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**1st International online seminar in Asahan**

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## Vol 1, No 1 (2020): ICoSSIT 2020

### Table of Contents

#### Computer Sciences

<a href="#">RAPIDMINER'S IMPLEMENTATION IN ANALYZING STUDENT MAINSTREAM DATA</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.819">10.33330/icossit.v1i1.819</a>   Abstract Views : 196 times   PDF Views : 97 times Dewi Anggraeni, Rizaldi Rizaldi	1 - 6
<a href="#">GEOGRAPHIC INFORMATION SYSTEM MAPPING SPREAD OF COVID-19 WITH FRAMEWORK CODEIGNITER</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.820">10.33330/icossit.v1i1.820</a>   Abstract Views : 341 times   PDF Views : 201 times Mardalius Mardalius	7 - 12
<a href="#">IMPLEMENTATION OF LEAST SQUARE METHOD FOR SALES PREDIC-TION IN TRIA MS GLOW</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.823">10.33330/icossit.v1i1.823</a>   Abstract Views : 383 times   PDF Views : 352 times Fauriatun Helmiyah, Dahriansyah Dahriansyah	13 - 18
<a href="#">THE MFEP AND MAUT METHODS IN SELECTING THE BEST EMPLOYEEES</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.822">10.33330/icossit.v1i1.822</a>   Abstract Views : 333 times   PDF Views : 198 times Dewi Maharani, Maulana Dwi Sena	19 - 26
<a href="#">K-MEANS CLUSTERING HWI PRODUCTS (Case Study: HWI Kisaran Distributor)</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.824">10.33330/icossit.v1i1.824</a>   Abstract Views : 274 times   PDF Views : 197 times Risnawati Risnawati, Rohminatin Rohminatin	27 - 36
<a href="#">IMPACT OF USING MOBILE LEARNING APPLICATIONS IN THE LEARNING PROCESS</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.705">10.33330/icossit.v1i1.705</a>   Abstract Views : 318 times   PDF Views : 281 times Akmal Nasution, Mohd. Siddik	37 - 42
<a href="#">DESIGN OF ARDUINO UNO-BASED EARTHQUAKE LEVEL VIBRATION LEVEL DETECTION</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.755">10.33330/icossit.v1i1.755</a>   Abstract Views : 69 times   PDF Views : 52 times hidayatullah hidayatullah, jhonson efendi Hutagalung	43 - 52
<a href="#">APPLICATION SOLAR CELLS ON HELMES AS A HANDPHONE BATTERY CHARGER</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.733">10.33330/icossit.v1i1.733</a>   Abstract Views : 261 times   PDF Views : 189 times Muhammad Amin, Ricki Ananda	53 - 60
<a href="#">APPLICATION OF HOUSEHOLD INDUSTRIAL CERTIFICATE LICENSE USING WEIGHT PRODUCT METHOD</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.685">10.33330/icossit.v1i1.685</a>   Abstract Views : 85 times   PDF Views : 95 times Guntur Maha Putra	61 - 70

<a href="#">CONTROL OF A ROBOT CAR WITH TWO COMMANDS VIA HC-05</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.782">10.33330/icossit.v1i1.782</a>   Abstract Views : 139 times   PDF Views : 120 times Ricki Ananda, Muhammad Amin	71 - 76
<a href="#">THE STRATEGIES TO IMPROVE THE SALE OF BICYCLES USING K-MEANS METHODS</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.764">10.33330/icossit.v1i1.764</a>   Abstract Views : 130 times   PDF Views : 101 times Adi Mas Afandi	77 - 84
<a href="#">ANDROID BASED AUTOMATIC FLOWERING OPTIMIZATION TOOLS</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.744">10.33330/icossit.v1i1.744</a>   Abstract Views : 84 times   PDF Views : 70 times Parini Parini, Andrew Ramadhani, Kusmawadi Kusmawadi	85 - 90
<a href="#">DEVELOPMENT OF STUDENTS BASED ENTREPRENEURS WEB AND MOBILE TECHNOLOGY</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.795">10.33330/icossit.v1i1.795</a>   Abstract Views : 153 times   PDF Views : 116 times Neni Mulyani, Muhammad Sabir Ramadhan	91 - 98
<a href="#">DETERMINATION OF QUALITY COCOA SEEDS</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.800">10.33330/icossit.v1i1.800</a>   Abstract Views : 100 times   PDF Views : 66 times Adi Prijuna Lubis	99 - 104
<a href="#">TOGAF MODELS IMPLEMENTATION IN DESIGN E-CAMPAIGN PUBLIC RELATIONS KPU ASAHAN</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.774">10.33330/icossit.v1i1.774</a>   Abstract Views : 110 times   PDF Views : 106 times William Ramdhan, Riki Andri Yusda, Uci Ramadhani	105 - 112
<a href="#">APPLICATION OF HUMAN NUTRITION NEEDS WITH HARRIS BENEDICT METHOD</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.797">10.33330/icossit.v1i1.797</a>   Abstract Views : 726 times   PDF Views : 311 times Iqbal Kamil Siregar	113 - 118
<a href="#">USE OF Rb941-2nd ROUTERBOARD MICROTIC USING ON LAN NETWORK LABORATORY</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.708">10.33330/icossit.v1i1.708</a>   Abstract Views : 101 times   PDF Views : 127 times Hambali Hambali	119 - 124
<a href="#">SURVEILLANCE CAMERA AND AUTO BACKUP CLOUD USING RASPBERRY PI</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.715">10.33330/icossit.v1i1.715</a>   Abstract Views : 109 times   PDF Views : 101 times Nofriadi Nofriadi, Rini Widyastuti	125 - 130
<a href="#">USABILITY TESTING ON THE ASAHAN COVID-19 WEB PORTAL USING SYSTEM USABILITY SCALE (SUS)</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.739">10.33330/icossit.v1i1.739</a>   Abstract Views : 625 times   PDF Views : 389 times Edi Kurniawan, Abdul Karim Syahputra	131 - 140
<a href="#">APPLICATION OF PROFILE MATCHING METHOD IN THE EMPLOYEE DECISION SUPPORT SYSTEM IN PDAM TIRTA SILAUPISA KISARAN WEB BASED</a>	<a href="#">PDF</a>
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.756">10.33330/icossit.v1i1.756</a>   Abstract Views : 103 times   PDF Views : 94 times Suparmadi Suparmadi, Santoso Santoso	141 - 150

<a href="#">THE TESTING OF LIBRARY APPLICATION BY USING BOUNDARY VALUE ANALYSIS</a>	<a href="#">PDF</a> 151 - 156
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.785">10.33330/icossit.v1i1.785</a>   Abstract Views : 218 times   PDF Views : 160 times Febri Dristyan, Mufrida Meri	
<a href="#">MEASURING TOOLS OF ALCOHOL LEVELS IN MICROCONTROLLER-BASED SOLUTIONS</a>	<a href="#">PDF</a> 157 - 162
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.805">10.33330/icossit.v1i1.805</a>   Abstract Views : 116 times   PDF Views : 118 times Riki Andri Yusda, William Ramdhan	
<a href="#">THE APPLICATION FOR THE PERMANENT VOTERS LIST OF THE GENERAL ELECTION COMMISSION IN LABUHANBATU UTARA BASED ON WEB</a>	<a href="#">PDF</a> 163 - 168
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.777">10.33330/icossit.v1i1.777</a>   Abstract Views : 87 times   PDF Views : 96 times Indra Ramadona Harahap, Muhammad Iqbal	
<a href="#">THE UTILIZATION OF MASSIVE OPEN ONLINE COURSE CONCEPT DURING CORONA PANDEMIC OUTBREAK</a>	<a href="#">PDF</a> 169 - 176
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.731">10.33330/icossit.v1i1.731</a>   Abstract Views : 167 times   PDF Views : 149 times Ahmad Muhazir, Sugianto Sugianto, Janner Simarmata, Pugu Sudarminto	
<a href="#">USING PROTOTYPING METHODS TO DEVELOP THE INFORMATION SYSTEM FOR ACADEMIC ADVISORS</a>	<a href="#">PDF</a> 177 - 186
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.803">10.33330/icossit.v1i1.803</a>   Abstract Views : 172 times   PDF Views : 108 times Rolly Yesputra, Cecep Maulana	
<a href="#">INTRUSION DETECTION SYSTEM AND MODSECURITY FOR HANDLING SQL INJECTION ATTACKS</a>	<a href="#">PDF</a> 187 - 194
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.711">10.33330/icossit.v1i1.711</a>   Abstract Views : 434 times   PDF Views : 267 times Ruri Ashari Dalimunthe, Sahren Sahren	
<a href="#">IMPLEMENTATION OF WEB-BASED CUSTOMER RELATIONSHIP MANAGEMENT IN GUCCI BUNUT SHOES</a>	<a href="#">PDF</a> 195 - 200
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.758">10.33330/icossit.v1i1.758</a>   Abstract Views : 167 times   PDF Views : 161 times Santoso Santoso, Suparmadi Suparmadi	
<a href="#">LAPTOP SALES LEVEL USING THE K-MEANS CLUSTERING METHOD</a>	<a href="#">PDF</a> 201 - 208
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.722">10.33330/icossit.v1i1.722</a>   Abstract Views : 135 times   PDF Views : 136 times hari jalsa marpaung	
<a href="#">FORECASTING ANALYSIS OF HONDA MOTORCYCLE SALES INVENTORY</a>	<a href="#">PDF</a> 209 - 214
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.730">10.33330/icossit.v1i1.730</a>   Abstract Views : 341 times   PDF Views : 167 times Juna Eska Eska	
<a href="#">DATA MINING IMPLEMENTATION FOR PRINTER SALES PREDICTION USING NAIVE BAYES METHOD AT RCA COMPUTER STORE KISARAN</a>	<a href="#">PDF</a> 215 - 220
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.776">10.33330/icossit.v1i1.776</a>   Abstract Views : 149 times   PDF Views : 141 times Rahayu Mayang Sari, Yori Apridonal M	

<a href="#">IMPLEMENTATION OF FMCDM IN DETERMINING DECISION MAKING</a>	<a href="#">PDF</a> 221 - 228
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.692">10.33330/icossit.v1i1.692</a>   Abstract Views : 51 times   PDF Views : 62 times Irianto Irianto, Sudarmin Sudarmin	
<a href="#">Customer Relationship In Competition Between Coffe Shops</a>	<a href="#">PDF</a> 229 - 234
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.778">10.33330/icossit.v1i1.778</a>   Abstract Views : 162 times   PDF Views : 135 times afdhal Syafnur	
<a href="#">DECISION SUPPORT SYSTEM SELECTION USED CAR USING THE FUZZY LOGIC METHOD OF TAHANI MODEL</a>	<a href="#">PDF</a> 235 - 242
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.729">10.33330/icossit.v1i1.729</a>   Abstract Views : 144 times   PDF Views : 129 times Rizaldi Rizaldi, Dewi Anggraeni	
<a href="#">PUSH NOTIFICATION TECHNOLOGY AS A SYSTEM ANDROID BASED STUDENT PRESENCE</a>	<a href="#">PDF</a> 243 - 250
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.710">10.33330/icossit.v1i1.710</a>   Abstract Views : 259 times   PDF Views : 169 times Mohd. Siddik, Akmal Nasution	
<a href="#">LED AND WATER PUMP CONTROL SYSTEMS FOR AGRICULTURE AND INTERCROPPING</a>	<a href="#">PDF</a> 251 - 258
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.801">10.33330/icossit.v1i1.801</a>   Abstract Views : 189 times   PDF Views : 93 times Bachtiar Efendi	
<a href="#">PREDICTION OF SUPPLEMENT SALES ON COVID 19 PANDEMIC USING LEAST SQUARE METHOD</a>	<a href="#">PDF</a> 259 - 264
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.740">10.33330/icossit.v1i1.740</a>   Abstract Views : 219 times   PDF Views : 166 times Febby Madonna Yuma	
<a href="#">ONLINE SELF-EXAM APPLICATION WEB-BASED LEARNING EVALUATION SOLUTIONS DURING A PANDEMIC</a>	<a href="#">PDF</a> 265 - 272
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.679">10.33330/icossit.v1i1.679</a>   Abstract Views : 177 times   PDF Views : 101 times Muhammad Iqbal, Andri Nata	
<a href="#">E-COMMERCE CLUSTERING ANALYSIS BASED ON LARGEST VISITORS</a>	<a href="#">PDF</a> 273 - 282
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.779">10.33330/icossit.v1i1.779</a>   Abstract Views : 189 times   PDF Views : 127 times Nurwati Nurwati	
<a href="#">EXPERT SYSTEM FOR DIAGNOSING LUNG DIASES USED CERTAINTY FACTOR</a>	<a href="#">PDF</a> 283 - 290
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.767">10.33330/icossit.v1i1.767</a>   Abstract Views : 166 times   PDF Views : 116 times Yessica Siagian, Janner Pelanjani Simamora	
<a href="#">DECISION SUPPORT SYSTEM DETERMINATION OF THE SCHOLARSHIP BY THE METHOD OF PROFILE MATCHING IN THE EIF2C STUDY COURSE THE RANGE OF WEB-BASED</a>	<a href="#">PDF</a> 291 - 296
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.693">10.33330/icossit.v1i1.693</a>   Abstract Views : 151 times   PDF Views : 85 times Maulana Dwi Sena, Dewi Maharani	
<a href="#">APPLICATION OF THE SINGLE MOVING AVERAGE (SMA) METHOD FOR FORECASTING SALES OF HORDEN IN UMI NALA'S SHOP BUSINESS</a>	<a href="#">PDF</a> 297 - 306
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.912">10.33330/icossit.v1i1.912</a>   Abstract Views : 283 times   PDF Views : 223 times Nuriadi Manurung	

<a href="#">DECISION SUPPORT SYSTEMS FOR SELECTING THE NUTRITIOUS FOOD FOR OBESITY PATIENTS WITH THE MOORA METHOD</a>	<a href="#">PDF</a> 307 - 316
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.784">10.33330/icossit.v1i1.784</a>   Abstract Views : 243 times   PDF Views : 180 times Nasrun Marpaung	
<a href="#">NETWORK SECURITY HOTSPOT AND USER LOGIN WITH METHOD CRYPTOGRAPHY</a>	<a href="#">PDF</a> 317 - 322
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.906">10.33330/icossit.v1i1.906</a>   Abstract Views : 269 times   PDF Views : 151 times Herman Saputra	
<a href="#">IMPLEMENTATION OF MULTI FACTOR EVALUATION PROCESS (MFEP) METHOD IN DECISION SUPPORT SYSTEM FOR SELECTION OF BEST LABORANT.</a>	<a href="#">PDF</a> 323 - 328
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.806">10.33330/icossit.v1i1.806</a>   Abstract Views : 116 times   PDF Views : 110 times Masitah Handayani, Wan Mariatul Kifti	
<a href="#">C4.5 ALGORITHM IN PREDICTING THE SUCCESS RATE OF FIG CULTIVATION</a>	<a href="#">PDF</a> 329 - 334
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.889">10.33330/icossit.v1i1.889</a>   Abstract Views : 80 times   PDF Views : 77 times Rika Nofitri, Novica Irawati	
<a href="#">SIMULATION OF NEW STUDENT PREDICTION AMOUNT USING THE MONTECARLO METHOD</a>	<a href="#">PDF</a> 335 - 340
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.894">10.33330/icossit.v1i1.894</a>   Abstract Views : 74 times   PDF Views : 61 times Novica Irawati, Rika Nofitri	
<a href="#">NATIONAL SCIENCE OLYMPIAD PARTICIPANT SELECTION USING COMBINATIONS AHP AND MFEP METHODS</a>	<a href="#">PDF</a> 341 - 348
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.748">10.33330/icossit.v1i1.748</a>   Abstract Views : 78 times   PDF Views : 90 times Andri Nata	
<a href="#">MULTIMEDIA AS A MEDIA FOR ANALYZING STUDENT LEARNING OUT-COMES WITH THE CONCEPT OF BLENDED LEARNING</a>	<a href="#">PDF</a> 349 - 354
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.867">10.33330/icossit.v1i1.867</a>   Abstract Views : 290 times   PDF Views : 239 times Aulia Fitrul Hadi, Sitti Rizki Mulyani, Muhammad Ridwan, Irzon Irzon, Silfia Andini	
<a href="#">APPLICATION OF THE SMART METHOD TO DETERMINE THE BEST VILLAGE</a>	<a href="#">PDF</a> 355 - 364
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.713">10.33330/icossit.v1i1.713</a>   Abstract Views : 124 times   PDF Views : 82 times Zulfan Efendi	
<a href="#">DECISION SUPPORT SYSTEM FOR HANDLING PUBLIC WELFARE ASSURANCE USING FUZZY TAHANI REASONING</a>	<a href="#">PDF</a> 365 - 370
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.791">10.33330/icossit.v1i1.791</a>   Abstract Views : 113 times   PDF Views : 94 times Suci Andriyani, nadia astri wulandari	
<a href="#">SELECTING THE BEST COW SEEDS USING THE MOORA METHOD</a>	<a href="#">PDF</a> 371 - 376
DOI : <a href="https://doi.org/10.33330/icossit.v1i1.718">10.33330/icossit.v1i1.718</a>   Abstract Views : 126 times   PDF Views : 81 times Afrisawati Afrisawati	



## MULTIMEDIA AS A MEDIA FOR ANALYZING STUDENT LEARNING OUTCOMES WITH THE CONCEPT OF BLENDED LEARNING

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### ABSTRACT

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in the world of education innovation is needed to improve the quality of education. Especially in increasingly rapid technological developments. The use of technology in the education sector makes the quality of education increasingly developed. In this study the authors made an online analytical medium that was used to test students' understanding of the lessons taught. By applying an online test at the end of the meeting. This application proves the level of ability of students in real and real time. This multimedia application also provides results directly to the participants. So that they can find out the results of their competency test directly.

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## INTRODUCTION

Multimedia is the use of computers to present and combine text, sound, images, animation, audio and video with tools and connections so that users can navigate, interact, work and communicate. Multimedia is often used in the world of informatics [1]. Apart from the world of informatics, multimedia is also adopted by the world of games, and also for creating websites. Multimedia is also used in the world of education and business. In the world of education, multimedia is used as a medium of teaching, both in class and individually or self-taught. In the business world, multimedia is used as a media company profile, product profile, even as an information kiosk and training media in the e-learning system [2]. In the beginning multimedia only included media which became the consumption of the senses of vision (still images, text, video motion pictures, and imagery / motion pictures), and consumption of the sense of hearing (sound) and also in the form (tangible). In its development multimedia includes kinetic (motion) and odor which are the consumption of the sense of smell. Multimedia began to incorporate kinetic elements since it was applied to a 3-dimensional film show that was combined with movement on the seat where the audience sat. Kinetic and 3-dimensional movies evoke a realistic sense. Began to be part of multimedia since it was discovered odor reproduction technology through telecommunications. With an odor detection input device, an operator can send digitizing results to the odor via the internet. The receiving +computer must provide an output device in the form of a smell reproduction machine. This odor reproduction machine mixes various types of odor materials which after being mixed produce output in the form of odors similar to data sent from the internet. By analogy with a printer, this tool makes smelly pheromones instead of ink. Output not be printed, but the scent [3].

Learning media is the media used in learning, which includes teaching aids in teaching as well as means of messenger from learning resources to recipients of learning messages (students) [4]. As a presenter and message provider, media learning in certain cases can represent educators presenting learning information to students. If the media program is designed and developed well, then the function will be played by the media even without the presence of educators. One of the multimedia devices is a video camera, now there is a handy size camcorder. With this device audiovisual activities can be recorded into VHS cassette tapes. Then the recordings are played on a video tape recorder so that they can be seen on the screen [5]. In the beginning the use of computer-based multimedia devices was known as CAI (Computer Assisted Instruction) and CMI (Computer Managed Instruction) [6].

From the above problems a system is needed that can solve the above series of problems, namely multimedia. With multimedia all students can test their learning abilities and understanding directly. Although they come from different educational backgrounds. Multimedia is a combination of various media texts, graphics, images, and videos. Multimedia is also interpreted as a computer system consisting of hardware and software that makes it easy to combine images, video, photography, graphics and animation with sound, text, data that is controlled by a computer program, thus providing

## **METHOD**

Based on the framework, each step can be described as follows:

- A. Defining the Scope of the Problem Space The problem to be examined must be determined in advance, because without being able to define and determine the boundaries of the problem to be studied, there will not be a best solution to the problem.
- B. The problem analysis step is to be able to understand the problem that has been determined the scope and limitations of implementing multimedia by using flash media macros 8. By analyzing the problem that has been determined, it is expected that the problems are well understood and correct, in accordance with the solutions expected.
- C. Determining Objectives Based on the understanding of the problem, the objectives to be achieved from the study are determined :
  - a. Creating multimedia applications to provide examinations to students online.
  - b. Give the results of the exam directly and informative.
  - c. improve the ability of students to understand learning because they are provided with online examinations
- D. Studying Literature Study existing cases from previous systems and look for references that can help answer the results of these problems.
- E. Collect Data Collect data needed to be moved into the system. Such as tutorial videos, knowledge of lessons, and questions that will be entered into the system.

## **RESULT AND DISCUSSION**

Multimedia is the use of several different media to convey and convey information in the form of text, audio, graphics, animation, and video. Multimedia system is a system that can be used digitally, transmission and representation of several discrete (digital) media in the form of text, graphics, images, audio and video via computer.

### **A. Multimedia System Design**

This application was built using macromedia flash 8 and php mysql. At this design stage the author designed several stages. The first interface of the application when run.



The image shows a web browser window titled "Quiz Viewer" with a sub-header "ANALISA KESIAPAN KERJA". Below the header is an orange bar labeled "Entry Page" with navigation icons. The main content area contains a registration form with the following fields: NOKTP: \*, NAMA: \*, ALAMAT: \*, PENDIDIKAN: \*, KUALIFIKASI: \*, and NOHP: \*. Each field is followed by a red asterisk and a text input box. At the bottom of the form is a "Start" button.

Image 1 . Online Test Home Preview

This is the initial design of the system development. There are several options that must be filled and fulfilled to continue into the system.



Image 2. Video based learning

On this page students will be given learning about lectures with audio and visual animation.

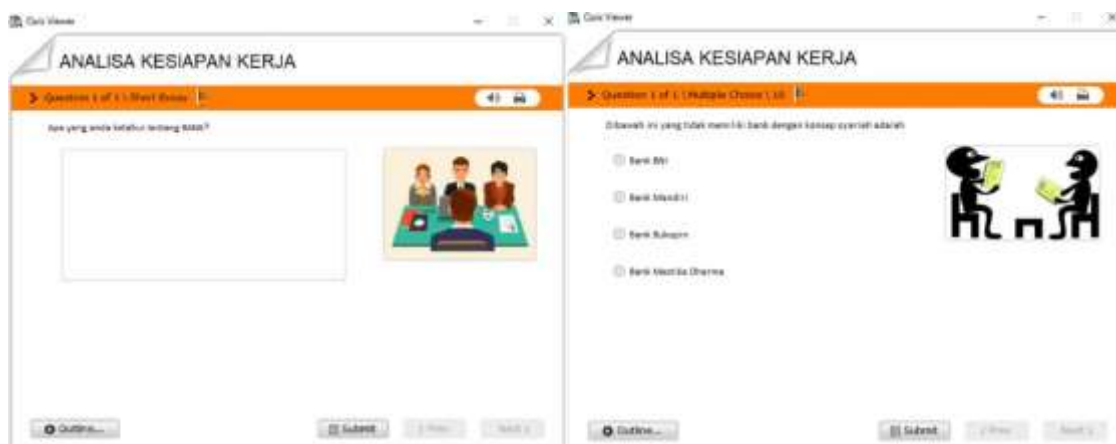


Image 3. Online Test Layout

On this page students will be asked to carry out examinations online. There are several problem, essay and objective models. The time given to complete it can be set by the lecturer concerned.



Image 4. Scoring and Exam Result

This is the result of the test trials that have been conducted by students. The value is clearly displayed.

## CONCLUSION

Animation development that will be done is by giving tutorials or education about learning. At this stage the system will be presented with several videos that explain the learning material. The video will educate about the material to be tested on the test page. So that this multimedia system can help students to understand learning better.

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