Design and implementation of thesis exam assessment at Science and Technology Faculty UIN Sunan Gunung Djati Bandung

E A Z Hamidi*, E Mulyana, M Wildan, R Miftahussalim and M R Effendi
Electrical Engineering Department, UIN Sunan Gunung Djati Bandung, Bandung, Indonesia

*ekiahamdaki@uinsgd.ac.id

Abstract. Speeding up the calculation process in thesis exam, a web-based thesis exam assessment system is needed, the data of the students would be saved safely on a database. Designing and implementing thesis exam assessment system a web based at Science and Technology Faculty UIN Sunan Gunung Djati Bandung are the purpose. Admin and user are the people who can do at a work principle as a method of this research. User is examiner or counsellor, and admin is operator, usually administration staff. The result would be proven well, after designing and implementing have been processed. All system, such as input text, button and hyperlink in assessment system has been well functioned based on their design, purpose and function.

1. Introduction
Recently, the development of information technology is very fast without a time limit [1]. Thesis is a scientific work of college students as an obligatory requirement to obtain a bachelor's degree at UIN Sunan Gunung Djati Bandung, based on research [2].

The rapid growth in information and communication technologies (ICTs), especially the Internet and the World Wide Web and easy access to these technologies, have influenced various aspects of human life. Academic services are one of the areas heavily influenced by this new technology [3]. Nowadays, there are many academic services projects that use Web, one of which is technical in thesis exam. In view of this characteristic, the Web platform has the advantage of simple operation, high portability, and large display content, which makes the best Web service platform [4].

Writing thesis for college students is an inseparable part from the higher education system and has a very important position, strategic, because the college student scientific paper is part of formal academic demands. The function and purpose of the thesis can be divided into two types, to fulfil study assignments which must be fulfilled by college students outside the classroom. It is a requirement that is demanded from students when completing their studies for the bachelor program [5].

Thesis exam assessment system at Science and Technology Faculty UIN Sunan Gunung Djati Bandung still uses manual system, the examiners of thesis too. So, the students must be waiting for the results. Using this web-system the students must not be waiting for their result exam. This research is focused on the process of the thesis exam assessment which is PHP and MySQL is used and index home is used to web design.
2. Methods
In this research, the steps are taken to obtain the intended results in Design and Implementation of Thesis Exam Assessment at Science and Technology Faculty UIN Sunan Gunung Djati Bandung that made in the form of a flowchart as shown in figure 1.

![Flowchart](image)

**Figure 1.** Flowchart research method.

Can be seen on figure 1, literature review, identification of problem, and analysis needs which has been done in this research. The last, the problem will be found and it must be solved by this system, to be analysed.

2.1. XAMPP
XAMPP is an open source cross platform web server. To improve flexibility of server, XAMPP server has been developed [6]. A XAMPP application is used in this research to support various operating system, which has function as a server (local-host), such as programs Apache HTTP Server, MySQL database, and language translator itten in a programming language PHP and Perl.

2.2. phpMyAdmin
PhpMyAdmin is a tool that can be used easily to manage MySQL database visually, so we no longer need to write SQL query every will perform database operation command [7]. phpMyAdmin supports various operations of MySQL, such as database, fields (tables), relations, index, users, permissions, and others.

2.3. PHP
Pre Hypertext Processor (PHP) is a server-side scripting language designed for the web. On other side, PHP is a server-side programming language with text page document which help in creating a response to a process request [8]. PHP also has a lot of built-in functionality to do many web-related tasks. Moreover, PHP has a high flexibility of development approaches and can be used in many different operating systems [9].

2.4. HTML
HTML is a widely used mark-up language to make up innumerable web pages [4]. These websites can then be viewed by anyone else connected to the Internet. It is relatively easy to learn, with the basics being accessible to most people in one sitting; and quite powerful in what it allows you to create.

2.5. CSS
Cascading Style Sheets (CSS) is a declarative, domain-specific language, used to define a structured document presentation (e.g., HTML, SVG), as well as a desktop and mobile app user interface, across different presentation media [10]. CSS is usually used to render a page display to illustrate an HTML document presentation, as well as CSS is a cornerstone technology used to develop Web applications [11].
3. Results and discussion

3.1. Design
Workflow from web-based thesis exam assessment system is a general description of performance from web-based thesis exam assessment system, shown in figure 2 below:

![Workflow diagram](image)

Figure 2. Workflow from web-based thesis exam assessment system.

The following is an explanation from Workflow from web-based thesis exam assessment system:
- Registration: Registration is first step for user, if they do not have an ID for access web-based thesis exam assessment system;
- User: User as a user of web-based thesis exam assessment system or usually as an examiner at exam;
- Login: Login is a system that functions to be able to continue to the page as a user or admin.
- Admin: Admin function as an operator web-based thesis exam assessment system;
- Home Index: Home Index as the main page on web-based thesis exam assessment system;
- Admin Index: Admin Index is a page that can only be accessed by operators;
- Examiner Index: Examiner Index is a value input page for lecturers who will take a test to the college students;
- Database: Database is a page which contains all input data in web-based thesis exam assessment system such as exam values, lecturer’s data, college student’s data and others.

3.2. Implementation
Implementation of thesis exam assessment system which has been based on the design that is logged in thesis exam assessment system. Admin does not have to register. It has been registered in database. User or examiner must be login the first. It could be seen as figure 3 and figure 4.

![Login admin page](image)

Figure 3. Page display login admin on thesis exam assessment system.
Figure 4. Page display login user / examiner on thesis exam assessment system.

On the submenu which consist of add ID admin, add ID examiner, ID database user, collage student’s database and data that has been on the page index admin. As shown as in figure 5.

Figure 5. Front page display admin index on thesis exam assessment system.

Index examiner is the main page for user/examiner who can input the values according to the college students who will take the thesis exam. Choosing the college students who can take an exam thesis 1 and the user will be directed to choose his job whether as the 1st, 2nd, or 3rd examiner, or preceptor. It could be seen as figure 6.

Figure 6. Front page display examiner index on thesis exam assessment system.

On the main page of the index examiner, the user continued to the next page to fill the value of exam thesis. Press the button input score on a session table based on the name of the students, as in figure 7.
Figure 7. Value input display page in examiner index on thesis exam assessment system.

Web valuable system that has been made, would be connected to the database which has been made before, using platform phpMyAdmin. Admin, students, lecturers, and the other value data would be connected directly to the database, as on figure 8.

Figure 8. Front display page database thesis exam assessment on phpMyAdmin.

The results of the design and implementation web-based thesis exam assessment system could be taken from the result of the test. The output would be seen, whether the system is going run well or not. Excited, all the systems are well functioned, attentioning to validation and navigation.

There are two methods which is used in this test web-based. User as an examiner who will fill the value of the test of the students in index penguji (examiner). The next, admin as an operator who has more authorism on this system than user. Index penguji (examiner), index admin, database, input student’s data who can take an exam thesis, add username, and password, might be taken out by admin, also printed all the result of the exam of thesis.

4. Conclusion
Design and implementation web-based thesis exam assessment could be implemented more that this web-based can help the students, lecturers, study program on thesis exam. Thesis exam assessment could be taken faster, then before, manually safety data on database.

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