

**Computer-Aided Instruction in English Subject for**  
**Grade Three of San Ramon Elementary School**

A Project

Presented to

the Faculty of STI Academic Center Calamba

In Partial Fulfillment  
of the Requirements for the Degree of  
Bachelor of Science in Information Technology

by

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March 2017

## **ADVISER'S RECOMMENDATION SHEET**

This Project entitled

**Computer-Aided Instruction in English subject**

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submitted in partial fulfillment of the requirements of  
the Bachelor of Science in Information Technology  
has been examined and is hereby recommended  
for acceptance and approval

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March 2017

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## **ABSTRACT**

The purpose of this study was to design a Computer-Aided Instruction in English subject for San Ramon Elementary School and to find out its acceptability in terms of construction, design and functionality. The Computer-Aided Instruction in English subject was developed using NetBeans, Adobe Photoshop for the design, WampServer for database and MySQL Workbench for ERD diagram. The result of the study revealed that the developers' system is "Very Acceptable" as evaluated by the Principal, ICT, English teacher and selected pupils of the school. In the light of the present findings and conclusions, the following recommendations are advanced, namely, that this system should be introduced to the client; that it should be adopted by the school to help the client to find and monitor records that at the same time generate an accurate and efficient record of the pupils' task performance. Also, to help the teachers in guiding the pupils in enhancing their knowledge, enhance their vocabulary, comprehension and skills in reading English. In addition, to provide a system that desired and needed of the client with user friendly design and functions that can lessen the time consuming work to all users. Furthermore, with graphical design suitable for the pupils' level aiming not only to caught the attention and interest of the pupils but also to motivate and practice these children to study with or without the teacher's guidance.

## **PREFACE**

These days, the discovery and improvement of our technology is continuous there are many things that involve technology, communicating to other people, keeping yourself updated to what is happening to your surroundings, learning many things through the internet and many more. Thesis is considered as one of essential or major sources of information during the research phase.

Furthermore, it will also help the school or thesis coordinator to easily communicate or enhance the dissemination of information to their students with regards to thesis related course. The developers also followed the thesis guidelines given by their thesis coordinator for the documentation process of their study.

## **Chapter 1 INTRODUCTION**

San Ramon is a public elementary school, located at Purok I, Manfil Canlubang, Calamba City Laguna. Mrs. Jocelyn V. Reyes the school principal, with the help of 64 faculty members, facilitate and guide the 2,876 pupils, in 8 to 9 sections from Grade 1 to Grade 6. The school aims to educate these pupils properly and shaped to become productive citizens of the country. The knowledge acquired and the experiences gained can be used not only inside the classroom but also in everyday and future life to keep up with the modern times. Like other public schools, the client uses provided lessons, timetable, textbooks, instructional aids and teaching module from the DepEd and some provided Computerized Instructional Aides and self-downloaded videos to innovate the way of teaching, but still it is not enough to meet the pupil's needs mostly in learning English language; that is the reason why the teachers are having difficulties in getting the pupils' attention and focus during discussions and why most of the pupils are not fascinated with the English subject. In addition, the client is using a traditional way of giving quizzes, seatwork, monitoring and recording the pupils' assessments.

Communication is a powerful tool to have a good social relationship and to be an effective citizen of the community, but what if because of the incapability of an individual to understand and use this language it become a problem? Due to language barrier, many people are shy or worst scared to communicate with other people mostly if the language is foreign or in English. The lack of training and knowledge on the use of English language at an early age is seen as one of the reasons why it becomes the student's problem in the future. San Ramon's objective and practice are to lessen this problem by providing and innovating the way of teaching, but what if this said innovation

is not enough? What if the medium itself is hard to understand? What if there is a lack of knowledge in Basic English? These problems are reflected not only in everyday life but also inside a classroom and to its pupils.

Based on Executive Order 210 s.2003 President Gloria Macapagal Arroyo former president of the Philippines declared and approved that English shall be taught as a second language, starting with the First Grade. As provided for in the 2002 Basic Education Curriculum, English shall be used as the medium of instruction for English, Mathematics and Science from at least the Third Grade level. Shall be used as the primary medium of instruction in all public and private institutions of learning in the secondary level, including those established as laboratory and/or experimental schools, and non-formal and vocational or technical educational institutions. As the primary medium of instruction, the percentage of time allotment for learning areas conducted is expected to be not less than *seventy percent* (70%) of the total time allotment for all learning areas. It is the objective of the foregoing policies to develop the aptitude, competence and proficiency of all students in the use of the English language to make them better prepared for the job opportunities emerging in the new, technology-driven sectors of the economy [PGMA2003], but what if this executive order cannot be followed due to lack of knowledge, instructional aids, practice and module to effectively teach the English subject?

A stereotype pupil's attitude towards the English subject is, it is difficult to learn and study. Many of the pupils are not interested in this subject because of difficulty in

understanding it. It is necessary to use a variety of lessons about listening, speaking, reading and writing in English. No wonder many teachers are now trying to enhance the old teaching method and replace it with new and more fun techniques. Like the Computer Aided Instruction (CAI) but to no avail. Computer-Aided Instruction is a computer based instructional aide refers to the use of the computer as a tool to facilitate and improve instruction. CAI programs use tutorials, drill and practice, simulation, and problem solving approaches to present topics, and they test the student's understanding.

The developers Computer-Aided Instruction is developed to lessen the client's problem in teaching English. The system provides a specific task and module for different users such as: the admin, the teacher and the pupil. A user authentication is also provided to secure the files recorded in the system's database. In addition, the developers' system is developed in an interactive instructional technique whereby a computer is used to present the instructional material and monitor the learning that takes place. As a Computer-Aided Instruction it is a combination of text, graphics, sound and video that enhances the learning process. The developers aimed and approached not only one but three types of learners the visual, reading/writing and auditory learners. Furthermore, the developers' system provides videos, presentations, slideshows and audio with correct pronunciation and better reading comprehension. Also, the system gives the pupil's a proper feedback in the end of every activity and quizzes. Lastly, it has a graphical design suitable to entertain and motivate the pupils to study with or without the teacher's guidance. It has information that helps teach or encourage interaction that are presented on computers in the form of text or multimedia formats, which include photographs, videos, animation,

speech, and music. The guided drill is a computer program that provides questions to pupils, returns feedback, and selects additional questions based on pupil's responses. Recent guided drill systems incorporate the principles of education in addition to subject matter knowledge into the computer program. [ARNO2000]

### **1.1 Statement of the problem**

San Ramon Elementary School is facing the following difficulties and problems in teaching English

- Having difficulties in getting the attention of the pupils resulting in low retention and poor grades.

*Based on the transcript of interview conducted to the English teachers in Grade 3, the time span of the pupils' attention in English subject is only 10 to 15 minutes.*

*After that the teacher need to get the attention of the pupils resulting in interrupting the class. There is also lack of interactive activities during the teaching-learning process. The English class becomes boring because of the frequent use of the provided instructional materials.*

- Having difficulties in encouraging the pupils to interact and participate in the discussion resulting in low grades in oral participation.

*Based on the transcript of interview conducted to the teachers of English subject in Grade 3. Only 4 to 5 out of 34 students in the higher section are voluntarily answer and participate in the recitation. The worst scenario is that, in the lowest section during discussion and recitation, no student participating at all.*

- Lacking of pupils reading comprehension resulting in poor performance in examination.

*During the Division Reading Performance of San Ramon Elementary School, in school year 2016-2017 in oral reading 160 out of 427 falls on frustration level which means the pupils do not know how to read and write English properly. While, 144 pupils out of 427 fall on the instructional level which means the pupils still needs the guidance of the teacher to read continuously and 40 pupils fall in the independent level which means the pupils have the ability to read and write English and worst 83 pupils out of 427 fall in the non-reader category which means the pupils do not totally know how to read English at all.*

- Lacking of activities that are suitable for the pupils' level resulting in low grades.

*Aside from the repeated visual aids and self-downloaded videos, teachers have no other way of giving activities that is more interested for the pupils resulting to loss of drive of the students to be participative and become boring. The client doesn't have any interactive game which pupils can't participate collaboratively.*

- Delayed monitoring of students' performance most especially in English reading and writing due to large number of pupils per classroom.

*Teacher can't conduct a one-to-one monitoring of the students' performance due to the large number of students' per classroom.*

## **1.2 Current state of technology**

The developers' client San Ramon is a public school that uses textbooks, provided by DepEd and some instructional aides in teaching different subjects. In addition, the client has 65 instructors and 2876 pupils from grade 1 to grade 6, consisting of 40 to 50 pupils in 8 to 9 sections that eventually having difficulties in coping up in particular subjects. Furthermore, the client is using some self-downloaded videos for the pupils to get the attention and participate in the class. Also, the client is using a traditional way in giving quizzes, seatworks and printouts for the instructors' questionnaires. In addition, San Ramon Elementary school doesn't have any computerized instructional aides for the pupils that mostly needed to further the pupils' knowledge in a particular subject.

### **1.2.1 Foreign study**

#### **Computer-assisted language learning (CALL)**

An approach to teaching and learning foreign language where the computer and computer-based resources such as the Internet are used to present, reinforce and assess material to be learned. It usually includes a substantial interactive element. It also includes the search for and the investigation of applications in language teaching and learning. Except for self-study software, CALL is meant to supplement face-to-face language instruction and not replace it. In recent years, CALL researchers have investigated the advantages of using computers as teaching/learning tools in improving different language skills. Many studies

indicate that CALL provides an innovative and effective alternative for language instructors.

*The developers developed a Computer-Aided Instruction for grade 3 pupils of San Ramon Elementary School, having difficulties with the English subject. This system will provide language proficiency and understanding of basic ideas, develop reading comprehension and improve grammar and speech. In addition, many studies indicate that there has been an increase emphasis on computer technology and its integration at all levels of education [STEPP2002]. Furthermore, the computer allows learners to progress at their own pace and work individually to solve problems, provide immediate feedback, and know whether the answers are correct or not.*

### **Learn English System (series)**

This system is designed for middle school students through adult learners, including ESL (English as a Second Language), and struggling readers. This system consists of different lessons such as grammar, read/write and developed the basic skills in the art of language, especially in English where this system brought the user reading comprehension to the next level. Students are able to learn English grammar easier than ever before. The 10 programs in this series are each divided into 3 to 5 short lessons, making them perfect for classroom use or self-study. This is also ideal for reviewing grammar or preparing for many verbal standardized tests such as the SAT (Scholastic Assessment Test), TOEFL (Test of English as a Foreign Language), GED (General Educational

Development), and GRE (Graduate Record Examination). The system also features interactive Menus, Exact Scene Access, Study Guide Weblink, Instructor Profile, Company Profile. Furthermore, this program has ten programs such as: Sentence Structure, Parts of Speech, Sentence Complements, Verbs, Pronouns, subject-verb Agreement, Modifiers, Parallel Structure, Punctuation and Spelling and Capitalization.

*The developers Computer-Aided Instruction is designed to assist the pupils learning process particularly in English subject. This features interactive Menus, Exact Scene Access, Study Guide link and Instructor/student Profile. In addition, this system provides courseware based on the lessons from the textbook, enabling it to teach essential rules of English grammar, usage, and mechanics, and fundamental principles that will make a better reader and writer. Along the way, the pupils work through a large variety of practice examples and learn foolproof techniques for tackling even the most challenging reading passages, editing exercises, and essay prompts.*

### **Learning Management System (LMS)**

It is a software application or Web-based technology used to plan, implement, and assess a specific learning process. Typically, a learning management system provides an instructor with a way to create and deliver content, monitor student participation, and assess student performance. This may also provide students with the ability to use interactive features such as threaded discussions, video conferencing, and discussion forums. The Advanced Distance Learning group,

sponsored by the United States Department of Defense, has created a set of specifications called Shareable Content Object Reference Model (SCORM) to encourage the standardization of learning management systems.

*The developers developed system provide an enhanced approach of learning that aims to catch the pupils attention and interest, basically in English. Computer-Aided Instruction includes the use of computers to teach academic skills and to promote communication and language development and skills. It includes computer modeling and computer tutors [KLIN2009]. Also, this system is designed with different courseware based in the textbooks. Containing different activities and quizzes that acts as a reviewer for the previous lesson. It has Video, Slide show and other presentation for entertaining discussions. Furthermore, it provides different user task to secure, monitor and record the school's data.*

### **1.2.2 Local Study**

#### **Interactive Courseware for Preschoolers in Liceo de Cagayan University**

In the Philippines, Liceo de Cagayan University implemented an Interactive Courseware for Preschoolers to develop their social skills. It enhanced the traditional way of teaching to boost the pupils' interests in learning with the computer environment that is creative enough for the pupils to be please. This Interactive Courseware for Preschoolers is a type of computer-based instruction with text and animation in graphical form suitable to learn interactively with the presented lessons and interactive quizzes for lesson recaps. This can provide the

pupils with a more flexible, creative and entertaining environment for a better learning experience.

*The interactive courseware of Liceo de Cagayan University are the same in the developers Computer Aided Instruction (CAI), both of the system uses text and animations to produce an interactive courseware. The only difference in these two systems is the level of difficulties in teaching. The interactive courseware of Liceo de Cagayan University is for pre-school while the developers' Computer Aided Instruction (CAI) is developed suitable for Grade 3 pupils.*

## **CAMI EDUCATIONAL SYSTEM**

It is the leading developer of high performance educational software. This software is used extensively in schools, suitable in Grade 1 to Grade 12 student, homes and private practitioners in their own CAMI Edu-Centre's. Its focus on knowledge retention gives a student more time to practice taught concepts. Explanatory notes and hints are also included to aid the student, where necessary, while working through the exercises. With this focus on retention, a learner can work through a significantly larger workload in shorter time periods and still produce better results. Also, it is a collection of programs that includes Math's, a Perceptual Skills Builder as well as a Reading and Language System

*The developers Computer Aided Instruction (CAI) and CAMI Educational system have the same target of respondent but different in focused areas of learning. The CAMI educational system provides courseware for all learning areas while Computer Aided Instruction focuses only in English subject.*

### **1.2.3 Related Studies**

#### **Attention span during lectures**

Many of the articles and academic literature says that the attention span of the modern students is only 10 - to -15 min. In the book “Tools for Teaching”, Davis (5) states that “*...student attention during lectures tends to wane after approximately 10–15 minutes.*” Similar to Wankat’s argues that “*Although student attention is high at the start of a lecture, it has reached a low point after 10–15 minutes.*” And The Psychologist Wilbert J. McKeachie, Benjamin (1) asserts that “*When the lecture begins, most students are paying attention, and for most students that attention lasts for about 10 minutes.*” This sentiment still echoed more than 20 year later and has maintained that “*Attention typically increases from the beginning of the lecture to 10 minutes into the lecture and decreases after that point,*” In Teaching Tips (13), (8th Ed.), and 14th edition of the book (19). One study in attention span states that when trying to estimate realistically how much time a child can focus on one activity and can use the following formula:

$$\text{Attention span for learning} = \text{chronological age} + 1$$

For example, an eight-year-old child ( $8+1=9$ ) would have a nine-minute attention span for a learning activity. In 2015, a study commissioned by Microsoft and discussed in Time magazine found that the average attention span was in fact only 8 s. Similarly, the 8-s attention span for humans actually reflects the average time a person will spend on a web page before looking somewhere else.

## **The Reading Speed and Comprehension**

According to Elizabeth Schotter a psychological scientist at the University of California, San Diego and one of the authors of the report. “*Reading is a complex dance among various visual and mental processes, and research shows that skilled readers already read quickly, averaging 200 to 400 words per minute. Some speed reading technologies claim to offer an additional boost by eliminating the need to make eye movements by presenting words rapidly in the center of a computer screen or mobile device, with each new word replacing the previous word. The problem, researchers find, is that eye movements account for no more than 10% of the overall time we spend reading, and eliminating the ability to go back and reread previous words and sentences tends to make overall comprehension worse, not better*”.

[RAYN et al, 2016].

Although, speed reading is one type of skills in reading, other studies say that normal reading led to much better comprehension than did speed reading or skimming. This was true both for the 3 readers who were studied before and after the course and for the cross-sectional comparison of the 3 groups of readers. The comprehension advantage varied across the 2 types of passages, the 2 types of questions (probing high-level or low-level information), and the 2 types of rapid reading; but the advantage of the normal readers was almost always present. [JUST2013]

The experiment showed that reading at a normal rate produces better comprehension than reading at a rapid rate, even if the readers have had training in speed reading. But it is important to keep in mind that the total reading time is considerably longer in the

case of normal reading. In addition, countless numbers of conscientious people in the academic and business worlds have received speed-reading instruction.

Since speed reading has such widespread appeal and potential pedagogical importance, it is useful to examine objectively the psychological processes that differentiate speed reading from normal reading. Furthermore, skills in speed reading are considered important if the reading activity is given in a limited time.

### **1.3 Objectives**

#### **1.3.1 General objective**

The developers aim to develop a Computer-Aided Instructions that will not only give pupils a good time while learning and understanding the subject and measure the knowledge that acquired from the topics and lesson studied, but also to give pupils the opportunity to use self-learning technique and help the pupils to become independent and responsible by learning on their own. A system that will break the traditional way of spoon-feeding, a teaching method where they completely rely on the teachers and to help mold both the intellectual aspect, confidence in speaking a foreign language and personality aspect of the pupils.

#### **1.3.2 Specific objectives**

- To develop a system that will get the attention of the students and will avoid the low retention and poor grades.

*The developers developed a Computer-Aided Instruction that can help and motivate the pupils that are passive in lectures discussions actively.*

- To develop a module that will encourage the students to interact and participate in the discussion that will avoid low grades in oral participation.

*The developers developed and provided a system that has an interactive lessons suited to the pupils taste to get the pupils attention and interest to learn in English subject.*

- To develop a module that will enhance the performance of the students in reading comprehension.

*The developers develop and provide a Computer-Aided Instruction system that will enrich the pupils' knowledge in reading, in writing and speaking English language. To enrich and train the pupils to have reading comprehensions, learn the correct pronunciation and mostly in communication using this language.*

- To develop a module that will give activities that are suitable for the students' level.

*The developers developed an enhanced Computer-Aided Instruction with Video module, Song module, audio in Language proficiency module and Educational Presentation module for better understanding of Basic English and at the same time motivates the pupils to study and learn without the guidance of the instructors.*

- To develop a system that will conduct a one-to-one monitoring of the students in English reading and writing.

*The developers developed an enhanced Computer-Aided Instruction with File maintenance of the lesson, Teachers Account and activity recording module that would monitor pupils progress to better evaluate the pupils understanding and*

*learning of the subject matter with a module that will generate fast reports on the results of quizzes and all information's of pupils and audit trail of teachers.*

## **1.4 Scope and Limitations**

### **1.4.1 Scope**

- **User authentication Module**

*The developers ensure the client record is secured and won't access by an unauthorized person by providing each user an account that only the user is allowed to use.*

- **Admin Module**

*The developers developed an admin module to record, monitor and update all the school personnel and pupils' information which consists of different tools such as:*

- **Students**

*This module is developed and provided for easy access and view all list of students.*

- **Teachers**

*This module is developed and provided for easy access and view all list of teachers*

- **Log Manager**

*View the history of logging-in and out of the admin.*

### **■ Backup and Restore**

*This module is developed and provided to easily back-up and restore the system's databases.*

### **■ Account Info**

*This module is developed and provided for easy access of all account information.*

#### **○ Teachers Module**

*Teacher's module is developed to monitor the pupil's performance and level of knowledge in English subject. Consisting of:*

### **■ Students Info**

*Students Info Module is developed for an easy access of the pupils' records and information such as the pupils level of knowledge in this subject and the pupils section.*

### **■ Account Info**

*This Module is provided where the teacher can update the teachers personal account password. Also, it can view the progress of the pupils in statistical report.*

#### **○ Student Module**

*The developers developed and designed a Computer-Aided Instruction system allowing the pupils to login on a specific account. View a specific lesson suitable to the Grade 3 pupils. This said lessons are*

*provided with a pretest and posttest exams to test the pupils level of knowledge in English subject. That can be recorded immediately in the teachers monitoring record. Furthermore, this module will give immediate feedback on the pupil's scores and what level these pupils knowledge in this subject. This module is consisting of:*

■ **Lessons**

*The Lessons Module is provided to easily view the list of suitable lessons that will help and enhanced the pupil's initial knowledge in English subject.*

■ **Pre-Test/Post-Test**

*The Pre-Test and Post-Test Module is developed and provided to view the pupil's test scores before and after the pupil take the provided lessons. Also, this module is provided to serves as the pupils self-monitoring of what level the pupil is.*

■ **Account Info**

*This module is where the pupils can view the entire pupil's personal information such as the user account and password.*

○ **System specification**

*The system is applicable in Windows, Mac OS X, Linux and Solaris due to Net Beans IDE that the developer used in developing the system.*

### **1.4.2 Limitations**

- **Speech recognition**

*This function is excluded in the system because it requires large amounts of memory to store voice files. Also, it is difficult to use in classroom settings, due to noise interference that can makes errors and can be frustrating without adequate support.*

- **The number of Post-Test retakes**

*The number of the pupil's post-test retakes is not counted, only the highest passing score will be recorded. The developers' post-test is set to be taken as many numbers as possible until the pupil meet the needed score for the next topic.*

- **The teacher's interval in the pupil's lessons**

*The teacher's interval is limited in monitoring the pupils progress and level of knowledge in English subject. The developers' system is provided with suitable lessons and examinations. Set to guide the pupil's studies and help to learn at the pupils own pace with or without the teacher's guide.*

- **Recording of the pupil's exercises scores**

*The pupils recorded scores is limited in pretest and posttest only. The other exercises and activities that the system provided is only a drill and will not recorded/countered in the pupil's grades.*

- **Students Drill**

*The drill set and provided in the system can't run without any flash player.*

## **Chapter 2 THEORETICAL FRAMEWORK**

### **2.1 INTRODUCTION**

This chapter gives information about the developers' concepts and definition of system used to developed the Computer-Aided Instruction for San Ramon Elementary school. The system is based on CALL (Computer-Assisted Language Learning). In addition, manage the important record based on the guidance and rules of Database Management System. ERD (Entity Relation Diagram) is used to describe and explain the existing relationship and theories that is implemented to the system.

In developing the Computer-Aided Instruction System for San Ramon Elementary School, the developers used the Rapid Application Development (RAD) Model for the methodology, NetBeans with Integrated Development Environment (IDE) which serves as a platform for implementing the Java programming language in developing and designing the system; Wamp server serves as the database for inputting and retrieving records in the system. The developers also applied certain existing theories and technologies in the system such as the Information System, Computer Assisted Language Learning (CALL), and the Star topology.

### **2.2 Information System**

#### **Computer Assisted Language Learning (CALL)**

Computer-Assisted Language Learning (CALL) is defined as "the search for and study of applications of the computer in language teaching and learning." (Levy, 1997: 1) The main aim of CALL is to find ways for using computers for the purpose of teaching and learning the language. More specifically, CALL is the use of computer technologies that promote educational learning, including word

processing, presentation packages, guided drill and practice, tutor, simulation, problem solving, games, multimedia CD-ROM, and internet applications such as e-mail, chat and the World Wide Web (WWW) for language learning purposes. There are several terms associated with CALL. CALL is variously known as Computer-Aided Language Learning (CALL), Computer-Assisted Language Instruction (CALI) and Computer-Enhanced Language Learning (CELL). The first two terms generally refer to computer applications in language learning and teaching, while CELL implies using CALL in a self-access environment [HOVE 1999].

### **2.3 Programming Language**

#### **Java Language**



*Figure 2-1: Java Language*

Java is a general purpose, high-level programming language developed by Sun Microsystems. A small team of engineers, known as the Green Team, initiated the language in 1991. Java was originally called OAK and was designed for handheld

devices and set-top boxes. Oak was unsuccessful, so in 1995 Sun changed the name to Java and modified the language to take advantage of the burgeoning World Wide Web. In addition, Java is an object-oriented language similar to C++, but simplified to eliminate language features that cause common programming errors. Java source code files (files with a .java extension) are compiled into a format called bytecode (files with a .class extension), which can then be executed by a Java interpreter. Compiled Java code can run on most computers because Java interpreters and runtime environments, known as Java Virtual Machines (VMs), exist for most operating systems, including UNIX, the Macintosh OS, and Windows. Bytecode can also be converted directly into machine language instructions by a just-in-time compiler (JIT). In 2007, most Java technologies were released under the GNU General Public License.

## 2.4 DBMS



Figure 2-2: Database Management System (DBMS)

A database management system (DBMS) is system software for creating and managing databases. The DBMS provides users and programmers with a systematic way to create, retrieve, update and manage data. A DBMS makes it possible for end users to create, read, update and delete data in a database. It essentially serves as an interface between the database and end users or application programs, ensuring that data is consistently organized and remains easily accessible. Furthermore, the DBMS manages three important things: the data, the database engine that allows data to be accessed, locked and modified and the database schema, which defines the database's logical structure. These three foundational elements help provide concurrency, security, data integrity and uniform administration procedures.

Typical database administration tasks supported by the DBMS include change management, performance monitoring/tuning and backup and recovery. Many database management systems are also responsible for automated rollbacks, restarts and recovery as well as the logging and auditing of activity. The DBMS is perhaps most useful for providing a centralized view of data that can be accessed by multiple users, from multiple locations, in a controlled manner. It can limit what data the end user sees, as well as how that end user can view the data, providing many views of a single database schema. End users and software programs are free from having to understand where the data is physically located or on what type of storage media it resides because the DBMS handles all requests [MARG 2015]

### 2.4.1 WampServer



*Figure 2-3: Windows, Apache, MySQL, and PHP (WAMP)*

Windows, Apache, MySQL, and PHP (WAMP) is a variation of LAMP for Windows systems and is often installed as a software bundle (Apache, MySQL, and PHP). It is often used for web development and internal testing, but may also be used to serve live websites. The most important part of the WAMP package is Apache (or "Apache HTTP Server") which is used to run the web server within Windows. By running a local Apache web server on a Windows machine, a web developer can test webpages in a web browser without publishing them live on the Internet [ROUS 2005]

WAMP also includes MySQL and PHP, which are two of the most common technologies used for creating dynamic websites. The developers use MySQL due to its high-speed database, while PHP is a scripting language that can be used to access data from the database. By installing these two components locally, the developers can build and test a dynamic website before publishing it to a public web server. While Apache,

MySQL, and PHP are open source components that can be installed individually, they are usually installed together. One popular package is called "WampServer," which provides a user-friendly way to install and configure the "AMP" components on Windows.

## 2.5 Star Topology

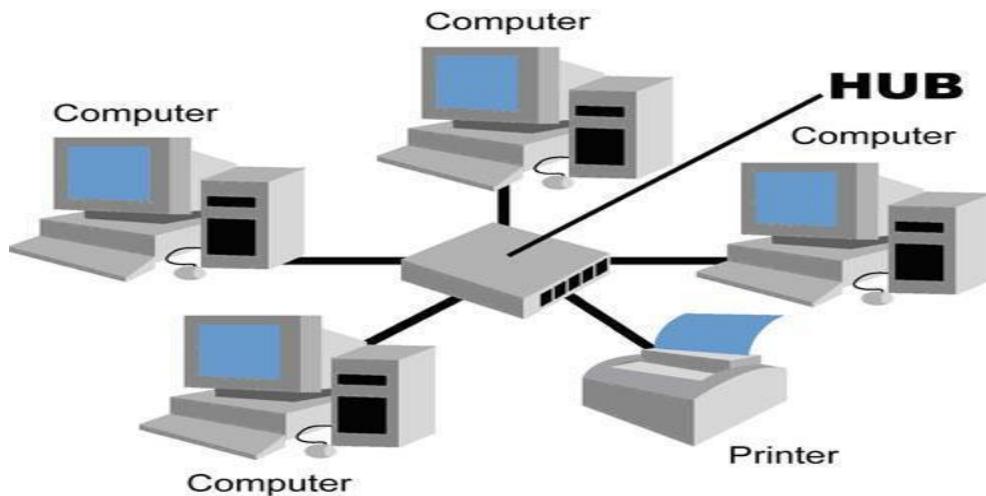


Figure 2- 4: Star Topology

Alternatively referred to as a star network, star topology is one of the most common network setups. In this configuration, every node connects to a central network device, like a hub, switch, or computer. The central network device acts as a server and the peripheral devices act as clients [ROUS 2005]

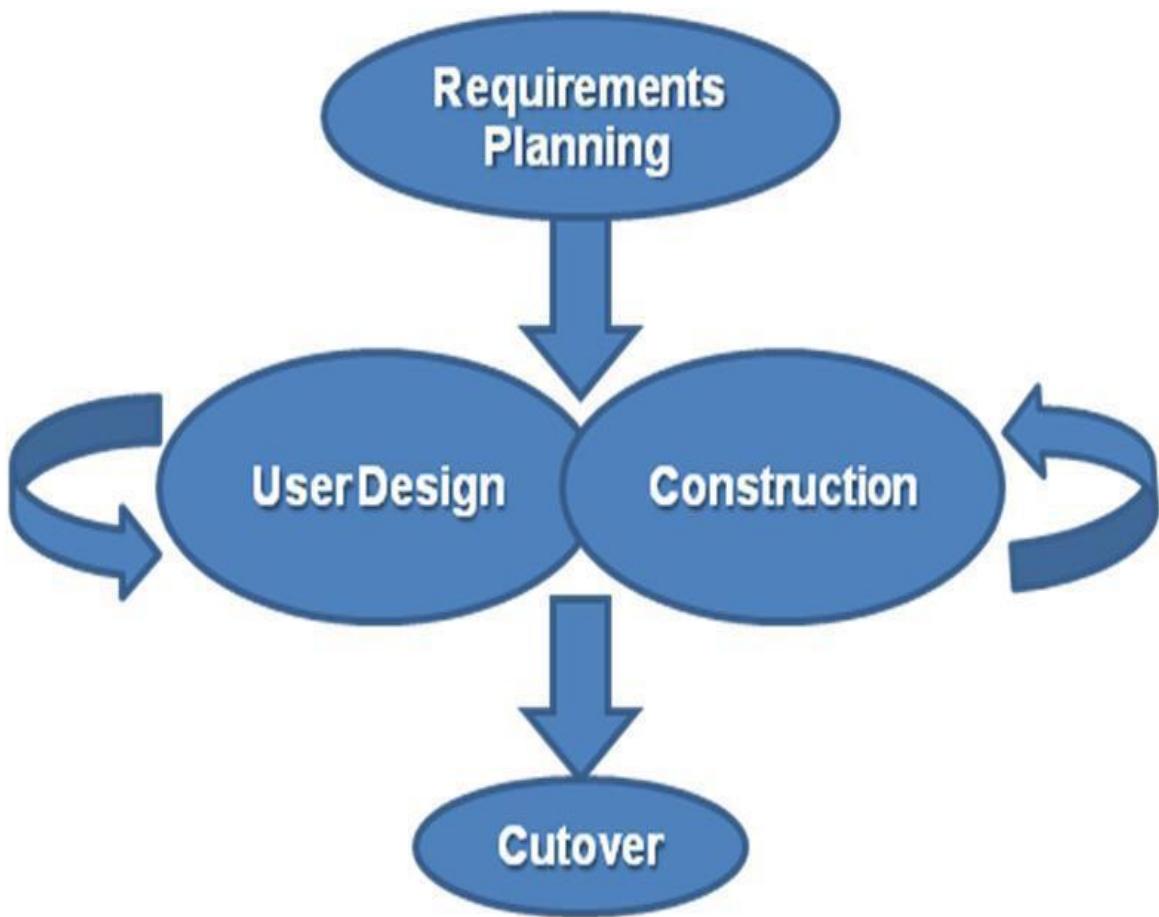
Star network has the ability to limit the impact of a single failure. In star networks, a single unit is isolated by its relationship to the central hub, so that if a component goes down, it only affects that unit's local reach. Also it facilitates adding or removing individual components to and from a network, for the same reasons. With this the

developers choose to use and implement star topology in the system. Furthermore, the developers use the star topology for expansion of Network to be possible and easy. Where the developers can centralize the management of the network, through the use of the central computer, hub, or switch; also the developers can be easily adding another computer to the network. In addition, the developers use star topology for easy detection of error and system corrections. Where each segment is provided with dedicated point-to-point wiring to the central hub and if one computer on the network fails, the rest of the network continues to function normally.

## **2.6 SDLC**

Also, referred as the application development life-cycle a term used in systems engineering, information systems, and software engineering to describe a process for planning, creating, testing, and deploying an information system. The systems development life-cycle concept applies to a range of hardware and software configurations, as a system can be composed of hardware only, software only, or a combination of both. There are different types of Systems Development Life Cycle (SDLC) one example of this, is RAD or Rapid Application Development that the developers use for the developers developed system.

- **Rapid Application Development (RAD)**



*Figure 2-5: Rapid Application Development (RAD)*

It is a software development methodology that uses minimal planning in favor of rapid prototyping. A prototype is a working model that is functionally equivalent to a component of the product. In RAD model the functional modules are developed in parallel as prototypes and are integrated to make the complete product for faster product delivery.

The developers used the Rapid Application Development (RAD) due to the limited time in developing a system and because of an existing process and used

it as a prototype to develop a Computer-Aided Instruction System. Furthermore, in RAD model, the components or functions are developed in parallel as if they were mini projects. These developments are time boxed, delivered and then assembled into a working prototype. This can quickly give the customer something to see, to use and to provide faster feedback regarding the quizzes, seatwork, and activities of the students. In addition, RAD model can reduce the development time and increase the reusability and has a quick initial reviews occurring in the system. The fast development of the system will encourage the client to give feedback for further development of the system.

- **Requirements Planning Phase**

It combines elements of the system planning and systems analysis phases of the Systems Development Life Cycle (SDLC). Users, managers, and IT staff members discuss and agree on business needs, project scope, constraints, and system requirements. It ends when the team agrees on the key issues and obtains management authorization to continue.

At this phase the developers conduct a brainstorming with the other members of the group to identify what system should be developed, know the risk of the said system, and coordinate all activities for successful project deployment. In addition, the developers' data are gathered by conducting an interview with a potential client. In this phase the developer held research for further information and knowledge.

- **User Design Phase**

During this phase, users interact with systems analysts and develop models and prototypes that represent all system processes, inputs, and outputs. The RAD groups or subgroups typically use a combination of Joint Application Development (JAD) techniques and CASE tools to translate user needs into working models. User Design is a continuous interactive process that allows users to understand, modify, and eventually approve a working model of the system that meets their needs.

The developers design and develop a system from an existing system that is functionally equivalent to a component of the product requested by the client. It is where the proponents identify the overall direction the project will take through the creation of strategies documents. In addition, the developers also conducted research and consulted different people with knowledge about the developers' project. In this phase, the developers use the existing theme, features and system or process that already exist in the client's system.

- **Construction phase**

This phase focuses on program and application development task similar to the SDLC. In RAD, however, users continue to participate and can still suggest changes or improvements as actual screens or reports are being developed. Its tasks are programming and application development, coding, unit-integration and system testing.

In here, the developers code a process, assign functions of the system, find existing errors for further development, document and implement it to operate.

In addition, in this phase the developers conduct different ways that are suitable for the system's user.

- **Cutover phase**

It resembles the final tasks in the SDLC implementation phase, including data conversion, testing, changeover to the new system, and user training.

Compared with traditional methods, the entire process is compressed. As a result, the new system is built, delivered, and placed in operation much sooner.

In this said phase, the developers test the finished system to check errors and problem that may occur and if the functions are running properly, and eventually implement and end it with formal test. In addition, this said testing is conducted multiple times by different people for the assurance of the function. The process, should meet the client's requirement.

## **2.7 Summary**

Technology is not a panacea or a magic bullet that suddenly transforms all learning. The effectiveness of educational technology depends on how it is employed to meet educational goals for particular kinds of students in specific language learning environments. Computer-Aided Instruction (CAI) offers numerous advantages for education and training when properly designed and implemented. Recent computer

developments in hardware and software enhance the effectiveness and reduce the cost of CAI.

The developers review recent developments, using CAI programs designed and developed by other developers and existing system. In addition, CAI can now be widely adopted for training and education supplements in different fields. Furthermore, in this chapter the developers discussed the system used to develop the Computer-Aided Instruction system and designed using Photoshop and WAMP SERVER for the database. In addition, the developers also discussed the programming language that is used in the developers' system which is java language and the specification and definition of the said applications and show the relationship and flow of the system by designing or showing its ERR Diagram.

## **Chapter 3 COMPUTER-AIDED INSTRUCTION**

### **3.1 INTRODUCTION**

This chapter concludes with the problems that are cited in the “Statement of the Problems” in which San Ramon Elementary School uses a provided instructional aid from the DepEd and some self-downloaded educational videos, presentation and self-provided instructional material and cut-outs to get the attention of the pupils to at least listen and participate in the class. Also, the client used a traditional or spoon-feeding instruction method in teaching which is one of the factors or reason why most of the pupils are not interested with the English subject.

With the developers Computerized-Aided Instruction System that are developed and enhanced based in the client’s request, there is an easiest accurate record and calculation of quizzes; seatwork and activities at the same time generate essential reports and information that can easily be viewed by the client. Furthermore, the enhanced and developed system will secure the data and information of San Ramon Elementary School by providing a user authentication module. It will reduce the traditional way of teaching and time consuming work of checking the activities of the students.

## **3.2 System Design Specification**

### **3.2.1 Hardware and Software Components**

The developers use the following hardware and software components that are necessary during the development of the system

#### **3.2.1.1 Hardware Components**

No	HARDWARE COMPONENTS	MINIMUM SPECIFICATION
1	Processor	At least Dual Core Processor or higher
2	Speed	At least 1GHz or higher
3	Screen Resolution	1024 x 768
4	Random Access Memory (RAM)	At least 2GB RAM or higher
5	Secondary Storage (Hard Drive)	At least 100 GB free space
6	Video Card (Optional)	At least 1 GB

*Table 3-1: Hardware Components*

#### **3.2.1.2 Software Components**

The developers categorize the needed software components into three (3) namely: a. for development, b. for documentation and c. for testing.

**a. For development**

• **Windows 8**

The basic version of Windows 8, suitable for most users, works with touch screen devices as well as with traditional keyboard-and-mouse systems. A version called Windows RT supports the ARM processor architecture. Windows 8 Pro aimed to business and technical professionals who desire encryption, virtualization, PC management and domain connectivity. Its screen is tiled-based, although users can bring up a “Start screen” by touching or clicking the lower-left corner of the display. It also offers an updated Windows Explorer, an updated Task Manager, and picture password capability. The Windows 8 that the developers use is a Microsoft operating system that was released in 2012 as part of the company's Windows NT OS family. It also offers an updated Windows Explorer, an updated Task Manager, and picture password capability. Furthermore, Windows 8 represents a major departure from previous versions of Windows because it is based on the Metro design language which is used in the developers' system designs.

• **NetBeans**

NetBeans is an open-source integrated development environment (IDE) for developing with Java, PHP, C++, and other

programming languages. It is also referred to as a platform of modular components used for developing Java desktop applications. It is coded in Java and runs on most operating systems with a Java Virtual Machine (JVM), including Solaris, Mac OS, and Linux. NetBeans manages the following platform features and components: User settings, Windows (placement, appearance, etc.), NetBeans Visual Library, Storage, Integrated development tools, Framework wizard.

NetBeans uses components, also known as modules, to enable software development. NetBeans dynamically installs modules and allows users to download updated features and digitally authenticated upgrades. NetBeans IDE modules include NetBeans Profiler, a Graphical User Interface (GUI) design tool, and NetBeans JavaScript Editor. Its framework reusability simplifies Java Swing desktop application development, which provides platform extension capabilities to third-party developers.

- **WampServer**

WAMP is a mini web server that runs on almost any Windows operating system. WAMP has Apache, PHP (SMTP ports are disabled), and MySQL (phpMyAdmin and SQLiteManager are installed to manage the user's databases) pre-installed.

The developers use WAMP Server due to its widely used and relied upon for local development or as a ready-to-deploy server.

The ease of installation, configuration and management of WAMP has played a vital role in its worldwide popularity. WAMP is available for both, 32-bit and 64-bit operating system. There are add-ons available which can easily be plugged into WAMP. These add-ons are for Apache, PHP, and MySQL. Also WampServer is suitable to use for the developers computerized sales and inventory system.

- **Adobe Photoshop**

An image editing software developed and manufactured by Adobe Systems Inc. Photoshop is considered one of the leaders in photo editing software. Allows users to manipulate, crop, resize, and correct color on digital photos. It can edit and compose raster images in multiple layers and supports masks, alpha compositing and several color models including RGB, CMYK, CIELAB, spot color and duotone. Photoshop has vast support for graphic file formats but also uses its own PSD and PSB file formats which support all the aforementioned features.

The developers use the Adobe Photoshop to design the content of the system such as the presentation, video, the activity modules. Where the developer can edit and compose raster images in multiple layers and supports masks, alpha compositing and several color models including spot color, duotone etc. Mostly, in the

Student module aiming to caught the pupils' attention and interest while taking the pupils activity task.

**b. For documentation**

**• Microsoft Office Word**

Microsoft Word is word processing software that allows users to create and edit text documents. Users can start with blank documents or work from pre-configured templates for projects with frequently used formats. Microsoft Word let users format various aspects of a document, ranging from text alignment to custom table layouts. Beyond basic data entry, the program enables users to insert and format images and shapes or view and edit PDF files. To simply use the program as a document viewer, individuals can access documents in Read mode to avoid accidental changes. The software is valuable for businesses because it allows remote collaboration on documents projects, making it easy to share file updates. The developers use the Microsoft word to document all events and happenings in the past months while developing the developers Computerized Sale and Inventory System.

**• Microsoft Office PowerPoint**

PowerPoint uses a graphical approach to presentations in the form of slide shows that accompany the oral delivery of the topic.

Anyone can create stunning presentations as if they were designed by a professional. PowerPoint presentations can be made into photo albums, complete with music or narrations, to distribute on CDs or DVDs. If you are in the sales field, it involves just a few simple clicks to add an illustrative chart of data or an organizational chart of your company's structure. Presentation can be made into a web page for emailing purposes or as a promotion displayed on your company's website.

The developers use the PowerPoint to present and customize presentations with the client's logo and to dazzle the audience or panels by using one of the many design templates that come with the programs. Many free add-ins and templates are available online from Microsoft and a host of other websites.

In addition to an on screen slide show, PowerPoint has printing options that allow the presenter to provide handouts and outlines for the audience as well as notes pages for the speaker to refer during the presentation.

**c. For testing**

**• WampServer**

WAMP is a mini web server that runs on almost any Windows operating system. WAMP has Apache, PHP (SMTP ports are

disabled), and MySQL (phpMyAdmin and SQLitemanager are installed to manage the user's databases) pre-installed.

The developers use WAMP Server due to its ready-to-deploy server. Furthermore, the installation, configuration and management of WAMP have played a vital role in its worldwide popularity. Also WampServer is suitable to use for the developers computerized sales and inventory system.

- **NetBeans**

It is a software development platform written in Java. The NetBeans Platform allows applications to be developed from a set of modular software components called modules. Applications based on the NetBeans Platform, including the NetBeans integrated development environment (IDE), can be extended by third party developers. The NetBeans IDE is primarily intended for development in Java, but also supports other languages, in particular PHP, C/C++ and HTML5.

Its cross-platform and runs on Microsoft Windows, Mac OS X, Linux, Solaris and other platforms supporting a compatible JVM. The NetBeans Team actively supports the product and seeks feature suggestions from the wider community. Every release is preceded by a time for Community testing and feedback

### 3.2.2 Architectural Design

The developers used the following design to shows the overall structure of the system being developed.

#### 3.2.2.1 Hierarchical Input-Process-Output (HIPO)

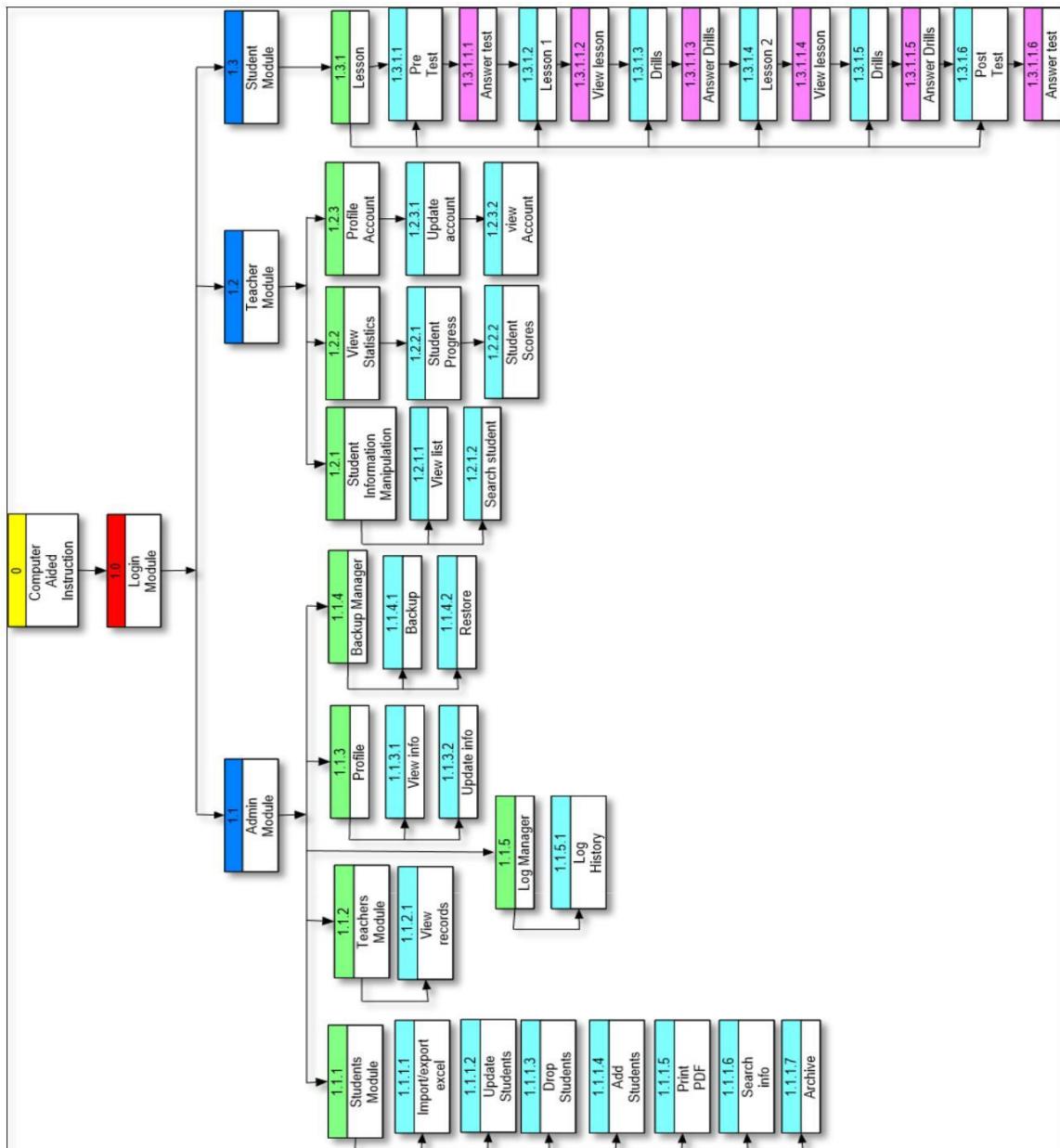


Figure 3-1: Hierarchical Input-Process-Output (HIPO)

**Login Authentication.** The login module is composed of 3 types of user: The admin, teacher and the student. The admin must log into login module to access the administrator module, the teacher must also log into teacher's module to view the student progress, and also the pupils must log into student module to answer the test and drills.

**Admin Module.** The admin can manage the pupil's information module by adding, updating and deleting information, the student module can import and export excel file for the account of each pupil. The admin can also print the file in PDF/hard copy. The admin can search the pupil's information and the archive where the admin can view the active and inactive students in school.

**Teacher Module.** The teacher can only view the list of the student and the progress of pupils from the pre-test and post-test.

**Student Module.** The developers provided this module with a set of lessons and drills. First the pupils will take the pretest examination to measure the level of pupil's knowledge in English subject. Then, the pupil will proceed to the first lesson set to enhance the pupil's level of knowledge in this subject. After that, the system gives the pupils some drills. This drills serves as a review of the previous lesson to remind the pupils of what lesson is being discussed. Finally, the posttest examination, where the pupils will be taken a test similar to the pretest exercises to monitor the progress of these pupils.

### 3.2.2.2 CONTEXT DIAGRAM

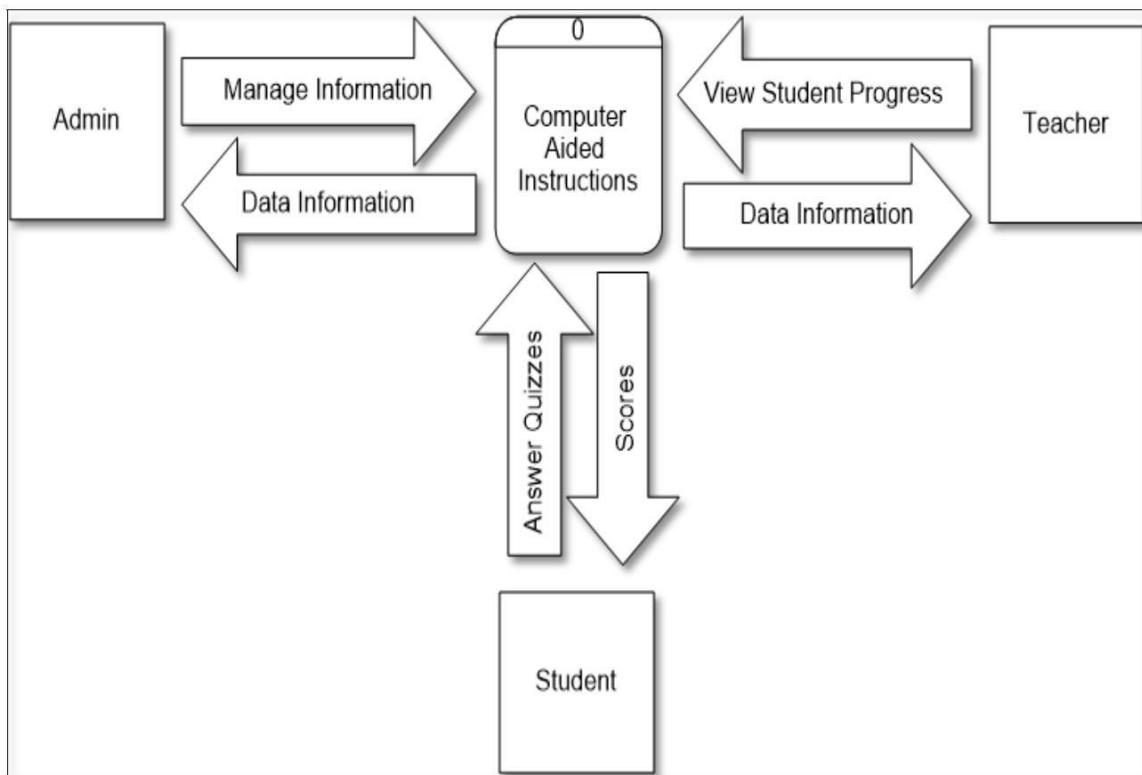


Figure 3-2: Context Diagram

The context diagram shows the flow of Computer Aided Instructions in English subject to the admin, teacher and student where the admin can manage information of the teacher, student, log in history, back-up and restore and profile accounts. The teacher can only view the student progress of pre-test and post-test and the student will answer the set test, lesson and drills.

### 3.2.2.3 FLOWCHART (Admin Module)

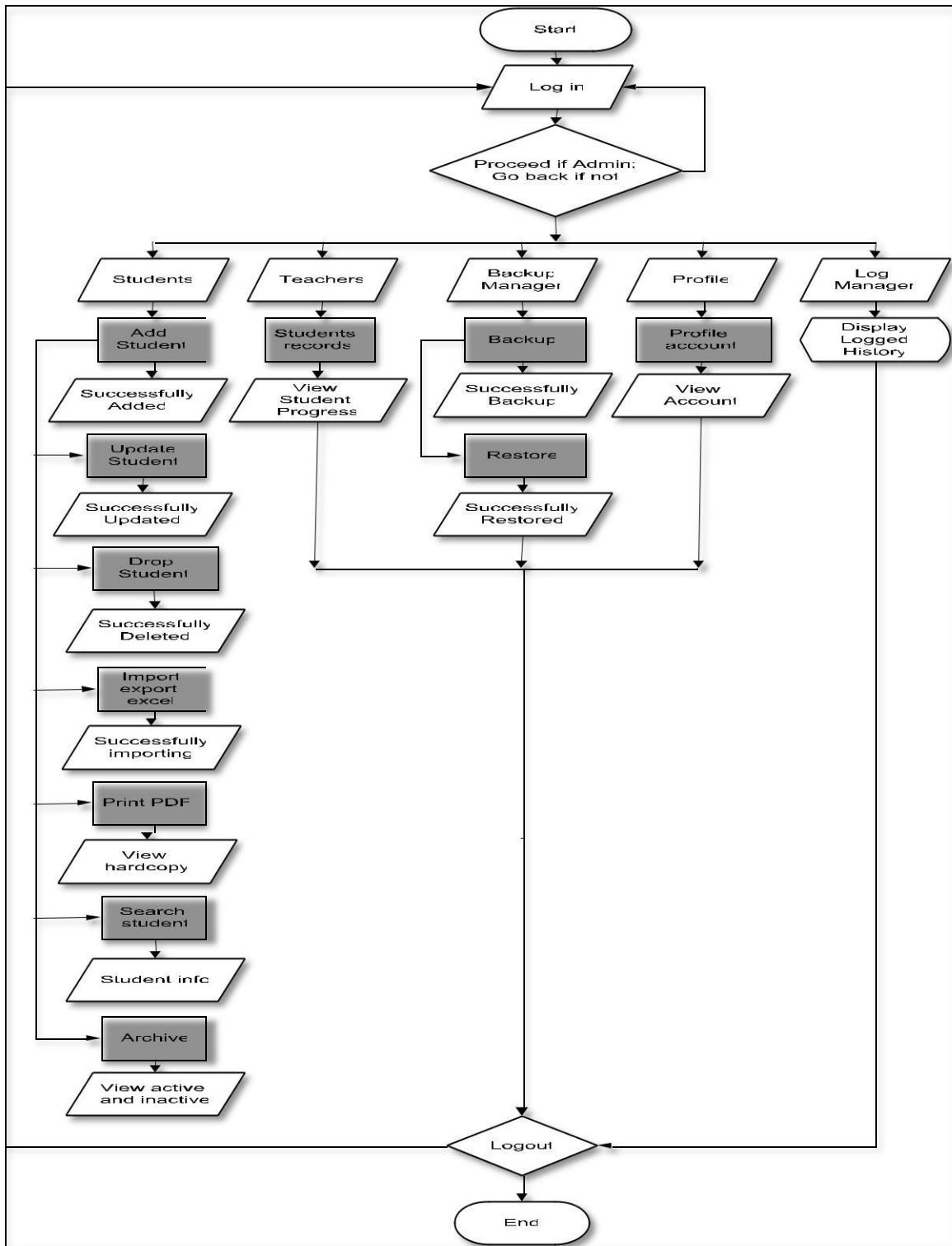
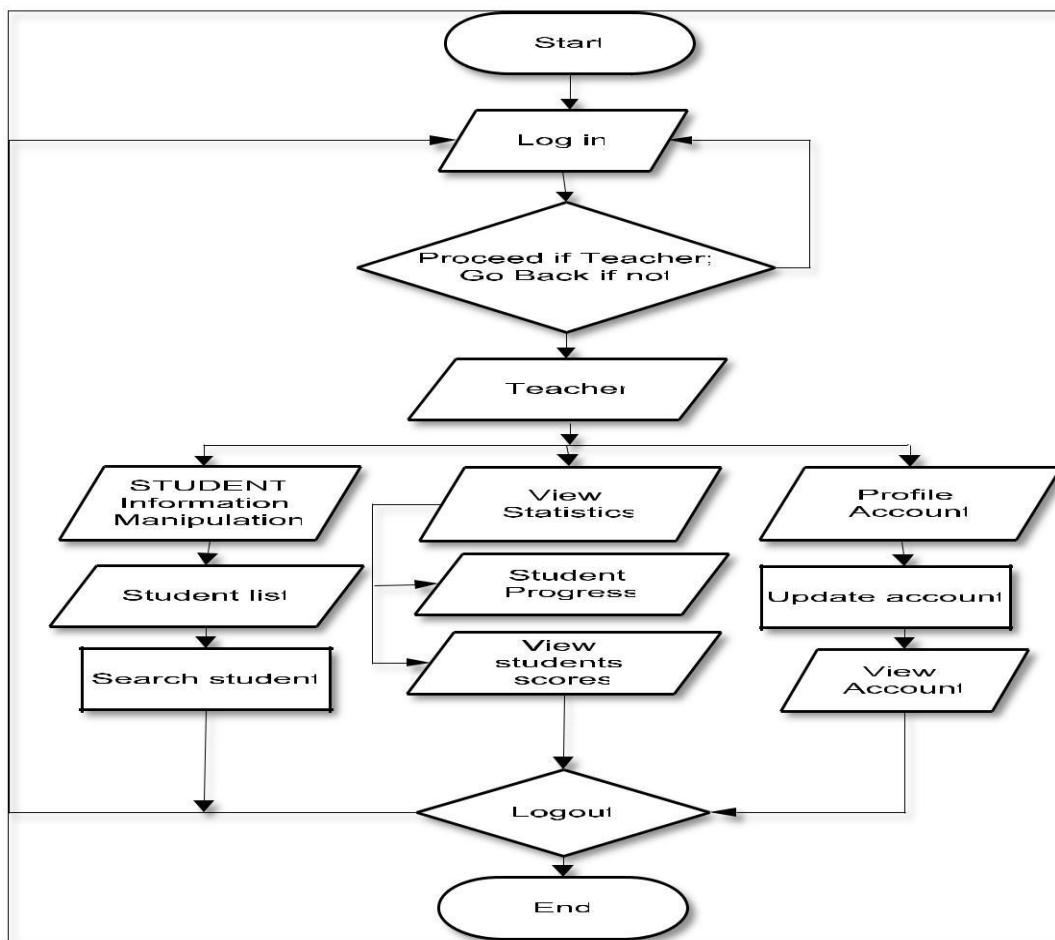


Figure 3-3: Flowchart (Admin Module)

The admin can manage nine (5) modules. The student module is where the admin can import and export file through excel, can add, update and delete student information, it can also print the files in PDF form. The admin can also search the students' information. The archive is where the admin can view the active and inactive students. The admin can also view the logged history of the user in log manager. The back-up and restore module is where the admin can back-up and restore the database. And the user account module where the admin can add, update and delete username and password.

#### **3.2.2.4 FLOWCHART (Teacher's Module)**



*Figure 3-4: Flowchart (Teacher's Module)*

In the above flowchart, the teacher can view the list of students and search the students' information. It can view the progress of the students from the pre-test and post-test and the scores will also display.

### 3.2.2.5 FLOWCHART (Students Module)

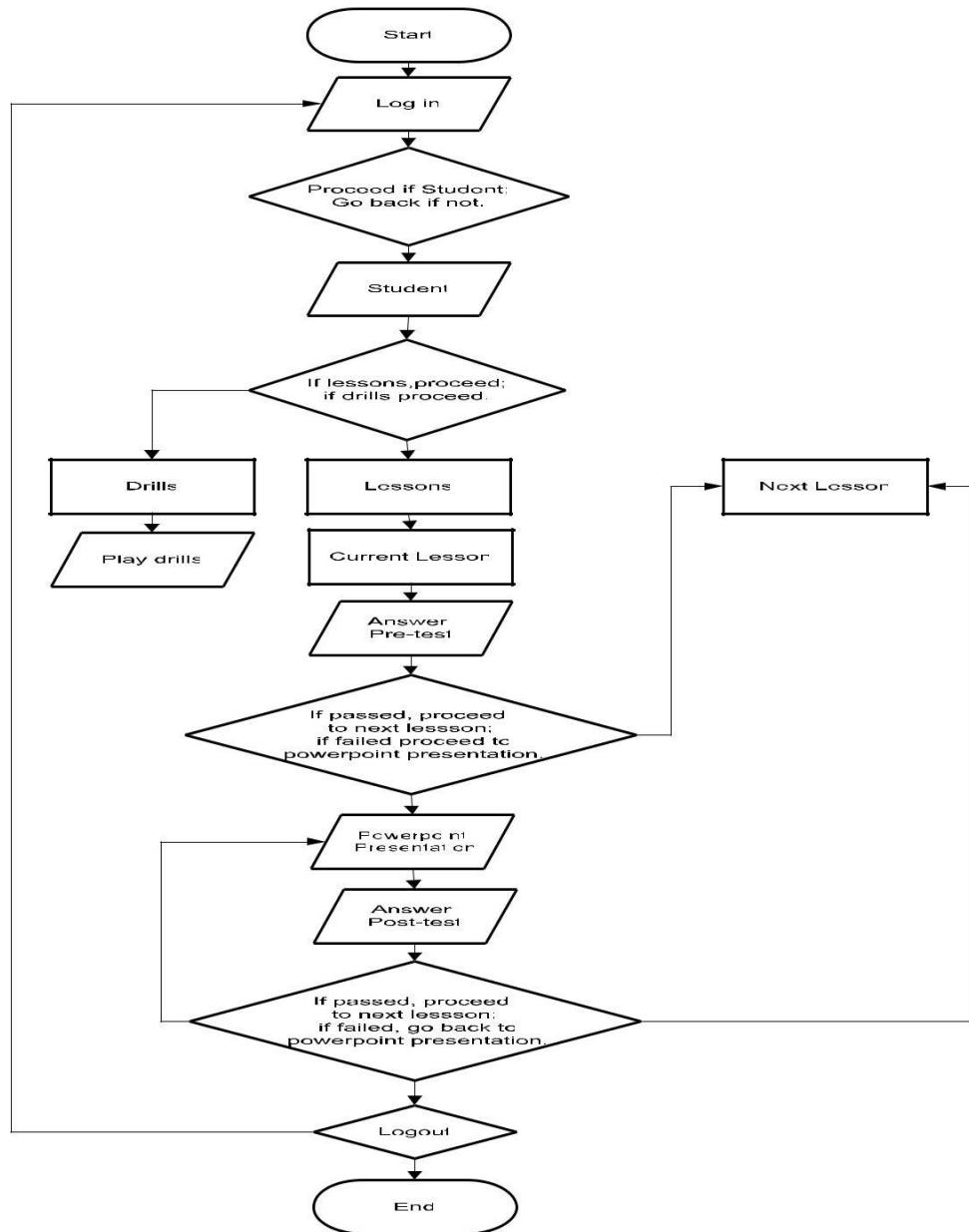


Figure 3-5: Flowchart (Student Module)

The student will answer the pre-test, if the student passes the pre-test, the lesson 2 will be unlocked, but if the student fails from the pre-test, the student needs to proceed to lesson presentation and answer the post-test, if the student fails the post-test, the student must go back to previous lesson presentation and continue to answer again. After passing the post-test, the lesson 2 will be unlocked.

### 3.2.2.6 Entity Relationship Diagram (ERD)

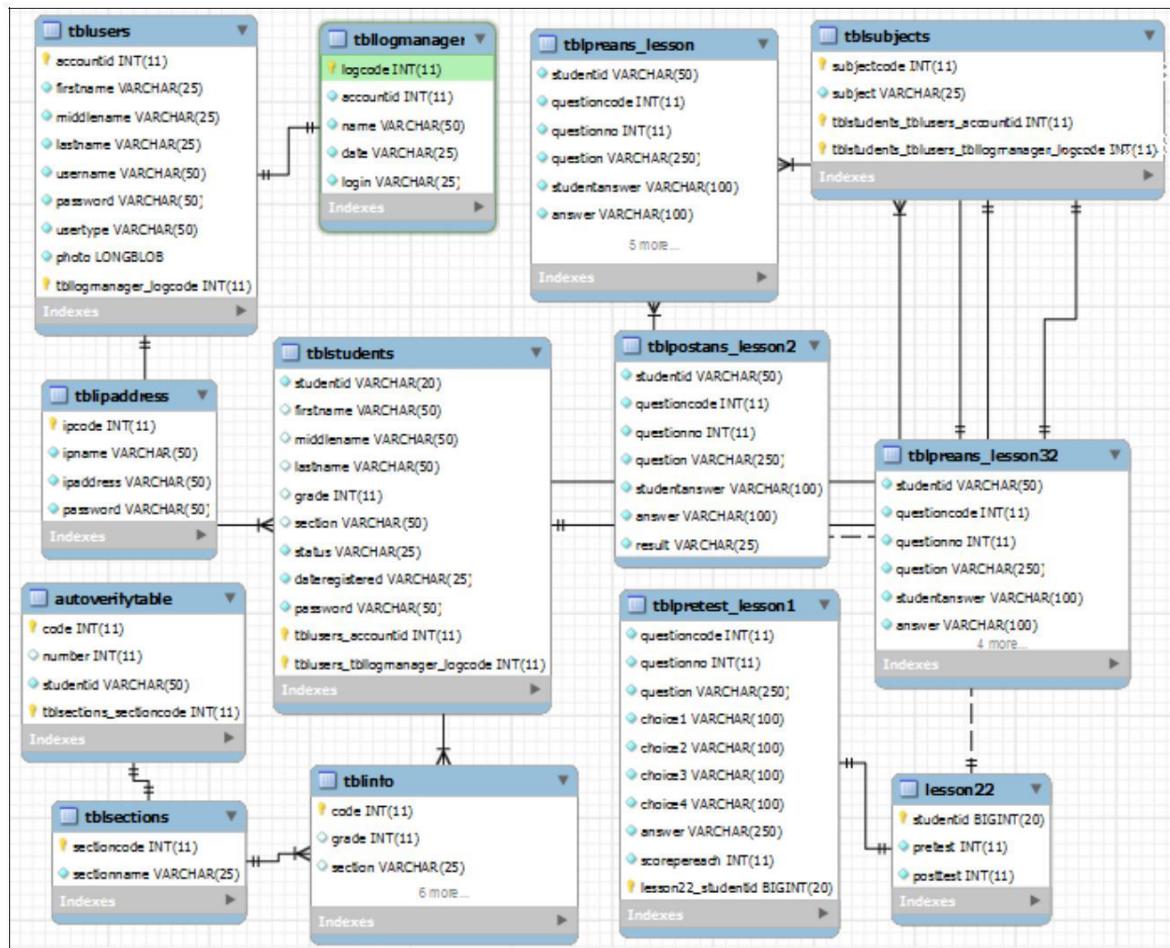


Figure 3-6: Entity Relationship Diagram (ERD)

The diagram shows the relationships of entity sets stored in database. An entity in this context is a component of data. It illustrates the logical structure of the database.

### **3.3 Summary**

In this chapter the developers showed and explained all the developers provided module needed to build and design the system, which hardware and software is best for the system to ensure that the system will work or run properly.

In addition, the developer explained the hierarchy in relation and flow of the system by using the Hierarchy Input-Process-Output (HIPO) where it shows different modules and processing the input to have a reliable output, at the same time categorized by different color to classify which is which. Flow Chart shows the flow of the input information or data to the system. Furthermore, the developers also show the relation of each user by providing an Entity Relationship Diagram (ERD).

## **Chapter 4 PERFORMANCE ANALYSIS**

### **4.1 INTRODUCTION**

In this chapter, the performance and function of the system will be tested and analyzed. The developers will undergo trial and error, and will conduct a test to know if the system will work properly. The developers' main objective is to develop an enhanced solution to the client's problem in teaching the English subject by providing a Computer-Aided Instruction.

### **4.2 Experimental**

The developers conduct a test stage to check if all functions and performance of the system are working properly according to the desired output.

#### **4.2.1 Test Plan**

<b>TEST PLAN</b>	<b>DESCRIPTION</b>
Log In	For user password authentication use
Admin Module	For the admin use in saving faculty and students data
Teacher Module	For teachers recording, and monitoring the pupil's files
Student Module	For the students recording of conducted quizzes, seatwork, and activity
Backup and Restore	For back-up and restore data in the system's database

*Table 4-1 Test Plan*

#### 4.2.2 Test Case

**Computer-Aided Instruction in English Subject**, the developers conducted software testing to evaluate the function of the system and its operation for the controls and processes while in use. These are the following test:

- **Test Name: Login Authentication**



Figure 4-1 Log-In Authentication

- **Procedure/s:**

- The user input a valid user and password
- The user input an invalid user and password
- The user input a three time attempt login authentication

- **Expected Result/s:**

- Proceed to the assigned module where the user login.

- Prompt an invalid message when the user and password are incorrect.
  - Prompt invalid message when the user and password are missing.
  - Prompt a message when the user login is invalid and meet the three times (3x) attempt.
- **Actual Result/s:**

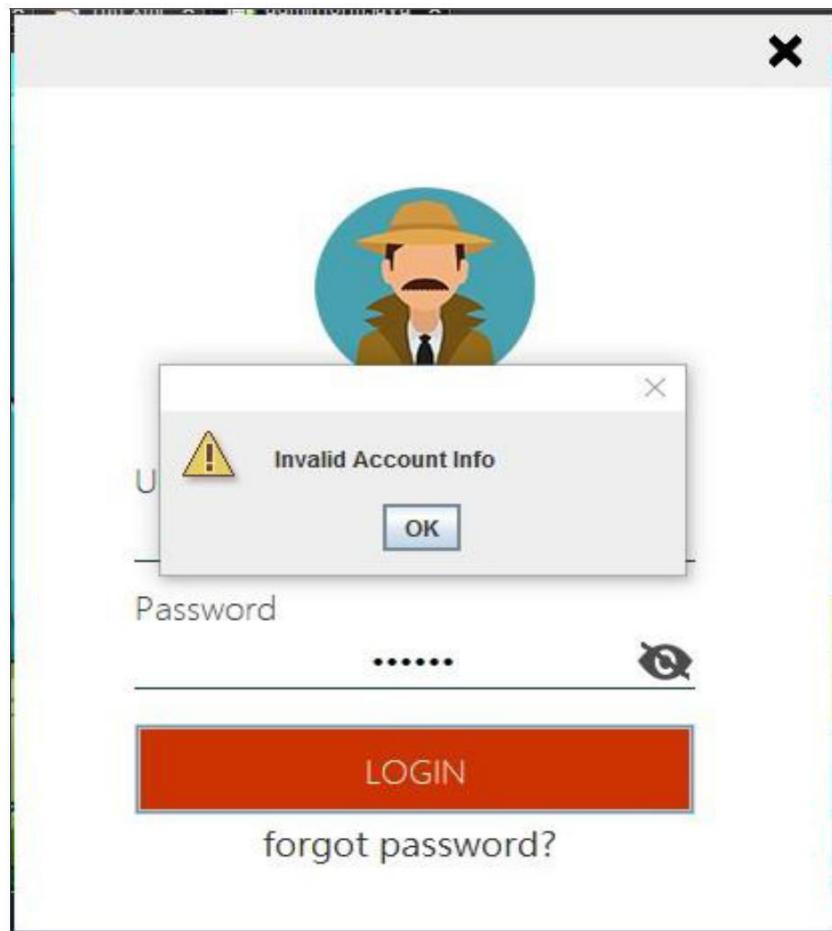


Figure 4-2 Log-In Authentication (Invalid Login Authentication)

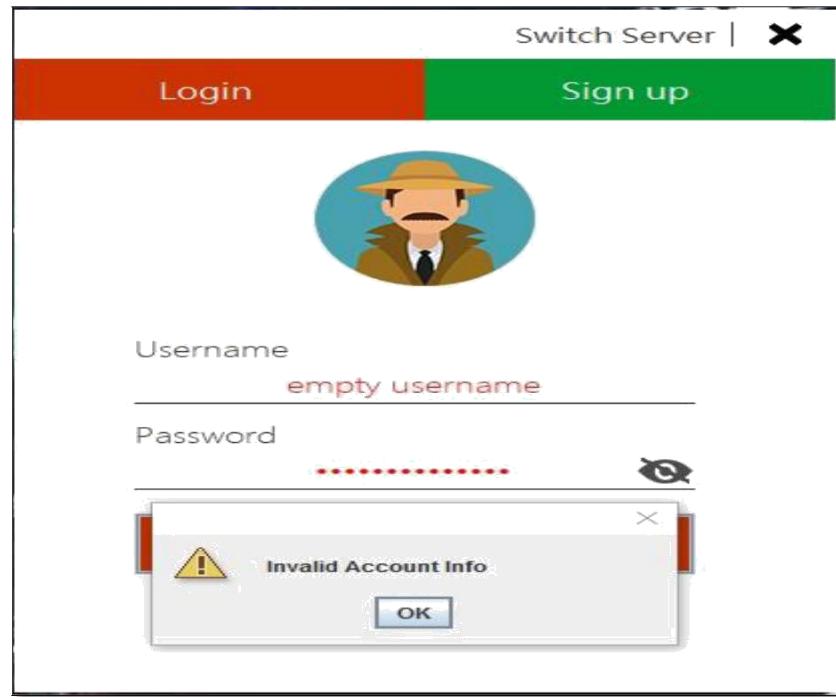


Figure 4-3 Log-In Authentication (Invalid Login Authentication (missing password or user name))



Figure 4-4 Log-In Authentication (3x failed login attempt)

- **Test Name: Admin Module**

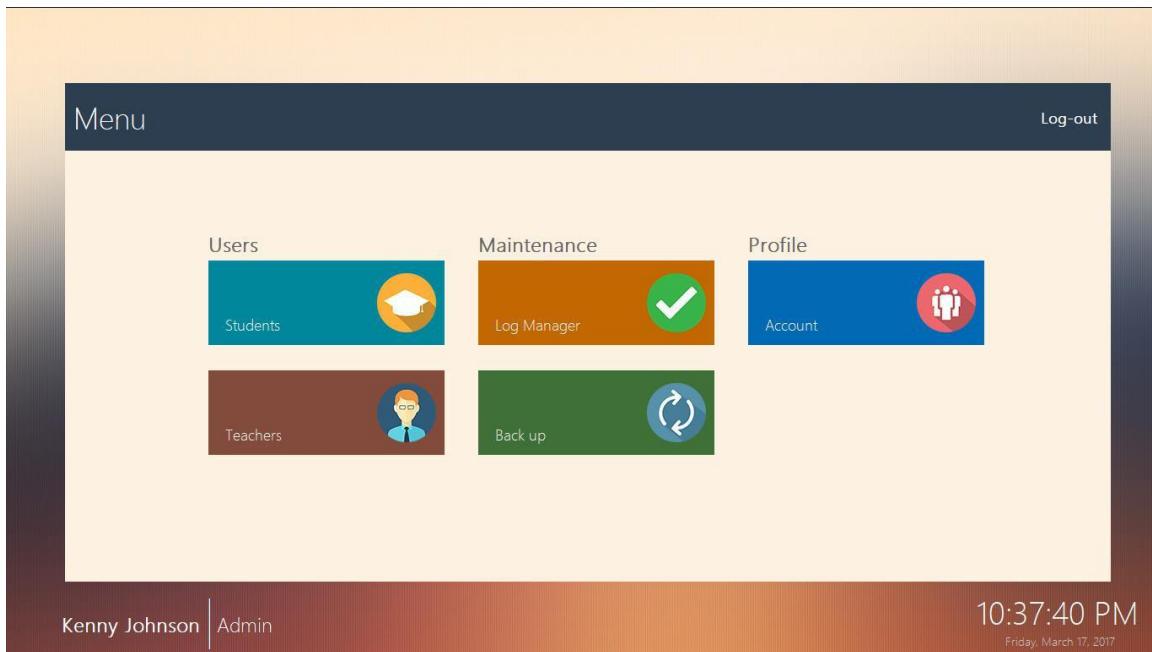


Figure 4 – 5 Admin Main menu

- **Procedure/s:**

The Admin module content seven buttons to:

- Add new data
- Delete a particular data
- Search and view a particular data
- Categorize each file saved in the database

- **Expected Result/s:**

- The admin can view, search, add and update the students and teacher's data
- The admin can categorize and sort the students, section, teachers, level, and information

- Can view information through report module and the dates when the user login or logout.

- Import files from/to other path

- Actual Result/s:**



Figure 4 – 6 Student button

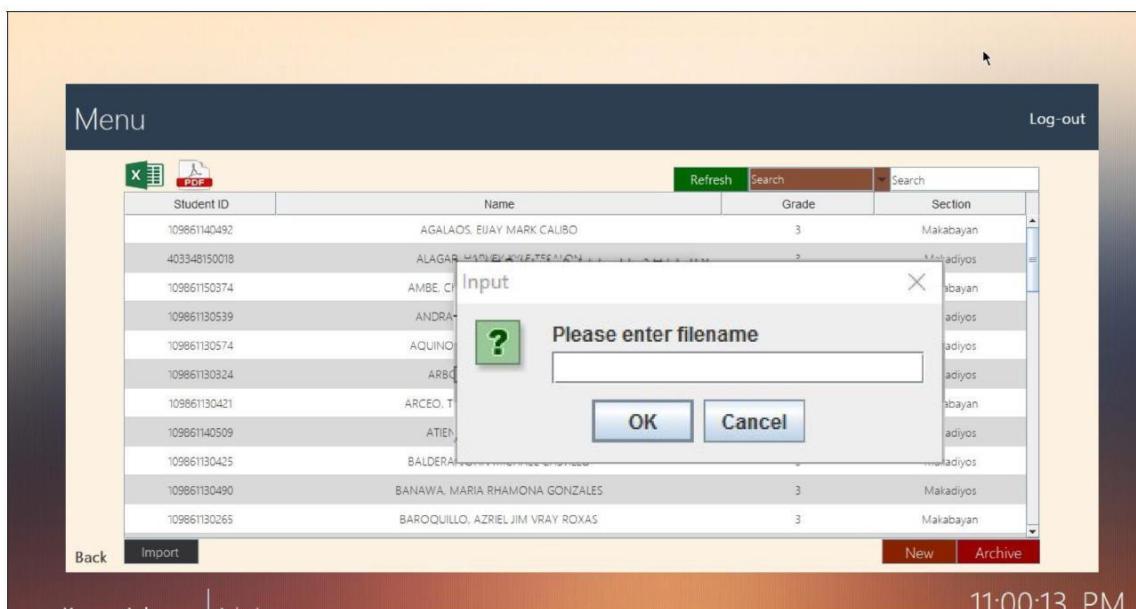


Figure 4 – 7 Excel button

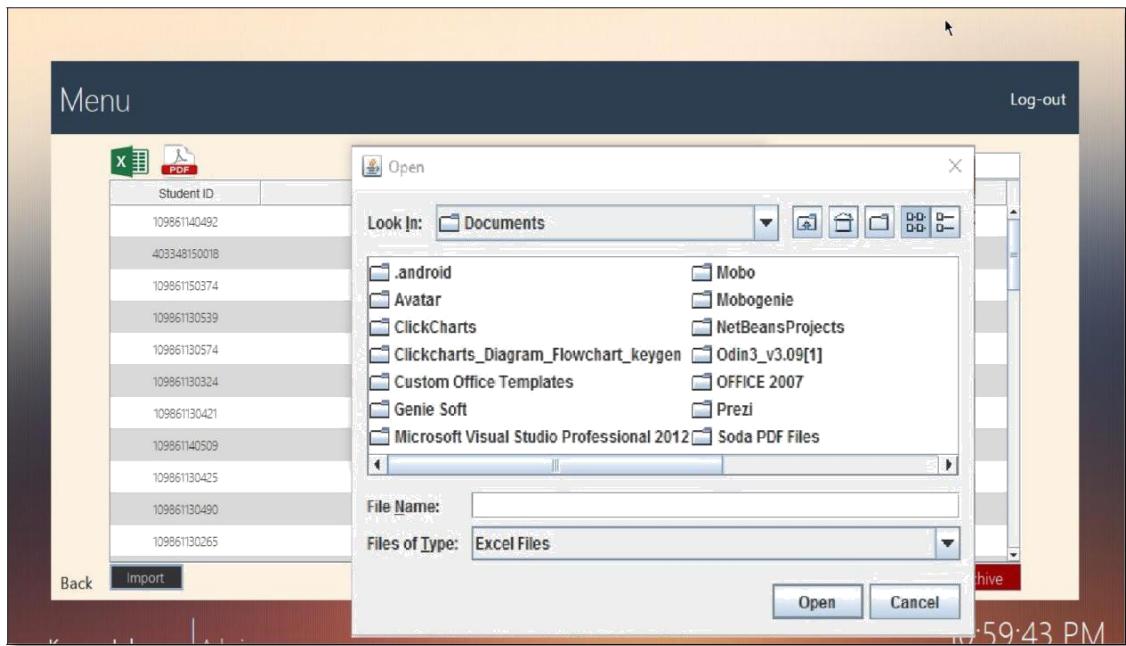


Figure 4 – 8 Import Button

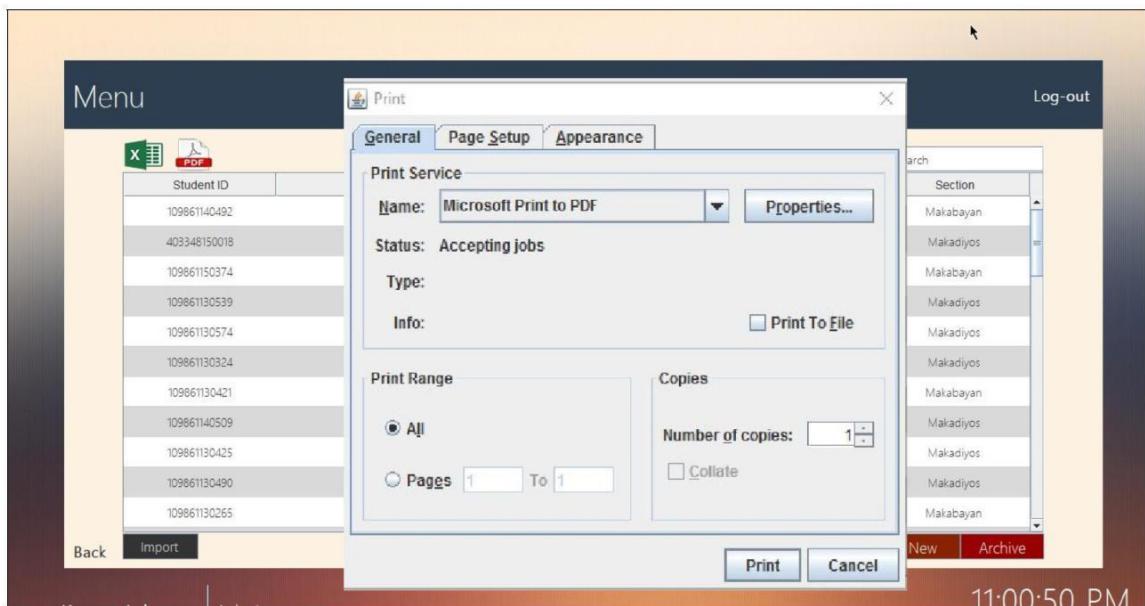


Figure 4 – 9 PDF Button

Account Log-out

**Change password**

Current Password	<input type="text" value="admin"/>
New Password	<input type="text"/>
retype password	<input type="text"/>

**Enter**

[Back](#)

Kenny Johnson | Admin      4:45:21 PM  
Monday, March 27, 2017

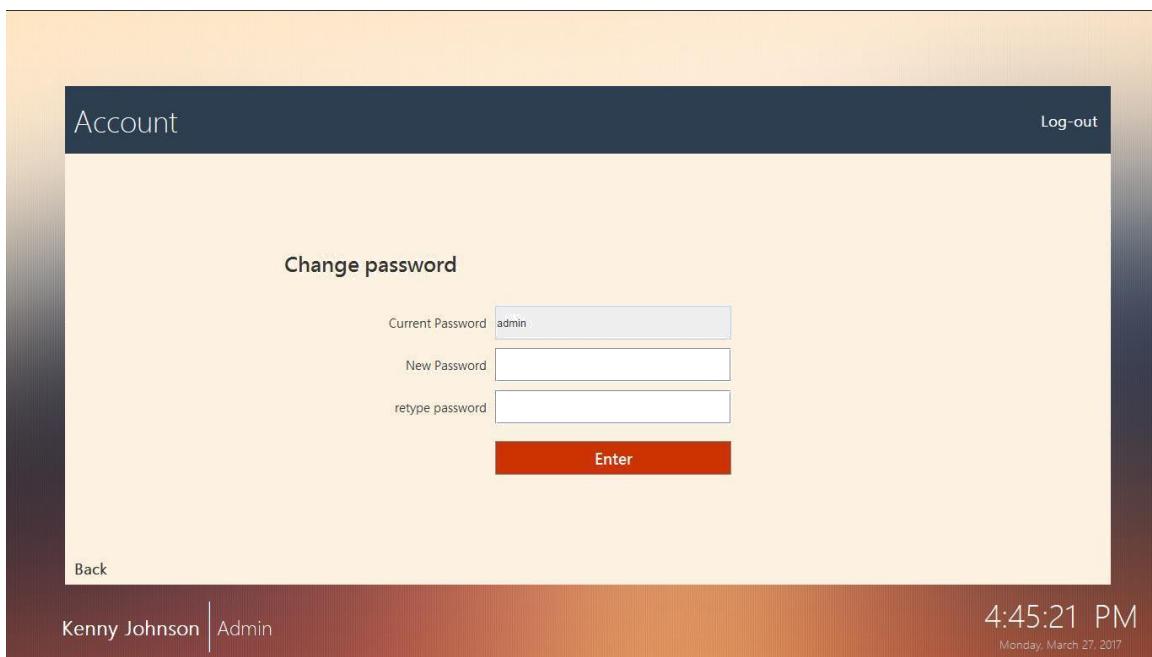


Figure 4 – 10 Account Change Password

Archive Log-out

ID#	Student Name	Grade	Sections
109861130323	ALCANTARA, JOHN KENNEDY BAJAMONDE	3	Makadiyos

[Back](#) **Retrieve**

10:58:48 PM

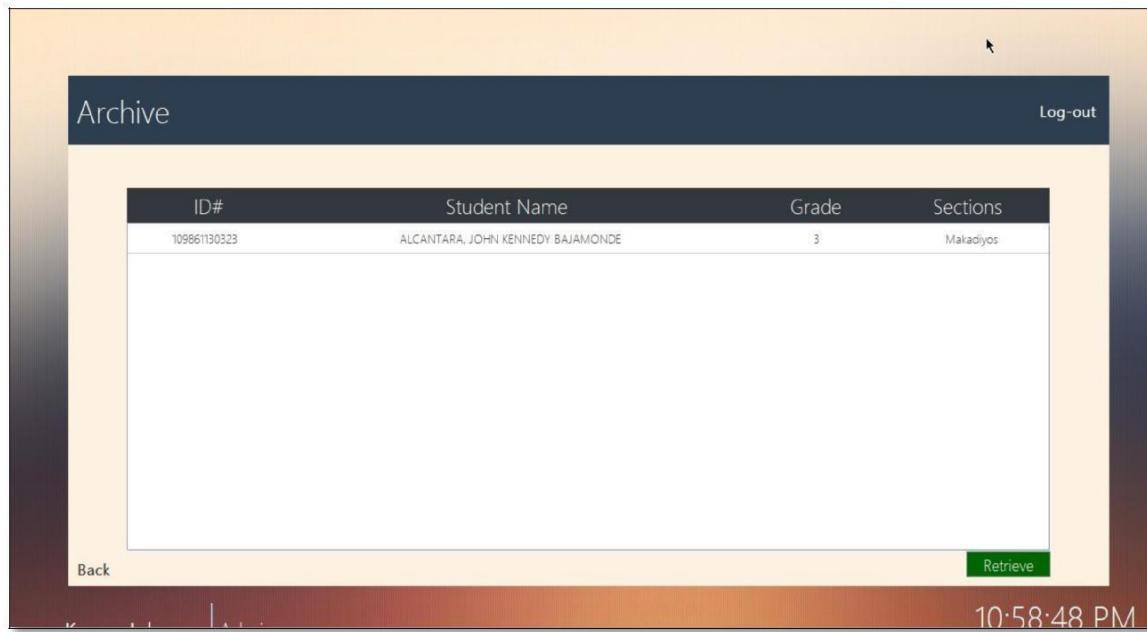


Figure 4 – 11 Archive Button

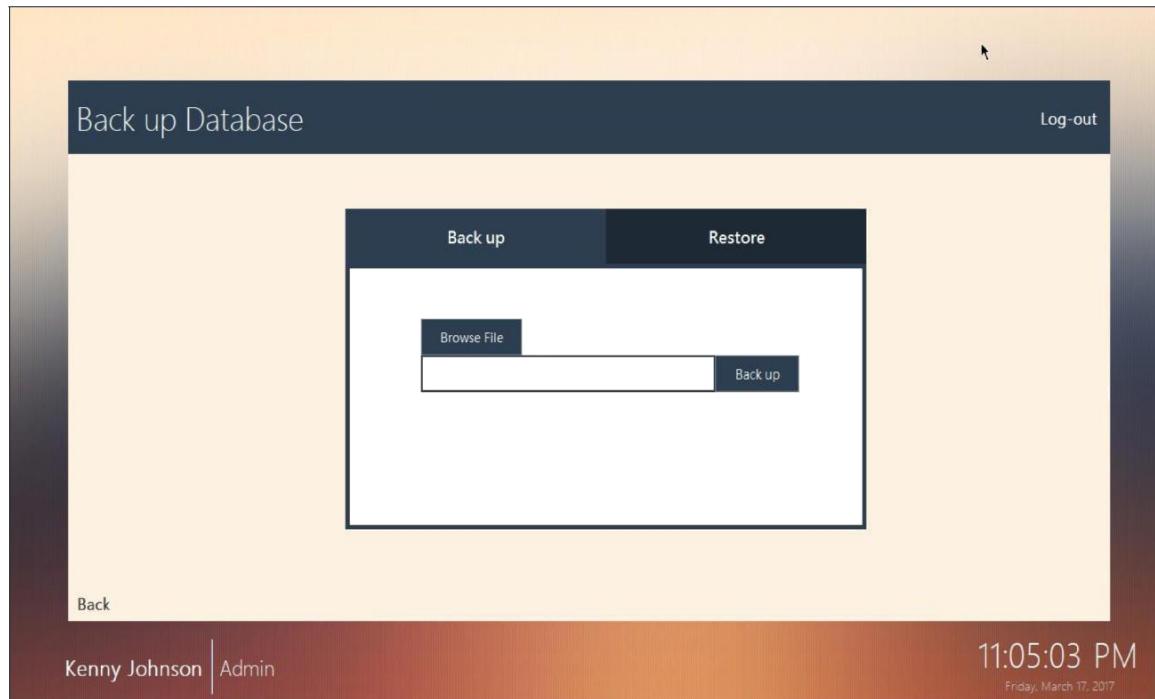


Figure 4 – 12 Backup and Restore

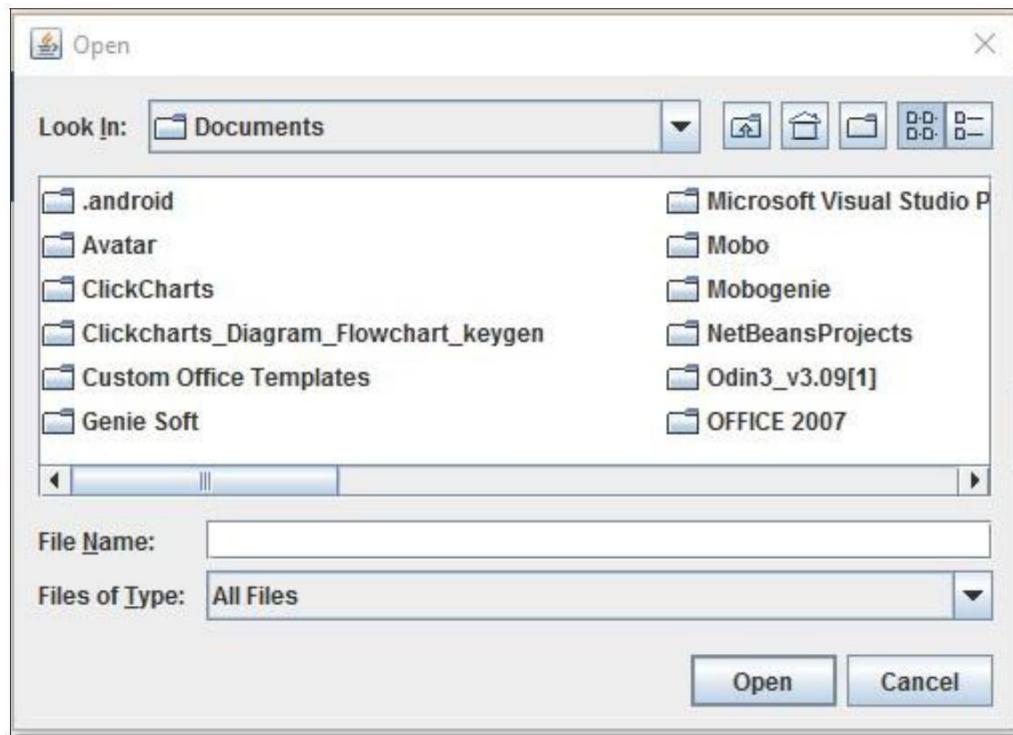


Figure 4 – 13 Browse Button (Backup and Restore)

Log-out

Log code	ID	Name	Date	Time
881	101	admin	March/17/2017	10:55:55 PM
880	101	admin	March/17/2017	10:54:09 PM
879	101	admin	March/17/2017	10:37:03 PM
878	4	ramos	March/17/2017	6:49:48 PM
877	101	admin	March/17/2017	6:37:12 PM
876	4	ramos	March/17/2017	4:16:07 PM
875	101	admin	March/17/2017	4:12:37 PM
874	101	admin	March/17/2017	4:03:45 PM
873	101	admin	March/17/2017	3:57:57 PM
872	101	admin	March/17/2017	3:53:47 PM
871	101	admin	March/17/2017	3:46:06 PM
870	101	admin	March/17/2017	3:44:55 PM

Back

Kenny Johnson | Admin

11:04:32 PM  
Friday, March 17, 2017

Figure 4 – 14 Log Manager

Log-out

Refresh

ID#	Teachers Name
3	Tureda, Sarah Jane D.
2	Catalone, Ana Fe Mercado
1	Leralia, Marime Libago
4	Ramos, Daisy G.
5	Almarvez, Mericel A.
6	Calpo, Janet D.
1234	Tiburcio, Prince Ivan Kent Marquez
45215	olivar, shiela mei emprese

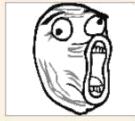
New

Back

Figure 4 – 15 Teacher Button

Teacher

Log-out



Employee ID:

Firstname:

Middlename:

Lastname:

Username:

Password:

**SAVE**

Back

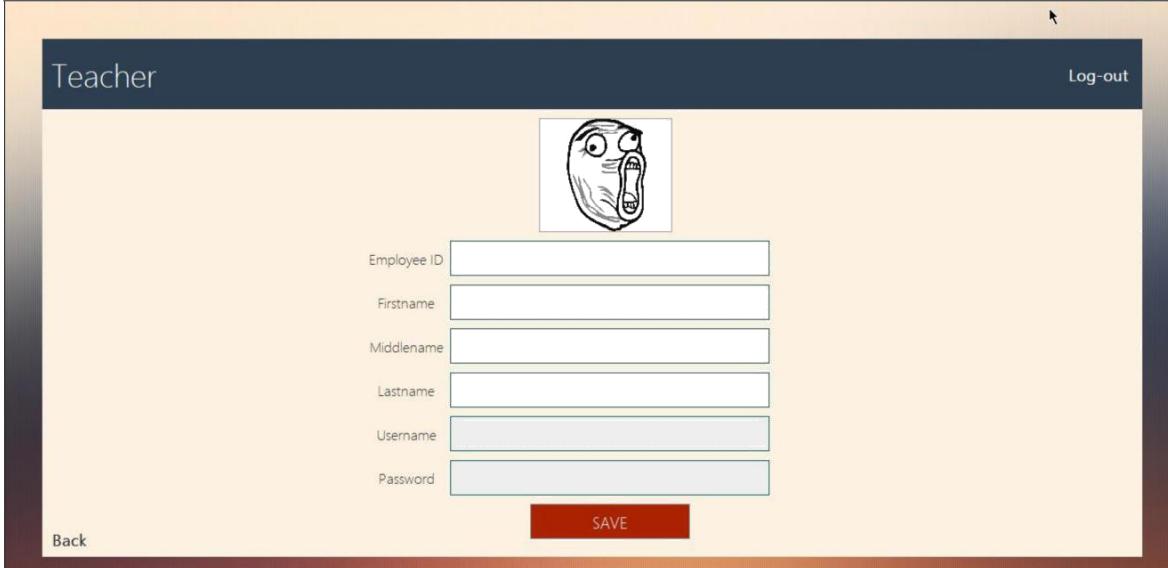


Figure 4 – 16 Add new teachers (Teachers button)

Teacher

Log-out



Teachers Information

 Saved

**OK**

Username:

Password:

**SAVE**

Back

Kenny Johnson | Admin

11:03:21 PM  
Friday, March 17, 2017

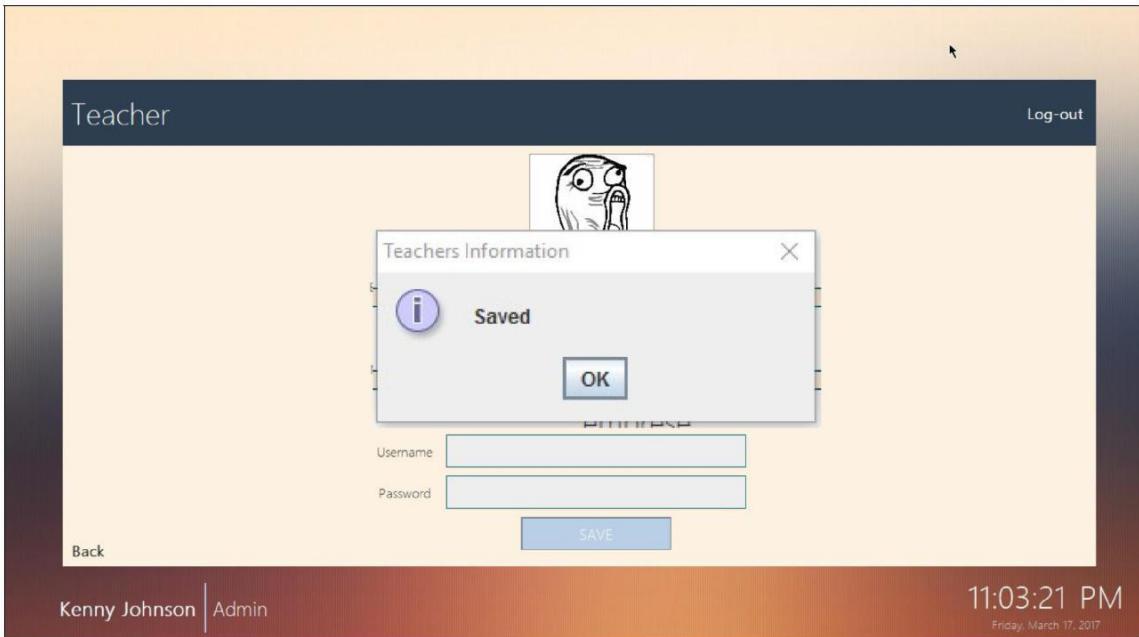


Figure 4 – 17 Saved New Teacher (Record)

Teacher		Log-out
ID#	Teachers Name	Refresh
3	Tureda, Sarah Jane D.	
2	Castalone, Ana Fe Mercado	
1	Lerala, Marime Libago	
4	Ramos, Daisy G.	
5	Almarvez, Mericel A.	
6	Calipo, Janet D.	
1234	Tiburcio, Prince Ivan Kent Marquez	
45215	olivar, shiela miei emprese	

New

Back

Kenny Johnson | Admin

11:04:03 PM  
Friday, March 17, 2017

Figure 4 – 18 Updated Teacher file

- **Test Name: Teacher Module**

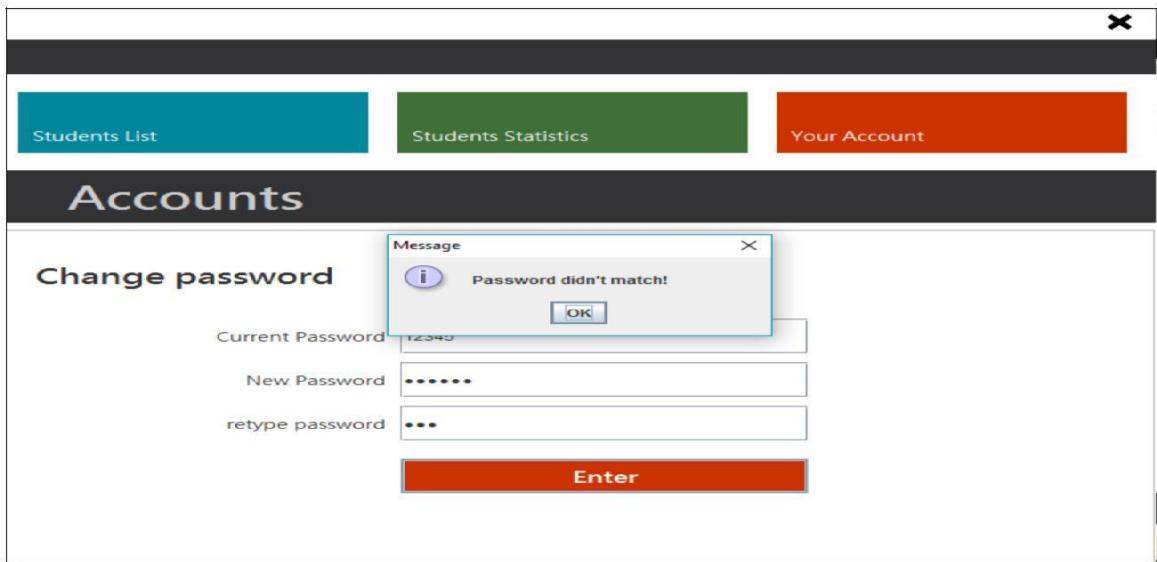
Students List	Students Statistics	Your Account		
<b>Student's List</b>				
<table border="1"> <thead> <tr> <th>ID</th><th>Name</th></tr> </thead> </table>		ID	Name	
ID	Name			

Figure 4 – 19 Teachers' Main module

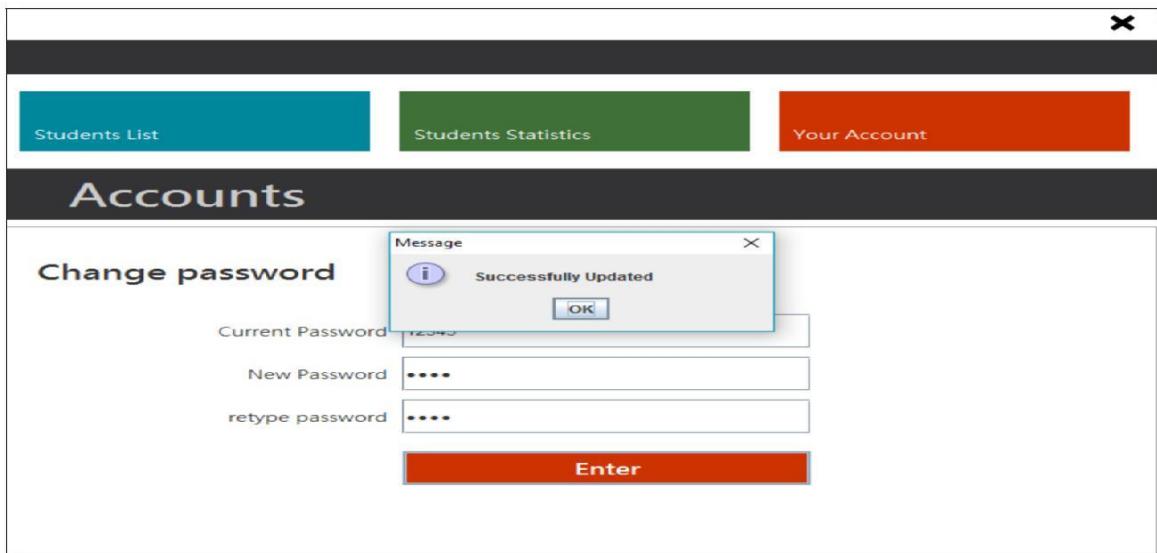
- **Procedure/s:**

- View the save score recorded and level of the pupil's progress.

- **Expected Result/s:**
  - Prompt message when a data is updated
  - The user can view a particular searched data
  - Prompt message when the password didn't match



*Figure 4 – 20 Password didn't much (Teachers Module)*



*Figure 4 – 21 Password Successfully updated (Teachers Module)*

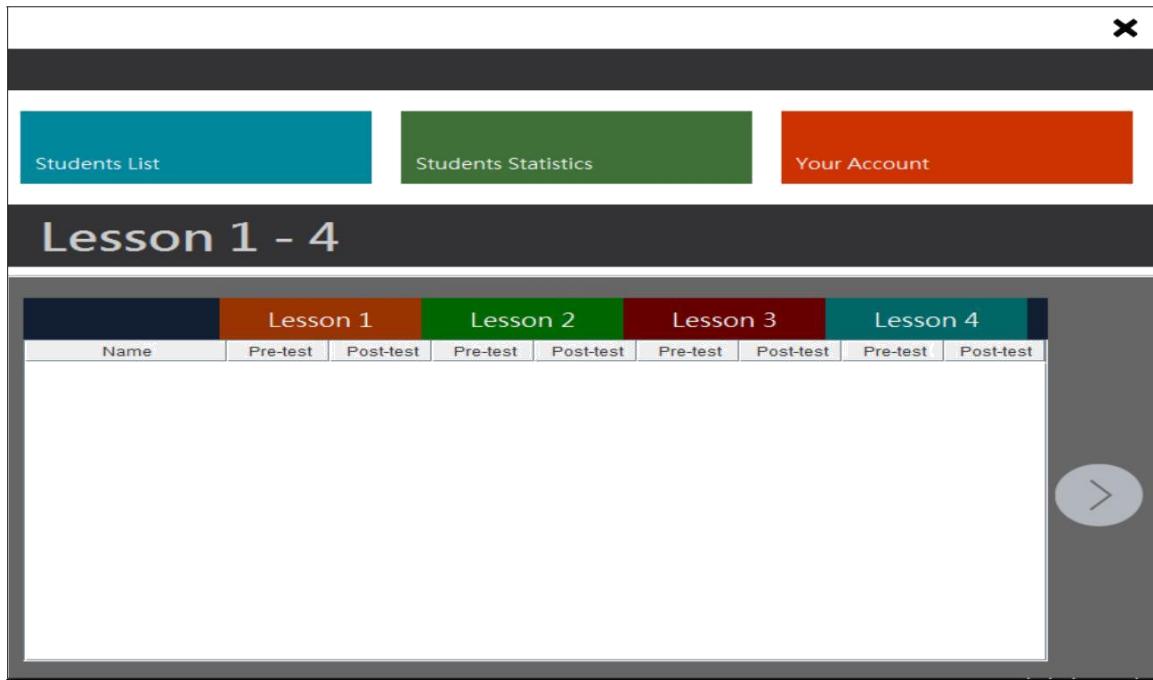


Figure 4 – 22 students' statistics (Teachers Module)

- **Test Name: Student Module**

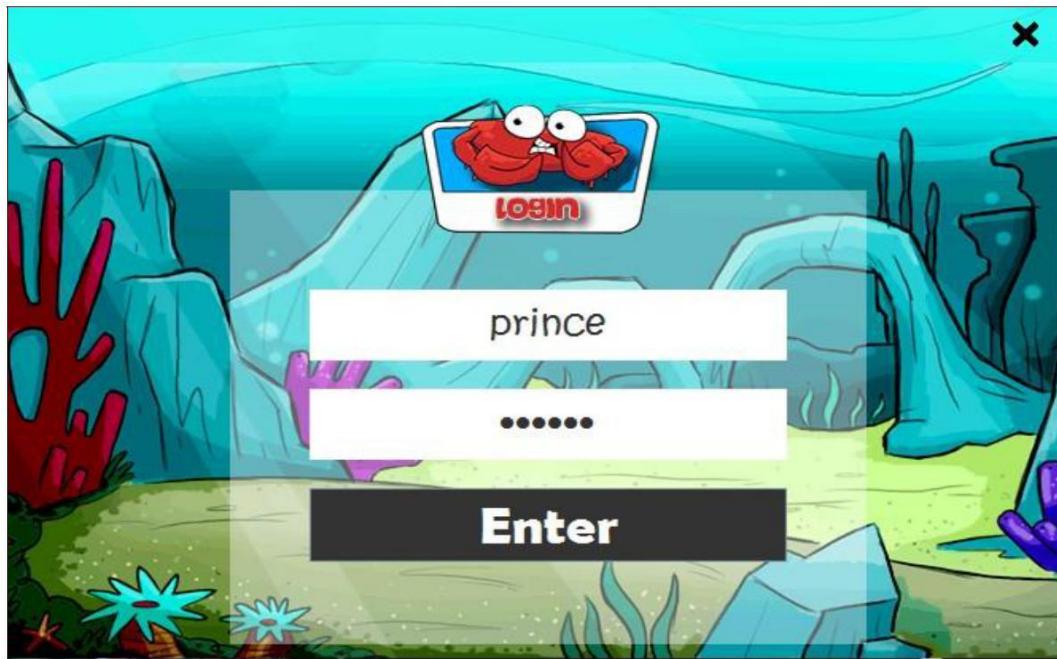


Figure 4 – 23 Students Login

- **Procedure/s:**

- View Lessons.
- View Drills for the pupil's review.
- Save the task performed by the pupils.
- Record the scores of pre-test and post-test examination
- Perform one-to-one activities for the pupil's task performance.

- **Expected Result/s:**

- The pupils can take the activity task for the desired lesson.
- Give feedback in every task activity the pupils taken.
- Give rambled set of questions in every activity for different pupil who login at the same time.
- Prompt message when the exercises are not answered and the next/proceed button is being clicked.

- **Actual Result/s:**

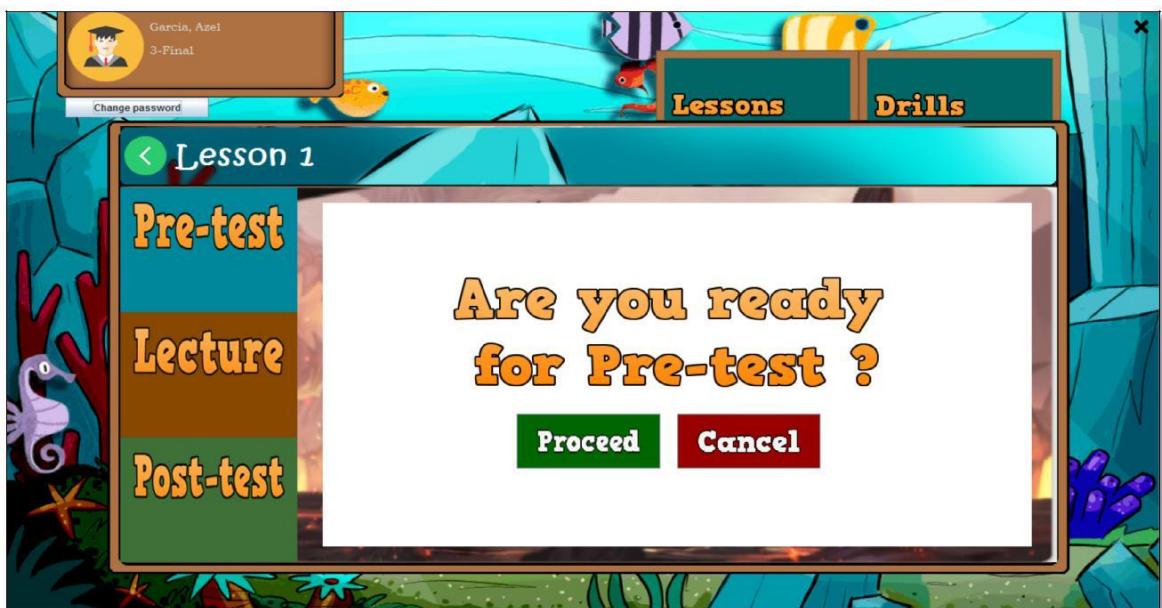


Figure 4 – 24 Students Pre-test



Figure 4 – 25 Students Pre-test (Question)

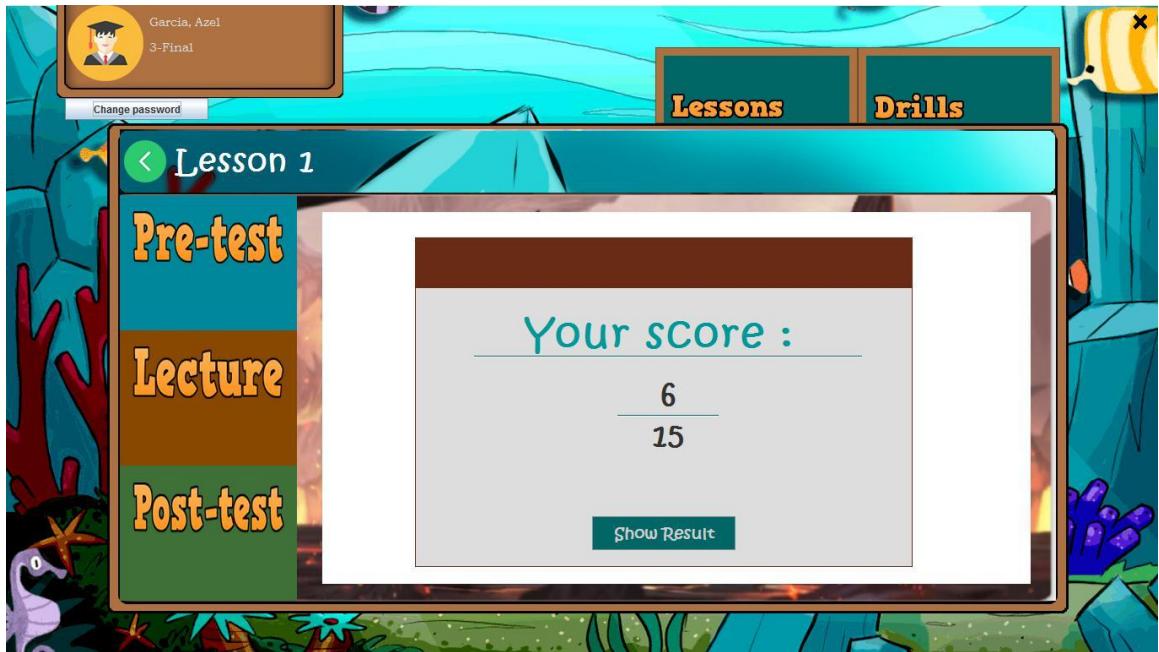


Figure 4 – 26 Students Pre-test (Score result)



Figure 4 – 27 Students Pre-test (Summary result)

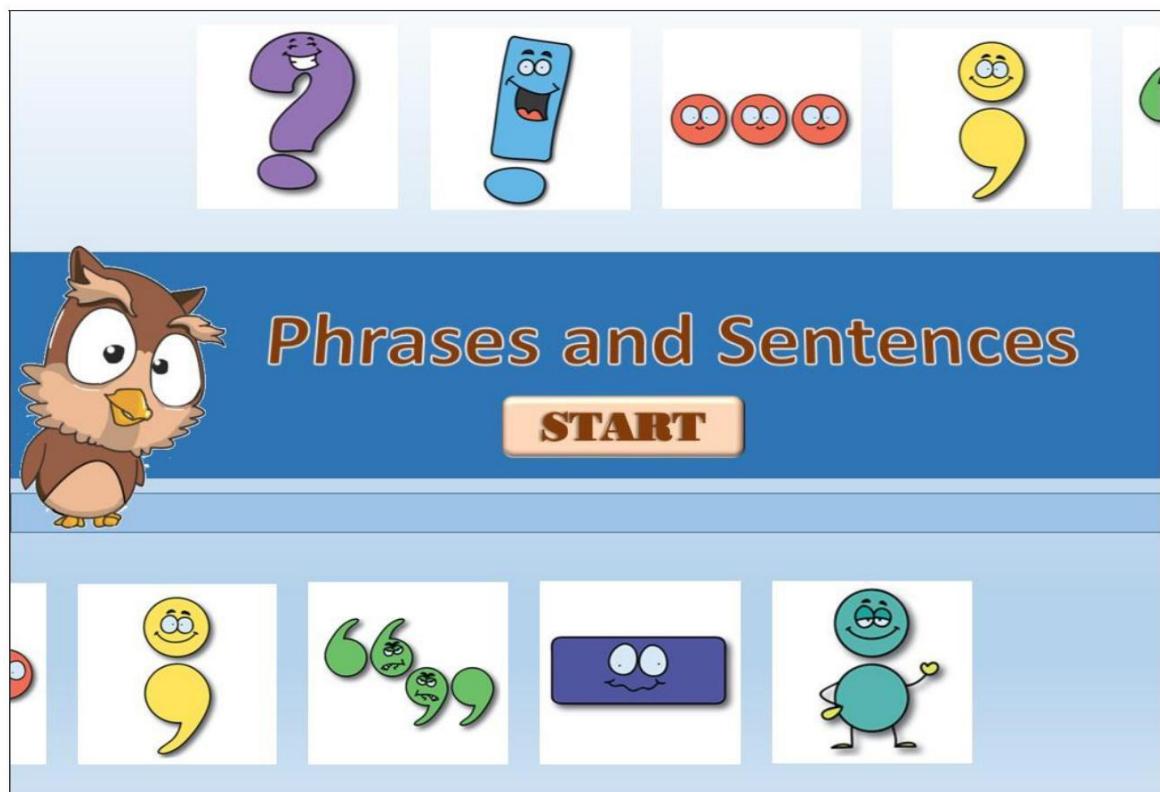


Figure 4 – 28 Students Lesson (Presentation)

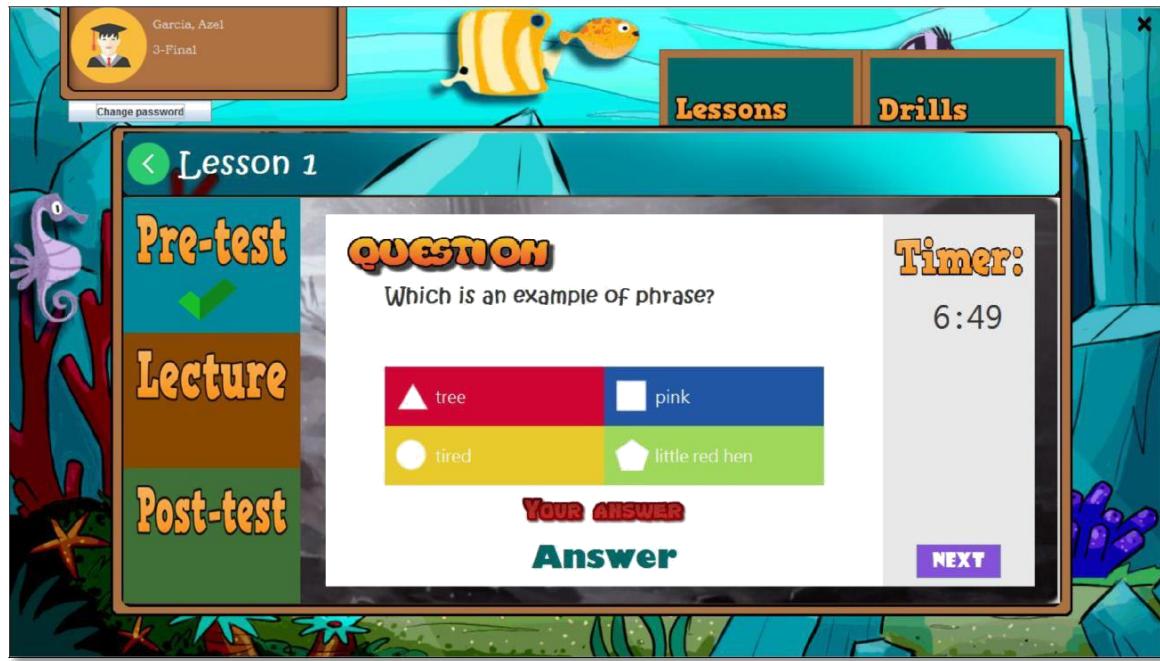


Figure 4 – 29 Student Post-Test



Figure 4 – 30 Students Lesson (Main form)



Figure 4 – 31 Student Drills (1<sup>st</sup> presentation)

#### 4.3 Summary

The information taken by the developers will serve as a guide for the objectives of the Computer-Aided Instruction in English subject; to help, ease and lessen the traditional way of learning/teaching process of San Ramon Elementary school and also to lessen the time-consuming work of checking the quizzes, activity, guiding and monitoring the performance of each pupil in the classroom. The mentioned experimentation and results above are the practices that make sure that the developers certify the functionality and design of the system.

## **4.4 SYSTEM / SOFTWARE EVALUATION PLAN**

### **4.4.1 STATISTICAL ANALYSIS**

The developers used the computation of weighted mean that helped the researcher analyze the rate of the respondents answer to the provided survey question.

- Weighted Mean Formula

$$X = \frac{5(fsa) + 4(fa) + 3(ffa) + 2(fd) + 1(fsd)}{N}$$

Where:

fsa = number of evaluator who strongly

agreed fa = number of evaluator who agreed

ffa = number of evaluator who fairly agreed

fd = number of evaluator who dis agreed

fsd = number of evaluator who strongly disagreed

N = total number of respondents.

- **RESULT AND ANALYSIS**

The following are the results that the developers completed after a survey from different respondents. This evaluation is determined to provide a logical and consistent data to use for decision making that is related to the continued development and future use of the system.

Rate	Functionality	Reliability	Usability	Efficiency	Maintainability	Portability
SA	39%	37%	36%	26%	32%	31%
A	44%	42%	37%	50%	38%	40%
FA	9%	20%	23%	19%	23%	24%
D	8%	1%	3%	4%	6%	5%
SD	0%	0%	1%	1%	1%	0%
TOTAL	100%	100%	100%	100%	100%	100%

Table 4-2 Number of respondents according to specific ISO standard in percentage

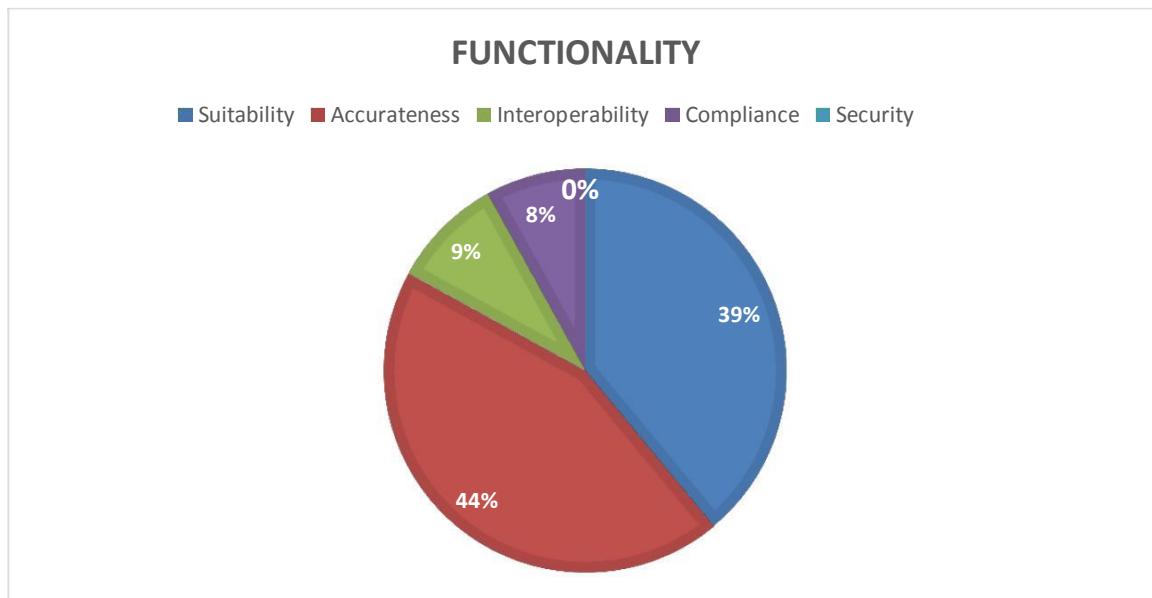
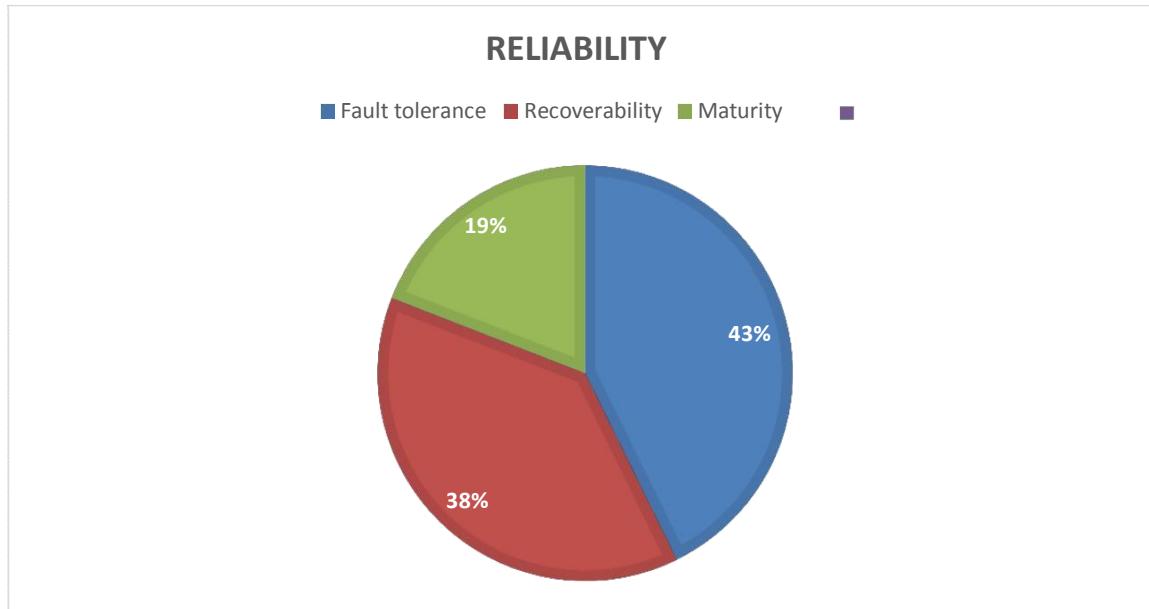


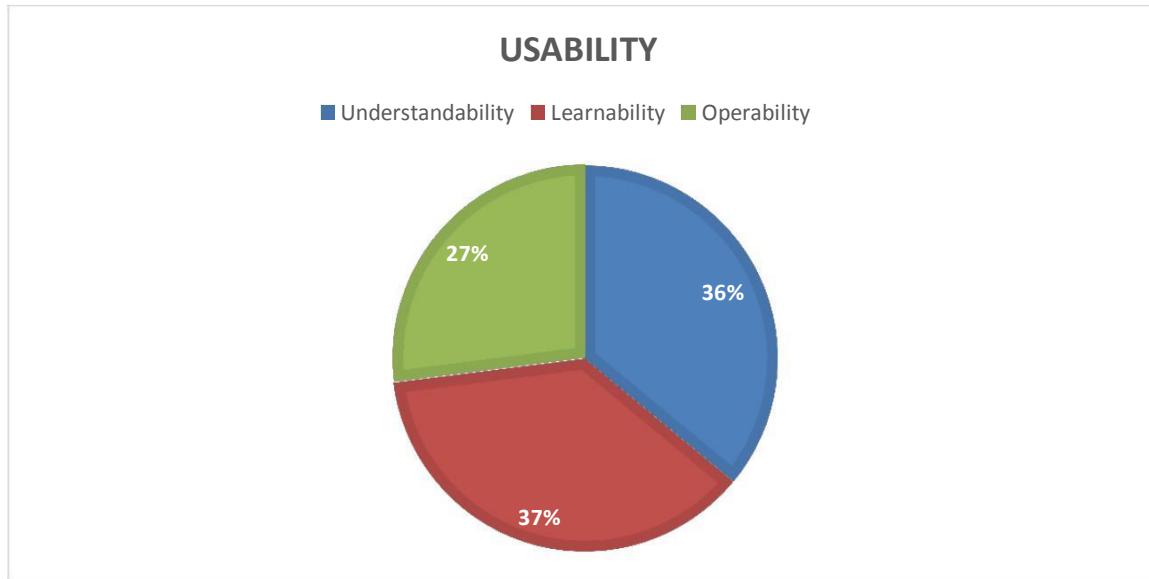
Figure 4 – 32 Functionality

The figure above shows that 39% of the system is suitable for all users, 44% in accuracy, the ability of a software component to interact with other components or systems is 9%, and 8% in security



*Figure 4 – 33 Reliability*

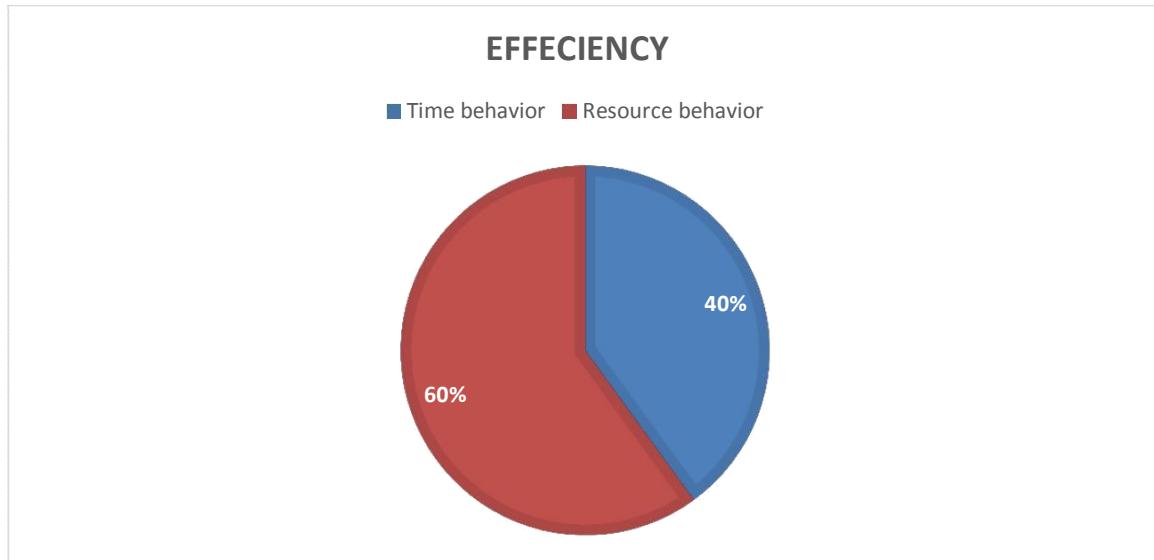
The figure above shows, 43% of the respondent agreed that the developed system is capable of recover in any failure.



*Figure 4 – 34 Usability*

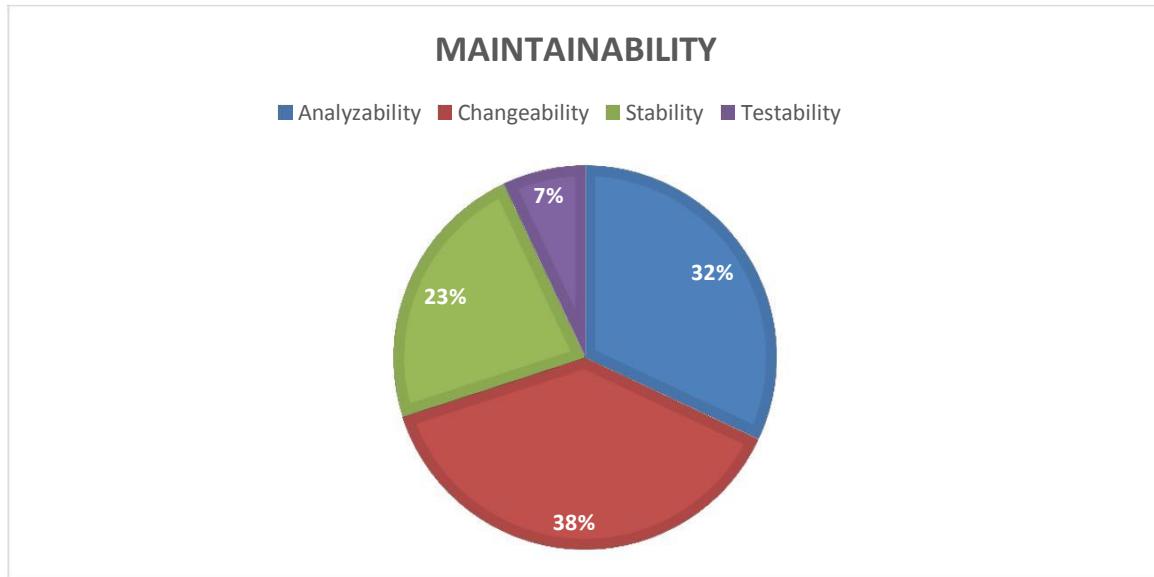
The figure above shows that the developed system is 36% understandable to all users.

While 37% of the respondent agreed that the system is learnability and 27% is operability



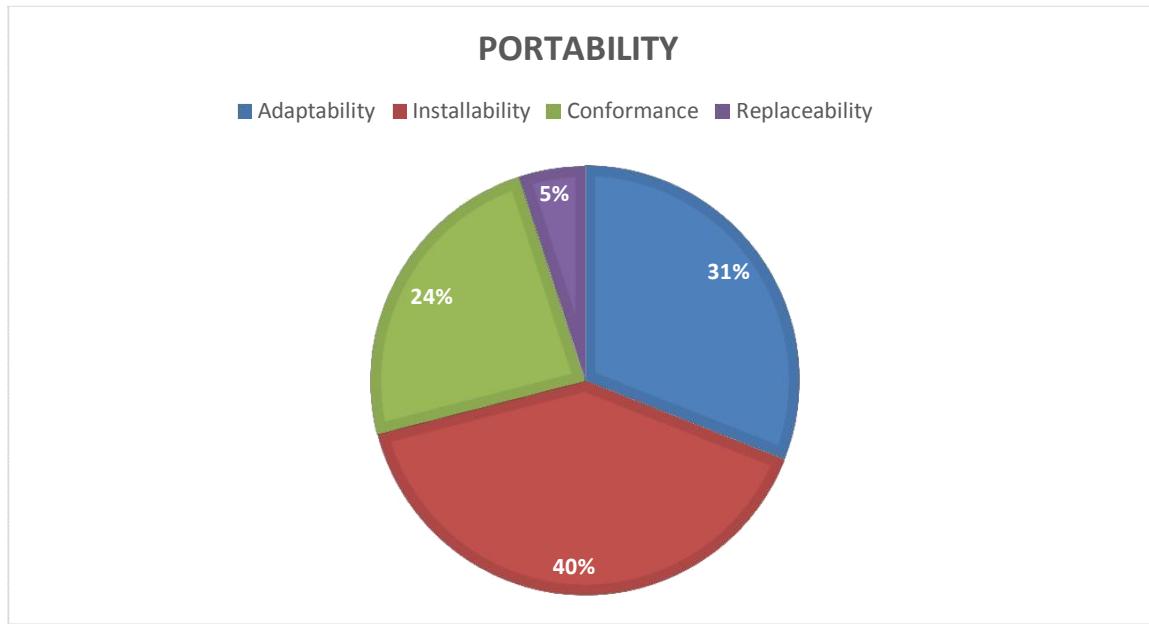
*Figure 4 – 35 Efficiency*

The figure above shows that the developed system is 60% response to the user immediately.



*Figure 4 – 36 Maintainability*

The figure above shows that 93% of the system is maintainable.



*Figure 4 – 37 Portability*

The figure above shows that 95% of the developed system is portable and 5% of the developed system is replaceable.

## **Chapter 5 CONCLUSION**

The developers have completed all the requirements and specifications of the system. From the results of the present study, it can be concluded that the Computer Aided Instruction (CAI) proved as more effective method to enhance the learning achievement (knowledge and understanding, skills/performance, and desirable characteristics) in English subject of grade three students of San Ramon Elementary School. The developers have successfully met the objectives of the study. Specially, Computer Aided Instruction (CAI) does effect on the learning achievement as it tests for its significant difference between the pre-test and post-test scores of learning achievements. The results of the analysis of data indicated the post-test score of learning achievement of grade three students in English subject taught by Computer Aided Instruction (CAI) has greater value than that of the pre-test score.

### **5.1 Recommendation**

Based on the conclusion above, the following are recommended for the systems enhancement:

1. The Computer-Aided Instructions can be enhanced to use online.
2. The Computer-Aided Instruction can be enhanced by developing and providing a speech recognition utility for correct and precise pronunciations of words.
3. The Computer-Aided Instruction can be enhanced by developing a drill that will run even without flash player.

# APPENDIX A

## (Personal Vitae)

# **Olivar, Shiela Mei E.**

**Address:** 264 Don Bosco Street, Mayapa Calamba

**Contact Number:** 09357594231

**Email Address:** [winteraira13@gmail.com](mailto:winteraira13@gmail.com)

---

## **Personal Information**

**Age:** 26

**Date of Birth:** October 30, 1990

**Place of Birth:** San Francisco Aurora, Quezon

**Gender:** Female

**Height:** 4'11

**Weight:** 45 kg

**Civil Status:** Single

**Nationality:** Filipino

**Religion:** Roman Catholic

## **Employment Record**

- BEI**

Batino Calamba

Software Tech.

October 2009 – May 2012

- EPSON Phil. Inc.**

Lima Batangas

Quality Assurance

May 2012 – November 2012

- IM Digital**

FPIP Sto. Tomas Batangas

Inspector

December 2013 – June 2014

## **Skills**

Knowledgeable in:

- Netbeans(Java Advance Programming)
- Visual Studio
- Jcreator
- Microsoft Office
- Sybase Central
- Photoshop
- Cisco Tracer
- Wamp Server

## **Educational Background**

- **STI College Calamba**  
Brgy. Uno, National Highway, Calamba  
City 2013 - present
- **Camp Vicente Lim National High School**  
Mayapa Calamba  
Laguna 2006-2007
- **Mayapa Elementary School**  
Mayapa Calamba  
Laguna 2003-2004

## **Character References**

- **Mel Delo Santos**  
RNP Manager  
Batino Calamba Laguna
- **Neil Ross**  
RNP Supervisor  
Batino Calamba Laguna

*I hereby certify that the above information given are true and correct as to the best of my knowledge.*

\_\_\_\_\_  
Shiela Mei E. Olivari

# **Magpantay, John Emmanuel R.**

**Address:** Purok 1 Makiling Calamba, Laguna

**Contact Number:** 09194874439

**Email Address:** [johnrosell@gmail.com](mailto:johnrosell@gmail.com)

---

## **Personal Information**

**Age:** 20

**Date of Birth:** March 9, 1996

**Place of Birth:** Calamba, Laguna

**Gender:** Male

**Height:** 5'7

**Weight:** 68 kg

**Civil Status:** Single

**Nationality:** Filipino

**Religion:** Born Again Christian

## **Employment Record**

- **IBEX Global**  
Paranaque  
Technical Support Representative  
October 2015 – April 2016

## **Skills**

Knowledgeable in:

- Unity
- Netbeans(Java Advance Programming)
- Visual Studio
- Microsoft Office
- Photoshop

## **Educational Background**

- **STI College Calamba**  
Brgy. Uno, National Highway, Calamba  
City 2013 - 2015, 2016 - present
- **Polytechnic University of the Philippines**  
Sto. Tomas, Batangas  
2012 – 2013
- **Makiling National High School**  
Makiling Calamba, Laguna  
2007-2012
- **Makiling Elementary School**  
Makiling Calamba, Laguna  
2001-2007

## **Character References**

- **Jester Emann Peñaranda**  
IT Instructor  
STI College Calamba
- **Norris Alexis P. Amora**  
IT Instructor  
STI College Calamba

*I hereby certify that the above information given are true and correct as to the best of my knowledge.*

---

John Emmanuel Magpantay

# **Garcia, Aizel L.**

**Address:** Blk.2 Lot 18 Majada In, Canlubang

**Contact Number:** 09997306899

**Email Address:** [yellgarcia@gmail.com](mailto:yellgarcia@gmail.com)

---

## **Personal Information**

**Age:** 24

**Date of Birth:** May 14, 1992

**Place of Birth:** Mabato Calamba, Laguna

**Gender:** Female

**Height:** 5'4

**Weight:** 53 kg

**Civil Status:** Single

**Nationality:** Filipino

**Religion:** Catholic

## **Employment Record**

- **Shindengen Phils. Corporation**  
Carmelray Industrial Park 1, Canlubang  
Visual Inspector  
July 2010 – June 2015

## **Skills**

Knowledgeable in:

- Sybase Central
- Wamp Server
- Netbeans(Java Advance Programming)
- Visual Studio
- Microsoft Office
- Photoshop
- Cisco Tracer

## **Educational Background**

- **STI College Calamba**  
Brgy. Uno, National Highway, Calamba  
City 2013 – Present
- **Mabato National High School**  
Mabato Calamba,  
Laguna 2008-2009
- **Mabato Elementary School**  
Mabato Calamba,  
Laguna 2004-2005

## **Character References**

- **Fe Dalangin**  
IT Head  
STI College Calamba
- **Norris Alexis P. Amora**  
IT Instructor  
STI College Calamba

*I hereby certify that the above information given are true and correct as to the best of my knowledge.*

---

Aizel L. Garcia

# **Tiburcio, Prince Ivan Kent M.**

**Address:** Blk 15, Lot 14 South Wynds

**Contact Number:** 09467311489

**Email Address:** [princeivankentmtiburcio@gmail.com](mailto:princeivankentmtiburcio@gmail.com)

---

## **Personal Information**

**Age:** 20

**Date of Birth:** August 6, 1996

**Place of Birth:** Sampalok, Manila

**Gender:** Male

**Height:** 5'7

**Weight:** 47 kg

**Civil Status:** Single

**Nationality:** Filipino

**Religion:** Catholic

## **Employment Record**

- **Greenwich**  
Bauan, Batangas  
City Service Crew  
June-August 2015

- **Jollibee**  
SM Calamba  
Service Crew  
September-October 2015

## **Skills**

Knowledgeable in:

- Sybase Central
- Wamp Server

- NetBeans (Java Advance Programming)
- Visual Studio
- Microsoft Office
- Photoshop
- HTML (PhP, CSS)
- SQL Databases

## Educational Background

- **STI College Calamba**  
Mayapa, Calamba City  
2013 – Present
- **Camp Vicente Lim National High School**  
Mayapa, Calamba City  
2011-2012
- **Mayapa Elementary School**  
Mabato Calamba,  
Laguna 2007-2008

## Character References

- **Fe Dalangin**  
IT Head  
STI College Calamba
- **Jester Emann Peñaranda**  
IT Instructor  
STI College Calamba

*I hereby certify that the above information given are true and correct as to the best of my knowledge.*

---

Prince Ivant Kent M. Tiburcio

# **APPENDIX B**

## **(Project Schedule)**

## Project Schedule

Week 8					Week 9					Week 10					Week 11					Week 12					Objective		Week 13						Week 14							
																									Documentation		13	14	15	16	17	18	19	20	21	22				
1	10	11	12	13	14	16	17	18	19	20	21	23	24	26	27	28	30	31	1	2	3	4	6	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11		
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11		
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11			
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11				
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11					
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11						
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11							
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11								
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11									
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11										
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11											
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11												
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11													
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11														
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11															
18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																
19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																	
20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																		
21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																			
22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																				
23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																					
24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																						
25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																							
26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																								
27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																									
28	29	30	31	1	2	3	4	5	6	7	8	9	10	11																										
29	30	31	1	2	3	4	5	6	7	8	9	10	11																											
30	31	1	2	3	4	5	6	7	8	9	10	11																												
31	1	2	3	4	5	6	7	8	9	10	11																													
1	2	3	4	5	6	7	8	9	10	11																														
2	3	4	5	6	7	8	9	10	11																															
3	4	5	6	7	8	9	10	11																																
4	5	6	7	8	9	10	11																																	
5	6	7	8	9	10	11																																		
6	7	8	9	10	11																																			
7	8	9	10	11																																				
8	9	10	11																																					
9	10	11																																						
10	11																																							
11																																								

### Legend:



On Going



# APPENDIX C

## (Letter to Project Adviser, letter to Grammarians and to Client)

February 16, 2017

Mrs. Jocelyn V. Reyes  
Principal  
Purok I, Manfil Canlubang,  
Calamba, Laguna

Dear Ma'am,

We, a 4<sup>th</sup> year students of STI Academic Centre Calamba pursuing the degree in Bachelor of Science in Information Technology currently enrolled in IT Special Project (ITSPROJ) which will develop our skill in Field of IT.

We, as a student are requesting your good office to be allowed to conduct data gathering by means of requesting necessary reports such as National Achievement Test result in the previous two years, a post test and pre-test results of students in grade three in English subject. The information will be used in our study and we will assure that all information will be keep confidential.

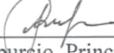
Anticipating your favourable approval

Very truly yours,

  
Garcia, Aizel L.

  
Magpantay, John Emmanuel R.

  
Olivar, Shiedla Mei E.

  
Tiburcio, Prince Ivan Kent M.

Noted by:

  
Arvin M. Sadicon  
Thesis Coordinator, STI Academic Center Calamba

Approved by:

  
Mrs. Jocelyn V. Reyes  
Principal

Figure C – I Letter to the Client

Mr. Jester Emann E. Peñaranda  
IT Instructor  
STI College – Calamba

Sir:

Good day!

This semester, the 4<sup>th</sup> year Bachelor of Science in Information Technology students are taking up IT Special Project (ITSPROJ) as a part of our curriculum. The said subject is requiring us a person that will monitor and guide us to the project work towards the betterment of the project output.

In line with this matter, we are sincerely asking you to be our Project Adviser for our thesis because we believe that you have the knowledge that will gives suggestions and comments on how the project could be strengthened.

We are hoping for your positive response,

Respectfully yours,

  
Garcia, Aizel L.

  
Magpantay, John Emmanuel R.

  
Olivar, Shiela Mei E.

  
Tiburcio, Prince Ivan Kent M.

**Statement of acceptance:**

"I hereby accept that I will be the Project Adviser of the following students above"

  
Mr. Jester Emann E. Peñaranda  
Mrs. Maria Isabel Mercado  
Professor  
STI College Calamba

*Figure C – 2 Letter to the Project Adviser*

Good day,

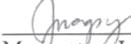
We, a 4<sup>th</sup> year students of STI Academic Centre Calamba pursuing the degree in Bachelor of Science in Information Technology currently enrolled in IT Special Project (ITSPROJ) which will measure our ability to develop our skill in Field of IT.

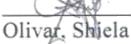
In line with this, we would like to ask your permission to become our grammarian for the aforementioned project. We believe in your knowledge and abilities to guide us as we develop our project.

We are humbly for your approval,

Very truly yours,

  
\_\_\_\_\_  
Garcia, Aizel L.

  
\_\_\_\_\_  
Magpantay, John Emmanuel R.

  
\_\_\_\_\_  
Olivar, Shiela Mei E.  
  
\_\_\_\_\_  
Tiburcio, Prince Ivan Kent M.

Noted by:

  
\_\_\_\_\_  
Arvin M. Sadicon  
Thesis Coordinator,  
STI Academic Center Calamba

Approved by:

  
\_\_\_\_\_  
Mrs. Maria Isabel Mercado  
Professor  
STI College Calamba

*Figure C – 3 Letter to the Grammarian*

# APPENDIX D

## (Journal)

### ACCOMPLISHMENT AND CONSULTATION FORM

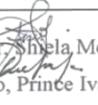
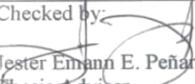
INSTRUCTION: List all the activities, improvements or an accomplishment that has been made in your Thesis Documentation and System/Prototype. This form may be reproduced as you go along with your research. This form should be submitted to your Thesis Adviser every week.

Thesis Title: Computer-Aided Instruction in English subject

Week Number: 1

ACTIVITY/ ACCOMPLISHMENT	REMARKS/ COMMENTS/ SUGGESTIONS/ DELIVERABLES and DUE DATE
Submission of Chapter 1 (first day of checking of documentation)	<p>Incorrect format of title page</p> <ul style="list-style-type: none"> <li>• Incomplete title</li> </ul> <p>Checking the content of Introduction</p> <p>Checking of statement of the problem</p> <ul style="list-style-type: none"> <li>• All problems must be measurable</li> <li>• Give the exact details (problem)</li> <li>• Support this (problem) with good reason</li> <li>• Motivation cannot measure because this is too intra-personal</li> <li>• Rephrase the seventh problem in the list</li> </ul> <p>Checking of limitation</p> <ul style="list-style-type: none"> <li>• Add more limitations</li> </ul>
Checking of revision in Statement of the problem (2 <sup>nd</sup> day of checking of documentation)	<p>Checking of statement of the problem</p> <ul style="list-style-type: none"> <li>• Support this (problem) with good reason</li> <li>• Where the statement is based</li> <li>• Follow a cause and effect format for better explanation</li> <li>• Replace <u>weaker students</u> in sixth statement because this will create</li> </ul>

*Figure D – 1 First week activities*

<p>Checking of system's status</p>	<p>diversity of knowledge inside the classroom</p> <ul style="list-style-type: none"> <li>• Omit the fourth statement</li> </ul> <p>Checking of limitation (Add more limitations)</p> <ul style="list-style-type: none"> <li>• Should designed suitable for grade three pupils</li> <li>• Ramble questions in quizzes</li> <li>• Activities should base on the textbook</li> <li>• The system should be maintainable</li> <li>• Should be entertaining</li> </ul>
<p>Prepared by:</p> <p>Garcia, Alzel L.            Magpantay, John Emmanuel R.  </p> <p>Olivar, Shela Mei E.            Tiburcio, Prince Ivan Kent M.  </p>	
<p>Checked by:            Jester Eimann E. Peñaranda          Thesis Adviser</p>	<p>Noted by:            Sadicon, Arvin M.          Thesis Coordinator</p>
<p>Date Signed:</p>	<p>Date Signed:</p>

*Figure D – 1.1 First week activities*

### ACCOMPLISHMENT AND CONSULTATION FORM

**INSTRUCTION:** List all the activities, improvements or an accomplishment that has been made in your Thesis Documentation and System/Prototype. This form may be reproduced as you go along with your research. This form should be submitted to your Thesis Adviser every week.

Thesis Title: Computer-Aided Instruction in English subject

Week Number: 2

ACTIVITY/ ACCOMPLISHMENT	REMARKS/ COMMENTS/ SUGGESTIONS/ DELIVERABLES and DUE DATE
Checking of Documentation(grammarians)	Rewrites from grammarians: (Chapter 1) <ul style="list-style-type: none"> <li>• Revise the first paragraph (Introduction)</li> <li>• Paraphrased the third paragraph (Introduction)</li> <li>• Use active voice/verb</li> <li>• Revise the current state of technology</li> <li>• Always paraphrased the definition and references</li> <li>• Choose recent reference in studies</li> </ul>
Checking of HIPO and flow chart (Sir. Jester and Sir Brotonel)	The system's status is almost 60% of function
Checking of the system's status	Passing of Chapter 1-5 this Friday before 12:00
Prepared by:  Garcia, Alzel L.  Magpantay, John Emmanuel R.	 Olivay, Shulela Mei E.  Tiburcio, Prince Ivan Kent M.
Checked by:  Jester Emmanuel E. Peñaranda Thesis Adviser	Noted by:  Sadion, Arvin M. Thesis Coordinator
Date Signed:	Date Signed:

*Figure D – 2 Second week activities*

### ACCOMPLISHMENT AND CONSULTATION FORM

**INSTRUCTION:** List all the activities, improvements or an accomplishment that has been made in your Thesis Documentation and System/Prototype. This form may be reproduced as you go along with your research. This form should be submitted to your Thesis Adviser every week.

Thesis Title: Computer-Aided Instruction in English subject

Week Number: 3

<b>ACTIVITY/ ACCOMPLISHMENT</b>	<b>REMARKS/ COMMENTS/ SUGGESTIONS/ DELIVERABLES and DUE DATE</b>
Submission of Chapter 2 and 3	Proceed and finish the chapter 4 and 5
Checking of the system's status	The developers' system is almost 50%
Prepared by:  Garcia, Aizel L.  Magpanay, John Emmanuel R.	 Ohvan Shieila Mei E.  Tiburcio, Prince Ivan Kent M.
Checked by:  Jester Emann E. Peñaranda Thesis Adviser	 Noted by: Sadicon, Arvin M. Thesis Coordinator
Date Signed:	Date Signed:

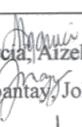
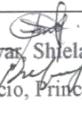
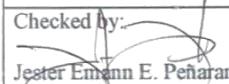
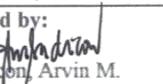
*Figure D – 3 Third week activities*

### ACCOMPLISHMENT AND CONSULTATION FORM

**INSTRUCTION:** List all the activities, improvements or an accomplishment that has been made in your Thesis Documentation and System/Prototype. This form may be reproduced as you go along with your research. This form should be submitted to your Thesis Adviser every week.

Thesis Title: Computer-Aided Instruction in English subject

Week Number: 4

<b>ACTIVITY/ ACCOMPLISHMENT</b>	<b>REMARKS/ COMMENTS/ SUGGESTIONS/ DELIVERABLES and DUE DATE</b>
<p>Checking of project status</p>     <p>Checking of the system's status</p>	<p>The developers coordinator check the status of the project mostly the documentation of the project</p> <ul style="list-style-type: none"> <li>• Check the correct format of the title page</li> <li>• The coordinator of the project, Sir. Sadicon advise the developer to submit the Chapter 2 and 3</li> <li>• Checking of the status of the developers' system</li> </ul> <p>The developers' system is almost 45%</p> <ul style="list-style-type: none"> <li>• Put GIF for entertaining interface</li> <li>• Student module should be to easy access</li> <li>• The quizzes should maintainable</li> </ul>
<p>Prepared by:</p> <p>Garcia, Aizel L. </p> <p>Magpantay, John Emmanuel R. </p>	 <p>Olivas, Shelia Mei E.</p> <p>Tiburcio, Prince Ivan Kent M. </p>
<p>Checked by:</p> <p>Jester Emmanuel E. Peharanda Thesis Adviser </p> <p>Date Signed:</p>	<p>Noted by:</p> <p>Sadicon, Arvin M. Thesis Coordinator </p> <p>Date Signed:</p>

*Figure D – 4 Fourth week activities*

# APPENDIX E

## (Transcript of Interview)

**Interviewee:** Good morning ma'am, from STI College Calamba po kami, andito po kami for interview.

**Respondent:** Good morning din.

**Interviewee:** Gaano po kadami ang mga nag-aaral dito sa school?

**Respondent:** 2,876lahat.

**Interviewee:** Ilan po ang mga teacher dito?

**Respondent:** 65 kami lahat.

**Interviewee:** Ilang section po ang meron sa bawat isang grade?

**Respondent:** 8 hanggang 9 section lahat bawat isang grade simula Grade 1 hanggang Grade 6.

**Interviewee:** May provided na po ba kayo dito na Computer Aided?

**Respondent:** Wala kaming provided na Computer Aided dito sa school.

**Interviewee:** Sapat po ba ang mga gamit ninyo sa pagtuturo ng English subject?

**Respondent:** Kulang ang mga gamit namin, kulang kami sa textbooks at mga guide para sa pagtuturo ng English subject.

**Interviewee:** Gaano po kadami ang estudyante nyo sa section na ito?

**Respondent:** 35 sila lahat.

**Interviewee:** First section po ba ito?

**Respondent:** Oo.

**Interviewee:** Ilang subject po ang hawak ng bawat isang teacher?

**Respondent:** 8 ang subject na hawak namin.

**Interviewee:** Ano po ang mga nacen-counter ninyo na problema regarding sa pagtuturo po ng English subject?

**Respondent:** Madami, halos wala silang participation sa English subject. Kaunti lamang din sa kanila ang nagpa-participate sa recitation at discussion lalo na kapag ang sagot ay english.

**Interviewee:** Ilan po ang nagpa-participate na estudyante sa klase nyo?

  
Ana Fe M. Castalone  
Grade 3/Section 1 English Adviser

*Figure E – I Transcript of Interview*

**Respondent:** 4 hanggang 5 lamang ang nagpa-participate sa kanila.  
**Interviewee:** Gaano katagal po sila hindi nakikinig sa klase?  
**Respondent:** 15 minutes after ko mag-start ng klase hindi na sila nakikinig.  
**Interviewee:** Ano pa po ang nae-encounter ninyo?  
**Respondent:** Karamihan sa kanila hindi pa masyadong marunong sa pag-construct ng sentence gamit ang english lalo na kapag on-the-spot recitation.  
**Interviewee:** Matataas po ba ang mga result ng quizzes, at seatwork nila?  
**Respondent:** Mababa ang scores nila sa quizzes pati narin sa seatwork nila, pati sa score nila sa participation mababa din.  
**Interviewee:** Madami po ba sa kanila ang marunong na bumasa ng english?  
**Respondent:** kaunti pa lamang sa kanila ang marunong talaga sa pagbabasa ng english, pati nadin sa pronunciation.  
**Interviewee:** Sa 35 nyo po na estudyante, ilan po sa kanila ang hindi nakakasunod sa klase ninyo?  
**Respondent:** 8 sa kanila.  
**Interviewee:** Salamat po ma'am sa time.  
**Respondent:** Ok sige salamat din.

  
Ana Fe M. Castalone  
Grade 3/Section 1 English Adviser

*Figure E – 2 Transcript of Interview*

**Interviewee:** Sir good morning po, pwedepobanaminmalamanangkabuoangbilang ng mga mag-aaralnapumapasokdito sa San Ramon?

**Respondent:** Good morning, kami ay mayroongkabuoangbilangna 2, 876 ng mag-aaralmula kinder garden hangganggrade 6dito. Nahahatiitosa 8 hanggang9 sections per grade.

**Interviewee:** Sir ilannamanpoangbilang ng faculty members ninyo?

**Respondent:** Ang faculty members namin ay may totalna 65 kasamanaroonang Principal at teacher ng ICT.

**Interviewee:** Ilanpoang total number ng english teacher ditosimula grade 1 hanggang grade 6?

**Respondent:** Sa grade 1 hanggang grade 3, kung ilanang section yun din ang number ng teacher. Sa grade 1 at grade 2 may 8 teachers, sa grade 3 may 9 teachers, at sa grade 4 hanggang grade 6 mayroon 2-3 teachers.

**Interviewee:** Gusto nyopobanagumawa kami ng system para po sa English subjectat para din po sa mgaestudyantenyio? Computer Aided Instruction pokasiyunnanaka-focus sa English subject.

**Respondent:** Kung pwedeoo, makatatulongyun ng malaki sa amin.

**Interviewee:** Sigero sir, maramingsalamatpo sa inyongoras.



KennyJohnsonMontiel

ICT/ Teacher III

*Figure E – 3 Transcript of Interview*

**Interviewee:** Good morning ma'am, from STI College Calamba po kami, nadito po kami para mag-interview sa inyo para sa last section ng English subject.

**Respondent:** Ok sige.

**Interviewee:** Ilan po ang estudyante ninyo sa section na ito?

**Respondent:** 51 sila lahat.

**Interviewee:** Ano po ang nae-encounter ninyo na problema sa pagtuturo ng English subject sa mga estudyante?

**Respondent:** Hindi marunong magbasa ng English, wala silang alam. Hindi din sila nakikinig at palaging walang attention sa klase ko, hindi sila naka-focus kapag English subject.

**Interviewee:** Sa 51 na estudyante nyo, ilan po ang hindi marunong sa English subject?

**Respondent:** 18 sa kanila hindi pa talaga marunong sa English. Iilan lamang sa kanila ang may reading comprehension.

**Interviewee:** Ano pa po ang napapansin ninyo sa mga estudyante ninyo sa English subject?

**Respondent:** Lack of confidence sa pagsagot, hindi din sila nagpa-participate sa klase ko lalo na kapag English ang sagot.

**Interviewee:** Ilan po sa mga estudyante ninyo ang napa-participate sa klase?

**Respondent:** wala talagang nagpa-participate sa kanila lalo na kapag English na ang sagot.

**Interviewee:** Ano po ang ginagawa ninyo sa mga estudyante na mahina sa English subject?

**Respondent:** May remedial class kami para sa English subject tuwing sabado 9am hanggang 11am.

**Interviewee:** Madami po ba ang pumapasok sa remedial class nyo?

**Respondent:** Hindi lahat pumapasok sa remedial class, yung iba hindi na pumapasok.



Michelle L. Derilo

Grade 3/Last section English Adviser

*Figure E – 4 Transcript of Interview*

**Interviewee:** Sa National Achievement Test (NAT), ano pong subject ang may pinakamababang score?

**Respondent:** English at Filipino ang may mababang score.

**Interviewee:** Ano pong grade ang nakakuha ng mababang score sa National Achievement Test (NAT)?

**Respondent:** Grade 3 at Grade 6 na mga estudyante.

**Interviewee:** Maraming Salamat po ma'am sa oras.

**Respondent:** Ok sige salamat din.



Michelle L. Derilo

Grade 3/Last section English Adviser

*Figure E – 5 Transcript of Interview*

# APPENDIX F

## (Survey Form and Questionnaire)

## RESEARCH QUESTIONNAIRE

Date: \_\_\_\_\_

Year Level/Course: \_\_\_\_\_

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Gender: \_\_\_\_\_

### **1. FUNCTIONALITY OF THE SYSTEM**

Can the computerized system perform the task required?

	Strongly Agree	Agree	Fairly Agree	Strongly Disagree	Disagree
1. FUNCTIONALITY OF THE SYSTEM Can the computerized system perform the task required?					
2. RELIABILITY OF THE SYSTEM Can the computerized system be capable in handling error?					
3. USABILITY OF THE SYSTEM The computerized system can understand easily?					
4. EFFICIENCY OF THE SYSTEM Can the computerized system respond quickly to the user?					
5. MAINTAINABILITY OF THE SYSTEM Can the computerized system be tested easily?					
6. PORTABILITY OF THE SYSTEM The computerized system can be installed easily?					

# APPENDIX G

## (Client)



*Figure G – 1 San Ramon Elementary School*



*Figure G – 2 The School Ground 2017*



*Figure G – 3 The School Covered court*



*Figure G – 4 The Computer Lab and the Principals office*



*Figure G – 5 The School Grade 3 classroom building*



*Figure G – 6 The Classroom*



Figure G – 7 The Classroom



Figure G – 8 The English Corner of the School



Figure G – 9 The Visual aid in English

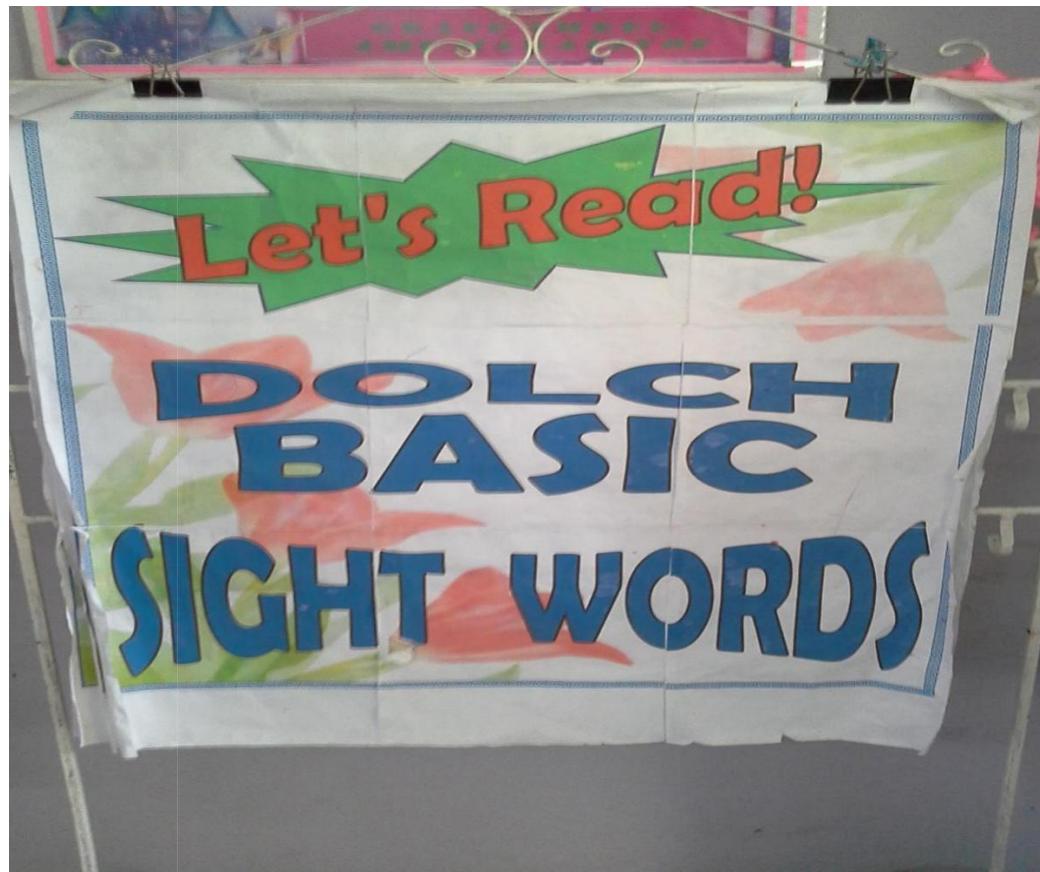


Figure G – 10 Instructional materials in English

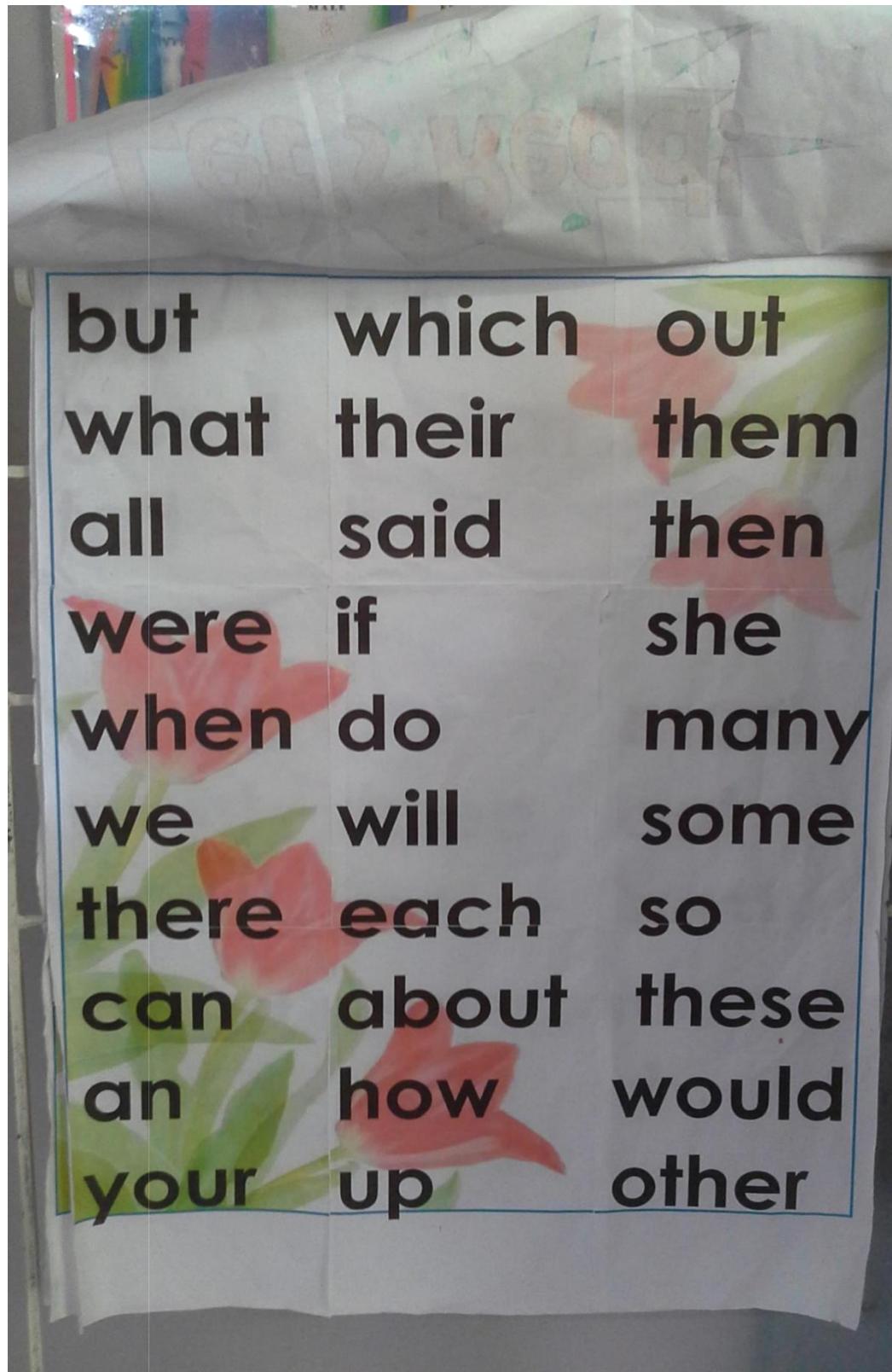


Figure G – 11 Instructional materials in English for reading comprehension



Figure G – 12 Instructional materials in English for reading comprehension

# APPENDIX H

## (Clients' Data)

**Division Reading Performance/Pansangay Na Pagganap sa Pagbasa**

**SILENT READING**  
[Pagbasa Nang Pahigas]  
Englishly Post Reading  
SY 2016 - 2017

ENROLMENT Bilang Mag-aaral	PUPIL TESTED (Bilang ng Mag-aaral na Kumula ng Pagtataya)	SPEED LEVEL		COMPREHENSION LEVEL		READING LEVEL		CHANGE (Pagbabago)		NON-READER (Dahilanan)
		Slow (Matagal)	Average (Kamantahan)	Fast (Malinis)	Frustration (Pampagkakuto)	Instructional (Independent) (Paglabago)	Frustration (Pampagkakuto)	Instructional (Independent) (Malaya)	Frustration (Pampagkakuto)	
		Pre (Panimula)	Post (Pantapos)	Pre (Panimula)	Post (Pantapos)	Pre (Panimula)	Post (Pantapos)	Pre (Panimula)	Post (Pantapos)	
		Post	Pre	Post	Pre	Post	Pre	Post	Pre	
Grade 1	302	49	138	104	51	147	93	35	132	124
Grade 2	308	308	87	34	82	137	50	124	81	99
Grade 3	427	427	124	119	178	210	41	97	125	132
Grade 4	417	417	93	67	254	220	65	130	112	41
Grade 5	419	419	250	49	90	135	77	235	268	62
Grade 6	373	373	32	20	224	226	117	127	2	0
Total:	1944	2246	586	338	828	1066	350	817	588	315
										180
										25

Prepared by:

**MERLYN B. CAPINPIN**  
School English Coordinator

Noted by:

  
**JOCELYN V. REYES**  
Principal II

*Figure H – 1 Phil-IRI per-test/post-test result in Silent reading*

Division of Calamba City  
 Calamba West District  
**SAN RAMON ELEMENTARY SCHOOL**  
 Canlubang, Calamba City

Division Reading Performance/Pansangay Na Pagganap sa Pagbasa

**ORAL READING**

(Pagbasa Nang Pribikas)

ENGLISH

SY 2016 - 2017

Division: **CALAMBA CITY**

**POST READING**

GRADE	ENROLMENT (Bilang ng Mag-aaral)	PUPIL TESTED		READING				NON READER	
				FRUSTRATION (Paglabag)		INSTRUCTIONAL (Pampagkatuto)		INDEPENDENT (Malaya)	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post
Gr-1			302		39		130		112
Gr-2	308	308	74	34	87	131	58	130	89
Gr-3	427	427	160	146	144	188	40	92	83
Gr-4	417	417	86	25	256	288	75	104	0
Gr-5	419	419	250	40	99	143	70	233	3
Gr-6	373	373	2	0	243	250	128	123	0
Total	1944	1944	2246	572	284	829	1130	371	794
									175
									35

**MERLYN B. CAPINPIN**  
School English Coordinator

Noted by:

  
**JOCELYN V. REYES**  
 Principal II

Figure H – 2 Phil-IRI per-test/post-test result in Oral reading

Pupil Achievement based on NAT 3 Results

NAME OF SCHOOL	2012-2013		2013-2014		2014-2015	
	MPS	RANK	MPS	RANK	MPS	RANK
SAN RAMON ES	51.66	8	43.06	15	60.80	8

This table shows that S.Y 2014-2015 has the highest MPS while S.Y 2013-2014 has the lowest MPS with 8.6% decreased. The findings further show that the NAT results for three consecutive years is inconsistent.



JOCELYN V. REYES  
Principal II

*Figure H – 3 National Achievement Test (NAT) ranking, yr. 2012-2015*

# APPENDIX I

## (Schools' Vision and Mission)

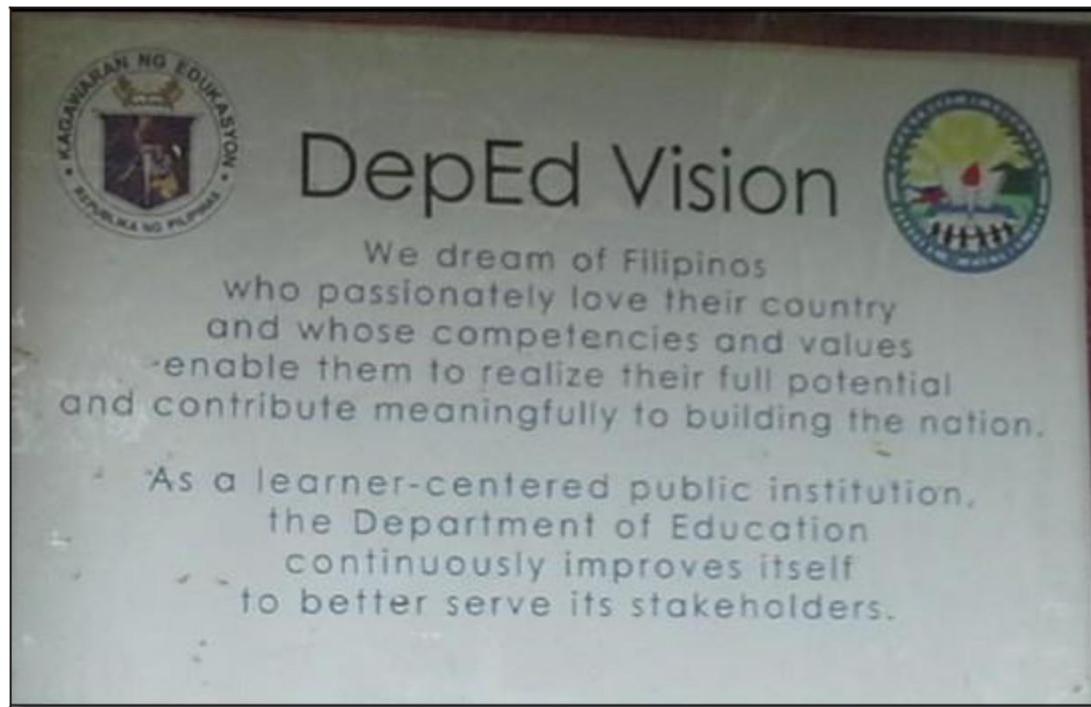


Figure I – 1 Vision

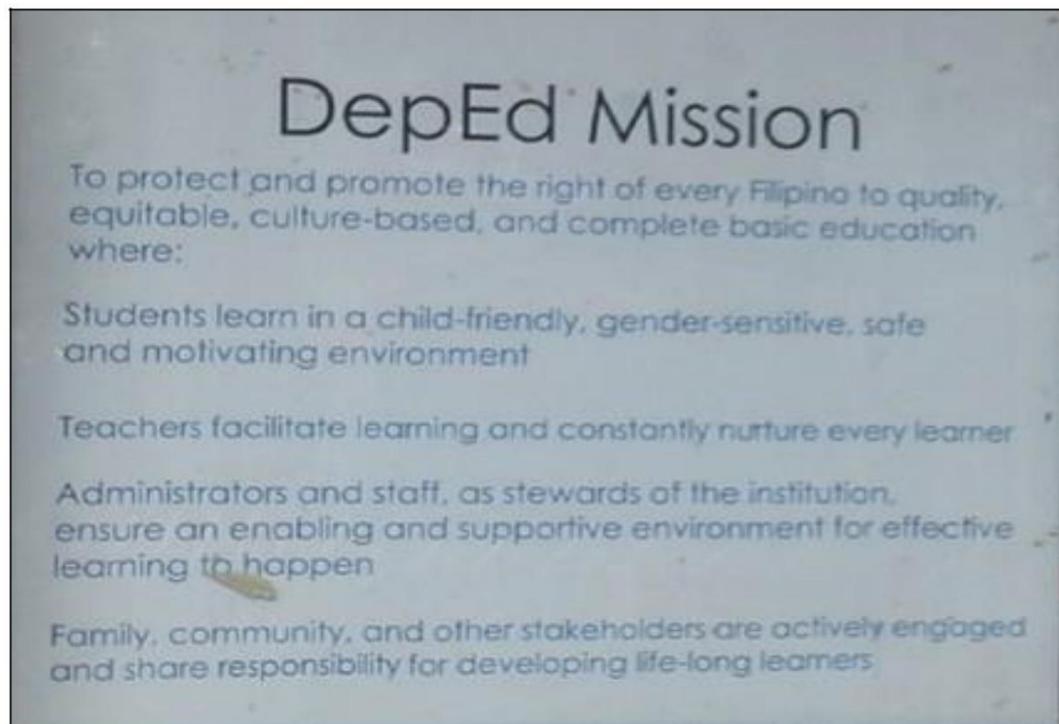


Figure I – 2 Mission

# **APPENDIX J**

## **(User's Manual)**

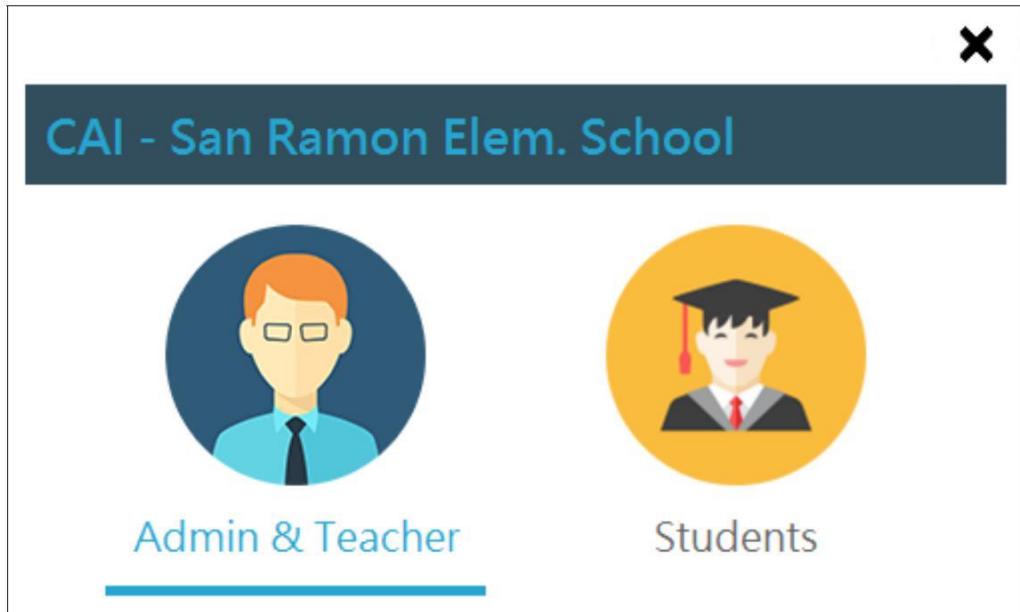
**Requirements:**

- ✓ WampServer
- ✓ Computer-Aided Instruction executable file

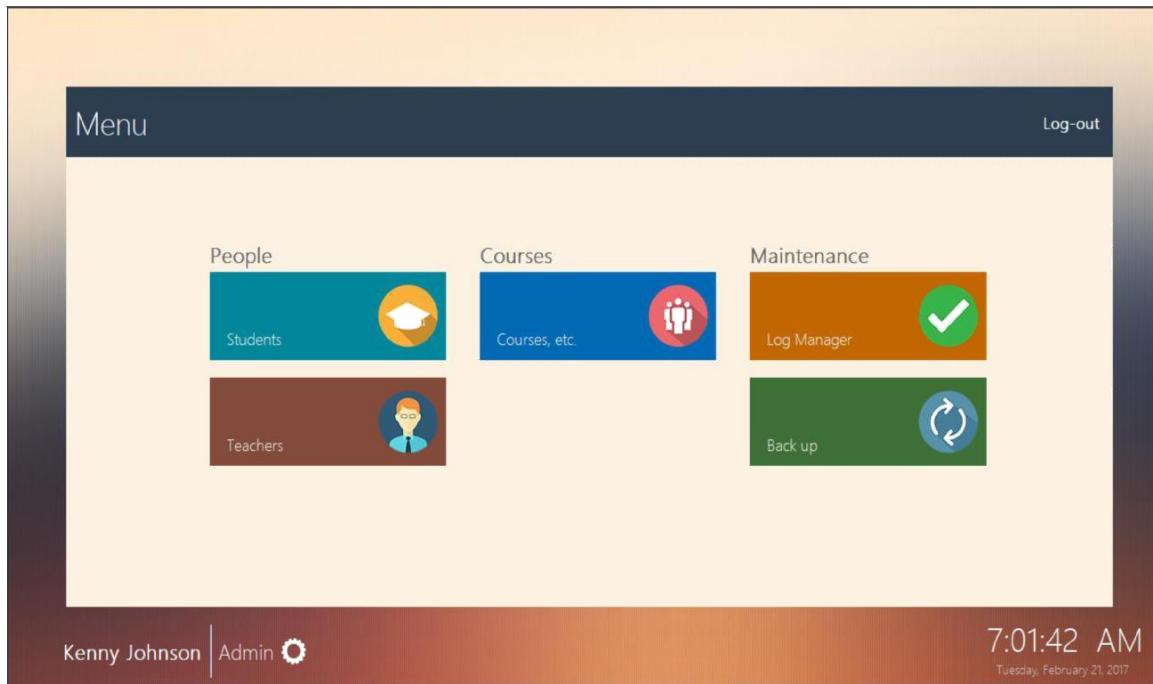
**Procedure:**

1. Install the WampServer executable file
2. Double click the Computer-Aided Instruction.exe. and install

**Computer-Aided Instruction system manual**



1. Login user authentication



2. The admin main menu, if the user login as admin this main menu will appear.

A screenshot of a student data table. The title "Students" is at the top left, and "Log-out" is at the top right. The table has columns for "ID#", "Student Name", "Grade", and "Sections".

ID#	Student Name	Grade	Sections
109861140492	AGALAO, EUAY MARK CALBO	3	Makabayan
109861140492	AGALAO, EUAY MARK CALBO	3	Makabayan
403348150018	LAGAR, HARVEY KYLE TESALON	3	Makadiyos
109861130323	ALCANTARA, JOHN KENNEDY BAJAMONDE	3	Makadiyos
109861130419		3	Makabayan
109861150374	AMBE, CHRISTIAN MELVIN BELESINA	3	Makabayan
109861130539	ANDRADA, ANGEL JOY ALCARAZ	3	Makadiyos
109861130574	AQUINO, ALTRINA MAE CASQUETE	3	Makadiyos
109861130324	ARBOLEDA, BENJO ROBLES	3	Makadiyos
109861130421	ARCEO, THOMAS GABRIEL SAN JUAN	3	Makabayan
109861140509	ATIENZA, EYESHIA QIN ALAY	3	Makadiyos

At the bottom, there are "Back", "New", and "Archive" buttons, along with the same "Kenny Johnson Admin" and "Tuesday, February 21, 2017" timestamp as the previous screenshot.

3. The student button, where the admin can add, view, save and print students data.

The screenshot shows a web application interface titled "Teacher". At the top right is a "Log-out" button. Below the title is a search bar with a magnifying glass icon. A table lists six teachers, each with an ID# and a name. The table has alternating row colors. At the bottom left is a "View Enrolled Teachers" button, and at the bottom right are "New" and "Edit" buttons. The footer contains navigation links for "Back", "Kenny Johnson | Admin", and the current date and time "Tuesday, February 21, 2017 7:10:51 AM".

ID#	Teachers Name
3	Tureda, Sarah Jane D.
2	Castalone, Ana Fe Mercado
1	Lerala, Marime Libago
4	Ramos, Daisy G.
5	Almarvez, Merciel A.
6	Calpo, Janet D.

4. The teacher button, where the admin can add, view, edit and save the teachers information.

The screenshot shows a web application interface titled "Account". At the top right is a "Log-out" button. Below the title is a "Change password" section. It contains three input fields: "Current Password" (containing "admin"), "New Password", and "retype password". Below the fields is a red "Enter" button. The footer contains navigation links for "Back", "Kenny Johnson | Admin", and the current date and time "Monday, March 27, 2017 4:45:21 PM".

5. The change password, where the admin change any password of recorded data.

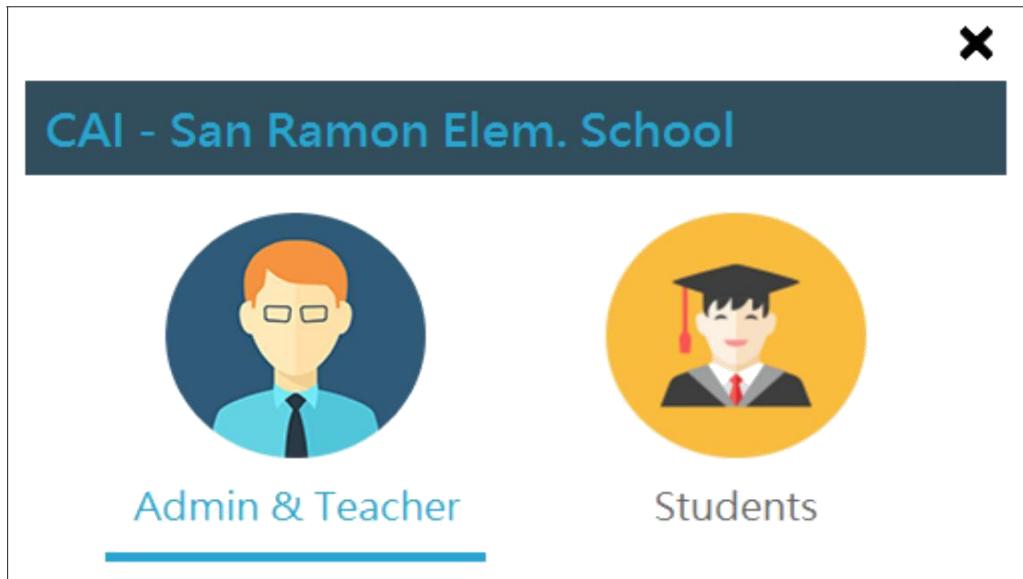
The screenshot shows a web application interface titled "Log Manager". At the top right is a "Log-out" button. Below the title is a table with columns: "Log code", "ID", "Name", "Date", and "Time". The table contains 14 rows of log entries. At the bottom left is a "Back" button, and at the bottom center is a user profile with the name "Kenny Johnson" and the role "Admin" next to a gear icon. On the far right, the time "7:03:35 AM" and date "Tuesday, February 21, 2017" are displayed.

Log code	ID	Name	Date	Time
433	101	admin	February/21/2017	7:02:12 AM
432	101	admin	February/21/2017	7:01:38 AM
431	101	admin	February/21/2017	6:54:50 AM
430	101	admin	February/21/2017	6:50:37 AM
429	1	marime	February/21/2017	5:34:33 AM
428	99866455	admin	February/21/2017	5:33:48 AM
427	11111	mika	February/21/2017	5:22:10 AM
426	11111	mika	February/21/2017	4:21:05 AM
425	11111	mika	February/21/2017	4:20:49 AM
424	11111	mika	February/21/2017	4:18:33 AM
423	1234567	prince	February/21/2017	4:18:20 AM
422	11111	mika	February/21/2017	2:53:15 AM

6. The Log Manager button, where the admin can view the log history of the users

The screenshot shows a web application interface titled "Back up Database". At the top right is a "Log-out" button. In the center is a large rectangular form containing two tabs: "Back up" (which is selected) and "Restore". Inside the form, there is a "Browse" button and a red "Restore" button at the bottom.

7. The backup and restore button, where the admin can backup and restore the data saved in the systems database.



8. The teacher's login menu, when the user login as a teacher this menu will appear. Where the teacher can choose a specific grade, section and subject that the teachers handled in particular time.

ID	Name

9. The teacher module main menu, where the user can add, edit, view, and search a pupil's particular data.

The screenshot shows a software interface titled "Students Information". At the top left is a user icon labeled "Ana Fe | 3-Makadiyos" and "English - teacher". The top right shows the time "7:12:47 AM" and date "Tuesday, February 21, 2017". Below the title is a toolbar with "PDF" and "Excel" buttons, and a search bar labeled "Search Name". The main area displays a table of student records with columns for "Student ID" and "Name". The data includes:

Student ID	Name
109861130323	ALCANTARA, JOHN KENNEDY BAJAMONDE
403348150018	ALAGAR, HARVEY KYLE TESALON
109861130324	ARBOLEDA, BENJO ROBLES
109861130425	BALDERA, JOHN MICHAEL CASTILLO
109861130437	BARSANAS, ROMULO SANEO III
109861130484	BRAGAIS, KURT LIAN LLABRES
109861130327	DE CASTRO, IAN MARCO YASOÑA
109861150201	DIMAYUGA, KING EDWARD WAJE
109861130436	HILIS, JUSTIN MELTON
109861130407	MAÑUGO, CEDRICK DEHNIEL TIGLAO
109861130472	MARASIGAN, LEONARDO URMANETA
428573150011	PALE JR, GLENN SALEGUE
403348150116	PETILO, JOHN BARSANAS
109861130411	RUBIA, CLARENZ ARGEL FAME

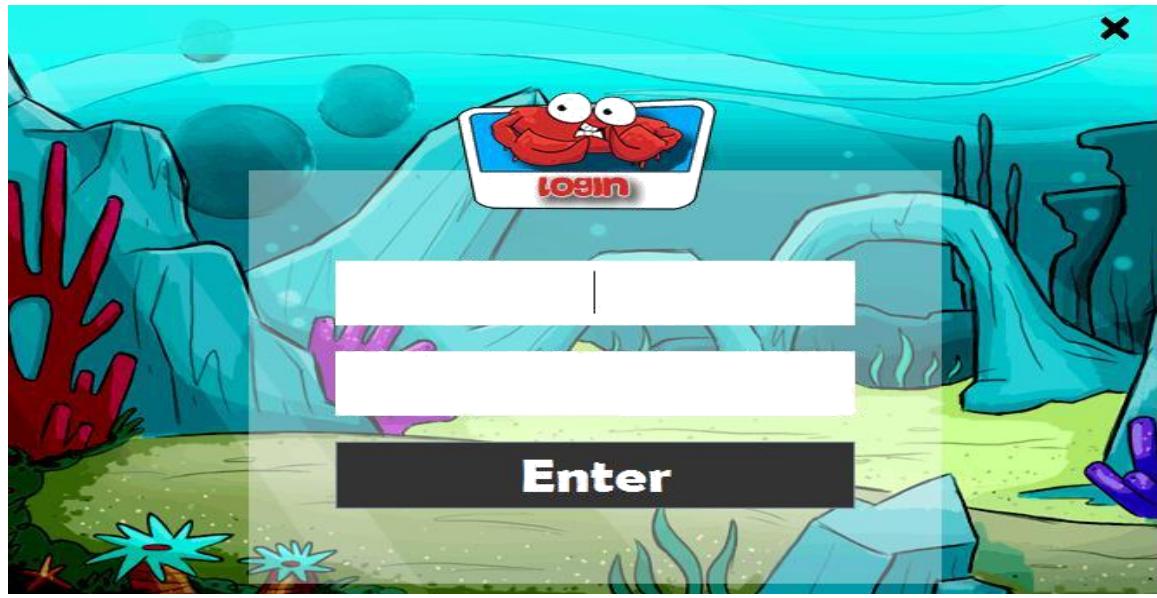
[Back to menu](#)

10. Student button (teacher's module), where the user can view, search and print a pupil's particular data.

The screenshot shows a software interface titled "Lesson 1 - 4". At the top are three buttons: "Students List" (blue), "Students Statistics" (green), and "Your Account" (orange). Below the title is a table with four columns for "Lesson 1", "Lesson 2", "Lesson 3", and "Lesson 4", each containing "Pre-test" and "Post-test" sections. The table has a header row with "Name" and "Pre-test", "Post-test" repeated for each lesson. A large gray area below the table contains a circular arrow icon pointing right. The table rows are as follows:

Name	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test

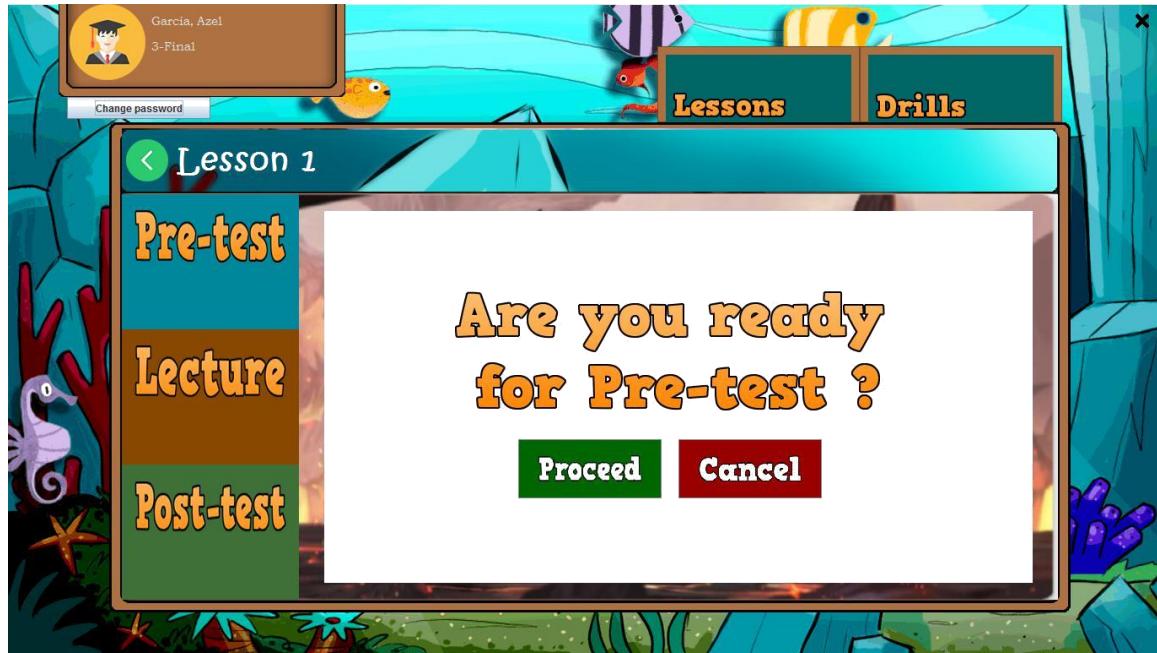
11. The teacher can view the statistic summary reports of the students' progress and level of knowledge in English subject.



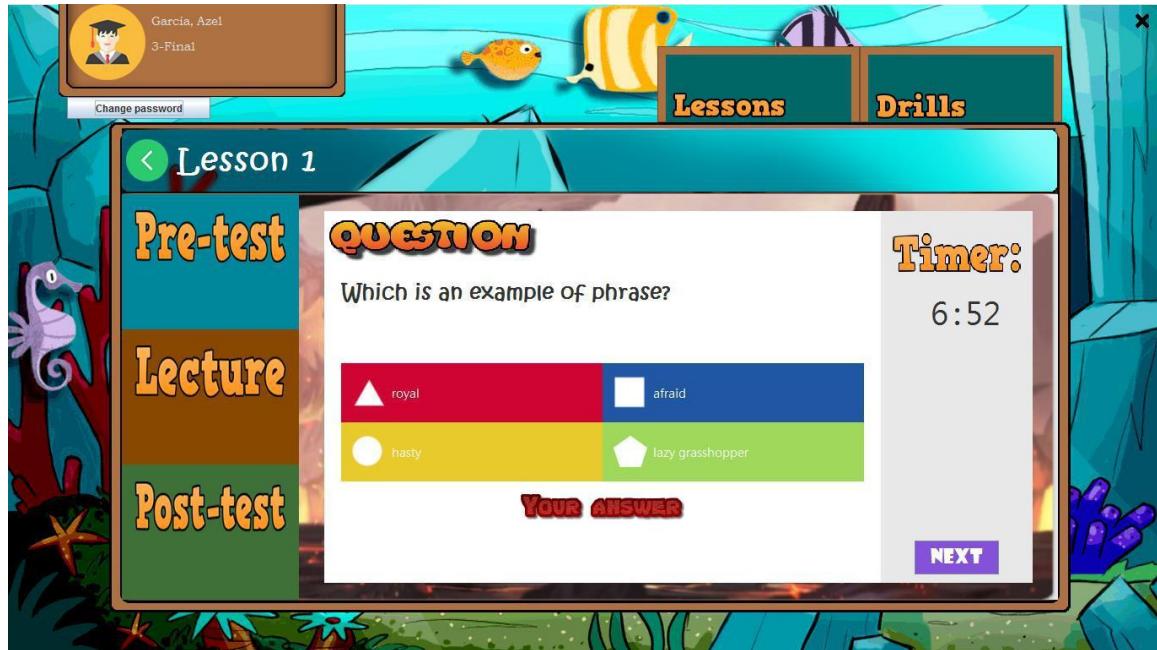
12. The student login module, this menu will appear when a pupil login to take the pupils specific task



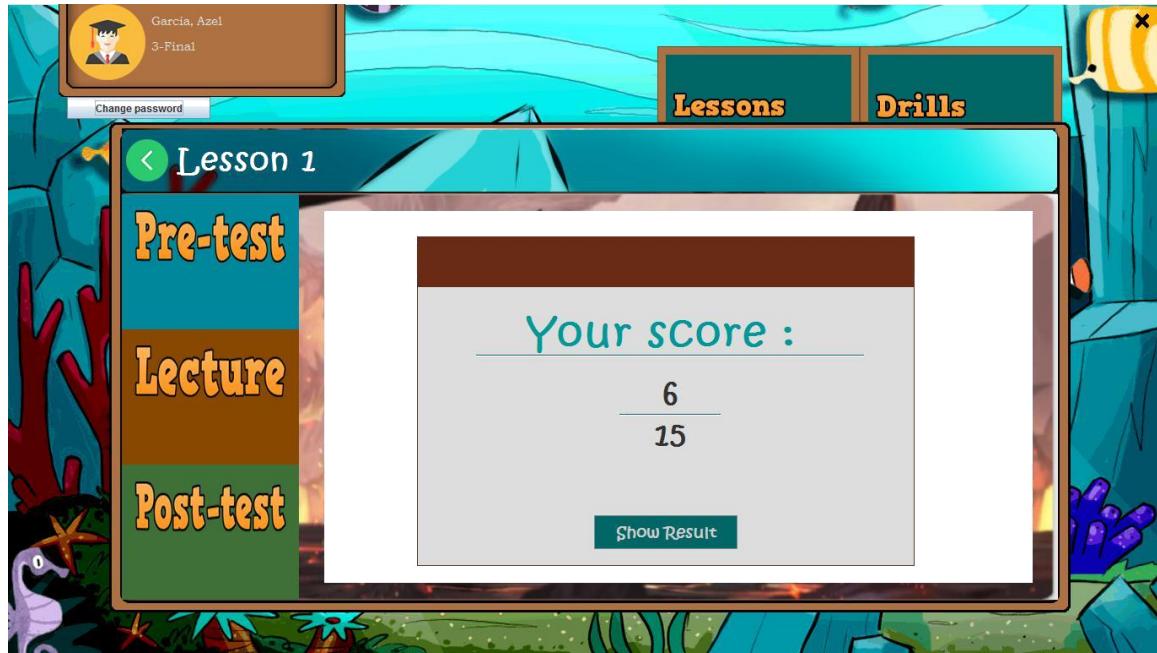
13. The main menu (Student Module), this menu will appear when the pupil finished login. The pupil should choose the specific lesson for the pupil's level.



14. The pre-test button, this menu is for the pupil's quiz that set to test the pupils' initial level of knowledge. The pupils should choose what lesson number is to be taken and performed the specific task, answer the quizzes thoroughly and save the taken task.



15. This will be the main menu of the pre-test button after the pupil select the specific subject.



16. The pre-test score result shows the summary report of the students' scores in the initial examination pre-test.

A screenshot of a digital learning platform with an underwater theme. At the top left is a user profile icon for 'Garcia, Azel' (3-Final) with a 'Change password' button. At the top right are 'Lessons' and 'Drills' tabs. The main area shows 'Lesson 1' with three options: 'Pre-test', 'Lecture', and 'Post-test'. A large central box displays a 'Result' table for 9 questions:

Q#	Question	your answer	correct answer	result
1	It does not express a complete thought.	story	incorrect	
2	It expresses a complete thought	letter	incorrect	
3	Sentences starts with	question mark	incorrect	
4	A sentence could end with?	.	correct	
5	A sentence does NOT ends with?	/	correct	
6	Which is not an example of phrase?	red apple	incorrect	
7	Which is not an example of phrase?	ball and chain	incorrect	
8	Which is an example of phrase?	little red hen	correct	
9	Which is an example of phrase?	lazy grasshopper	correct	

A 'PROCEED' button is at the bottom right of the result box.

17. This menu is the summary report of the students score result in the initial test.



18. This is the drill menu where the pupil can take exercises in a form of games. This menu provides interactive games suitable for the grade three pupils.

A screenshot of a post-test menu titled 'Lesson 1'. On the left, there are three buttons: 'Pre-test' (with a green checkmark icon), 'Lecture' (in large yellow letters), and 'Post-test' (in large green letters). The main area contains a 'QUESTION' section asking 'Which is an example of phrase?' with four options: 'tree' (triangle icon), 'pink' (square icon), 'tired' (circle icon), and 'little red hen' (pentagon icon). Below the question is a 'YOUR ANSWER' field and an 'Answer' button. To the right is a 'Timer:' section showing '6:49' and a 'NEXT' button. The background is an underwater scene with a seahorse, starfish, and fish.

19. The post-test menu, this menu will appear after the student finished the provided lesson for the specific level. Also, this menu serves as the review and final test to monitor the progress of a pupil and to monitor if the pupils level of knowledge improve or not.

# APPENDIX K

## (Program Listing)

## Admin Module

```
import static  
adminmodule.informationpane.pain;  
  
import java.awt.Color;  
import java.awt.Image;  
import java.awt.Rectangle;  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
import java.awt.print.PrinterException;  
import java.io.ByteArrayOutputStream;  
import java.io.File;  
import java.io.FileInputStream;  
import java.io.FileNotFoundException;  
import java.io.FileOutputStream;  
import java.io.IOException;  
import static java.lang.Thread.sleep;  
import java.sql.SQLException;  
import java.util.Calendar;  
import java.util.GregorianCalendar;  
import java.util.Set;  
import java.util.TreeMap; import  
java.util.logging.Level; import  
java.util.logging.Logger; import  
javax.imageio.ImageIO; import  
javax.swing.ImageIcon; import  
javax.swing.JComboBox; import  
javax.swing.JDialog; import  
javax.swing.JFileChooser;  
  
import javax.swing.JFrame;  
import javax.swing.JOptionPane;  
import javax.swing.SwingConstants;  
import  
javax.swing.filechooser.FileFilter;  
import  
javax.swing.filechooser.FileNameExtens  
ionFilter;  
import  
javax.swing.table.DefaultTableCellRend  
erer;  
import  
javax.swing.table.DefaultTableModel;  
import userloginmodule.loginform;  
import mylasthope.database;  
import org.apache.poi.ss.usermodel.Cell;  
import  
org.apache.poi.xssf.usermodel.XSSFRo  
w;  
import  
org.apache.poi.xssf.usermodel.XSSFSHe  
et;  
import  
org.apache.poi.xssf.usermodel.XSSFWo  
rkbook;  
import  
org.jdesktop.swingx.decorator.Highlight  
erFactory;  
import teachersmodule.teachersform;  
  
/**  
*  
* @author Raymundo Family
```

```

*/
public class adminform
extends javax.swing.JFrame {
    DefaultTableCellRenderer center
= new DefaultTableCellRenderer();
    String username = null;
    String password = null;
    String value = null;
    //student status button
    String button = null;
    public static Object id = null;
    //COMBO BOXES (SORT)
    Object grade = null;
    Object section = null;
    //tblstudentsview row #
    public static Object row = 0;
    public JComboBox getCbosort()
    { return cbosort;
    }
    public void setCbosort(JComboBox
cbosort) {
        this.cbosort = cbosort;
    }
    //file input stream
    private final ImageIcon format = null;
    //String filename String
    filename = null;
    int s = 0;
    byte[] personimage = null;
    String path = "";
    /**
     * Creates new form adminform
     */
    public adminform() {
        initComponents();
        center.setHorizontalAlignment(SwingConstants.CENTER);
        cbosort.removeAllItems();
        cbosort.addItem("Search");
        cbosort.addItem("Search ID");
        cbosort.addItem("Search
lastname");
        cbosort.addItem("Search
firstname");
        cbosort.addItem("Search
middlename");
        cbosort.addItem("Search grade");
        cbosort.addItem("Search section");
        username =
loginform.txtusername.getText();
        password =
loginform.txtpassword.getText();
        photovalidation();
        //status
        username();
    }
}

```

```

//Update TIME
setupdatetime();

/* This method is called from within
the constructor to initialize the form.

* WARNING: Do NOT modify this
code. The content of this method is
always

// Displaying DATAS in
table: logmanager();
tblstudents();
tblteachers();
tblgrades();
tblsections();
tblsubjects();
tblteachersenrolled();
tabledesigns.table();

/* regenerated by the Form Editor.

*/
@SuppressWarnings("unchecked")
// <editor-fold
defaultstate="collapsed"
desc="Generated Code">

private void initComponents() {

    JPanel1 = new
    javax.swing.JPanel();

    lbltime = new javax.swing.JLabel();

    lblampm = new
    javax.swing.JLabel();

    lbldate = new javax.swing.JLabel();

    lbl = new javax.swing.JLabel();

    lblname = new
    javax.swing.JLabel();

    jSeparator1 = new
    javax.swing.JSeparator();

    menupanel = new
    javax.swing.JPanel();

    lbldash = new
    javax.swing.JLabel();

    lbllogout = new
    javax.swing.JLabel();

    studentsboard = new
    javax.swing.JPanel();

}

/***

```

```

mainwindow = new
javax.swing.JPanel();

one = new javax.swing.JPanel();
jLabel15 = new
javax.swing.JLabel();
jLabel13 = new
javax.swing.JLabel();
two = new javax.swing.JPanel();
jLabel14 = new
javax.swing.JLabel();
jLabel12 = new
javax.swing.JLabel();
three = new javax.swing.JPanel();
jLabel24 = new
javax.swing.JLabel();
jLabel19 = new
javax.swing.JLabel();
four = new javax.swing.JPanel();
jLabel26 = new
javax.swing.JLabel();
jLabel21 = new
javax.swing.JLabel();
six = new javax.swing.JPanel();
jLabel17 = new
javax.swing.JLabel();
jLabel25 = new
javax.swing.JLabel();
seven = new javax.swing.JPanel();
jLabel20 = new
javax.swing.JLabel();
jLabel27 = new
javax.swing.JLabel();

jLabel39 = new
javax.swing.JLabel();
jLabel37 = new
javax.swing.JLabel();
jLabel34 = new
javax.swing.JLabel();
eight = new javax.swing.JPanel();
jLabel28 = new
javax.swing.JLabel();
jLabel29 = new
javax.swing.JLabel();
studentsview = new
javax.swing.JPanel();
cmdsav1 = new
javax.swing.JButton();
txtsearch = new
javax.swing.JTextField();
btndit = new
javax.swing.JButton();
cbosort = new
javax.swing.JComboBox();
btndrop = new
javax.swing.JButton();
btnnew = new
javax.swing.JButton();
jPanel2 = new
javax.swing.JPanel();
jLabel33 = new
javax.swing.JLabel();
jLabel40 = new
javax.swing.JLabel();
jLabel41 = new
javax.swing.JLabel();

```

```

jLabel42 = new
javax.swing.JLabel();

jScrollPane12 = new
javax.swing.JScrollPane();

tblstudentsview = new
org.jdesktop.swingx.JXTable();

lblback1 = new
javax.swing.JLabel();

jLabel1 = new
javax.swing.JLabel();

jLabel2 = new
javax.swing.JLabel();

studentsettings = new
javax.swing.JPanel();

btnclose = new
javax.swing.JButton();

jLabel58 = new
javax.swing.JLabel();

txtsection = new
javax.swing.JTextField();

txtgrade = new
javax.swing.JTextField();

jLabel57 = new
javax.swing.JLabel();

jLabel56 = new
javax.swing.JLabel();

txtlastname = new
javax.swing.JTextField();

txtmiddlename = new
javax.swing.JTextField();

jLabel55 = new
javax.swing.JLabel();

jLabel54 = new
javax.swing.JLabel();

txtfirstname = new
javax.swing.JTextField();

txtstudentid = new
javax.swing.JTextField();

jLabel53 = new
javax.swing.JLabel();

lblpicture = new
javax.swing.JLabel();

lblback7 = new
javax.swing.JLabel();

teachersview = new
javax.swing.JPanel();

cbosort1 = new
javax.swing.JComboBox();

jTextField2 = new
javax.swing.JTextField();

cmdsave2 = new
javax.swing.JButton();

btndit4 = new
javax.swing.JButton();

btndit5 = new
javax.swing.JButton();

btndit6 = new
javax.swing.JButton();

jPanel3 = new
javax.swing.JPanel();

jLabel44 = new
javax.swing.JLabel();

jLabel45 = new
javax.swing.JLabel();

btndit12 = new
javax.swing.JButton();

jScrollPane13 = new
javax.swing.JScrollPane();

```

```

tblteachersview = new
org.jdesktop.swingx.JXTable();

lblback2 = new
javax.swing.JLabel();

teachersettings = new
javax.swing.JPanel();

txtaccountid1 = new
javax.swing.JTextField();

jLabel60 = new
javax.swing.JLabel();

txtfirstname1 = new
javax.swing.JTextField();

txtmiddlename1 = new
javax.swing.JTextField();

jLabel61 = new
javax.swing.JLabel();

jLabel62 = new
javax.swing.JLabel();

txtlastname1 = new
javax.swing.JTextField();

txtgrade1 = new
javax.swing.JTextField();

jLabel63 = new
javax.swing.JLabel();

jLabel64 = new
javax.swing.JLabel();

txtsection1 = new
javax.swing.JTextField();

btndate1 = new
javax.swing.JButton();

btndate2 = new
javax.swing.JButton();

btndate3 = new
javax.swing.JButton();

btndate4 = new
javax.swing.JButton();

btndate5 = new
javax.swing.JButton();

btndate6 = new
javax.swing.JButton();

btndate7 = new
javax.swing.JButton();

jLabel69 = new
javax.swing.JLabel();

txtsubject1 = new
javax.swing.JTextField();

jLabel70 = new
javax.swing.JLabel();

jScrollPane15 = new
javax.swing.JScrollPane();

tblteacher = new
org.jdesktop.swingx.JXTable();

jScrollPane16 = new
javax.swing.JScrollPane();

tblteacherenrolled = new
org.jdesktop.swingx.JXTable();

btnreturn1 = new
javax.swing.JButton();

btnreturn2 = new
javax.swing.JButton();

jLabel71 = new
javax.swing.JLabel();

jLabel72 = new
javax.swing.JLabel();

teachereditform = new
javax.swing.JPanel();

btndate8 = new
javax.swing.JButton();

jLabel74 = new
javax.swing.JLabel();

textlname = new
javax.swing.JTextField();

textmname = new
javax.swing.JTextField();

jLabel75 = new
javax.swing.JLabel();

jLabel76 = new
javax.swing.JLabel();

```

```

textfname = new
javax.swing.JTextField();

textaccountid = new
javax.swing.JTextField();

jLabel77 = new
javax.swing.JLabel();

btnedit2 = new
javax.swing.JButton();

textpassword = new
javax.swing.JTextField();

jLabel78 = new
javax.swing.JLabel();

jLabel79 = new
javax.swing.JLabel();

textusername = new
javax.swing.JTextField();

levelspanel = new
javax.swing.JPanel();

jScrollPane9 = new
javax.swing.JScrollPane();

tbllevels = new
org.jdesktop.swingx.JXTable();

btnlevel_save = new
javax.swing.JButton();

btnleveldelete = new
javax.swing.JButton();

txtlevelname = new
javax.swing.JTextField();

jLabel66 = new
javax.swing.JLabel();

lblback3 = new
javax.swing.JLabel();

sectionspanel = new
javax.swing.JPanel();

btnsection_save = new
javax.swing.JButton();

btnsectionsdelete = new
javax.swing.JButton();

txtsec = new
javax.swing.JTextField();

jScrollPane10 = new
javax.swing.JScrollPane();

tblsections = new
org.jdesktop.swingx.JXTable();

jLabel67 = new
javax.swing.JLabel();

lblback4 = new
javax.swing.JLabel();

subjectpanel = new
javax.swing.JPanel();

jScrollPane14 = new
javax.swing.JScrollPane();

tblsubjects = new
org.jdesktop.swingx.JXTable();

txtsubject = new
javax.swing.JTextField();

jLabel68 = new
javax.swing.JLabel();

btndaysave = new
javax.swing.JButton();

btndaydelete = new
javax.swing.JButton();

lblback8 = new
javax.swing.JLabel();

reportspanel = new
javax.swing.JPanel();

lblback5 = new
javax.swing.JLabel();

```

```

        logpanel = new
        javax.swing.JPanel();
        jScrollPane11 = new
        javax.swing.JScrollPane();
        tbllogmanager = new
        org.jdesktop.swingx.JXTable();
        lblback6 = new
        javax.swing.JLabel();
        jPanel4 = new
        javax.swing.JPanel();
        jLabel43 = new
        javax.swing.JLabel();
        jLabel46 = new
        javax.swing.JLabel();
        jLabel47 = new
        javax.swing.JLabel();
        jLabel48 = new
        javax.swing.JLabel();
        jLabel38 = new
        javax.swing.JLabel();
        lblsettings = new
        javax.swing.JLabel();
        background = new
        javax.swing.JLabel();
        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setUndecorated(true);
        jPanel1.setBackground(new
        java.awt.Color(11, 16, 21));
        jPanel1.setLayout(new
        org.netbeans.lib.awtextra.AbsoluteLayout());
        lbltime.setFont(new
        java.awt.Font("Yu Gothic UI Light",
        0, 38)); // NOI18N
        lbltime.setForeground(new
        java.awt.Color(255, 255, 255));
        lbltime.setHorizontalAlignment(javax.s
        wing.SwingConstants.CENTER);
        lbltime.setText("10:23:12");
        jPanel1.add(lbltime, new
        org.netbeans.lib.awtextra.AbsoluteConst
        raints(1150, 690, 140, -1));
        lblampm.setFont(new
        java.awt.Font("Yu Gothic UI Light",
        0, 38)); // NOI18N
        lblampm.setForeground(new
        java.awt.Color(255, 255, 255));
        lblampm.setText("PM");
        jPanel1.add(lblampm, new
        org.netbeans.lib.awtextra.AbsoluteConst
        raints(1290, 690, 60, -1));
        lbldate.setFont(new
        java.awt.Font("Yu Gothic UI Light",
        0, 14)); // NOI18N
        lbldate.setForeground(new
        java.awt.Color(204, 204, 204));
        lbldate.setHorizontalAlignment(javax.s
        wing.SwingConstants.CENTER);
    
```

```

        lbldate.setText("Sunday, January
1, 2017");

        jPanel1.add(lbldate, new
org.netbeans.lib.awtextra.AbsoluteConstraints(1150, 740, 200, -1));

        lbl.setFont(new java.awt.Font("Yu
Gothic UI Light", 0, 24)); // NOI18N

        lbl.setForeground(new
java.awt.Color(255, 255, 255));

        lbl.setText("Admin");

        jPanel1.add(lbl, new
org.netbeans.lib.awtextra.AbsoluteConstraints(250, 710, 70, 40));

        lblname.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 24)); // NOI18N

        lblname.setForeground(new
java.awt.Color(255, 255, 255));

        lblname.setHorizontalAlignment(javax.s
wing.SwingConstants.RIGHT);

        lblname.setText("Prince Ivan
Kent");

        jPanel1.add(lblname, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 710, 220, 40));

jSeparator1.setOrientation(javax.s
wing.SwingConstants.VERTICAL);

        jPanel1.add(jSeparator1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(240, 700, 10, 60));

```

```

        menupanel.setBackground(new
java.awt.Color(44, 62, 80));

        menupanel.setLayout(null);

        lbldash.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 36)); // NOI18N

        lbldash.setForeground(new
java.awt.Color(255, 255, 255));

        lbldash.setText("Main Menu");

        menupanel.add(lbldash);

        lbldash.setBounds(10, 10, 340, 60);

        lbllogout.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 18)); // NOI18N

        lbllogout.setForeground(new
java.awt.Color(255, 255, 255));

        lbllogout.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

        lbllogout.setText("Log-out");

        lbllogout.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));

        lbllogout.addMouseListener(new
java.awt.event.MouseAdapter() {

            public void
mouseClicked(java.awt.event.MouseEve
nt evt) {

                lbllogoutMouseClicked(evt);
            }

```

```

    });

    menupanel.add(lbllogout);
    lbllogout.setBounds(1150, 10, 80,
60);

    JPanel1.add(menupanel, new
org.netbeans.lib.awtextra.AbsoluteConstraints(70, 90, 1240, 80));

    studentsboard.setLayout(new
java.awt.CardLayout());

    mainwindow.setBackground(new
java.awt.Color(253, 241, 225));

    mainwindow.setLayout(new
org.netbeans.lib.awtextra.AbsoluteLayout());

    one.setBackground(new
java.awt.Color(0, 135, 156));

    one.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));

    one.addMouseListener(new
java.awt.event.MouseAdapter() {

        public void
mouseClicked(java.awt.event.MouseEve
nt evt) {

            oneMouseClicked(evt);
        }
    }

    public void
mouseEntered(java.awt.event.MouseEve
nt evt) {
}
}

    oneMouseEntered(evt);
}

public void
mouseExited(java.awt.event.MouseEven t
evt) {
}

oneMouseExited(evt);
}

});

one.setLayout(null);

jLabel15.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

jLabel15.setForeground(new
java.awt.Color(255, 255, 255));

jLabel15.setText("Students");

one.add(jLabel15);

jLabel15.setBounds(20, 60, 100,
30);

jLabel13.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

jLabel13.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/admin-student.png"))); // NOI18N

one.add(jLabel13);

jLabel13.setBounds(200, 10, 70,
80);

```

```

mainwindow.add(one, new
org.netbeans.lib.awtextra.AbsoluteConstraints(60, 60, 280, 100));

two.setBackground(new
java.awt.Color(131, 75, 60));
two.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));
two.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEvent
evt) {

        twoMouseClicked(evt);
    }

    public void
mouseEntered(java.awt.event.MouseEvent
evt) {

        twoMouseEntered(evt);
    }

    public void
mouseExited(java.awt.event.MouseEvent
evt) {
        twoMouseExited(evt);
    }
});;
two.setLayout(null);

jLabel14.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N
jLabel14.setForeground(new
java.awt.Color(255, 255, 255));
jLabel14.setText("Teachers");
two.add(jLabel14);
jLabel14.setBounds(20, 60, 100,
30);

jLabel12.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);
jLabel12.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/teachers.png"))); // //
NOI18N
two.add(jLabel12);
jLabel12.setBounds(200, 10, 70,
80);

mainwindow.add(two, new
org.netbeans.lib.awtextra.AbsoluteConstraints(360, 60, 280, 100));

three.setBackground(new
java.awt.Color(0, 106, 181));
three.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));
three.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEvent
evt) {
        threeMouseClicked(evt);
    }
});

```

```

        public void
mouseEntered(java.awt.event.MouseEve
nt evt) {
            threeMouseEntered(evt);
        }

        public void
mouseExited(java.awt.event.MouseEvent t
evt) {
            threeMouseExited(evt);
        }
    });

    three.setLayout(null);

    jLabel24.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

    jLabel24.setForeground(new
java.awt.Color(255, 255, 255));
    jLabel24.setText("Levels");
    three.add(jLabel24);
    jLabel24.setBounds(20, 60, 100,
30);

    jLabel19.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

    jLabel19.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/admin-levels.png"))); // 
NOI18N

    three.add(jLabel19);
    jLabel19.setBounds(200, 10, 70,
80);

    mainwindow.add(three, new
org.netbeans.lib.awtextra.AbsoluteConstraints(60, 210, 280, 100));

    four.setBackground(new
java.awt.Color(44, 62, 80));
    four.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));
    four.addMouseListener(new
java.awt.event.MouseAdapter() {

        public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
            fourMouseClicked(evt);
        }

        public void
mouseEntered(java.awt.event.MouseEve
nt evt) {
            fourMouseEntered(evt);
        }

        public void
mouseExited(java.awt.event.MouseEven
t evt) {
            fourMouseExited(evt);
        }
    });

    four.setLayout(null);

    jLabel26.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

```

```

        jLabel26.setForeground(new
java.awt.Color(255, 255, 255));
        jLabel26.setText("Sections");
        four.add(jLabel26);
        jLabel26.setBounds(20, 60, 110,
30);

jLabel21.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);
        jLabel21.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/admin-sections.png")));
// NOI18N

        four.add(jLabel21);
        jLabel21.setBounds(190, 10, 80,
80);

mainwindow.add(four, new
org.netbeans.lib.awtextra.AbsoluteConstraints(360, 210, 280, 100));

six.setBackground(new
java.awt.Color(195, 104, 0));

six.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));
        six.addMouseListener(new
java.awt.event.MouseAdapter() {

        public void
mouseClicked(java.awt.event.MouseEve
nt evt) {

        sixMouseClicked(evt);
    }
}

public void
mouseEntered(java.awt.event.MouseEve
nt evt) {
        sixMouseEntered(evt);
    }

        public void
mouseExited(java.awt.event.MouseEven
t evt) {
        sixMouseExited(evt);
    }

});;
six.setLayout(null);

jLabel17.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

        jLabel17.setForeground(new
java.awt.Color(255, 255, 255));
        jLabel17.setText("Log Manager");
        six.add(jLabel17);
        jLabel17.setBounds(20, 60, 110,
30);

jLabel25.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);
        jLabel25.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/admin-
logmanager.png"))); // NOI18N

        six.add(jLabel25);
        jLabel25.setBounds(200, 10, 70,
80);

```

```

        mainwindow.add(six, new
org.netbeans.lib.awtextra.AbsoluteConstraints(60, 370, 280, 100));

        seven.setBackground(new
java.awt.Color(62, 112, 56));

        seven.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));

        seven.addMouseListener(new
java.awt.event.MouseAdapter() {
            public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
                sevenMouseClicked(evt);
            }
            public void
mouseEntered(java.awt.event.MouseEve
nt evt) {
                sevenMouseEntered(evt);
            }
            public void
mouseExited(java.awt.event.MouseEven t
evt) {
                sevenMouseExited(evt);
            }
        });
        seven.setLayout(null);

        jLabel20.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

        jLabel20.setForeground(new
java.awt.Color(255, 255, 255));
        jLabel20.setText("Back up");
        seven.add(jLabel20);

        jLabel20.setBounds(20, 60, 110,
30);

        jLabel27.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);
        jLabel27.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/admin-backup.png")));
// NOI18N

        seven.add(jLabel27);
        jLabel27.setBounds(200, 10, 70,
80);

        mainwindow.add(seven, new
org.netbeans.lib.awtextra.AbsoluteConstraints(360, 370, 280, 100));

        jLabel39.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 24)); // NOI18N

        jLabel39.setForeground(new
java.awt.Color(102, 102, 102));
        jLabel39.setText("People");
        mainwindow.add(jLabel39, new
org.netbeans.lib.awtextra.AbsoluteConstraints(60, 20, 140, 40));

```

```

jLabel37.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 24)); // NOI18N

jLabel37.setForeground(new
java.awt.Color(102, 102, 102));

jLabel37.setText("Courses");

mainwindow.add(jLabel37, new
org.netbeans.lib.awtextra.AbsoluteConstraints(60, 170, 150, 40));

jLabel34.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 24)); // NOI18N

jLabel34.setForeground(new
java.awt.Color(102, 102, 102));

jLabel34.setText("Maintenance");

mainwindow.add(jLabel34, new
org.netbeans.lib.awtextra.AbsoluteConstraints(60, 330, 150, 40));

eight.setBackground(new
java.awt.Color(0, 60, 69));

eight.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));

eight.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {

        eightMouseClicked(evt);
    }
}

public void
mouseEntered(java.awt.event.MouseEve
nt evt) {

    eightMouseEntered(evt);
}

public void
mouseExited(java.awt.event.MouseEven
t evt) {

    eightMouseExited(evt);
}

});

eight.setLayout(null);

jLabel28.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

jLabel28.setForeground(new
java.awt.Color(255, 255, 255));

jLabel28.setText("Subjects");

eight.add(jLabel28);

jLabel28.setBounds(20, 60, 110,
30);

jLabel29.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

jLabel29.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/admin-
subjects.png"))); // NOI18N

eight.add(jLabel29);

jLabel29.setBounds(200, 10, 70,
80);

```

```

        mainwindow.add(eight, new
org.netbeans.lib.awtextra.AbsoluteConstraints(660, 210, 280, 100));

        studentsboard.add(mainwindow,
"card10");

        studentsview.setBackground(new
java.awt.Color(253, 241, 225));

        studentsview.setLayout(new
org.netbeans.lib.awtextra.AbsoluteLayout());
}

        cmdsave1.setBackground(new
java.awt.Color(49, 147, 212));

        cmdsave1.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

        cmdsave1.setForeground(new
java.awt.Color(255, 255, 255));

        cmdsave1.setIcon(new
javax.swing.ImageIcon(getClass().getResource(
"/pictures/search.png"))); // NOI18N

        cmdsave1.setFocusable(false);

        studentsview.add(cmdsave1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(1130, 20, 40, 30));

        txtsearch.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

        txtsearch.setForeground(new
java.awt.Color(51, 51, 51));

        txtsearch.setText("Search");

        txtsearch.addMouseListener(new
java.awt.event.MouseAdapter() {

            public void
mousePressed(java.awt.event.MouseEvent evt) {

                txtsearchMousePressed(evt);
            }

            public void
keyReleased(java.awt.event.KeyEvent evt) {

                txtsearchKeyReleased(evt);
            }
        });

        txtsearch.addActionListener(new
java.awt.event.ActionListener() {

            public void
 actionPerformed(java.awt.event.ActionEvent evt) {
                txtsearchActionPerformed(evt);
            }
        });
    }

    private void txtsearchActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void txtsearchMousePressed(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
    }

    private void txtsearchKeyReleased(java.awt.event.KeyEvent evt) {
        // TODO add your handling code here:
    }

    private void txtsearchActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }
}

```

```

btredit.addActionListener(new
java.awt.event.ActionListener() {
    public void
actionPerformed(java.awt.event.ActionEvent evt) {
        btreditActionPerformed(evt);
    }
});

studentsview.add(btredit, new
org.netbeans.lib.awtextra.AbsoluteConstraints(990, 470, 90, 30));

cbosort.setBackground(new
java.awt.Color(135, 79, 55));

cbosort.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

cbosort.setForeground(new
java.awt.Color(255, 255, 255));

cbosort.setModel(new
javax.swing.DefaultComboBoxModel(n
ew String[] { "Item 1", "Item 2", "Item
3", "Item 4" }));
}

cbosort.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));

cbosort.setFocusable(false);

cbosort.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEvent evt) {
        cbosortMouseClicked(evt);
    }
});

public void
mouseEntered(java.awt.event.MouseEvent evt) {
    cbosortMouseEntered(evt);
}

cbosort.addItemListener(new
java.awt.event.ItemListener() {

    public void
itemStateChanged(java.awt.event.ItemEvent evt) {
        cbosortItemStateChanged(evt);
    }
});

cbosort.addActionListener(new
java.awt.event.ActionListener() {

    public void
actionPerformed(java.awt.event.ActionEvent evt) {
        cbosortActionPerformed(evt);
    }
});

cbosort.addFocusListener(new
java.awt.event.FocusAdapter() {

    public void
focusGained(java.awt.event.FocusEvent evt) {
        cbosortFocusGained(evt);
    }
});

studentsview.add(cbosort, new
org.netbeans.lib.awtextra.AbsoluteConstraints(780, 20, 170, 30));

```

```

        btndrop.setBackground(new
java.awt.Color(60, 14, 0));

        btndrop.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

        btndrop.setForeground(new
java.awt.Color(255, 255, 255));

        btndrop.setText("Drop");

        btndrop.setFocusable(false);

        btndrop.addActionListener(new
java.awt.event.ActionListener() {

    public void
actionPerformed(java.awt.event.ActionEvent
evt) {

        btndropActionPerformed(evt);

    }
});

        studentsview.add(btndrop, new
org.netbeans.lib.awtextra.AbsoluteConstraints(1080, 470, 90, 30));
    }

    btnnew.setBackground(new
java.awt.Color(136, 34, 0));

    btnnew.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

    btnnew.setForeground(new
java.awt.Color(255, 255, 255));

    btnnew.setText("New");

    btnnew.setFocusable(false);

    btnnew.addActionListener(new
java.awt.event.ActionListener() {

```

```

        public void
actionPerformed(java.awt.event.ActionEvent
evt) {

        btnnewActionPerformed(evt);

    }
});

        studentsview.add(btnnew, new
org.netbeans.lib.awtextra.AbsoluteConstraints(900, 470, 90, 30));
    }

    jPanel2.setBackground(new
java.awt.Color(50, 56, 61));

    jPanel2.setLayout(new
org.netbeans.lib.awtextra.AbsoluteLayout());
}

jLabel33.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 24)); // NOI18N

jLabel33.setForeground(new
java.awt.Color(255, 255, 255));

jLabel33.setText("Sections");

jPanel2.add(jLabel33, new
org.netbeans.lib.awtextra.AbsoluteConstraints(960, 0, 90, 40));
}

jLabel40.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 24)); // NOI18N

jLabel40.setForeground(new
java.awt.Color(255, 255, 255));

jLabel40.setText("ID#");

```

```

        jPanel2.add(jLabel40, new
org.netbeans.lib.awtextra.AbsoluteConstraints(80, 0, 60, 40));
        },
        new String [] {
        }

        jLabel41.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 24)); // NOI18N

        jLabel41.setForeground(new
java.awt.Color(255, 255, 255));

        jLabel41.setText("Student Name");

        jPanel2.add(jLabel41, new
org.netbeans.lib.awtextra.AbsoluteConstraints(380, 0, 150, 40));

        jLabel42.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 24)); // NOI18N

        jLabel42.setForeground(new
java.awt.Color(255, 255, 255));

        jLabel42.setText("Grade");

        jPanel2.add(jLabel42, new
org.netbeans.lib.awtextra.AbsoluteConstraints(790, 0, 70, 40));

        studentsview.add(jPanel2, new
org.netbeans.lib.awtextra.AbsoluteConstraints(70, 50, 1099, 40));

        tblstudentsview.setForeground(new
java.awt.Color(51, 51, 51));

        tblstudentsview.setModel(new
javax.swing.table.DefaultTableModel(
new Object [][] {
        }

        }
        ));

tblstudentsview.setColumnMargin(0);
tblstudentsview.setEditable(false);

tblstudentsview.setFocusable(false);
tblstudentsview.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

tblstudentsview.setGridColor(new
java.awt.Color(204, 204, 204));

tblstudentsview.setRequestFocusEnable
d(false);

tblstudentsview.setRowHeight(35);
tblstudentsview.setRowMargin(0);

tblstudentsview.setSelectionBackground
(new java.awt.Color(85, 132, 85));

tblstudentsview.setSelectionForeground( new
java.awt.Color(236, 240, 241));

tblstudentsview.setShowVerticalLines(fa
lse);

tblstudentsview.addMouseListener(new
java.awt.event.MouseAdapter() {

```

```

        public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
    tblstudentsviewMouseClicked(evt);
}

tblstudentsviewMouseClicked(evt);

jScrollPane12.setViewportView(tblstude
ntsview);
// NOI18N

studentsview.add(jScrollPane12,
new
org.netbeans.lib.awtextra.AbsoluteConstraints(70, 90, 1100, 380));

lblback1.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 18)); // NOI18N

lblback1.setForeground(new
java.awt.Color(51, 51, 51));

lblback1.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);
lblback1.setText("Back");

lblback1.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));
lblback1.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
    lblback1MouseClicked(evt);
}
});
```

```

        studentsview.add(lblback1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(0, 470, 60, 40));

        jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/xls-icon-3379.png")));
// NOI18N

        jLabel1.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));
        jLabel1.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
        jLabel1MouseClicked(evt);
    }
});
```

```

        studentsview.add(jLabel1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(70, 10, 50, 40));

        jLabel2.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/pdf.png"))); // NOI18N

        jLabel2.setCursor(new
java.awt.Cursor(java.awt.Cursor.HAND
_CURSOR));
        jLabel2.addMouseListener(new
java.awt.event.MouseAdapter() {
```

```

        public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
    jLabel2MouseClicked(evt);
}

});

studentsview.add(jLabel2, new
org.netbeans.lib.awtextra.AbsoluteConstraints(130, 10, 50, 40));

studentsboard.add(studentsview,
"card2");

studentsettings.setBackground(new
java.awt.Color(253, 241, 225));

studentsettings.setLayout(new
org.netbeans.lib.awtextra.AbsoluteLayou
t());

btnsave.setBackground(new
java.awt.Color(170, 34, 0));

btnsave.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

btnsave.setForeground(new
java.awt.Color(255, 255, 255));

btnsave.setText("SAVE");

btnsave.setFocusable(false);

btnsave.addActionListener(new
java.awt.event.ActionListener() {

    public void
actionPerformed(java.awt.event.ActionEvent
nt evt) {
        btnsaveActionPerformed(evt);
    }
});
});

studentsettings.add(btnsave, new
org.netbeans.lib.awtextra.AbsoluteConstraints(560, 450, 180, 40));

jLabel58.setBackground(new
java.awt.Color(255, 255, 255));

jLabel58.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 16)); // NOI18N

jLabel58.setForeground(new
java.awt.Color(51, 51, 51));

jLabel58.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

jLabel58.setText("Section");

studentsettings.add(jLabel58, new
org.netbeans.lib.awtextra.AbsoluteConstraints(370, 400, 100, 40));

txtsection.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

txtsection.setForeground(new
java.awt.Color(51, 51, 51));

txtsection.setHorizontalAlignment(javax.
swing.JTextField.CENTER);

txtsection.setBorder(javax.swing.BorderFactory.
createLineBorder(new
java.awt.Color(0, 102, 102)));

```

```

studentsettings.add(txtsection, new
org.netbeans.lib.awtextra.AbsoluteConstraints(470, 400, 360, 40));

txtgrade.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

txtgrade.setForeground(new
java.awt.Color(51, 51, 51));

txtgrade.setHorizontalAlignment(javax.s
wing.JTextField.CENTER);

txtgrade.setBorder(javax.swing.BorderF
actory.createLineBorder(new
java.awt.Color(0, 102, 102)));

studentsettings.add(txtgrade, new
org.netbeans.lib.awtextra.AbsoluteConstraints(470, 350, 360, 40));

jLabel57.setBackground(new
java.awt.Color(255, 255, 255));

jLabel57.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 16)); // NOI18N

jLabel57.setForeground(new
java.awt.Color(51, 51, 51));

jLabel57.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

jLabel57.setText("Lastname");

studentsettings.add(jLabel56, new
org.netbeans.lib.awtextra.AbsoluteConstraints(370, 300, 100, 40));

txtlastname.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

public teachersform() {
    initComponents();

    //remove all items in combo boxes

    cbostudentsearch.removeAllItems();
    cbocorrectans.removeAllItems();
    cbocorrectans1.removeAllItems();
    cbolessons.removeAllItems();
    cbolectures.removeAllItems();

    //user details
}

```

```

        userid =
Integer.parseInt(String.valueOf(userdetai
ls.lbluserid.getText()));

        usertable =
userdetails.lblusertype.getText();

        username =
userdetails.lblusername.getText();

        password =
userdetails.lbluserpassword.getText();

        userdetails();

        username();

maxnumber();

tableinterface();

tbllesson();

tbllessonsetting();

tablestudent();

tblquizzesformat();

tblplaylectureformat();

tablestudentsetting();

tbllecture();

tblquiz();

setupdatetime();

cbofill();

cbolessons();

Teacher Module

//initiates students form

```

```

mainboardpanel.removeAll();
mainboardpanel.repaint();
mainboardpanel.revalidate();

mainboardpanel.add(studentspanel);
lbldashboard.setText("Menu");

// lbldashboard.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/students-flat.png")));

path.setVisible(false);

lblnumber.setVisible(false);

//textarea over writing

txtlessondescription1.setBorder(BorderF
actory.createEmptyBorder(5, 5, 5, 5));

//question box validation

if(txtquestion1.getText().equals("Type
question here")){
    txtquestion1.setForeground(new
Color(51,51,51));
}

else{
    txtquestion1.setForeground(Color.BLAC
K);
}

private void cbofill(){

```

```

cbocorrectans.addItem(txttriangle.getText());
cbocorrectans.addItem(txtsquare.getText());
cbocorrectans.addItem(txtcircle.getText());
cbocorrectans.addItem(txtpentagon.getText());
cbocorrectans1.removeAllItems();
cbocorrectans1.addItem(txtchoicea1.getText());
cbocorrectans1.addItem(txtchoiceb1.getText());
cbocorrectans1.addItem(txtchoicec1.getText());
cbocorrectans1.addItem(txtchoiced1.getText());
cbostudentsearch.addItem("Search Name");
cbostudentsearch.addItem("Search ID");
//cbolessons
try{
    database.open();
    database.rs =
    database.st.executeQuery("Select lessonno from tbllesson where grade =
    "+grade+" and section =
    "+section+" and subject =
    "+subject+" group by lessonno");
    while(database.rs.next()){
        cbolectures.addItem(database.rs.getString(1));
    }
}catch(Exception e){
    JOptionPane.showMessageDialog(null, e.getMessage());
}
Object selected;
private void maxnumber(){
    try{
        database.open();
        database.rs =
        database.st.executeQuery("Select max(questionno) from tblquiz where
        grade = "+grade+" and section =
        "+section+" and subject = "+subject+
        " and lessonno = "+selected+"");
        while(database.rs.next()){
            lblnumber.setText(database.rs.getString(1));
        }
        if(lblnumber.getText()==null){

```

```

        }

lblnextnumber.setText(""+1);
    }

    if(lblnumber.getText()!=null){
        int num =
Integer.parseInt(String.valueOf(lblnumb
er.getText()));

        int sum = (int)(num+1);

lblnextnumber.setText(""+sum);
    }

}catch(SQLException e){

JOptionPane.showMessageDialog(null,
e.getMessage());
}

private void cbolessons(){

cbolessons.addItem("Select Lesson
#");
tblquiz();
try{
    database.open();
    database.rs =
database.st.executeQuery("Select
lessonno from tbllesson where grade =
"+grade+" and section = "+section+
" and subject = "+subject+"");
while(database.rs.next()){
    cbolessons.addItem(database.rs.getStrin
g(1));
}
}

}catch(SQLException e){

JOptionPane.showMessageDialog(null,
e.getMessage());
}

cbolessons.addActionListener(new
ActionListener() {

@Override
public void
actionPerformed(ActionEvent event) {

JComboBox cbosort =
(JComboBox) event.getSource();
selected =
cbosort.getSelectedItem();
if(selected.equals(selected)){
tblquiz();
maxnumber();
}
switch (selected.toString()) {
case "Male":
break;
case "Female":
break;
}
});

}};

//all in one query
}

```

```

        private void managedata(String sql,
String msg, int msgtype, String title){

    try{
        database.open();
        if(sql.isEmpty()){
            JOptionPane.showMessageDialog(this,
"Check your information", "",
JOptionPane.WARNING_MESSAGE);
        }
        else{
            database.st.execute(sql);

            JOptionPane.showMessageDialog(this,
msg, title, msgtype);

            clearlessontexts();
            clearstudenttexts();
        }
        database.close();
    }catch(SQLException e){
        JOptionPane.showMessageDialog(null,
e.getMessage());
    }
}

private void clearstudenttexts(){

    txtstudentid.setText(null);
    txtfirstname.setText(null);
    txtmiddlename.setText(null);
    txtlastname.setText(null);
}
}

private void clearlessontexts(){

    txtcode1.setText(null);
    txtlessonno1.setText(null);
    txtlessontopic1.setText(null);
    txtlessondescription1.setText(null);
}

private void.userdetails(){

    grade =
Integer.parseInt(String.valueOf(userdetails.
cbograde.getSelectedItem()));

    section =
userdetails.cbosection.getSelectedItem().
toString();

    subject =
userdetails.cbosubject.getSelectedItem().
toString();
}

private void username(){

    try{
        database.open();

        database.rs =
database.st.executeQuery("Select
firstname, usertype from tblusers where
username = '"+username+"' and
password = '"+password+"'");
        while(database.rs.next()){

lblusername.setText(database.rs.getString(1)+" | "+grade+" - "+section);
}
    }
}

```

```

lblusertype.setText(database.rs.getString
(2));

lblsubject.setText(subject);

}

}catch(SQLException e){

JOptionPane.showMessageDialog(null,
e.getMessage());

}

//TABLES

private void tbllesson(){

try{

database.open();

DefaultTableModel tbl =
new DefaultTableModel(){};

tbl.addColumn("Code");
tbl.addColumn("Lesson #");
tbl.addColumn("Topic");



database.rs =
database.st.executeQuery("Select *
from tbllesson where grade = "+grade+
and section = "+section+" and subject
= "+subject+" order by lessonno");

while(database.rs.next()){

tbl.addRow(new
Object[]{database.rs.getString(1),database
.rs.getString(5),database.rs.getString(6
)});



}
tbllesson.setModel(tbl);
lessontablequiz.setModel(tbl);

//table customization
// -- width

tbllesson.getColumnModel().getColumn
(0).setPreferredWidth(60);

tbllesson.getColumnModel().getColumn
(1).setPreferredWidth(90);

tbllesson.getColumnModel().getColumn
(2).setPreferredWidth(190);

lessontablequiz.getColumnModel().getC
olumn(0).setPreferredWidth(60);

lessontablequiz.getColumnModel().getC
olumn(1).setPreferredWidth(90);

lessontablequiz.getColumnModel().getC
olumn(2).setPreferredWidth(190);

//      340, 570

DefaultTableCellRenderer center
= new DefaultTableCellRenderer();

center.setHorizontalAlignment(SwingCo
nstants.CENTER);

// -- center alignment

tbllesson.getColumnModel().getColumn
(0).setCellRenderer(center);

```

```

tbllesson.getColumnModel().getColumn(1).setCellRenderer(center);

tbllesson.getColumnModel().getColumn(2).setCellRenderer(center);

lessontablequiz.getColumnModel().getColumn(0).setCellRenderer(center);

lessontablequiz.getColumnModel().getColumn(1).setCellRenderer(center);

lessontablequiz.getColumnModel().getColumn(2).setCellRenderer(center);

}catch(SQLException e){

JOptionPane.showMessageDialog(null,
e.getMessage());

}

private void tablestudent(){

try{

database.open();

DefaultTableModel tbl =
new DefaultTableModel() {};

tbl.addColumn("Student ID");

tbl.addColumn("Name");

database.rs =
database.st.executeQuery("select
studentid, CONCAT (lastname,'',
'firstname,' ',middlename) from

tblstudents where grade = "+grade+
and section = "+section+"");

while(database.rs.next()){

tbl.addRow(new Object[]{

database.rs.getString(1),
database.rs.getString(2)});

}

tblstudent.setModel(tbl);

//table customization

// -- width

tblstudent.getColumnModel().getColumn(0).setPreferredWidth(200);

tblstudent.getColumnModel().getColumn(1).setPreferredWidth(990);

// 1190, 600

DefaultTableCellRenderer center
= new DefaultTableCellRenderer();

center.setHorizontalAlignment(SwingConstants.CENTER);

// -- center alignment

tblstudent.getColumnModel().getColumn(0).setCellRenderer(center);

tblstudent.getColumnModel().getColumn(1).setCellRenderer(center);

}catch(SQLException e){

}

```

```

JOptionPane.showMessageDialog(null,
e.getMessage());

}

}

private void tblquizzesformat(){

try{

database.open();

DefaultTableModel tbl =
new DefaultTableModel() {};

tbl.addColumn("#");
tbl.addColumn("Question");
tbl.addColumn("Answer");
tblquiz.setModel(tbl);

//table customization
// -- width
tblquiz.getColumnModel().getColumn(0).setPreferredWidth(50);

tblquiz.getColumnModel().getColumn(1).setPreferredWidth(600);

tblquiz.getColumnModel().getColumn(2).setPreferredWidth(163);

DefaultTableCellRenderer center
= new DefaultTableCellRenderer();

center.setHorizontalAlignment(SwingConstants.CENTER);

// -- center alignment
tblquiz.getColumnModel().getColumn(0).setCellRenderer(center);
tblquiz.getColumnModel().getColumn(1).setCellRenderer(center);
tblquiz.getColumnModel().getColumn(2).setCellRenderer(center);

}catch(SQLException e){

JOptionPane.showMessageDialog(null,
e.getMessage());
}
}

private void tblquizzes(){

Object pk =
lessontablequiz.getValueAt(lessontablequiz.getSelectedRow(), 1);

try{

database.open();

DefaultTableModel tbl =
new DefaultTableModel() {};

tbl.addColumn("#");
tbl.addColumn("Question");
tbl.addColumn("Answer");

database.rs =
database.createStatement("select
questionno, question, answer from
tblquiz where grade = "+grade+" and
section = "+section+" and subject =
"+subject+" and lessonno = "+pk+"");
}
}

```

```

while(database.rs.next()){
    tbl.addRow(new Object[]{
        database.rs.getString(1),
        database.rs.getString(2),
        database.rs.getString(3)});

}
tblquiz.setModel(tbl);
//table customization
// -- width

tblquiz.getColumnModel().getColumn(0).setPreferredWidth(50);

tblquiz.getColumnModel().getColumn(1).setPreferredWidth(600);

tblquiz.getColumnModel().getColumn(2).setPreferredWidth(163);

DefaultTableCellRenderer center =
new DefaultTableCellRenderer();
center.setHorizontalAlignment(SwingConstants.CENTER);
// -- center alignment

tblquiz.getColumnModel().getColumn(0).setCellRenderer(center);

tblquiz.getColumnModel().getColumn(1).setCellRenderer(center);

tblquiz.getColumnModel().getColumn(2)
.setCellRenderer(center);

}catch(SQLException e){
JOptionPane.showMessageDialog(null,
e.getMessage());
}

}

//TABLE SETTINGS

private void tbllessonsetting(){
try{
database.open();
DefaultTableModel tbl = new
DefaultTableModel(){ };

tbl.addColumn("Lesson code");
//tbl.addColumn("Grade");
//tbl.addColumn("Section");
tbl.addColumn("Lesson no.");
tbl.addColumn("Topic");
tbl.addColumn("Description");

database.rs =
database.createStatement("Select *"
from tbllesson where grade = "+grade+"
and section = "+section+" and subject
= "+subject+"");
while(database.rs.next()){

tbl.addRow(new Object[]{

}
);
tblquiz.setModel(tbl);
}
}

```

```

        database.rs.getString(1),
        //      database.rs.getString(2),
        //      database.rs.getString(3),
        database.rs.getString(5),
        database.rs.getString(6),
        database.rs.getString(7}});

    }

tbllessons.setModel(tbl);
database.close();
}catch(SQLException e){
JOptionPane.showMessageDialog(null,
e.getMessage());
}

private void tablestudentsetting(){
try{
    database.open();
    DefaultTableModel tbl = new
DefaultTableModel(){};

tbl.addColumn("Student ID");
tbl.addColumn("firstname");
tbl.addColumn("Middlename");
tbl.addColumn("Lastname");

    database.rs =
database.st.executeQuery("select
studentid, firstname, middlename,
lastname from tblstudents where grade =
"+grade+" and section = '"+section+"'");

while(database.rs.next()){
tbl.addRow(new Object[]{
database.rs.getString(1),
database.rs.getString(2),
database.rs.getString(3),
database.rs.getString(5),
database.rs.getString(6),
database.rs.getString(7)});

}
tblstudentsetting.setModel(tbl);
}catch(SQLException e){
JOptionPane.showMessageDialog(null,
e.getMessage());
}

private void tblquiz(){
try{
    database.open();
    DefaultTableModel tbl = new
DefaultTableModel(){};

//12 columns

tbl.addColumn("Code");
tbl.addColumn("Q#");
tbl.addColumn("Question");
}

```

```

database.rs =
database.st.executeQuery("Select * from
tblquiz where grade = "+grade+" and
section = "+section+" and subject =
"+subject+" and lessonno =
"+cbolessons.getSelectedItem()+" and
order by questionno");

while(database.rs.next()){
    tbl.addRow(new Object[]{
        database.rs.getString(1),
        database.rs.getString(6),
        database.rs.getString(7)});
}

questiontable1.setModel(tbl);

//table customization
// -- width

questiontable1.getColumnModel().getColumn(0).setPreferredWidth(30);

questiontable1.getColumnModel().getColumn(1).setPreferredWidth(30);

questiontable1.getColumnModel().getColumn(2).setPreferredWidth(350);

DefaultTableCellRenderer center
= new DefaultTableCellRenderer();

center.setHorizontalAlignment(SwingConstants.CENTER);
// -- center alignment

questiontable1.getColumnName(0).setCellRenderer(center);
questiontable1.getColumnName(1).setCellRenderer(center);
questiontable1.getColumnName(2).setCellRenderer(center);

}catch(SQLException e){
JOptionPane.showMessageDialog(null,
e.getMessage());
}

private void tbllecture(){

try{
database.open();

DefaultTableModel tbl =
new DefaultTableModel(){};

//12 columns
tbl.addColumn("Lecture Code");
tbl.addColumn("Lesson #");
tbl.addColumn("Filename");
tbl.addColumn("Filepath");

database.rs =
database.st.executeQuery("Select * from
tbllecture where grade = "+grade+" and
");
}

```

```

section = "+section+" and subject
= "+subject+" order by lessonno");

while(database.rs.next()){

tbl.addRow(new Object[]{
    database.rs.getString(1),
    database.rs.getString(2),
    database.rs.getString(6),
    database.rs.getString(7)});

}

tbllecture.setModel(tbl);

//table customization

tbllecture.getColumnModel().getColumn
(0).setPreferredWidth(130);

tbllecture.getColumnModel().getColumn
(1).setPreferredWidth(130);

tbllecture.getColumnModel().getColumn
(2).setPreferredWidth(235);

tbllecture.getColumnModel().getColumn
(3).setPreferredWidth(235);

DefaultTableCellRenderer center
= new DefaultTableCellRenderer();

center.setHorizontalAlignment(SwingConstants.CENTER);

tbllecture.getColumnModel().getColumn
(0).setCellRenderer(center);

tbllecture.getColumnModel().getColumn
(0).setCellRenderer(center);

tbllecture.getColumnModel().getColumn
(1).setCellRenderer(center);

tbllecture.getColumnModel().getColumn
(2).setCellRenderer(center);

}catch(SQLException e){

JOptionPane.showMessageDialog(null,
e.getMessage());

}

}

/**



* This method is called from within
the constructor to initialize the form.

* WARNING: Do NOT modify this
code. The content of this method is
always

* regenerated by the Form Editor.

*/
@SuppressWarnings("unchecked")

// <editor-fold
defaultstate="collapsed"
desc="Generated Code">

private void initComponents() {

```

```

jPanel1 = new
javax.swing.JPanel();

lblclose = new
javax.swing.JLabel();

sidepanel = new
javax.swing.JPanel();

studentsbutton = new
javax.swing.JPanel();

jLabel14 = new
javax.swing.JLabel();

jLabel12 = new
javax.swing.JLabel();

lecturesbutton = new
javax.swing.JPanel();

jLabel15 = new
javax.swing.JLabel();

jLabel16 = new
javax.swing.JLabel();

quizbutton = new
javax.swing.JPanel();

jLabel17 = new
javax.swing.JLabel();

jLabel18 = new
javax.swing.JLabel();

settingsbutton = new
javax.swing.JPanel();

jLabel19 = new
javax.swing.JLabel();

jLabel20 = new
javax.swing.JLabel();

rankingbutton = new
javax.swing.JPanel();

jLabel46 = new
javax.swing.JLabel();

```

```

jLabel47 = new
javax.swing.JLabel();

jPanel2 = new
javax.swing.JPanel();

lblusername = new
javax.swing.JLabel();

jSeparator1 = new
javax.swing.JSeparator();

jLabel2 = new
javax.swing.JLabel();

lblphoto = new
javax.swing.JLabel();

lblsubject = new
javax.swing.JLabel();

jLabel4 = new
javax.swing.JLabel();

lblusertype = new
javax.swing.JLabel();

dashboardpanel =
new javax.swing.JPanel();

lblampm = new
javax.swing.JLabel();

lbldate = new javax.swing.JLabel();

lbltime = new javax.swing.JLabel();

lbdashboard = new
javax.swing.JLabel();

mainboardpanel =
new javax.swing.JPanel();

studentspanel = new
javax.swing.JPanel();

cbostudentsearch = new
javax.swing.JComboBox();

jTextField5 = new
javax.swing.JTextField();

```

```

        jButton3 = new
        javax.swing.JButton();
                JPanel7 = new
        javax.swing.JPanel();

        jButton4 = new
        javax.swing.JButton();
                jLabel11 = new
        javax.swing.JLabel();

        jScrollPane10 = new
        javax.swing.JScrollPane();
                jScrollPane6 = new
        javax.swing.JScrollPane();

        tblstudent = new
        org.jdesktop.swingx.JXTable();
                tbllesson = new
        org.jdesktop.swingx.JXTable();

        lecturespanel = new
        javax.swing.JPanel();
                quizpanel = new
        javax.swing.JPanel();

        jPanel6 = new
        javax.swing.JPanel();
                jPanel4 = new
        javax.swing.JPanel();

        jPanel5 = new
        javax.swing.JPanel();
                jLabel22 = new
        javax.swing.JLabel();

        lbltopic = new
        javax.swing.JLabel();
                jScrollPane5 = new
        javax.swing.JScrollPane();

        jLabel7 = new
        javax.swing.JLabel();
                lessontablequiz = new
        org.jdesktop.swingx.JXTable();

        lbllessonno = new
        javax.swing.JLabel();
                quizstyle = new
        javax.swing.JPanel();

        jLabel23 = new
        javax.swing.JLabel();
                questionpanel = new
        javax.swing.JPanel();

        jButton8 = new
        javax.swing.JButton();
                jPanel16 = new
        javax.swing.JPanel();

        jScrollPane13 = new
        javax.swing.JScrollPane();
                jLabel29 = new
        javax.swing.JLabel();

        tblplaylecture = new
        org.jdesktop.swingx.JXTable();
                jLabel31 = new
        javax.swing.JLabel();

        jScrollPane2 = new
        javax.swing.JScrollPane();
                jLabel32 = new
        javax.swing.JLabel();

        txtdescription = new
        javax.swing.JTextArea();
                jLabel33 = new
        javax.swing.JLabel();

        jLabel21 = new
        javax.swing.JLabel();
                jLabel24 = new
        javax.swing.JLabel();

```

```

lbllessonno1 = new
javax.swing.JLabel();

jLabel8 = new
javax.swing.JLabel();

lbltopic1 = new
javax.swing.JLabel();

jScrollPane4 = new
javax.swing.JScrollPane();

tblquiz = new
org.jdesktop.swingx.JXTable();

cmdviewedit = new
javax.swing.JButton();

virtualpanel = new
javax.swing.JPanel();

lblprev1 = new
javax.swing.JLabel();

lblprev2 = new
javax.swing.JLabel();

jLabel34 = new
javax.swing.JLabel();

jLabel36 = new
javax.swing.JLabel();

jLabel3 = new
javax.swing.JLabel();

jPanel14 = new
javax.swing.JPanel();

jLabel37 = new
javax.swing.JLabel();

txtsquare = new
javax.swing.JTextField();

jPanel17 = new
javax.swing.JPanel();

jLabel40 = new
javax.swing.JLabel();

txttriangle = new
javax.swing.JTextField();

jPanel18 = new
javax.swing.JPanel();

jLabel38 = new
javax.swing.JLabel();

txtpentagon = new
javax.swing.JTextField();

jPanel19 = new
javax.swing.JPanel();

jLabel41 = new
javax.swing.JLabel();

txtcircle = new
javax.swing.JTextField();

jLabel39 = new
javax.swing.JLabel();

cbocorrectans = new
javax.swing.JComboBox();

jLabel35 = new
javax.swing.JLabel();

jLabel42 = new
javax.swing.JLabel();

txtquestion = new
javax.swing.JTextField();

cmdoverview = new
javax.swing.JButton();

recordspanel = new
javax.swing.JPanel();

jScrollPane11 = new
javax.swing.JScrollPane();

tblstudent1 = new
org.jdesktop.swingx.JXTable();

jButton5 = new
javax.swing.JButton();

```

```

jButton6 = new
javax.swing.JButton();

jTextField6 = new
javax.swing.JTextField();

jComboBox2 = new
javax.swing.JComboBox();

settingspanel = new
javax.swing.JPanel();

menu = new javax.swing.JPanel();

jSeparator4 = new
javax.swing.JSeparator();

jSeparator6 = new
javax.swing.JSeparator();

jSeparator5 = new
javax.swing.JSeparator();

jSeparator2 = new
javax.swing.JSeparator();

lecturesbutton1 = new
javax.swing.JPanel();

jLabel48 = new
javax.swing.JLabel();

jLabel49 = new
javax.swing.JLabel();

quizbutton1 = new
javax.swing.JPanel();

jLabel50 = new
javax.swing.JLabel();

jLabel51 = new
javax.swing.JLabel();

lecturebutton = new
javax.swing.JPanel();

jLabel56 = new
javax.swing.JLabel();

jLabel57 = new
javax.swing.JLabel();

settingsboard = new
javax.swing.JPanel();

lessonsettings = new
javax.swing.JPanel();

lbldashboard2 = new
javax.swing.JLabel();

txtlessonno1 = new
javax.swing.JTextField();

jLabel58 = new
javax.swing.JLabel();

jScrollPane8 = new
javax.swing.JScrollPane();

tbllessons = new
org.jdesktop.swingx.JXTable();

cmdsave1 = new
javax.swing.JButton();

cmdnew1 = new
javax.swing.JButton();

cmdupdate1 = new
javax.swing.JButton();

cmddelete1 = new
javax.swing.JButton();

txtlessontopic1 = new
javax.swing.JTextField();

jLabel59 = new
javax.swing.JLabel();

jLabel62 = new
javax.swing.JLabel();

txtcode1 = new
javax.swing.JTextField();

jLabel79 = new
javax.swing.JLabel();

```

```

jScrollPane1 = new
javax.swing.JScrollPane();

quizsettings = new
javax.swing.JPanel();

txtlessondescription1 = new
javax.swing.JTextArea();

cbolessons = new
javax.swing.JComboBox();

lecturesettings = new
javax.swing.JPanel();

questionpanel1 = new
javax.swing.JPanel();

cmdnew3 = new
javax.swing.JButton();

jScrollPane9 = new
javax.swing.JScrollPane();

cmddelete2 = new
javax.swing.JButton();

questiontable1 = new
org.jdesktop.swingx.JXTable();

cmdsave2 = new
javax.swing.JButton();

jLabel66 = new
javax.swing.JLabel();

cmdnew2 = new
javax.swing.JButton();

jLabel63 = new
javax.swing.JLabel();

txtfilepath = new
javax.swing.JTextField();

jLabel65 = new
javax.swing.JLabel();

jLabel67 = new
javax.swing.JLabel();

jLabel64 = new
javax.swing.JLabel();

txtfile = new
javax.swing.JTextField();

jLabel76 = new
javax.swing.JLabel();

jLabel73 = new
javax.swing.JLabel();

txtquestion1 = new
javax.swing.JTextField();

lbldashboard3 = new
javax.swing.JLabel();

jPanel15 = new
javax.swing.JPanel();

cbolectures = new
javax.swing.JComboBox();

jLabel69 = new
javax.swing.JLabel();

jLabel72 = new
javax.swing.JLabel();

txtchoiceb1 = new
javax.swing.JTextField();

cmdupdate3 = new
javax.swing.JButton();

jPanel20 = new
javax.swing.JPanel();

jScrollPane12 = new
javax.swing.JScrollPane();

jLabel68 = new
javax.swing.JLabel();

tbllecture = new
org.jdesktop.swingx.JXTable();

txtchoicea1 = new
javax.swing.JTextField();

```

```

jPanel22 = new
javax.swing.JPanel();

jLabel71 = new
javax.swing.JLabel();

txtchoicec1 = new
javax.swing.JTextField();

jPanel21 = new
javax.swing.JPanel();

jLabel70 = new
javax.swing.JLabel();

txtchoiced1 = new
javax.swing.JTextField();

cbocorrectans1 = new
javax.swing.JComboBox();

jLabel75 = new
javax.swing.JLabel();

panelnew = new
javax.swing.JPanel();

lblprev10 = new
javax.swing.JLabel();

jLabel80 = new
javax.swing.JLabel();

panelsave = new
javax.swing.JPanel();

lblprev11 = new
javax.swing.JLabel();

jLabel81 = new
javax.swing.JLabel();

panelupdate = new
javax.swing.JPanel();

jLabel82 = new
javax.swing.JLabel();

lblprev12 = new
javax.swing.JLabel();

```

```

paneldelete = new
javax.swing.JPanel();

lblprev9 = new
javax.swing.JLabel();

jLabel74 = new
javax.swing.JLabel();

path = new
javax.swing.JTextField();

lblpicture = new
javax.swing.JLabel();

lblnumber = new
javax.swing.JLabel();

lblnextnumber = new
javax.swing.JLabel();

jLabel1 = new
javax.swing.JLabel();

studentsettings = new
javax.swing.JPanel();

cmdupdate = new
javax.swing.JButton();

cmddelete = new
javax.swing.JButton();

cmdsav = new
javax.swing.JButton();

cmdnew = new
javax.swing.JButton();

txtlastname = new
javax.swing.JTextField();

jLabel54 = new
javax.swing.JLabel();

jLabel55 = new
javax.swing.JLabel();

txtmiddlename = new
javax.swing.JTextField();

```

```

txtfirstname = new
javax.swing.JTextField();

jLabel52 = new
javax.swing.JLabel();

jLabel53 = new
javax.swing.JLabel();

txtstudentid = new
javax.swing.JTextField();

lbldashboard1 = new
javax.swing.JLabel();

jScrollPane7 = new
javax.swing.JScrollPane();

tblstudentsetting = new
org.jdesktop.swingx.JXTable();

setDefaultCloseOperation(javax.swing.
WindowConstants.EXIT_ON_CLOSE);

setUndecorated(true);

jPanel1.setBackground(new
java.awt.Color(141, 171, 141));

jPanel1.setLayout(null);

lblclose.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

lblclose.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/closestandard.png"))); // NOI18N

lblclose.addMouseListener(new
java.awt.event.MouseAdapter() {

```

```

public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
    lblcloseMouseClicked(evt);
}

});

jPanel1.add(lblclose);

lblclose.setBounds(1324, 0, 40, 40);

sidepanel.setBackground(new
java.awt.Color(0, 26, 0));

sidepanel.setLayout(null);

studentsbutton.setBackground(new
java.awt.Color(0, 26, 0));

studentsbutton.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
        studentsbuttonMouseClicked(evt);
    }

});

studentsbutton.setLayout(null);

jLabel14.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

jLabel14.setForeground(new
java.awt.Color(255, 255, 255));

```

```

        });
        lecturesbutton.setLayout(null);

        jLabel15.setFont(new
        java.awt.Font("Yu Gothic UI Light",
        0, 14)); // NOI18N
        jLabel15.setForeground(new
        java.awt.Color(255, 255, 255));

        jLabel15.setHorizontalAlignment(javax.
        swing.SwingConstants.CENTER);
        jLabel15.setText("Lecture");
        lecturesbutton.add(jLabel15);
        jLabel15.setBounds(30, 80, 100,
        30);

        jLabel16.setHorizontalAlignment(javax.
        swing.SwingConstants.CENTER);
        jLabel16.setIcon(new
        javax.swing.ImageIcon(getClass().getRe
        source("/pictures/lecture.png"))); // NOI18N
        lecturesbutton.add(jLabel16);
        jLabel16.setBounds(30, 10, 100,
        70);

        sidepanel.add(studentsbutton);
        studentsbutton.setBounds(0, 0,
        160, 110);

        lecturesbutton.setBackground(new
        java.awt.Color(0, 26, 0));
        lecturesbutton.addMouseListener(new
        java.awt.event.MouseAdapter() {
            public void
            mouseClicked(java.awt.event.MouseEve
            nt evt) {
                lecturesbuttonMouseClicked(evt);
            }
        });

        quizbutton.setBackground(new
        java.awt.Color(0, 26, 0));
    
```

```

quizbutton.addMouseListener(new
java.awt.event.MouseAdapter() {
    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
        quizbuttonMouseClicked(evt);
    }
});

quizbutton.setLayout(null);

jLabel17.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

jLabel17.setForeground(new
java.awt.Color(255, 255, 255));

jLabel17.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

jLabel17.setText("Quiz");

quizbutton.add(jLabel17);

jLabel17.setBounds(30, 80, 100,
30);

jLabel18.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

jLabel18.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/Brain-Games.png")));
// NOI18N

quizbutton.add(jLabel18);

jLabel18.setBounds(30, 10, 100,
70);

```

```

sidepanel.add(quizbutton);

quizbutton.setBounds(0, 260,
160, 110);

settingsbutton.setBackground(new
java.awt.Color(0, 26, 0));

settingsbutton.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {
        settingsbuttonMouseClicked(evt);
    }
});

settingsbutton.setLayout(null);

jLabel19.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

jLabel19.setForeground(new
java.awt.Color(255, 255, 255));

jLabel19.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

jLabel19.setText("Settings");

settingsbutton.add(jLabel19);

jLabel19.setBounds(30, 80, 100,
30);

```

```

jLabel20.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
jLabel20.setIcon(new javax.swing.ImageIcon(getClass().getResource("/pictures/settings.png")));
// NOI18N
settingsbutton.add(jLabel20);
jLabel20.setBounds(30, 10, 100, 70);

sidepanel.add(settingsbutton);
settingsbutton.setBounds(0, 520, 160, 110);

rankingbutton.setBackground(new java.awt.Color(0, 26, 0));
rankingbutton.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        rankingbuttonMouseClicked(evt);
    }
});
rankingbutton.setLayout(null);

jLabel46.setFont(new java.awt.Font("Yu Gothic UI Light", 0, 14)); // NOI18N
jLabel46.setForeground(new java.awt.Color(255, 255, 255));

jLabel46.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
jLabel46.setText("Records");
rankingbutton.add(jLabel46);
jLabel46.setBounds(30, 80, 100, 30);

jLabel47.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
jLabel47.setIcon(new javax.swing.ImageIcon(getClass().getResource("/pictures/ranking.png")));
// NOI18N
rankingbutton.add(jLabel47);
jLabel47.setBounds(30, 10, 100, 70);

sidepanel.add(rankingbutton);
rankingbutton.setBounds(0, 390, 160, 110);

jPanel1.add(sidepanel);
sidepanel.setBounds(0, 110, 160, 660);

jPanel2.setBackground(new java.awt.Color(0, 66, 0));
jPanel2.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

```

```

lblusername.setBackground(new
java.awt.Color(255, 255, 255));

lblusername.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 18)); // NOI18N

lblusername.setForeground(new
java.awt.Color(255, 255, 255));

lblusername.setText("Prince Ivan
Kent");

jPanel2.add(lblusername, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 20, 260, 30));

jPanel2.add(jSeparator1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(80, 50, 260, 10));

jLabel2.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

jLabel2.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/userinfo.png"))); // 
NOI18N

jLabel2.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {

        jLabel2MouseClicked(evt);

    }
});

jPanel2.add(jLabel2, new
org.netbeans.lib.awtextra.AbsoluteConstraints(310, 55, 40, 30));

lblphoto.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

lblphoto.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/teacherphoto.png"))); // 
NOI18N

jPanel2.add(lblphoto, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 10, 70, 70));

lblsubject.setFont(new
java.awt.Font("Yu Gothic Light",
0, 16)); // NOI18N

lblsubject.setForeground(new
java.awt.Color(255, 255, 255));

lblsubject.setHorizontalAlignment(javax.s
wing.SwingConstants.RIGHT);

lblsubject.setText("Subject");

jPanel2.add(lblsubject, new
org.netbeans.lib.awtextra.AbsoluteConstraints(78, 50, 80, 40));

jLabel4.setFont(new
java.awt.Font("Yu Gothic Light",
1, 36)); // NOI18N

jLabel4.setForeground(new
java.awt.Color(255, 255, 255));

jLabel4.setText("-");

jPanel2.add(jLabel4, new
org.netbeans.lib.awtextra.AbsoluteConstraints(160, 50, -1, 40));

```

```

lblusertype.setBackground(new
java.awt.Color(255, 255, 255));

lblusertype.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 16)); // NOI18N

lblusertype.setForeground(new
java.awt.Color(255, 255, 255));

lblusertype.setText("Administration");

jPanel2.add(lblusertype, new
org.netbeans.lib.awtextra.AbsoluteConstraints(180, 49, 130, 40));

jPanel1.add(jPanel2);

jPanel2.setBounds(0, 20, 360, 90);

dashboardpanel.setBackground(new
java.awt.Color(34, 34, 34));

dashboardpanel.setLayout(null);

lblampm.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 38)); // NOI18N

lblampm.setForeground(new
java.awt.Color(255, 255, 255));

lblampm.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

lblampm.setText("PM");

dashboardpanel.add(lblampm);

lblampm.setBounds(1138, 5, 60,
40);

lbldate.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

lbldate.setForeground(new
java.awt.Color(204, 204, 204));

lbldate.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

lbldate.setText("Sunday, January
1, 2017");

dashboardpanel.add(lbldate);

lbldate.setBounds(1010, 45, 180,
20);

lbltime.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 38)); // NOI18N

lbltime.setForeground(new
java.awt.Color(255, 255, 255));

lbltime.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

lbltime.setText("10:23:12");

dashboardpanel.add(lbltime);

lbltime.setBounds(995, 5, 150, 40);

lbldashboard.setBackground(new
java.awt.Color(255, 255, 255));

lbldashboard.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 30)); // NOI18N

lbldashboard.setForeground(new
java.awt.Color(255, 255, 255));

```

```

lbldashboard.setHorizontalAlignment(ja
vax.swing.SwingConstants.CENTER);

lbldashboard.setText("Dashboard");
dashboardpanel.add(lbldashboard);

lbldashboard.setBounds(300, 0,
540, 70);

jPanel1.add(dashboardpanel);
dashboardpanel.setBounds(160,
40, 1210, 70);

mainboardpanel.setBackground(new
java.awt.Color(255, 255, 255));

mainboardpanel.setLayout(new
java.awt.CardLayout());

studentspanel.setBackground(new
java.awt.Color(141, 171, 141));

studentspanel.setLayout(null);

cbostudentsearch.setModel(new
javax.swing.DefaultComboBoxModel(n
ew String[] { "Item 1", "Item 2", "Item
3", "Item 4" }));

studentspanel.add(cbostudentsearch);

cbostudentsearch.setBounds(830,
10, 150, 40);

jTextField5.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

jTextField5.setForeground(new
java.awt.Color(51, 51, 51));

jTextField5.setBorder(javax.swing.Bord
erFactory.createLineBorder(new
java.awt.Color(153, 153, 153)));

studentspanel.add(jTextField5);

jTextField5.setBounds(980, 10,
220, 40);

jButton3.setBackground(new
java.awt.Color(204, 51, 0));

jButton3.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

jButton3.setForeground(new
java.awt.Color(255, 255, 255));

jButton3.setText("Excel");

jButton3.addActionListener(new
java.awt.event.ActionListener() {

    public void
actionPerformed(java.awt.event.ActionEvent
evt) {

        jButton3ActionPerformed(evt);

    }
});

studentspanel.add(jButton3);

jButton3.setBounds(90, 10, 80, 40);

```

```

        jButton4.setBackground(new
java.awt.Color(204, 51, 0));
        jButton4.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N
        jButton4.setForeground(new
java.awt.Color(255, 255, 255));
        jButton4.setText("PDF");
        studentspanel.add(jButton4);
        jButton4.setBounds(10, 10, 80, 40);

tblstudent.setForeground(new
java.awt.Color(51, 51, 51));
tblstudent.setModel(new
javax.swing.table.DefaultTableModel( new
Object [][] {
        {null, null},
        {null, null}
}, 2 ) );
tblstudent.setColumnMargin(0);
tblstudent.setEditable(false);
tblstudent.setFocusable(false);
tblstudent.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N
tblstudent.setGridColor(new
java.awt.Color(204, 204, 204));
tblstudent.setRequestFocusEnabled(false);
tblstudent.setRowHeight(35);
tblstudent.setRowMargin(0);

```

```

tblstudent.setSelectionBackground(new
java.awt.Color(85, 132, 85));

tblstudent.setSelectionForeground(new
java.awt.Color(236, 240, 241));

tblstudent.setShowVerticalLines(false);

jScrollPane10.setViewportView(tblstude
nt);

studentspanel.add(jScrollPane10);

jScrollPane10.setBounds(10,
50, 1190, 600);

mainboardpanel.add(studentspanel,
"card3");

lecturespanel.setBackground(new
java.awt.Color(141, 171, 141));

lecturespanel.setLayout(null);

jPanel6.setBackground(new
java.awt.Color(255, 255, 255));

jPanel6.setBorder(javax.swing.BorderFactory
.createLineBorder(new
java.awt.Color(189, 195, 199)));

jPanel6.setLayout(null);

jPanel5.setBackground(new
java.awt.Color(0, 100, 0));

```

```

jPanel5.setLayout(null);

lbltopic.setBackground(new
java.awt.Color(255, 255, 255));

lbltopic.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 36)); // NOI18N

lbltopic.setForeground(new
java.awt.Color(255, 255, 255));

lbltopic.setText("Cats and Dogs");

jPanel5.add(lbltopic);

lbltopic.setBounds(220, 0, 530, 90);

jLabel7.setBackground(new
java.awt.Color(255, 255, 255));

jLabel7.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 36)); // NOI18N

jLabel7.setForeground(new
java.awt.Color(255, 255, 255));

jLabel7.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

jLabel7.setText("-");

jPanel5.add(jLabel7);

jLabel7.setBounds(180, 0, 30, 90);

lbllessonno.setBackground(new
java.awt.Color(255, 255, 255));

lbllessonno.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 40)); // NOI18N

```

```

lbllessonno.setForeground(new
java.awt.Color(255, 255, 255));
jPanel6.add(jButton8);
jButton8.setBounds(660, 730, 170,
40);

lbllessonno.setHorizontalTextPosition(java
x.swing.SwingConstants.CENTER);
lbllessonno.setText("1");
jPanel5.add(lbllessonno);
lbllessonno.setBounds(140, 0, 30,
90);

jLabel23.setBackground(new
java.awt.Color(255, 255, 255));
jLabel23.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 24)); // NOI18N
jLabel23.setForeground(new
java.awt.Color(255, 255, 255));
jLabel23.setText("Lesson No. ");
jPanel5.add(jLabel23);
jLabel23.setBounds(20, 0, 120, 90);

jPanel6.add(jPanel5);
jPanel5.setBounds(0, 0, 820, 90);

jButton8.setBackground(new
java.awt.Color(204, 51, 0));
jButton8.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N
jButton8.setForeground(new
java.awt.Color(255, 255, 255));
jButton8.setText("View Full
Screen");

```

```

jPanel6.add(jButton8);
jButton8.setBounds(660, 730, 170,
40);

tblplaylecture.setForeground(new
java.awt.Color(51, 51, 51));
tblplaylecture.setModel(new
javax.swing.table.DefaultTableModel( new
Object [][] {
{ null, null },
{ null, null },
{ null, null },
{ null, null }
},
new String [] {
"Title 1", "Title 2"
})
);
tblplaylecture.setColumnMargin(0);
tblplaylecture.setEditable(false);
tblplaylecture.setFocusable(false);
tblplaylecture.setFont(new
java.awt.Font("Arial", 0, 14)); // //
NOI18N
tblplaylecture.setGridColor(new
java.awt.Color(204, 204, 204));

tblplaylecture.setRequestFocusEnabled(f
alse);
tblplaylecture.setRowHeight(30);
tblplaylecture.setRowMargin(0);

```

```

tblplaylecture.setSelectionBackground(new java.awt.Color(204, 51, 0));

tblplaylecture.setSelectionForeground(new java.awt.Color(236, 240, 241));

tblplaylecture.setShowVerticalLines(false);

tblplaylecture.addMouseListener(new java.awt.event.MouseAdapter() {

    public void mouseClicked(java.awt.event.MouseEvent evt) {

        tblplaylectureMouseClicked(evt);
    }
});

jScrollPane13.setViewportView(tblplaylecture);

jPanel6.add(jScrollPane13);

jScrollPane13.setBounds(10, 160, 800, 470);

jScrollPane2.setVerticalScrollBarPolicy(javax.swing.ScrollPaneConstants.VERTICAL_SCROLLBAR_NEVER);

txtdescription.setEditable(false);

txtdescription.setColumns(20);

txtdescription.setFont(new java.awt.Font("Yu Gothic UI Light", 0, 18)); // NOI18N

txtdescription.setLineWrap(true);

txtdescription.setRows(5);

txtdescription.setWrapStyleWord(true);

jScrollPane2.setViewportView(txtdescription);

jPanel6.add(jScrollPane2);

jScrollPane2.setBounds(120, 100, 500, 50);

jLabel21.setBackground(new java.awt.Color(255, 255, 255));

jLabel21.setFont(new java.awt.Font("Yu Gothic UI Light", 0, 18)); // NOI18N

jLabel21.setForeground(new java.awt.Color(51, 51, 51));

jLabel21.setText("Description -");

jPanel6.add(jLabel21);

jLabel21.setBounds(10, 100, 110, 40);

lecturespanel.add(jPanel6);

jPanel6.setBounds(380, 10, 820, 640);

jPanel7.setBackground(new java.awt.Color(255, 255, 255));

```

```

jPanel7.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(189, 195, 199)));
jPanel7.setLayout(null);

jLabel11.setBackground(new java.awt.Color(255, 255, 255));
jLabel11.setFont(new java.awt.Font("Yu Gothic UI Light", 0, 24)); // NOI18N

jLabel11.setForeground(new java.awt.Color(51, 51, 51));
jLabel11.setText("Lessons");
jPanel7.add(jLabel11);
jLabel11.setBounds(20, 0, 120, 60);

tbllesson.setForeground(new java.awt.Color(51, 51, 51));
tbllesson.setModel(new javax.swing.table.DefaultTableModel(
new Object [][] {
{null, null},
{null, null}
}, new String [] {
"Title 1", "Title 2"
}));
tbllesson.setColumnMargin(0);
tbllesson.setEditable(false);
tbllesson.setFocusable(false);

tbllesson.setFont(new java.awt.Font("Yu Gothic UI Light", 0, 14)); // NOI18N

tbllesson.setGridColor(new java.awt.Color(204, 204, 204));
tbllesson.setRequestFocusEnabled(false);
tbllesson.setRowHeight(30);
tbllesson.setRowMargin(0);
tbllesson.setSelectionBackground(new java.awt.Color(85, 132, 85));
tbllesson.setSelectionForeground(new java.awt.Color(236, 240, 241));
tbllesson.setShowVerticalLines(false);

```

```

tbllesson.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {

        tbllessonMouseClicked(evt);
    }

});

jScrollPane6.setViewportView(tbllesson
);

jPanel7.add(jScrollPane6);

 jScrollPane6.setBounds(10,
60, 340, 570);

lecturespanel.add(jPanel7);

jPanel7.setBounds(10, 10, 360,
640);

mainboardpanel.add(lecturespanel,
"card2");

quizpanel.setBackground(new
java.awt.Color(141, 171, 141));

quizpanel.setLayout(null);

jPanel4.setBackground(new
java.awt.Color(255, 255, 255));

jPanel4.setBorder(javax.swing.BorderFa
ctory.createLineBorder(new
java.awt.Color(189, 195, 199)));

```

```

jPanel4.setLayout(null);

jLabel22.setBackground(new
java.awt.Color(255, 255, 255));

jLabel22.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 24)); // NOI18N

jLabel22.setForeground(new
java.awt.Color(51, 51, 51));

jLabel22.setText("Lessons");

jPanel4.add(jLabel22);

jLabel22.setBounds(20, 0, 120, 60);

lessontablequiz.setForeground(new
java.awt.Color(51, 51, 51));

lessontablequiz.setModel(new
javax.swing.table.DefaultTableModel( new
Object [][] {
{ null, null },
{ null, null }
} ) );

```

```

        {null, null},
        {null, null},
        {null, null},
        {null, null}
    },
    new String [] {
        "Title 1", "Title 2"
    }
));
lessontablequiz.setColumnMargin(0);
lessontablequiz.setEditable(false);
lessontablequiz.setFocusable(false);
lessontablequiz.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N
lessontablequiz.setGridColor(new
java.awt.Color(204, 204, 204));
lessontablequiz.setRequestFocusEnabled
(false);
lessontablequiz.setRowHeight(30);
lessontablequiz.setRowMargin(0);

lessontablequiz.setSelectionBackground( new
java.awt.Color(85, 132, 85));

lessontablequiz.setSelectionForeground( new
java.awt.Color(236, 240, 241));

lessontablequiz.setShowVerticalLines(fa
lse);
}

lessontablequiz.addMouseListener(new
java.awt.event.MouseAdapter() {

    public void
mouseClicked(java.awt.event.MouseEve
nt evt) {

    lessontablequizMouseClicked(evt);
}
});

jScrollPane5.setViewportView(lessontab
lequiz);

jPanel4.add(jScrollPane5);
jScrollPane5.setBounds(10,
60, 340, 570);

quizpanel.add(jPanel4);
jPanel4.setBounds(10, 10, 360,
640);

quizstyle.setBackground(new
java.awt.Color(255, 255, 255));

quizstyle.setBorder(javax.swing.BorderFactory
.createLineBorder(new
java.awt.Color(189, 195, 199)));

quizstyle.setLayout(new
java.awt.CardLayout());

questionpanel.setBackground(new
java.awt.Color(255, 255, 255));

```

```

questionpanel.setLayout(null);

        jLabel32.setBackground(new
java.awt.Color(255, 255, 255));

        jLabel32.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 24)); // NOI18N

        jLabel32.setForeground(new
java.awt.Color(51, 51, 51));

        jLabel32.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

        jLabel32.setText("(");

        jPanel16.add(jLabel32);

        jLabel32.setBounds(750, 10, 10,
60);

jLabel29.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

jLabel29.setText("100");

jPanel16.add(jLabel29);

jLabel29.setBounds(760, 10, 40,
60);

        jLabel31.setBackground(new
java.awt.Color(255, 255, 255));

        jLabel31.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 20)); // NOI18N

        jLabel31.setForeground(new
java.awt.Color(51, 51, 51));

        jLabel31.setText("Questions");

        jPanel16.add(jLabel31);

        jLabel31.setBounds(660, 10, 90,
60);

        jLabel32.setBackground(new
java.awt.Color(255, 255, 255));

        jLabel32.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 24)); // NOI18N

        jLabel32.setForeground(new
java.awt.Color(51, 51, 51));

        jLabel32.setHorizontalAlignment(javax.
swing.SwingConstants.CENTER);

        jLabel32.setText(")");

        jPanel16.add(jLabel32);

        jLabel32.setBounds(800, 10, 10,
60);

        jLabel24.setBackground(new
java.awt.Color(255, 255, 255));

```

```

jLabel24.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 24)); // NOI18N

jLabel24.setForeground(new
java.awt.Color(255, 255, 255));

jLabel24.setText("Lesson No. ");
jPanel16.add(jLabel24);
jLabel24.setBounds(20, 0, 120, 90);

lbllessonno1.setBackground(new
java.awt.Color(255, 255, 255));

lbllessonno1.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 40)); // NOI18N

lbllessonno1.setForeground(new
java.awt.Color(255, 255, 255));

lbllessonno1.setHorizontalAlignment(ja
vax.swing.SwingConstants.CENTER);
lbllessonno1.setText("1");
jPanel16.add(lbllessonno1);
lbllessonno1.setBounds(140, 0, 30,
90);

jLabel8.setBackground(new
java.awt.Color(255, 255, 255));
jLabel8.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 36)); // NOI18N

jLabel8.setForeground(new
java.awt.Color(255, 255, 255));
jLabel8.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

jLabel8.setText("-");
jPanel16.add(jLabel8);
jLabel8.setBounds(180, 0, 30, 90);

lbltopic1.setBackground(new
java.awt.Color(255, 255, 255));
lbltopic1.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 36)); // NOI18N

lbltopic1.setForeground(new
java.awt.Color(255, 255, 255));
lbltopic1.setText("Cats and Dogs");
jPanel16.add(lbltopic1);
lbltopic1.setBounds(220, 0, 530,
90);

questionpanel.add(jPanel16);
jPanel16.setBounds(0, 0, 820, 90);

tblquiz.setForeground(new
java.awt.Color(51, 51, 51));
tblquiz.setModel(new
javax.swing.table.DefaultTableModel(
new Object [][] {
{null, null},
{null, null},
{null, null},
{null, null}
},
{
new String [] {
"Title 1", "Title 2"
}
));

```

```

        }

        tblquiz.setColumnMargin(0);
        tblquiz.setEditable(false);
        tblquiz.setFocusable(false);
        tblquiz.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 14)); // NOI18N

        tblquiz.setGridColor(new
java.awt.Color(204, 204, 204));

tblquiz.setRequestFocusEnabled(false);
tblquiz.setRowHeight(30);
tblquiz.setRowMargin(0);

tblquiz.setSelectionBackground(new
java.awt.Color(255, 102, 0));

tblquiz.setSelectionForeground(new
java.awt.Color(236, 240, 241));

tblquiz.setShowVerticalLines(false);

jScrollPane4.setViewportView(tblquiz);

questionpanel.add(jScrollPane4);
jScrollPane4.setBounds(10,
150, 800, 480);

cmdviewedit.setBackground(new
java.awt.Color(204, 51, 0));

```

```

        cmdviewedit.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

        cmdviewedit.setForeground(new
java.awt.Color(255, 255, 255));

cmdviewedit.setText("VIEW/EDIT");
cmdviewedit.setFocusable(false);

cmdviewedit.addActionListener(new
java.awt.event.ActionListener() {

    public void
actionPerformed(java.awt.event.ActionEvent
evt) {

cmdvieweditActionPerformed(evt);

    }
});

questionpanel.add(cmdviewedit);
cmdviewedit.setBounds(670, 100,
140, 40);

quizstyle.add(questionpanel,
"card2");

virtualpanel.setBackground(new
java.awt.Color(255, 255, 255));
virtualpanel.setLayout(null);

lblprev1.setHorizontalAlignment(javax.s
wing.SwingConstants.CENTER);

```

```

lblprev1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/pictures/previous.png"))); // NOI18N
virtualpanel.add(lblprev1);
lblprev1.setBounds(10, 530, 70,
70);

lblprev2.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
lblprev2.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/pictures/next.png"))); // NOI18N
virtualpanel.add(lblprev2);
lblprev2.setBounds(740, 530, 70,
70);

jLabel34.setBackground(new
java.awt.Color(255, 255, 255));
jLabel34.setFont(new
java.awt.Font("Yu Gothic UI Light",
1, 24)); // NOI18N
jLabel34.setForeground(new
java.awt.Color(51, 51, 51));
jLabel34.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
jLabel34.setText("10");
virtualpanel.add(jLabel34);
jLabel34.setBounds(134, 0, 30, 60);

jLabel36.setBackground(new
java.awt.Color(255, 255, 255));
jLabel36.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N
jLabel36.setForeground(new
java.awt.Color(51, 51, 51));
jLabel36.setText("Correct Answer :");
virtualpanel.add(jLabel36);
jLabel36.setBounds(160, 470, 130,
40);

jLabel3.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/pictures/picture.png"))); // NOI18N
virtualpanel.add(jLabel3);
jLabel3.setBounds(140, 95, 540,
220);

jPanel14.setBackground(new
java.awt.Color(33, 86, 164));
jPanel14.setLayout(null);
jLabel37.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/pictures/boxshape.png"))); // NOI18N
jPanel14.add(jLabel37);
jLabel37.setBounds(10, 20, 30, 30);

```

```

txtsquare.setFont(new
java.awt.Font("Segoe Print", 1, 24)); //
NOI18N

txtsquare.setForeground(new
java.awt.Color(255, 255, 255));

txtsquare.setText("Square");
txtsquare.setOpaque(false);
txtsquare.addKeyListener(new
java.awt.event.KeyAdapter() {

    public void
keyReleased(java.awt.event.KeyEvent
evt) {

        txtsquareKeyReleased(evt);
    }
});

jPanel14.add(txtsquare);
txtsquare.setBounds(50, 10, 200,
50);

virtualpanel.add(jPanel14);
jPanel14.setBounds(410, 320, 270,
70);

jPanel17.setBackground(new
java.awt.Color(207, 4, 50));

jPanel17.setLayout(null);

jLabel40.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/triangle.png"))); //
NOI18N

jPanel17.add(jLabel40);

jLabel40.setBounds(10, 20, 30, 30);

txttriangle.setFont(new
java.awt.Font("Segoe Print", 1, 24)); //
NOI18N

txttriangle.setForeground(new
java.awt.Color(255, 255, 255));

txttriangle.setText("Triangle");
txttriangle.setOpaque(false);
txttriangle.addKeyListener(new
java.awt.event.KeyAdapter() {

    public void
keyReleased(java.awt.event.KeyEvent
evt) {

        txttriangleKeyReleased(evt);
    }
});

jPanel17.add(txttriangle);
txttriangle.setBounds(50, 10, 200,
50);

virtualpanel.add(jPanel17);
jPanel17.setBounds(140, 320, 270,
70);

jPanel18.setBackground(new
java.awt.Color(160, 216, 92));

jPanel18.setLayout(null);

jLabel38.setIcon(new
javax.swing.ImageIcon(getClass().getRe

```

```

source("/pictures/pentagon.png"))); //
NOI18N

jPanel18.add(jLabel38);

jLabel38.setBounds(10, 20, 30, 30);

txtpentagon.setFont(new
java.awt.Font("Segoe Print", 1, 24)); //
NOI18N

txtpentagon.setForeground(new
java.awt.Color(255, 255, 255));

txtpentagon.setText("Pentagon");

txtpentagon.setOpaque(false);

txtpentagon.addKeyListener(new
java.awt.event.KeyAdapter() {

    public void
keyReleased(java.awt.event.KeyEvent
evt) {

        txtpentagonKeyReleased(evt);
    }
});

jPanel18.add(txtpentagon);

txtpentagon.setBounds(50, 10, 200,
50);

virtualpanel.add(jPanel18);

jPanel18.setBounds(410, 390, 270,
70);

jPanel19.setBackground(new
java.awt.Color(233, 202, 44));

jPanel19.setLayout(null);

jLabel41.setIcon(new
javax.swing.ImageIcon(getClass().getRe
source("/pictures/circle.png"))); //
NOI18N

jPanel19.add(jLabel41);

jLabel41.setBounds(10, 20, 30, 30);

txtcircle.setFont(new
java.awt.Font("Segoe Print", 1, 24)); //
NOI18N

txtcircle.setForeground(new
java.awt.Color(255, 255, 255));

txtcircle.setText("Circle");

txtcircle.setOpaque(false);

txtcircle.addKeyListener(new
java.awt.event.KeyAdapter() {

    public void
keyReleased(java.awt.event.KeyEvent
evt) {

        txtcircleKeyReleased(evt);
    }
});

jPanel19.add(txtcircle);

txtcircle.setBounds(50, 10, 200,
50);

virtualpanel.add(jPanel19);

jPanel19.setBounds(140, 390, 270,
70);

jLabel39.setBackground(new
java.awt.Color(255, 255, 255));

```

```

jLabel39.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 24)); // NOI18N

jLabel39.setForeground(new
java.awt.Color(51, 51, 51));

jLabel39.setText("Question #");

virtualpanel.add(jLabel39);

jLabel39.setBounds(20, 0, 112, 60);

cbocorrectans.setBackground(ne
w java.awt.Color(204, 51, 0));

cbocorrectans.setFont(new
java.awt.Font("Yu Gothic UI Light",
0, 18)); // NOI18N

cbocorrectans.setForeground(new
java.awt.Color(255, 255, 255));

cbocorrectans.setModel(new
javax.swing.DefaultComboBoxModel(
new String[] { "Item 1", "Item 2",
"Item 3", "Item 4" }));

```

**Student Module**

```

public class studentwindow
extends javax.swing.JFrame {

//STUDENT INFORMATION

String firstname = null;
String lastname = null; int
id = 0;
int grade = 0;
String section = null;

```

```

//COURSE INFORMATION

String teacher = null;
String subject = null; int
lessonno = 0;

//QUESTIONS int

questionno = 0;

String question = null;
String choicea = null;
String choiceb = null;
String choicec = null;
String choiced = null;
String answer = null;
byte[]image = null;

//TIMER

int endtime = 0;
int words = 250;
String title = "";

//STORY JTextArea

textpane;
JScrollPane scrollpane;

//Correct answers for
readmodule – test

```

```

int storycode = 0;
String num1; String
num2; String num3;
String num4; String
num5;

String test = null; public
String getTest(){
    return test;
}

public void setTest(String test){
    this.test = test;
}

//QUIZ MODULE PROCEES int
quizcode = 0;
String studentanswer = null;
String correctanswer = null;
String result = null;

public int getCode(){
    return quizcode;
}

public void setCode(int
quizcode){
    this.quizcode = quizcode;
}

//public int getID(){
//    return id;
//}

public void setID(int id){
    this.id = id;
}

//public String getAnswer(){
//    return studentanswer;
//}

public void setAnswer(String
studentanswer){
    this.studentanswer =
studentanswer;
}

public String
getCorrectAnswer(){
    return correctanswer;
}

```

```

        }

    public void
    setCorrectAnswer(String
    correctanswer){
        this.correctanswer =
    correctanswer;
    }

    //

    public String getResult(){
        return result;
    }

    public void setResult(String
    result){
        this.result = result;
    }
}

/***
 * Creates new form
studentwindow
*/
public studentwindow() {
    initComponents();

    //Fullscreen
    Toolkit tk =
    Toolkit.getDefaultToolkit();
    int xsize =
    (int)tk.getScreenSize().getWidth();
    int ysize =
    (int)tk.getScreenSize().getHeight();
    ;
    this.setSize(xsize,ysize);

    //
    board.removeAll();
    board.repaint();
    board.revalidate();
    board.add(quizmenu);
    //STUDENT INFO
    INITIATION
    studentdetails();
    teachername();
    cbolessons();

    displayinformation();
    lblanswer.setVisible(false);
    lblresult.setVisible(false);
    textpane = new
    JTextArea(10,20);
}

```

```

scrollpane = new
JScrollPane(textpane,
JScrollPane.VERTICAL_SCROLLBAR_ALWAYS,
JScrollPane.HORIZONTAL_SCROLLBAR_NEVER);

scrollablepane.add(scrollpane);

//textarea over writing

txtstory.setBorder(BorderFactory.createEmptyBorder(5, 5, 5, 5));
rbuttons();

// correctans();

}

private void rbuttons(){
    ButtonGroup choice1 = new
ButtonGroup();
    choice1.add(rb1a);
    choice1.add(rb1b);
    choice1.add(rb1c);
}

ButtonGroup choice2 = new
ButtonGroup();
choice2.add(rb2a);

choice2.add(rb2b);
choice2.add(rb3c);

ButtonGroup choice3 = new
ButtonGroup();
choice3.add(rb3a);
choice3.add(rb3b);
choice3.add(rb3c);

ButtonGroup choice4 = new
ButtonGroup();
choice4.add(rb4a);
choice4.add(rb4b);
choice4.add(rb4c);

ButtonGroup choice5 = new
ButtonGroup();
choice5.add(rb5a);
choice5.add(rb5b);
choice5.add(rb5c);

private void studentdetails(){
    id =
Integer.parseInt(String.valueOf(loginwindow.txtstudentid.getText()));
;

try{

```

```

        database.open();

        database.rs =
database.st.executeQuery("Select * from
tblstudents where studentid = "+id+"");

        while(database.rs.next()){

            firstname =
database.rs.getString(2);

            lastname =
database.rs.getString(4);

            grade =
database.rs.getInt(5);

            section =
database.rs.getString(6);

            subject =
cbosubject.getSelectedItem().toString();

        }

        }catch(SQLException e){

JOptionPane.showMessageDialog( null,
e.getMessage());
}
}

private void teachername(){

try{

database.open();

database.rs =
database.st.executeQuery("select
firstname from tblusers where accountid
= (select accountid from tblinfo where
section = "+section+" group by
accountid);");

while(database.rs.next()){

teacher =
database.rs.getString(1);

}

}catch(SQLException e){

JOptionPane.showMessageDialog( null,
e.getMessage());
}

//GENERATING QUIZ

private void autoverification(){

try{

database.open();

String sql = "Insert into
autoverifytable values(default, ?)";

database.pst =
database.con.prepareStatement(sql );

database.pst.setInt(1,
questionno);

database.pst.execute();

}catch(SQLException e){
}
}
}

```

