

## DEVELOPMENT OF COMMUNITY SERVICE PRACTICES INFORMATION SYSTEM BASED ON WEB IN IIB DARMAJAYA

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### Abstract

The administrative system of the Community Service Work Practice (PKPM) at IIB Darmajaya currently has several problems, namely students have to queue to register themselves to the Department by filling out the registration form, the division of participant groups is still using Microsoft Excel, the student data validation process is difficult for the committee because checking files is still manually, the process of distributing DPL (Field Supervisory Board) and determining the location of PKPM which is still not systemized properly. The purpose of this study is to build a registration information system and PKPM information online and build a PKPM information system that can assist in the activities of the academic community. Data collection methods used are interviews and observation. The system development method chosen is the Waterfall method. System design using UML (Unified Modeling Language) scenarios, use case diagrams, activity diagrams, class diagrams, and sequence diagrams. From the research results, the designed Information System can obtain and provide information about registration, group division, village division, and field supervisory board division (DPL) making it easier for students in the administrative process.

## 1. INTRODUCTION

Technology is a development of science that was created to assist and facilitate the resolution of system problems. In addition, technology has a major influence on the development of society, various activities carried out by the community can not be separated from the use of technology so that it can be said that technology is the main supporting factor for the implementation of an activity well. With technology, people will get information.

Along with the times, the Darmajaya Institute of Informatics and Business (IIB) has also begun to thoroughly activate each unit and every activity and activity has used information technology to simplify and improve its services, such as providing information services for Community Service Practices (PKPM) or Job Lectures. Real (KKN). The implementation of PKPM at IIB DARMAJAYA is carried out by the Institute for Development, Learning, Research and Community Service (LP4M). One of his duties is holding Community Service Job Training (PKPM) activities for students who have met the requirements, must carry out the registration process, fill out data, and submit files to the PKPM committee for validation. The PKPM Committee announced the number of PKPM registrants, group divisions, DPL (Field Supervisors), and PKPM Locations. The registration process starts from the student submitting a statement letter of willingness to follow and comply with PKPM regulations with

conditions such as passing the research methodology and Indonesian language courses and the number of Semester Credit Units (SKS) taken is more or equal to 96 credits. The previous research was carried out by Galuh Fandatiar, Supriyono, Fajar Nugraha, entitled Design of a Real Work Lecture Information System (KKN) at Muria Kudus University. discusses data management in the implementation of KKN activities that require good data documentation and must be able to accommodate several processes needed in the implementation of KKN activities, including data management regarding KKN registration, division of KKN groups, division of time and place for implementation of KKN, distribution of field supervisors (DPL) and the process of assessing the results of KKN. The second researcher was conducted by Refly Christian Mandag, Arie SM Lumenta, Yaulie DY Rindengan entitled Development of an Integrated Work Lecture Information System (KKT) at Sam Ratulangi University. The problem in this research is that the management process starts from delivering KKT information which still uses announcement boards to convey information, this can cause queues and jostling for students who want to see KKT information so that it is not time efficient. Registration which still uses a registration form where students have to go to LPPM to take the registration form and return it back, this can cause the returned form to be scattered and lost. and the division of

groups and the placement of these locations is still using Microsoft Excel where the division of groups and the placement of these locations can be uneven and can be changed. For this reason, it is necessary to have an information system for the Community Service Work Practice (PKPM) to facilitate the work of the Institute for Development, Learning, Research and Community Service (LP4M), especially the PKPM section in terms of managing the PKPM system which consists of delivering information, dividing groups, and placing PKPM locations. This information system is also a tool for students taking PKPM.

## II. THEORETICAL BASIS

### 2.1. Real Work Lecture (KKN)

Real Work Lecture (KKN) is a special form of community service activity, because in KKN, education and teaching, research and community service are integrated into it and involve a number of students and a number of teaching staff plus community elements. KKN is an intracurricular lecturing activity in the form of community service carried out by students in an interdisciplinary and cross-sectoral manner. This activity is aimed at developing students' sense of sensitivity and social cognition as well as assisting the development process. [1]

### 2.2. Waterfall Method

The Waterfall method is a sequential software development process, in which progress is seen as continuously flowing down (like a waterfall) through the phases of planning, modeling, implementation (construction), and testing. The software development model introduced by Winston Royce in the 1970s is a simple classic model with a linear system flow—the output of the previous stage is the input for the next stage. Development with this model is the result of adaptation of hardware development, because at that time there were no other software development methodologies. This highly structured development process makes the potential loss due to errors in the previous process very large and often expensive because of the swelling costs of redevelopment.[2]

### 2.3 Information System

An information system is any organized combination of people, hardware, software, communication networks, data sources and the organized policies and procedures that store, retrieve, transform, and segregate information within an organization.[3]

### 2.4 Use Case Diagrams

Use case diagram is a modeling for the behavior (behavior) of the information system to be made. Use cases are used to find out what functions are in the information system and who has the right to use these functions.[4]

## III. RESEARCH METHODS

### 3.1. Method of collecting data

The data collection methods used in this study are

#### 1. Interview

The interview was conducted by interviewing Mr. Dr. Anuar Sanusi, SE. M.Si as chairman of the Institute for Development, Learning, Research and Community Service (LP4M), and Secretary of the Information Systems Department Mr. Hendra Kurniawan, S.Kom.,MTI related to the services that have been carried out so far it is still manual, services for registration of Job Training Community Service (PKPM).

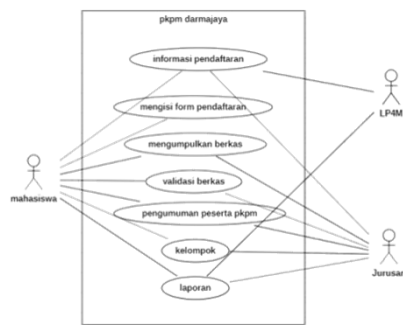
#### 2. Observation

Observation is a method of collecting data that is carried out intentionally and systematically and then recorded using and studying implementation practices at the research site including the registration process for KKN, division of KKN groups, division of time and place for KKN implementation, distribution of field supervisors (DPL) and the process of assessing the results of KKN.

### 3.2. Running System Analysis

The current flow of the system Students who take the Community Service Work Practice Lecture (PKPM) must carry out the registration process, fill in data, and collect files to LP4M officers for validation. LP4M officers announce the number of KKN registrants, division of KKN groups, DPL (Field Supervisors ), as well as the location of KKN. The following is the flow of the system running:

1. LP4M Opens Registration and sends notification letters to each department.
2. Department opens PKPM registration pendaftaran
3. Students fill out the registration form.
4. Students submit files to the Department.
5. Majors validate the data .
6. Announcement of the total number of KKN registrants.
7. LP4M makes KKN groups based on faculties and gender and provides 1 DPL in each KKN group as well as the distribution of KKN locations.
8. Make a report containing the KKN group, DPL, the number of participants and the location of the KKN to be announced.



Picture 1 Use case Diagram of the running PKPM Darmajaya Information System

### 3.3. Proposed System Analysis

The proposed system for services at the Pesawaran Social Service is as follows.

1. Students can view the PKPM IIB Darmajaya information system to find out registration information.
2. Students can register for PKPM on the PKPM website.
3. Students who have registered will get a group of participants, DPL, and village locations.
4. Students can do online report guidance.
5. Students can upload reports to the web which will be received by the admin, Secretary, and DPL.

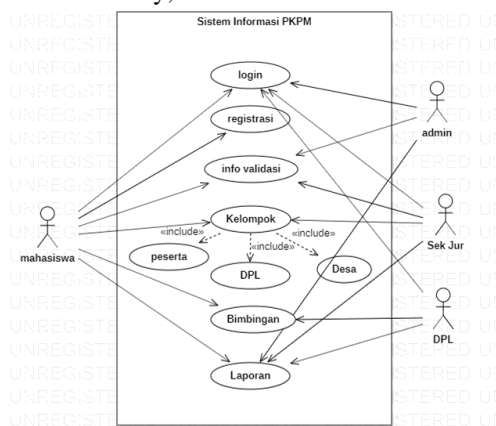


Figure 2 Use case Proposed PKPM Information System Diagram

## IV. RESULTS

The PKPM information system that has been built has been in accordance with the needs of all users related to PKPM, and can overcome the problems that have been described in the introductory subchapter and complement the results of the research. The features in question include registration through an online system, group division, uploading reports, distribution of DPL, and location sharing, participants and groups can also do online guidance.

The registration feature is used to register at the respective faculties. The registration menu contains student status, if you have not submitted the form, the status "you have not registered" appears. If you have entered the registration but it has not been approved by the admin, then

the status changes to "waiting for confirmation". If it has been confirmed by the admin, then the status changes to "you have registered". Community Service Work Practice Information System, facilitated by the following menus:

#### A. Login Page

The following is an image of the login page for the user. This display will appear after the user opens the login page on the Community Service Practice (PKPM) information system.



Figure 3 Login page view

The login page is the user's main access right when he wants to access the main page of the PKPM information system. The purpose of the login page is to maintain the privacy of any data entered into the system. On this login page, there is a facility, namely the login button. The login button is used to check whether the username and password entered are correct or not. If the correct username and password are entered, the application will continue to the next page, namely the participant registration page or admin homepage, secretariat and DPL, but if the username and password are incorrect or not registered, this page will display a warning that the username and password are incorrect.

#### B. Homepage Admin and Secretary

The following is an image of the home page for admin and secretary. This view contains summary information of some of the features available on the system.

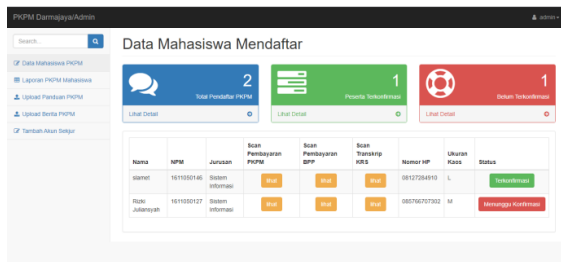


Figure 4 Admin and Secretary Pages

Admin and Sekjur pages are used to process data, replace data and delete data. This page also has a sub menu that is used by the admin to find out PKPM student data and see the results of student PKPM reports

#### C. Student Data Page Register

The following is student data who registers for pkpm. In this form the admin can see the number of registrants and student data that has not been validated.

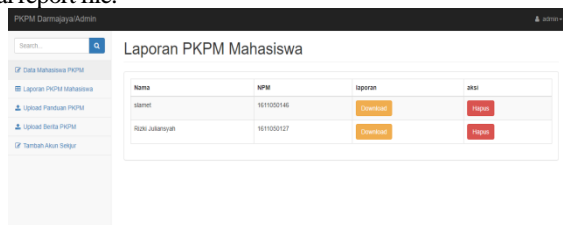


**Figure 5** Student Data Page

The image above is a display image on the student data page. This page will be managed by the admin to view student data who registered for the PKPM. Admin can also validate student data if the data has been met.

**D. PKPM Report Page**

The following is an image of the student PKPM Report page. In this view, students can upload the PKPM final report file.



**Figure 6** PKPM Report Page

Student PKPM Report page which contains data on student PKPM reports who have carried out PKPM activities by inputting name, NPM, and report file based on group leader.

**E. User Homepage**

The following is an image of the user's home page. This view contains a summary of some of the features contained in the PKPM information system.

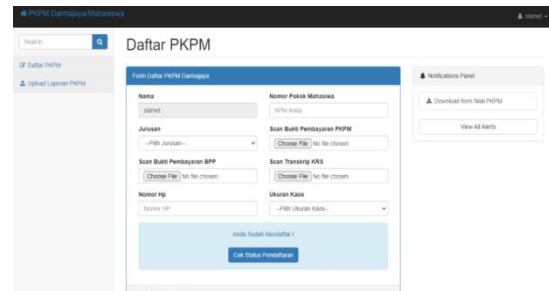


**Figure 7** User Homepage

The picture above is a display on the user's home page which has several sub menus such as the home menu, Profile, PKPM Participant Observation Form, Contacts, and Login. This page will appear when the user accesses the PKPM Darmajaya website. On this page there is an image slider and also other information.

**F. PKPM Registration Page**

The following is a capture of the PKPM Registration page. This view contains a biodata form to complete the registration file.

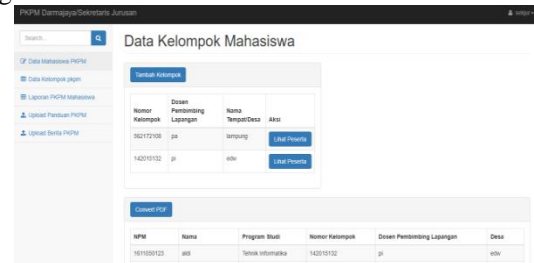


**Figure 8** PKPM Registration Page

The picture above is a display image on the PKPM Registration page, students input data such as name, NPM, Department and so on, for registration of Community Service Work practice (PKPM).

**G. PKPM Group Data Page**

The following is a screenshot of the PKPM Report page.



**Figure 9** PKPM Group Data Page

The picture above explains the information on the number of PKPM groups with details of the Group Number, field supervisor, village name, and members. The PKPM Group Report can be printed in Pdf format.

**Table 1** The results of the distribution of the PKPM Group

Daftar Peserta PKPM@darmajaya.ac.id

NPM	Nama	Program Studi	Nomor Kelompok	Dosen Pembimbing Lapangan	Desa / Tempat
1711050090	LIZY KOMALA SARU NEGARA	Sistem Informasi	1	DPL	metro selatan
1611050203	ganda	Sistem Informasi	1	DPL	metro selatan
1711050008	chintya	Sistem Informasi	1	DPL	metro selatan
1411050063	rio	Sistem Informasi	2	dp11	bandar lampung
1911050026P	enika	Sistem Informasi	2	dp11	bandar lampung
1711050015	emil	Sistem Informasi	2	dp11	bandar lampung

The table above describes the list of PKPM participants from each group consisting of group number, DPL, and location.

**H. File Validation Page**

The following is an image of the file validation page. This view contains unconfirmed student data.



Figure 10 File Validation Page

The picture above explains how the process of validating student files who register for PKPM. The validation process is carried out by the department secretary by checking files such as pkpm payment slips, BPP payment slips, KRS transcripts, and grade transcripts for each student data.

I. PKPM Report Guidance Page

The following is an image of the PKPM Group Report Guidance page. This display contains online guidance for students with DPL.



Figure 11 PKPM Report Guidance Page

The picture above explains how the process of guiding the pkpm report via chat on the PKPM information system with students attaching a document file is then sent to the DPL for revision.

Testing Admin login menu

If the user enters the correct username and password, he will enter the next menu. That is, enter the next menu page

Table 2 login test



If the user enters the wrong username and password, for example, the username is correct but the password is wrong, or vice versa, or both are wrong, they will fail to enter the next page so they have to repeat by entering the username and password until they are correct and enter. to the next page.



Figure 12 failed login

Test display on the PKPM Registration Menu

Before registering for PKPM, students are required to login using their username and password. If the username and password are successful, the student is required to fill in biodata

Table 3 Registration test



Enter username and password pass

PKPM Registration

If the student has already registered, the student will not be able to register a second time



Figure 13 Registration Status

If the student has already registered, the student will not be able to register a second time.

V. CONCLUSION

5.1 Conclusion

From the results and discussion in this study, several conclusions can be drawn as follows, the information generated includes PKPM registration and group reports, PKPM locations, and distribution of DPL. By using the designed Information System, we can obtain and provide information about registration, group division, village division, and field supervisory board division (DPL). The system that was built was intended to facilitate students in the administrative process of computerized PKPM registration, where previously the administrative process was still manually by filling out the registration form and submitted to the organizing committee for data collection.

5.2 Suggestions

With the completion of this Community Service Job Training information system, the author has

several suggestions that can support further system development as follows:

1. It is necessary to make database integration on the PKPM IIB Darmajaya web to the Darmajaya Academic System web which can notify when students finish doing PKPM activities.
2. The total examination of student credits is integrated with the IIB DARMAJAYA Academic System database so that negligence in the selection of criteria for prospective PKPM participants can be resolved.
3. It is hoped that there will be application development in the form of an android application so that students who register for PKPM can directly and easily register.

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