STUDENT COUNSELING INFORMATION SYSTEM (SIBIMA) CASE STUDY: INFORMATICS DEPARTMENT, FACULTY OF INDUSTRIAL TECHNOLOGY, UPN "VETERAN" JAWA TIMUR, SURABAYA

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ABSTRACT

Especially higher education institutions have a responsibility to produce quality graduates in various fields of science. Universities in curriculum development as the basis for the student in the study. The mechanism of appointment of the supervisor and examiner and exam scheduling Final Project and Job Training Program, especially in the Information Engineering study conducted by the coordinator and the coordinator of the Final Job Training while the schedule and the test team informed through the notice board exam in Informatics Engineering Study Program. This process takes a long time and good management, so that the student obtain the tutor according to the scientific field as well as the examination schedule so that no class schedules or schedule menggaggu lecturers. The conclusions of this research is produced an Information System Final Project and Job Training to assist the process of guidance Final Project and Job Training Program in the Computer Science National Development University "Veteran" East Java can run smoothly. In addition, with this information system is expected to help the work of each coordinator Final Project and field practice in conducting administrative activities Final guidance process and the Job Training

Keyword : Web, Information Systems, Student Guidance

INTRODUCTION

The development of information technology very rapidly affect other areas of the world of business, services, education and others. No exception to education, especially higher education is one area that is heavily influenced by developments in information technology. Globalization requires a college education to be able to manage the information properly, so that the information needs of each stakeholder can be met quickly and precisely (Choldun, 2006).

Academic advising of students is one of the elements supporting the most important in a relationship between educators and students for any formal educational institutions. Academic tutoring itself is held because it serves as have brought a formal education institution students in academic and other fields that support the academic activities mahasisa itself. This requires any formal educational institutions, especially the University or Institute to have a system that can help the academic guidance counselor is directly related to the academic problems with students each - each. (Afni & Naidoo, 2013

The study program Information Engineering of National Development University "Veteran" East Java is one of the courses that requires each student / i her to complete a final project before getting a college degree. In addition to a final project, students must also complete the Job Training. A student registering Final Project and field work by attaching requirements - requirements in accordance with predetermined rules. The registration is verified by the coordinator and the coordinator of the Final Job Training. However, until today the enrollment and registration process is still done manually and thus require a relatively long time, it becomes more difficult Reporting Process, Process Monitoring becomes more difficult.

The purpose of this study is how to make a web based information system to facilitate the service process End Task and Job Training Program of Computer Science National Development University "Veteran" East Java and change the service process Final which was originally based on paper-based models to a digital solution-based models.

Based on the description above, created a web that can petrify Final Project coordinator and Job Training in managing all the elements associated with both Final Student coaching and Job Training.

LITERATURE REVIEW

According to Cornford & Shaikh, (2013) Information System can improve the management of the organization to operate and help ease the job. This is achieved by collecting, storing, and processing and sharing of data and information. The statement shows that the study of information systems requires four different purposes but interrelated, are as follows:

1. The computer-based digital technology, used to handle the information.
2. The user becomes part of the information system.
3. Complete the tasks that are expected for the needs and specific requirements.
4. Build a system.

Scott (1996) says that the system consists of elements - elements like the input, processing and output as shown in Figure 1. According to (Jogiyanto, 2005) in his book entitled Analysis and Design of Information Systems explains that: "The system is a network of procedures - procedure interconnected, gathered together to perform an activity to accomplish a specific goal "

Figure 1. Blocks of Information Systems (Scott, 1996)

According Jogiyanto (2005) in his book entitled Analysis and Design of Information Systems, defines the following information: "Information is data that is processed into a form more useful

and more meaningful for those who receive it." Characteristics of information according to Jogiyanto in his book entitled Analysis and Design Information systems are as follows:
1. Relevant
2. Timely
3. Accurate

According to (Adiwinata, Sarwoko, & Indriyati 2012) Information System Final Project and Job Training to assist the process of course Final Project and Job Training program in environmental studies Information Engineering University of Diponegoro can proceed smoothly. In addition, with this information system is expected to help the work of each - each coordinator Final Project and the Job Training is then called by street vendors in administering the course. Students and faculty of Information Engineering study program can also take advantage of this information system as a source of information and journals on subjects Final Project and street vendors.

According to (Handayaningsih & Pujiyono 2010) Study Program Informatics Ahmad Dahlan University students have as many as 1350 student body. The number of counselors is also limited. By looking at the faculty workload is heavy with the amount of guidance that many Final Project and Job Training a resulted in less than optimal in providing guidance. This paper will discuss the design and implementation of application systems consulting and coaching final report based on web. These applications run on the system and integrated with IT CENTER. The results of this Final Project and Job Training coaching report card in the form of guidance based on the input start time to finish guidance. Lecturers do guidance by downloading the material sent by students and leave a comment or by conducting discussions with chat. Supervisor agree to exam seminar and pendadaran proposal. Guidance cards can be printed and used as physical evidence submitted proposals and pendadaran exam seminar at the faculty level and university.

According to (Pertiwi, 2013) Final Project and Job Training Guidance System Design and Implementation Final Project Report (LTA) is a system design that will be built to create a centralized data related to the research carried out in an educational institution in this case carried out at STMIK - PalComtech Polytechnic Palembang. Final Project and Job Training Guidance System Design and Implementation Final Project Report (LTA) as a system that helps the communication between faculty and students to conduct face-to-face barriers between students and professors. Lecturers will be able to see the research report submitted by students through Worksheet. Lecturers will examine and repair records directly to the report submitted by the students. However, this system can not be 100% substitute for face-to-face with teachers, but direct discussions with the lecturer will be better results Design Guidance System Final Project and Job Training and Implementation Final Project Report (LTA) is also a system that collects all the title of the study conducted by students STMIK - Polytechnic PalComTech and lecturers. Students and faculty can see direct research that has been done in the previous semester. System development method used in the system design process is to use the spiral method.

According to (Ernawati, Anindito, & Perwiro Atmojo, 2014) This study functioned as a preliminary study for research on plagiarism that occurs in students' final assignment S1 at Bina Nusantara University and how to resolve the case with prevention procedures approved by students, faculty, department and other support units. The preliminary study conducted by the library found several cases of plagiarism. The results of this literature study is used to compile a questionnaire that will contribute to the student, the Final Project and Job Training advisor,

judge the Final Project and Job Training, and the department to get the real condition of plagiarism practices, precautions, and some input to support further research.

RESEARCH METHODS

This study is divided into several stages as follows:

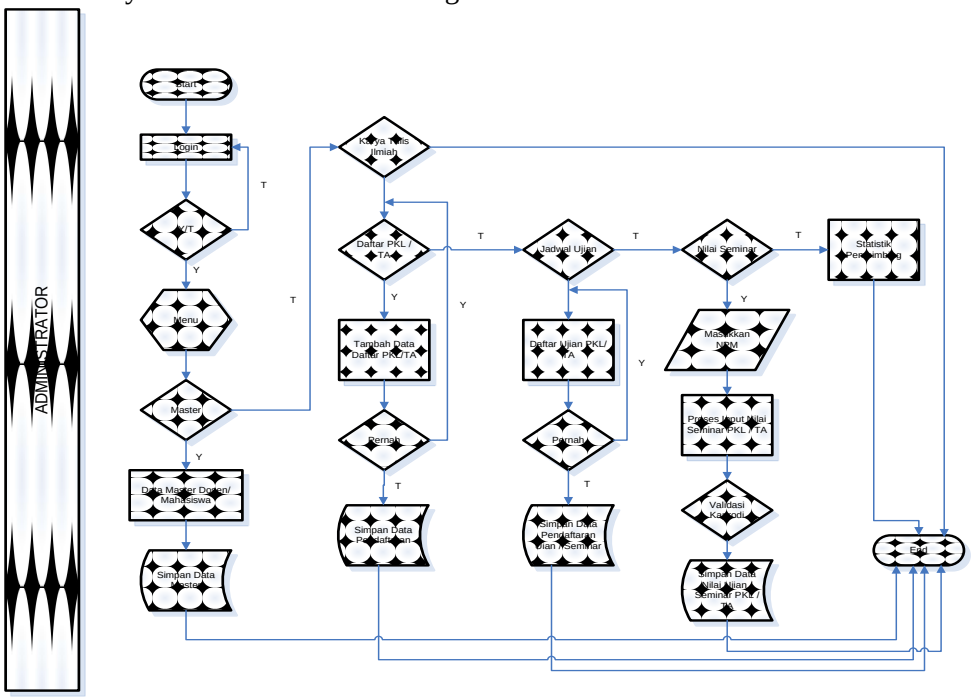

Figure 2. Flowchart SIBIMA

In the picture above description describes the architectural structure of the master data processing to create a final project management processes and Job Training field.
In the explanation of the image above, it will get a database design that has a level of clarity that is similar to a database that will be used on Guidance System Students End (SIBIMA) in the Informatics Faculty of Industrial Technology, where models of this design there are two kinds, namely, with Conceptual Data Model (CDM) as well as when it will degenerate into a Physical Data Model (PDM).

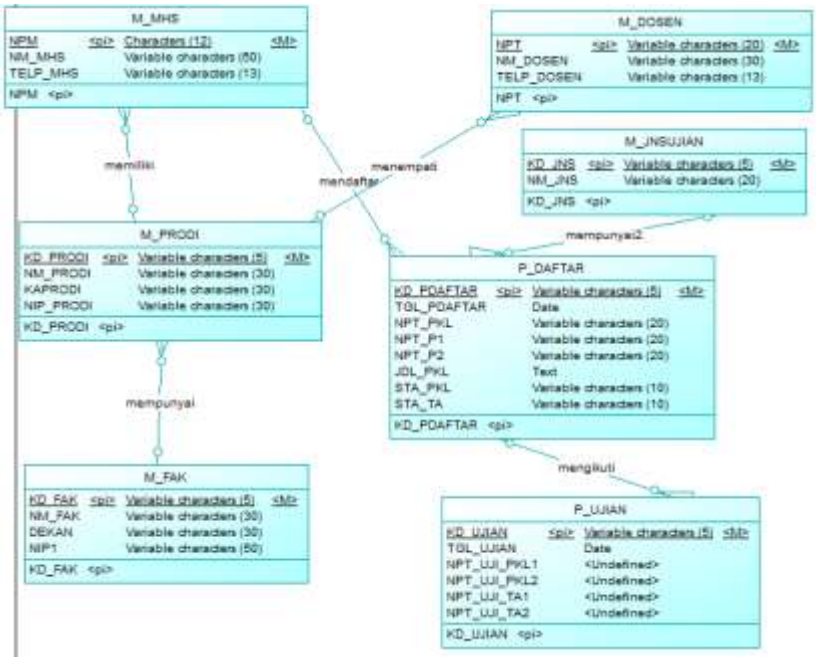

Figure 3. CDM SIBIMA

Pada gambar 3 diatas menunjukan dari 7 entitas ini meliputi dari:
a. M_MHS dimana pada entitas ini bertujuan untuk menyinpan semua data mahasiswa dari berbagai angkatan dan entitas M_MHS ini mempunyai *primary key* NPM.
b. M_DOSEN dimana pada entitas ini bertujuan untuk menyinpan semua data dosen dari berbagai jurusan yang diwakili dengan relasi ke M_PRODI dan entitas M_DOSEN ini mempunyai *primary key* NPT.
c. M_FAK dimana pada entitas ini bertujuan

In the picture above shows 3 of 7 this entity covers from:
a. **M_MHS** where the entity aims to save all student data from various forces and entities M_MHS NPM has a primary key.
b.**M_DOSEN** where the entity aims to save all data lecturers from various departments are represented with relation to M_PRODI and this entity has a primary key M_DOSEN NPT.
c. **M_FAK** where the entity aims to save all faculty data on UPN "Veteran" East Java, in this entity also has a field name is Dean and the entity has a primary key M_FAK KD_FAK.
d. **M_PRODI** where the entity aims to save all faculty data on UPN "Veteran" East Java, in this entity also has a field name is Chairman of the Program and this entity has a primary key M_PRODI KD_PRODI.
e. **M_JNSUJIAN** where the entity aims to menyinpan all data type exam, which includes the Job Training , Final Project and Job Training and Oral Examination that existed at the Faculty of UPN "Veteran"East Java, and the entity has a primary key M_JNSUJIAN KD_JNSUJIAN.

f. **P_DAFTAR**, the entity is used to store data of students who enroll Exam type Final Project and Job Training Program
f. **P_UJIAN**, the entity is used to store data of students who enroll

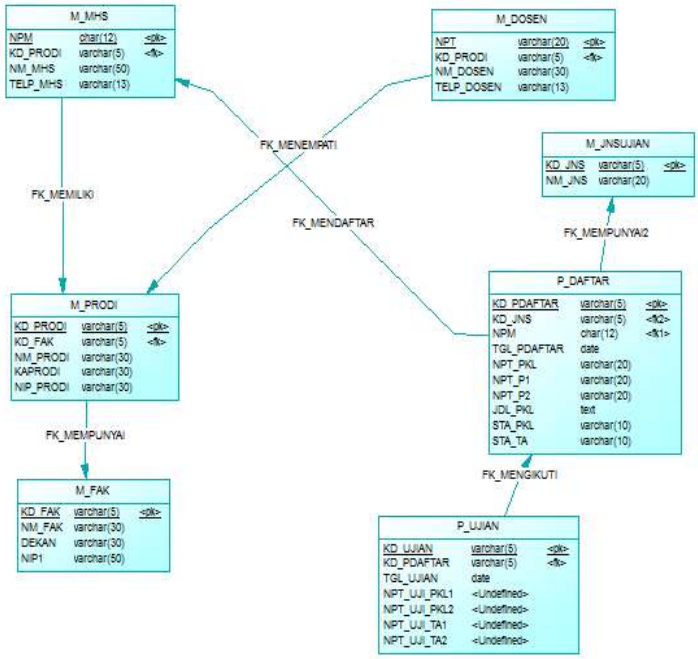

Figure 4. PDM SIBIMA

In the picture above describes the results of a Conceptual generated that have been made, which in this PDM approach can be said and dgunakan as a database in the system.
At PDM does not change the number of entities that exist in SIBIMA this, because of the results of the relationships among the entities no one uses the relation many-to-many, so that the results of the relation of one-to-many or many-to-one confirmed only the addition of primary key from one entity to another, for example relationships of entities P_DAFTAR with P_UJIAN where both these entities will be related, to conduct an examination of the results by the student, the student must be registered in advance on the entity P_DAFTAR, so they will know NPM, Title, as well as from faculty mentor anyone. When not registering in P_DAFTAR entity, it will not be able to enter data into the entity P_UJIAN.

RESULT AND DISCUSION

Figure 5. Main page SIBIMA

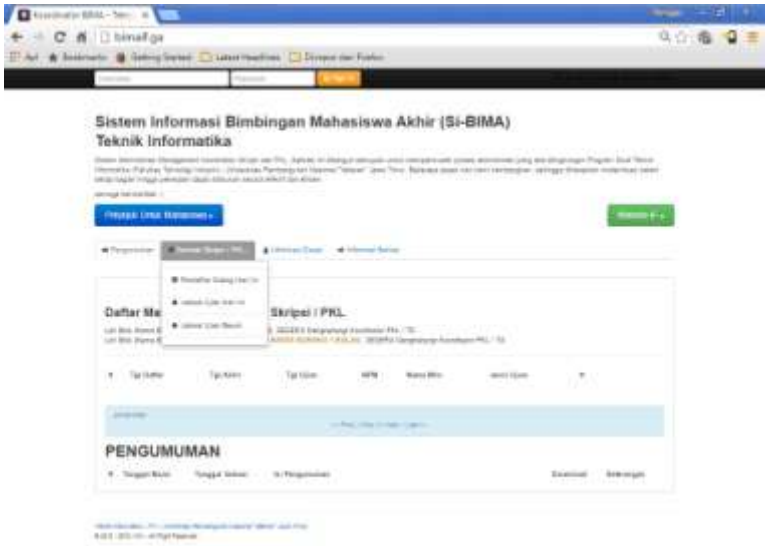

Figure 6. View Final Project and Job Training SIBIMA

Figure 7. View Information lecturers SIBIMA

CONCLUTIONS

The conclusions of this research is produced an Information System Final Project and Job Training to assist the process of course Final Project and Job Training program in environmental studies Information Engineering University of Diponegoro can proceed smoothly. In addition, with this information system is expected to help the work of each - each coordinator Final Projrct and street vendors in administering subjects

The. Students and lecturers of courses

Technical Information can also use this information system as a source of information and journal data on subjects Final Projrct and street vendors.

Information System Final Project and Job Training still require further development. One of the things that must be developed that application database object oriented. It is intended that the base more data in accordance with the method of application development ini.Selain, it is expected the participation of the academic community to take advantage of this information system in order to support the process of course Final Project and Job Training run efficiently..

REFERENCES

Adiwinata, R., Sarwoko, E. A., & Indriyati. 2012. Sistem Informasi Tugas Akhir & Praktek Kerja Lapangan Berbasis Web Menggunakan Metode Unified Process. Jurnal Masyarakat Informatika, 51-62.

Afni, S. Y., & Samosir, R. S. 2013. Analisa dan Perancangan Sistem Pembimingan Akademik Institut Teknologi dan Bisnis Kalbe. Jurnal Teknologi Informatika , 53-63.

Choldun, Muh. Ibnu. 2006. Perancangan Sistem Informasi Akademik dengan Mengimplementasikan ERP. Prosiding Konferensi Nasional Teknologi Informasi & Komunikasi untuk Indonesia ITB.

Ernawati, E., Anindito, & Perwiro Atmojo, R. N. 2014. Sistem Pendeteksi Plagiatisme Untuk Tugas Akhir Mahasiswa di Universitas Bina Nusantara; Studi Pendahuluan. HUMANIORA , 541-549.

Handayaningsih, S., & Pujiyono, W. 2010. Sistem Konsultasi Dan Laporan Pembimbingan Tugas Akhir. Seminar Nasional Informatika (SemnasIF) , 197-204.

Jogiyanto. 2005. Sistem teknologi informasi. Yogyakarta: Andi Yogyakarta

Pertiwi, D. H. 2013. Perancangan Sistem Untuk Pelaksanaan Bimbingan Skripsi dan Laporan Tugas Akhir Terstruktur. JUrnal Teknologi dan Informatika (TEKNOMATIKA) , 201-213.

Scott, George M. 1996. Principles of Management Information System. Cetakan Ketiga. Penerbit PT Raja Grafindo Persada. Jakarta.