

Design and Implementation of Learning E-Scheduling in Sriwijaya State Polytechnic - Telecommunication Engineering Study Program

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ABSTRACT

In this research, the features of the previous research information system is developed. The development of the system is about how to design and implement an e-scheduling system, to deal with teaching schedule problems which include for example the proportional or fairness of teaching load, the suitability of competence and educational background of the lecturers, etc. Then with this e-scheduling, it is hoped that it will help the task of the head of the study program in compiling a schedule, where online changes can be made quickly and can be confirmed directly to each lecturer immediately. The long-term objective of this research is to provide an information system for administrative management and lecturers in the study program that can help flexibility and rapid in obtaining information and managing data, providing document backup process, especially in terms of scheduling. The special target is the availability of an administrative information system for the Sriwijaya State Polytechnic, Telecommunications Engineering Study Program, that is integrated with an Android application with new features including e-scheduling.

Keywords: *features, android, web, schedule*

1. INTRODUCTION

In this research, the features of the previous research information system is developed. The development of the system is about how to design and implement an e-scheduling system, to deal with teaching schedule problems which include for example the proportional or fairness of teaching load, the suitability of competence and educational background of the lecturers, etc. Then with this e-scheduling, it is hoped that it will help the task of the head of the study program in compiling a schedule, where online changes can be made quickly and can be confirmed directly to each lecturer immediately.

In case, for example, if there is a lecturer who want to change courses or has insufficient teaching hours, the lecturer can immediately make a proposal for changes to a schedule plan format, by selecting which parts to be proposed to be changed. Then, the head of the study program was immediately followed up and immediately asked for confirmation from the related lecturers, including from other lecturers. Thus it is hoped that further processes such as proposing teaching decisions, printing lecture schedules, and other procedures can be

carried out quickly, including until the process of proposing teaching recapitulation to be paid for excess teaching hours of lecturers in a certain period can be carried out on the schedule as it should be, not in the late category.

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1.1. My SQL

MySQL is the name of the database server. The database server is a functioning server to handle the database. Database is a data organization with a purpose to facilitate storage and access of data. By using MySQL, you can save data and then the data can be

accessed in an easy and fast way. MySQL classified as a relational database. In this model, data is expressed in the form two dimensions specifically called tables. Tables are composed of rows and columns (Kadir, 2013).

1.2. HTML (Hyper Text Markup Language)

HTML, short for HyperText Markup Language, is the authoring language used to create documents on the World Wide Web (www) [3]. All web page of this research is designed in HTML tables. According to [4], HTML tables are still considered as the most effective way to visualize relational information on web pages. Besides, several view of the web of this research is arranged in Frames, such as upper frame, lower frame, left frame, and right frame.

1.3. File Transfer Protocol (FTP)

Through FTP, the abbreviation of File Transfer Protocol, transferring files on the Internet can be achieved [1]. Fedora provides powerful web and FTP clients for accessing the Internet [2]. FTP is a protocol that functions to exchange files on a network that use a TCP connection instead of UDP. Two things important in FTP are FTP Server and FTP Client. FTP server is a server run software that functions to provide file exchange services where The server is always ready to provide FTP services when it gets a request from the FTP client. The FTP client is the computer that requests a connection to the FTP server for the purpose of exchanging files. After connecting to the FTP server, the client can download, upload, rename, delete, etc. according to the permissions provided by the FTP server. Among other things, the purpose of the FTP server is for sharing purposes data, to provide indirect or implicit remote computers, to provide space storage for the user, and to provide reliable and efficient data transfer. The process of transferring files on FTP is that files are sent without being encrypted beforehand via clear text. The text mode used for data transfer is ASCII ordinary format. By default, FTP uses ASCII mode in data transfer. The tools used in this research to transfer files from FTP Client to FTP server is WinSCP.

1.4. Password Sniffing

Among various types of attacks on an Ethernet network, "sniffing attack" is probably one of the most difficult attacks to handle [5]. Some information on the system we built in this research is protected with password. Perhaps the most significant security risk on the Internet today issue of a reusable password sent over the internal network and external. This is the same password the Metcalfe RFC602 describes. Only now, the problem is

not that they are predictable: the problem is that they are being sent in a form subject to wiretapping.

1.5. E-Schedule

E-Scheduling is a web-based application whose main function is to manage electronic program and activity scheduling system. According to [6], The multiorganization maintenance scheduling and coordination problem can hardly be solved optimally since scheduling in general is NP-hard.

2. RESEARCH METHODS

This system is designed with a combination or integration of web or desktop-based systems with an Android-based system. first of all this system is designed based on web or desktop with consideration from the side of the administrator and the manager that most access to this system is done while working at the computer. Then it was developed based on Android for easy access to mobile. The stages carried out are as follows:

1. Study and identify problems. In this case, one of the problems that is deemed necessary is identified and a solution is sought..
2. determine the scope of the problem. Next, formulate the selected problem and determine how to solve it
3. Literature study stage. Doing literature study to prove the hypothesis. The library sources used are relevant journals including journals that have been subscribed to by the Higher Education, as well as relevant books.
4. The stage of designing and managing a web-based system. At this stage the web-based study program design and management information system is carried out.
5. Android system integration stage. This stage is the core stage, where web-based information systems that have been made are integrated into an Android-based system.
6. Trial Phase. The trial phase includes testing system performance and testing system benefits. Record data from each test result.
7. Data processing and analysis stage. At this stage, data processing is carried out both the trial data and the data during the design and trouble shooting. The results are analyzed which will be the basis for writing research results into scientific writing.
8. Stage of publication. publishing research results through journals.

2.1. Research Sites

The research location is Sriwijaya State Polytechnic Campus with the address Jl. Srijaya Negara - Bukit Besar - Palembang.

2.2. The Model Used

The model used in this study is an experimental model, where this research is applied directly to the problem that is the focus of discussion until the expected results are obtained. The main objective of applied research is problem solving so that research results can be used for the benefit of humans both

individually and in groups or for industrial or political interests and not only for scientific insights. In other words, applied research is a type of research whose results can be directly applied to solve the problems at hand.

3. RESULT AND DISCUSSION

The result can be see on <https://siaptt.polsri.ac.id/jadwal/>.



Figure 1. Initial display of the system on the desktop

After clicking on the "Entering the System" menu, the Login page will appear as shown below.



Figure 2. The Display of the Login page

The user will enter the password that has been determined, then the system main menu page will appear as shown below.

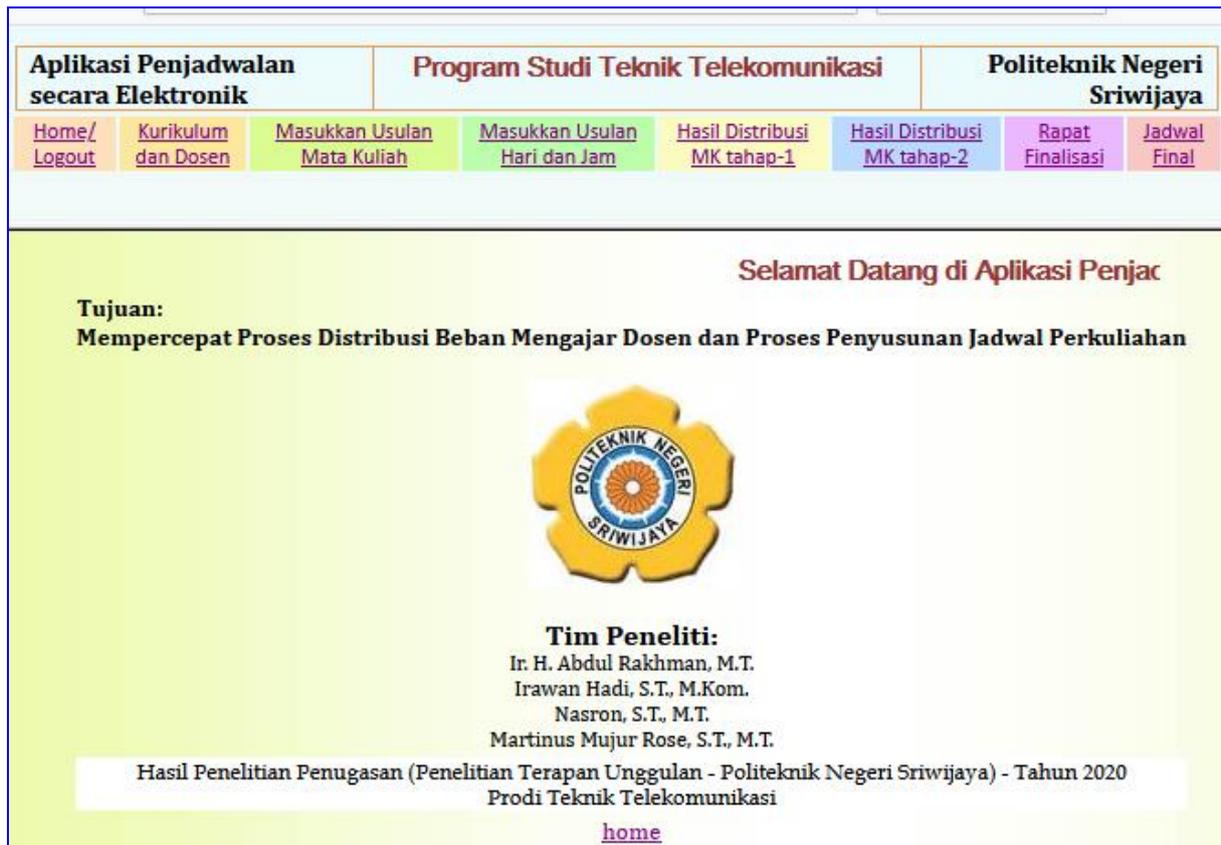


Figure 3. The Display of the main Menu page

All menu on the main menu page can also be run.

State Polytechnic of Sriwijaya, with the result: <https://siaptt.polsri.ac.id/jadwal/>.

4. CONCLUSIONS AND SUGGESTIONS

4.1. Conclusions

Even though this system has not been implemented yet in the current learning process, the results of the trials have shown that this system can be used. One of the parameters that indicates that the system can be run is, for example, the input form of the sequence of the priority courses mastered by each lecturer can be done, and the results can be shown. Likewise, with the simulation of teaching load distribution, both at stage 1 and the next stage can be done. As well as with other menus can already be run.

4.2. Suggestions

Further research that will greatly support this system is to make a mobile application version of this system.

AUTHORS' CONTRIBUTIONS

The authors' contributions are the design and implementation of a system namely e-schedule of learning process in Telecommunication Engineering -

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