

Monitoring Information System of the Students' Final Project Mobile Web-Based

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Abstract:

Background: A Thesis or final project is a requirement for graduation from a bachelor's degree student of the university. The thesis is a final course that must be completed by students of private universities or state universities so that they are considered worthy of a bachelor's degree. Building an information system that is collected in a container called the Mobile Web-Based Final project Monitoring Information System to facilitate lecturers and students in implementing and monitoring students' final projects, so that the history of the guidance process and students' activities can be recorded in detail, precisely and accurately. The location of the research is the Sembilanbelas November University, Kolaka, which is located at Pemuda Street, No. 339 Kolaka, Southeast Sulawesi. The source of data used in this research is primary data, namely research that requires data or information from the first source or commonly referred to as respondents. The data or information was obtained orally using interview and observation methods. The research model is the waterfall model. The system that has been built is a mobile web-based thesis guidance system named SIMOTA (Sistem Informasi Monitoring Tugas Akhir/Final project Monitoring Information System). This system is built using the PHP programming language, uses a MySQL database and uses a framework for a more attractive appearance and an easy user interface that is easily accepted by users later. This system functions more focus on submitting titles and thesis guidance without face to face by the lecturer as supervisors and students. The system analysis in this research was designed and built to assist the effectiveness of the thesis guidance process for the Sembilanbelas November Kolaka University students. The current system for submitting thesis titles and the thesis guidance process at the Sembilanbelas November University, Kolaka, starts with the student submitting the title of the Final project to the head of the study program, and then the head of the study program verifies the proposed title, if the title submitted is deemed inappropriate, then the next student re-submit another final project title. On the other hand, if the title of the final project is deemed worthy then a supervisor is given to assist students during the process of preparing the final project. After conducting supervision, students who have been approved to take the final project examination register for the final project examination by preparing the final project exam requirements document which will be approved by the head of the study program. The final project monitoring information system that is applied to processes in the field of education can help educational institutions to obtain information on students' final project. Through this system, students who take the final project are required to report on the progress of the final project work process regularly so that it will spur students to quickly graduate and complete their studies.

Keywords: Monitoring; Final project; Mobile Web.

I. Introduction

Technology information Progress has touched various fields of life such as a field economy, health, security, and not except in education, especially in higher education. System Information in higher education is a collection of people, software, hardware, procedures, and rules that interact with each other and work together to encourage the effectiveness of the higher education process.

The thesis or final project is a condition for graduating undergraduate students of the university. The thesis is a final course that must be completed by students at the university of the country so that it is considered proper to get the title of bachelor.

At the Information System Study Program Faculty Technology of Sembilanbelas November University, Kolaka, the preparation process thesis involves a lecturer supervisor and student guidance. The guidance process is usually done face to face in advance direct between the lecturer supervisor with the student. Every session guidance thesis is recorded in the book guidance brought by students that contain the information date of guidance, information guidance, and initials from the lecturer supervisor.

In implementation guidance often occur problem, for example, lecturer supervisors who do not have notes about stages are students who have to do guidance. This can happen because of factor lack of communication good between student guidance and the lecturer supervisor. Besides that, recording only done by

one party, namely in the book guidance student. The lecturer supervisor can not find the record of guidance that has been reviewed previously as an ingredient consideration for the guidance to be carried out.

Not existing information about the remainder of the time processing thesis sometimes makes students not driven more enthusiastically to work thesis with more discipline. Guidance students often not regularly. Management of less time good affects the development thesis student. Sometimes, one-week diligent guidance, then absence for a few weeks until months so that the lecturer supervisor of course difficulty to identify the student if no media is used for monitoring the development student's thesis.

Some of the above of course harmful for students, related to time, schedule, reminders, and results of the seminar. These problems cause the processing thesis becomes slower, so delaying the solution thesis appropriate time and risk worst if not complete the limit the specified time is drop out.

Besides the lecturer supervisor, task monitoring, the final step is also carried out by the head of the study program to find out the activity lecturer supervisors and students' guidance. With existing system monitoring information, the head of the study program can monitor anyone just lecturers' rare supervisors' open service or timetable guidance so that it can be used as a basis for determining the lecturer supervisor thesis or final project student in the future.

Based on problems that have been displayed then considered the need to apply progress technology information and communication to automate managerial processes. A built system which information named System Web-Mobile-Based Final project Monitoring Information to makes it easier for lecturers and students to implement and monitor the final project of students so that the history of the guidance process and student activities can be recorded with detail, precision, and accuracy.

II. Materials And Methods

Research Location: The location of the research is Sembilanbelas November University, Kolaka which is located at Pemuda Street No. 339 Kolaka, Southeast Sulawesi.

Schedule: This research conducted for 3 months starting from February until April 2021.

Data Sources: The data sources used in this research are primary data, namely research that requires data information from sources first or the usual called with respondents. Data or information is obtained orally by using the method of interviews and observations.

Types of Data: The types of data used in this research are:

1. Qualitative data is data in the form of words, not in the form of word numbers. Qualitative data is data in the form of a verbal sentence, which gives information about something's state through statements or words.
2. Quantitative data is data in the form of a number or a number that is used to find the sum of the quantities of an object to be studied.

Techniques of data Collection: As for the techniques or method. The data collection carried out for the preparation of this research is as follows: following:

1. Observation Method, namely direct observation of the object under research.
2. Interview Method, namely the method data collection by asking some related questions to the researched problem.
3. Libraries Method, namely studies literature with gather related sources with discussion in research. These sources are obtained from print media and the internet.

Research Steps: In conducting this research, the researcher used the *waterfall* model as the method development system. The *waterfall* model proposes an approach to device systematic software and sequentially starting at level analysis, design, code, testing, and maintenance. The researcher chooses this method is because enough general use and easy to implement.

Analysis Requirements

At this stage, the researcher analyzes the collected data and studies what data only what is needed in designing a data center application and summarizes it into section information medium system walk in shape *Flowmaps*. So, hope can simplify the design of this application. The systems needed in this research are hardware and software.

1. Hardware

a. Laptops

- Brand Asus VivoBook A407MA
- Processor Intel Celerone N4000

- 14.0" LCD
 - RAM 4GB DDR3
 - 1TB HDD
- b. Printer
- Brand Epson L series
2. Software
- 1) MySQL is used as Databases.
 - 2) Programming language used HTML5, PHP, CSS, Javascript
 - 3) Draw.io is used to create use case diagrams, activity diagrams, sequence diagrams, class diagrams, and interface mockups.
 - 4) Microsoft Word Office 2010 used as making a report
 - 5) The Smartphone device used is the Vivo brand with model number
 - 6) 1806, Android Version 10 with 2.0 GHz AI octa-core processor with 64.00 RAM and storage phone 64.00 GB.

Design System

In this designstage, the researcher designs the data structure, architecture device software and details procedure. At this stage will then be seen description or design system information created, such as Entity Relationship Diagrams (ERD), Data Flow Diagrams (DFD), Context Diagrams, Flowcharts and User Interface (UI) Data Center programs created.

Here is the proposed systemcontextdiagramdesign:

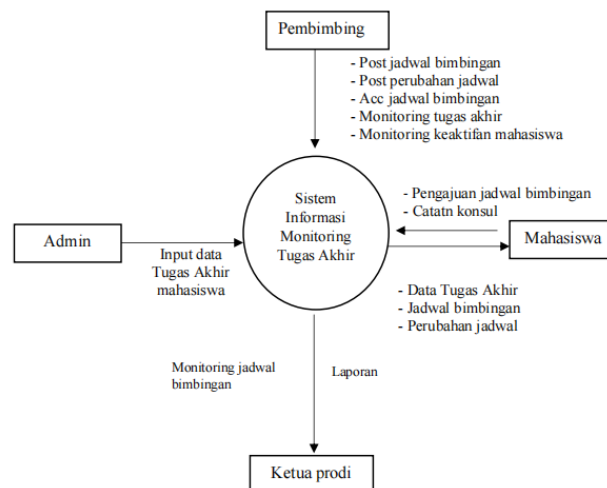


Figure 1. Proposed System Context Diagram Design

Program Code Writing

At a stage, the researcher makes code or possible formula understood by the machine and can executed by the computer. The target codingstage is writing a program in detail on each module forms. Researcher uses programming languages *MySQL* to create Data Center program code. Programming language *MySQL* is used because simpler in writing code the program and have the databaseitself is in the form of a DBFfile.

Testing

After the program code is complete created and the program can run, testing can be started. Testing is focused on the internal logic of the device software, function external, and looking for all possibility error. And check is in accordance with the desired result. In the process of testing. In this case, the researcher uses the method *Black-Box* as method testing device soft.

Reason researchers use the method this is based on functionality system, namely to ensure system can handle all input that is not appropriate and ensure users only can enter correct data into the system.

Application and Maintenance

Device soft after given to the user, may be found *error* when run in the user environment. Or maybe the user asks addition function, this thing cause factor maintenance this Becomes important in use method this. Maintenance this can affect everyone previous steps.

III. Result

Analysis System

System that has been built is a system guidance given mobile web-based thesis called SIMOTA(*Sistem Informasi Monitoring Tugas Akhir*/System Final project Monitoring Information). System this built by using the PHP programming language, using the MySQL database and using a framework for a better view attractive and easy user interface later accepted by the user. System this function more focus on submission title and guidance thesis without stare face by lecturer supervisors and students. Analysis system in this study designed and built to help the effectiveness of the guiding process thesis university students Sembilanbelas November Kolaka.

Analysis On- going System

Current system walk moment this is for submission title thesis and guidance process thesis at the University of Sembilanbelas November Kolaka is started from students submit title Final project to head of the study program, then head of study program do verification proposed title, if proposed title considered no worthy, then students next submit repeat another title. On the contrary if title considered worth then next given supervisor to assist student during the drafting process Final project. After doing guiding, students who have approved to take the exam Final project, do registration exam with prepare document requirements exam to be approved by the head of the study program. FlowmapsCurrent system running can be seen in the following.

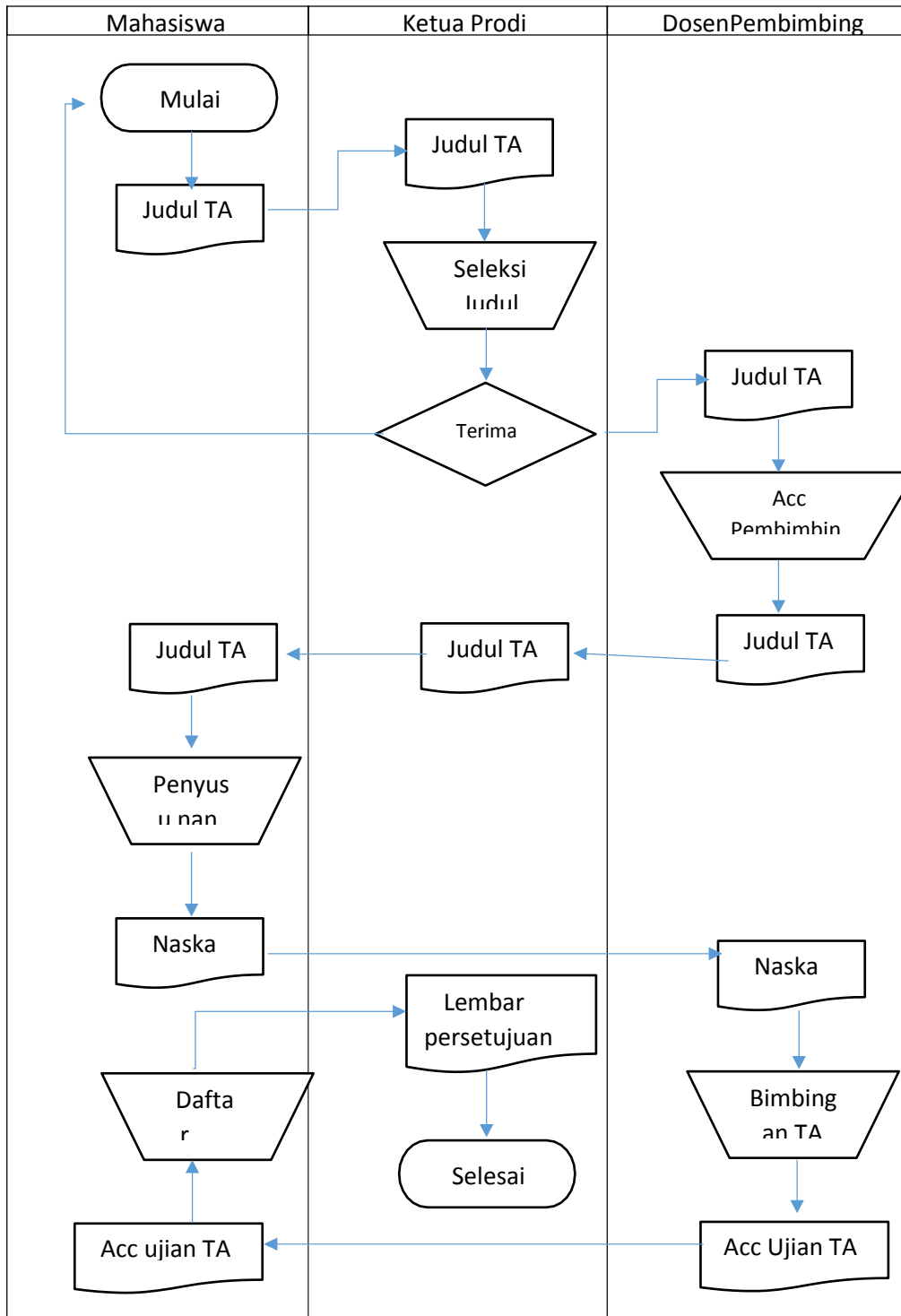


Figure 2 Flowmaps on going system

Analysis Proposed System

System starting from students who open the SIMOTA USN KOLAKA website and register account student after that input title thesis then the system will confirm direct to head of the study program for input and selection lecturer supervisor. Flow map image medium system walking can be seen in the picture following.

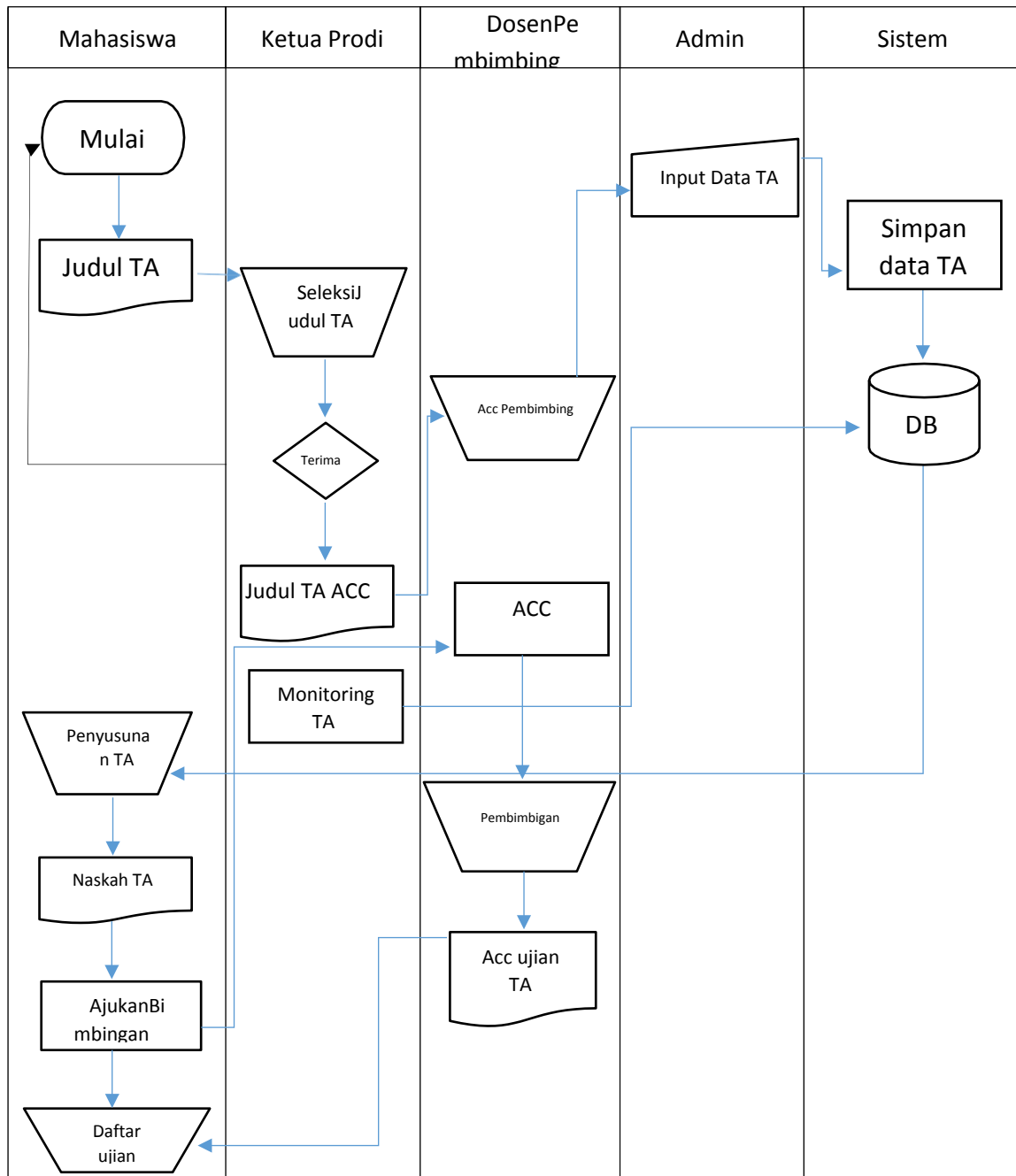


Figure 3. Flow of the proposed system

From Figure 3, it can be explained that students submit title of final project to head of the study program, then head of study program do verification proposed title, if proposed title considered no worthy, then students next submit repeat another title. On the contrary if title considered worth then next given supervisor. For the guidance process of final project, student do submission timetable guidance to lecturer supervisor through system, after lecturer supervisor agree timetable guidance, student then embarrass guidance until lecturer supervisor agree to take the exam final project. Through system monitoring information, the head of the study program can monitor the lecturer supervisors and students related with intensity guidance as well as information how far is the guiding process has been done.

Design System

to make it easier researcher build system, it takes some design cover making design and design the system uses Data Flow Diagrams (DFD) and Entity Relationship Diagrams (ERD).

Data Flow Diagrams (DFD)

To be able to see how the process of the system, described with the following Data Flow Diagrams (DFD) this:

Context diagram

Context diagram made to describe something global system of the whole existing system.

Zero Diagram

Zero Chart made to describe the stages of the process in the context diagram in detail.

a. Context Diagram

System task monitoring information end has 4 Entities, namely Admin, Supervisor, Student and Head of Study Program. Admin has authority to carry out data entry task end, i.e. Title Final project as well as lecturer his supervisor. Lecturer supervisor can do adjustment timetable guidance, can see history guidance, can see submission timetable student . Student through system this can apply timetable supervising to lecturer supervisor, and can see the details of the task end. Head of study program through system it can monitor the supervising process final project student. Following context diagram image:

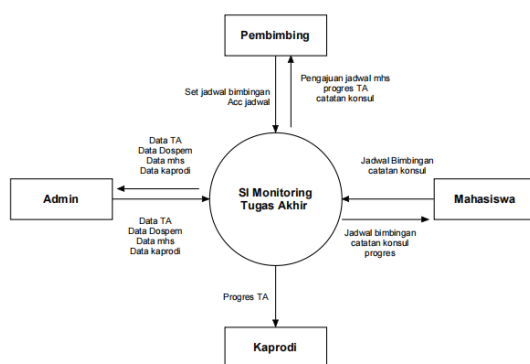


Figure 4. Context diagram

b. level 0 chart

First Admin do Task data entry end to be stored in the table final assignment, lecturer data supervisor in the table lecturer, student data in the table student and head of study program data in the study program table. After each user has account, then the user can login and perform data processing respectively. Student To do submission timetable guidance that will be approved by the lecturer supervisor. After being approved by the lecturer supervisor, student do guidance then input the results of consultations and progress final project in table noteconsultation and progress. The head of the study program can monitor progress final project through progress data and consultationnotes. For more clear following level 0 diagram drawing:

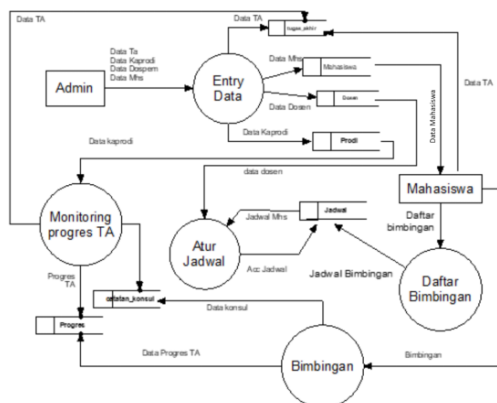


Figure 5. Level 0 chart

From Figure 5, it can be explained that students submit final project title to head of the study program, then head of study program do verification proposed title, if proposed title considered no worthy, then students next submit repeat another title. On the contrary if final project title considered worth then next given supervisor. For the guidance process of final project, student do submission timetable guidance to lecturer supervisor

through system, after lecturer supervisor agree timetable guidance, student then embarrass guidance until lecturer supervisor agree to take the final project examination. Through system monitoring information, the head of the study program can monitor the lecturer supervisors and students related with intensity guidance as well as information how far is the supervising process has been done.

Entity Relationship Diagram (ERD)

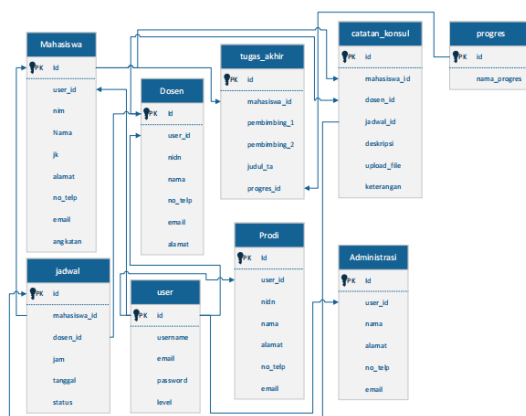


Figure 6. Entity Relationship Diagram (ERD)

Database Design

1. Structure Table

a. Table Student

Table name : tb_mahasiswa
 Primary key : id
 Information : contains student data

Table student is a working table as the place student data storage. Table student consists of id_mahasiswa, NIM_mahasiswa, Nama_mahasiswa, Jk_mahasiswa, alamat_mahasiswa, No_hp dan Angkatan_mahasiswa. Primary key of the table student is id.

Table 1. Students' Table

| Nama field | Type | Size | Note |
|--------------------|---------|------|-------------------------|
| Id | Bigint | 20 | Id |
| Id_mahasiswa | Int | 11 | Id mahasiswa |
| NIM_mahasiswa | Varchar | 255 | Nomor induk mahasiswa |
| Nama_mahasiswa | Varchar | 255 | Nama mahasiswa |
| Jk_mahasiswa | Varchar | 255 | Jenis kelamin mahasiswa |
| Alamat_mahasiswa | Varchar | 255 | Alamat mahasiswa |
| No_hp | Varchar | 255 | No. telp mahasiswa |
| Angkatan_mahasiswa | Year | 4 | Angkatan mahasiswa |

b. Table Lecturer

Table name: tb_dosen
 Primary key: id
 Description: contains lecturer data supervisor

Table lecturer is a working table as the place lecturer data storage supervisor. Table lecturer consists of id_dosen, NIDN, nama, no.telp and e-mail. Primary key of the table lecturer id.

Table 2. Table Lecturer

| Nama field | Type | Size | Note |
|------------|---------|------|----------------|
| Id | Bigint | 20 | id |
| Id_dosen | Int | 11 | Id dosen |
| Nidn | Varchar | 255 | Nidn dosen |
| Nama | Varchar | 255 | Nama dosen |
| No_telp | Varchar | 255 | No. telp dosen |
| Email | Varchar | 255 | Email dosen |
| Alamat | Varchar | 255 | Alamat dosen |

c. Table Final project (Tugas Akhir table)

Table name: tugas_akhir

Primary key: id

Description: contains final project data.

Table tugas_akhir is a table _ as the stored data of final project. Final project table consists of id_mahasiswa, pembimbing_1, pembimbing_2, judul_TA, id_progres. Primary key of the table final_task is id.

Table 3. Table Final project

| Nama field | Type | Size | Note |
|--------------|---------|------|--------------------|
| Id | Bigint | 20 | id |
| Id_mahasiswa | Int | 11 | Id mahasiswa |
| Pembimbing_1 | Int | 11 | Dosen pembimbing 1 |
| Pembimbing_2 | Int | 11 | Dosen pembimbing 2 |
| Judul_TA | Varchar | 255 | Judul tugas akhir |
| Id_progres | Text | | progres |

d. Table Notes Consul

Table name: catatan_akhir

Primary key: id

Description: contains the data of the consul

Table notes consul is a working table _ as the place consul data storage table notes consul consists of id_mahasiswa, id_dosen, id_jadwal, deskripsi, upload_file dan keterangan. primary key from table consul_note is the id.

Table 4. Table Notes Consul

| Nama field | Type | Size | Note |
|--------------|--------|------|--------------|
| Id | Bigint | 20 | Id |
| Id_mahasiswa | Int | 11 | Id mahasiswa |
| Id_dosen | Int | 11 | Id dosen |
| Id_jadwal | Int | 11 | Id jadwal |
| Deskripsi | Text | | deskripsi |
| Upload_file | Text | | Upload file |
| keterangan | Text | | keterangan |

e. Table Progress

table name: tb_progress

Primary key: id

Description: contains final project progress data

Table progress is a working table _ as the place storage of final project progress data. Progress table consists of nama_progres. Primary key of progress table is id.

Table 5. Table Progress

| Nama field | Type | Size | Note |
|--------------|---------|------|--------------|
| Id | Bigint | 20 | id |
| Nama_progres | Varchar | 255 | Nama progres |

f. Table Timetable

Table name: tb_jadwal

Primary key: id

Description: contains schedule data guidance

Table schedule is a working table _ as the place schedule data storage guidance. Table timetable consists of id_mahasiswa, id_dosen, jam, tanggal dan status. Primary key from table schedule is id.

Table 6. Table Timetable

| Nama field | Type | Size | Note |
|--------------|--------|------|--------------|
| Id | Bigint | 20 | id |
| Id_mahasiswa | Int | 11 | Id mahasiswa |
| Id_dosen | Int | 11 | Id dosen |
| Jam | Time | | Jam |

g. User Table

Table name: tb_user

Primary key: id

Description: contains user data.

user table is a working table _ as the place data storage. user table consists of username, email, password and level. Primary key of the user table is id.

Table 7. User Table

| Nama field | Type | Size | Note |
|------------|---------|------|--------------------|
| Id | Bigint | 20 | Id |
| Username | Varchar | 255 | Username mahasiswa |
| Email | Varchar | 255 | Email mahasiswa |
| Password | Varchar | 255 | Password mahasiswa |
| Level | Int | 11 | Level |

h. Study program table

Table name: tb_prodi

Primary key: id

Description: contains study program data

Study program table is a working table _ as the place lecturer data storage supervisor. Table lecturer consists of id_user, NIDN, nama, no.telp dan email. The primary key of the study program table is id.

Table 8. Table of Study Programs

| Nama field | Type | Size | Note |
|------------|---------|------|----------------|
| Id | Bigint | 20 | id |
| Id_user | Int | 11 | Id user |
| NIDN | Varchar | 255 | NIDN prodi |
| Nama | Varchar | 255 | Nama prodi |
| Alamat | Varchar | 255 | No. telp prodi |
| No_telp | Varchar | 255 | Email prodi |
| Email | Varchar | 255 | Alamat prodi |

i. Administration Table

Nama tabel: tb_administrasi

Primary key: id

Keterangan: contains administration data

Administration tabel is a tabelyang of administration data storage. Administration table consist of id_user, nama, alamat,no.telp dan email. Primary key of admininstratontable is id.

Table 9. Table Administration

| Nama field | Type | Size | Note |
|------------|---------|------|----------|
| Id | bigint | 20 | Id |
| Id_user | Int | 11 | Id user |
| nama | Varchar | 255 | nama |
| alamat | Varchar | 255 | alamat |
| No_telp | Varchar | 255 | No. telp |
| email | Varchar | 255 | email |

Flow chart

Flowchart is a schema that illustrates order activity a program from scratch until end. Some of the flowcharts used are as follows:

1. **Admin Flowchart**

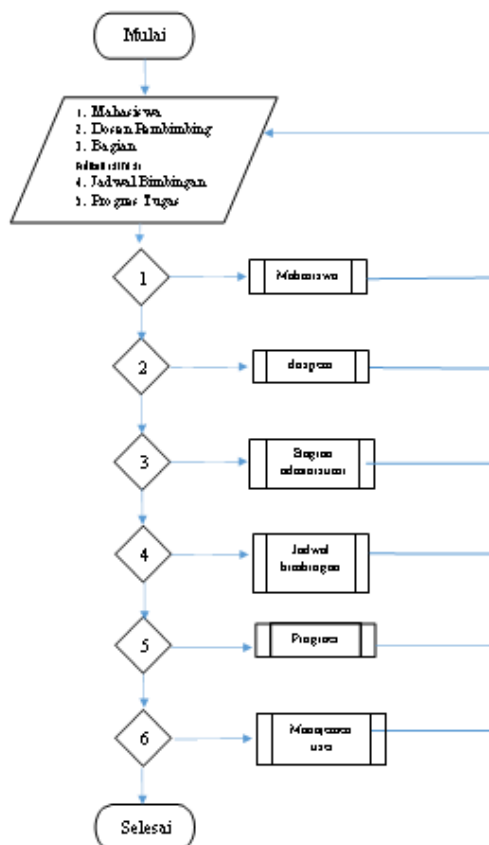


Figure 7 Admin Form Flowchart

In the admin flowchart, there are six main menus that can be selected by the admin such as the student menu which, if clicked will display page student, lecturer menu supervisor who if clicked will display page lecturer supervisor, section menu administration will show page part administration, schedule menu guidance will show page timetable guidance, the final project progress menu will display final project progress page and user management menu will display page user management.

2. Study Program Flowchart

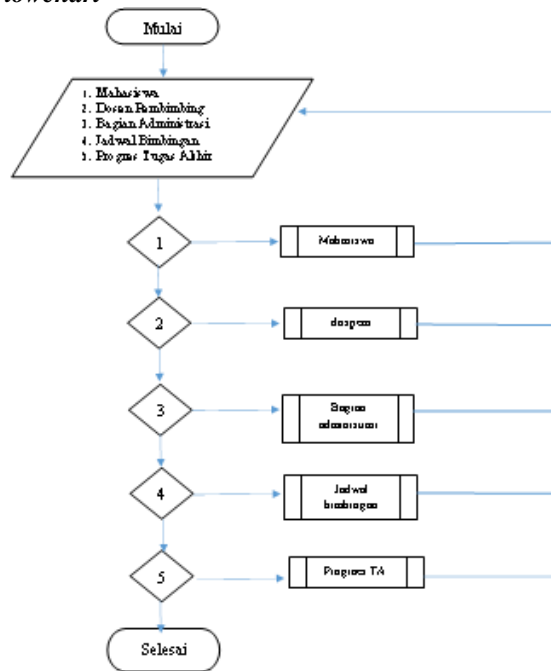


Figure 8 Flowchart of Study Program Form

In the study program *flowchart*, there are five main menus that can be selected by the study program such as the student menu which, if clicked will display page student, lecturer menu supervisor who if clicked will display page lecturer supervisor, section menu administration which if clicked will display page part administration, schedule menu guidance that if clicked will display page timetable guidance and final project progress menu which if clicked will display final project progress page.

3. Lecturer Flowchart

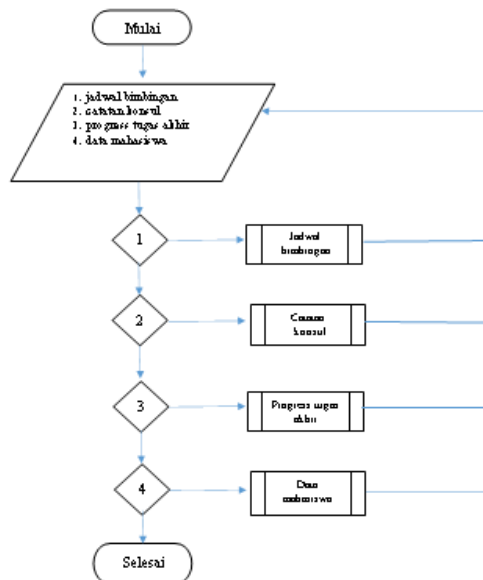


Figure 9 Lecturer Form Flowchart

On the lecturer *flowchart* supervisor there are four main menus that can be selected by the lecturer supervisor like schedule menu guidance that if clicked will display page timetable guidance, note menu the consul who if clicked will display page notes consul, task progress menu the end if clicked will display task progress page end and student data menu which if clicked will display student data page.

4. Student Flowchart

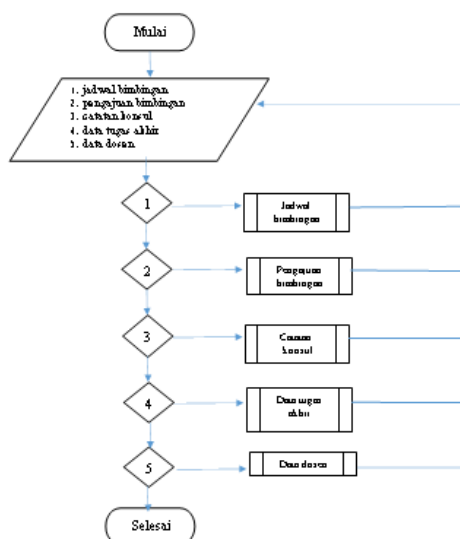


Figure 10 Student form flowchart

In the student *flowchart* there are five main menus that students can choose from, such as the schedule menu guidance that if clicked will display page timetable guidance, submission menu guidance that if clicked will display page submission guidance, note menu the consul who if clicked will display page notes task data menu consul the end if clicked will display task data page the end and the lecturer data menu which if clicked will display lecturer data page.

Implementation System

a. Login page

The login page is the display of the login form design, this form appear when the user accesses the website, the user must input *email* and *password* so you can access, system. When the *email* and *password* are correct, the system will display the main menu Incorrect *email* and *password* will appear message wrong *email* and *password*. The login page image can be seen in Figure 11.

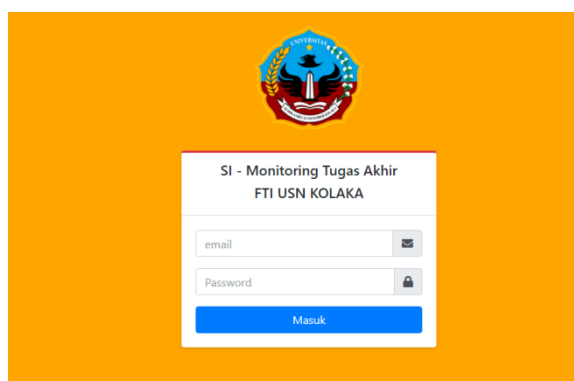


Figure 11. Login Page

b. Admin Main Page

On the admin main menu page, there are seven main menus, namely the student menu which, if clicked will display student data page, lecturer menu supervisor who if clicked will display lecturer data page supervisor , section menu administration which if clicked will display section data page administration, schedule menu guidance that if clicked will display page timetable guidance student , task progress menu the end if clicked Alan showing task progress page end student, user management menu which if clicked will display user data page and logout menu which if clicked will Return to login page. Page image The main admin can be seen in Figure 12.

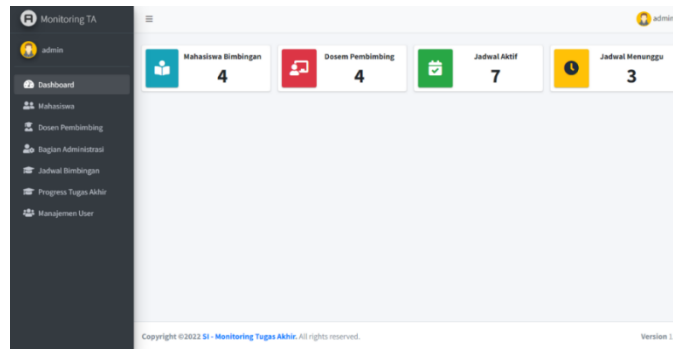


Figure 12. Admin Main Page

c. Student Data Input Page

On the student data input page, if the admin presses add data, the system will display the form add student data and the admin will input student data such as filling in the NIM, name student, address, type gender, number phone, Force, email and password. If all forms have been fill and press knob save then the system will save the data. The image of the student data input page can be seen in Figure 13.

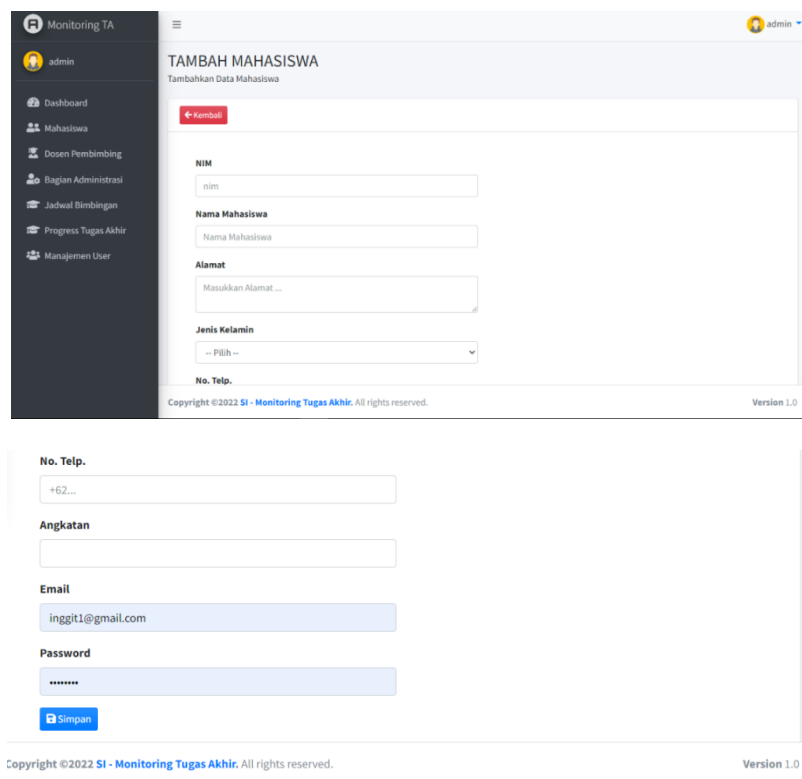


Figure 13. Student Data Input Page

d. Lecturer Data Input Page Advisor

On the lecturer data input page supervisor, if admin wants add lecturer data supervisor then admin needs clicking add data and the system will display page add lecturer data supervisor then the admin inputs the lecturer's data. If the admin is done input data then push knob save then the system will save the data. Picture of lecturer data input page supervisor can be seen in Figure 14.

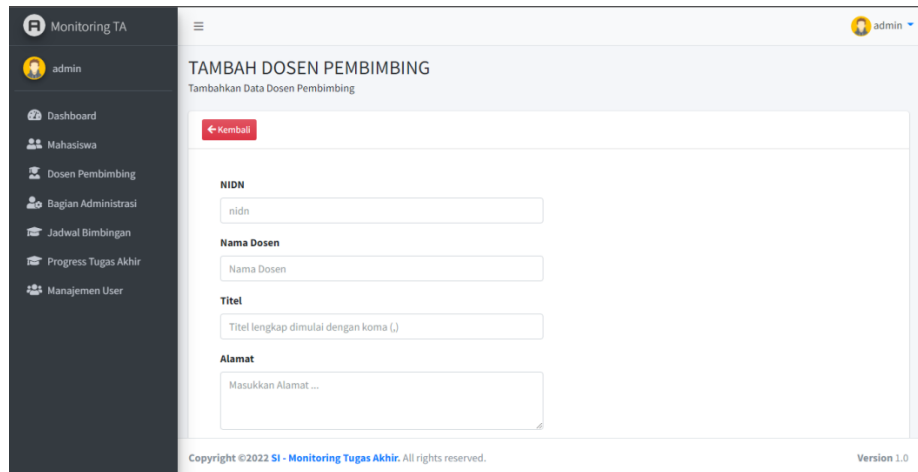


Figure 14. Lecturer Data Input Page Advisor

e. Final project Progress Data Input Page

On the task progress data input page end, if admin wants add task progress data end then admin needs clicking add data and the system will display page plus Final project then the admin inputs the task data the end. If the admin is done input data then push knob save then the system will save the data. Image of the task progress data input page The end can be seen in Figure 15.

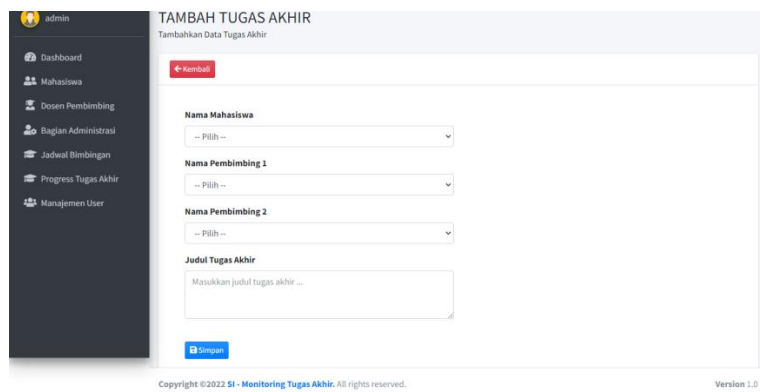


Figure 15. Final project Progress Data Input Page

f. Lecturer Page Advisor

On page lecturer supervisor, there are five main menus, namely the schedule menu guidance that if clicked will display page timetable guidance, note menu the consultation who jika clicked will display page notes consultation, task progress menu the end if clicked will display task progress page end, the student data menu which if clicked will display student data page and logout menu which if clicked will Return to login page. Page image lecturer supervisor can be seen in Figure 16.

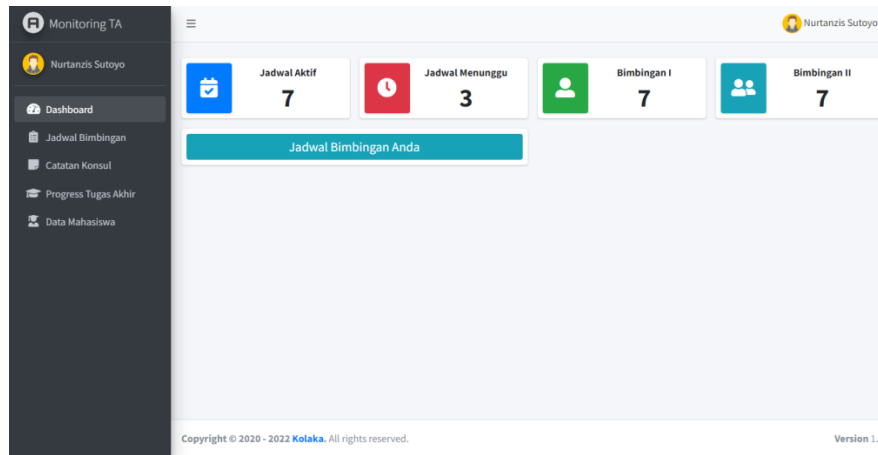


Figure 16. Lecturer Page Advisor

g. Study Program Head page

On page the head of the study program there are six main menus, namely the student menu which, if clicked will display student data page, lecturer menu supervisor will display lecturer data page supervisor, section menu administration which if clicked will display section data page administration, schedule menu guidance that if clicked will display page timetable guidance, task progress menu the end which when clicked will display task progress page end and logout menu which if clicked will Return to login page. Page image the head of the study program can be seen in Figure 17.

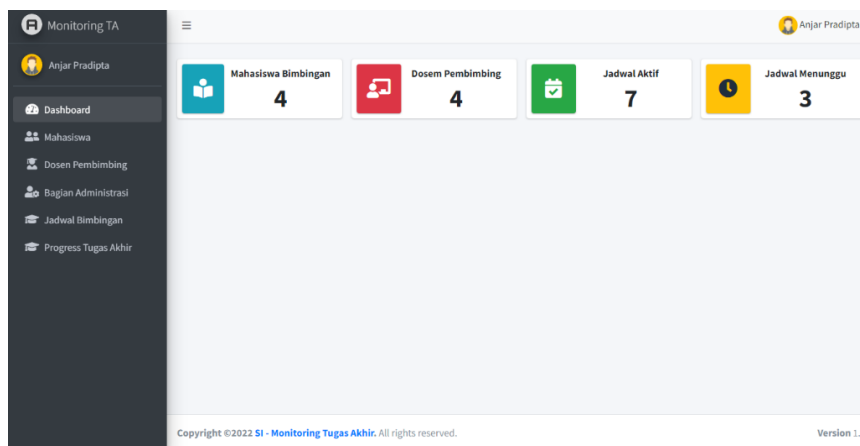


Figure 17. Study Program Head page

h. Student Page

On page There are seven main menus for students, namely, the dashboard menu which contains task progress data end title final project, name one supervisor and supervisor two, schedule menu guidance that if clicked will appear page timetable guidance, submission menu guidance that if clicked will display page submission guidance note menu the consultation who if clicked will display page notes consultation, task data menu the end if clicked will display task data page end, the lecturer data menu which if clicked will display lecturer data page and logout which if clicked will return to login page. Page image students can be seen in Figure 18.

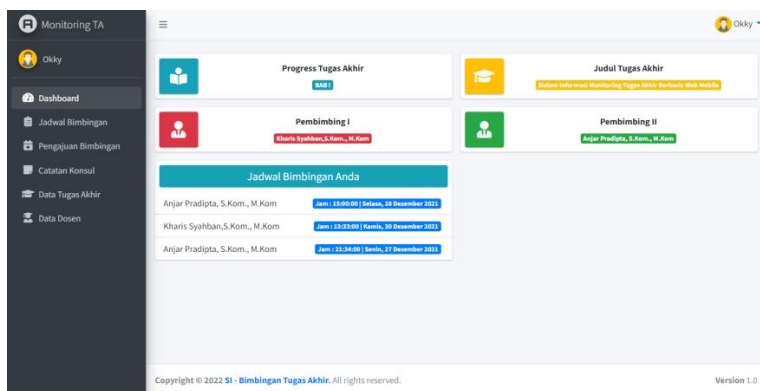


Figure 18 Student Pages

i. Submission Data Guidance

On the submission input page guidance if student want to make timetable guidance then students need clicking add data on the submission menu guidance and the system will display page plus timetable guidance then student input desired schedule. If student done input data then push knob save then the system will save the data. Image of the submission input page guidance can be seen in figure 19.

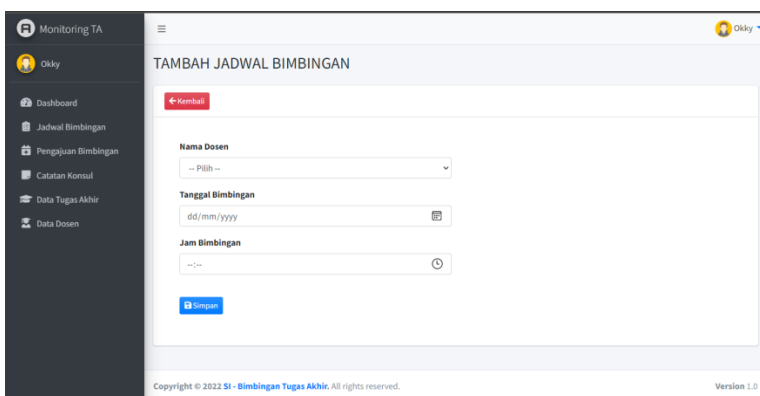


Figure 19. Submission Input Page Guidance

j. Notes Input Page Consul

On the note input page consul if student want to upload revision Duty the end that has been made then student need clicking add data on menu c notes the consul and the system will display page plus notes consultation past student input the data and enter the task file final in pdf format. If student done input data then push knob save then the system will save the data. Note input page image consul can be seen in Figure 20.

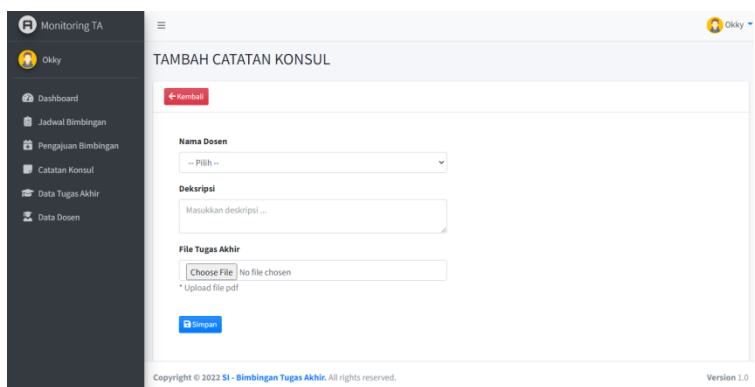


Figure 20. Notes Input Page Consultation

IV. Discussion

Test System Black Box

Before the program is implemented must free more first from mistakes. because of that, the program must tested for errors. Possible error occurs can be classified into the three form the error is:

- a. Common language errors called with error writing, i.e. error in the writing *source program* that doesn't in accordance with what is indicated.
- b. Error processing time, i.e. errors that occur while the program is executing. Error this will cause the program process to stop when the process has not done
- c. Error logic, namely errors from the logic of the program that is made. Error This is a dangerous mistake, if no realized and not found type the error, the results obtained will be misleading users.

Test System on Login Page

Table 10. Test System on Login Page

| No | Skenario pengujian | Hasil yang Diharapkan | Pengamatan | Keterangan |
|----|---|--|---|------------|
| 1 | Menginput <i>email</i> dan <i>password</i> yang tidak ada dalam <i>database</i> | Sistem akan menampilkan pesan "maaf <i>email</i> atau <i>password</i> salah" | Sistem menampilkan pesan "maaf <i>email</i> atau <i>password</i> salah. | Valid |
| 2 | Menginput <i>email</i> dan <i>password</i> yang sesuai dalam <i>database</i> | Sistem akan menampilkan halaman utama | Sistem menampilkan halaman utama | Valid |

On the table testing login page, researcher do scenario testing with input the appropriate email and password in the *database* and from observations researcher system has walk appropriate (valid) as expected.

4.6.2 Testing System on Admin Main Page

Table 11. Testing System on Admin Main Page

| No | Skenario Pengujian | Hasil Yang diharapkan | Pengamatan | Keterangan |
|----|--|--|---|------------|
| 1 | klik menu dashboard | Sistem akan menampilkan halaman dashboard | Sistem menampilkan halaman dashboard | Valid |
| 2 | Klik menu mahasiswa | Sistem akan menampilkan halaman data mahasiswa | Sistem menampilkan halaman data mahasiswa | Valid |
| 3 | klik menu dosen pembimbing | Sistem akan menampilkan halaman data dosen pembimbing | Sistem menampilkan halaman data dosen pembimbing | Valid |
| 4 | Klik menu bagian administrasi | Sistem akan menampilkan halaman data Bagian administrasi | Sistem menampilkan halaman data bagian administrasi | Valid |
| 5 | Klik menu jadwal bimbingan | Sistem akan menampilkan halaman jadwal bimbingan | Sistem menampilkan halaman jadwal bimbingan | Valid |
| 6 | Klik menu progress tugas akhir mahasiswa | Sistem akan menampilkan halaman progress tugas akhir mahasiswa | Sistem menampilkan halaman progress tugas akhir mahasiswa | Valid |
| 7 | Klik menu manajemen user | Sistem akan menampilkan halaman manajemen user | Sistem menampilkan halaman manajemen user | Valid |
| 8 | Klik menu logout | Sistem akan Kembali ke menu login | Sistem akan Kembali ke menu login | Valid |

On the table testing system on the main menu page admin, researchers do scenario testing with click the dashboard menu, and from observations researcher system has walk appropriate (valid) as expected. Researchers also do scenario testing with click the logout menu, and from observation researcher system has walk appropriate (valid) as expected.

Test System on Student Data Input Page

Table 12. Test System on Student Data Input Page

| No | Skenario pengujian | Hasil yang diharapkan | pengamatan | Keterangan |
|----|---------------------------------|---|--|------------|
| 1 | Klik tombol Tambah data | Sistem akan menampilkan halaman tambah data mahasiswa | Sistem menampilkan halaman tambah data mahasiswa | Valid |
| 2 | Klik tombol simpan | Sistem akan menyimpan data yang telah diinput | Sistem menyimpan data yang telah diinput | Valid |
| 3 | Klik tombol simpan (jika gagal) | Data tidak tersimpan dan akan kembali ke halaman input data | System tidak menyimpan data yang telah di input | Valid |

On the table testing system on page student, researcher To do scenario testing with click knob add data, and from observations researcher system has walk appropriate (valid) as expected. Researchers also do scenario testing with click knob save, and from observation researcher system has walk appropriate (valid) as expected.

Test System on Lecturer Data Input Page Advisor

Table 13. Test System on Lecturer Data Input Page

| No | Skenario pengujian | Hasil yang diharapkan | pengamatan | Keterangan |
|----|---------------------------------|---|--|------------|
| 1 | Klik tombol Tambah data | Sistem akan menampilkan halaman tambahdata dosen pembimbing | Sistem menampilkan halaman tambahdata dosen pembimbing | Valid |
| 2 | Klik tombol simpan | Sistem akan menyimpan datayang telah diinput | Sistem menyimpan datayang telah diinput | Valid |
| 3 | Klik tombol simpan (jika gagal) | Data tidak tersimpan dan akan kembali ke halaman input data | System tidak menyimpan data yang telah di input | Valid |

On the table testing system on page lecturer supervisor, researcher To do scenario testing with click knob add data, and from observations researcher system has walk appropriate (valid) as expected. Researchers also do scenario testing with click knob save, and from observation researcher system has walk appropriate (valid) as expected .

Test The System on the Final project Progress Data Input Page

Table 14. Test System on the Task Progress Data Input Page

| No | Skenario pengujian | Hasil yang diharapkan | pengamatan | Keterangan |
|----|---------------------------------|---|--|------------|
| 1 | Klik tombol Tambah data | Sistem akan menampilkan halaman tambah data progresstugas akhir | Sistem menampilkan halaman tambah data progresstugas akhir | Valid |
| 2 | Klik tombol simpan | Sistem akan menyimpan data yang telah diinput | Sistem menyimpan data yang telah diinput | Valid |
| 3 | Klik tombol simpan (jika gagal) | Data tidak tersimpan dan akan kembali ke halaman input data | System tidak menyimpan data yang telah di input | Valid |

On the table testing system on the task progress page end, researcher To do scenario testing with click knob add data, and from observations researcher system has walk appropriate (valid) as expected. Researchers also do scenario testing with click knob save, and from observation researcher system has walk appropriate (valid) as expected.

Test System on Lecturer Page Advisor

Table 15. Test System on Lecturer Page Advisor

| No | Skenario Pengujian | Hasil Yang diharapkan | pengamatan | Keterangan |
|----|---------------------------------|---|---|------------|
| 1 | klik menu dashboard | Sistem akan menampilkan halaman dashboard | Sistem menampilkan halaman dashboard | Valid |
| 2 | klik menu jadwal bimbingan | sistem akan menampilkan halaman data jadwal bimbingan | Sistem menampilkan halaman jadwal bimbingan | Valid |
| 3 | klik menu doseme catatan konsul | Sistem akan menampilkan halaman catatan konsul | Sistem menampilkan halaman catatan konsul | Valid |
| 4 | Klik menu progress tugas akhir | Sistem akan menampilkan halaman progress tugas akhir | Sistem menampilkan halaman progress tugas akhir | Valid |
| 5 | Klik menu data mahasiswa | Sistem akan menampilkan halaman data mahasiswa | Sistem menampilkan halaman data mahasiswa | Valid |
| 6 | Klik menu logout | Sistem akan Kembali ke menu login | Sistem akan Kembali ke menu login | Valid |

On the table testing system on page main lecturer supervisor, researcher To do scenario testing with click the dashboard menu, and from observations researcher system has walk appropriate (valid) as expected. Researchers

also do scenario testing with click the logout menu, and from observation researcher system has walk appropriate (valid) as expected.

Test System on Study Program Pages

table 16. Test System on Study Program Pages

| No | Skenario Pengujian | Hasil | Yang diharapkan | pengamatan | Keterangan |
|----|--------------------------------|-----------------------------------|---------------------------------|---|------------|
| 1 | klik menu dashboard | Sistem halaman dashboard | akan menampilkan | Sistem menampilkan halaman dashboard | Valid |
| 2 | klik menu mahasiswa | sistem halaman | akan menampilkan data mahasiswa | Sistem menampilkan halaman data mahasiswa | Valid |
| 3 | klik menu dosen pembimbing | Sistem halaman pembimbing | akan menampilkan data dosen | Sistem menampilkan halaman data dosen pembimbing | Valid |
| 4 | Klik menu bagian administrasi | Sistem halaman administrasi | akan menampilkan data bagian | Sistem menampilkan halaman data bagian administrasi | Valid |
| 5 | Klik menu jadwal bimbingan | Sistem halaman jadwal bimbingan | akan menampilkan | Sistem menampilkan halaman jadwal bimbingan | Valid |
| 6 | Klik menu progress tugas akhir | Sistem halaman progress mahasiswa | akan menampilkan tugas akhir | Sistem menampilkan halaman progress tugas akhir mahasiswa | Valid |
| 7 | Klik menu manajemen user | Sistem halaman manajemen user | akan menampilkan | Sistem menampilkan halaman manajemen user | Valid |
| 8 | Klik menu logout | Sistem Kembali | akan ke menu login | Sistem akan Kembali ke menu login | Valid |

On the table testing system on the main menu page of study programs, researchers To do scenario testing with click the dashboard menu, and from observations researcher system has walk appropriate (valid) as expected. Researchers also do scenario testing with click the logout menu, and from observation researcher system has walk appropriate (valid) as expected.

Test System on Student Pages

Table 17. Test System on Student Pages

| No | Skenario Pengujian | Hasil | Yang diharapkan | Pengamatan | Keterangan |
|----|-------------------------------|--|--|--|------------|
| 1 | klik menu dashboard | Sistem submenu tugas satu pembimbing dua | akan menampilkan data progress tugas akhir, judul akhir, nama pembimbing dan | Sistem menampilkan submenu data progress tugas akhir, judul tugas akhir, nama pembimbing satu dan pembimbing dua | Valid |
| 2 | klik menu jadwal bimbingan | sistem halaman jadwal bimbingan | akan menampilkan | Sistem menampilkan halaman jadwal bimbingan | Valid |
| 3 | klik menu pengajuan bimbingan | Sistem halaman pengajuan bimbingan | akan menampilkan | Sistem menampilkan halaman pengajuan bimbingan | Valid |
| 4 | Klik menu catatan konsul | Sistem catatankonsul | akan menampilkan | Sistem menampilkan halaman catatan konsul | Valid |
| 5 | Klik menu data tugasakhir | Sistem halaman data tugasakhir | akan menampilkan | Sistem menampilkan halaman data tugas akhir | Valid |
| 6 | Klik menu data dosen | Sistem menampilkan halaman data dosen | akan | Sistem menampilkan halaman data dosen | Valid |
| 7 | Klik menu logout | Sistem Kembali | akan ke menu login | Sistem akan Kembali ke menu login | Valid |

On the table testing system on the main menu page student, researcher do scenario testing with click the dashboard menu, and from observations researcher system has walk appropriate (valid) as expected. Researchers

also do scenario testing with click the logout menu, and from observation researcher system has walk appropriate (valid) as expected.

Test System on the Submission Data Input Page Guidance

Table 18 Tests System on the Submission Data Input Page Guidance

| No | Skenario pengujian | Hasil yang diharapkan | yang pengamatan | Keterangan |
|----|---------------------------------|---|--|------------|
| 1 | Klik tombol Tambah data | Sistem akan menampilkan halaman tambah data pengajuan bimbingan | Sistem menampilkan halaman tambah data pengajuan bimbingan | Valid |
| 2 | Klik tombol simpan | Sistem akan menyimpan data yang telah diinput | Sistem menyimpan data yang telah diinput | Valid |
| 3 | Klik tombol simpan (jika gagal) | Data tidak tersimpan dan akan kembali ke halaman input data | System tidak menyimpan data yang telah di input | Valid |

On the table testing system on page lecturer supervisor, researcher To do scenario testing with click knob add data, and from observations researcher system has walk appropriate (valid) as expected. Researchers also do scenario testing with click knob save, and from Observation researcher system has walk appropriate (valid) as expected.

V. Conclusion

From the results of research and discussion in chapter IV, the authors take conclusion that:

1. System task monitoring information end applied to business processes in education can help party educational institutions to get information final project student.
2. Through system the students who take Final assignment is required report development of the TA work process on a regular basis so that it will spur students to graduate quickly complete his studies.

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