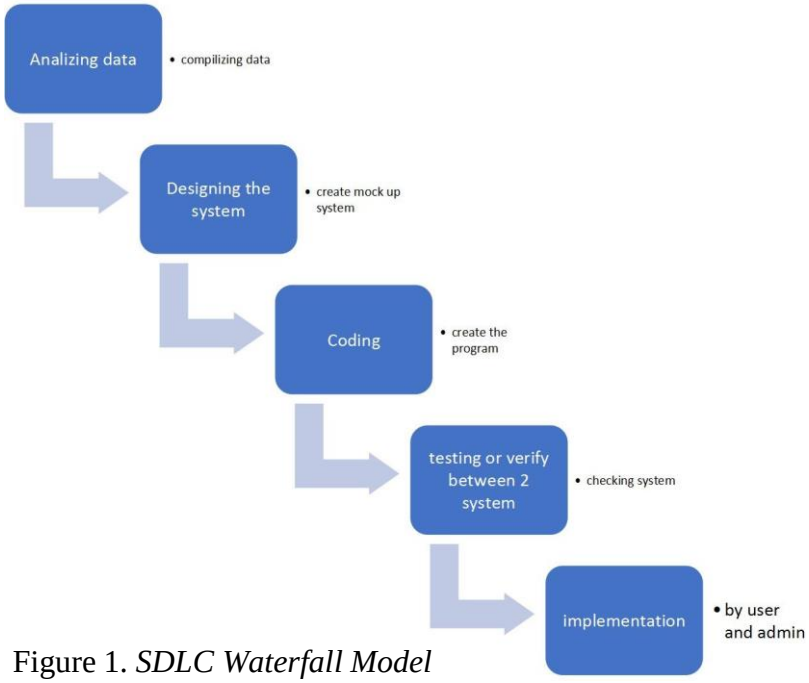

Figure 1. *SDLC Waterfall Model*

2.2 Tools And Materials

In making this application requires a media to construct it that is with the help of some software. The software used in this study is as follows:

- Bootstrap (Front End)
- Node js
- Git
- Java jdk
- Corel draw (Optional)
- Draw.io

- DBMS
- Laravel 5 version (Back End)
- XAMPP

2.3 Design

Design is the first process to analyze patterns and design applications to be made. Therefore, this study the researcher made two design that is using the use case diagram and Entity Relation Diagram. Because, by using both the researcher can manage to analyze, identify, and clarify the system requirement (Goos et al., 1999). In order to making the program work well as its purpose (Cagiltay et al., 2013). Which researchers create the use case diagram into 3 access privilage in 1 part and also the Entity Relation Diagram. Namely the use case for the admin, user, and *executor*. whose image for Usecase will be shown in Figure 2, and image for the Entity Relation Diagram will be shown in Figure 3.

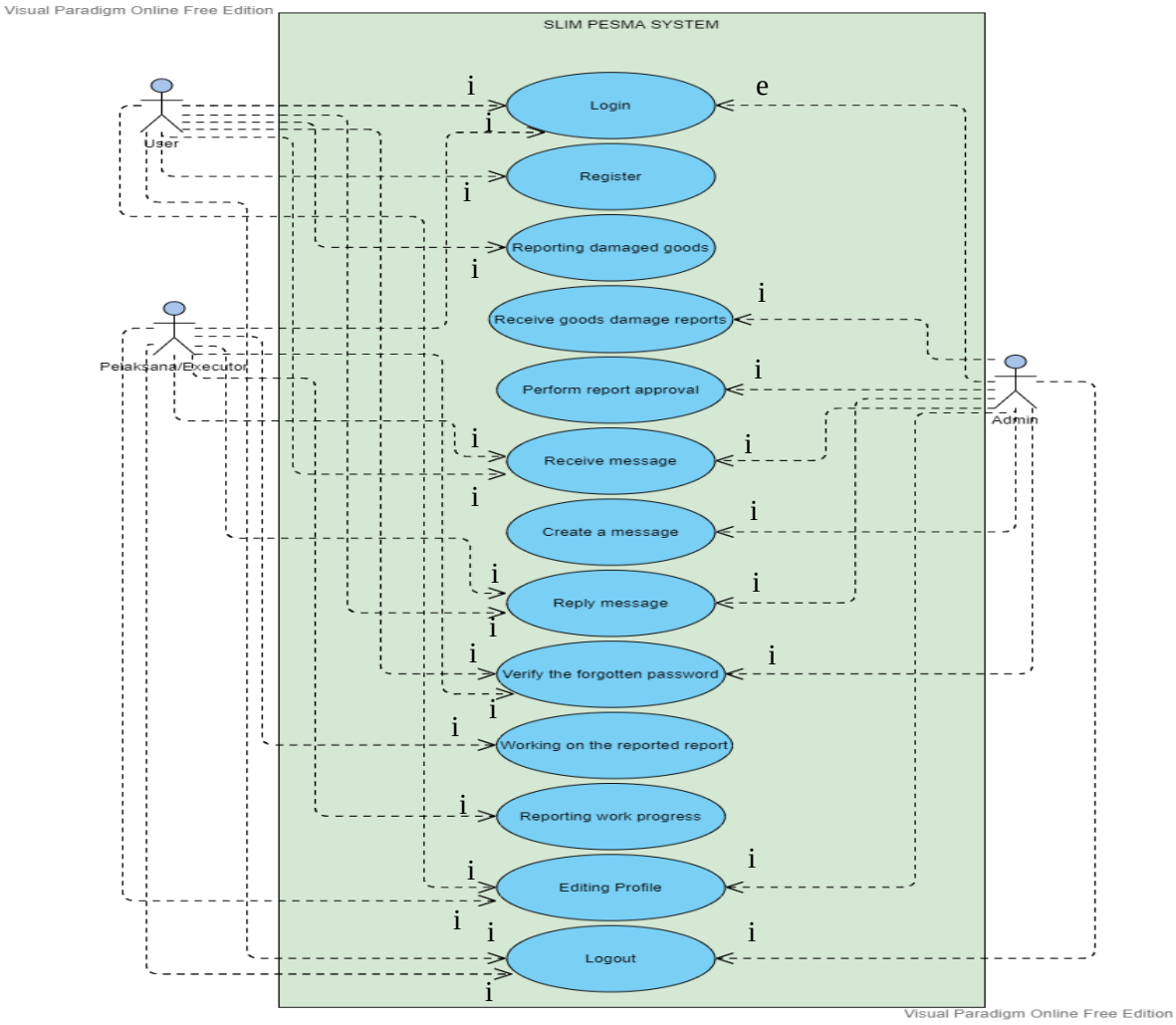

Figure 2. *Usecase Diagram*

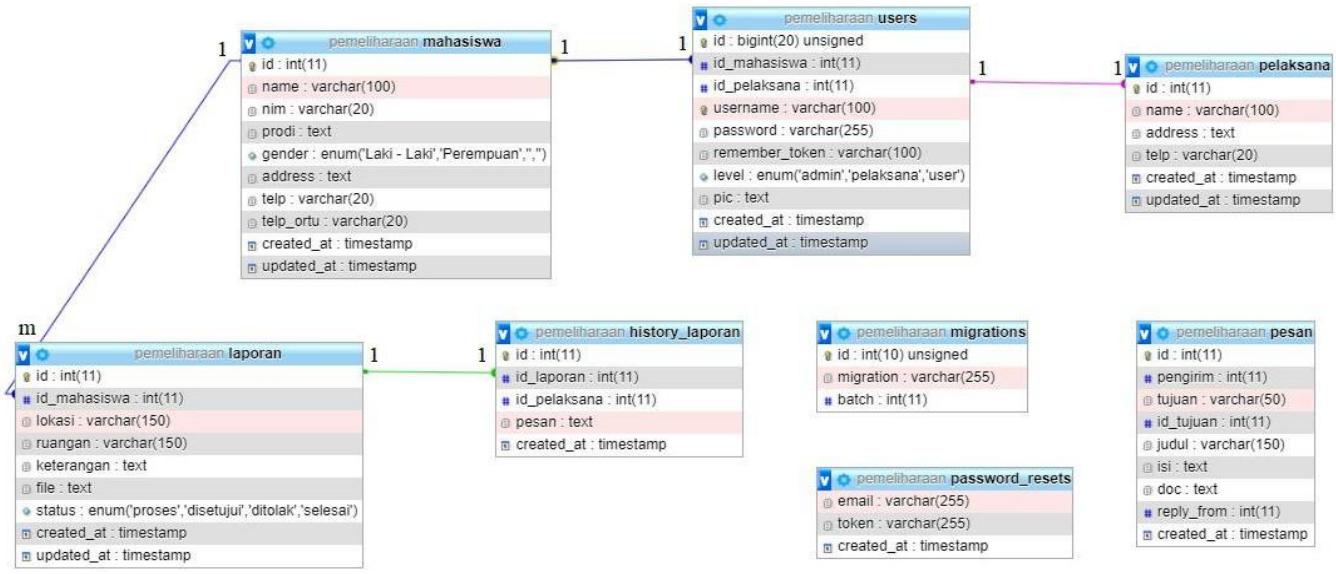

Figure 3. *Entity Relation Diagram*

Figure 2 above describes that:

User Access, user as Mahasantri can access login after registering on the registration form menu that has been provided below. After the user registers, user can log in to this web application. In the initial view the user will display a dashboard menu that displays the user's ownership profile and the user can edit their own profile. The user can send a report when the user finds damage to goods or pesma facilities on the "*Laporan*" menu feature, on the menu feature the user is asked to fill in some data in the form of location, room, information to make it easier for the admin and executor to execute the report. and the user can only receive messages when the admin sends a message, the user is not allowed to send a message first because there will be spam against the admin or even unwanted things. Therefore, the researcher made the user only able to receive messages then the user could reply briefly or did not need to respond. After the user accesses each of its feature menus, the user can log out on the menu provided. And the last, if the user forgets his account password, the user can manage it through his Gmail account, the system will send a link via the gmail account entered in the "*Lupa Password*" feature form provided below to change a new password for users who forgot their password.

Admin Access, admin as IT administrator of Pesma KH Mas Mansur can access login directly without registering account because researcher has created special account for him. After the admin login, admin will be directed to the

dashboard menu in the form of profile data from all users and detailed reports. On the "*Data Mahasiswa*" feature menu, the admin can see and edit the profile to be edited. admin can also change a user's password when the forgot password feature connected to Gmail is an error or a user who doesn't have a Gmail account. then when it occurs a new password change for users who do not have a gmail account will be sent via the whatsapp chat. then on the menu "*Laporan*" admin features, will display a collection of various reports that enter from existing users. In this feature menu, the Admin can determine approval for the implementation of incoming reports which will later be forwarded to the executor, so that the reports that will be done by the executor can be carried out regularly. then on the message feature menu the admin can send a message in the form of a short notification or an announcement to the user and executor and also the admin can reply to it too if there is someone who responds to the message. After admin accesses all of that, admin can logout on the menu provided.

Executor/*Pelaksana* access, executor as cleaning service in Pesma KH Mas Mansur, can access login directly also without registering account because researcher has created special account for him. After the executor login, the executor will be directed to the dashboard menu which contains the incoming report data along with the executive profile itself. Executor can edit his own profile on the dashboard page. The executor makes progress on his work by reporting it in the "Progress report" feature menu, so that the admin can find out the progress made by the executor. Just as same as 'user', the executor cannot send a message before the admin sends him a message first. After that, the executor can log out after all the reported work has been completed by pressing the logout button provided. Furthermore, if the executor forgets his account password, he can recover it via the "Forgot password" feature on the login page at the bottom.

For Figure 3 above describes that:

- Users table is a collection of three access rights accounts, namely: user as student, admin as IT admin of pesma, and executor as cleaning service of pesma.
- Mahasiswa table is data from students who have registered.
- Laporan table is a report form data reported by students.
- Pelaksana table is the profile data account of the executor
- History_laporan table is a report history that is being worked on or has been done by executors supervised by the admin.

'id_mahasiswa' in the 'tabel users' is connected (1-1) with the 'id' in the 'tabel mahasiswa'.

'id_pelaksana' contained in 'tabel users' is connected (1-1) with 'id' in 'tabel pelaksana'.

The 'id' in the 'tabel mahasiswa' is connected (1-m) to 'id_mahasiswa' in the 'tabel laporan'.

The 'id' in the 'tabel laporan' is connected (1-1) to the 'id' in the 'tabel history_laporan'.

Furthermore, that ERD Figure 3 above in making this web application system, the researcher does not really refer to the database. Because, the researcher takes the program data directly from the website, not from the database(to be precise, does not rely too much on databases in localhost).

3. RESULT AND DISCUSSION

3.1 User Interfaces

The researcher will display the UI and explain briefly the SLIM Pesma application website in the section below.

3.1.1 Login and Register

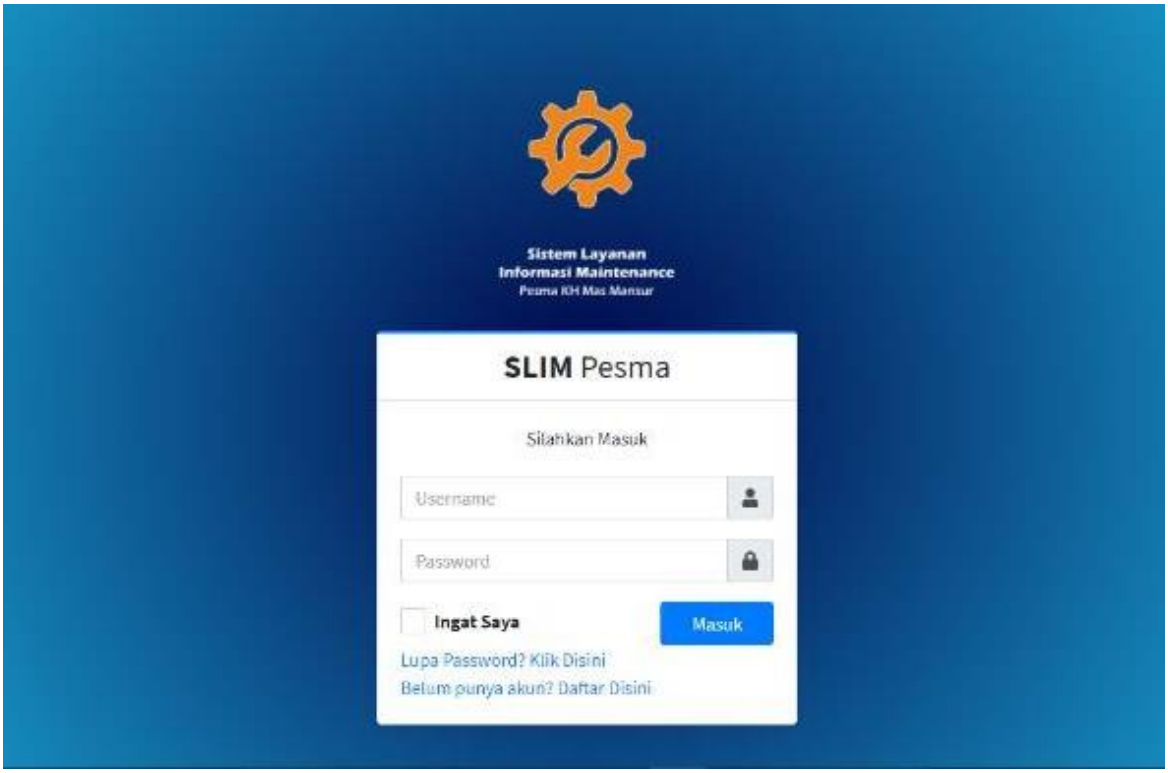

Figure 4. *Login Interfaces*

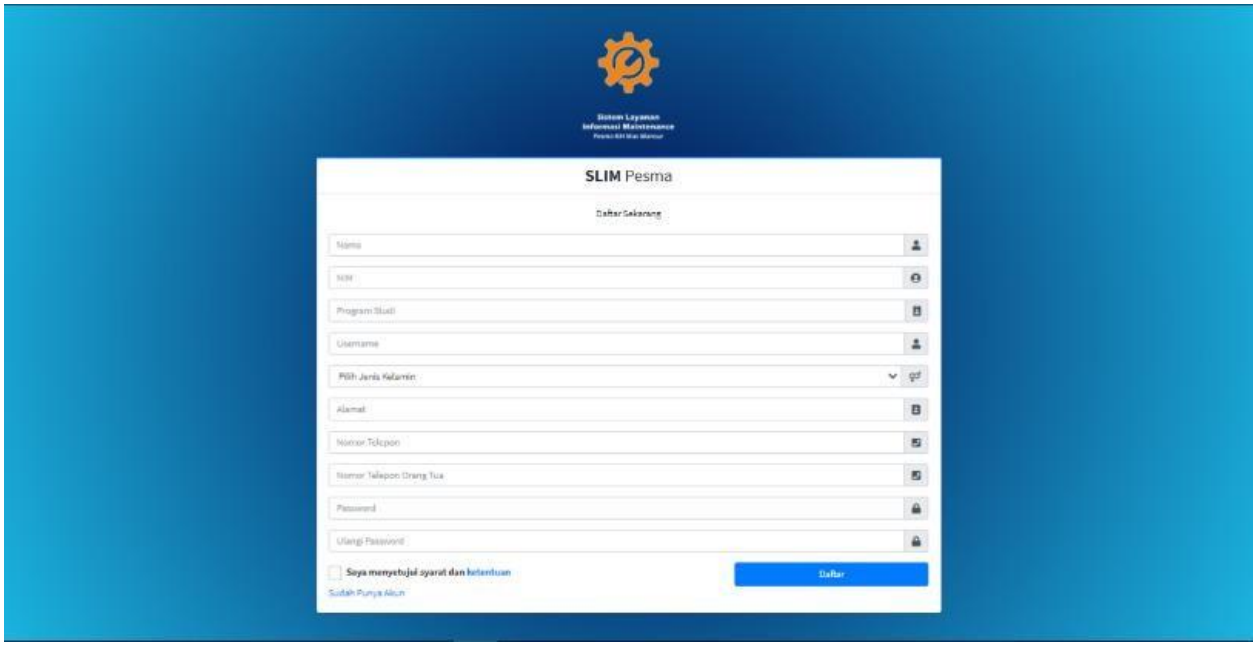

Figure 5. *Register Interfaces form*

The login page is the first display when a user will easily access reports of damaged facilities that are within the scope of Pesma through the SLIM Pesma application website. Users are required to register for an account first when they want to access the SLIM Pesma application website, by pressing the panel button "Belum punya akun? Daftar disini". There the user will be directed to fill out the registration form which includes the user's profile bio along with the username and password. but for admins and implementers, there is no need to register an account, because researchers have created special accounts for admins and executors.

3.1.2 Landing Page (Dashboard)

a. Admin

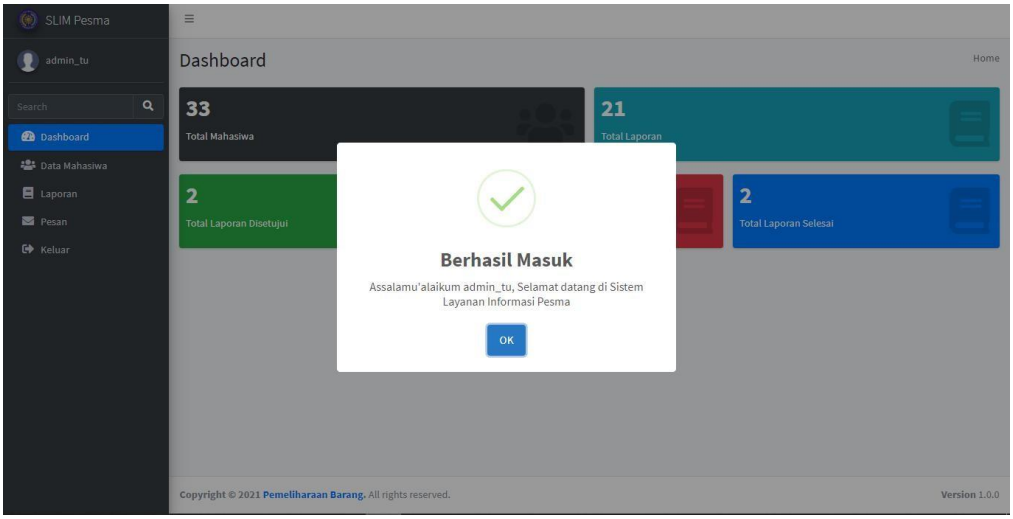

Figure 6. *Dashboard Admin Interfaces with Greetings pop up*

b. User

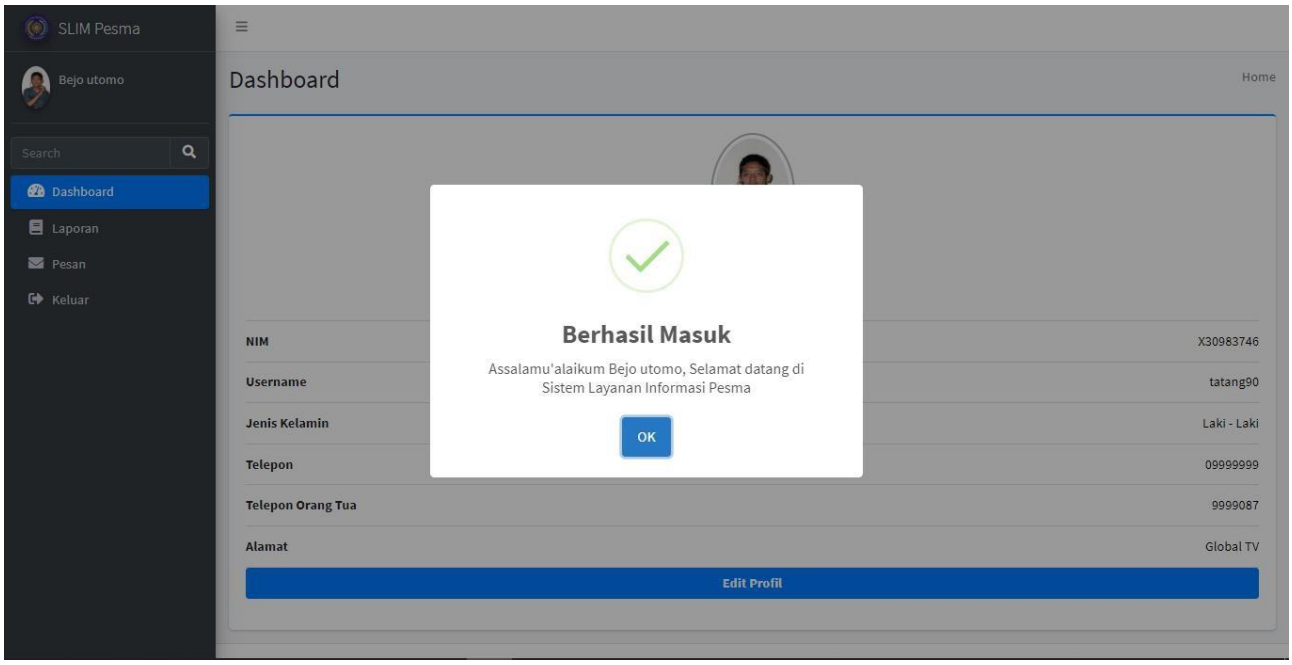

Figure 7. *Dashboard User Interfaces with Greetings pop up*

c. Pelaksana

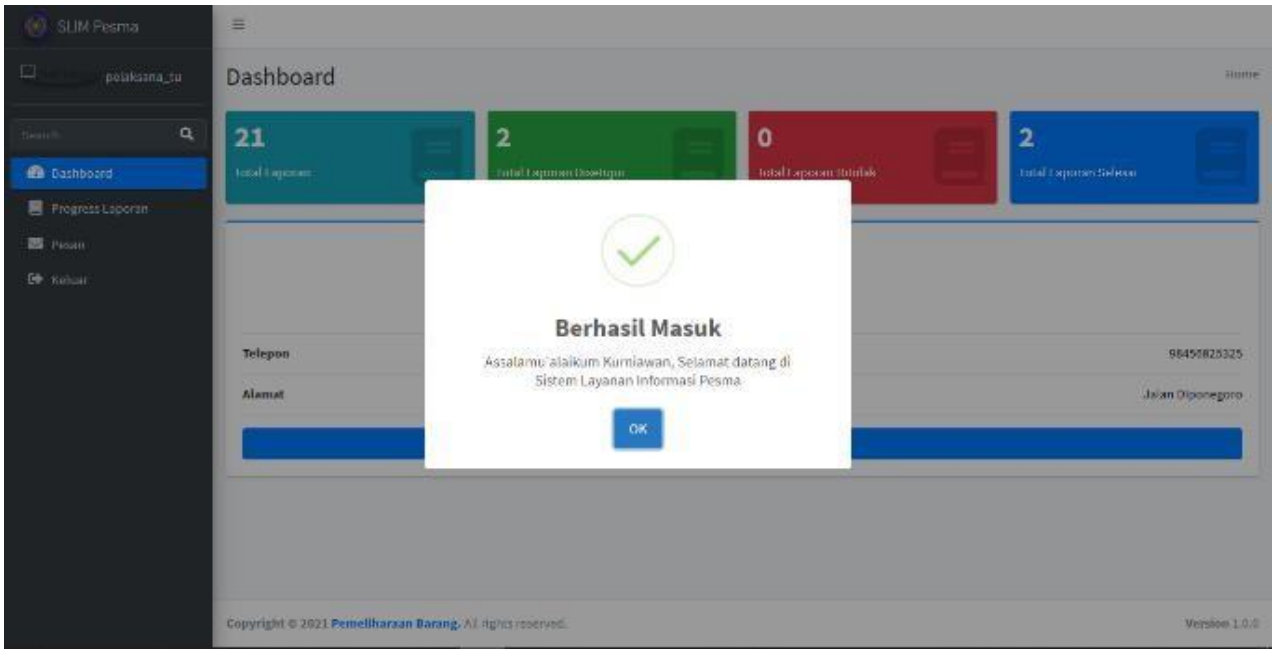

Figure 8. *Dashboard Pelaksana Interfaces with Greetings pop*

Dashboard is an initial display when all users have logged in on the previous login page. when all users will enter the system dashboard a greeting pop up will appear to ensure that the user has successfully logged into the application website.

On the initial dashboard display, a "User" will display the "User" profile that has been filled in via the registration form on the registration page located on the previous login page.

Unlike admin, the initial dashboard view of "Admin" only displays some of the total data

entered in the admin system itself. almost the same as admin, it's just that on the dashboard an "*Pelaksana*" has a little additional profile data.

3.1.3 Menus

The UI is divided into 3 access rights: a menu for admin, executor, and user.
On the admin menu, there are 4 menus, namely the dashboard menu, student data, reports, and messages. On the user menu, there are 3 menus, namely the dashboard menu, reports, and messages. And on the *pelaksana* menu, there are 3 menus, namely the dashboard, report progress, and messages.

Admin

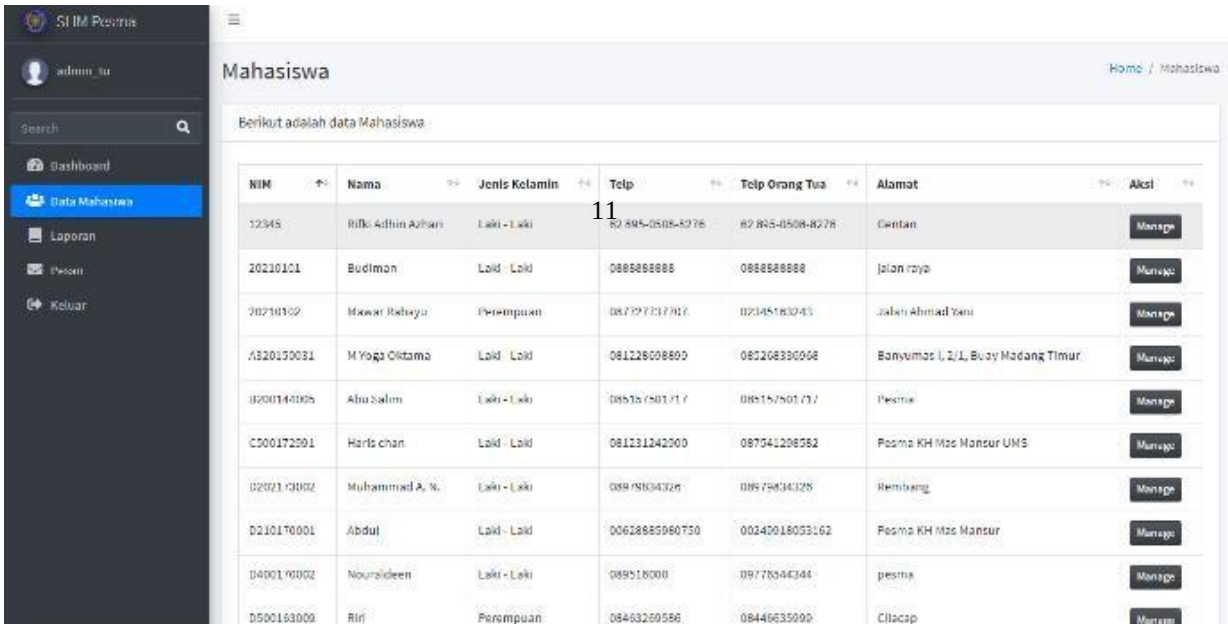

Figure 9. *Menu Data Mahasiswa Admin Interfaces*

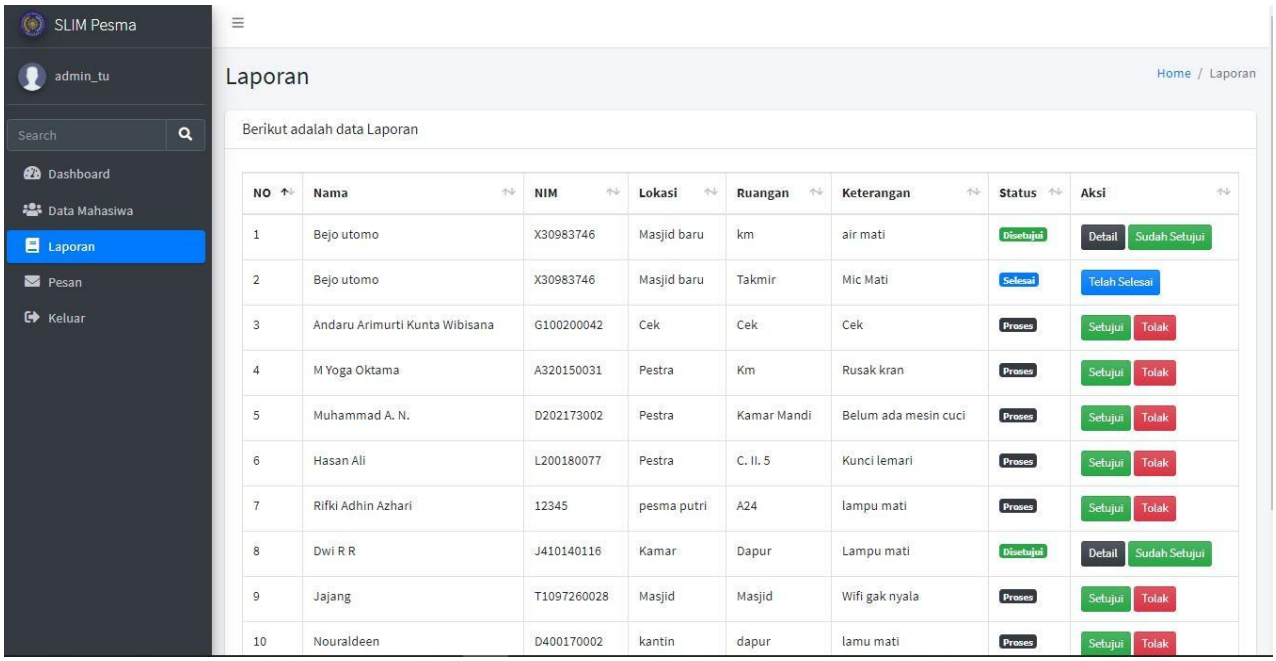

Figure 10. *Menu Laporan Admin Interfaces*

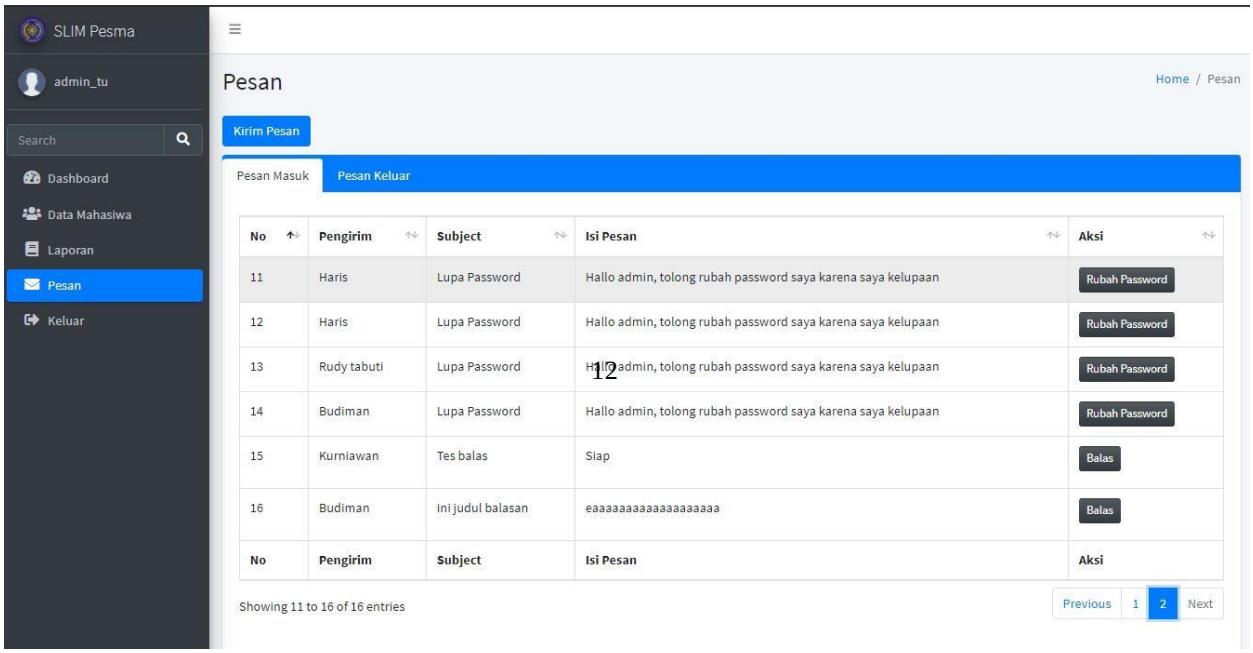

Figure 11. *Menu Pesan Admin Interfaces*

The Admin menu, there are 4 menus, the first is the dashboard that has been displayed and explained previously, the second is mahasiswa data, reports, and messages.

The "*Data Mahasiswa"* menu, the researcher creates a table that contains a set of student profile data that has been registered on this application website. from here also the admin can view and manage existing student profile data. if needed, the admin can also change a user's password via this menu.

The *"Laporan"* menu, the researcher creates a table of approval actions on an incoming report, where on this menu the admin can manage the work of the report to be done first. making it easier for executors in the process.

The "*Pesan"* menu, the researcher creates a message table for the admin to interact with the user and *pelaksana* when the admin will deliver a progress notification or announcement

User

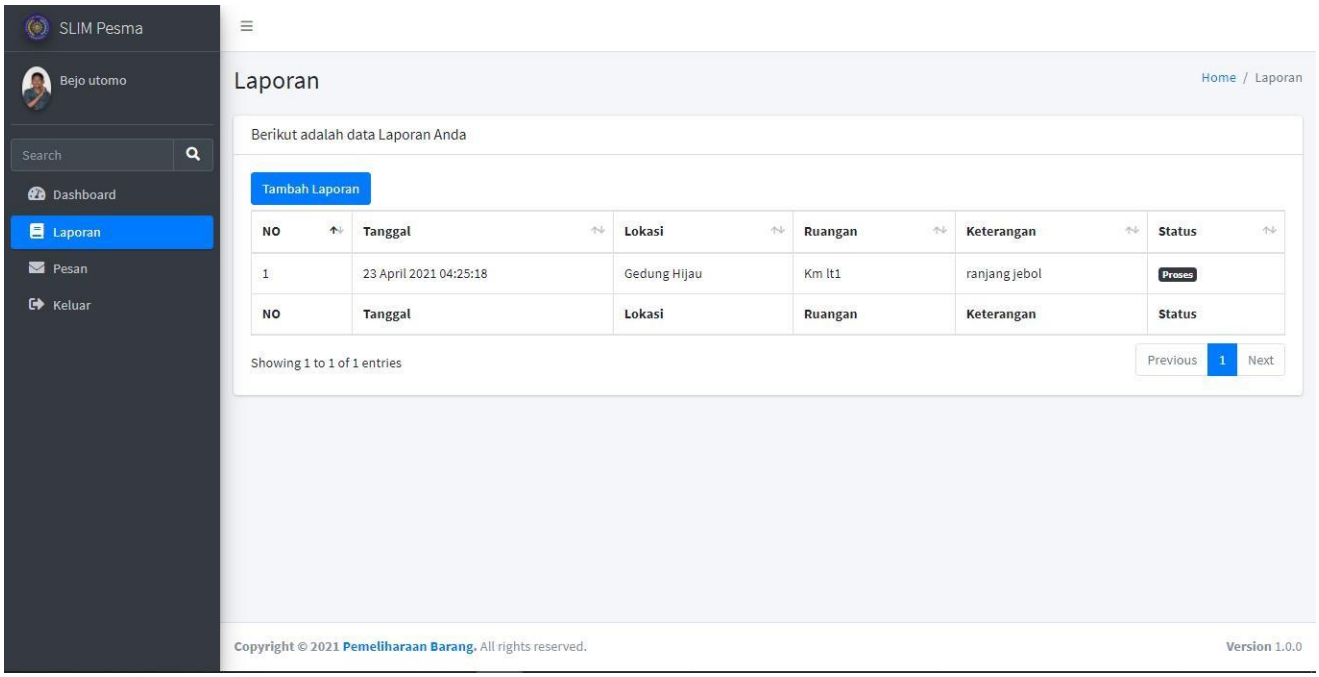

Figure 12. *Menu Laporan User*

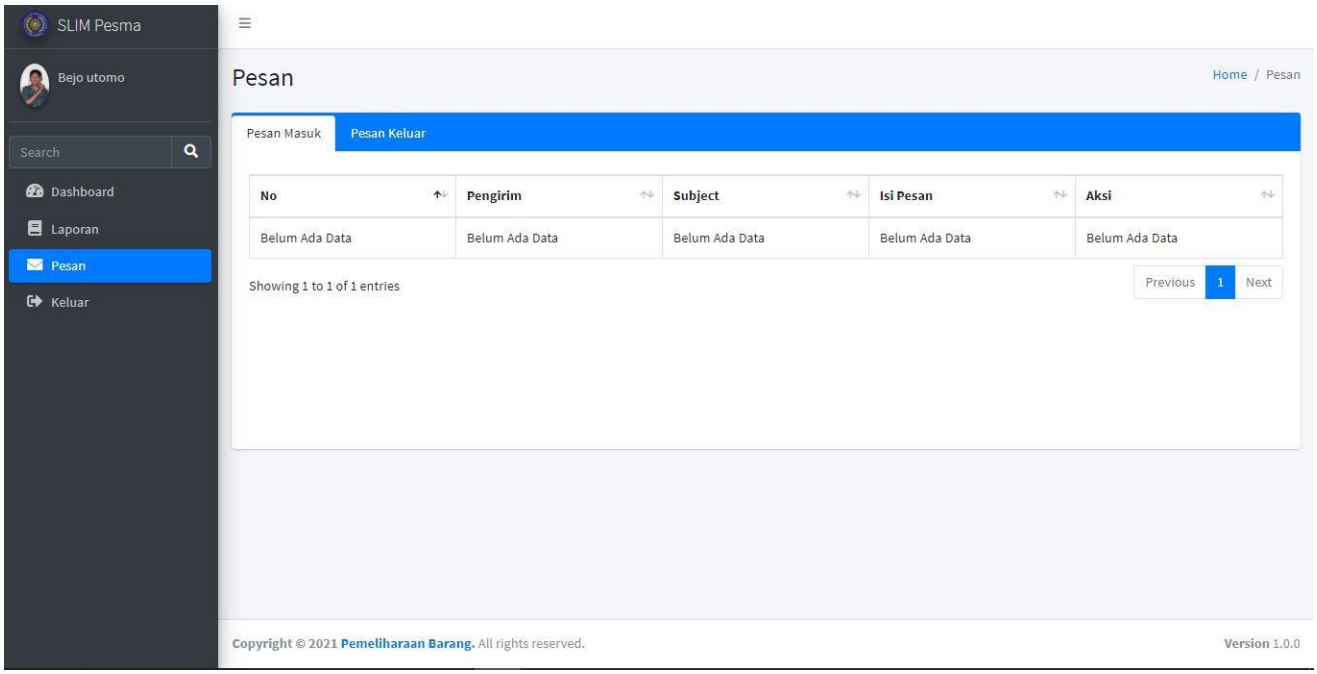

Figure 13. *Menu Pesan User Interfaces*

The user menu there are three menus, the first is the dashboard which has been researched explained in the above sub-chapter. the second is a *Laporan*, and the last is a *Pesan*.

On the *Laporan* menu, the researcher creates 3 column forms which include Location, Room, and Description. which is where the user can fill in the 3 form fields when the user will report-damage to the pesma facility that a user finds in which location, what room, and what type of damage has occurred.

On the *Pesan* menu, the researcher creates a message table for users who only have one-way interactions that only address the admin and can only send messages when the admin has sent a message to the user. Researchers do this because things don't happen that are not desired.

Pelaksana

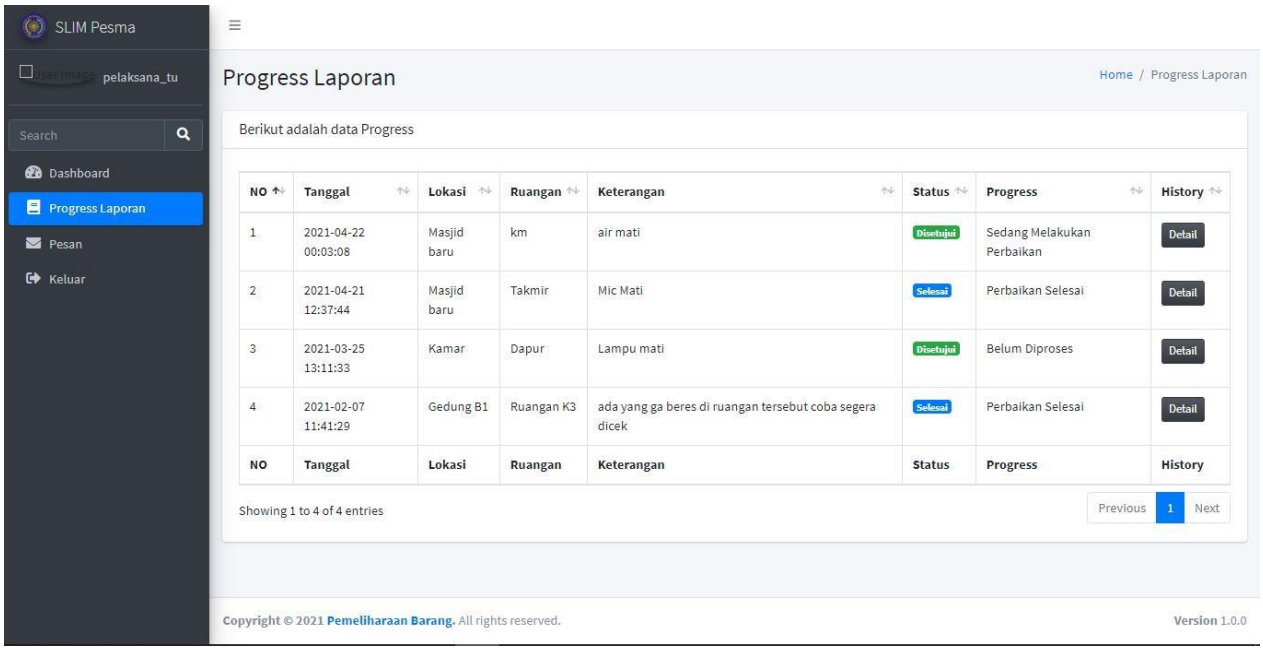

Figure 14. *Menu progress laporan Pelaksana Interfaces*

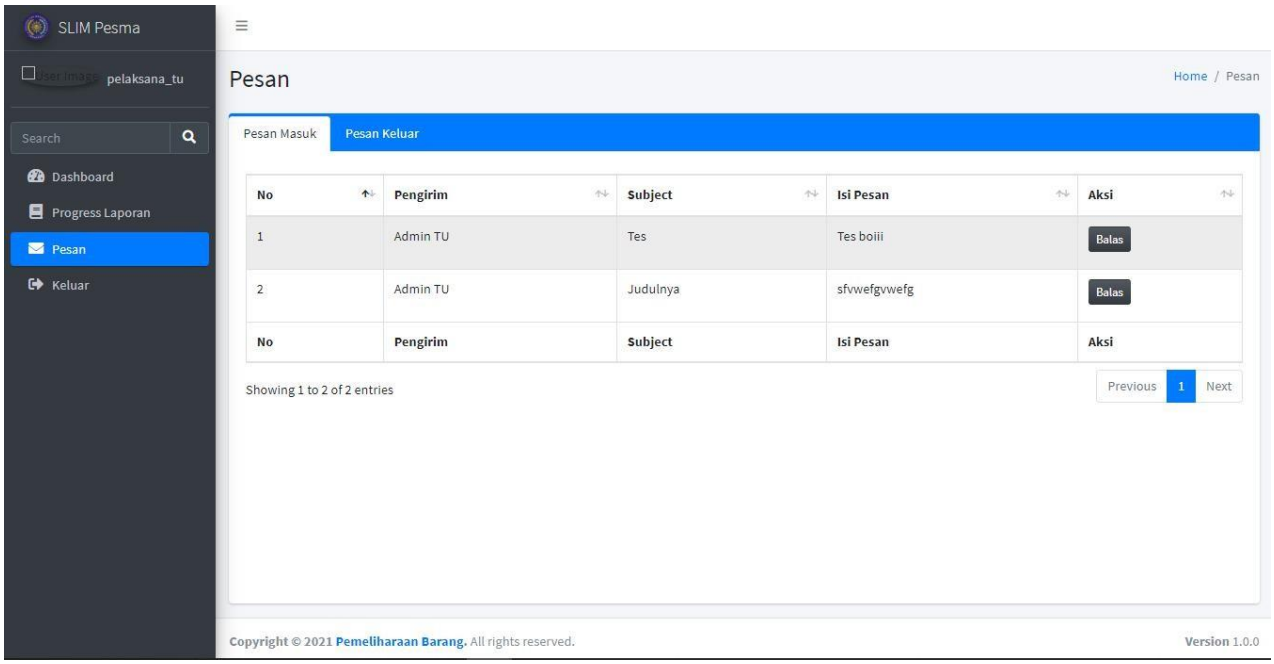

Figure 15. *UI menu pesan*

Thus this *Pelaksana* menu there are also 3 menus, including the dashboard, *Progres Laporan* and *Pesan*. on the *Progres Laporan* menu, the researcher creates a work progress table of an executor. which in the progress table contains a progress panel of what the executor-is doing and in that panel the updates will be recorded which will be conveyed by the Admin and then to a User who reports a damaged facility.

on the *Pesan* menu, it is the same as the *Pesan* menu on the User. *Pelaksana* cannot send any message, *Pelaksana* can only reply and send a message if *Pelaksana* gets a message from the Admin.

3.2 Black box Testing

Black box testing is a test that is carried out only observing the results of execution through test data and checking the functionality of the software..

Black box testing not concern with the internal mechanisms of a system; these are focus solely on the outputs generated in response to selected inputs and execution conditions(Chool & Nhancement, 2009).

The Researchers will undertake Black Box Testing to look if the program is works fine.

Look at the table 1 below!

Table 1. *Blackbox Testing*

No	Scenario	Test scenarios	Expected results	Result

No	Scenario	Test scenarios	Expected results	Result
1	**Login and Register(Login page)**			
	❖ Admin can directly to login without registering account ❖ User must create account in register form before login ❖ *Pelaksana* directly also to login inside without registering account	❖ The Admin and *Pelaksana* Login without fill registering form. By fill Username and Password. by entering the username and password that was created by the researcher then click the Login button provided ❖ The User create account by pressing “Belum punya akun? Daftar disini.” Then User fill the form and create the account. Afterthat User can Login by filling in the username and password thatwas created previously then user will directly login after	If the username and password are stored and registered in the program and database, all access rights (admin, user and pelaksana) will be able to enter the main menu. If you don't enter your username and password incorrectly, then all access rights (Admin, User, Pelaksana) cannot access the main menu	Valid

No	Scenario	Test scenarios	Expected results	Result
		account by pressing “Belum punya akun? Daftar disini.” Then User fill the form and create the account. After that User can Login by filling in the username and password that was created previously then user will directly login after create account	Pelaksana) cannot access the main menu	
	Menu *Laporan*			
2	❖ User add the reports information ❖ Admin receive the reports information ❖ *Pelaksana* perform the reports that are reported	❖ User reports damage to facilities in this menu by pressing the "Add report" button. ❖ Admin receives the report and determines the approval of the report by pressing the "*Setujui* or Tolak" button in	Reports submitted by a "User" can be conveyed properly and effectively	Valid

No	Scenario	Test scenarios	Expected results	Result
		the "*Aksi*" table column. ❖ *Pelaksana* performs and notifies the progress of the work being done to the Admin and User by pressing the "Details" button in the History table column		
3	**Menu *Data Mahasiswa***			
	Admin can edit the data inside it	Admin stores student profile data and can change the password for a user account or a student's data.	Admin can organize data properly	Valid
4	**Menu Pesan**			
	❖ User and *Pelaksana* perform a one-way interaction ❖ Admin interact with all users of this application website	When the admin sends a notification or announcement to all users of this web application via the message menu, the notification or announcement will go to the inbox	users and executors can only reply to messages from the admin via the inbox but cannot send messages to the admin or other users. different from admin, admin can send	Valid

No	Scenario	Test scenarios	Expected results	Result
		message for each user addressed by the admin. user and executor can respond by pressing the "*Balas*" button. but on the other hand, the user and the implementer cannot send messages first	messages to all existing users and can also reply to messages replied to by a user	
5	**Menu Logout**			
	All permissions(Admin, User, *Pelaksana)* can Logout	All access rights (admin, user, executor) can be logged out. by pressing the "Logout" button available at the bottom of the "Pesan" menu	All access authorization(Admin, User, *Pelaksana*) will be redirected out to the login front page, and will get a greeting pop up indicating that some users has been successfully logged out	Valid

Table 1. You can see that there are four columns that contain Scenarios of what the system is doing, The Test scenario is a way to conduct the testing phase of the scenario that is being carried out by the system, Expect the results as expected as the system is functioning properly, and the final, the system Results, whether valid or invalid.

The blackbox test results shown in Table 1 above have a valid overall value, this indicates that system performance follows the expected function.

3.3 USER ACCEPTANCE TEST QUESTIONNAIRE RESULT

User acceptance testing (UAT) is the final phase of the testing process for a program.

During UAT, program users actually test a program to ensure it can handle the tasks required in real-world concepts, according to specifications. so that the researcher decided to do the test using this UAT method.

User acceptance testing may provide valuable guidance on key project decisions such as: proceed with development of a system with the functionality currently specified, modify the target functionality prior to proceeding with development, or abandon the development project(Davis & Venkatesh, 2004).

Thus this research took 33 samples of users from the pesma kh mas mansur ums student using a questionnaire. Participating users will be asked to answer 12 questions by selecting one of the five answer options which are given. Every one of the five choices has a different rate of value, Table score will be shown in Figure 16.

Options	Score	Grade
A	Very: Easy / Good / Suitable / Clear	5
B	Enough: Easy / Good / Suitable / Clear	4
C	Neutral	3
D	Sufficient: Difficult / Bad / Unsuitable / Unclear	2
E	Very: Difficult / Bad / Unsuitable / Unclear	1

Figure 16. *Answer option Alphabet and score*

Figure 16. Furthermore, the table above describes the options in the form of letters A-E with different scores and grades. Therefore, this table is a detail of the choices in the questionnaire. Then after obtaining the data, the data will be processed into information in the form of a percentage value for each question and the overall average percentage, see Table 2.

The formula below will be used to calculate the percentage value of every question given by the researcher that has been answered by the participating respondents.

$$Y = \frac{\Sigma nP}{nT} \times 100\%$$

Which is:

Y = Percentage

∑nP = Total Score

nT = Amount of respondents x 5

Table 2. Questionnaire Result

No	Question	Result					Score					Total (∑nP)	Y
		A	B	C	D	E	A*5	B*4	C*3	D*2	E*1		

No	Question	Result					Score					Total (∑nP)	Y
		A	B	C	D	E	A*5	B*4	C*3	D*2	E*1		
1	Is the display of maintenance information service website good enough?	12	16	4	1	0	60	64	12	2	0	138	83.64%
2	Is this the pesma facility maintenance information service website easy to access?	16	11	6	0	0	80	44	18	0	0	142	86.06%
3	Is the level of service interaction quality on the website good enough?	8	19	4	2	0	40	76	12	4	0	132	80.00%
4	Is appearance the registration form page good enough?	13	13	7	0	0	65	52	21	0	0	138	83.64%
5	Are the forgot password button working properly?	9	19	5	0	0	45	76	15	0	0	136	82.42%
6	Are the help buttons which are available can help you access this web?	12	15	6	0	0	60	60	18	0	0	138	83.64%
7	Does this website satisfy the expected usefulness?	17	14	1	1	0	85	56	3	2	0	146	88.48%
8	Does this website make it easy for you to report damaged facilities in pesma?	17	12	3	1	0	85	48	9	2	0	144	87.27%
9	Does the provided menu satisfy your needs in reporting damaged facilities?	15	13	4	0	1	75	52	12	0	1	140	84.84%
10	Are the menus provided easy to understand?	15	13	4	1	0	75	52	12	2	0	141	85.45%
11	Does this website assist you in reporting damaged pesma facilities?	16	11	4	2	0	80	44	12	4	0	140	84.84%

No	Question	Result					Score					Total (∑nP)	Y
		A	B	C	D	E	A*5	B*4	C*3	D*2	E*1		
12	Can this web system help satisfy the reporting of damaged facilities in pesma that you find?	14	14	2	2	0	70	56	6	4	0	136	82.42%
average value in percent													84.39%

Table 2 above shows the questions and the results of the questionnaires that were distributed to the respondents who were in PESMA KH MAS MANSUR. In the Result Table Column, it means that the number of respondents who chose the options from letters A to E. In the Score table column, namely the multiplication result of the quality numbers in letters A to E with the result table column. Which is where the details of the quality value, namely; A with a quality value of 5, B with a quality value of 4, C with a quality value of 3, D with a quality value of 2, and E with a quality value of 1. in the Total table column (∑nP) is obtained from the overall quantity from the score table column. table column Y is obtained from formula above that has been described.

The table above shows the percentage obtained from calculating the value for every given question. The first question obtains a total value of 138 and the resulting percentage of the calculation is 83.64%. The second question gets a total score of 142 and the resulting percentage of the calculation is 86,06%. The third question gets a total score of 132 and the resulting percentage of the calculation is 80.00%. The fourth question gets a total score of 138 and the resulting percentage of the calculation is 83.64%. The fifth question gets a total score of 136 and the resulting percentage of the calculation is 82.42%. The sixth question gets a total score of 138 and the resulting percentage of the calculation is 83.64%. The seventh question gets a total score of 146 and the resulting percentage of the calculation is 88,48% and so on as shown in the table above.

The conclusion obtained by researcher from the average percentage of the twelve questions by adding the percentage of numbers one to twelve divided by twelve questions resulted in 84.39%. Based on this percentage value, it presented that the system that is created is pretty good from the display. The system functions properly, the user is quite easy to use the system, and part of the interaction with a system like pressing a button is quite easy, and the features make it easier for users to change the password if they forget it.

3.4 Validation Result

Validity is a measure that shows the level of validity of an instrument made by researchers, which is where the instrument can be said to function properly when all measures of validity are valid.

Based on table 2 above, the instrument is used to determine whether a test has the validity or accuracy of measuring the ability of a program(Riyani et al., 2017)

First, it was taken from the amount of respondent as much as 33 from mahansantri pesma kh mas mansur and got a rTable of 0.344. Then the researchers calculated the correlation which was assisted by Ms. Excel. with the formula:

$$= CORREL(Amount\ of\ respondent; The\ sum\ of\ the\ Total)$$

This questionnaire can be said to be valid when the value of rCount is greater than rTable

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Total
1	4	4	4	4	4	4	4	4	4	4	4	4	48
2	5	4	5	5	5	5	5	5	5	5	5	5	59
3	4	4	4	4	4	4	4	4	4	4	4	4	48
4	4	3	4	3	3	4	2	3	4	4	4	4	42
5	5	5	4	4	4	4	4	4	4	4	4	4	50
6	3	3	2	3	4	3	4	2	3	3	2	2	34
7	4	4	4	4	3	4	4	3	3	3	3	3	42
8	5	5	4	5	4	5	5	4	5	5	4	5	56
9	4	4	4	4	5	5	4	5	5	5	4	4	53
10	5	3	5	5	4	4	5	5	5	5	5	5	56
11	5	5	5	5	4	5	4	4	4	4	4	4	53
12	4	4	4	4	4	4	4	4	4	4	4	4	48
13	5	5	4	4	4	3	5	5	5	5	5	5	55
14	4	5	5	5	5	5	5	5	5	5	5	5	59
15	4	5	4	4	4	4	5	5	4	4	3	4	50
16	4	3	5	3	5	5	5	5	5	5	5	5	55
17	4	5	4	4	4	5	5	5	4	4	5	5	54
18	4	4	3	4	4	4	5	5	4	3	5	4	49
19	4	4	4	3	3	3	4	4	3	4	4	4	44
20	4	4	3	3	3	3	4	4	5	4	5	4	46
21	5	5	4	4	4	4	5	5	5	5	5	4	55
22	4	5	4	5	4	4	4	4	4	4	4	4	50
23	5	4	4	5	4	5	5	5	4	5	5	5	56
24	4	5	4	5	4	3	4	4	5	4	3	4	49
25	5	5	5	5	5	5	5	5	5	5	5	5	60
26	3	3	3	3	3	3	3	3	3	3	3	3	36
27	2	3	3	3	4	4	4	4	1	2	2	2	34
28	5	5	5	5	5	5	5	5	5	5	5	5	60
29	5	5	5	5	5	5	5	5	4	5	5	5	59
30	3	5	4	5	4	4	5	5	5	5	5	5	55
31	5	5	5	5	5	5	5	5	5	5	5	5	60
32	3	4	4	4	4	4	4	4	4	4	4	4	47
33	4	5	4	4	5	4	5	5	5	5	5	5	56
rCount	0.745	0.641	0.801	0.756	0.708	0.676	0.737	0.834	0.802	0.893	0.826	0.923	1
rTable	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344	0.344
Validation	V	V	V	V	V	V	V	V	V	V	V	V	V

Figure 17. *Validation Result*

Figure 17. Shows the correlation calculation of the 52 respondents participated with a questionnaire encompass 12 questions.

Seen from the calculations in Figure 17. by the 12 questions overall get a valid value because the value of rCount is greater than the value of rTable.

3.5 Implementation

The output of this study is a web application that is used to report an item or facility

that has been damaged in the Pesma KH Mas Mansur area so that learning at the Pesma KH Mas Mansur is not hampered and becomes more efficient.

The researcher implemented the slim pesma web application with the permission of the Pesma admin and the Pesma director. This system will be run online so that this web application can work effectively and is well integrated and can make clear interactions.

This web application uses several plugin sets such as Bootstrap which has been integrated with the laravel version 5 framework which is quite secure and has hosting and its servers.

4. CLOSING

4.1 Conclusion

This research is aimed at facilitating access in reporting damaged goods or facilities within the scope of the Pesma KH Mas Mansur. because there are so many existing facilities and buildings in which there are various goods or facilities so that pesma admins have difficulty in arranging which repairs to be done first, so the researchers created this web application to ease the work of the pesma admin. whichis where this web application has 3 access rights, namely the User as a student / student, the Admin as the pesma IT admin, and the *Pelaksana* as a person who makes improvements to facilities somewhere in the pesma area

4.2 Suggestion

Based on the questionnaire about the use of the SLIM Pesma Web Application, suggestions given to improve the quality therein, namely with interface improvements such as landing buttons and less attractive backgrounds, adding special features suchas AI bots that will help users when there are other difficulties in accessing this web application, and reduce some of the data that is in the user account registration form.

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