

Design of Online Exam Applications during the National Preparation Pandemic

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ABSTRACT

This research is carried out to analyze and design a website which is a technology that is very influential on education science during the current pandemic is needed a technology that can support the course of learning and exams. One of them is about the technology of Exam Preparation Application using Web-based Random Methods at SMA Negeri 1 Pantai Cermin. The exam itself is an activity that is carried out routinely to measure the achievement of student competencies after completing one or more basic competencies. The research method used consists of several stages of research, namely data collection, system analysis and software design. The data collection method used is observation and literature study. The method of analysis and design of the system used is Rapid Application Development (RAD) using Unified Modeling Language (UML) and user interface design system design. Applications are created on two sides, namely admin applications and user applications. The programming language used for software development is PHP and for servers using MySQL as a database. The result of this study is an application based on an online exam website for national exam preparation and using random methods that can later be used by teachers and students. The application of this application can provide convenience for teachers and students in the process of working on exam practice questions in a computerized manner and can immediately see the results of the exam quickly.

Keywords: Online Exam Application, Website, UML, RAD, PHP

INTRODUCTION

The National Exam at the High School level is an activity carried out by the education unit to measure the achievement of student competencies as a recognition of learning achievements and or completion from the school. In preparation for the exam requires paper in the implementation of the exam, as well as conducting a manual assessment audit that is usually done by the teacher, so that the standard application of the exam can be a long process to cost a lot of money. Computer technology developed very rapidly with the advent of the internet where computers can be connected to each other forming a very wide network consisting of thousands of computers around the world. Anyone who has access to his network can exchange information on various forms of text data, images, sounds, files and so on. More than that, this network can be accessed for 24 hours. The purpose of this research is to produce an online exam training design that can be used by students in the face of computer-based national exam preparation. The benefits of this research are to make it easier for teachers to monitor student preparation ahead of national exams and help teachers in achieving student grades for the preparation of national exams and make it easier for students to master the online exam system and make it easier to do it.

RESEARCH HYPOTHESIS

This research is to make it easier for teachers to monitor student preparation ahead of national exams and help teachers in

achieving student scores for the preparation of national exams and make it easier for students to master the online exam system and make it easier to do it.

RESEARCH METHODS

Using a grounded theory approach, researchers conduct research that focuses on a series of individual or collective events, actions, or activities that evolve over time in a given context. Grounded theory is useful in situations when very little is known about a particular topic or phenomenon. In general, the purpose of grounded theory is to build new theories, although it is often also used to expand or modify existing theories. This research uses a type of qualitative research.

Qualitative research aims to gain a general understanding of social reality from the perspective of participants through descriptive data. Understanding is not determined in advance, but obtained after conducting an analysis of social reality that is the focus of research, then a conclusion is drawn in the form of a general understanding of reality. Qualitative research focuses more on observation and natural atmosphere. The researcher acts as an observer. He simply created a category of behavior, observed symptoms and recorded them in his observation book. Qualitative research uses theory as a reference or guideline in conducting research, not testing theory as in quantitative research.

RESEARCH PROCEDURES

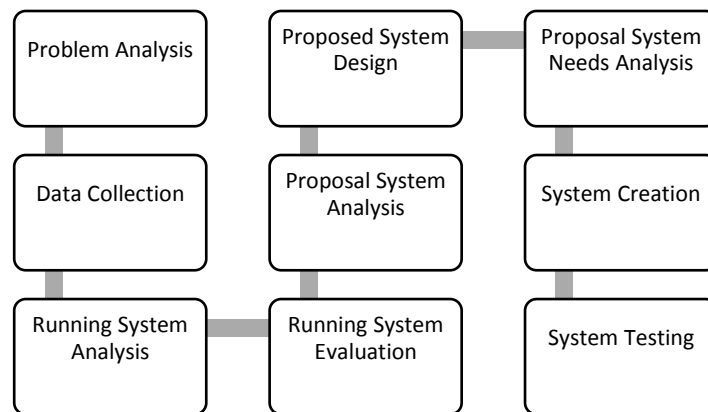


Fig.1. Research Procedures

APPLICATION RESULT VIEW

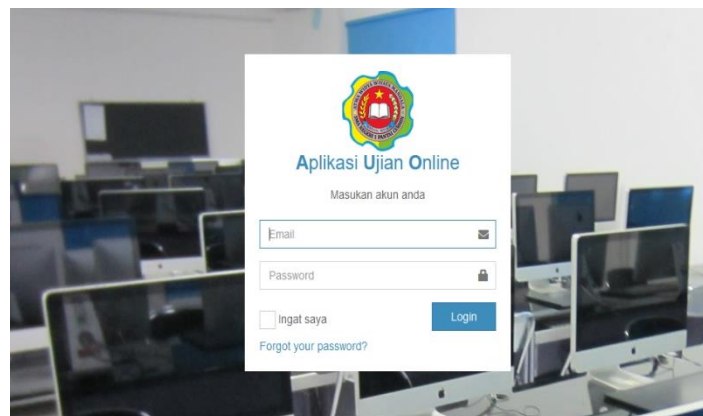


Fig.2. Login Page

The login page appears on the first page of the application which displays the username and password filling form. This

login page is used by all students, teachers and operators. After the user enters the username and password and is declared

successful, then the system will be redirected to the dashboard page or the

user's main page. Here's what the login page looks like.

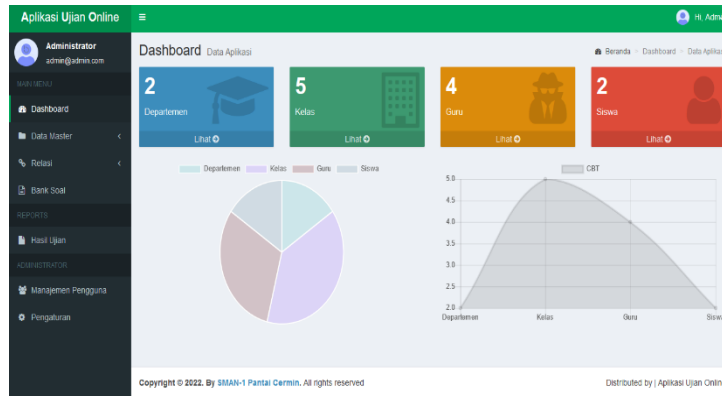


Fig .3. Admin Home Page

The admin or school operator's main page will appear after the user with admin or operator access successfully signs in. This page will show at a glance the data about the

amount of teacher data, the amount of student data, the amount of class data and also a graph of each data. Here's what the admin's main page looks like.

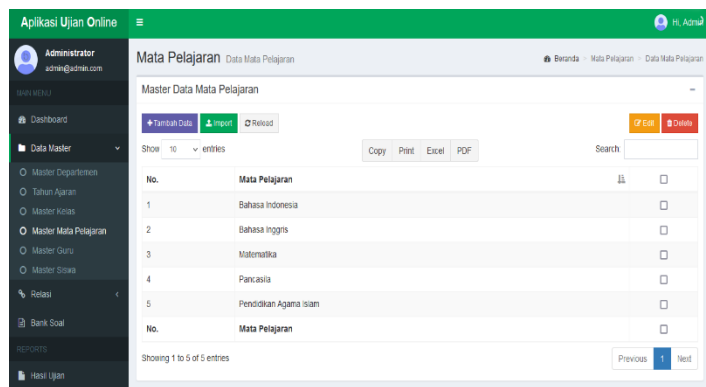


Fig.4. Lesson Data Master Page

This lesson data master page is used to record all the subjects in the school. The data displayed is in the form of learning data, add

data buttons, edit data, delete, and export. Here is the master page of lesson data.

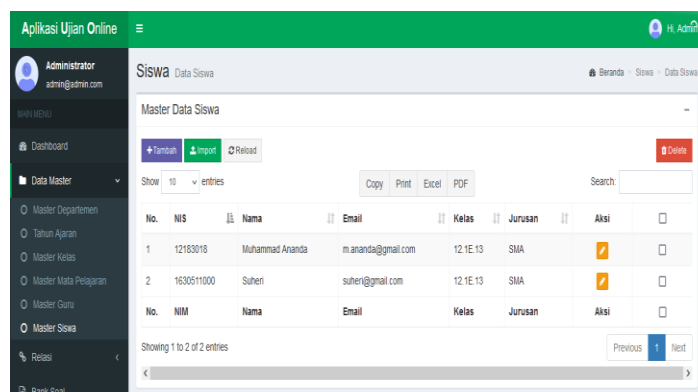


Fig.5. Student Data Master Page

The student data master page is used to record all students in the school. This page will display student data in the form of NIS, Name, Email, and Class, as well as data

buttons just add data, delete data, and export data. Here's a look at the student data master page.

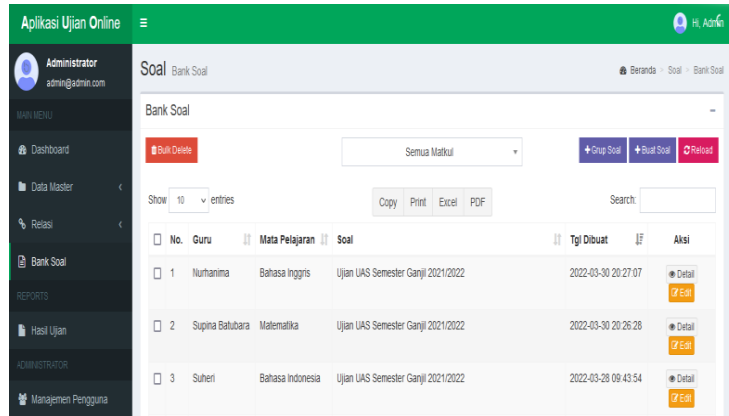


Fig.6. Master Teacher Data Page

This teacher data master page is in the form of a display of teacher data including NIP, Name, Email and Subjects, as well as system

buttons in the form of Add data, delete data, Change Data and also export data. Here's what the teacher data master page looks like.

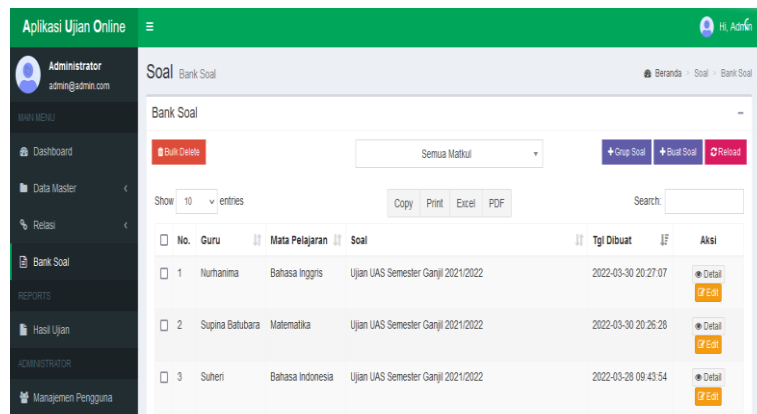


Fig 7. Question Bank Data Page

This question bank data page is a list page of questions that have been filled in by the teacher in each subject. On this page in the form of bank data questions include teacher

name, lesson name, question title, create date, add data button, change data, data details and delete data. Here's the bank data page.

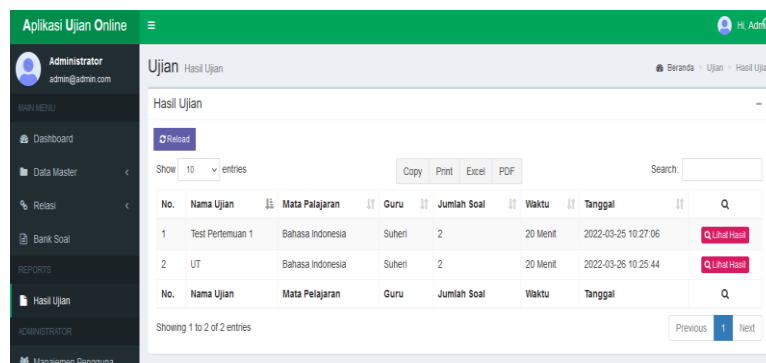


Fig.8. Exam Results Page

The exam results page is a page that displays the data of exam results that have been done by students. On this page I can see exam

results, see details of exam results and also print exam results. Here's a look at the exam results page.

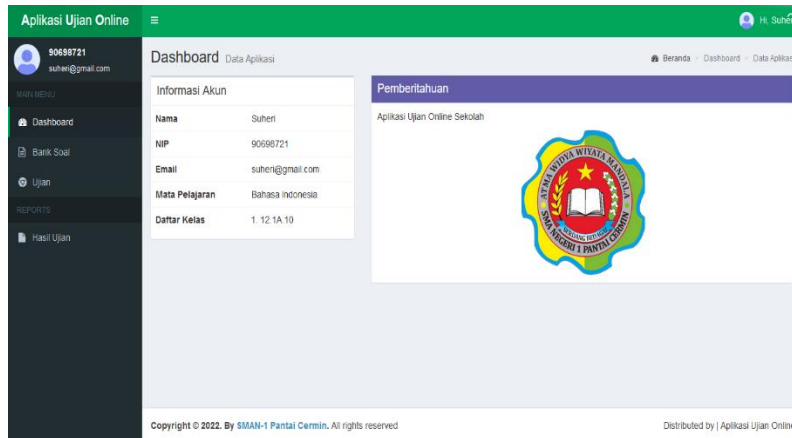


Fig. 9. Teacher's Main Page

The teacher's main page is the first page that appears when the teacher successfully logged in on the login page. On this page will be

displayed account information that is logged in welcome to the online exam application. Here is the view of the teacher's main page.

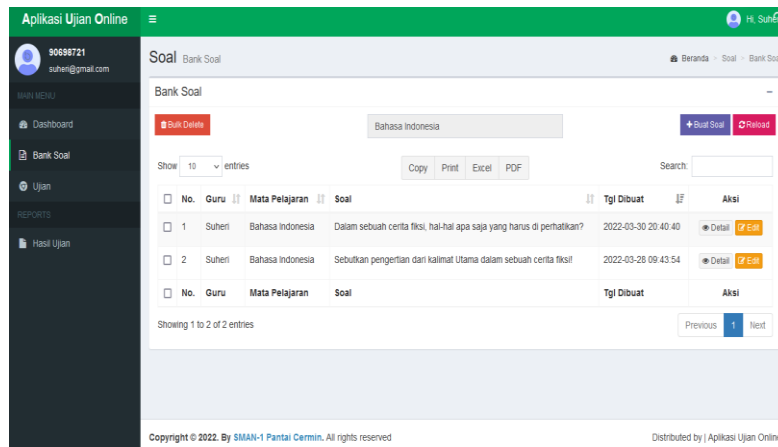


Fig. 10. Bank Data Page About Teachers

This question bank data page is a list page of questions that have been filled in by the teacher in each subject in accordance with the lesson taught by the teacher. On this page in the form of bank data questions include

teacher name, lesson name, question title, create date, add data button, change data, data details and delete data. Here is the bank data page about teacher access rights.

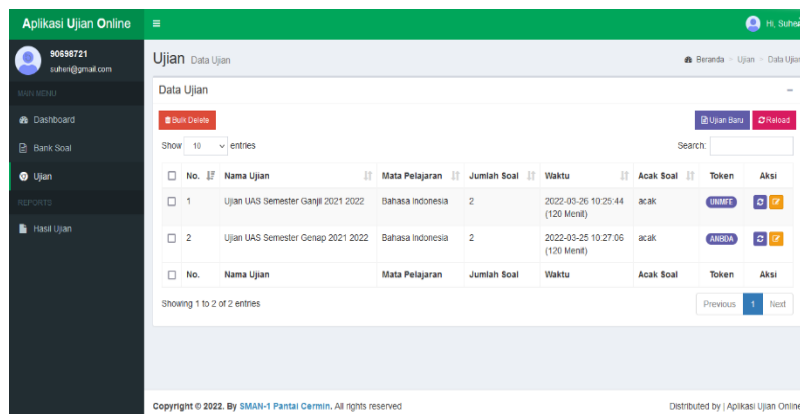


Fig.11. Exam Data Teacher Page

The exam data page on the teacher's access rights is a page that displays data on exams that can be carried out by students. On this page the teacher can add exam data with data

from the question bank. Here's the view of the exam data page.

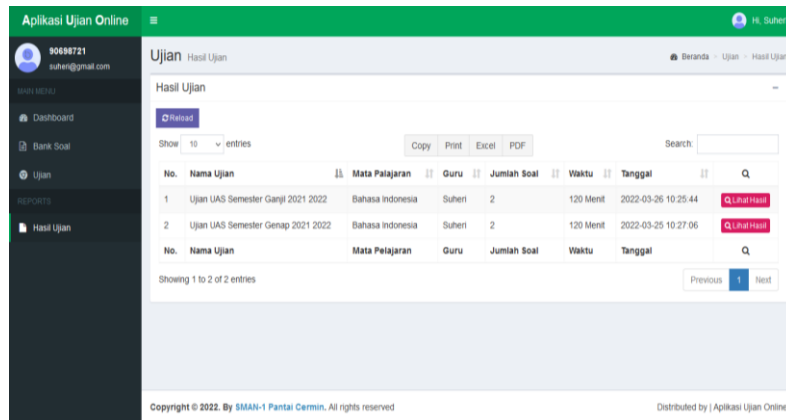


Fig.12. Exam Results Teacher Page

The exam results page is a page that displays the data of exam results that have been done by students. On this page the teacher can see

the exam results, see the details of the exam results and also print the exam results. Here's a look at the exam results page.

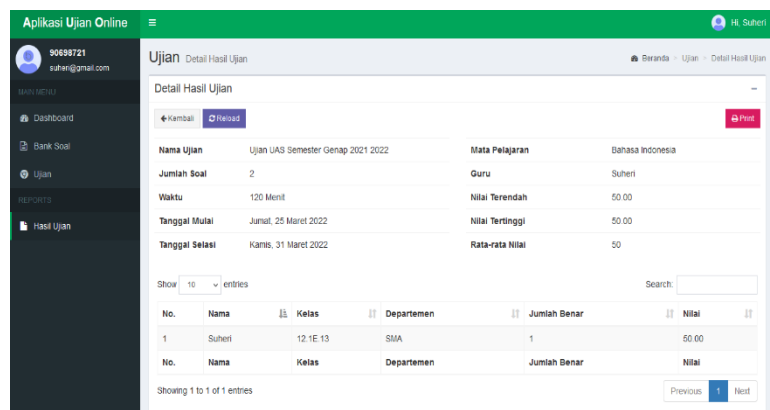


Fig.13. Exam Results Details Page

The detailed page of exam results is a page that displays complete data of exam results that have been done by students. On this page

the teacher can see the details of the exam results and also print the exam results. Here is the detailed page of the exam results.

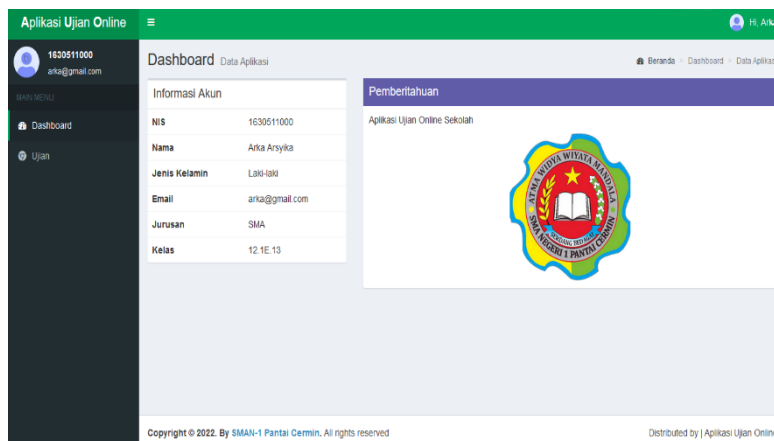


Fig.14. Student Home Page

The student's main page is the page that first appears when students successfully log in on the login page. On the main page of this student in the form of a display of student

account information list of menus that can be accessed by students. Here is the student's main page view.

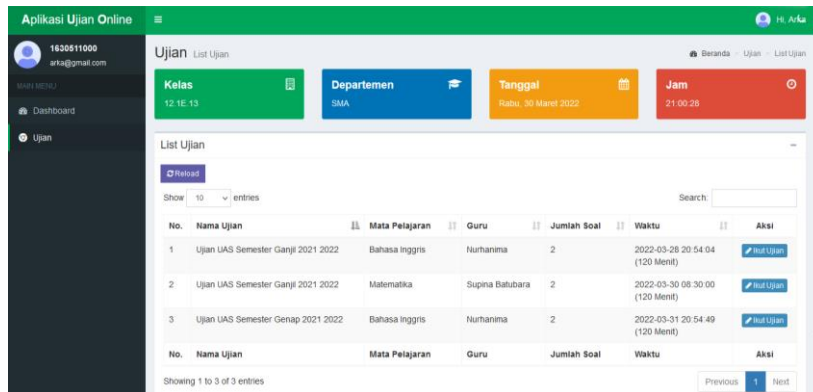


Fig. 15. Student Exam Page

The student exam page is a page on student access rights that is useful for viewing a list of what exams students can take. The exam list is the exam data that has been inputted by the subject teacher. When there is a list of exams on the list page of this student exam,

students can take the exam by pressing tomol Take the Exam which is on the right of the exam list. Here is the view of the student exam list page.

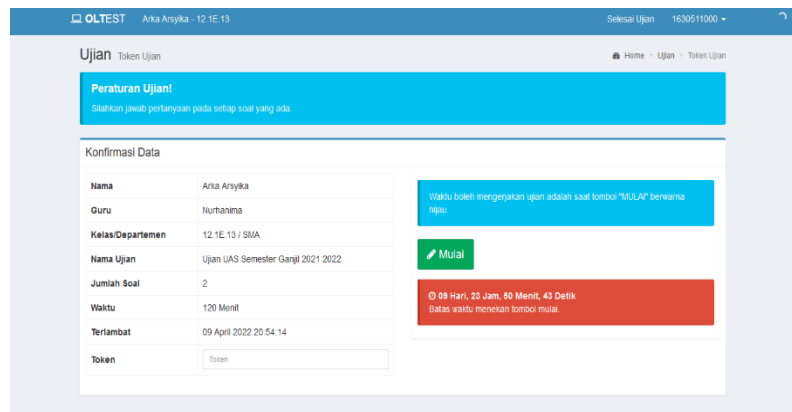


Fig. 16. Student Exam Confirmation Page

The student exam confirmation page is a page that appears after students press the Take the Exam button on the exam data list page above. On the exam confirmation page, students will be asked to enter the exam Token number. The Token Number of this exam is obtained from the teacher according to the subject to be tested. On the confirmation page of this exam also displays the time of the exam to be carried out and the information that the exam can be carried out or not. Exam information cannot be carried out if the date specified by the teacher when filling in the exam data does not match the date the student presses the ujian button, so

students are expected to take the exam in accordance with the provisions set by the teacher or school administration. Here is the student exam confirmation view.

The exam sheet page is a page that displays a list of questions that students will answer. On this page, students can answer questions. After all questions are answered, students can press the Finish button. In this case, you can also see the navigation of the problem, which is the display on the left of the page to display the entire number of questions and questions that have been answered which are marked in green and unanswered questions that are marked in white.

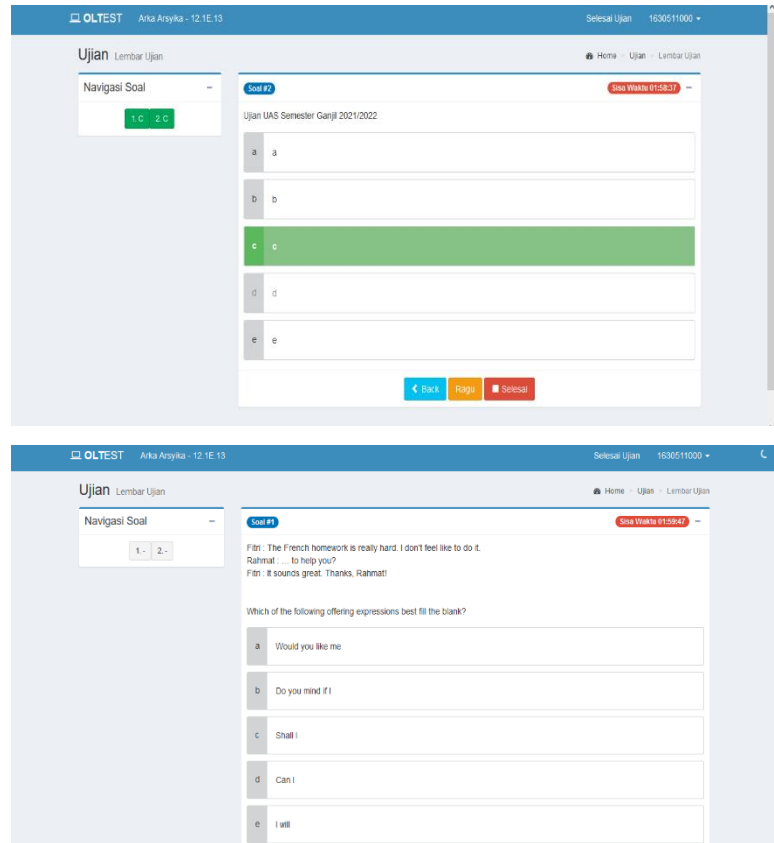


Fig. 17. Student Exam Sheet Page

CONCLUSION

This research was conducted to produce an online exam training design that can be used by students in facing the preparation of the Computer-Based National Exam can make it easier for teachers to monitor student preparation ahead of the national exam and help teachers in achieving student grades for the preparation of the National Exam and make it easier for students to master the online exam system and make it easier to do it.

ACKNOWLEDGEMENT

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