

Design of Website-Based Online Training (Bootcamp) Testing Management System

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ABSTRACT

Millennials like today, there are many ways to make it easier for someone to do anything. Included in studying the field of information technology. If on the lecture bench it will be a little challenging in managing time when attending class, then one way to make it easier is to create a bootcamp. Bootcamp is the perfect solution for pursuing a career in information technology without a degree. The purpose of this research is to create a system that can be used to test participants in online training by conducting several stage exams. So that participants get validation in the form of a transcript of the value of the exam results if they have taken the exam. This website is designed using the codeigniter framework. Therefore, the authors would like to conduct a study on web-based bootcamp participant tester systems with the title "Design Of Website-Based Online Training (Bootcamp) Testing Management System".

Keywords: *Bootcamp; Website; Codeigniter.*

INTRODUCTION

Jobs in the field of information technology or Information Technology (IT) are jobs that have great career opportunities in this industrial era 4.0. Many companies are growing with the creation of modern technologies that have been created by experts in the field of information technology. Unfortunately, getting expertise in this field is not easy. There are still many human resources (HR) who do not understand the world of information technology. One of them is due to economic limitations which is the most basic reason in this matter. In addition, most of them also have limited time. It is not uncommon for community resources (HR) to have limited time because of the work they are doing.

Millennials like today, there are many ways to make it easier for someone to do anything. Included in studying the field of information technology. If on the lecture bench it will be a little difficult to manage time when attending class, then one way to make it easier is by creating a bootcamp. Bootcamp is the perfect solution for pursuing an information technology career without a degree. Unlike lectures with a busy schedule, bootcamp is a learning system via the web that tends to be more flexible in terms of time. It is not uncommon for bootcamps to be an additional class facility for students who also want to understand more deeply about the subjects they are studying. Currently there are also many companies that improve the skills and abilities of employees by registering them in a bootcamp. In addition, they can also use the talent management system to manage all employee activities and performance in a very practical way.

In order to hone skills using the bootcamp to be even more effective, it is better if the participants also take a test to test how far their abilities are by following the participant testing stage at the bootcamp. In this stage, participants can find out how far their abilities are. The purpose of this research is to design and build a participant ability test system in a web-based bootcamp. This system is built using the codeigniter framework. The way this system works is that each participant can directly practice the material that has been studied on the page provided.

METHOD

The creation of a website-based participant tester is aimed at facilitating the assessment and is carried out automatically. The method used in this research is R&D (Research and Development) which is used to produce and test the effectiveness of the products that have been developed. The model used in this study is the waterfall model. The waterfall model is a model that is often used in the development of information systems or software. The model uses a systematic and sequential approach. The stages of this

model start from the planning stage to the management stage and are carried out in stages. The software used in this study includes windows operations, codeigniter, MySQL, XAMPP, Visual Studio Code, PhpMyAdmin.

Website Design and Development

Making a website using the codeigniter framework with the PHP programming language. Website design is illustrated with a flowchart which can be seen in Figure 1 and Figure 2. Flowcharts are generally used to make it easier to solve a problem, especially problems that need to be studied and evaluated further (Mentaruk, et al.. 2020). The website workflow on the admin section starts with logging into an account that is already owned by the admin by inputting admin data such as username and password. Then if the admin user has entered the correct username and password, then the login is successful and will enter the main page as admin. On the admin main page there are several menus that can only be accessed as an admin such as teacher data, student data, manage exam questions, manage examinees, and exam results. In this system only the admin can determine when the exam will be held. After the participant has finished working on the exam questions, the participant's score can be seen and printed on the exam results page in the form of a transcript. The following is a series of admin flowcharts.

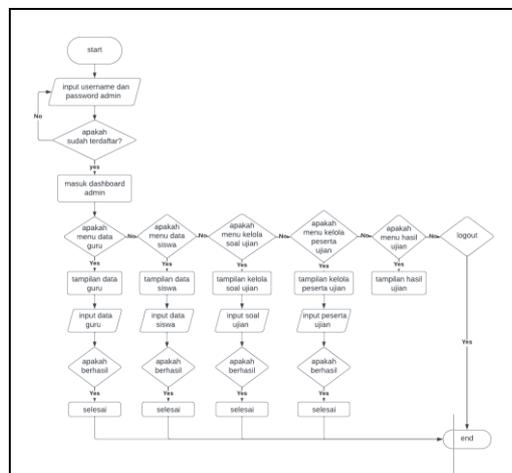


Figure 1. Flowchart Admin

While the website workflow on the user section starts from logging in using the username and password that has been determined by the admin. After successful login, participants will be on the main page of the website. Participants can access exam questions when they are at a predetermined time. If the work process has been completed, participants can end the exam session and will return to the exam schedule page. After that participants can also see the results of the tests that have been carried out in the form of the number of wrong and right answers, and the final score of the test results. The following is a series of user flowcharts.

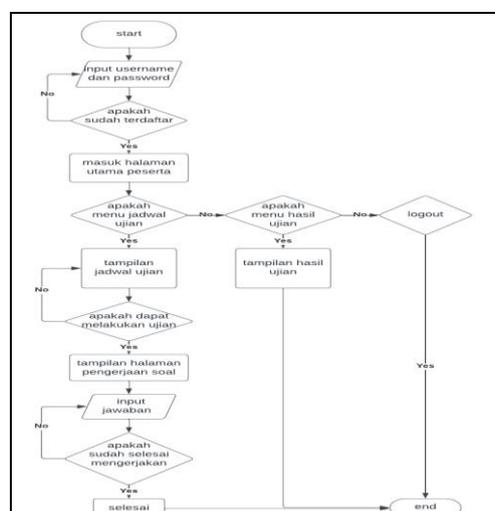


Figure 2. Flowchart User

RESULT AND DISCUSSION

The following are the results and discussion obtained after conducting research and the process of working on the Design Of Website-Based Online Training (Bootcamp) Testing Management System:

Result

The results of the Design Of Website-Based Online Training (Bootcamp) Testing Management System are as follows.

- Login

On the login page, the admin and participants can enter the website using their respective usernames and passwords. the display of the login page can be seen in Figure 3.

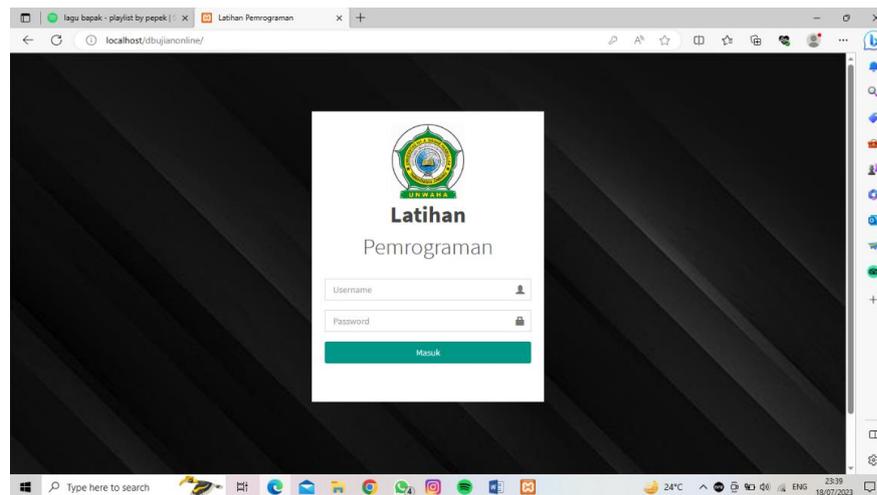


Figure 3. Login page

- Admin

The admin page functions to edit all data starting from teacher data, student data, manage exam questions, manage examinees and exam results as can be seen in Figure 4.

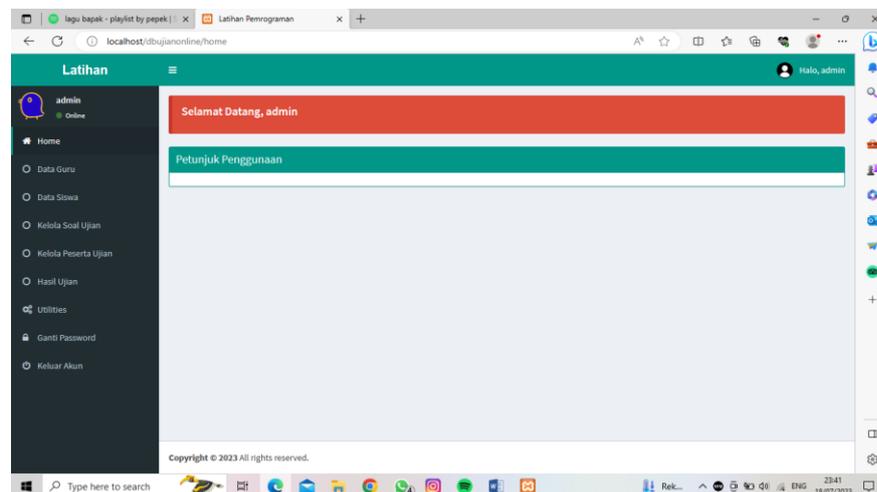


Figure 4. Admin page

- Teacher data

The teacher data page functions to input teacher data as shown in Figure 5.

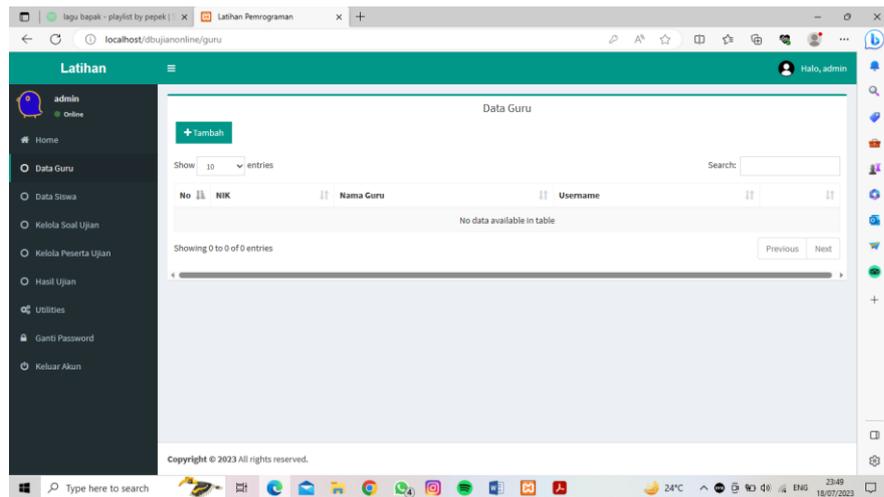


Figure 5. Teacher data page

- Student data
This page is used to input student data before being declared as a test taker which can be seen in Figure 6.

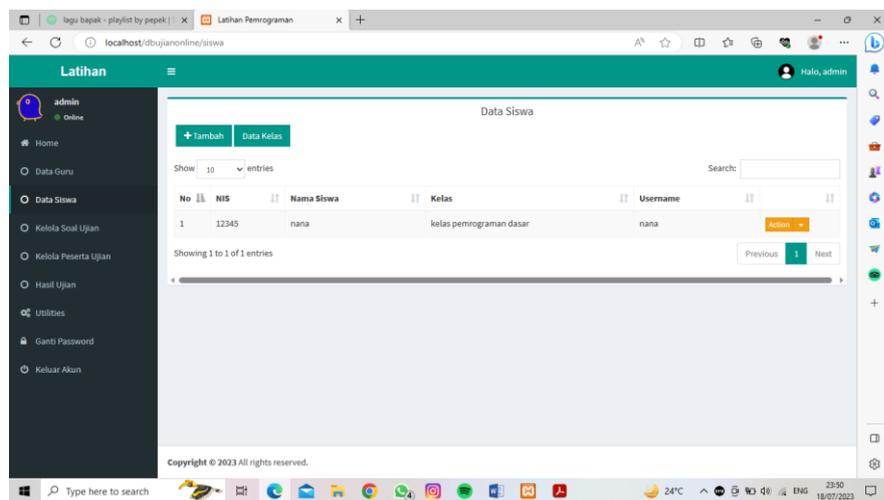


Figure 6. Student data page

- Manage exam questions
On the exam questions management page is used to input questions and answers which can be seen in Figure 7.

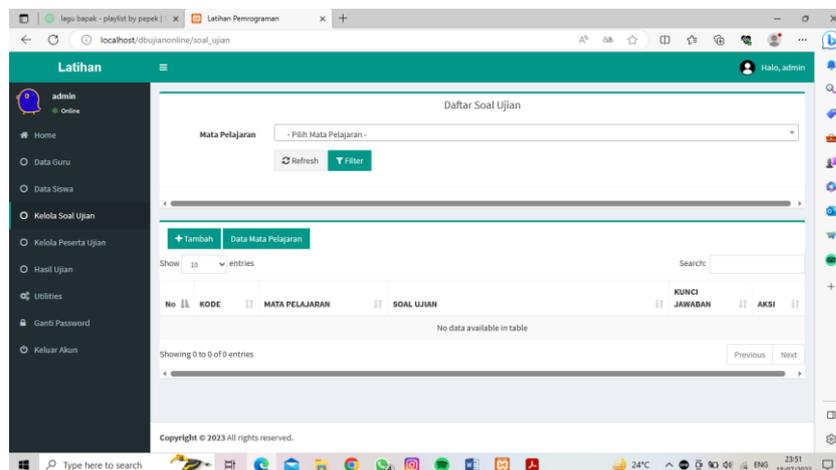


Figure 7. Manage exam questions page

- **Manage examinees**
After inputting student data, on this page students can be declared as participants if student data has been inputted as can be seen in Figure 8.

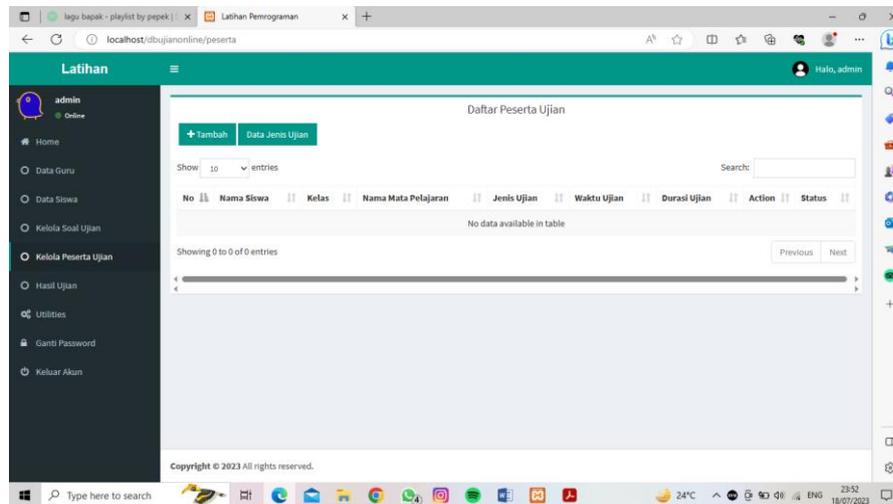


Figure 8. Manage examinees page

- **Exam results at admin level**
On the admin level exam results page will display the results of the exams that have been carried out by the participants in the form of grade transcripts as can be seen in Figure 9.

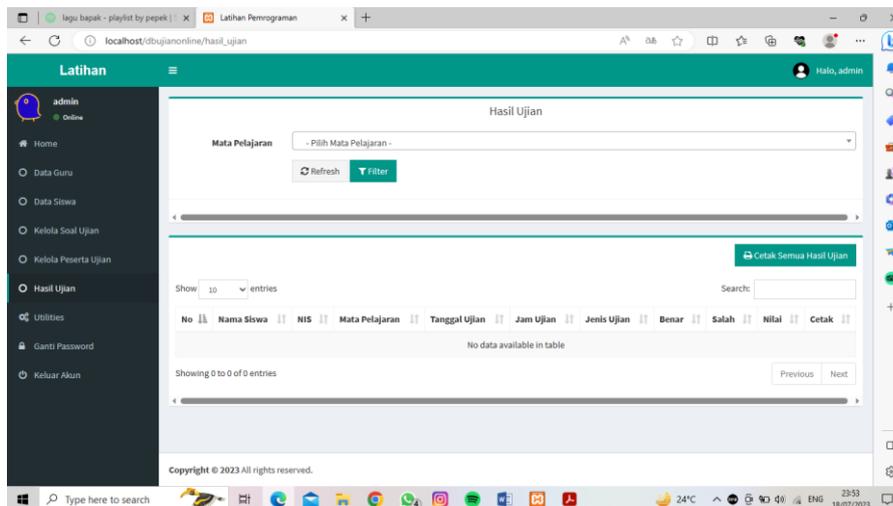


Figure 9. Exam results at admin level page

- **Participant**
This page is the main page of the examinees, which can be seen in Figure 10.

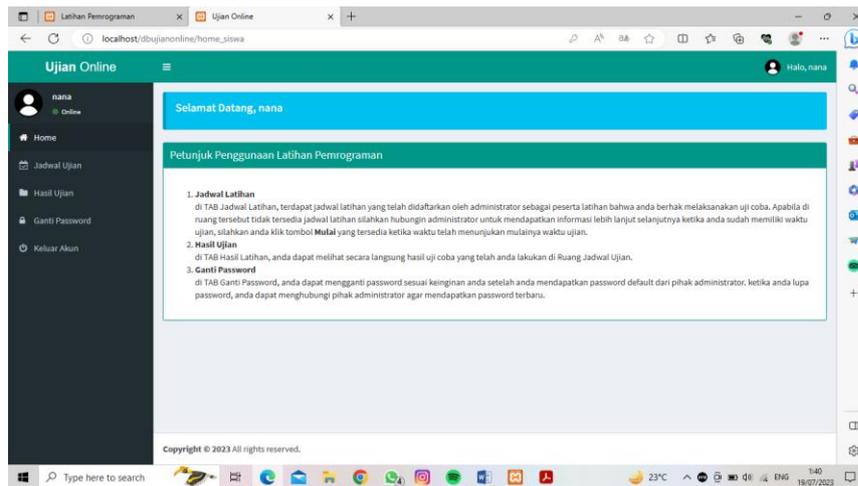


Figure 10. Participant page

- Exam schedule
This page displays the time schedule for the exam, and when the specified time arrives, participants can start working on the questions. Can be seen in Figure 11.

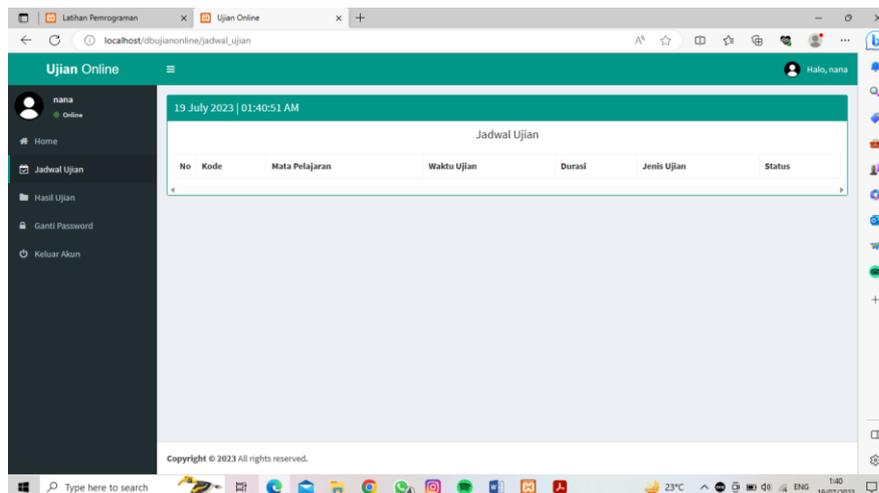


Figure 11. Exam Schedule page

- Participant test results
On this page participants can see the results of the tests that have been done in the form of scores and the number of right and wrong as can be seen in Figure 12.

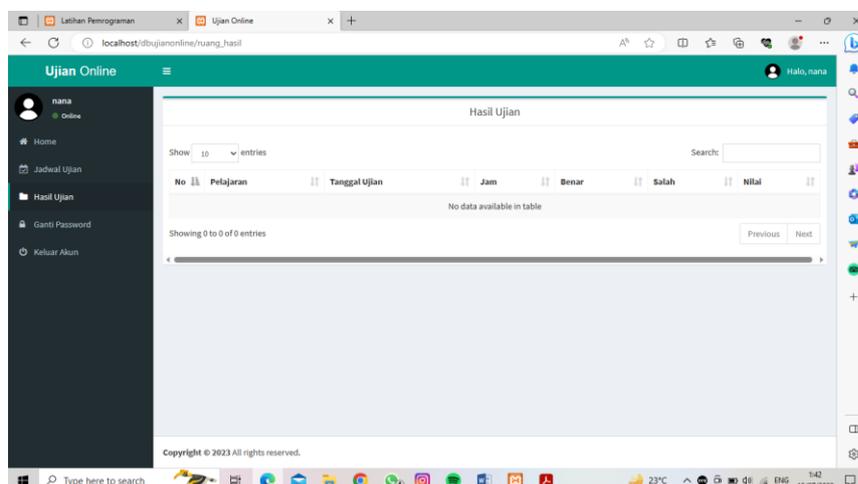


Figure 12. Participant test results page

Discussion

After carrying out the system development above, as found in the research model, Design and Build of Web-Based Online School Exam Information Systems at MTSS Nasruddin Dampit was designed using UML with the Waterfall method. The design model gets positive affirmation from the user, so it is feasible to be developed. This design model is also able to make it easier for teachers in terms of assessing school exam results because this system can automatically display the results of calculating student exam scores. So that teachers do not need to correct student exam results (Annurwan, 2023).

CONCLUSION

Based on the results of the design and testing of the system, it can be concluded as follows.

- The website of this tester system has been successfully created
- This website makes it easier for participants to identify abilities in the form of true and false results after the process of working on the questions
- Make it easier for admins and teachers to input data and calculate the final grade.

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