# Information System of Graduation in Administration and Academic Bureau  Soegijapranata Catholic University

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*Abstract*— **The development of online graduation system becomes a necessity because it is expected that the graduation registration system can be conducted and finished fast and the data can be straored safely**
**The system helps in the process of administration in terms of inspection files and financial report   by the authorities more quickly. From the student side of the system is very helpful in checking the online registration process.**

*Keywords*— **system, online, graduation, registration**

## I. INTRODUCTION

The Administration and Academic Bureau (BAA) is a supportive unit in Soegijapranata Catholic University that is responsible in the admission to graduation processes of the students. Graduation is a process where the students have accomplished their study and theses, and they earn certificate and transcript as their token of graduation.

The process of graduation registration is conducted manually by completing the form and asking for the signatures from the concerned party. The process takes time, so that it needs days to complete it.

The result of the physical thesis or final assignment or scientific work is submitted to some parties in different rooms or buildings as an evidence that the student has finalized the assignment. The process of submitting the paper. In addition, the graduate needs to submit his/her personal identification, such as the Identification Card (KTP), High School Certificate, Photographs, and digital version of the Thesis/Final Paper, that will be used as graduation report to Indonesian Directorate General of Higher Education (DIKTI).

The weakness of the process explained before is that the bundle of files can be defective or misplaced. Therefore, the application of the Information System of the Graduation is needed to manage everything well.

The development of online graduation system becomes a necessity because it is expected that the graduation registration system can be conducted and finished fast and the data can be stored safely.

## II. Purpose

The Purposse of the information system are:

1. Accelerating the process of registration and validation of graduation
2. Organizing  the theses results well
3. Accelerating the process of graduation journal

The good service in organization is needed because the faster the service, the more satisfied the customers. Information system has a high percentage in service and it always adopts certain technology to support the problem solving. Thus, information system is an important factor to facilitate and reach efficient performance in an organization[1].

Information system is an organized system to collect, organize, store, and

communicate information.[2]. Witten stated that organizational information system needs to understand, and manage data to be supportive information for organization, employees, customers, distributors, and partners. [3]

The performance of human resources can mostly be accelerated through management information system and technology utilization[4]. Information Technology (IT) is a computer application and telecommunication tools to store, take, send, and manipulate data, often in business context or other companies[5].

Information System always adopts certain technology in finishing certain purposes. The service area has a high percentage. In developing the system, Web technology with PHP is used as a programming script MySql as a database server.

Web application uses Protocol Hypertext Transfer Protocol (HTTP) that is used in all web based application in accessing World Wide Web. Protocol is used to get the texts from their sources.[6].

PHP is a strong and stable web based program language to develop the content of HTML. PHP is designed to create a dynamic content of web, that is able to process data that is based on database[7]. PHP is able to process XML based documents, graphs, Flashanimation, PDF Files, and many more. Now, almost all data is processed by database system that is based on relational (RDBMS). MySQl is regional database that is popular. MySQL has a high performance and multithreaded. In addition, it is an RDBMSmultiuser that is built based on architecturalclient-server. MySql is a fast, strong, and friendly database system. It is chosen for business[8].

## III. RESEARCH METHODOLOGY

### 3.1 Procedure

The procedure of graduation registration involves various units/faculties. BAA Unit becomes an administrator. The faculty becomes a validator. The library is related with books borrowing detection and digital theses documentation. Administration and Finance Bureau deals with financial matters. It is stated in the following diagram. (see Fig 1)

### 3.2 Development Tool

In this research, the application is built by using programming languages of PHP and HTML,and also by using databases Mysql and Firebird. Mysql database server is used to process temporary registration. Firebird database is a main server that is used to process data of scores, student numbers, and NIRL, that will be used for process of PDF based of transcripts and certificates.

The Web based application can be run by using internet network model or internet that uses local and global IP in server. The software used is

1. Centos 4 OS : operating system based on linux that is used for Operating System server.
2. Apache: apache is used as a web server.
3. Mysql: a server database based on opensource that is used to store temporary data.
4. Firebird: a server database based on opensource that is used to store students data and transcripts.
5. PHP and HTML: Programming languages based on script that is used to input, process, and report the result.
6. Pdf: it is used to make transcript files and printed certificates. Alur proses sistem

## 3.3 The Flow of Students Registration Process

Students graduated from theses examination or final paper are allowed to register for their graduation in http://sintak.unika.ac.id. The process is as follow :

1. The students do login by using their student numbers and fill out the registration form. In this process, the system checks the students GPA whether it is above 2, the number of D is more than 10%, the number of credit is required for the graduation, the score for thesis has been inputted and it is minimum C.

2. After the form is completed and printed, the students submit the forms, signed by the counselors and examiners as the requirements of the thesis, to Administrative Staff. In this process, the staff will do login in accordance with the faculties and the system will check and make sure that only the listed students are validated.

3. The validation of Vice Dean 1 and the Head of the Study Program : in doing the validation, the Vice Dean 1 does login as wd 1 or kaprogdi, the data displayed is the data that is validated by the administrative staff.

4. After the students submit a bundle of thesis to the library, the library staff validates it : the bundle is a signed hardcopy. The library staff who does the validation has to login by using a certain password for library staff. Data displayed before the validation is the data that has been validated by Vice Dean 1 or the Head of the Study Program.

5. The students make a payment in the BANK. After the payment, the students submit he receipts to the BAK staff. The BAK staff will do login using a special user code of BAK to validate it. The data displayed before validation is data that is validated by Vice Dean 1 or the Head of the Study Program.

6. The final process, the students submit photographs, and high school certificates to BAA. The final validation is conducted in BAA. The data submitted in BAA can be used for many necessities, for example to make graduation book.

7. BAA prints out transcripts and certificates (signed by the Rector and each Dean) then give them to the students.

8. The students take the graduation invitation in BAA.

## 3.4 Database Design

Database Design is very important to be conducted so that there will be no data that is lost or redundant. In the implementation, Database is designed thoroughly using normalization technique to 3NF.

## IV. RESULTS AND DISCUSSION

### The Implementation

The students, who have passed their thesis examination and got their scores, conduct the graduation registration by doing login to the system as stated in the picture 2 below. after doing login, the students can select graduation button for registration.



**Fig. 2 After login**

The system will check whether the students have fulfiled all the requirements (for example scores and payment) or not. If the students have not passe and fulfiled the requirements, they cannot register. It is seen in Picture 3 below.



**Fig. 3 The display of not registering**

If the students are successfully registered, they can fill out the form as stated in Picture 4. The students must fill out the forms correctly. If there are wrong data inputted, the students will have the consequences.
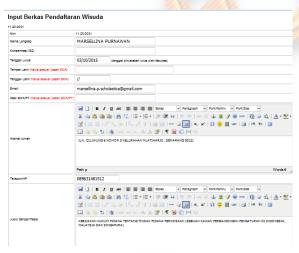


**Fig. 4 The form completion**

The students can edit, copy in PDF or print the forms after they fill them out. It is stated in the following picture.
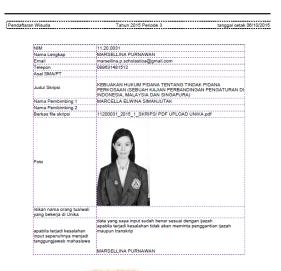


**Fig. 5 Print form**

The students can check the registration process by looking at the status progress bar. They only need to press the registration process menu. The result of the registration process can be seen in Picture 6 as follow.



The validation process is conducted in the Administration Office, Faculty (conducted by Vice Dean 1 or the Head of the Department) and Library. In the validation process, the users can see the forms of input results and the bundle of digital theses in PDF format. The users only press valid button in the validation process. The results will be as follow



**Fig. 7 The validation result of Vice Dean 1**

After validated by the Library, the students can do the payment at the Bank or Administration and Finance Bureau (BAK). The students data in BAK are the data validated by the Library. The data has also been filtered based on the study program. The process is intended to minimalize the error of inputting the finance data. It is stated in Picture 8 below.



**Fig. 8 Graduation Payment**

After finishing the payment, the students submit the print out of the signed registration forms to BAA. Thus, the graduation registration is complete.

BAA processes all the graduation data for graduation books, the best graduates, and so on.
BAA also prints out certificates and trancripts that will be given in the graduation ceremony.

## V. CONCLUSIONS

The process of graduation information system is very helpful in administration process. The system helps in checking the bundles needed and financial matters faster. For the students, the system is helpful in checking the registration process.
For BAA, this program is helpful in various ways. It can help dealing with the graduation process and the reports for related parties because the data have been organized digitally. The files of theses collected can be used by other units, such as the library because the files can be accessed easily.

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## Prosedur Wisuda Online

| Aktifitas | BAA | Calon Wisudawan | Fakultas | Perpustakaan | BAK |
|---|---|---|---|---|---|

BAA :
1. Membuka Pendaftaran Wisuda
2. Menerima persyaratan kelengkapan Wisuda meliputi : **Cetakan hasil input pendaftaran, FC ijazah terakhir, pas foto 3x4=5 lbr, Transkrip** 3. menyelenggarakan Wisuda

CALON WISUDAWAN :
1. Melakukan Ujian TA/Skripsi/ Thesis
2. Membuat revisi, Hardcover dan VCD TA.
3. Input Peserta calon Winisuda
4. Melakukan verifikasi Akademik di Fakultas, Cek Perpustakaan dan Cek Keuangan
5. Menyerahkan berkas persyaratan wisudawan ke BAA
6. WISUDA

FAKULTAS :
1. Melakukan verifikasi hasil proses Akademik sampai dikeluarkanya bukti lolos akademik (Cek Transkrip, Laporan Bendel, CD dll)

PERPUSTAKAAN :
1. Melakukan verifikasi penyerahan bendel TA + VCD TA dan mengeluarkan bukti bebas perpustakaan
2. Cek keaslian tdk plagiasi

BAK :
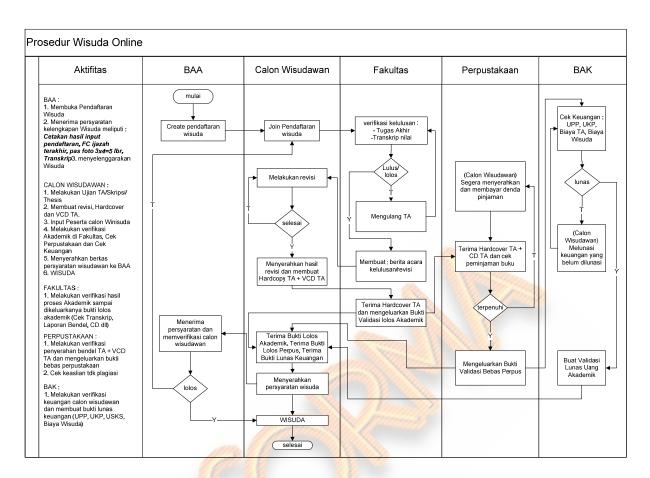1. Melakukan verifikasi keuangan calon wisudawan dan membuat bukti lunas keuangan (UPP, UKP, USKS, Biaya Wisuda)



**Fig. 1 The Procedure of Graduation Registration**