

Development Of Interactive Multimedia Interactive Information Technology Learning Applications

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Abstract— Indragiri Islamic University or commonly abbreviated as UNISI is a private university located in Indragiri Hilir, Riau. UNISI was built to develop the quality of human resources. Introduction to Information Technology is one of the basic lessons of computer science in Indragiri Islamic University which is still used in its delivery as a medium of books. With the role of multimedia that is used to convey information, it can provide an interesting understanding and there is no boredom for students who want to understand learning and make the atmosphere in learning and teaching more attractive, namely by "developing learning applications introducing information technology" where this application is designed accordingly. material from learning books at Indragiri Islamic University and this application will be packaged in the form of android. Which is where Multimedia is one of the current information technology products. The birth of multimedia technology is the result of a combination of advances in electronic technology, computer engineering and software. Supported by this multimedia application, universities can undergo the learning and teaching process to be smoother and more interesting.

Keywords- *development of learning applications; PTI; interactive multimedia*

I. INTRODUCTION

The availability of commonly used media such as textbooks, magazines, newspapers and blackboards causes boredom in carrying out classroom learning. While audio and visual media such as television, radio, and video, while electronic media such as computers. All the media used have not been fully utilized, even computers are only as "decoration" because they are not used optimally. Therefore, it is necessary to have the creativity of educators in utilizing the media, even educators are often found using interactive media[1].

Multimedia is one of the existing information technology products. The birth of multimedia technology is the result of a combination of advances in electronic technology, computer engineering and software. Supported by this multimedia application, universities can undergo the learning and teaching process to be smoother and more interesting. Indragiri Islamic University or commonly abbreviated as UNISI is a public university located in Indragiri Hilir, Riau. UNISI was built to develop the quality of human resources. Indragiri Islamic University has a mission to encourage, develop regional development so that it remains an economic activity based on a people's economy in Indragiri Hilir Regency [2].

Introduction to Information Technology is one of the basic lessons of computer science in Indragiri Islamic University, which is still used in its delivery as a medium of books. With the role of multimedia that is used to convey information, it can provide an interesting understanding and there is no boredom for students who want to understand learning and make the atmosphere in learning and teaching more attractive, namely by "developing learning applications introducing information technology" where this application is

designed accordingly. material from learning books at Indragiri Islamic University and this application will be packaged in the form of android [3].

II. RESEARCH METHODOLOGY

The research method is a method or technique used in the design of this information system building. The methods accepted in this study are as follows:

The analysis and design of the sales information system in the Showroom Master is carried out using the PIECES analysis method.

a) Performance (performance)

Performance Analysis, performance is a supporting part in the smooth running of a company's work processes. Performance analysis is intended to bring about an increase in the performance (work results) of the new system so that it becomes more effective.

b) Information (information)

Information Analysis, in the presentation of information, there is often a relationship, even errors. The resulting information often cannot be directly used as a basis for decision making. Therefore, accurate, timely and relevant information is expected.

c) Economy (economy)

Economic analysis, economic analysis is a system assessment in the reduction and benefits that will be obtained from the system being developed. The system will provide operational savings and increase company profits. Savings are obtained through raw materials and maintenance. Meanwhile, the benefits are obtained from increasing the value of information and the resulting decisions.

d) Control (control)

Control Analysis, Control over a system is needed. Its presence is to attend and detect early system misuse or error, as well as to ensure data and information security. With control, tasks or performance that experience disruption can be overcome

e) Efficiency (efficiency)

Efficiency Analysis, with this analysis there are efforts to increase the efficiency of operations by using available resources

f) Service (service)

Service Analysis (Service Analysis), improving service to consumers is the main goal. The service process is considered quite good, but the search for order data and calculations that only use a calculator as a calculation tool causes the service time to be quite long.

III. RESULTS AND DISCUSSION

This information system design stage is a tool for designing a new system to be created, the goal of which is to reduce system weaknesses.

A. *Process Design*

In designing this process, there are several designs that will be presented. The following is a general proposed system design.

a) Use Case diagram

One of the important diagrams used to illustrate the requirements of the system is a use case (UC) diagram, which describes visually the context of the interaction between actors and the system. Each use case states a specification of the behavior (functionality) of the system being described that is needed by the actor to fulfill its objectives[4]. Figure 4.1 above is a usecase diagram of an introductory information technology learning application designed. The actors involved in the system can be defined by one actor, namely the

user. Which is where the role of this user is a person who uses the Unisi college promotion application. Users can view the main page and select the available options.

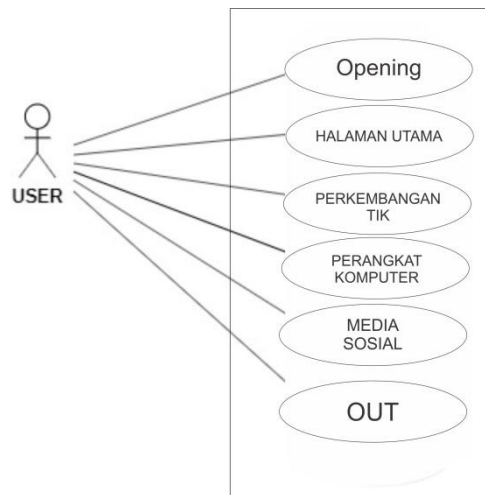


Figure 4.1 Use case diagram

b) Activity Diagram

Activity diagrams are diagrams that describe the naturally dynamic nature of a system in the form of flow and control models from activity to other activity[5].

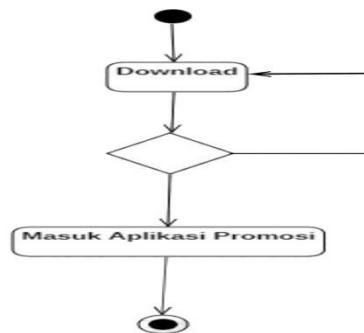


Figure 4.2 Activity in the User download application diagram

Figure 4.2 above can be explained before the user enters the introductory learning application to information technology, the user is required to download the Google Playstore first because the application can only be downloaded on the Playstore, from this activity the user succeeds in downloading, the user will enter the application and if the download process is interrupted such as network disruption, then re-examine the download page in the Google Playstore [6]

c) Main Activity Diagram

The main activity diagram for users who are accessing the promotional application can select several items provided in this application, starting from the Intro, Home, UnisiinfoInfom, animation, and exit, while other items will follow the class choices that have been controlled first [6].

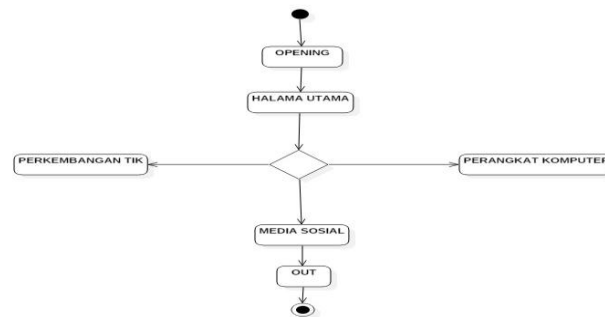


Figure 4.3 Main activity diagram

Figure 4.3 above is the main activity diagram where users can see interacting starting with the opening when starting or entering the application of introductory information technology learning applications, where this opening is the opening page when the first application is run, where the opening is in the form of an animation. And then it will enter the main page. On this page the user can choose what content he wants to see in the menu. When the user is already on the main page or the home menu the user will be able to select the available menu where each menu has learning according to the learning of information technology developments, namely there is a typewritten development page, computer devices, social media, and menu out [7].

d) Activity Diagram menu Type Development

In Figure 4.4, the activity diagram for the development of typing can be seen from the interaction of the user with the system, where when the user enters the halal development of typing, the user will be able to get information or learn about the development of computer information technology and to be able to understand more there is supporting material which helps the user understand the material more clearly, namely there is a "history" menu which contains the history of information technology development and there is also a "Impact" menu which contains learning from the impact of the impact on the development of information technology. And if the user wants to leave this page there is a "Main page" menu where to return to the menu home or main page [8].

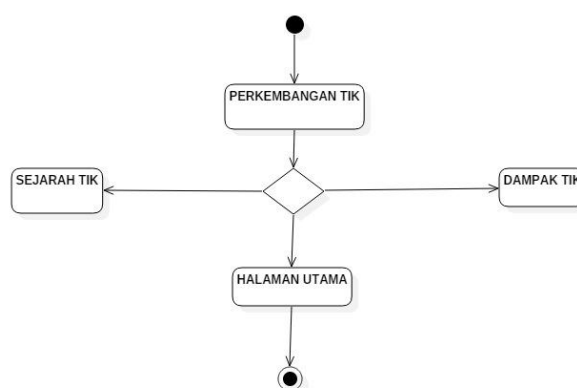


Figure 4.4 Activity diagram of the tick progress menu

e) Activity Diagram computer device menu

In Figure 4.5 the activity diagram of a computer device, the user will be able to get information or learning about the explanation of computer devices and to be able to understand more there is supporting material which helps users understand more clearly, namely there is a "Hardware" menu which contains an explanation of hardware devices and there also the "Software" menu which contains an explanation of the

software tools. And if the user wants to exit this page there is a "Main page" menu which is where to return to the start or main page menu [9].

f) Activity diagram of social media menu

In Figure 4.6 the social media activity diagram, the user will be able to get information or learning about social media explanations and to be able to understand more there is supporting material which helps users understand the material more clearly, namely there is a "function" menu which contains an explanation of the functions of social media. and there is also a "types" menu which contains an explanation of the types of social media. menu "Impact" This menu contains an explanation of the impacts of social media and if the user wants to leave this page there is a "Main page" menu which is where to return to the start or main page menu [10].

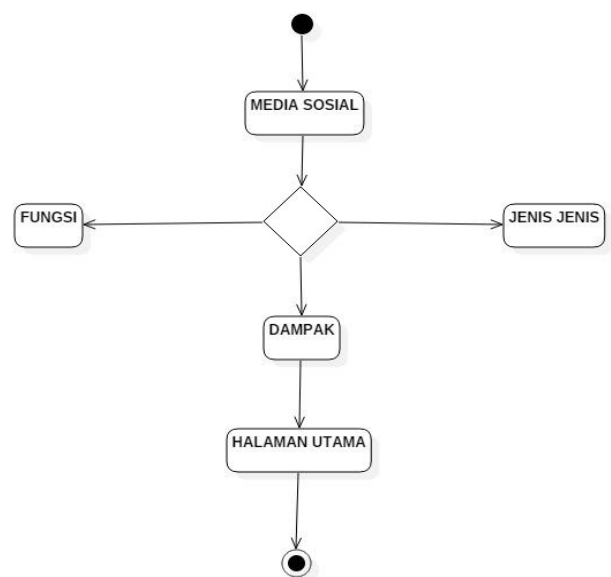
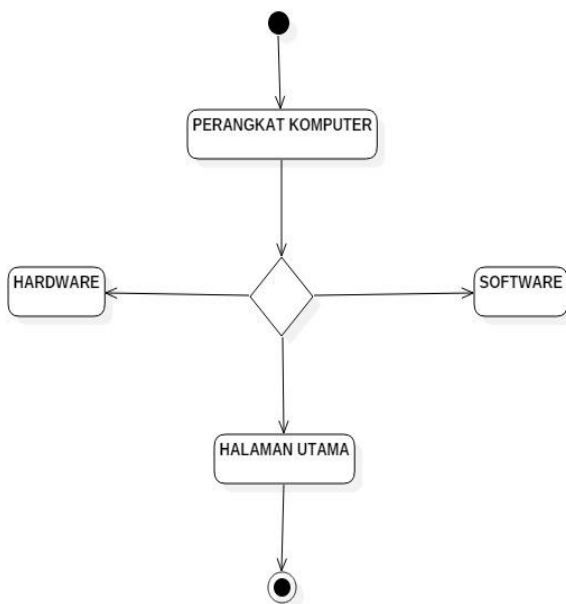


Figure 4.5 Activity diagram computer device menu Figure 4.6 Activity diagram of the social media menu

B. Interface design

Interface Design contains an explanation of the interface design of the introductory information technology learning application. which explains each interface design on each menu and explains the use of button functions in introductory information technology learning [6]. For this interface design which will be packaged in the form of an Android application, the shape of this application is horizontal. The interface design can be explained one by one each menu from intro to menu out [9]. Opening Interface to describes the OPENING page interface design where the opening page displays the opening animation which this animation contains. Main Page Interface is the main menu page design where this main manu is the main page of the introductory information technology learning application where this page contains an explanation of information and communication technology and determines the user to go to the next page. On this page there are buttons to go to the desired page. there is an ICT development menu page, computer devices, social media and there are also sound and host buttons that can help users [11].

ICT Development menu interface is a design for the ICT development menu, in this menu the user gets explanations and information about the development of ICT and there are also supporting material menu buttons, namely the history menu and the Impact menu. Computer device menu interface is a design for

computer devices, in this menu the user gets explanations and information about computer devices and there are also supporting material menu buttons, namely the hardware menu and the software menu. Social media menu interfaces is a design for the social media menu where the user will get an explanation of social media and there is also supporting material, namely the function menu, types and impact menu [11].

IV. CONCLUSION

UNISI is a private university located in Indragiri Hilir, Riau. UNISI was built to develop the quality of human resources. With the role of multimedia that is used to convey information, it can provide an interesting understanding and there is no boredom for students who want to understand learning and make the atmosphere in learning and teaching more interesting. "The development of an introductory information technology learning application", where this application is designed according to the material from the existing learning books at Indragiri Islamic University and this application will be packaged in the form of android.

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