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 (SistemInformasi 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 worthythen 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.

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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 lecturer supervisor and student guidance. The guidance processis 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 enthusiasticto 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 informationnamed 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 students' activities can be recorded with detail, precision, and accuracy.

II. Materials And Methods

Research Location: Thelocation 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. InterviewMethod, 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 Al 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.

Analysis System

III. Result

System that has been built is a system guidance given mobile web-based thesis called SIMOTA(*SistemInformasi 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 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.

Nama field	Tipe	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 mahaiswa
Angkatan_mahasiswa	Year	4	Angkatan mahasiswa

Table 1. Students' Table

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 ofid_ dosen, NIDN,nama, no.telp and e-mail. Primary key of the table lecturer id.

NT C 11	Table 2. Table Lecturer				
Nama field	Туре	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		

Table 2 Table Lecturer

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 storagedata 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	Туре	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 Con	nsul
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Tuble in Tuble Hotes Combai			
Nama field	Туре	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 ofnama_progress. Primary key of progress table is id.

Table 5. Table Progress			
Nama field	Туре	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 0. Table Tilletable			
Nama field	Туре	Size	Note	
Id	Bigint	20	id	
Id_mahasiswa	Int	11	Id mahasiswa	
Id_dosen	Int	11	Id dosen	
Jam	Time		Jam	

Table 6. Table Timetable

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	Туре	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 placelecturer 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	Туре	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 administrationtable is id.

Table 9. Table Administration			
Nama field	Туре	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 aresix 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.



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*

2.



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.

Monitoring TA	=	📀 admin 👻
admin	TAMBAH MAHASISWA	
Dashboard Mahasiswa Dosen Pembimbing Dosen Pembimbing Bagian Administrata Jadwal Bimbingan Progress Tugas Akhir Manajemen User	Tambahkan Data Mahasiowa	Version 1.0
No. Telp.		
+62		
Angkatan		
Email		
inggit1@gmail.com		
inggit1@gmail.com		
Password		

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.

B Monitoring TA	=	🞧 admin 🝷
admin	TAMBAH DOSEN PEMBIMBING Tambahkan Data Dosen Pembimbing	
🙆 Dashboard	(← Kentual)	
📱 Dosen Pembimbing	NIDN	
Jadwal Bimbingan	nide	
🞓 Progress Tugas Akhir 🏰 Manajemen User	Nama Dosen	
	Titel Titel lengkap dimulai dengan koma (.)	
	Alamat Masukkan Alamat	
	Copyright ©2022 SI - Monitoring Tugas Akhir. All rights reserved.	Version 1.0
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No. Telp +62		
Email		
inggit1	ref	
	_	
⊟ Simpl		
opyright ©20	22 SI - Monitoring Tugas Akhir. All rights reserved. Version 1.0	

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.

Dashboard			
	← Kembali		
Mahasiswa			
Dosen Pembimbing	Nama Mahasiswa		
Bagian Administrasi	Pilih	~	
* Jadwal Bimbingan	Nama Pembimbing 1		
Progress Tugas Akhir	Pilin		
Manajemen User	Nama Pembimbing 2		
	Pilih	*	
	Judui Tugas Akhir		
	Masukkan judul tugas akhir		
	🖬 Simpan		

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 jka 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.

Monitoring TA	=						🞧 Anjar Pradipta 🤻
Anjar Pradipta	Mahasiswa Bimbi 4	ngan	Dosem Pembimbing	₩	Jadwal Aktif	0	Jadwal Menunggu
Dashboard					1		3
🚢 Mahasiswa							
🚨 Dosen Pembimbing							
🍰 Bagian Administrasi							
😰 Jadwal Bimbingan							
🕿 Progress Tugas Akhir							
	Copyright ©2022 SI - Monitor	ing Tugas Akhir. All rij	ghts reserved.				Version 1.0

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.

Honitoring TA	=		
Okky	TAMBAH JADWAL BIMBINGAN		
🔁 Dashboard	← Kembali		
💼 Jadwal Bimbingan	_		
🛱 Pengajuan Bimbingan	Nama Dosen		
🖉 Catatan Konsul	Pilih	~	
🖨 Data Tugas Akhir	Tanggal Bimbingan		
🗸 Data Dosen	dd/mm/yyyy	(ii)	
	Jam Bimbingan		
		۲	

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.

Monitoring TA	=	😯 Okky -
Okky	TAMBAH CATATAN KONSUL	
 Dashbaard Jadwal Bimbingan Propajuan Bimbingan Gatata Romal Data Tugas Akhir Data Dosen 		
	Copyright © 2022 SI - Bimbingan Tugas Akhir. All rights reserved.	Version 1.0

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 Lage						
No	Skenario pengujian	Hasil yang Diharapkan	Pengamatan	Keterangan			
1	Meng <i>inputemail</i> dan <i>password</i> yang tidak ada dalam <i>database</i>	L	Sistem menampilkan pesan"maaf <i>emaila</i> tau <i>password</i> salah.	Valid			
2	Meng <i>input email</i> dan <i>password</i> yang sesuaidalam <i>database</i>	Sistemakan enampilkan halaman utama	Sistem menampilkan halaman utama	Valid			

Table 10. Test System on Login Page

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	HasilYang diharapkan	Pengamatan	Keterangan
1	klik menu dashboard	Sistemakan menampilkan halaman dashboard	Sistem menampilkan halaman dashboard	Valid
2	Klik menu mahasiswa	Sistemakan menampilkan halamandata mahasiswa	Sistem menampilkan halaman data mahasiswa	Valid
;	klik menu dosem pembimbing	Sistemakan menampilkan halamandata dosen pembimbing	Sistem menampilkan halaman data dosen pembimbing	Valid
4	Klik menu bagian administrasi	Sistemakan menampilkan halamandata Bagianadministrasi	Sistem menampilkan halaman data bagian administrasi	Valid
i	Klik menu jadwal bimbingan	Sistemakan menampilkanhalamanjadwalbimbin gan	Sistem menampilkan halaman jadwalbimbingan	Valid
1	Klik menu progress tugas akhir	Sistemakan menampilkan halaman progress tugas akhirmahasiswa	Sistem menampilkan halaman progress tugas akhir mahasiswa	Valid
1	Klik menu manajemen user	Sistemakan menampilkanhalamanmanajemen user	Sistemmenampilkanhalaman manajemen user	Valid
3	Klik menu logout	Sistemakan kembalikemenu 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

	1 able 1	2. Test System on Stude	ni Data mput rage	
No	Skenario pengujian	Hasilyang 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	J 1	Sistem menyimpan datayang telah di <i>input</i>	Valid
3	Klik tombol simpan (jika gagal)	Data tidak tersimpan dan akan	System tidak menyimpan datayang	Valid

Table 12. Test System on Student Data Input Page

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.

kembali ke halaman input data telah di input

Test System on Lecturer Data Input Page Advisor

No	Skenario pengujian	Hasil	yang diharapkan	Pengamatan	Keterangan
1			1	Sistem menampilkan halaman tambahdata dosenpembimbing	Valid
2	1	Sistemakan telah di <i>inpu</i>		Sistem menyimpan datayang telah di <i>input</i>	Valid
3	1 0 00 /		1	System tidak menyimpandatayang telah di input	Valid

Table 13.	Test S	vstem	on L	ecturer	Data	Input Page
Table 13.	ILSUD	ystem	UII LA	ccurci	Data	input i age

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

No	Skenario pengujian	Hasilyang diharapkan	Pengamatan	Keterangan			
1		Sistemakan menampilkan halaman tambahdata progresstugasakhir	Sistem menampilkan halaman tambahdata progresstugasAkhir	Valid			
2	1	, i , c	Sistem menyimpan datayang telah di <i>input</i>	Valid			
3	1 0 00 /	Data tidak tersimpan dan akan kembali ke halaman input data	System tidak menyimpan datayang telah di <i>input</i>	Valid			

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

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

	1	able 15. Test system on Lecture	a l'age Auvisoi	
No	Skenario Pengujian	HasilYang diharapkan	pengamatan	Keterangan
1	klik menu dashboard	Sistemakan menampilkan halaman dashboard	Sistem menampilkan halaman dashboard	Valid
2	klik menu jadwal bimbingan	Sistemakan menampilkan halamandata jadwal bimbingan	Sistem menampilkan halaman jadwal bimbingan	Valid
3	klik menu dosem catatan konsul	Sistemakan menampilkan halaman catatan konsul	Sistem menampilkan halaman catatan konsul	Valid
4	Klikmenuprogress tugas akhir	Sistemakan menampilkan halaman progress tugas akhir	Sistem menampilkan halaman progress tugas akhir	Valid
5	Klikmenu data mahasiswa	Sistemakan menampilkan halamandata mahasiswa	Sistem menampilkan halaman data mahasiswa	Valid
6	Klik menu logout	Sistemakan kembali ke menu login	Sistem akan Kembali ke menu login	Valid

Table 15. Test System on Lecturer Page Advisor

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. 1 est System on Study Program Pages						
No	Skenario Pengujian	HasilYang diharapkan	pengamatan	Keterangan			
1	klik menu dashboard	Sistemakan menampilkan halaman dashboard	Sistem menampilkan halaman dashboard	Valid			
2	Klikmenumahasiswa	Sistemakan menampilkanhalamandata mahasiswa	Sistem menampilkan halaman data mahasiswa	Valid			

table 16. Test System on Study Program Pages

Monitoring Information	$C \rightarrow C T $	\mathbf{C}_{1} , 1_{1} , \mathbf{T}_{1} , \mathbf{T}_{1} , \mathbf{T}_{2} , \mathbf{T}_{1}	ויו או יי מו	\mathbf{U}
Monitoring intermation	NUCTOM AT IND	<u>Νπιαρήτε</u> Είναι	Project Monii	ο ννοη_καςρα
	System Of Inc			e neo-Duseu

3	klik menu dosen pembimbing	Sistemakan menampilkan halamandata dosen pembimbing	Sistem menampilkan halaman data dosen pembimbing	Valid
4		Sistemakan menampilkan halamandata bagianadministrasi	Sistem menampilkan halaman data bagianadministrasi	Valid
5	Klik menu jadwal bimbingan	Sistemakan menampilkan halaman jadwal bimbingan	Sistem menampilkan halaman jadwal bimbingan	Valid
	Klikmenu progress tugas akhir	Sistem akan menampilkan halaman progress tugas akhir mahasiswa	Sistem menampilkan halaman progress tugas akhir mahasiswa	Valid
	j	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 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

-	Tuble 111 Test System on Student Tuges					
No	Skenario Pengujian	HasilYang diharapkan	Pengamatan	Keterangan		
1	klik menu dashboard	Sistemakan menampilkan submenudata progress tugas akhir,judultugas akhir, nama pembimbing satudanpembimbing dua	Sistem menampilkan submenu data progress tugas akhir, judulTugasakhir, nama pembimbing satudan pembimbingdua	Valid		
2	klik menu jadwal bimbingan	Sistemakan menampilkan halaman jadwal bimbingan	Sistem menampilkan halamanjadwal bimbingan	Valid		
3	Klikmenu pengajuan bimbingan	Sistemakan menampilkan halaman mengajuan bimbingan	Sistem menampilkan halaman pengajuan bimbingan	Valid		
4	Klik menu catatan konsul	Sistemakan menampilkan catatankonsul	Sistem menampilkanhalaman catatan konsul	Valid		
5	Klikmenu data tugasakhir	Sistemakan menampilkan halamandata tugasakhir	Sistem menampilkan halaman data tugas akhir	Valid		
6	Klikmenu datadosen	Sistemakanmenampilkanhalamadata dosen	Sistemmenampilkanhalaman data dosen	Valid		
7	Klik menu logout	Sistemakan kembalike menu login	Sistemakan kembali ke menu login	Valid		

Table 17. Test System on Student Pages

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	Hasilyang diharapkan	pengamatan	Keterangan
1	Klik tombol Tambah data	menampilkan halaman	Sistem menampilkan halaman tambah data pengajuan bimbingan	Valid
2	Klik tombol simpan		Sistem menyimpan datayangtelah di <i>input</i>	Valid
3	Klik tombol simpan (jika gagal)	Data tidak tersimpan dan akan kembali ke halamaninput data		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:

System task monitoring information end applied to business processes in education can help party 1. 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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