

**“TERM-BASED COMPUTERIZED GRADING SYSTEM”**

A research Project Proposal

Presented to the Faculty of the

**Engineering Technology Program**

Mariano Quinto Alarilla Polytechnic College

Meycauayan Bulacan

By:

Alas-as, Jayson

Austria, Christian

Corido, Dominic

Dela Cruz, Elisha Mae

Espadilla, Marche

Flores, Evert Gil

Trinidad,Lycka

Submitted in partial

Fulfillment of the requirements for the

**Computer Engineering Technology**

**MARCH 14, 2016**

## APPROVAL SHEET

The research project entitled "**Term-Based Computerized Grading System**" prepared and submitted by **Alas-as, Jayson., Austria, Christian., Corido, Dominic., Dela Cruz, Elisha Mae., Espadilla, Marche., Flores, Evert Gil., Trinidad, Lycka.**, in partial fulfillment of the requirements for the degree of **Computer Engineering Technology**, is hereby approved and accepted.

**Ms.April D. Matus**

Adviser

**Mr. Mark Aeron Montes**

Chairperson

**Engr. Kim Dowell Grimaldo**

Member

**Engr. Marlon M. Latagan**

Member

**Engr. Noel B. Alegre**

Member

Accepted in partial fulfillment of the requirements for the diploma of  
**COMPUTER ENGINEERING TECHNOLOGY.**

**Atty. Julius A. Babista**  
OIC, College Dean  
Date: \_\_\_\_\_

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**ABSTRACT****TITLE: TERM-BASED COMPUTERIZED GRADING SYSTEM**

Term-based Computerized Grading System development was the focused of this study. One the most important intend of the study is to develop a user-friendly, time valuable and systematically efficient scheme. The study was put together for the users to benefit users. This system has the advantage for students to view their grades every prelim, midterm and finals. The professor would be able to encode more efficiently and comfortably of encoding the grades of student that could lead for their better encoding performance. Admin could also search student's grade specifically. The study is capable for computing the student's grade per semester. Upon running the project, the result shows proper functionality of what the researchers expected.

## **ACKNOWLEDGMENTS**

The Term-based Computerized Grading System researchers would like to express their warmest gratitude to the people who have extended their support which fueled our way to success especially during the time of trials and hardships which were encountered during the development of this project and who became inspiration to the researchers to pursue the required knowledge to be applied on the project.

To our adviser, Ms. April Matus who has guided the researchers for the improvement of the system and for his priceless patience of teaching us the right instructions that made this projects a reality.

To our parents, who have provided us the resources and for their productivity to support the researchers until it's completed and who guard us the right way to mount patience while doing the project.

Last but not the least, to our Almighty God, for His gifted knowledge and willpower that strengthen us despite all changes and trials we have encountered and who mostly became our important inspiration during those difficulties.

We are dedicating these accomplishments to all of you.

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## CHAPTER 1

### INTRODUCTION

In this day and age, people are reliant to electronic information. Information is important in everyday living and it's a lot of information to process and release each time. Manual processing and releasing of information consumes more time and space due to paper works unlike electronic information, it processes data faster, technical and efficiently. Electronic process of information also is more secure and manageable than manual processing. Security is one of the most important when it comes to data storing and management. Processing the data result efficiently is achievable nowadays because technology has enhanced. Information is released by many transactions such as government, corporate industries, schools, etc. Through computers, users are able to do all the above mentioned about the benefits of electronic information.

To conduct a study, the researchers focused on school information releasing problems specifically on grades. Some are computing grades manually that it causes delay to encode and the students are wondering on what is their grade. This is just one of the grade releasing problems. In order to lessen this flaw, the researchers developed the "Term-based Computerized

Grading System". The system has various data the users can view. In students, they can view their current and previous grades every term which are also divided in quiz, examination, performance, and project. The professors can view their current and previous subjects handled, can view their due date of encoding to lessen the delay of grade releasing. The admin is capable of securing the data and the only user allowed for printing the grades.

## **BACKGROUND OF THE STUDY**

Computerized Grading System is designed to assist the students whenever they encounter some problems including grades. Using this computerized grading system, they are able to see their grades from prelim up to finals. Every term they are capable to review the computation for each term including quizzes, assignments, projects, seatworks, activities and examinations, so whenever they have complain they can only review it.

Computerized Grading System is still working but there are some problems concerning grades like; only the registrar's office can print the current and previous grades of students, the students was not able to view the full details of their currents and past grades, there are times encountering the delay of releasing of grades, and lastly, the students can't view the details of their grade because the professor is not available or the professor is a part time instructor.

## **OBJECTIVES OF THE STUDY**

### **General Objective:**

This study would able to build a system where the students can view the full details of their grades.

### **Specific Objectives:**

This study has the following specific objectives:

1. To create a system that helps students to review their previous and current grades.
2. To create a system that records the student grades every term.
3. To develop the current system.

## **SCOPE AND LIMITATIONS OF THE STUDY**

This study is limited to Mariano Quinto Alarilla Polytechnic College to maximize the attendance of students during regular class that is both beneficial to the instructors and students; the users/students are not allowed to print out the records, the system can only be access on the school and our system can only be view offline.

The study Term-Based Computerized Grading System is both beneficial to the instructors and students; the system shows the full details of the system, only the registrar is capable to edit the records of the system, the system can compute the grades of the students and our system provides security for the user.

## **SIGNIFICANCE OF THE STUDY**

The study Term-Based Computerized Grading System will give benefit the following: first to the students, they are able to see their grades every term, it helps the students to review the calculations of their grades and they can see their grades; for the professors, this will lessen the time spent when they are recording grades and the system will help to compute the grades fast; and the system could also give benefit for the school, a system that provides an upgraded system.

## CHAPTER 2

### CONCEPTUAL FRAMEWORK

#### **REVIEW OF RELATED LITERATURE AND STUDIES**

The review of related literature and studies will help us to understand how software works, its components and how efficient, reliable and fast a grading system is.

#### **GRADING SYSTEM**

Grading system is a process of computing grades if it is failed or not, most common grading systems are used for grading student works for its feedback.

**Table 1**

Grading System of the Philippines and the equivalent grades in US.

Grade	Scale	Scale 2	Grade Description	US Grade
1.00 - 1.24	96.00 - 100.00	Excellent		A+
1.25 - 1.49	94.00 - 95.99	Superior		A
1.50 - 1.74	91.00 - 93.99	Very Good		A-
1.75 - 1.99	89.00 - 90.99	Good		B+
2.00 - 2.24	86.00 - 88.99	Very Satisfactory		B
2.25 - 2.49	83.00 - 85.99	High Average		B-
2.50 - 2.74	80.00 - 82.99	Average		C+
2.75 - 2.99	77.00 - 79.99	Fair		C
3.00 - 3.99	75.00 - 76.99	Pass		C-
4.00 - 4.99	70.00 - 74.99	Conditional		D
5.00 - 5.00	0.00 - 69.99	Failing		F
5A		Failure Due To Absences		
5W		Withdrawal		
INC		Incomplete		
DRP		Dropped		

Source: <http://Grading System of the Philippines>

Computer-Based instruction techniques are the best example of the integration of science and technology. Having a computerized marking of assignments including of written text would probably be a benefit to teachers and educational administrators. When a huge numbers of assignments are submitted at once, they end up into a scenario that in their attempt to give a consistent evaluation and high quality feed back to students within a short period of time they feel bogged down.

The Educational administrators are also after to the efficiency and time management of the feedback, but in count must handle the outlay of doing this work. Obviously an computerized system would be a good addition to educational tool-kit, specifically if it can give less cost and useful outcome.

With this research it composes of description and evaluation of four computerized essay grading systems. The report of trial provided the information of the system which was undertaken at Curtin University of Technology in the first half of 2001.

The main reason of the trail was to assess whether computerized essay grading system was realistic, inexpensively viable and as effective as manually grading system. In the said school it is not implemented the computerized grading system but the advantage could be more huge given the very large

numbers of the students in some of the first year subjects. And the idea of the trial is to prove the result of the system is to improve the manual system.

Teaching staff around the world are encountering with a same recurring dilemma: what can they do to reduce the quantity of time consume on the relative task associated with grading their student's essay?

Given that their having an arrival of incoming large number of students, often counted in first year, the current situation of grading system was become both time consuming and expensive at the same time. For most teaching staff, having a system that can manage to computerize the task is just a dream. One of the tasks that can consider difficult to do is to grade, specifically when there is no need to give an individual feedback as in the case of examination grading.

A research in Curtin Business School they have about 2,000 first year students each year in several countries in Australasian region. Students abroad specifically in countries of Malaysia, Singapore, Hong Kong and elsewhere in the world, including remote & remote Australia, are conducting same subjects but taught by their local teachers.

In preserving consistency, the main examination was conducted to the main grading that is centralized in Australia but the system of grading load for Australian lecturers is terrible animations could be as large as 16,000 scripts

requiring grading. In addition to this already extensive problem we can add an additional 16,000 to 32,000 assignments of which possibly half would be graded too late to provide formative evaluation feedback to the students. Expectation could be as large as 16,000 students needed to have their grades. In addition to this already wide dilemma we can add an additional 16,000 to 32,000 assignments but only half can provide the feedback of their grades.

A computerize system of grades is just a dream in this current situation. Though there are systems emerging from laboratories that can somehow help the production environment.

Four of the systems are being evaluated in the following sections. One of the trials result that being reported. Production Automated Essay Grading System one of the system that have an capacity to computerize the grading system in essays that is Project Essay Grading (PEG). With the help of computerization technology in 1960's more useful essay grading system have emerged, and in the research it discuss the most contenders in the field.

COMPARISON OF TEST WITH OTHER AES TOOLS				
	PEG	IEA	E-Rater	TEST
Evaluation parameters	Essay length, Complexity of sentence and word length.	Similarity with gold standard	Lexical complexity, Vocabulary, Essay organization and fluency	Similarity with gold standard, Essay organization, Fluency, Accuracy
Feedback	No	Yes	Very more, Yes	Yes
Essay content checking	No	Yes	Yes	Yes
Fact checking	No	No	Yes	Yes
Training phase	Time consuming & Inexpensive	Time consuming & inexpensive	Time consuming & expensive	Time consuming & inexpensive
Language of essay	English	English	English	Hindi
Performance	Correlation of 0.87 with human raters	Correlation of 0.96 with human raters	Correlation of 0.87 with human raters	Correlation of 0.7652 with human raters

Source: <http://AES-TOOLS>

**Figure 1.** Comparison of test with other AES Tools.

The main purpose of the PEG is to aid and lessen the huge essay grading load in large educational testing program, such as SAT. when numerous grades are used, the problem focus in the grading process. A huge number of judges are likely to give a realistic grade for essay. An essay that been graded based on the judges will make the essay. A variety of linguistic features are used and measured. Then it develops a multiple regression equation that the main purpose is the grading system. Using this method, it assigned what grade a student can achieve based on the essay that the student do and being graded by the judges.

PEG started in work begun 1960's by Page and his colleagues (Page,1966 ).

"...we coined two explanatory terms: Trines were the intrinsic variables of interest – fluency, diction, grammar, punctuation, and many others. We had no direct measures of these, so began with substitutes: Proxies were approximations, or possible correlates, of these trines. All the computer variables (the actual counts

in the essays) were proxies. For example, the trine of fluency was correlated with the proxy of the number of words." (Page, 1994).

The numerous regression techniques are helpful in evaluation of grades, from the proxies, a prediction of the students score per essay. In research reported b Page (1994), the objectives were to differentiate those variables that would prove helpful in predicting student grades. Some software products including grammar checker, a program that can identify words and sentences, a software dictionary for definitions. And parser that used to collect data about proxies.

The definition of predictive variables is not given to Page's work. But, amongst the variables found useful in the equation were the fourth root of the number of words, sentence length, and a measure of punctuation. One of the results that were based in the regression equation with 26 variables showed correlations between PEG prediction scores and human rater scores including between 0.389 and 0.743. Palmer, Williams, & Dreher



Source: <http://e-rater-logo>

**Figure 2.** E-rater

**E-rater.** It is a mixed statistical and Natural Languages Processing (NLP) techniques to take out linguistic features to the essay to be evaluated. And all of the abstract models discussed in research, e\_rater students essay are graded based on a specific graded essay. E\_rater has module that take out the vocabulary contents, discourse structure information and syntactic information. In predicting a score of essay it will use a numerous linear regression techniques, focus onto the features that been take out. For every questionnaire, it produces a response base on human features scores. It has 57 features of the bench mark essay, based upon six score points in an Educational Testing Services (EST) scoring guide for manual grading, are the model used to build the regression model. Using stepwise regression techniques, the major predictor variable are

determined. Students grades are being predicted based on the value that have been take out.

The essay syntactic variety is one of the scoring guide criteria. When parsing the essay with an NLP tool is done, to determine the clause or verb that being used by the writer the parse tree was being analyzed. Each syntactic type on per essay and per sentence basis are ratios that needed to be calculated. Another related criteria for grading is having a well-developed argument on essay.

In looking for surface cue words and no lexical cues discourse analysis use techniques to examined the essay for discourse units. For partitioning process of essay based upon students contents arguments the cues are being needed. The grading system also provides topical information of the essay based on the words that used in the sentence and how the word used. Burstein, Kukich, Wolff, Lu &Chodorow (1998) are the people who evaluate the system and noticed that it can attain a degree of agreement with users raters. the following predictive feature variables were found to be important for one test essay question.

1. Argument content score
2. Essay word frequency content score
3. Total argument development words/phrases
4. Total pronouns beginning arguments

5. Total complements clauses beginning arguments
6. Total summary words beginning arguments
7. Total detail words beginning arguments
8. Total rhetorical words developing arguments
9. Subjunctive modal verbs

Having a represented documents and their word contents in a large two dimensional matrix semantic space and it use a Latent Semantic Analysis (LSA). the algebra method known as Singular Value Decomposition (SVD) are using a matrix from Latent Semantic Analysis (LSA), it gives an idea of relationship between the documents and words, and that relationship are being customize to give an efficient signify the true implication.

Words and contexts are represented by a matrix. Every words are being considered for the analyzing the matrix that represented by rows, when sentence, paragraphs or other partition of sentence that a word occurs are being represented by columns of the matrix. The frequencies of the words in each context contains cell.

The matrixes have been applied to SVD. The original matrix divided into three components matrices because of the SVD, when matrix multiplied, it gives the original matrix. Using a reduced length of these three matrices it can represent the word-context association, the divided matrix and the original matrix show another relationship between the word and the context.

The new relationship shows the evident, whereas above to the SVD hidden or latent. The Intelligent Assessor, using the LSA are developed by Landauer, Foltz & Laham (1998). To evaluate the essay, they also build the essay matrix for documents, and used the SVD technique to reproduce the matrix containing the essay topic domain semantic space.

The space was created consisted the human evaluated essay. The computed student's data are known as vectors. The essay documents has it vector, and the semantic space with documents are being compared; the evaluated essay with the lowest cosine value is assigned to the essay to be graded.

Landauer et al. (1998), report that LSA has been tried with five scoring methods, each varying the manner in which student essays were compared with sample essays. Mainly this will happen with the cosine between appropriate vectors are computed. Based on domain specific materials and the students essay LSA method was constructed.

Foltz also reports that LSA grading performance is about as reliable as human graders (Foltz, 1996). Landauer reports another trial on GMAT essay where the percentages for adjacent agreement with human grades were between 85%-91%(Landauer,1999)

**The TextCategorisation Technique (TCT).** Larkey (1998) implemented an automated essay grading approach based on text categorization techniques, text complexity features, and linear regression methods. The techniques for classifying documents as to their appropriateness of its content for given document retrieval query are discussed by the information Retrieval literature (van Rijsbergen, 1979) Larkey's approach "... is to train binary classifiers to distinguish "good" from "bad" essays, and use the Scores output by the classifiers to rank essays and assign grades to them." (Larkey, 1998) The technique firstly makes use of Bayesian independent classifiers (Maron, 1961) assigning probabilities to documents predicting that they somehow belong to a specified category of documents. Second is, a neighbor techniques called k-nearestis used to identify the closest k essay to the students essay, and k is achieve by having a comparison between a human graded essay.

#### The In query retrieval system (Callan, Croft &Broglio, 1995)

At last, text complexities eleven features are used, such as the equal number of the character in documents, the number of words in fourth root is a document it is also discussed in the PEG, and the average sentence length, a numbers of regression trials conducted by Larkey, used a different combination of quantity. Larkey also used a set of essay, as well as essay on social study (soc) where the main idea is the primary needed, and essay of general opinion, was the criteria of assessment.

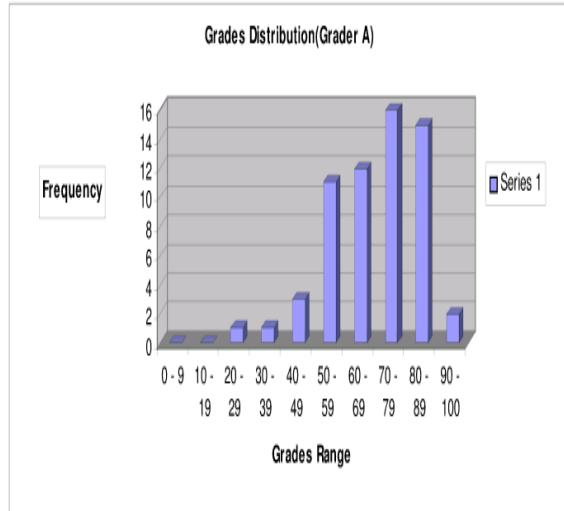
When the based grades are compared to the human's graders .60 and scores adjacent having a score of 1.00. For the essay tackles opinion were gain .55 and .97. During the first semester in 2001 a trial of an computerized essay grading system was conducted at Curtin University of Technology in Perth, western Australia.

Only one subject was picked, a the information systems introduction, achieve a 1,000 students willing to join. But sadly the semester start before the research starts to conduct information. This proves that the assessment was already determined. If the assessment is done the student can change its result without major consent.

The process of having a consent and secure a high rate of response to the trial, the researchers announced that they have an additional question. it is useless to say that the response was in a high rate. Because the system require a 200 manually graded essay as an input to the grading system. In the middle of three researchers they graded a papers counted in 70 and deliver to the US site the electronic copies and another 330 ungraded essay were then forwarded to the site

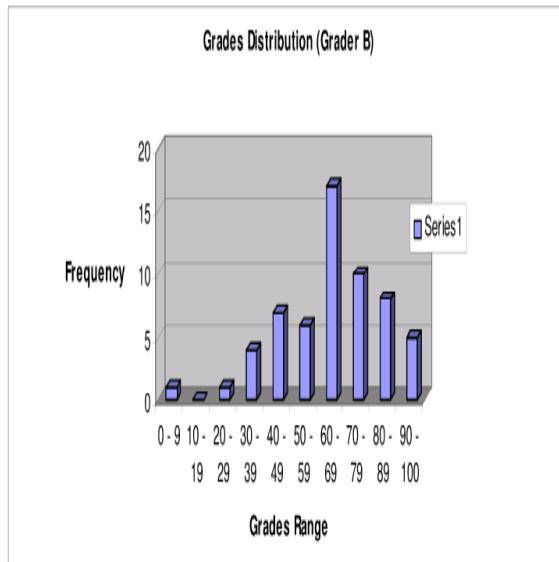
The graders of this trial are divided in four Graders (A, B, C, D) the frequency of each grader will be the based grade for the grades of the essay that the judges give to them to evaluate.

## Automated Essay Grading System



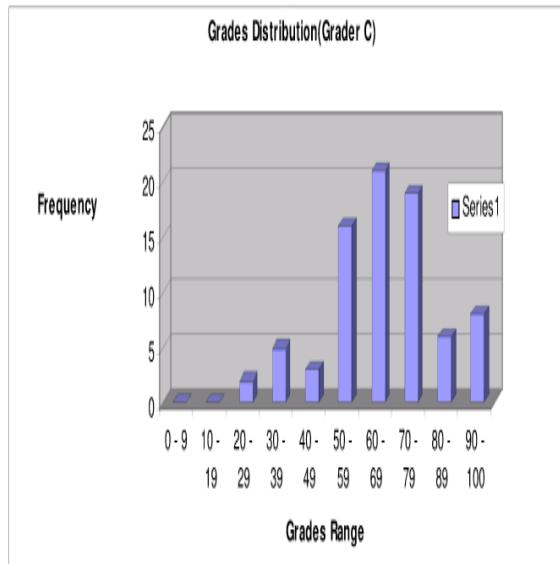
Source: <http://essay-grading-system>.

**Figure 3.** Results of grades for Graders A



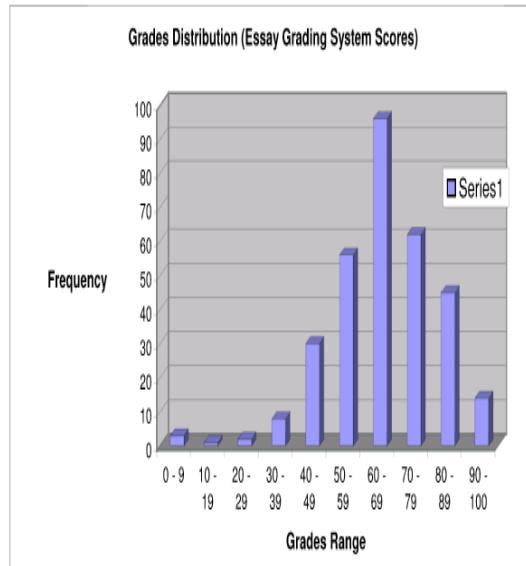
Source: <http://essay-grading-system>.

**Figure 4.** Results of grades for Graders B



*Source: <http://essay-grading-system>.*

**Figure 5.**Results of grades for Graders C



*Source: <http://essay-grading-system>.*

**Figure 6.**Results of grades for Graders

In summary the results of frequency shows a low grades for all of the gathered grades.

The weaknesses of the system can be defined into two the minor and the major. The first is the successful implementation, to have a 200 essay that needed to encode into the system manually. The graded output of the system will depend on the essay that encoded to the system. In a class having a small number of students it is not reasonable to implement.

Other weakness is the charge of having a system. Because the system was in American so the researchers needed to pay in US\$. Because the output will give a low rate to implement to classes having a few students the initial cost will be \$11,400. This is obviously not a good in cost. if same essay will use per semester the cost will somehow reduce. But using a same essay per semester is not advisable or to use it twice.

There was another factor. The system is in America than having at Curtin University. In security it is kind of risky and the cost in idea is no so expensive compare in hiring a human grader.

The system is completely based on the essay encoded to the system. To more accurate the system in idea provides grade same as human grader. And it can run available it any place.

The cost of hiring a human grader will cost \$25 per hour. The system should give a 90% feedback in grading. The experience of the researcher in implementing the system in 200 essays it cost \$33 per essay with two pages in length the initial payment for service cost \$600. But it cost about \$10,800 and a total of \$11,400.

The idea of the system provides a small cost supporting a University. Even the initial cost is high the out com per essay to be graded will be low. Up to 2000 essay could have been evaluate for the A\$11,400, but we did not have the number to grade with some economies of scale, and do not give the give the benefits. The system can provide at least 2,000 essays to grade, the automated essay grading system and the cost still hit the price of A\$5.70 per essay, it double the cost of manual grading system.

### **Applications of grading system**

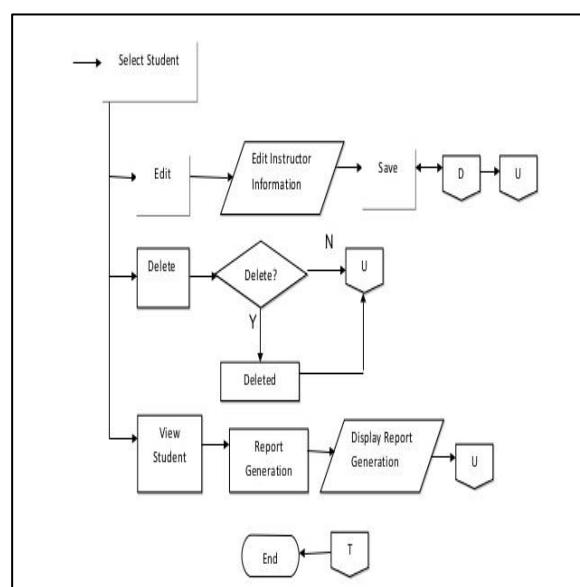
For now on, technology is the most widely used in the industry and mostly is in the College University. The application of computerized grading system is one of the examples of application of technologies that could be used in Universities.

## Thesis in IT Online Grade Encoding and Inquiry System via SMS

**Technology.** Alternatively, the grades can perform operations such as; can improve the use of manual operation in the office of the registrar; to determine the problems encountered whenever there are delays in releasing the grades; to lessen the consumed time in searching the grades of the students.

Grades are important for advance learning; it is the result of what the student has done after several times in school, so grades are important for the students.

On the other hand, there are students who want to secure their grades; however, some students sometimes they misplaced their printed grades, so student gets timid whenever they want to ask in the registrar's office for new one especially when they have much work to finish.



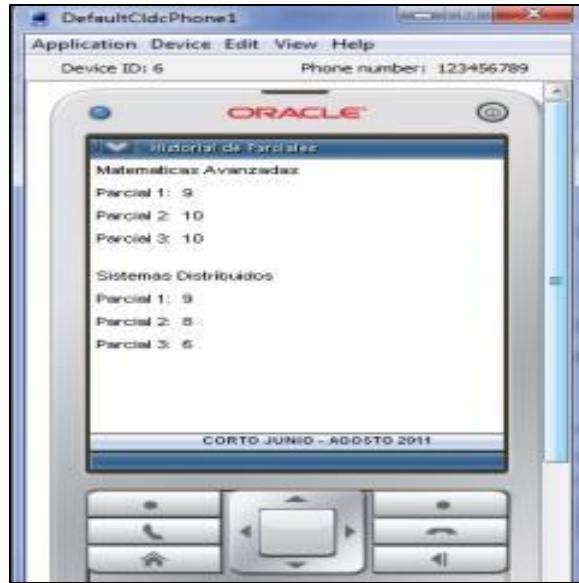
Source: Thesis in IT Online Grade Encoding and Inquiry System via SMS

**Figure 7.** Conceptual framework of an Online Grade Encoding and Inquiry System via SMS Technology.

Student ID	Student Name	Address	Age	Birth Date	Birth Place
200912140	Janneth Sebastian D. Stevens	Damaser Ing.	24	1989-01-20	Sanchez, Neg.
200912110	Zohreh Sebastian D. Stevens	Cebato Tower, Baguio, Negros	21	1991-12-05	Roxas N.S., Saudi-Arabia
200914022	Ramonson Jocelyn	College St. Man. City	23	1993-07-11	Coloso St. Man. City
200918110	Aldana	University of Negros Occidental	19	1994-01-15	Tambacan, Neg. Occ.
200918100	Munoz Jun Izaelle	College St. Man. Neg. Occ.	20	1992-10-21	Macabebe, Neg. Occ.
200919200	Gabino Capulante	Bugas Jr. Neg. R.	22	2001-09-08	Bacolod City
200914300	Connie Daniel	c/o Pedro Pascualen Cpl.	23	1993-03-02	Paisanearan City
200918010	garcia eric	cupid	22	1993-09-16	Capiz

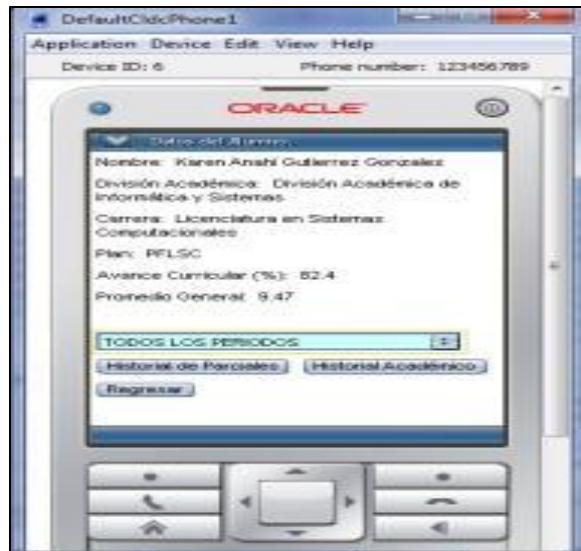
  

Subject	Description	Units	Pre Requisites
English	Analysis of Structure & Information Technology		
Mathematics	Year 1		
Mathematics	Year 2		
Mathematics	Year 3		
Mathematics	Year 4		
Mathematics	Year 5		
Mathematics	Year 6		
Mathematics	Year 7		
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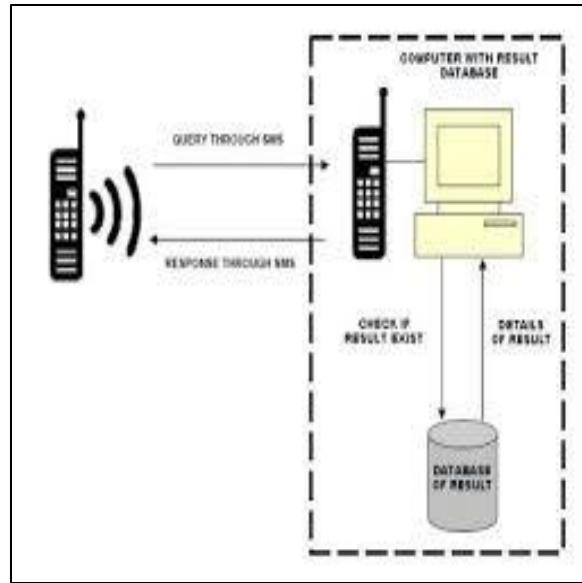
Source:Grade Query System using Mobile Devices for Students of Juarez Autonomous University of Tabasco

**Figure 9.**Initial Screen of Grade Query



Source:Grade Query System using Mobile Devices for Students of Juarez Autonomous University of Tabasco

**Figure 10.**Initial Screen and Options Menu



Source:Grade Query System using Mobile Devices for Students of Juarez Autonomous University of Tabasco

**Figure 11.**Partial Exams Result



Source:Grade Query System using Mobile Devices for Students of Juarez Autonomous University of Tabasco

**Figure 12.**Shows the conceptual framework of Grade

The above figures shows the Grading system using mobile query. This explains how grading system could work by applying Grading system in mobile query.

Both the professor and the web will evaluate using the grading system, and then the final grade will be computed. Many researchers says that this is the most helpful tool for learning, it involves organizing, integrate ideas, to review and the ability to interpret the application of information.

Computer-Based instruction techniques are the best example of the integration of science and technology.

## **HTML**

It is the text mark-up language trend given on the World Wide Web. If you have always written a school report or business memo, you have encountered text mark-up. Your files likely came back to take over in red ink, favour of your teacher, usually the symbols or acronyms given in this editorial mark-up to propose changes for you to clarify.

### **History of HTML**

This chapter intends to distribute facts on how HTML was applied and used today. In 1989, World Wide Web (www) began to CERN- European

laboratory in Switzerland. CERN is the place where logic thinkers meet to engage in the contemplation of complex atomic phenomena that occur on a minuscule scale in time and space. This is the place where technology begins. Tim Berners-Lee invented Web. He was working on computing services when he came up with the concept. He thought that by using hypertext, you could quickly display part of another paper that holds directly relevant text or diagrams. Tim had already served on document production and text processing, and had developed his first hypertext 'Enquire', in 1980 for personal use. Tim's prototype Web browser in the NeXT computer came out in 1990. Hypertext was coming into vogue and being used on computers. The system was widely distributed. Then, the new domain name system had made it much easier to address a machine on a internet. A domain name comprises a series of letters separated by dots, for example: www.fb.com. These names are the easy-to-use alternative to the much less manageable and cumbersome IP address numbers. A program called distributed name Name service (DNS) maps domain names onto IP addresses, keeping the IP address 'hidden'. As a result, email addresses became simpler. To Tim Berners-Lee, global hypertext links seemed feasible, but it was a matter of finding the correct approach to implement them. Using an existing hypertext package was impractical for a number of reasons. Therefore, any hypertext tool to be used worldwide must have into many types of computers existed such as: Personal computers, macintoshes, UNIX machines and simple terminals. Also, many desktop publishing methods were in vogue: SGML, Interleaf, Latex, Microsoft Word, and Troff among many others. Tim

demonstrated a basic, but attractive way of publishing text by developing some software, himself, and also his own simple protocol-HTTP-for retrieving other documents text via hypertext links. Tim's own protocol, HTTP, stands for Hypertext Mark-up Language; his implementation was held on a NeXT workstation. He encourage others build upon his ideas and to design further software for displaying HTML, and for setting up their own HTML documents ready for access. The HTML that tim invented was strongly based on SGML(Standard Generalized Mark-up Language), an internationally agreed upon method for marking up text into structural units such as paragraphs, heading, list, list items and so on. SGML could be implemented on any machine. The language was independent of the formatter (the browser or other viewing software) which display text on screen. The pairs of tags such as <TITLE> and </TITLE> is taken directly from SGML, which does exactly the same. SGML elements used in tim's HTML included (paragraph); H1 through H6 (Heading level 1 through heading level 6); OL(ordered lists); UL(unordered lists); LI(list items) and various others. What SGML not include of course, are hypertext links: using anchor element with the HREF attribute was purely tim's invention, as was the now-famous 'www.name.name' format for addressing machines on the Web. Certainly the simplicity of HTML, and the use of the anchor element A for creating hypertext links, was that made tim's invention useful. In September 1991, the WWW-talk mailing list was started, a kind of electronic discussion group in which enthusiasts could exchange ideas and gossip. By 1992, Dave Raggett from England was one of his early enthusiasts, following dave visited

tim. Dave looked through printed media to get an idea of what sort of HTML features would be important when that information was published online. When dave return to England, he composed HTML+, a richer version of the original HTML. However, tim's ideas had caught the eye of Joseph Hardin and Dave Thompson, both of the National Center for Supercomputer Applications, a research institute at the University of Illinois at Champaign-Urbana. They managed to connect the computer at CERN and download copies of two free web browsers. Realizing the importance of what they saw, NCSA decided to develop a browser of their own to be called mosaic. Marc Andreessen and Eric Bina were the genius programmers in the NCSA. In dec. 1992, Dave Raggett, Tim Berners-Lee, Dan Connolly and others debeted how images(photographs, diagrams, illustrations and so on) should be inserted into HTML documents in an electronic discussion group called WWW-talk. Marc Andreessen introduced an idea for IMG tag by the Mosaic team. The coming of HTML 4, the OBJECT tag potentially replaces IMG. In march 1993, Lou Montulli released the Lynx browser version 2.0-a text-based browser used DOS without OS. Lou Montulli worked with Netscape Communications Corp., while early 1993 Dave Raggett started to make his own browser and Eric Bina and the NCSA gang were hard at hacking through the night , Dave labs in Bristol. In april 1993, version 1 of the Mosaic browser was released for Sun Microsystems lines workstation. In late 1993 large companies underestimate the importance of the web. Dave Raggett's work was slow due to lack of money from team developers so he had to develop much of system single-handedly. Like other huge computer companies, Hewlett-Packard

was quiet unconvinced that the internet would be a success. There was also misconception that the internet was mostly for academics. Dave also used the browser to show text flow around images, flows and other aspects of HTML at the first www conference in Geneva in 1994. The Arena browser was later used for development work at CERN. In May 1994, spyglass, Inc., signed a multi-million dollar licensing agreement with NCSA to distribute a commercially enhanced version of Mosaic. In August of that same year, the University of Illinois of Champaign-Urbana, the home of NCSA, assigned all future commercial rights for NCSA Mosaic to spyglass. In May 1994, the first World Wide Web conference is held in Geneva, with HTML+ on show. Marc Andreessen and Jim Clark saw themselves as joint creators of a wonderful new technology. With 380 attendees from Europe and United States all was merry for the first www conference organized by CERN in May 1994, but the two programmers and Eric Bina do not attend. Dan Conolly who defined HTML2 gave presentation entitled Interoperability: Why Everyone Wins, it explains the importance of proper HTML specification in the web. Dave Raggett had been working on HTML+ which agreed in the conference that should lead for the development of HTML3 standard. Dave together with CERN, developed Arena further as a proof-of-concept browser for this work. Using Arena, Dave Raggett, Henrick Frystyk Nielsen, Hakon Lie and others demonstrated text flow around a figure with captions re sizable tables, image background, math and other features. In early 1994, an engineering task force working group was set up to deal with HTML. The (IETF) is the international standard and development body of the internet

and is a large, open community of network designers, operators, vendors, and researchers concerned with the evolution and smooth operation of the internet architecture. Security, Network routing, and Applications is clone in working groups of the IETF. In July 1994, HTML specification for HTML 2 is released. Dan and colleagues collected all the HTML tags and collated them into draft document what Tim Berners-Lee called HTML 2. The draft was circulated for comment. HTML 2 has document type definition, a kind of mathematically precise description of the language.

**November 1994.** Netscape is formed during 1993, Marc Andreessen became irritated on the Mosaic instead of being charged of it. Upon graduating, he left NCSA and went to California where he met Jim Clark of Silicon Valley. They formed Mosaic Communications which became Netscape Communications Corp. in November, 1994. It was successful and many users would mistakenly think that Netscape invented the Web. Netscape began inventing its own HTML tags and rarely made an appearance at the big WWW conferences.

**Late 1994.** The World Wide Web consortium forms- to fulfill the potential of the web, WWW Consortium were formed and recruited many of the famous names in the Web community. Headed up by Tim Berners-Lee, here are some of the Web legendary today (1997):

- Dave Raggett on HTML of United Kingdom.
- Arnaud le Hors on HTML of France.
- Dan Connolly on HTML of United States.
- Henrik Frystyk Nielsen on HTTP and on enabling the Web to go faster of Denmark.
- Hakon Lie in style sheets of Norway. He is located in France, working at INRIA.
- Bert Bos on style sheets and layout of Netherlands.
- Jim Miller on investigating technologies that could be used in rating the content of Web pages of United States.
- Chris Lilley on style sheets and font support of United Kingdom.

***March 1995.***A furor over the HTML Tables specification- Dave Raggett's HTML 3 draft had tackled the tabular organization in HTML. At the 32<sup>nd</sup> meeting of the IETF from Massachusetts, Dave found a group from SGML who were responsible for table specification for it opposes the CALS table model which is used by US Navy for complex documentation. HTML tables were not in HTML originally is at last faced from HTML 3 draft to HTML 3.2 and continue to used it to provide a Web design for sort out pictures and text on the screen.

***August 1995.***Microsoft's Internet Explorer browser come out- Version of 1.0 of Microsoft Corp.'s Internet Explorer was publicized which later compete with Netscape's browser and evolve its HTML features which become their business. ActiveX feature made Microsoft's browser exceptional, and Netscape developed

a plug-in called Ncompass to handle ActiveX. In November 1995, Microsoft's Internet Explorer version 2.0 arrived for its Windows NT and Windows 95 Operating Systems.

**September 1995.**Netscape submits a proposal for frames- Netscape submitted a proposal for frames, the proposal was implemented but nobody was surprised.

**November 1995.**The HTML working group runs into problems- HTML working group was an excellent in making ideas, but things do not settle down. The volume of email user climb and, HTML working group become great through the vast popularity of the Web. The HTML working group emailed each other in a passion of electronic activity that no time was left for programming and losing position to the browser dealers.

**November 1995.**Vendors unite to form a new group dedicated to developing an HTML standard- in November 1995 Raggett called the browser companies representatives and recommend they meet as small group dedicated to standardize HTML and they made quick and effective decisions about HTML.

**November 1995.**Style sheets for HTML documents design to take shape- World Wide Web Consortium programmers met in Versailles near Paris to converse about the deployment of Cascading Style Sheets- this name involves

that more than one style sheet can relate to construct the absolute appearance of the data.

**November 1995.** Internalization of HTML Internet Draft- Gavin Nicol and others present a paper on the internalization of the Web.

**December 1995.** The HTML working group is dismantled- Since the IETF HTML working group was having difficulties coming to quick agreement, they set apart.

**February 1996.** The HTML ERB is formed- World Wide Web group formed the HTML Editorial Review Board (ERB) to aid with the standardization process which consists of representatives from huge computer companies that communicate through email and telephone and meet just about four times a year. Dan Connolly of W3 group and author of HTML 2 achieved the rough meeting skillfully. Dan makes sure that all representatives must listen to each other's point. In ERB preparation meeting, specific describing of new feature of HTML was made electronically available for ERB members to read. At the meeting, the proponent will explain some specifications and then dearly hoped that all who were present also agree that the summarize ideas were sound. When writing, the next HTML standard, code-named *Cougar*, has begun its journey in this direction. The BLINK tag was exile in an HTML ERB meeting.

Netscape would only abolish it if Microsoft agreed to get rid of MARQUEE; the deal was hit and both tags disappeared. Tough decisions were made for the OBJECT specs which became part of the HTML, but not until 1997.

**April 1996.**The W3 Consortium working draft on Scripting come out-based on initial draft by Kindel, it derived from Netscape's extensions for JavaScript.

**July 1996.**Microsoft seems more interested than first imagined in open standards- in April 1996, Microsoft's Internet Explorer become available for Macintosh and Windows 3.1 systems. These included the remarkable MARQUEE tag made text dance about all over the screen.

**December 1996.**Work on 'Cougar' is begun- The HTML ERB became the HTML Working Group and began to work on 'Cougar', the next version of HTML with completion late Spring 1997, eventually become HTML 4. With all sorts of innovations for the disabled support for international languages and much more, HTML 4 breaks away from simplicity and charm of HTML of earlier years!

**January 1997.**HTML 3.2 is ready- In January 1997, The W3 Consortium formally endorsed HTML 3.2 as an HTML cross-industry specification. By providing a neutral forum, the W3 Consortium had successfully obtained agreement upon a standard version of HTML and took the existing IETF HTML 2

standard and incorporated features from HTML+ and HTML 3. HTML 3.2 included tables, applets, text flow around images, subscripts and superscripts.

**Update- Spring 1998.**Cougar has fully materialized as HTML 4.0 and is a W3C Proposed Recommendation.

**HTML Creation.**2003-06-03: the World Wide Web was invented by Tim Berners-Lee and Robert Cailliau in 1990. In 1989, while working at CERN (the European Organization for Nuclear Research), both men made proposals for hypertext systems.

HTML consists of a series of short **codes** typed into a text-file which is called Tags. The text is then **saved as an html file**, and **viewed through a browser**, like *Internet Explorer* or *Netscape Navigator*. This browser reads the file and translates the text into a visible form.

## **Types of HTML**

The most common version of HTML in use is HTML 4. The new version of HTML, which is entering the industry, is HTML 5. HTML can be divided into three categories: transitional, strict, and frameset. These types apply to how HTML is used, not necessarily to the section of tags.

Transitional is the most common type of HTML. It has flexible syntax. If tags are misspelled, the browsers do not correct web developers' errors, and they display content anyway.



*Source: Types of HTML*

**Figure 13.** Transitional HTML

Strict is meant to return rules into HTML ad make it more reliable. This style of HTML is important on phones, where the processing power may be limited. A clean and error-free code helps to load pages faster.

- ```
<!DOCTYPE html>
```
- **HTML 4.01 Strict**  
<!DOCTYPE HTML PUBLIC "-//W3C//DTD  
HTML 4.01//EN"  
"http://www.w3.org/TR/html4/strict.dtd">
  - **HTML 4.01 Transitional**  
<!DOCTYPE HTML PUBLIC "-//W3C//DTD  
HTML 4.01 Transitional//EN"  
"http://www.w3.org/TR/html4/loose.dtd">

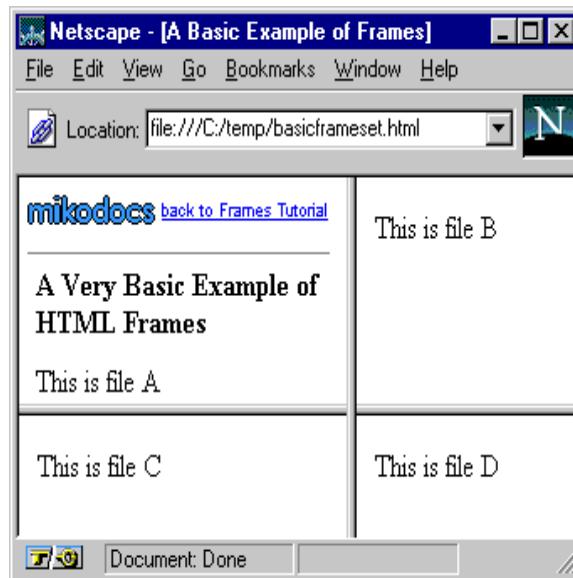
*Source: Types of html*

**Figure 14.** Strict HTML

Frameset allows web developers to create a mosaic of HTML

documents. Multiple documents can be connected into a single screen.

This technique is often used to create a menu system.



*Source: Types of html*

**Figure 15.** Frameset HTML

### Link types

In HTML, the following link types indicate the relationship between two documents, in which one links to the other using an `<a>`, `<area>`, or `<link>` element.

Here are the list of the defined link types and their significance in HTML:

*Alternate(`<a>`, `<area>`, `<link>`)* if the element is `<link>` and the `rel` attribute also contains the style sheet type, the link defines an alternative style sheet; in

that case the title attribute must be present and not be the empty string. If the type is set to application/rss + xml or application/atom + xml, the link defines a syndication feed.

*Archives (HTML 5)*(, , ) defines a hyperlink to a document that contains an archive link to this one.

*Note:* Although recognized, the singular archive is incorrect and must be avoided.

*Author (HTML 5)*(, , ) defines a hyperlink to a page describing the author or providing a way to contact the author.

*Note:* This may be a mailto: hyperlink, but this is not recommended on public pages as robot harvesters will quickly lead to a lot of spam sent to the address. Although recognized, the rev attribute on , , or<link> elements with a link type of made is incorrect and should be replaced by the rel attribute with this link type.

*Bookmark* (, ) indicates that the hyperlink is a permalink for the nearest ancestor <article> element.

*External (HTML 5)*(, ) indicates that the hyperlink leads to a resource outside the site of the current page; that is, following the link will make the user leave the site.

*First (HTML 5)(, , )* indicate that the hyperlink leads to the first resource of the *sequence* the current page is in.

*Note:* Other link types related to linking resources in the same sequence are last, prev, next.

*Help (, , )* defines a resource for representing the page in the user interface, usually an icon (auditory or visual).

*Icon (HTML)()* the media, type and sizes attributes allow the browser to select the most appropriate icon for this context.

*Note:* Apple's iOS does not use this link type, or the sizes attribute, like others mobile browsers do, to select a Webpage icon for Web Clip or a start-up placeholder.

*Index (, , )* indicates that the page is part of a *hierarchical* structure and that the hyperlink leads to the top level resource of that structure.

*Last (HTML 5) (, , )* indicates that the hyperlink leads to the *last* resource of the *sequence* the current page is in.

*Note:* Other link types related to linking resources in the same sequence are first, prev, next.

*License (HTML 5)* ([<a>](#), [<area>](#), [<link>](#)) indicates that the hyperlink leads to a document describing the licensing information.

*Note:* Although recognized, the synonym copyright is incorrect and must be avoided.

*Next* ([<a>](#), [<area>](#), [<link>](#)) indicates that the hyperlink leads to frames even though HTML 3.2 specification did not support this feature.

*Preload* ([<link>](#)) tells the browser to download a resource because this source will be needed later during the current navigation.

*Prev* ([<a>](#), [<area>](#), [<link>](#)) indicates that the hyperlink leads to the preceding resource of the sequence the current page is in.

*Note:* Other link types related to linking resources in the same sequence are first, last, next.

*Search* ([<a>](#), [<area>](#), [<link>](#)) indicates that the hyperlink reference is a document whose interface is specially designing for searching in this document, or site, and its resources.

*Style Sheet (HTML 5)* ([<link>](#)) defines an external resource to be used as a style sheet. If the type is not set, the browser should assume it is a text/css style sheet until further inspection.

*Sidebar (HTML 5)* (`<a>`, `<area>`, `<link>`) indicates that the hyperlink leads to a source that would be better suited for a secondary browsing context, like a *sidebar*. Browsers that don't have such a context will ignore this keyword.

*Tag* (`<a>`, `<area>`, `<link>`) indicates that the hyperlink refers to a document describing a *tag* that applies to this document.

*Nofollow (HTML 5)*(`<a>`, `<area>`) indicates that the linked document is not endorsed by the author of this one. This link type may be used by some search engines that use popularity ranking techniques.

*Noreferrerer (HTML 5)*(`<a>`, `<area>`) prevents the browser, when navigating to another page, to send this page name, or any other value, as referrer via the Referrer: HTTP header. (In Firefox, before Firefox 37, this worked only in links found in pages. Links clicked in the UI, like “Open in a new tab” via that contextual menu, doesn’t abide for this value).

*Pingback (HTML 5)* (`<link>`) defines an external resource URI to call if one make a comment or a citation about the webpage. The protocol used to make such a call is defined in the [Pingback 1.0](#) specification.

*Note:* if the X-Pingback: HTTP header is also present, this header has precedence over the `<link>` element with this link type.

*Preconnect (<link>)* Hints the browser to open in advance the connection to the linked web site, without disclosing any private information.

*Prefetch (HTML 5) (<a>, <area>, <link>)* Hints the browser to fetch in advance the linked resource, as it will likely be requested by the user.

*Note:* the [Link Prefetch FAQ](#) has details on which links can be prefetch and on alternative methods.

## **Versions of HTML**

**HTML 1.0 (1989-1994).** The first version of HTML that supported inline images and text controls and was very limited in terms of styling and presentation of content.

**HTML 2.0 (1995).** This specification supported more browsers and was considerably improved to support forms with limited set of form elements such as text boxes, etc.

**HTML 3.20 (1997).** These versions included support for creating tables and expanded options for form elements and also allow web pages to include complex mathematical equations.

**HTML 4.01 (1999).** This version added support for style sheets and scripting ability for multimedia elements to possibly change the appearance/look of the website by changing just the style sheet(s) itself.

## **Historical roots of html**

Tim Berners-Lee, a researcher from the Conseil Europeen stream Recherche nucleaire (CERN) laboratory in Geneva, Switzerland. In 1989, Berners-Lee had a task to create a hypertext delivery environment that can be used as an interface for scientific facts, that can read this information equally well in Macintosh systems with small screens, NeXT Workstations, IBM PCs, and any various of platforms.

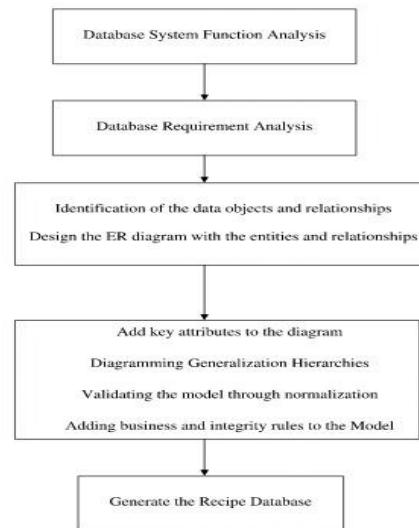
The HTML languages are usually defined as the application of Standard Generalized Markup Language (SGML), that serves as a basis to define the markup languages. Many flavours of HTML as a structured language have a connection with SGML.

## DATABASE

It is a software system that constructs databases and also manipulates data for many applications is called database management system.

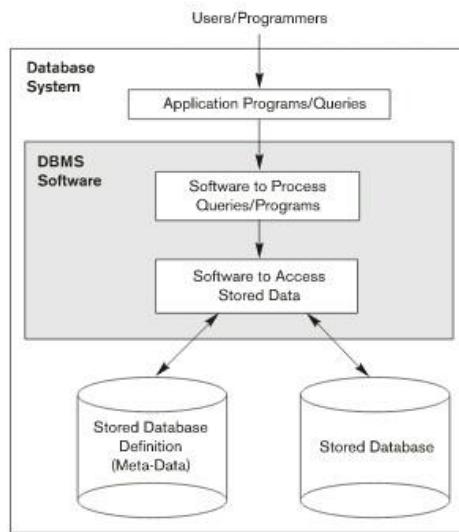
Database management system allows users to create database and also to maintain their database. Databases involve data types, structures and constraints of data.

Databases has many purposes where computers are used like business, electronic commerce, engineering, medicine, genetics, law, education, and library science.



*Source: Design and implementation of database for recipes*

**Figure 16.**How database management system Generates



*Source: Fundamentals of database system*

**Figure17.** How data stored in databases

## Characteristic of Database

One of the characteristics of database management system is that it manages different tasks and different users.

Databases are generated manually or computerized and also Databases may differ in different size and complexity. One of the examples of a large commercial database is Amazon.com. It holds data that is over 20 million books, CD's, videos, DVD'd, games, electronics, apparel, and other items.

In our society, Database and database system are important component. Most of us encountered things that are connected in database that is involve in our everyday lives. For example, if we go to the bank to deposit or withdraw funds, if we make a hotel or airline reservation, if we access a computerized

library catalog to search for a bibliographic item, or if we purchase something online-such as a book, toy, or computer-chances are that our activities will involve someone or some computer program accessing a database. Even purchasing items at a supermarket often automatically updates the database that holds the inventory of grocery items.

Database management system (DBMS) is a software application that uses databases to handle different data. It also provide logical model of data that separates them on how they are physically stored.

It is a kind of database management system where more structural, the redundancy is very low, and also provide strong query unction.

In relational database system, the data is stored in row and column style. The row and column is called table and database system is compose of group of table.

```

1 string cmdText = "SELECT * FROM Product WHERE id=@ID";
2 SqlCommand command = new SqlCommand(cmdText, conn);
3 command.Parameters.Add(new SqlParameter("@ID", id));
4 SqlDataReader reader = command.ExecuteReader(); // INV-Q1 executed
5 reader.Read();
6 result = Load(reader);
7 return result;

```

*Source: Impact analysis of database schema change*

**Figure18.** Database query to insert data

**Database Tables.**All data are stored in a database and each data must have different identifier for each record or they must have different id's.

In entering data in databases, the tables must be created. And the number of fields and data types must be specified.

```
CREATE TABLE Movies (
    title      CHAR(100),
    year       INT,
    length     INT,
    genre      CHAR(10),
    studioName CHAR(30),
    producerC# INT,
    PRIMARY KEY (title, year)
);
```

Source: *Database systems, The complete book*

**Figure19.** Database query to create table

**STUDENT**

| Name  | Student_number | Class | Major |
|-------|----------------|-------|-------|
| Smith | 17             | 1     | CS    |
| Brown | 8              | 2     | CS    |

**COURSE**

| Course_name               | Course_number | Credit_hours | Department |
|---------------------------|---------------|--------------|------------|
| Intro to Computer Science | CS1310        | 4            | CS         |
| Data Structures           | CS3320        | 4            | CS         |
| Discrete Mathematics      | MATH2410      | 3            | MATH       |
| Database                  | CS3380        | 3            | CS         |

**SECTION**

| Section_identifier | Course_number | Semester | Year | Instructor |
|--------------------|---------------|----------|------|------------|
| 85                 | MATH2410      | Fall     | 07   | King       |
| 92                 | CS1310        | Fall     | 07   | Anderson   |
| 102                | CS3320        | Spring   | 08   | Knuth      |
| 112                | MATH2410      | Fall     | 08   | Chang      |
| 119                | CS1310        | Fall     | 08   | Anderson   |
| 135                | CS3380        | Fall     | 08   | Stone      |

**GRADE\_REPORT**

| Student_number | Section_identifier | Grade |
|----------------|--------------------|-------|
| 17             | 112                | B     |
| 17             | 119                | C     |
| 8              | 85                 | A     |
| 8              | 92                 | A     |
| 8              | 102                | B     |
| 8              | 135                | A     |

**PREREQUISITE**

| Course_number | Prerequisite_number |
|---------------|---------------------|
| CS3380        | CS3320              |
| CS3380        | MATH2410            |
| CS3320        | CS1310              |

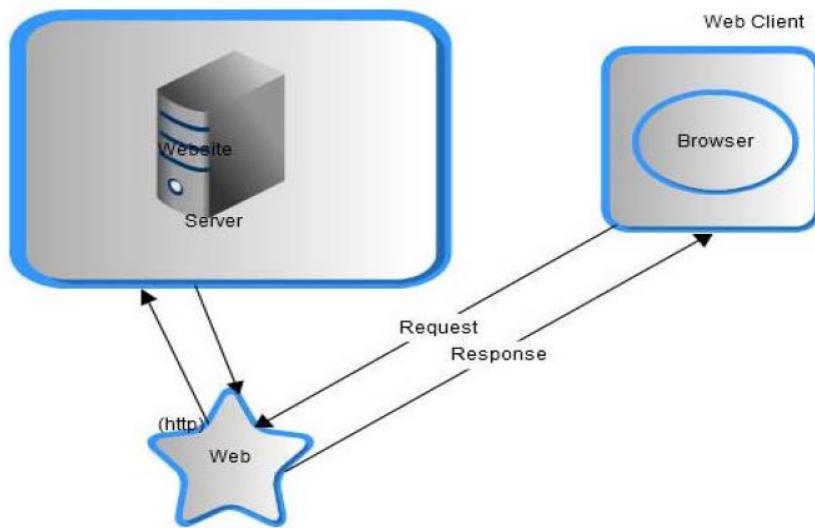
Source: *Fundamentals of database management systems*

**Figure20.** Data that is stored to database (Course and student information)

There are applications that are used in temporal databases, which records time-referenced data. These includes financial applications such as portfolio management, accounting, and banking; record-keeping applications such as personnel, medical-record, and inventory management; scheduling applications such as airline, train, and hotel reservations and project management; and scientific applications such as weather monitoring

## PHP

PHP is a scripting language that connects SSI (Server Side Includes) and Perl, intentionally for web environment. The Open Source software movement, PHP has gained quite subsequent and one of the frontrunners; the implementation of Web pages is a dynamic content. The popularity of PHP is like C syntax and plainness and it was designed by RasmusLerdof just for displaying his resume and collect data off his visitors. Because of the PHP language developers now can create a powerful website; to achieve this they require a database application such as MySQL. In doing this you need to have a background in Hypertext Markup Language (HTML).



Source: Comparison of Web Development Technologies – ASP.NET & PHP

**Figure21 . Simple Web Environment**

The dynamic Web content it was created by the open - source scripting language called PHP. One of the fastest scripting languages is PHP and it was easy to learn. To make dynamic web applications with Apache and MySQL is called WAMP server. The developers to make Web applications by offer the in-built Apache, PHP and MySQL database. PhpMyAdmin allows running the database easily. WAMP have all these features inherent in it which will assist the developers to make the development faster. In 1995 Apache was released. Apache is flexible and powerful; this server is use in PHP implementation and has a lot of support from its website. MySQL is open source software that is potential for anyone to use. Everyone can download the MySQL software from Internet for free. SQL stands for Structured Query Language which is a consistent language used to access the databases. This is a relational database that stores data in divide tables which adds flexibility. MySQL is easy to use and have a high presentation along with the dependability. MySQL can run on 20 different platforms. Time and memory can be saving by using the MySQL.

**History of PHP.** RasmusLerdorf was the creator of PHP in 1995 and he was an engineer at Yahoo, he needs an easier in creating his website but HTML gave him power and flexibility. Basically, he need a help in his web browser by writing scripts, create content and handle data. He created a technology that give him was his need, by the use the Perl language it was entitled “Personal Home Page/Forms Interpreter”. Afterwards the name “Personal Home Page/Forms

Interpreter” abridged to PHP/FI and finally renamed “PHP: Hypertext Preprocessor”. PHP/FI version 1.0 certainly not really used it in outer of his own website. The opening of PHP/FI 2.0 the changes was began; in 1997 PHP 3 was released.

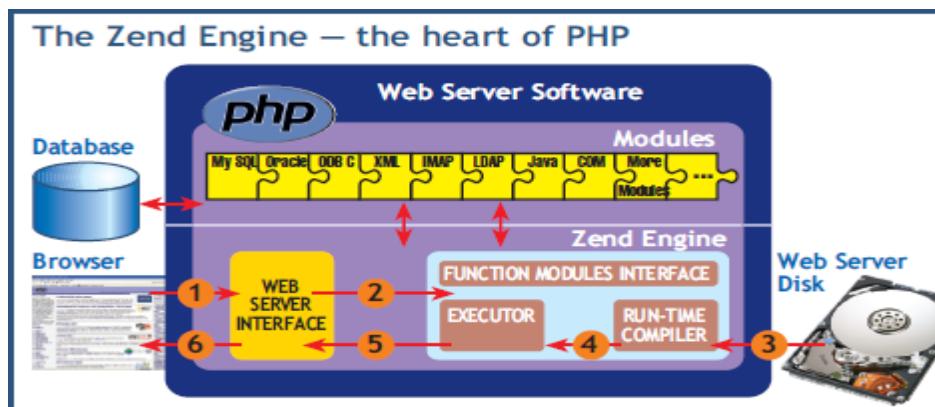
**PHP/FI 2.**In 1997 a rewrite came with PHP/FI 22, but at that time Rasmus handled it exclusively. AndiGutmans and ZeevSuraski came into PHP/FI after it was release and they looking for a language to build up an e – commerce solution in university project but they find out that PHP/FI is powerful and its language wanted many frequent features. The while loops was implemented and it was interesting it was the scanner in pointing a file that position can be save and the whole loop was check through and re-executed.

“The best way to be ready for the future is to invent it.” – John Sculley.

**PHP 3.**Zeev and Andi decided to team up with Rasmus in rewrite the scripting language to launch the PHP 3, and the new name is PHP: Hypertext Preprocessor, to emphasize that PHP is a dissimilar product and can use it many person. Zeev and Andi designed the implemented new expansion API. The new API can access in databases, spell checkers and other technologies, which many attracted developers that was not in the core. In June 1998 PHP 3 was released, the approximate installed PHP consist about 50,000 domains. PHP3 was the first version having installed base more than a one million domains.

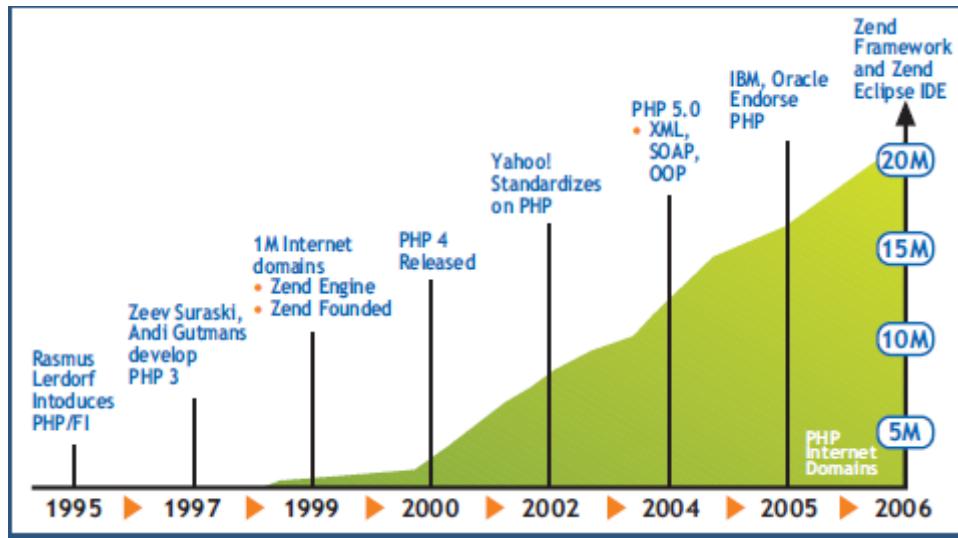
**PHP 4.** In late 1998, Zeev and Andi looked back their work on PHP 3, they think it can be rewrite, and PHP 4 came with a “compile first and execute later”. The PHP 4 was released on May 22, 2002, the new of it is the Zend Engine, because of the new execution the PHP 4 it was much better in PHP 3.

**PHP 5.** After the release of PHP 4, Andi come up with rewriting the Zend Engine to Zend Engine II: Feature Overview and Design” in this the object oriented was being rewritable. The basic language is the same but the many feature added and many changes in the PHP 5. The rewrite of XML functionality in PHP 5 the new SimpleXML extends it ridiculously easy to control XML document. Additional technologies is the new SOAP, and MySQLi.



Source: An Overview on PHP

**Figure 22.** Example of Zend Engine PHP4



Source: An Overview on PHP

**Figure 23.** Evolution of PHP

A Web developer or enterprise developer look to robustness Oracle Engine and PHP with the effortlessness, and presentation. Each PHP coders contribute several recipes to help in both technologies.

PHP programmer developed appliance for Oracle Database. It connects between the PHP and Oracle books and it show how PHP scripting language functions with Oracle Database. The basic building blocks needed to make far above the ground – performance PHP Oracle Web applications.

Web application is designing that PHP use it for designing, Livshit and Lam, they finding the security vulnerabilities in Java applications as the result in their analyzation supported by binary decisions. In a method similar to the string output of PHP programs with a context-free grammar is accessible. While

primarily targeted at the validation of HTML output, the author claims that it can also be used for the discovery of cross-site scripting vulnerabilities.

The widely used scripting language is PHP. Java and C# have the same features of PHP language and the general – idea programming language that supports both practical and object oriented programming. The PHP's success with it contributor its simplicity, which translates into shorter development cycles, easier maintenance, and lower training costs.

|   | <b>Variable</b>       | <b>Definition</b>                                  |
|---|-----------------------|----------------------------------------------------|
| 1 | <code>GLOBALS</code>  | References all variables available in global scope |
| 2 | <code>_SERVER</code>  | Server and execution environment information       |
| 3 | <code>_GET</code>     | HTTP GET variables                                 |
| 4 | <code>_POST</code>    | HTTP POST variables                                |
| 5 | <code>_FILES</code>   | HTTP File upload variables                         |
| 6 | <code>_COOKIE</code>  | HTTP Cookies                                       |
| 7 | <code>_SESSION</code> | Session variables                                  |
| 8 | <code>_REQUEST</code> | HTTP Request variables                             |
| 9 | <code>_ENV</code>     | Environment variables                              |

Source: *PHP SuperGlobals: Supersized Trouble*

**Figure 24.** Variables in PHP

Web application development platform, powering over 80 percent of all websites because of PHP platforms. Because of the vulnerabilities of the PHP needs a special attention, many application can have an effect on the general security and health condition of the entire web. The Hacker Intelligence Initiative (HII) they explore the vulnerability of related in the PHP and how they work

together with other distinctiveness and safety weaknesses in this environment. That is, a programmer declares the variable name and can use it contained by the scope it was confirmed in – inside specific functions (local variables) or a specific script (global variables). These variables are available to the PHP script in both scopes, with no need for clear statement. The PHP framework carries a long history of safety intimidation connected to the take priority over of internal variables by external input.

PHP developers are easy to learn and it just may represent the world of mobile development to a entire new batch of developers. Keep your skills present and stay on top of the latest PHP news and best practices by interpretation each new question about PHP.

To develop dynamic and interactive web applications is PHP that a powerful language. PHP is a language can join and control a database. On the other hand database management is done by the Structure Query Language (SQL). Common database operations are INSERT, UPDATE, DELETE and SELECT. The PHP language have many a advantage it is a server – side scripting language designed only for web based applications and the software frameworks considerably decrease the amount of time, effort and resources requisite to develop and maintain web applications.

Example: Insert process

Employee ID 444  
Name Robert  
Job System Administrator  
Salary 25000  
Department ID 130  
Submit Query

Insert Complete

Source: PHP Framework for Database Management Based on MVC Pattern

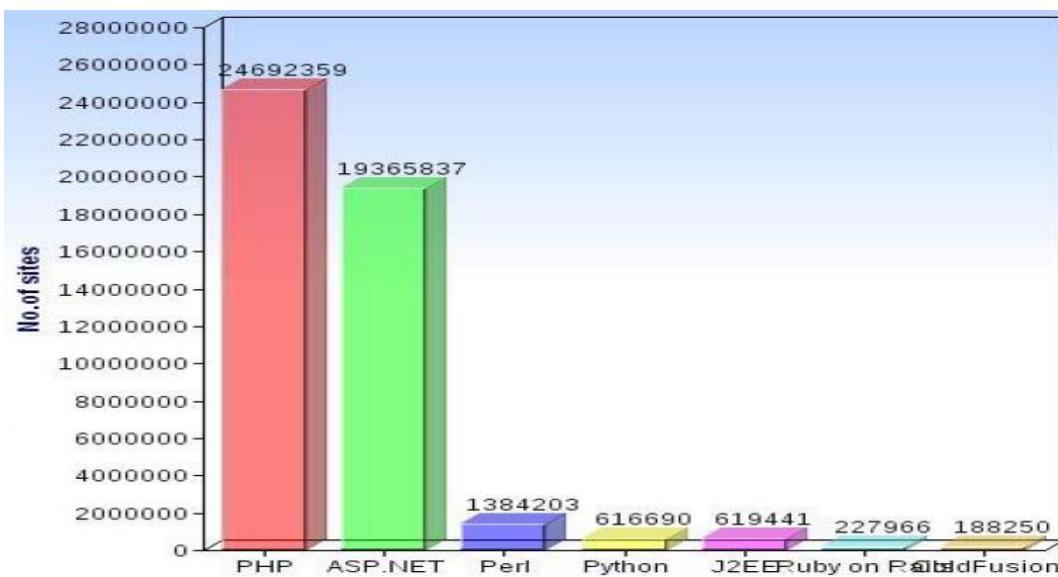
**Figure25.** Insert Interface with PHP Connections

| Employee ID | Employee Name | Job                  | Salary | Department ID | Action                                        |
|-------------|---------------|----------------------|--------|---------------|-----------------------------------------------|
| 1111        | Somchai       | Programmer           | 15000  | 128           | <a href="#">Delete</a> <a href="#">Update</a> |
| 2222        | Wichit        | DBA                  | 13500  | 42            | <a href="#">Delete</a> <a href="#">Update</a> |
| 3333        | Somjal        | Programmer           | 16500  | 128           | <a href="#">Delete</a> <a href="#">Update</a> |
| 4444        | Robert        | System Administrator | 25000  | 130           | <a href="#">Delete</a> <a href="#">Update</a> |

Source: PHP Framework for Database Management Based on MVC Pattern

**Figure26.** Delete and Update Interface with PHP Connections

PHP and ASP are programming languages that can create a dynamic website. The difference between ASP and PHP, PHP can run in Windows, Solaris, Unix and Linux but ASP runs only in Window based platforms. PHP uses C/C++ as a main language and it was similar to other syntax. Because of many programmer uses C++, PHP is more popular than ASP. PHP programming language doesn't have a Visual programming tool a lot of programmer that it was an advantage of PHP, PHP is easy to learn compare to ASP because PHP is more steady and bigger companies use to reduce the cost of ASP platforms.

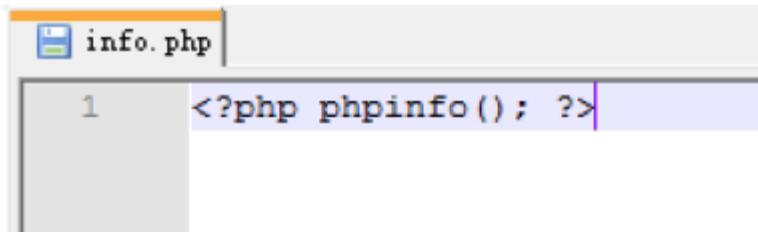


*Source: Comparison of Web Development Technologies – ASP.NET & PHP*

**Figure 27.**Bargraph comparison of PHP and ASP

Dynamic Web sites can build because of the powerful PHP programming language. To construct commercial excellence databases with the MySQL relational data management system. Web programming easily reached for beginners are the PHP and MySQL because it was powerful and easy to use.

The quality of the website directly development tools affect. The developer use PHP and HTML to create the homepage. The website were built is have a high performance, secure, stable and an easy – to – sustain environment. The external binary code and the server do not bear any extra burden in PHP but HTTP can combine forces with PHP. The open and close tags of PHP <?php and ?>.



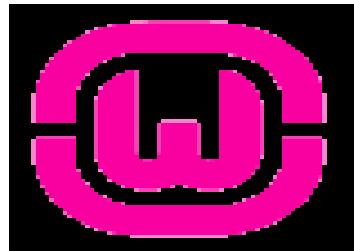
```
1 <?php phpinfo(); ?>
```

Source: *Web – Based library Management System with PHP and MySQL*

**Figure 28.** PHP tags

## **WAMP**

**Definition.** Wamp is composed of Apache, MySQL, and one of Perl, PHP, or Python in Microsoft Windows operating system. Apache HTTP server is a web server software. PHP stands for Hypertext Preprocessor. It is a type of HTML languages which are executed on the server. MySQL server is a small relational database management system. Actually they are entirely independent programs to each other, however they are usually used together, and have increasingly high compatibility degrees. So, these packages turned into a powerful web application platform.

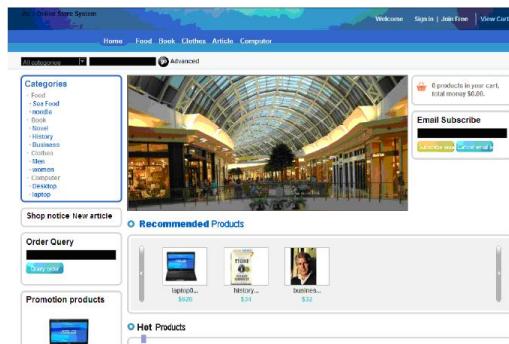


*Source: Building a WAMP Platform.*

**Figure29.**Wamp

Electronic Commerce is also known as E-Commerce, E-Commerce is an application where you can buy and sell through internet based a browser or a system. There are some related to E-Commerce System such as ASP.NET and J2EE, But these systems have their own: disadvantages and weaknesses, to solve problems, to improve the system efficiency. There are some comparison in

these different performance of their technology through arithmetic operations, database operation, and file operation to acquire the result of in which scenario is appropriate to use specific technology.

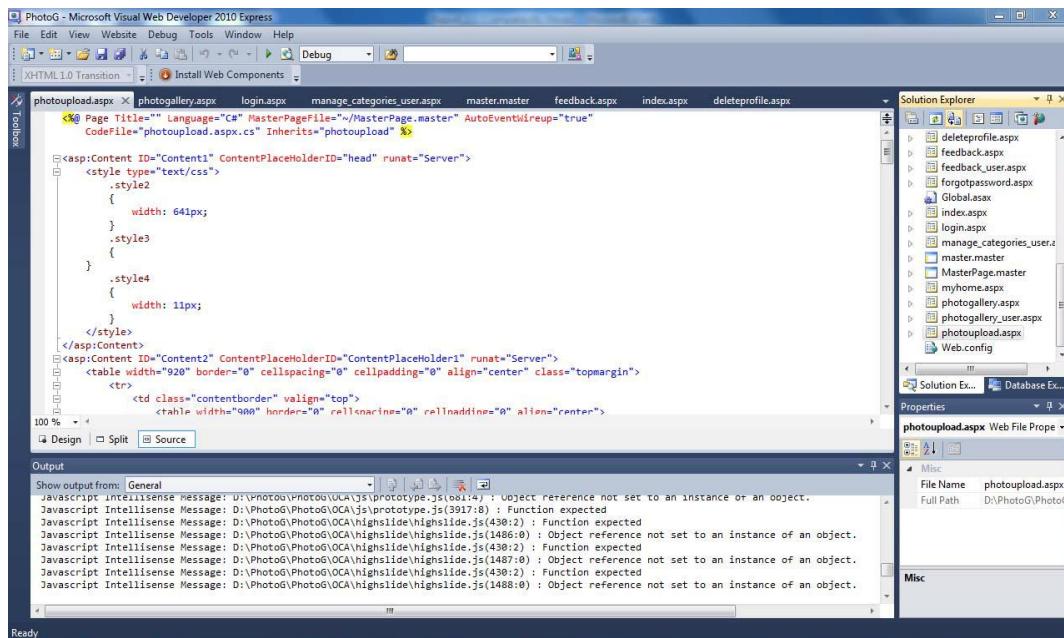
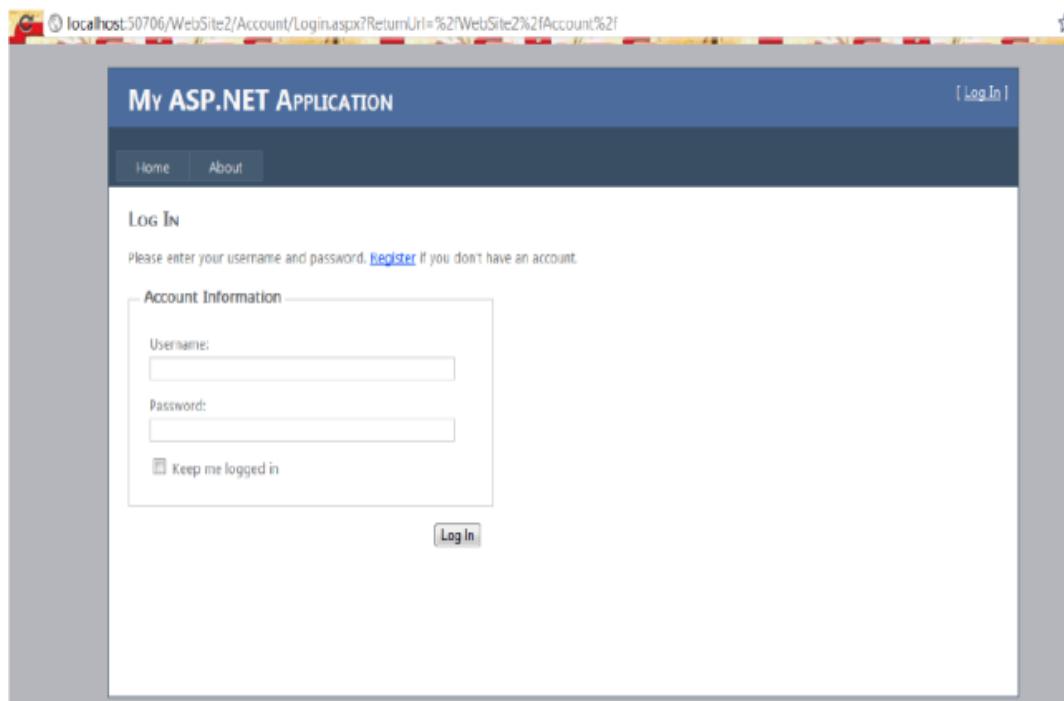


*Source: Development of E- Commerce Web*

*Application Using WAMP*

**Figure30.**Online Store Homepage

PHP is an open source of scripting languages for making a dynamic web ,and it is one of the fastest scripting language around the globe, easily to use. Most of script took a long time to compile and execute but its null filled with PHP codes cates. WAMP server is a web development platform on windows allowing you tocreate dynamic web applications with Apache and MySQL. Apache server is useful and flexible web server. It is used in PHP implementation and it has features to run virtually on all of computer platforms. From the beginning it is used to run primarily on UNIX web server, But now it can run on all flaours of UNIX also on Windows platform.

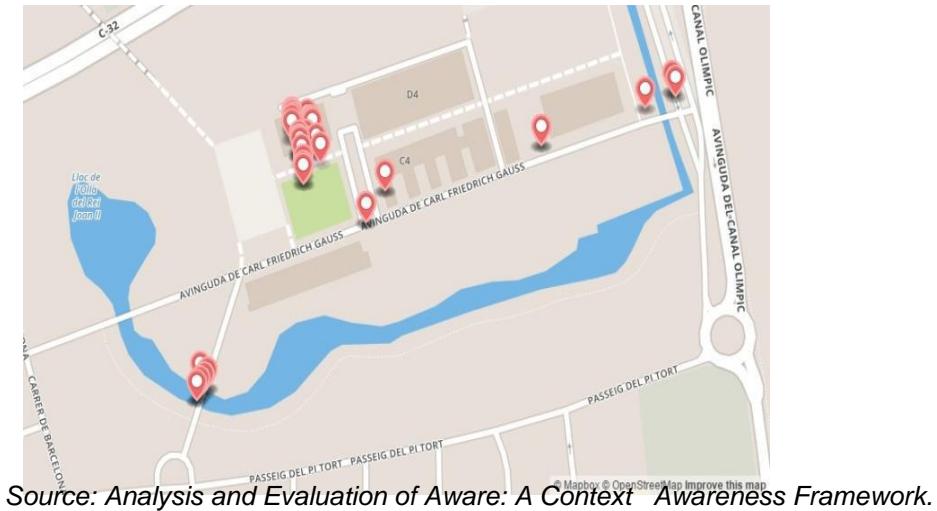


Source: Comparison of web Development Technologies- ASP.NET & PHP Implementation in

**PHP**

**Figure31.** Comparison of PHP and ASP.NET

Smart devices has facilitated the connection of the people and device in an easier and faster way in the globe. There's a high amount of information that can absorb with smart devices and can used to improve the aspect of people in a regular life and also the services that gives to users.



**Figure32.** Interface of location

This project is about making a web applications about Indian cricketer named “Bishan Singh Bedi”.these website have features like discussion forums, shopping cart, slide show and RSS feeds, Introductory videos, photo gallery, lectures and training sessions ,registration, event scheduling and calendar events.

Source: *A Web Application Development for BishanBedi*

**Figure33.**Online Web Application homepage

To install a wamp server just click on its icon to start the installation process, then close those application that are still open in windows then click next and read the license agreement then after you read it click on “I accept the agreement”, then click next. You have to choose where WampServer2 is installed I would recommend leave it to default of drive c, then click next .The next choice is a matter of personal preference. Leave blank or make your choice, then click next, then click “install”. Wamp Server ask you what browser usually that you use. After that click on “allow access” to your private network. Leave the default values, then click next. After that Click on the “Launch WampServer 2 now” box to enter a tick, then click on the “Finish” button.



*Source: Installation the Server Software*

**Figure34.** Installation of wamp

Ella Mathematics is a kind of a web based e( electronic) learning system, this system focuses on the improvement of elementary school students in mathematics learning in Sweden. This system has been partially completed since 2012 except descriptive statistics module summarizing students' performance in the learning process. This projects reports the presents and describes the design and implementation of such descriptive statistics module, which the student can review their grades and learning progress; the teachers easily to check and compare the status of each students, as well as parents to compare their children's grades and learning progress with average to other students.

| Staden            |           |           |           |           |           |                |                |                 |                   |
|-------------------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|-----------------|-------------------|
| Namn              | Uppgift 1 | Uppgift 2 | Uppgift 3 | Uppgift 4 | Uppgift 5 | Avg by student | STD by student | Mode by student | Median by student |
| Daniel            | 2         | 2         | 0         | 0         | 2         | 1.2            | 1.1            | 2,              | 2                 |
| Anna              | 2         | 0         | 2         | 2         | 0         | 1.2            | 1.1            | 2,              | 2                 |
| Merry             | 0         | 2         | 2         | 0         | 1         | 1              | 1              | 0,2,            | 1                 |
| Brown             | 2         | 0         | 0         | 0         | 1         | 0.6            | 0.89           | 0,              | 0                 |
| Skyla             | 0         | 2         | 0         | 1         | 2         | 1              | 1              | 0,2,            | 1                 |
| Booth             | 0         | 0         | 0         | 2         | 2         | 0.8            | 1.1            | 0,              | 0                 |
| Avg by uppgift    | 1         | 1         | 0.67      | 0.83      | 1.33      |                |                |                 |                   |
| STD by uppgift    | 1.1       | 1.1       | 1.03      | 0.98      | 0.82      |                |                |                 |                   |
| Mode by uppgift   | 2,0,      | 2,0,      | 0,        | 0,        | 2,        |                |                |                 |                   |
| Median by uppgift | 1         | 1         | 0         | 0.5       | 1.5       |                |                |                 |                   |

Source: *Ella Mathematics*

**Figure35.** Student Progress

In this master thesis work a website was design for an event to add and search events. A user must a register as a member to subscribe this system. When there is a new event added, this system will sent automatically to all members who subscribe this kind of event through email with attachment of a calendar event life. When users search an event, they could find the location of the event using a google map and also find events of the same day and nearby events



Source: Build and Design an Event Calendar Website

**Figure36.** Location of events

Adruino and Wamp Server are two softwares that are involved in this system. Wamp Server use to set-up the local server which the web pages is hosted by accessing through LAN, each user can view their electricity consumption through local server, and if the user exceeds the limits of the energy usages, the user will get a notification about their power consumption.



Source: An Automated Energy Metering

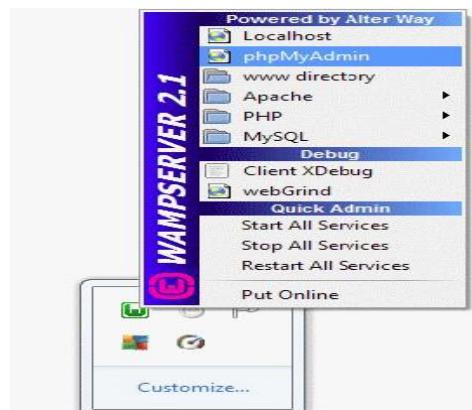
System- Homed Based Approach

**Figure37.**Notification

Wamp is an acronym for Windows,Apache,MySQL,Php. It was created after the lamp, where referring to all open source/ free approach which uses LINUX instead of WINDOWS

Each of the element of WAMP provides an essential layer of functionality.

- Microsoft Windows is the operating system that required.
- Apache is the Web server
- MySQL is the database management system or database server.
- PHP is an object-oriented Web scripting language



*Source: Development of an Interactive  
e-Learning Management System.*

**Figure38.** Toolbar in Wamp

This study is about to develop a system which is College Student Allocation System, It requires a Wamp server and Web application framework in this system.

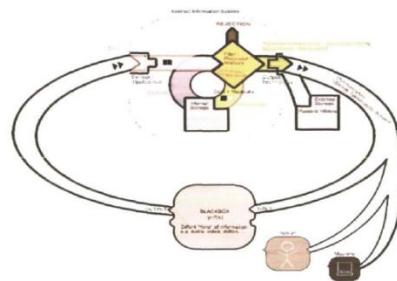
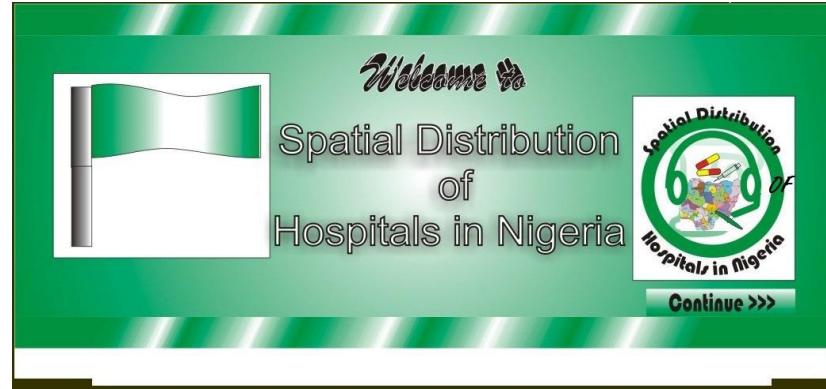


Figure 1: Image: Abstract Information System

*Source: College Student Allocation System.*

### **Figure39.Flow Diagram**

This system will help the user to identify where health care facilities are concentrated, and how to locate anytime. Some of the resources are used in this system: Macromedia dream weaver, Java Scripting, PHP, MYSQL; the WAMP server; while the UML are used for the system design.

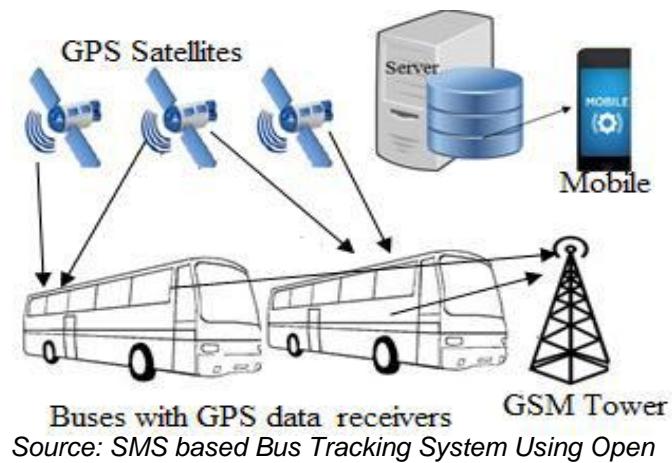


*Source: A Distributed Information System for Health Care Facilities*

*In Nigeria: A Web-Based Spatial Approach*

**Figure40.**Homepage

This system required to used Wamp server and an application to trace the bus written in PHP with MySQL for storing of those details.



*Source Technologies.*

**Figure41.** Data flow diagram

This system has two main modes of communication using Wamp Server. First is PubSub where the client can send and receive messages from the topic it is subscribed. Second is RPC which consists of a client, where asking for the result of a function that lies on the server.

Wamp server, ALOV, Quantum GIS and MySQL are used in first Web GIS framework while Apache Tomcat server, Geo Server, Quantum GIS, PostgreSQL and PostGIS have been used in second Web GIS framework. These two Web GIS frameworks have been seriously compared to give out the fitness of each for particular application and their performance.

## CONCEPTUAL MODEL OF THE STUDY

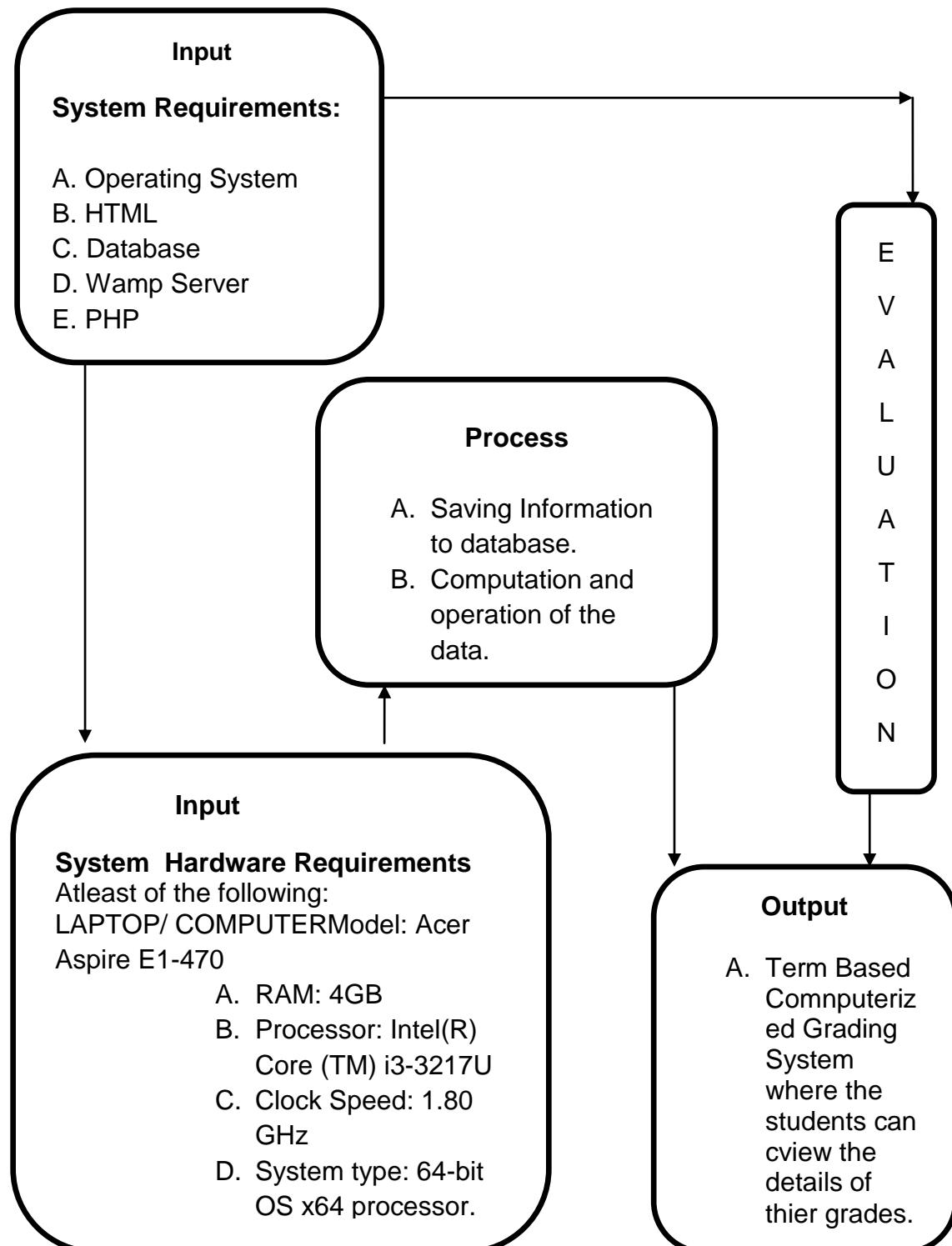


Figure42. Conceptual framework

The process of the computerized grading system: First, it will need software applications to run this system. These are operating system, html, database, wamp server and php. For the system to run and process the data, it will need a laptop/computer.

Those input data will be saved into the database of our system for computation and displaying. After processing, the grading system will allow to students, professors and registrar to view the information they need. For students, they can view their current subjects enrolled, grades (prelim, midterm, and finals) and forum. For professor, they can view their subjects loaded, to encode grades and also forum. For registrar, they can view all student information and grades for printing purposes.

## OPERATIONAL DEFINITION OF TERMS

**Program** provides a computer or other machine with coded instructions for the automatic performance of a particular task.

**Retrieval** is the process of getting something back from somewhere

**Website** is a set of related web pages typically serve from a single web domain.

**SVD** is a factorization of a real or complex matrix. It has many useful applications in signal processing and statistics.

**Query** ask a question about something, especially in order to express one's doubts about it or to check its validity or accuracy.

**Software** is any set of machine-readable instructions that directs a computer processor to perform specific operations.

**HTML** is the text markup language currently used on the World Wide Web

**Mark up Language** is a system for annotating a document in a way that is syntactically distinguishable from the text.

**Interface** is a shared boundary across which two separate components of a computer system exchange information.

**Application** is a set of computer programs designed to permit the user to perform a group of coordination functions, tasks or activities.

**Computer Programming** is a process that leads from an original formulation of a computing problem to execute computer program.

**Browser** is a software application for retrieving, presenting and traversing information resources on the worldwide web.

**Web server** is a computer system that processes requests via HTTP, the basic network protocol used to distribute information on the worldwide web.

**PHP** is an object-oriented Web scripting language. Stands for Hypertext Preprocessor. It is a kind of HTML embedded language which executed on the server.

**Web Page** a hypertext document connected to the world wide web.

**Server** is both a running instance of some software that is capable of accepting requests from clients and computer that executes such software

**Programming Languages** usually refers to high language. Each language has a unique set of keywords and a special syntax for organizing program instructions.

**Database** is a collection of information that is organized so that it can easily be accessed, managed, and updated.

**Wampserver** is an acronym for Windows, Apache ,MySql, Php is a web development platform on windows allowing you to create dynamic web applications with Apache and MySQL. Apache server is useful and flexible web server. It is used in PHP implementation and it has features to run virtually on all of computer platforms

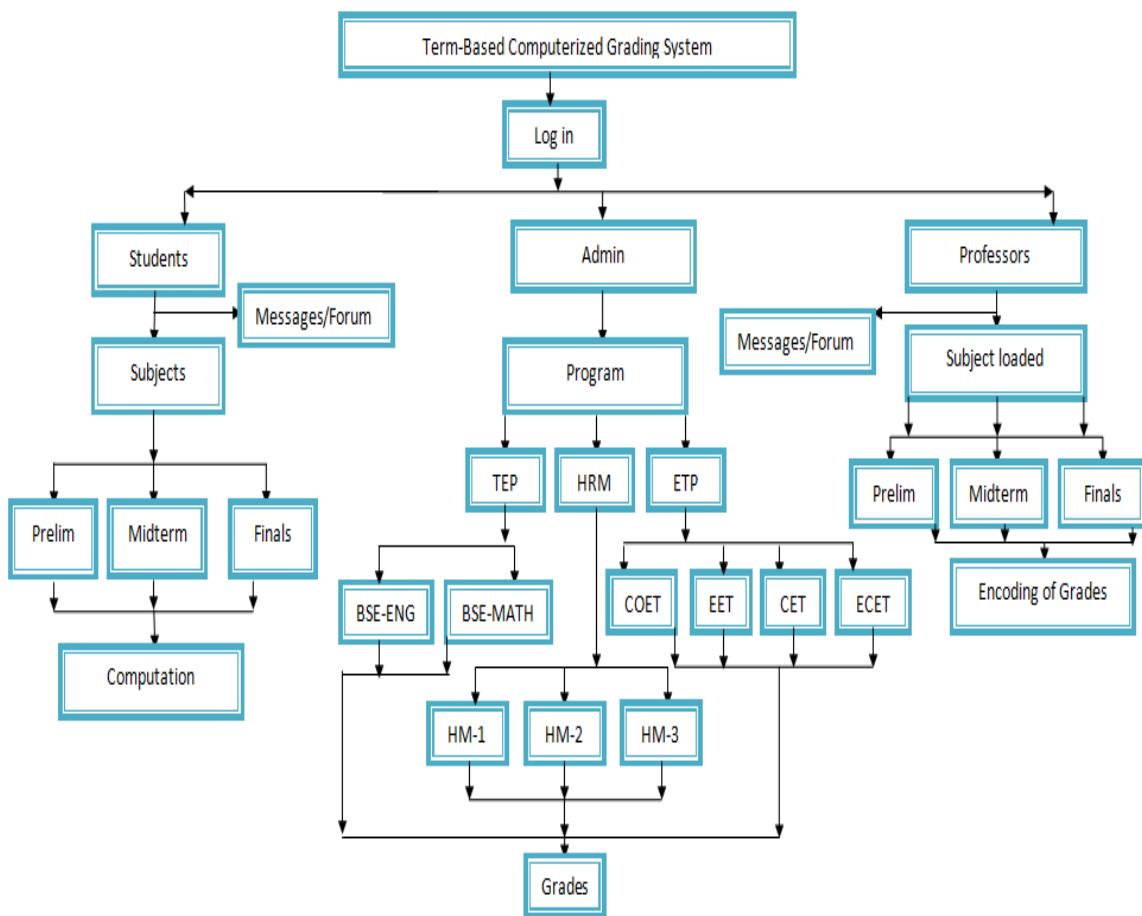
**Apache** is the world's most widely used web software. Originally based on the NCSA Httpd server, development of apache began in 1995 after worked on the NCSA code stalled.

**MySQL** is the database management system or database server.

## CHAPTER 3

### METHODOLOGY

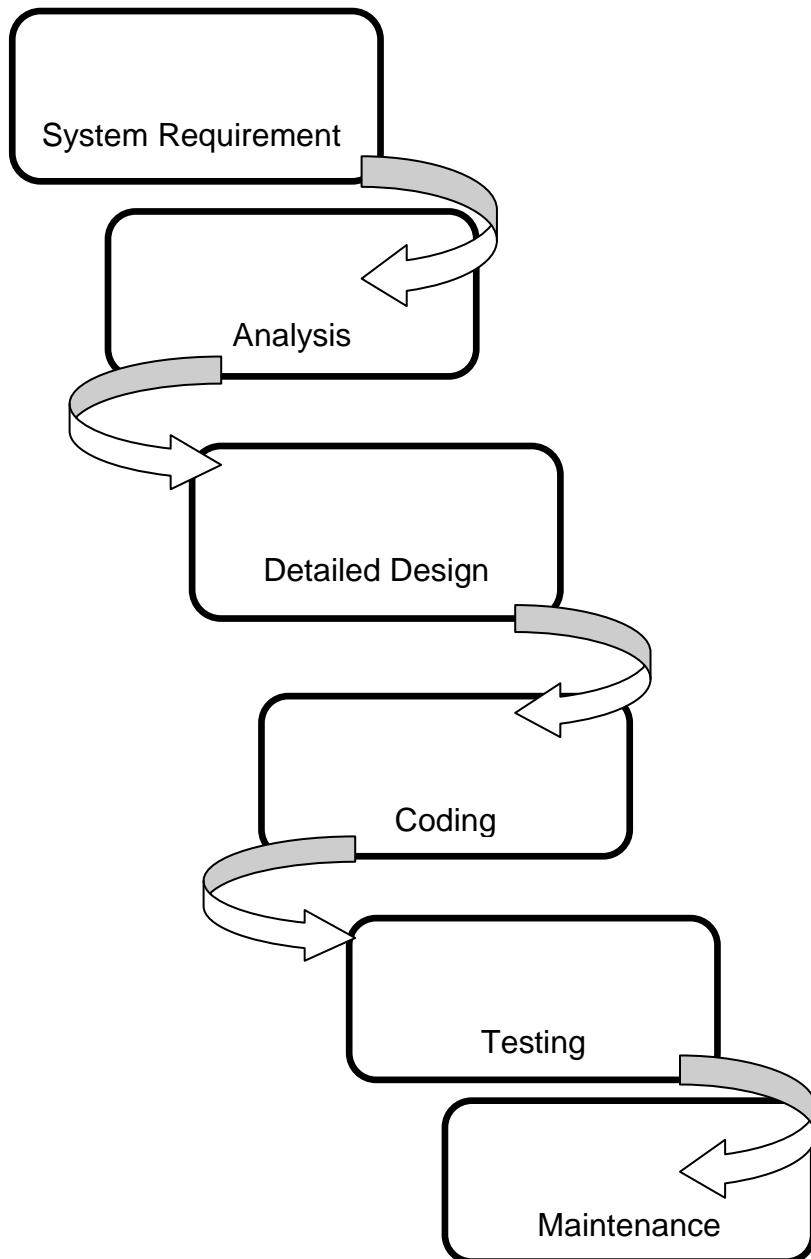
This chapter represents the project design, project development, operation and testing procedure as well as the evaluation procedure.



**Figure 43.** Block Diagram

## PROJECT DESIGN

The diagram shows the flow, process and operation inside the prototype (Figure).



**Figure 44.** Waterfall Model

## **PROJECT DEVELOPMENT**

The development of the Term-Based Computerized Grading System will need this process. These are the System Requirements, Analysis, Detailed Design, Coding, Testing and maintenance.

### **A. System Requirements**

This is the phase where the programmers and client needs to know the details of said system. (Operating System, Web server, Microsoft Office)

### **B. Analysis**

In this phase, the system programmers analyze the data and information gathered.

### **C. Detailed Design**

In this phase, the researchers start the design and interface of the system.

### **D. Coding**

In this phase, the programmers start the codes for the said system.

### **E. Testing**

When all of the functions of the system is ready, the researchers test the system in this phase.

### **F. Maintenance**

In this phase, the system is now ready and will maintain the functionality of the system.

## **OPERATION AND TESTING PROCEDURE**

### **OPERATION PROCEDURE**

1. Turn on your computer.
2. Make sure that the computer is up to date in order to be updated on the latest upgrade of the software.
3. Turn on your Wamp server application. Make sure that the folder files of the system were saved on the c:/wamp/www on your computer.
4. Open your browser.
5. Type the “localhost” on the URL textbox in the browser.
6. Choose the folder name of the system in the browser and open it. There will have a new tab in the browser by clicking it.
7. Go to the new tab to open the system.
8. The system is now running you will now choose what type of user you are.
9. After choosing a user, you will now just type your username and password to log in.

**Table 2**  
**DESCRIPTION AND INDICATOR**

| Description                       | Indicator                                                                                        |
|-----------------------------------|--------------------------------------------------------------------------------------------------|
| Log-In                            | Gives permission to enter the homepage of the user's profile.                                    |
| <b>Student</b>                    |                                                                                                  |
| View Previous Grades              | The grades of the student since the previous semester and year will be shown in the homepage.    |
| Forum                             | The conversation of the students and the professors belong to the specific subject.              |
| Prelim, Midterm and Finals button | The grades of the student can be view according to its period.                                   |
| <b>Professors</b>                 |                                                                                                  |
| Encode                            | The list of students enrolled on a specific subject will appear then encode the grades per term. |
| Encode per Class                  | Choose a class where they can encode the grades.                                                 |
| Forum                             | The conversation of the students and the professors belong to the specific subject handled.      |

| <b>Admin</b>       |                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------|
| Search per Student | The name of the student will appear linked, and the course and section also appear.                      |
| Linked Name        | The admin is able to view the student's current and previous academic information especially the grades. |
| Grades             | The admin can view and print the grades.                                                                 |
| Search per Course  | The page contains radio button: the program; and the course which has course, section and year.          |

## EVALUATION PROCEDURE

The researchers are going to conduct a questionnaire for students, and also for professionals to evaluate their system. The correspondence is composed of 10 students, 10 workers, and 5 outsiders. And a Total of 25 persons.

The questionnaire is composed of questions with criteria. Those are functionality, usability, reliability, efficiency, portability and maintainability.

In computation of the questionnaire, every questions rating will be added and it is called mean. After getting the mean of all questions, it will be added to get the sum. This will rate the system if it is a feasible system or not. Results were interpreted for the equivalent descriptive rating using table 3.

**Table 3**

### **Rating Scale for Interpreting the evaluation Result**

| <b>NUMERICAL RATING</b> | <b>INTERPRETATION</b> |
|-------------------------|-----------------------|
| <b>5</b>                | <b>EXCELLENT</b>      |
| <b>4</b>                | <b>VERY GOOD</b>      |
| <b>3</b>                | <b>GOOD</b>           |
| <b>2</b>                | <b>FAIR</b>           |
| <b>1</b>                | <b>POOR</b>           |

**Table 4****Evaluation Question**

Evaluation instrument for Users

For the acceptability of

**TERM-BASED COMPUTERIZED GRADING SYSTEM****EVALUATION CRITERIA**

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

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

Course/Program: \_\_\_\_\_

Year/Section: \_\_\_\_\_

| CRITERIA                                                  | RATING |   |   |   |   |
|-----------------------------------------------------------|--------|---|---|---|---|
| A. FUNCTIONALITY                                          | 1      | 2 | 3 | 4 | 5 |
| 1. Suitability. Software performs the tasks required.     |        |   |   |   |   |
| 2. Accurateness. The result is as expected.               |        |   |   |   |   |
| 3. Interoperability. System interacts with other systems. |        |   |   |   |   |
| 4. Security. Software prevents unauthorized access.       |        |   |   |   |   |
| B. Usability                                              |        |   |   |   |   |
| 1. Understandability. The software is easy to use.        |        |   |   |   |   |
| 2. Learnability. The system is easily learned.            |        |   |   |   |   |
| 3. Operability. The system is used without much effort.   |        |   |   |   |   |
| 4. Attractiveness. GUI interface looks good.              |        |   |   |   |   |

|                                                                            |  |  |  |  |
|----------------------------------------------------------------------------|--|--|--|--|
| <b>C. Reliability</b>                                                      |  |  |  |  |
| 1. Maturity. Most of the faults in the software been eliminated over time. |  |  |  |  |
| 2. Fault Tolerance. Software handles errors.                               |  |  |  |  |
| 3. Recoverability. Software resumes working and restores lost data.        |  |  |  |  |
| <b>D. Efficiency</b>                                                       |  |  |  |  |
| 1. Time Behaviour. The system responds quickly.                            |  |  |  |  |
| 2. Resource Utilization. System utilizes resources efficiently.            |  |  |  |  |
| <b>E. Portability</b>                                                      |  |  |  |  |
| 1. Adaptability. The software can be moved to other environments.          |  |  |  |  |
| 2. Installability. The software is installed easily.                       |  |  |  |  |
| 3. Conformance. The software complies with portability standards.          |  |  |  |  |
| 4. Replaceability. The software is easily replaced with other software.    |  |  |  |  |
| <b>F. Maintability</b>                                                     |  |  |  |  |
| 1. Analyzability. Faults are easily diagnosed.                             |  |  |  |  |
| 2. Changeability. The software is easily modified.                         |  |  |  |  |

|                                                                       |  |  |  |  |  |
|-----------------------------------------------------------------------|--|--|--|--|--|
| 3. Stability. The software continues to function if changes are made. |  |  |  |  |  |
| 4. Testability. The software is tested easily.                        |  |  |  |  |  |

Thank you for your cooperation.

Comments/Suggestions:

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Signature of the Respondent

## **CHAPTER 4**

### **RESULTS AND DISCUSSIONS**

This chapter presents the project description and structure, capabilities and limitation and the evaluation results for the project prototype.

#### **Project Description**

The Term-Based Computerized Grading System is designed purposely for the students and professors of Mariano Quinto Alarilla Polytechnic College. The main objective of this project is to develop a computer base grading system that is user-friendly, time valuable and systematically efficient. This system is also created to view the grades by the students and to have educational communication between students and professors. Therefore, it will help to maximize the purpose of grading system.

#### **Project Structure**

The ways to work a system properly follows the instruction guide. The following figures will help us to visualize the content, to identify the steps and also to familiarize the system.



**Figure 45.** System's Log in Page

In Figure 45, shows the Log in page of the system. To access the whole system, a registered username and password must be entered.

| HOME         |                                                   | PROFILE |                            | MESSAGE  |                      | FORUM                    |        | LOG-OUT |        |
|--------------|---------------------------------------------------|---------|----------------------------|----------|----------------------|--------------------------|--------|---------|--------|
| Subject Code | Subject Description                               | Unit    | Professor                  | Grade    | Numerical Percentage | Forum                    | Prelim | Midterm | Finals |
| RFD 2        | Project Development (Computer Hardware Servicing) | 2       | Ms. Matus, April           | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |
| COET 311     | Object Oriented Programming                       | 4       | Mr. Montes, Mark Aeron     | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |
| COET 312     | Software Engineering                              | 4       | Mr. Tayao, NIA             | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |
| COET 313     | Operating System                                  | 3       | Ms. Matus, April           | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |
| COET 314     | System Analysis and Design                        | 3       | Ms. Matus, April           | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |
| MIT 311      | Microprocessor & Interfacing Techniques           | 5       | Engr. Bantigue, Myra Fa    | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |
| Comp 311     | AutoCAD 2                                         | 2       | Arch. Rubio, Ramon         | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |
| RPD 1        | Research and Thesis Writing                       | 3       | Engr. Grimaldo, Kim Dowell | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |
| Rizal 311    | Rizals Life Works and Writing                     | 3       | Mr. Aguirre, Marck Genio   | Enrolled |                      | <a href="#">Click Me</a> |        |         |        |

**Figure 46.** (Student) Profile Page

In Figure 46, shows the current grades together with its Units and Professors to a certain subject and a forum where the students and professors can discuss about a certain subject.

| Academic Records        |                                      |      |       |
|-------------------------|--------------------------------------|------|-------|
| COET - 1 A 1st Semester |                                      |      |       |
| Subject Code            | Subject Description                  | Unit | Grade |
| ET 111                  | Basic Electricity (Lec)              | 3    | 2.50  |
| Math 111                | College Algebra                      | 3    | 2.50  |
| Math 112                | Plane and Spherical Trigonometry     | 3    | 2.00  |
| Chem 111                | General Chemistry                    | 4    | 2.25  |
| Draw 111                | Basic Engineering Drawing            | 1    | 2.50  |
| Fil 111                 | Komunikasyon sa Akademikong Filipino | 3    | 2.50  |
| Eng 111                 | Communication & Thinking Skills      | 3    | 1.75  |
| Comp 111                | Computer Fundamentals                | 1    | 1.50  |
| P.E. 111                | Physical Fitness and Gymnastics      | 2    | 1.75  |
| N.S.T.P. 111            | Civic Welfare Training Service       | 3    | 1.50  |
| EL 111                  | Basic Electricity (Lab)              | 3    | 2.25  |
| COET - 1 A 2nd Semester |                                      |      |       |
| Subject Code            | Subject Description                  | Unit | Grade |
| ET 121                  | Basic Electronics                    | 3    | 2.50  |
| EL 121                  | Electrical Technology 1              | 3    | 2.25  |

**Figure 47.** (Student) Previous Grades Page

In this Figure (Figure 47), it shows the previous subjects, subject code, units and grade for every semester every year.

| Project Development (Computer Hardware Servicing) |            |                     |                |
|---------------------------------------------------|------------|---------------------|----------------|
| Name                                              | Message    | Date                | Delete         |
| Austria, Christian Delos Santos                   | hello      | 2016-03-07 05:42:16 | delete message |
| Buello, Analiza Pauline                           | Hello!! :) | 2016-03-07 05:41:20 | delete message |
| Austria, Christian Delos Santos                   | hello      | 2016-03-07 05:41:02 | delete message |

Messages...

Input Here

**Figure 48.** (Student) Forum Page

In Figure (Figure 48), shows the page where a student can post messages for a certain subject.

The screenshot shows a web-based professor profile system. At the top, there's a navigation bar with links for HOME, PROFILE, PERSONAL INFO, MESSAGE, GRADES (which is highlighted in blue), CHANGE FORUM, and LOG-OUT. Below the navigation is a sidebar featuring a photo of a woman in academic regalia and the text "Ms. April D Matus Faculty Member". The main content area has a banner with two people at desks. Below the banner, the word "PROFESSORS" is displayed in large, bold letters. A link "To View previous subjects handled Click Here!" is present. Underneath, there's a section titled "Current Subjects" with a table:

| Subjects                                          | Subject Code | Units | Encode                    | Forum                     |
|---------------------------------------------------|--------------|-------|---------------------------|---------------------------|
| Operating System                                  | COET 313     | 3     | <a href="#">Click Me!</a> | <a href="#">Click Me!</a> |
| System Analysis and Design                        | COET 314     | 3     | <a href="#">Click Me!</a> | <a href="#">Click Me!</a> |
| Education Technology 2                            | EdTech 2     | 3     | <a href="#">Click Me!</a> | <a href="#">Click Me!</a> |
| Project Development (Computer Hardware Servicing) | RPD 2        | 2     | <a href="#">Click Me!</a> | <a href="#">Click Me!</a> |
| Computer Fundamentals and Concepts                | ICT 1        | 3     | <a href="#">Click Me!</a> | <a href="#">Click Me!</a> |
| Computer Fundamentals                             | Comp 111     | 1     | <a href="#">Click Me!</a> | <a href="#">Click Me!</a> |
| Computer Fundamentals                             | Comp 111     | 1     | <a href="#">Click Me!</a> | <a href="#">Click Me!</a> |

**Figure 49.** (Professor) Profile Page

In Figure 49, presents the Professor's current subjects handled with subject code and units. This is also where professors can encode grades and post message in the forum.

This screenshot shows the same professor profile system, but the "MESSAGE" tab is now active. The main content area displays a table of previous subjects handled:

| Subjects Name                                     | Subject Codes | Course   | Semester | Year      |
|---------------------------------------------------|---------------|----------|----------|-----------|
| Digital Electronics & Techniques                  | ECET 212      | ECET     | 1st      | 2012-2013 |
| Digital Electronics & Techniques                  | COET 212      | COET     | 1st      | 2012-2013 |
| Computer Fundamentals and Programming             | Comp 121      | EET      | 2nd      | 2012-2013 |
| Computer Fundamentals and Programming             | Comp 121      | ECET     | 2nd      | 2012-2013 |
| Computer Programming 1                            | Comp 121      | COET     | 2nd      | 2012-2013 |
| Computer System Organization w/ Assembly Language | COET 221      | COET     | 2nd      | 2012-2013 |
| Computer Fundamentals and Concepts                | ICT 1         | BSE_Eng  | 1st      | 2013-2014 |
| Computer Fundamentals                             | ICT 1         | BSE_Math | 1st      | 2013-2014 |
| Computer Fundamentals and Concepts                | ICT 1         | BSE_Eng  | 1st      | 2013-2014 |
| Microprocessor Interfacing Techniques             | ECET 311L     | ECET     | 1st      | 2013-2014 |
| Microprocessor                                    | ECET 311      | ECET     | 1st      | 2013-2014 |
| Operating System                                  | COET 313      | COET     | 1st      | 2013-2014 |
| Microprocessor & Interfacing Techniques           | MIT 311       | COET     | 1st      | 2013-2014 |
| Digital Electronics & Techniques                  | ECET 212      | ECET     | 1st      | 2013-2014 |
| Digital Electronics & Techniques                  | COET 212      | COET     | 1st      | 2013-2014 |
| Computer Applications                             | ICT 2         | BSE_Eng  | 2nd      | 2013-2014 |
| Computer Applications                             | ICT 2         | BSE_Eng  | 2nd      | 2013-2014 |
| Computer System Organization w/ Assembly Language | COET 221      | COET     | 2nd      | 2013-2014 |

**Figure 50.** (Professor) previous subjects handled

In Figure 50, shows the previous subjects handled with subject code, semester and year. This page can also show the students enrolled to a subject/s and its grades by clicking the linked name of subject/s.



The screenshot shows a professor's dashboard with a sidebar featuring a photo of Ms. April D Matus, Faculty Member. The main content area has tabs for HOME, PROFILE, MESSAGE, FORUM, and LOG-OUT. A table lists 15 students with their names, Quiz%, Performance %, Project %, Examination%, and Numerical Grade. Most students have a grade of 2.25 or 2.75, except for one who is Inc. / 3.00.

| Name                      | Quiz% | Performance % | Project % | Examination% | Numerical Grade |
|---------------------------|-------|---------------|-----------|--------------|-----------------|
| Banawon , Ana Lea         | -     | -             | -         | -            | 2.00            |
| Bertulfo , Ma. Ruth       | -     | -             | -         | -            | 2.25            |
| Borondia , Rica           | -     | -             | -         | -            | 2.75            |
| Buella , Analiza          | -     | -             | -         | -            | 2.25            |
| Butay , Marey Mae         | -     | -             | -         | -            | 2.25            |
| Camo , Diane Angelie      | -     | -             | -         | -            | 2.25            |
| Dela Cruz , Elisha Mae    | -     | -             | -         | -            | Inc. / 3.00     |
| Espadilla , Marche        | -     | -             | -         | -            | 3.00            |
| Libante , Crizelle        | -     | -             | -         | -            | 1.50            |
| Molina , Camille          | -     | -             | -         | -            | Inc. / 3.00     |
| Ogalisco , Sarah          | -     | -             | -         | -            | 2.50            |
| Oro , Anna Jane           | -     | -             | -         | -            | Inc. / 3.00     |
| Pineda , Alexandrine      | -     | -             | -         | -            | 2.75            |
| Ramirez , Christine Joyce | -     | -             | -         | -            | Inc. / 3.00     |
| Sumaya , Angelica         | -     | -             | -         | -            | 1.50            |
| Tanghal , Divine Grace    | -     | -             | -         | -            | 2.75            |

**Figure 51.** (Professor) Enrolled students of previous subject handled

This page shows the enrolled students of a previous subject handled by the professors and the numerical grades.



The screenshot shows a professor's dashboard with a sidebar featuring a photo of Ms. April D Matus, Faculty Member. The main content area has tabs for HOME, PROFILE, MESSAGE, FORUM, and LOG-OUT. A table lists 15 students with their names, Prelim, Midterm, Finals, and Numerical Grade. Most students have n/a for Prelim and Midterm, and various grades for Finals. A note says "Note: To encode per class click here!" with a link. A progress bar at the bottom says "Waiting for iContent.us...".

| Name                      | Prelim | Midterm | Finals | Numerical Grade |
|---------------------------|--------|---------|--------|-----------------|
| Banawon , Ana Lea         | 88     | 7       | 40     | n/a             |
| Bertulfo , Ma. Ruth       | 66     | 5       | 5      | n/a             |
| Borondia , Rica           | 0      | 5       | 5      | n/a             |
| Buella , Analiza          | 0      | 5       | 5      | n/a             |
| Butay , Marey Mae         | 0      | 5       | 5      | n/a             |
| Camo , Diane Angelie      | 0      | 5       | 5      | n/a             |
| Dela Cruz , Elisha Mae    | 90     | 5       | 7      | n/a             |
| Espadilla , Marche        | 84     | 5       | 8      | n/a             |
| Libante , Crizelle        | 0      | 5       | 7      | n/a             |
| Molina , Camille          | 0      | 5       | 57     | n/a             |
| Ogalisco , Sarah          | 0      | 5       | 5      | n/a             |
| Oro , Anna Jane           | 0      | 5       | 4      | n/a             |
| Pineda , Alexandrine      | 7      | 5       | 5      | n/a             |
| Ramirez , Christine Joyce | 0      | 5       | 5      | n/a             |

**Figure 52.** (Professor) Encoding of grades for every student per subject

In Figure 52, shows the list of students enrolled to a subject where professors can encode grades per semester, it has link in the upper side where a professor can encode grades per class.



**Figure 53.** (Professor) Encoding of grades per class-choosing of term

In Figure 53, shows the terms. Professors must first choose a term before encoding of grades per class. Output is shown in the **Figure 54**.

| Name                      | Quiz% | Performance % | Project % | Examination % | Prelim Grade |
|---------------------------|-------|---------------|-----------|---------------|--------------|
| 1. Banawon , Ana Lea      | 82    | 90            | 90        | 90            | 88           |
| 2. Bertulfo , Ma. Ruth    | 9     | 80            | 80        | 80            | 66           |
| 3. Borondia , Rica        | 0     | 0             | 0         | 0             |              |
| 4. Buella , Analiza       | 0     | 0             | 0         | 0             |              |
| 5. Butay , Marey Mae      | 0     | 0             | 0         | 0             |              |
| 6. Camo , Diane Angelle   | 0     | 0             | 0         | 0             |              |
| 7. Dela Cruz , Elisha Mae | 90    | 90            | 90        | 90            | 90           |
| 8. Espadilla , Marche     | 85    | 75            | 85        | 87            | 84           |
| 9. Libante , Crizelle     | 0     | 0             | 0         | 0             |              |
| 10. Molina , Camille      | 0     | 0             | 0         | 0             |              |
| 11. Ogalisco , Sarah      | 0     | 0             | 0         | 0             |              |
| 12. Oro , Anna Jane       | 0     | 0             | 0         | 0             |              |
| 13. Pineda , Alexandrine  | 7     | 7             | 7         | 7             | 7            |
| 14. Ramirez , Criselda    |       |               |           |               |              |

**Figure 54.** (Professor) Encoding of grades per class- output

In Figure 54, shows the output list of students enrolled to a subject after choosing a term. Professors can encode the quiz, performance, project, examination, semester grade and numerical grade. Click submit button below for saving.



**Figure 55.** (Admin) Search Page

In Figure 55, shows whether per student or per admin search of the grade to be print.



**Figure 56.** (Admin) Per student search Page

In Figure 56, shows the search window for viewing the grade of student per student, just type the student's no. and click the linked name to view the previous grades of the student per term shown in the **figure 57**.

| Subject Code | Subject Description                  | Unit | Grade |
|--------------|--------------------------------------|------|-------|
| ET 111       | Basic Electricity (Lec)              | 3    | 2.50  |
| Math 111     | College Algebra                      | 3    | 2.00  |
| Math 112     | Plane and Spherical Trigonometry     | 3    | 2.25  |
| Chem 111     | General Chemistry                    | 4    | 1.75  |
| Draw 111     | Basic Engineering Drawing            | 1    | 1.75  |
| Fil 111      | Komunikasyon sa Akademikong Filipino | 3    | 2.00  |

**Figure 57.** (Admin) student's printable grade page

Figure 57 shows the printable grades of the student for a particular semester. Click the print button to show the final output shown in the **figure 58**.

| Mariano Quinto Alarilla Polytechnic College     |                                      |                  |       |
|-------------------------------------------------|--------------------------------------|------------------|-------|
| Pag-asa St. Malacan City of Meycauayan, Bulacan |                                      |                  |       |
| Academic Records                                |                                      |                  |       |
| Student Name: Flores, Evert Gil De Pedro        | Date: 03/07/2016                     | Time: 06:21:04am |       |
| Student ID: 130459                              |                                      |                  |       |
| Course: COET-3A                                 |                                      |                  |       |
| COET - 1 A 1st Semester                         |                                      |                  |       |
| Subject Code                                    | Subject Description                  | Unit             | Grade |
| ET 111                                          | Basic Electricity (Lec)              | 3                | 2.50  |
| Math 111                                        | College Algebra                      | 3                | 2.00  |
| Math 112                                        | Plane and Spherical Trigonometry     | 3                | 2.25  |
| Chem 111                                        | General Chemistry                    | 4                | 1.75  |
| Draw 111                                        | Basic Engineering Drawing            | 1                | 1.75  |
| Fil 111                                         | Komunikasyon sa Akademikong Filipino | 3                | 2.00  |
| Erg 111                                         | Communication & Handling Skills      | 3                | 1.50  |
| Cmpu 111                                        | Computer Fundamentals                | 1                | 1.50  |
| P.E. 111                                        | Physical Fitness and Gymnastics      | 2                | 1.75  |
| N.S.S. 111                                      | Civic Welfare Training Service       | 2                | 1.25  |
| EL 111                                          | Basic Electricity (Lab)              | 3                | 2.25  |
| COET - 1 A 2nd Semester                         |                                      |                  |       |
| Subject Code                                    | Subject Description                  | Unit             | Grade |
| ET 112                                          | Basic Electronics                    | 3                | 2.25  |
| ERG 112                                         | Engineering Technology I             | 3                | 2.00  |
| Math 121                                        | Advanced College Algebra             | 2                | 2.00  |
| Math 122                                        | Analytic Geometry                    | 2                | 2.25  |
| Math 123                                        | Solid Measurement                    | 2                | 2.50  |
| CATS 111                                        | Engineering Aided Techniques         | 0 1 0            | 1.75  |

**Figure 58.** (Admin) print preview of grade

In Figure 59, shows the ready to print output. Press *ctrl+P* key to the print hard copy.



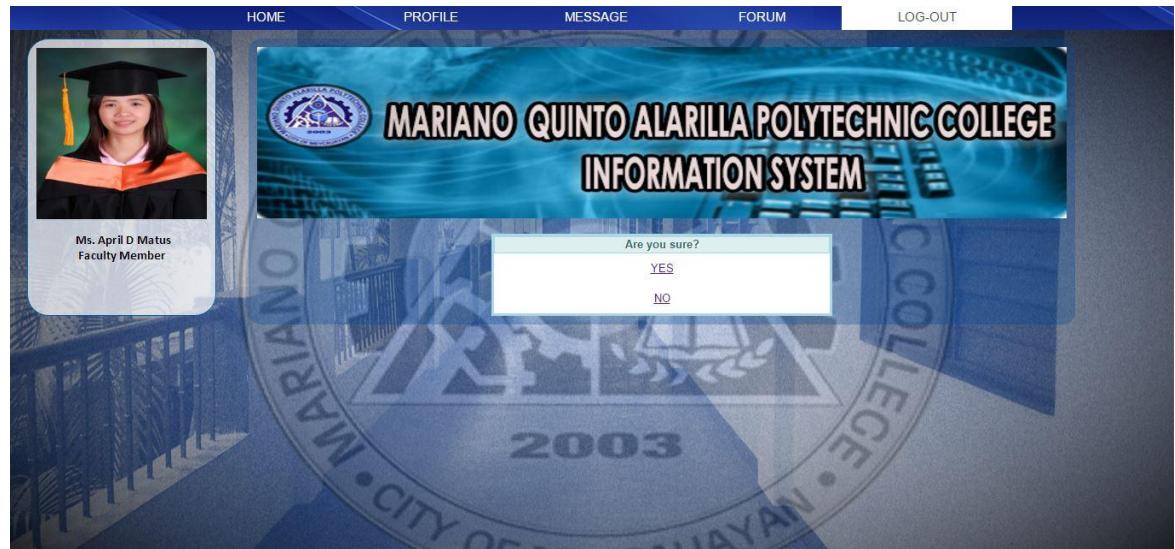
**Figure 59.** (Admin) student's per course search page

In Figure 60, shows the search window for viewing the grade of student per program. Output is shown in **Figure 60**.

| Subjects                                     | Professor             | Units | Subject Code | Confirm                |
|----------------------------------------------|-----------------------|-------|--------------|------------------------|
| Physical Fitness and Gymnastics              | Mr. Postrado, N/A     | 2     | P.E. 1       | <a href="#">select</a> |
| Komunikasyon sa Akademikong Filipino         | Mr. Beltran, Bernard  | 3     | Fil 1        | <a href="#">select</a> |
| Communication Arts                           | Mr. Gaza, Gerard      | 3     | Eng 1        | <a href="#">select</a> |
| National Service Training Program 1          | Mr. Beltran, Bernard  | 3     | N.S.T.P. 1   | <a href="#">select</a> |
| Principles of Tourism 1                      | Mr. Herrera, Harry    | 3     | Tour 1       | <a href="#">select</a> |
| Environmental Science                        | Mr. Meron, Renato     | 3     | NS 1         | <a href="#">select</a> |
| Principles of Safety, Hygiene and Sanitation | Mrs. Ampuan, Maricris | 3     | NS 2         | <a href="#">select</a> |
| Literature                                   | Mrs. Dela Rosa, Rona  | 3     | Lit 1        | <a href="#">select</a> |
| Business Math                                | Mrs. Dacaymat, Imelda | 3     | Math 1       | <a href="#">select</a> |

**Figure 60.** (Admin) per course search output Page

In Figure 60, shows the subjects to a certain course the admin entered. Also shows the enrolled students by selecting the link at the right side. Output is shown in **Figure 61**.



**Figure 61.** The Log out Page

In Figure 61, shows the confirmation box for logging out in the system.

## PROJECT CAPABILITIES AND LIMITATIONS

After developing the system, the researchers conduct a testing procedure to find its capabilities and limitations.

### CAPABILITIES

**1.** The system can be accessed by three users account, the student, professors and the admin.

**2. Students**– can view their current and previous grades.

– can access forum per subject in the student's profile.

**4. Professors**– can encode grades per student and per class for every term.

– can view their current and previous subjects handled.

– can access forum per subject in professor's profile.

– can view encoding report– includes the subject, name of professor, date and time of encoding grades.

**5. Admin**– can update the system specifically the design.

– can search per course or per student to print the grades.

– can view current subjects and grade of student's.

– can view previous subjects and grade of student's.

## LIMITATIONS

Here are the authorized and restricted activities of each user in the system;

- 1. Admin**– Authorized to update the system but not deleting or editing of grades.
- 2. Professors**– The only authorized user to encode grades of the students.
- 3. Students**– Access on viewing the grades by using a registered account only.
  - Not allowed to print any records from the system.
- 4.** This study is only limited to use by Mariano Quinto Alarilla Polytechnic College.
- 5.** This study cannot view online.

## PROJECT EVALUATION RESULTS

The researchers have achieved to develop the project. About this system, it takes a lot of changes and question on how this system can help. But in the other hand, it proves that it can help to assist the professor's to compute and to encode the grades of thier students. Computation and encoding of grades is complicated it undergoes many error's and conflict's but still the researcher's find a way to solve the problem's.

The researcher conduct a survey for them to know the satisfaction of the user to the system. The tables below show the results in functionality, usability, reliability, efficiency, portability, Maintability. While, the last table presents the overall mean of this project.

**Table5**  
**Functionality**

| Indicators                                                       | Mean        | Rating           |
|------------------------------------------------------------------|-------------|------------------|
| <b>1. Suitability. Software performs the task required.</b>      | 4.23        | Very Good        |
| <b>2. Acurateness. The result is as expected.</b>                | 4.15        | Very Good        |
| <b>3. Interoperability. System interacts with other systems.</b> | 4.08        | Very Good        |
| <b>4. Security. Software prevents unauthorized access.</b>       | 4.31        | Very Good        |
| <b>Total Mean Average</b>                                        | <b>4.19</b> | <b>Very Good</b> |

The outcome of assesment about the system's functionality performance got an overall mean of 4.19, which is equal to Very Good rating. It indicates that the user is satisfied with the functionality and being a user friendly of this system.

**Table 6****Usability**

| <b>Indicators</b>                                              | <b>Mean</b> | <b>Rating</b> |
|----------------------------------------------------------------|-------------|---------------|
| <b>1. Understandability. The software is easy to use.</b>      | 5.00        | Excellent     |
| <b>2. Learnability. The system is easily learned.</b>          | 5.00        | Excellent     |
| <b>3. Operability. The system is used without much effort.</b> | 5.00        | Excellent     |
| <b>4. Attractiveness. GUI interface looks good.</b>            | 4.23        | Very Good     |
| <b>Total Mean Average</b>                                      | <b>4.81</b> | Very Good     |

The outcome of assessment about the system's functionality performance got an overall mean of 4.81, which is equal to Very Good rating. It indicates that the user is satisfied with the usability of this system.

**Table 7****Reliability**

| <b>Indicators</b>                                                                      | <b>Mean</b> | <b>Rating</b> |
|----------------------------------------------------------------------------------------|-------------|---------------|
| <b>1. Maturity. Most of the faults in the software have been eliminated over time.</b> | 4.10        | Very Good     |
| <b>2. Fault tolerance. Software handles errors.</b>                                    | 4.00        | Very Good     |
| <b>3. Recoverability. Software resumes working and restores lost data.</b>             | 4.00        | Very Good     |
| <b>Total Mean Average</b>                                                              | <b>4.03</b> | Very Good     |

The outcome of assessment about the system's functionality performance got an overall mean of 4.03, which is equal to Very Good rating. It indicates that the user is satisfied with the reliability of this system.

**Table 8**

**Efficiency**

| <b>Indicators</b>                                                        | <b>Mean</b> | <b>Rating</b>    |
|--------------------------------------------------------------------------|-------------|------------------|
| <b>1. Time Behaviour. The system responds quickly.</b>                   | 4.23        | Very Good        |
| <b>2. Resource Utilization. The system utilize resources efficiency.</b> | 3.77        | Good             |
| <b>Total Mean Average</b>                                                | <b>4.00</b> | <b>Very Good</b> |

The outcome of assessment about the system's functionality performance got an overall mean of 4.00, which is equal to Very Good rating. It indicates that the user is satisfied with the efficiency of this system.

**Table 9****Portability**

| <b>Indicators</b>                                                              | <b>Mean</b> | <b>Rating</b>    |
|--------------------------------------------------------------------------------|-------------|------------------|
| <b>1. Adaptability. The software can be moved to other environments</b>        | 3.85        | Good             |
| <b>2. Installability. The software is installed easily.</b>                    | 4.15        | Very Good        |
| <b>3. Conformance. The software complies with portability standards.</b>       | 4.08        | Very Good        |
| <b>4. Replaceability. The software is easily replaced with other software.</b> | 4.00        | Very Good        |
| <b>Total Mean Average</b>                                                      | <b>4.02</b> | <b>Very Good</b> |

The outcome of assessment about the system's functionality performance got an overall mean of 4.02, which is equal to Very Good rating. It indicates that the user is satisfied with the portability of this system.

**Table 10****Maintability**

| <b>Indicators</b>                                                            | <b>Mean</b> | <b>Rating</b>    |
|------------------------------------------------------------------------------|-------------|------------------|
| <b>1. Analyzability. Faults are easily diagnosed.</b>                        | 4.08        | Very Good        |
| <b>2. Changeability. The software is easily modified.</b>                    | 3.92        | Good             |
| <b>3. Stability. The software continues to function if changes are made.</b> | 3.85        | Good             |
| <b>4. Testability. The software is tested easily</b>                         | 4.38        | Very Good        |
| <b>Total Mean Average</b>                                                    | <b>4.06</b> | <b>Very Good</b> |

The outcome of assessment about the system's functionality performance got an overall mean of 4.06, which is equal to Very Good rating. It indicates that the user is satisfied with the maintainability of this system.

**Table11**  
**Overall Result**

| INDICATORS           | MEAN        | RATING           |
|----------------------|-------------|------------------|
| <b>FUNCTIONALITY</b> | 4.19        | Very Good        |
| <b>USABILITY</b>     | 4.81        | Very Good        |
| <b>RELIABILITY</b>   | 4.03        | Very Good        |
| <b>EFFICIENCY</b>    | 4.00        | Very Good        |
| <b>PORTABILITY</b>   | 4.02        | Very Good        |
| <b>MAINTABILITY</b>  | 4.06        | Very Good        |
| <b>OVERALL</b>       | <b>4.22</b> | <b>Very Good</b> |

The table show's the overall result of the survey. It shows the mean result have reach 4.22 which is equivalent to Very Good rating. It serves as the notification that the system has reached the satisfaction of the user about functionality, usability, reliability, efficiency, portability and maintability of the system.

## CHAPTER 5

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### SUMMARY OF FINDINGS

The objective of this study is to plan and construct a Computerized Term-Based Computerized Grading System.

#### CONCLUSION

The researcher decided to develop a system that will benefit the users. This system has the advantage for students to view their grades every prelim, midterm and finals. The professor would be able to encode more efficiently and comfortably of encoding the grades of student. Admin could also search student's grade specifically.

Term-based computerized grading system is developed and for following reason:

1. For student to view the full details of their grades.
2. To provide a system that will allow students to view their current & previous grades.
3. To briefly discuss about a subject in forum.
4. Avoiding of realization of student grades.
5. To give the accurate percentage of the student grades.
6. To benefit professors for their performance during encode of grades.
7. For the registrar to search student's grade specifically for printing.

## **RECOMMENDATION**

The following recommendations are for related research & development purpose for the future benefits of our system. This will serve as upcoming features for the next update.

1. Can add files in forum section (docx, ppt, pdf).
2. Can add photos to the forum section.
3. Pop-up notifications.
4. Refresh button.
5. To have a mobile application version.
6. The students can view their balances.

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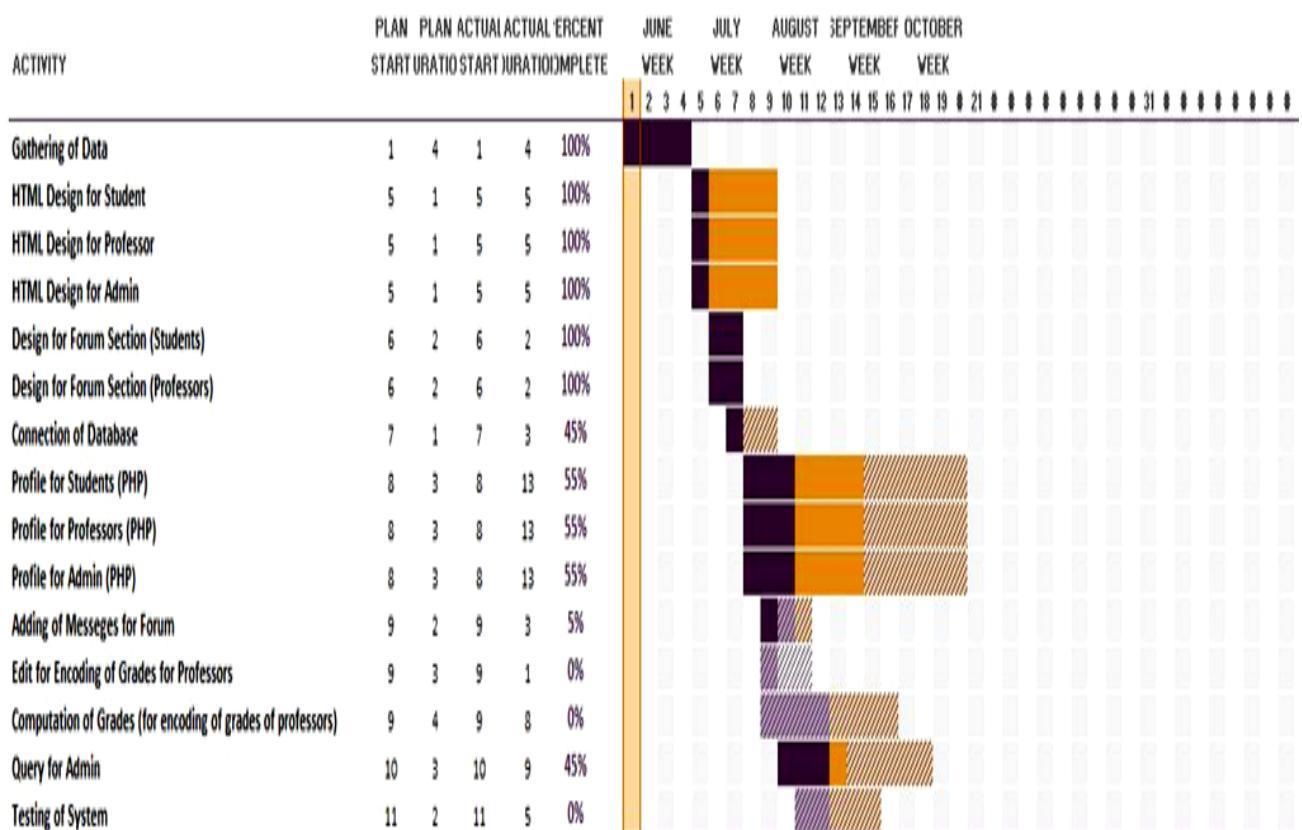
## APPENDICES

### APPENDIX A

#### GANTT CHART

#### Term-Based Computerized Grading System Project Planner

Period Highlights 1 ▾ Plan Actual % Complete Actual (beyond plan) % Complete (beyond plan)



**APPENDIX B**  
**TOTAL BUDGETARY REQUIREMENTS**

| PARTICULAR                                  | AMOUNT      |
|---------------------------------------------|-------------|
| 1. Personal Services                        |             |
| 1.1 Technical Consultant                    | Php 300.00  |
| 1.2 Consultant Labor                        | N/A         |
| 1.2.1 Laboratory Testing                    | N/A         |
| 1.2.2 Others Please Specify                 |             |
| a.                                          | N/A         |
| b.                                          | N/A         |
| c.                                          | N/A         |
|                                             | Php. 300.00 |
| Total Personal Services                     |             |
| 2. Maintenance and Other Operating Expences |             |
| 2.1 Travel Expences                         | Php 350.00  |
| 2.2 Materials and Supplies                  | Php 700.00  |
| 2.3 Sundries/ Laboratory Fees               | N/A         |
| 2.4 Other Services, Please Specify          |             |
| a. Printing Fee/ Xerox(For Documentation)   | Php 600.00  |
| b. Ring Binding/ Book Binding               | Php 310.00  |

|                             |              |
|-----------------------------|--------------|
| c. N/A                      | N/A          |
| Total Maintenance and Other | Php 1,960.00 |
| Operating Expenses          |              |
|                             |              |
|                             |              |
| TOTAL BUDGET                | Php 2,260.00 |

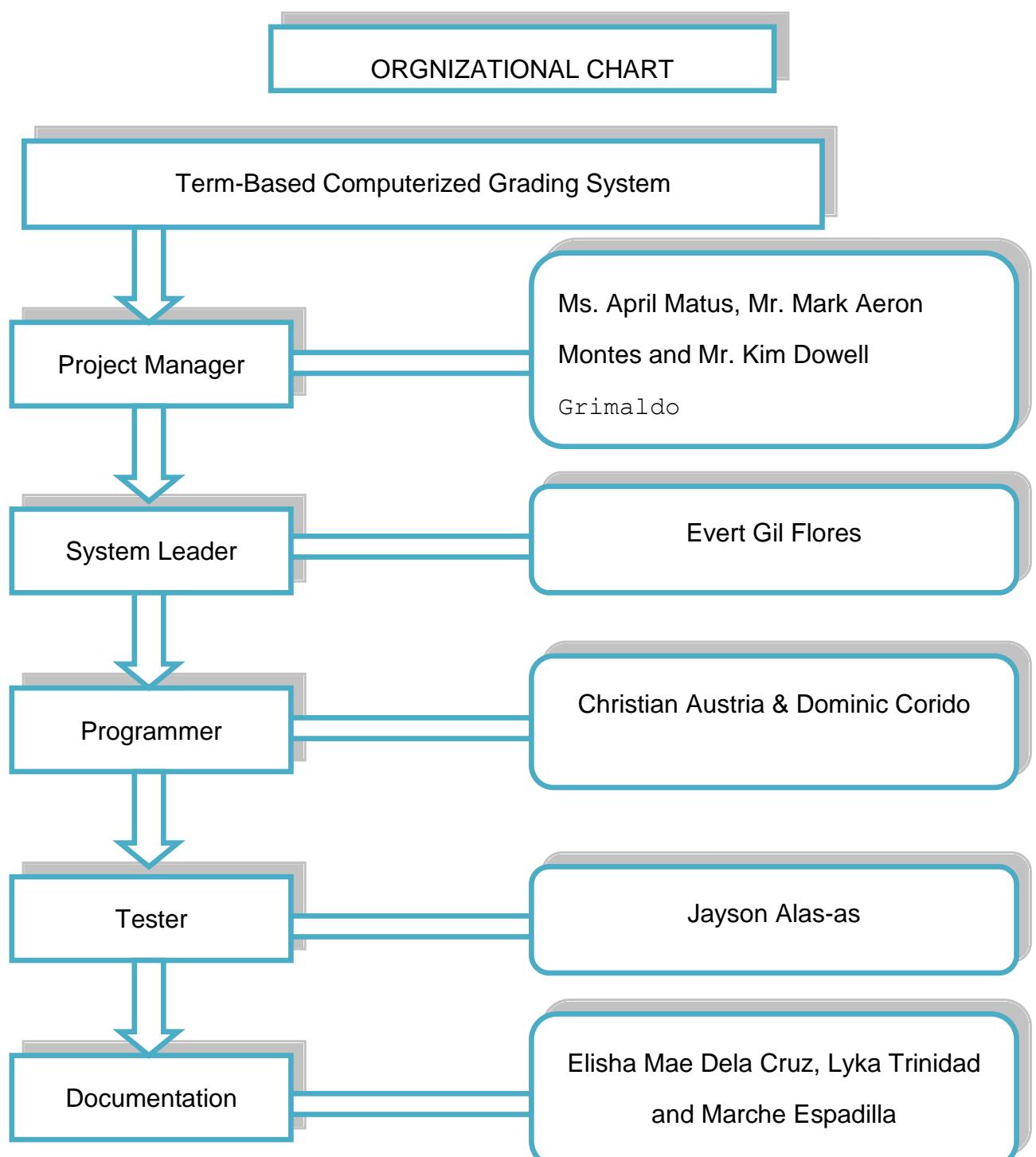
#### BILL OF MATERIALS AND SUPPLIES

| Quantity | Unit   | Specification | Unit Price | Total Price |
|----------|--------|---------------|------------|-------------|
| 3        | Bundle | Bond Paper    | Php 120.00 | Php 360.00  |
|          |        |               |            |             |
|          |        |               |            |             |

## APPENDIX C

### PROJECT MANAGEMENT

#### A. ORGANIZATIONAL CHART



## B. DUTIES AND RESPONSIBILITIES.

| Designation   | Duties and Responsibilities                                                                                                                          | Remarks |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| System Leader | <p>Managing the tasks of system programmers,</p> <p>Tester and Document manager and Gives tasks and assignments to the group.</p>                    | OK      |
| Programmer    | <p>Correct errors by making appropriate change for efficiency of the system.</p> <p>And also Builds the codes of the system and also its design.</p> | OK      |
| Tester        | <p>Conduct trial runs of programs and software applications to be sure to produce the desired information and ensures</p>                            | OK      |

|                 |                                                                                                                                                        |    |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|                 | <p>that the instructions are correct. And also Testing the whole system. Checking the codes and also looking for errors in the system for progress</p> |    |
| Document Manger | To keep all files needed in the system. And also Compile the files and is responsible for the papers of the system.                                    | OK |

## APPENDIX D

### WORK BREAKDOWN STRUCTURE

#### A. TARGETS AND INDICATORS

| TARGETS                                                                                                                  | DURATION | EXPECTED OUTPUT                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Account Management <ul style="list-style-type: none"> <li>• Login/Security</li> <li>• CRUD</li> </ul>                    | 7 DAYS   | The log in interface for the user is finished and secured.                                                                                                   |
| Arrange/Organize the database <ul style="list-style-type: none"> <li>• Grades</li> <li>• Accounts of Prof</li> </ul>     | 7 DAYS   | The user's information is saved on the database.                                                                                                             |
| Profile/Account of professors <ul style="list-style-type: none"> <li>• Subjects loaded with link for encoding</li> </ul> | 7 DAYS   | The list of the professor's subject handled which will be found on their profile (the first page after logging in) and the buttons and links are functional. |
| Encoding of grades <ul style="list-style-type: none"> <li>• List of Students Name</li> </ul>                             | 14 DAYS  | The list of the students were grouped according to its enrolled subjects and                                                                                 |

|                                                                                                                                                   |                |                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Encoding of Quiz, Participation, project, Exam, Final Grade(Prelim, Midterm, Finals)</li> </ul>          |                | <p>the encoding of grades can compute the encoded data, the data can be recorded to the database.</p>                                                                                                                                                                                                                   |
| <p>Making Interface/Account for admin</p> <ul style="list-style-type: none"> <li>• For printing of the submitted grades of instructors</li> </ul> | <p>14 DAYS</p> | <p>The information about the students was recorded and the grades were ready to print.</p>                                                                                                                                                                                                                              |
| <p>Interface for list of Subjects of students per course and section with links for admin to view grades</p>                                      | <p>7 DAYS</p>  | <p>The response of Per course section is that the user / admin must choose to the buttons will appear after clicking per course button, and whenever the button was clicked results will appear on the bottom part of the webpage. Links are functional, can view here all the subjects that a student is enrolled.</p> |
| <p>List of grades(prelim,</p>                                                                                                                     | <p>14 DAYS</p> | <p>The list of grades can view</p>                                                                                                                                                                                                                                                                                      |

|                                                                                             |  |                                   |
|---------------------------------------------------------------------------------------------|--|-----------------------------------|
| midterm, final) of students per subject, course and section for admin to print for approval |  | the grades and is ready to print. |
|---------------------------------------------------------------------------------------------|--|-----------------------------------|

## B. COST DIMENSION

| ACTIVITIES                      | MATERIALS & SUPPLIES | TOOLS & EQUIPMENTS | LABOR/ SERVICES | TOTAL COST |
|---------------------------------|----------------------|--------------------|-----------------|------------|
| 1.Data Gathering                | Bond Paper           | N/A                | N/A             | Php 60.00  |
| 2.Project Designing & Planing   | Bond Paper           | N/A                | Internet        | Php 100.00 |
| 3.Programming & Testing         | N/A                  | Computer           | N/A             | N/A        |
| 4.Implementaation & Maintenunce | N/A                  | Computer           | N/A             | N/A        |
| 5.Documentation                 | Bond Paper           | Computer           | N/A             | Php 230.00 |
| <b>OVERALL TOTAL COST</b>       | Bond Paper           | N/A                |                 | Php 442.00 |
|                                 |                      |                    |                 | Php 360.00 |

**APPENDIX E**  
**SAMPLE EVALUATION INSTRUMENT**

**TERM-BASED COMPUTERIZED GRADING SYSTEM EVALUATION**

**CRITERIA**

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

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

**Course/Program:** \_\_\_\_\_

**Year/Section:** \_\_\_\_\_

| CRITERIA                                                  | RATING |   |   |   |   |
|-----------------------------------------------------------|--------|---|---|---|---|
| <b>A. FUNCTIONALITY</b>                                   | 1      | 2 | 3 | 4 | 5 |
| 1. Suitability. Software performs the tasks required.     |        |   |   |   |   |
| 2. Accurateness. The result is as expected.               |        |   |   |   |   |
| 3. Interoperability. System interacts with other systems. |        |   |   |   |   |
| 4. Security. Software prevents unauthorized access.       |        |   |   |   |   |
| <b>B. Usability</b>                                       |        |   |   |   |   |
| 1. Understandability. The software is easy to use.        |        |   |   |   |   |
| 2. Learnability. The system is easily learned.            |        |   |   |   |   |
| 3. Operability. The system is used without much effort.   |        |   |   |   |   |
| 4. Attractiveness. GUI interface looks good.              |        |   |   |   |   |

|                                                                            |  |  |  |  |
|----------------------------------------------------------------------------|--|--|--|--|
| <b>C. Reliability</b>                                                      |  |  |  |  |
| 1. Maturity. Most of the faults in the software been eliminated over time. |  |  |  |  |
| 2. Fault Tolerance. Software handles errors.                               |  |  |  |  |
| 3. Recoverability. Software resumes working and restores lost data.        |  |  |  |  |
| <b>D. Efficiency</b>                                                       |  |  |  |  |
| 1. Time Behaviour. The system responds quickly.                            |  |  |  |  |
| 2. Resource Utilization. System utilizes resources efficiently.            |  |  |  |  |
|                                                                            |  |  |  |  |
| <b>E. Portability</b>                                                      |  |  |  |  |
| 1. Adaptability. The software can be moved to other environments.          |  |  |  |  |
| 2. Installability. The software is installed easily.                       |  |  |  |  |
| 3. Conformance. The software complies with portability standards.          |  |  |  |  |
| 4. Replaceability. The software is easily replaced with other software.    |  |  |  |  |
| <b>F. Maintability</b>                                                     |  |  |  |  |
| 1. Analyzability. Faults are easily diagnosed.                             |  |  |  |  |
| 2. Changeability. The software is easily modified.                         |  |  |  |  |
| 3. Stability. The software continues to function if                        |  |  |  |  |

|                                                |  |  |  |  |  |
|------------------------------------------------|--|--|--|--|--|
| changes are made.                              |  |  |  |  |  |
| 4. Testability. The software is tested easily. |  |  |  |  |  |

Thank you for your cooperation.

Comments/Suggestions:

---

---

---

Signature of the Respondent

**JAYSON ALAS-AS**

1197 Don Bernardo Homes Pantoc,  
Meycauayan City, Bulacan  
09059345974  
[jaysonalasas@yahoo.com](mailto:jaysonalasas@yahoo.com)

**OBJECTIVE:**

I am looking for a suitable job and opportunity where I could use my knowledge and skills, and also to develop my personality as a career person while utilizing my skills.

**EDUCATIONAL BACKGROUND:**

|           |   |                                                                                                                                                 |
|-----------|---|-------------------------------------------------------------------------------------------------------------------------------------------------|
| TERTIARY  | : | Mariano Quinto Alarilla Polytechnic College<br>Old MC Annex, Malhacan, Meycauayan, Bulacan<br>Computer Engineering Technology<br>2013 – Present |
| SECONDARY | : | Assemblywoman Felicita G. Bernardino Memorial<br>Trade School<br>Lias, Marilao, Bulacan<br>2009-2013                                            |

**TRAININGS AND SEMINARS ATTENDED:**

- 5's tips of safety  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- Electronic multimedia trends and innovations  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- Basic principles of concrete and composition of concrete  
March 21, 2015  
Mariano Quinto Alarilla Polytechnic College
- Testing of concrete slump test and compression test

March 21, 2015

Mariano Quinto Alarilla Polytechnic College

- Steam generators and boilers

March 28, 2015

Mariano Quinto Alarilla Polytechnic College

- Hvac

Mar 28, 2015

Mariano Quinto Alarilla Polytechnic College

### **TECHNICAL SKILLS:**

- Communicative, capable of establishing a positive and productive connection with types of people.
- Accepts direction easily and willing to invest time and effort to complete a certain task.
- Willing to work hard to achieve established objectives.
- Self-motivated and willing to work under pressure to achieve certain objectives
- Oriented in Autocad application
- Programming(tasm, database, DevC++)
- Oriented in Microsoft Offices

### **CHARACTER REFERENCES:**

Architect.Ramon Rubio

Professor

Marianio Quinto Alarilla Polytechnic College

09166736209

Engr. Kim Dowell Grimaldo

Professor

Marianio Quinto Alarilla Polytechnic College

09328560726

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

JAYSON ALAS-AS

Applicant

**CHRISTIAN DS. AUSTRIA**

B2 L2 Villa Samantha Brgy. Lawa Meycauayan City Bulacan  
09358635743

[Christiaanustria167@gmail.com](mailto:Christiaanustria167@gmail.com)



**OBJECTIVE:**

To seek challenging assignment and responsibility, with an opportunity for growth and career advancement as successful achievement.

**EDUCATIONAL BACKGROUND:**

TERTIARY : Mariano Quinto Alarilla Polytechnic College  
Old MC Annex, Malhacan, Meycauayan, Bulacan  
Computer Engineering Technology  
2013 – Present

SECONDARY : Dalandanan National High School  
G. Lazaro St. Dalandanan Valenzuela City  
2009-2013

**TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- On The Job Training Needs And Requirements  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- Programmable weather forecasting  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- 5's tips of safety  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- Electronic multimedia trends and innovations  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College

- Basic principles of concrete and composition of concrete  
March 21, 2015  
Mariano Quinto Alarilla Polytechnic College
- Testing of concrete slump test and compression test  
March 21, 2015  
Mariano Quinto Alarilla Polytechnic College
- Steam generators and boilers  
March 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- Hvac  
Mar 28, 2015  
Mariano Quinto Alarilla Polytechnic College

**SKILLS:**

- Autocad (2D&3D)
- Programming Language(C#, C++, PHP, HTML, Mysql Database, Tasm)

**CHARACTER REFERENCES:**

Engr. Kim Dowel Grimaldo  
Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09278802102

Engr. Noel Andrew Alegre  
Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09065561690

Arch. Ramon Rubio  
Architect/Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09166736209

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

CHRISTIAN AUSTRIA  
Applicant

**DOMINIC ESTEPA CORIDO**

B5 L13 Northville 4C Lambakin, Marilao, Bulacan

09071566763/09468333885

[DominicCorido@yahoo.com](mailto:DominicCorido@yahoo.com)

**OBJECTIVE:**

I would like to have a job which I can share my knowledge, skills and be effective in handling responsibilities and perseverance that will help to the success of your company.

**EDUCATIONAL BACKGROUND:**

TERTIARY : Mariano Quinto Alarilla Polytechnic College  
Old MC Annex, Malhacan, Meycauayan, Bulacan  
Computer Engineering Technology  
2013 – Present

SECONDARY : Seed Academy Foundation Inc.  
Lambakin, Marilao, Bulacan  
2009-2013

**TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- On The Job Training Needs And Requirements  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- Programmable weather forecasting  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- 5's tips of safety  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- Electronic multimedia trends and innovations  
March 07, 2015

- Mariano Quinto Alarilla Polytechnic College
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March 21, 2015  
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March 21, 2015  
Mariano Quinto Alarilla Polytechnic College
  - Steam generators and boilers  
March 28, 2015  
Mariano Quinto Alarilla Polytechnic College
  - Hvac  
Mar 28, 2015  
Mariano Quinto Alarilla Polytechnic College

**SKILLS:**

- AutoCAD
- Adept in Computer Programming Languages ( Assembly Language, Data Base & C++)
- Basic Networking
- Microsoft office

**CHARACTER REFERENCES:**

Engr. Marlon M. Latagan  
Engineering Technology Program Head  
Mariano Quinto Alarilla Polytechnic College  
0906-451-7727

Mr. Mark Aeron M. Montes  
Office of the Registrar / IT Professor  
Mariano Quinto Alarilla Polytechnic College  
0906-451-7727

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

DOMINIC CORIDO  
Applicant

**ELISHA MAE CESAR DELA CRUZ**

114 Little Baguio Street, Malhacan, Meycauayan City, Bulacan

09752299640/09157434358

elishamaedelacruz@gmail.com

**OBJECTIVE:**

To be a good worker, to use my skills and knowledge that I've learn and to make sure that I will do the position that was given to me

**EDUCATIONAL BACKGROUND:**

TERTIARY : Mariano Quinto Alarilla Polytechnic College  
Old MC Annex, Malhacan, Meycauayan, Bulacan  
Computer Engineering Technology  
2013 – Present

SECONDARY : Assemblywoman Felicita G. Bernardino Memorial  
Trade School  
Lias, Marilao, Bulacan  
2009-2013

**ACHIEVEMENTS:**

CHED STUPAF's Scholar  
2014 – Present

**TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- On The Job Training Needs And Requirements  
February 28, 2015  
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- March 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- Hvac
- Mar 28, 2015  
Mariano Quinto Alarilla Polytechnic College

**CHARACTER REFERENCES:**

Jacqueline Lea Tarnate  
Teacher  
09356171701  
Meycauayan, Bulacan

Daniel Lim  
Youth Pastor  
09178421090  
UPCI St. Francis Chapter

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

ELISHA MAE DELA CRUZ  
Applicant

**MARCHE CASTRO ESPADILLA**

1244 East Road, Raminel, Vientereales, Valenzuela City

09484915622

[espadillamarche@yahoo.com.ph](mailto:espadillamarche@yahoo.com.ph)

**OBJECTIVE:**

To acquire valuable knowledge and skills to complement those that I have learned from school in an actual job environment. In return, I offer my service and determination to be an asset to your company.

**EDUCATIONAL BACKGROUND:**

TERTIARY : Mariano Quinto Alarilla Polytechnic College  
Old MC Annex, Malhacan, Meycauayan, Bulacan  
Computer Engineering Technology  
2013 – Present

SECONDARY : San Pascual Academy  
San Pascual, Ubay, Bohol  
2009-2013

**TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- On The Job Training Needs And Requirements  
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- Hvac  
Mar 28, 2015  
Mariano Quinto Alarilla Polytechnic College

**CHARACTER REFERENCES:**

Engr. Marlon M. Latagan  
Engineering Technology Program Head  
Mariano Quinto Alarilla Polytechnic College  
0906-451-7727

April Matus  
Instructor  
Mariano Quinto Alarilla Polytechnic College  
09336023231

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

MARCHE CASTRO ESPADILLA  
Applicant

**EVERT GIL DE PEDRO FLORES**  
191 Lanillo St. Daungan, Malhacan,  
City of Meycauayan, Bulacan  
09056875802  
[floresevert72@yahoo.com](mailto:floresevert72@yahoo.com)



### **OBJECTIVE:**

I would like to have a job which I can share my knowledge, be effective enough in handling responsibilities and perseverance that will contribute to the success of your company.

### **EDUCATIONAL BACKGROUND:**

|           |   |                                                                                                                                                 |
|-----------|---|-------------------------------------------------------------------------------------------------------------------------------------------------|
| TERTIARY  | : | Mariano Quinto Alarilla Polytechnic College<br>Old MC Annex, Malhacan, Meycauayan, Bulacan<br>Computer Engineering Technology<br>2013 – Present |
| SECONDARY | : | Assemblywoman Felicita G. Bernardino Memorial<br>Trade School<br>Lias, Marilao, Bulacan<br>2009-2013                                            |

### **ACHIEVEMENTS:**

Mariano Quinto Alarilla Polytechnic College  
Full Scholar  
A.Y. 2013-2014

Linabelle Villarica Scholar  
A.Y. 2013-2014

CHED STUFAP'S Scholar  
2014-up to present

### **TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015

- Mariano Quinto Alarilla Polytechnic College
- Programmable weather forecasting  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
  - 5's tips of safety  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
  - Electronic multimedia trends and innovations  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
  - Basic principles of concrete and composition of concrete  
March 21, 2015  
Mariano Quinto Alarilla Polytechnic College

**TECHNICAL SKILLS:**

- Computer Literate (MS Word and offices)
- Basic Programming(C++ and C#)

**CHARACTER REFERENCES:**

Crisostomo Velasco Jr.  
Mathematics instructor  
Assemblywoman Felicita G. Bernardino Memorial Trade School  
09178223694

April Matus  
Instructor  
Mariano Quinto Alarilla Polytechnic College  
09336023231

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

EVERT GIL DE PEDRO FLORES  
Applicant

**LYKA J. TRINIDAD**

265 Balaongan St. Pantoc, Meycauayan City Bulacan  
09069450136

[Lycka\\_12@ymail.com](mailto:Lycka_12@ymail.com)



**OBJECTIVE:**

I am currently looking for a position in an environment that offers a greater challenge and experience in line with my field.

**EDUCATIONAL BACKGROUND:**

|           |   |                                                                                                                                                 |
|-----------|---|-------------------------------------------------------------------------------------------------------------------------------------------------|
| TERTIARY  | : | Mariano Quinto Alarilla Polytechnic College<br>Old MC Annex, Malhacan, Meycauayan, Bulacan<br>Computer Engineering Technology<br>2013 – Present |
| SECONDARY | : | San Roque National High School<br>2008-2012                                                                                                     |

**TRAININGS AND SEMINARS ATTENDED:**

- The Future of Web Base Design and Programming
- Mobile Phones Latest Trends and Innovations
- Trends and Innovations in Structural and Drafting Design
- On The Job Training Needs And Requirements  
September 26, 2013  
Mariano Quinto Alarilla Polytechnic College
- Disaster Preparedness Program
- Crisis Management in Education and Industry  
March 08, 2014
- 5'S(Sort, Systematize, Sweep, Sanitize and self-discipline)
- Photovoltaic Solar System
- Maritime Industry Safety
- Role of Automation in Offshore Industry  
March 22, 2014  
Mariano Quinto Alarilla Polytechnic College

- Nanotechnology the Future Demands
  - Pre-engineered Metal Building Technology
  - Programmable Weather Forecasting
  - Electro Multimedia Trends & Innovations
- March 29, 2014  
Mariano Quinto Alarilla Polytechnic College

**CHARACTER REFERENCES:**

Engr. Kim Dowel Grimaldo  
Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09278802102

Engr. Noel Andrew Alegre  
Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09065561690

Arch. Ramon Rubio  
Architect/Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09166736209

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

LYKA TRINIDAD  
Applicant

**“TERM-BASED COMPUTERIZED GRADING SYSTEM”**

A research Project Proposal

Presented to the Faculty of the

**Engineering Technology Program**

Mariano Quinto Alarilla Polytechnic College

Meycauayan Bulacan

By:

Alas-as, Jayson

Austria, Christian

Corido, Dominic

Dela Cruz, Elisha Mae

Espadilla, Marche

Flores, Evert Gil

Trinidad,Lycka

Submitted in partial

Fulfillment of the requirements for the

**Computer Engineering Technology**

**MARCH 14, 2016**

## APPROVAL SHEET

The research project entitled "**Term-Based Computerized Grading System**" prepared and submitted by **Alas-as, Jayson., Austria, Christian., Corido, Dominic., Dela Cruz, Elisha Mae., Espadilla, Marche., Flores, Evert Gil., Trinidad, Lycka.**, in partial fulfillment of the requirements for the degree of **Computer Engineering Technology**, is hereby approved and accepted.

**Ms.April D. Matus**

Adviser

**Mr. Mark Aeron Montes**

Chairperson

**Engr. Kim Dowell Grimaldo**

Member

**Engr. Marlon M. Latagan**

Member

**Engr. Noel B. Alegre**

Member

Accepted in partial fulfillment of the requirements for the diploma of  
**COMPUTER ENGINEERING TECHNOLOGY.**

**Atty. Julius A. Babista**  
OIC, College Dean  
Date: \_\_\_\_\_

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## **ABSTRACT**

### TITLE: TERM-BASED COMPUTERIZED GRADING SYSTEM

Term-based Computerized Grading System development was the focused of this study. One the most important intend of the study is to develop a user-friendly, time valuable and systematically efficient scheme. The study was put together for the users to benefit users. This system has the advantage for students to view their grades every prelim, midterm and finals. The professor would be able to encode more efficiently and comfortably of encoding the grades of student that could lead for their better encoding performance. Admin could also search student's grade specifically. The study is capable for computing the student's grade per semester. Upon running the project, the result shows proper functionality of what the researchers expected.

## **ACKNOWLEDGMENTS**

The Term-based Computerized Grading System researchers would like to express their warmest gratitude to the people who have extended their support which fueled our way to success especially during the time of trials and hardships which were encountered during the development of this project and who became inspiration to the researchers to pursue the required knowledge to be applied on the project.

To our adviser, Ms. April Matus who has guided the researchers for the improvement of the system and for his priceless patience of teaching us the right instructions that made this projects a reality.

To our parents, who have provided us the resources and for their productivity to support the researchers until it's completed and who guard us the right way to mount patience while doing the project.

Last but not the least, to our Almighty God, for His gifted knowledge and willpower that strengthen us despite all changes and trials we have encountered and who mostly became our important inspiration during those difficulties.

We are dedicating these accomplishments to all of you.

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OF THESIS**

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## CHAPTER 1

### INTRODUCTION

In this day and age, people are reliant to electronic information. Information is important in everyday living and it's a lot of information to process and release each time. Manual processing and releasing of information consumes more time and space due to paper works unlike electronic information, it processes data faster, technical and efficiently. Electronic process of information also is more secure and manageable than manual processing. Security is one of the most important when it comes to data storing and management. Processing the data result efficiently is achievable nowadays because technology has enhanced. Information is released by many transactions such as government, corporate industries, schools, etc. Through computers, users are able to do all the above mentioned about the benefits of electronic information.

To conduct a study, the researchers focused on school information releasing problems specifically on grades. Some are computing grades manually that it causes delay to encode and the students are wondering on what is their grade. This is just one of the grade releasing problems. In order to lessen this flaw, the researchers developed the "Term-based Computerized

Grading System". The system has various data the users can view. In students, they can view their current and previous grades every term which are also divided in quiz, examination, performance, and project. The professors can view their current and previous subjects handled, can view their due date of encoding to lessen the delay of grade releasing. The admin is capable of securing the data and the only user allowed for printing the grades.

## **BACKGROUND OF THE STUDY**

Computerized Grading System is designed to assist the students whenever they encounter some problems including grades. Using this computerized grading system, they are able to see their grades from prelim up to finals. Every term they are capable to review the computation for each term including quizzes, assignments, projects, seatworks, activities and examinations, so whenever they have complain they can only review it.

Computerized Grading System is still working but there are some problems concerning grades like; only the registrar's office can print the current and previous grades of students, the students was not able to view the full details of their currents and past grades, there are times encountering the delay of releasing of grades, and lastly, the students can't view the details of their grade because the professor is not available or the professor is a part time instructor.

## **OBJECTIVES OF THE STUDY**

### **General Objective:**

This study would able to build a system where the students can view the full details of their grades.

### **Specific Objectives:**

This study has the following specific objectives:

4. To create a system that helps students to review their previous and current grades.
5. To create a system that records the student grades every term.
6. To develop the current system.

## **SCOPE AND LIMITATIONS OF THE STUDY**

This study is limited to Mariano Quinto Alarilla Polytechnic College to maximize the attendance of students during regular class that is both beneficial to the instructors and students; the users/students are not allowed to print out the records, the system can only be access on the school and our system can only be view offline.

The study Term-Based Computerized Grading System is both beneficial to the instructors and students; the system shows the full details of the system, only the registrar is capable to edit the records of the system, the system can compute the grades of the students and our system provides security for the user.

## **SIGNIFICANCE OF THE STUDY**

The study Term-Based Computerized Grading System will give benefit the following: first to the students, they are able to see their grades every term, it helps the students to review the calculations of their grades and they can see their grades; for the professors, this will lessen the time spent when they are recording grades and the system will help to compute the grades fast; and the system could also give benefit for the school, a system that provides an upgraded system.

## CHAPTER 2

### CONCEPTUAL FRAMEWORK

#### **REVIEW OF RELATED LITERATURE AND STUDIES**

The review of related literature and studies will help us to understand how software works, its components and how efficient, reliable and fast a grading system is.

#### **GRADING SYSTEM**

Grading system is a process of computing grades if it is failed or not, most common grading systems are used for grading student works for its feedback.

**Table 1**

Grading System of the Philippines and the equivalent grades in US.

| Grade       | Scale          | Scale 2                 | Grade Description | US Grade |
|-------------|----------------|-------------------------|-------------------|----------|
| 1.00 - 1.24 | 96.00 - 100.00 | Excellent               |                   | A+       |
| 1.25 - 1.49 | 94.00 - 95.99  | Superior                |                   | A        |
| 1.50 - 1.74 | 91.00 - 93.99  | Very Good               |                   | A-       |
| 1.75 - 1.99 | 89.00 - 90.99  | Good                    |                   | B+       |
| 2.00 - 2.24 | 86.00 - 88.99  | Very Satisfactory       |                   | B        |
| 2.25 - 2.49 | 83.00 - 85.99  | High Average            |                   | B-       |
| 2.50 - 2.74 | 80.00 - 82.99  | Average                 |                   | C+       |
| 2.75 - 2.99 | 77.00 - 79.99  | Fair                    |                   | C        |
| 3.00 - 3.99 | 75.00 - 76.99  | Pass                    |                   | C-       |
| 4.00 - 4.99 | 70.00 - 74.99  | Conditional             |                   | D        |
| 5.00 - 5.00 | 0.00 - 69.99   | Failing                 |                   | F        |
| 5A          |                | Failure Due To Absences |                   |          |
| 5W          |                | Withdrawal              |                   |          |
| INC         |                | Incomplete              |                   |          |
| DRP         |                | Dropped                 |                   |          |

Source: <http://Grading System of the Philippines>

Computer-Based instruction techniques are the best example of the integration of science and technology. Having a computerized marking of assignments including of written text would probably be a benefit to teachers and educational administrators. When a huge numbers of assignments are submitted at once, they end up into a scenario that in their attempt to give a consistent evaluation and high quality feed back to students within a short period of time they feel bogged down.

The Educational administrators are also after to the efficiency and time management of the feedback, but in count must handle the outlay of doing this work. Obviously an computerized system would be a good addition to educational tool-kit, specifically if it can give less cost and useful outcome.

With this research it composes of description and evaluation of four computerized essay grading systems. The report of trial provided the information of the system which was undertaken at Curtin University of Technology in the first half of 2001.

The main reason of the trail was to assess whether computerized essay grading system was realistic, inexpensively viable and as effective as manually grading system. In the said school it is not implemented the computerized grading system but the advantage could be more huge given the very large

numbers of the students in some of the first year subjects. And the idea of the trial is to prove the result of the system is to improve the manual system.

Teaching staff around the world are encountering with a same recurring dilemma: what can they do to reduce the quantity of time consume on the relative task associated with grading their student's essay?

Given that their having an arrival of incoming large number of students, often counted in first year, the current situation of grading system was become both time consuming and expensive at the same time. For most teaching staff, having a system that can manage to computerize the task is just a dream. One of the tasks that can consider difficult to do is to grade, specifically when there is no need to give an individual feedback as in the case of examination grading.

A research in Curtin Business School they have about 2,000 first year students each year in several countries in Australasian region. Students abroad specifically in countries of Malaysia, Singapore, Hong Kong and elsewhere in the world, including remote & remote Australia, are conducting same subjects but taught by their local teachers.

In preserving consistency, the main examination was conducted to the main grading that is centralized in Australia but the system of grading load for Australian lecturers is terrible animations could be as large as 16,000 scripts

requiring grading. In addition to this already extensive problem we can add an additional 16,000 to 32,000 assignments of which possibly half would be graded too late to provide formative evaluation feedback to the students. Expectation could be as large as 16,000 students needed to have their grades. In addition to this already wide dilemma we can add an additional 16,000 to 32,000 assignments but only half can provide the feedback of their grades.

A computerize system of grades is just a dream in this current situation. Though there are systems emerging from laboratories that can somehow help the production environment.

Four of the systems are being evaluated in the following sections. One of the trials result that being reported. Production Automated Essay Grading System one of the system that have an capacity to computerize the grading system in essays that is Project Essay Grading (PEG). With the help of computerization technology in 1960's more useful essay grading system have emerged, and in the research it discuss the most contenders in the field.

| COMPARISON OF TEST WITH OTHER AES TOOLS |                                                       |                                       |                                                                |                                                                      |
|-----------------------------------------|-------------------------------------------------------|---------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
|                                         | PEG                                                   | IEA                                   | E-Rater                                                        | TEST                                                                 |
| Evaluation parameters                   | Essay length, Complexity of sentence and word length. | Similarity with gold standard         | Lexical complexity, Vocabulary, Essay organization and fluency | Similarity with gold standard, Essay organization, Fluency, Accuracy |
| Feedback                                | No                                                    | Yes                                   | Very more, Yes                                                 | Yes                                                                  |
| Essay content checking                  | No                                                    | Yes                                   | Yes                                                            | Yes                                                                  |
| Fact checking                           | No                                                    | No                                    | Yes                                                            | Yes                                                                  |
| Training phase                          | Time consuming & Inexpensive                          | Time consuming & inexpensive          | Time consuming & expensive                                     | Time consuming & inexpensive                                         |
| Language of essay                       | English                                               | English                               | English                                                        | Hindi                                                                |
| Performance                             | Correlation of 0.87 with human raters                 | Correlation of 0.96 with human raters | Correlation of 0.87 with human raters                          | Correlation of 0.7652 with human raters                              |

Source: <http://AES-TOOLS>

**Figure 1.** Comparison of test with other AES Tools.

The main purpose of the PEG is to aid and lessen the huge essay grading load in large educational testing program, such as SAT. when numerous grades are used, the problem focus in the grading process. A huge number of judges are likely to give a realistic grade for essay. An essay that been graded based on the judges will make the essay. A variety of linguistic features are used and measured. Then it develops a multiple regression equation that the main purpose is the grading system. Using this method, it assigned what grade a student can achieve based on the essay that the student do and being graded by the judges.

PEG started in work begun 1960's by Page and his colleagues (Page,1966 ).

"...we coined two explanatory terms: Trines were the intrinsic variables of interest – fluency, diction, grammar, punctuation, and many others. We had no direct measures of these, so began with substitutes: Proxies were approximations, or possible correlates, of these trines. All the computer variables (the actual counts

in the essays) were proxies. For example, the trine of fluency was correlated with the proxy of the number of words." (Page, 1994).

The numerous regression techniques are helpful in evaluation of grades, from the proxies, a prediction of the students score per essay. In research reported b Page (1994), the objectives were to differentiate those variables that would prove helpful in predicting student grades. Some software products including grammar checker, a program that can identify words and sentences, a software dictionary for definitions. And parser that used to collect data about proxies.

The definition of predictive variables is not given to Page's work. But, amongst the variables found useful in the equation were the fourth root of the number of words, sentence length, and a measure of punctuation. One of the results that were based in the regression equation with 26 variables showed correlations between PEG prediction scores and human rater scores including between 0.389 and 0.743. Palmer, Williams, & Dreher



Source: <http://e-rater-logo>

**Figure 2.** E-rater

**E-rater.** It is a mixed statistical and Natural Languages Processing (NLP) techniques to take out linguistic features to the essay to be evaluated. And all of the abstract models discussed in research, e\_rater students essay are graded based on a specific graded essay. E\_rater has module that take out the vocabulary contents, discourse structure information and syntactic information. In predicting a score of essay it will use a numerous linear regression techniques, focus onto the features that been take out. For every questionnaire, it produces a response base on human features scores. It has 57 features of the bench mark essay, based upon six score points in an Educational Testing Services (EST) scoring guide for manual grading, are the model used to build the regression model. Using stepwise regression techniques, the major predictor variable are

determined. Students grades are being predicted based on the value that have been take out.

The essay syntactic variety is one of the scoring guide criteria. When parsing the essay with an NLP tool is done, to determine the clause or verb that being used by the writer the parse tree was being analyzed. Each syntactic type on per essay and per sentence basis are ratios that needed to be calculated. Another related criteria for grading is having a well-developed argument on essay.

In looking for surface cue words and no lexical cues discourse analysis use techniques to examined the essay for discourse units. For partitioning process of essay based upon students contents arguments the cues are being needed. The grading system also provides topical information of the essay based on the words that used in the sentence and how the word used. Burstein, Kukich, Wolff, Lu &Chodorow (1998) are the people who evaluate the system and noticed that it can attain a degree of agreement with users raters. the following predictive feature variables were found to be important for one test essay question.

1. Argument content score
2. Essay word frequency content score
3. Total argument development words/phrases
4. Total pronouns beginning arguments

5. Total complements clauses beginning arguments
6. Total summary words beginning arguments
7. Total detail words beginning arguments
8. Total rhetorical words developing arguments
9. Subjunctive modal verbs

Having a represented documents and their word contents in a large two dimensional matrix semantic space and it use a Latent Semantic Analysis (LSA). the algebra method known as Singular Value Decomposition (SVD) are using a matrix from Latent Semantic Analysis (LSA), it gives an idea of relationship between the documents and words, and that relationship are being customize to give an efficient signify the true implication.

Words and contexts are represented by a matrix. Every words are being considered for the analyzing the matrix that represented by rows, when sentence, paragraphs or other partition of sentence that a word occurs are being represented by columns of the matrix. The frequencies of the words in each context contains cell.

The matrixes have been applied to SVD. The original matrix divided into three components matrices because of the SVD, when matrix multiplied, it gives the original matrix. Using a reduced length of these three matrices it can represent the word-context association, the divided matrix and the original matrix show another relationship between the word and the context.

The new relationship shows the evident, whereas above to the SVD hidden or latent. The Intelligent Assessor, using the LSA are developed by Landauer, Foltz & Laham (1998). To evaluate the essay, they also build the essay matrix for documents, and used the SVD technique to reproduce the matrix containing the essay topic domain semantic space.

The space was created consisted the human evaluated essay. The computed student's data are known as vectors. The essay documents has it vector, and the semantic space with documents are being compared; the evaluated essay with the lowest cosine value is assigned to the essay to be graded.

Landauer et al. (1998), report that LSA has been tried with five scoring methods, each varying the manner in which student essays were compared with sample essays. Mainly this will happen with the cosine between appropriate vectors are computed. Based on domain specific materials and the students essay LSA method was constructed.

Foltz also reports that LSA grading performance is about as reliable as human graders (Foltz, 1996). Landauer reports another trial on GMAT essay where the percentages for adjacent agreement with human grades were between 85%-91%(Landauer,1999)

**The TextCategorisation Technique (TCT).** Larkey (1998) implemented an automated essay grading approach based on text categorization techniques, text complexity features, and linear regression methods. The techniques for classifying documents as to their appropriateness of its content for given document retrieval query are discussed by the information Retrieval literature (van Rijsbergen, 1979) Larkey's approach "... is to train binary classifiers to distinguish "good" from "bad" essays, and use the Scores output by the classifiers to rank essays and assign grades to them." (Larkey, 1998) The technique firstly makes use of Bayesian independent classifiers (Maron, 1961) assigning probabilities to documents predicting that they somehow belong to a specified category of documents. Second is, a neighbor techniques called k-nearestis used to identify the closest k essay to the students essay, and k is achieve by having a comparison between a human graded essay.

#### The In query retrieval system (Callan, Croft &Broglio, 1995)

At last, text complexities eleven features are used, such as the equal number of the character in documents, the number of words in fourth root is a document it is also discussed in the PEG, and the average sentence length, a numbers of regression trials conducted by Larkey, used a different combination of quantity. Larkey also used a set of essay, as well as essay on social study (soc) where the main idea is the primary needed, and essay of general opinion, was the criteria of assessment.

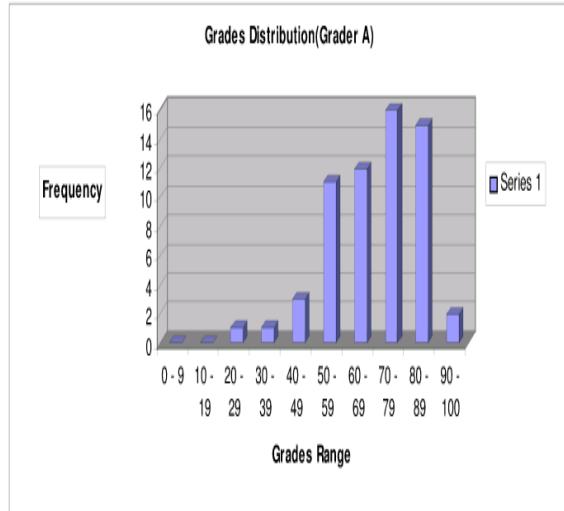
When the based grades are compared to the human's graders .60 and scores adjacent having a score of 1.00. For the essay tackles opinion were gain .55 and .97. During the first semester in 2001 a trial of an computerized essay grading system was conducted at Curtin University of Technology in Perth, western Australia.

Only one subject was picked, a the information systems introduction, achieve a 1,000 students willing to join. But sadly the semester start before the research starts to conduct information. This proves that the assessment was already determined. If the assessment is done the student can change its result without major consent.

The process of having a consent and secure a high rate of response to the trial, the researchers announced that they have an additional question. it is useless to say that the response was in a high rate. Because the system require a 200 manually graded essay as an input to the grading system. In the middle of three researchers they graded a papers counted in 70 and deliver to the US site the electronic copies and another 330 ungraded essay were then forwarded to the site

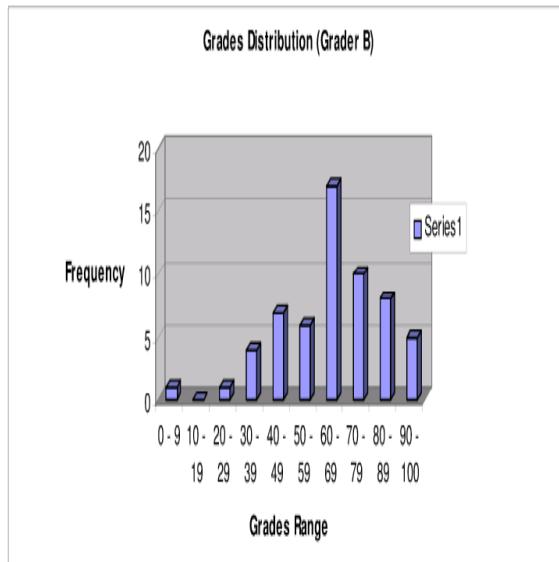
The graders of this trial are divided in four Graders (A, B, C, D) the frequency of each grader will be the based grade for the grades of the essay that the judges give to them to evaluate.

## Automated Essay Grading System



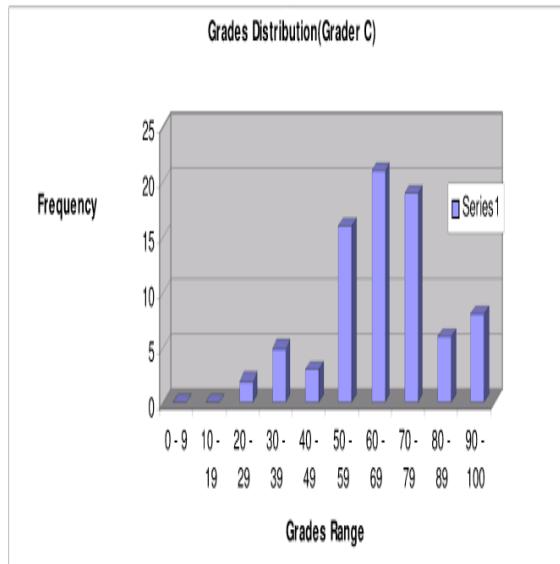
Source: <http://essay-grading-system>.

**Figure 3.** Results of grades for Graders A



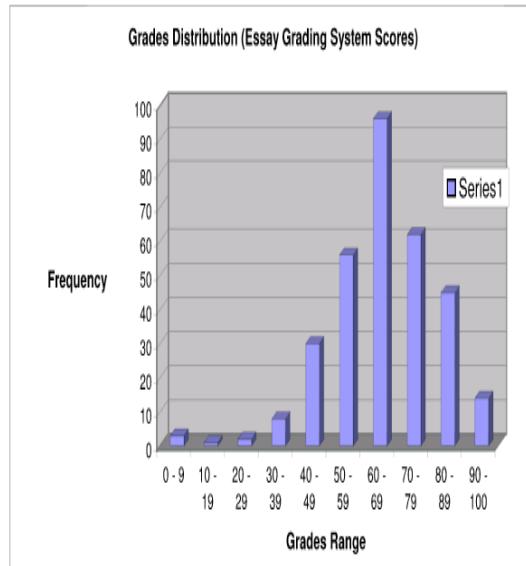
Source: <http://essay-grading-system>.

**Figure 4.** Results of grades for Graders B



*Source: <http://essay-grading-system>.*

**Figure 5.**Results of grades for Graders C



*Source: <http://essay-grading-system>.*

**Figure 6.**Results of grades for Graders

In summary the results of frequency shows a low grades for all of the gathered grades.

The weaknesses of the system can be defined into two the minor and the major. The first is the successful implementation, to have a 200 essay that needed to encode into the system manually. The graded output of the system will depend on the essay that encoded to the system. In a class having a small number of students it is not reasonable to implement.

Other weakness is the charge of having a system. Because the system was in American so the researchers needed to pay in US\$. Because the output will give a low rate to implement to classes having a few students the initial cost will be \$11,400. This is obviously not a good in cost. if same essay will use per semester the cost will somehow reduce. But using a same essay per semester is not advisable or to use it twice.

There was another factor. The system is in America than having at Curtin University. In security it is kind of risky and the cost in idea is no so expensive compare in hiring a human grader.

The system is completely based on the essay encoded to the system. To more accurate the system in idea provides grade same as human grader. And it can run available it any place.

The cost of hiring a human grader will cost \$25 per hour. The system should give a 90% feedback in grading. The experience of the researcher in implementing the system in 200 essays it cost \$33 per essay with two pages in length the initial payment for service cost \$600. But it cost about \$10,800 and a total of \$11,400.

The idea of the system provides a small cost supporting a University. Even the initial cost is high the out com per essay to be graded will be low. Up to 2000 essay could have been evaluate for the A\$11,400, but we did not have the number to grade with some economies of scale, and do not give the give the benefits. The system can provide at least 2,000 essays to grade, the automated essay grading system and the cost still hit the price of A\$5.70 per essay, it double the cost of manual grading system.

### **Applications of grading system**

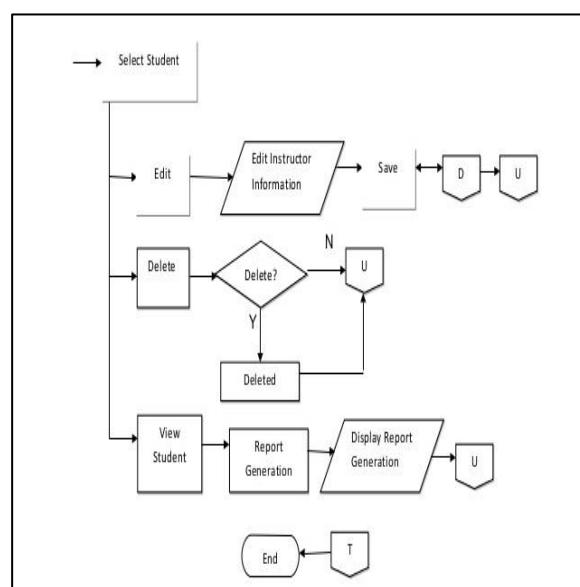
For now on, technology is the most widely used in the industry and mostly is in the College University. The application of computerized grading system is one of the examples of application of technologies that could be used in Universities.

## Thesis in IT Online Grade Encoding and Inquiry System via SMS

**Technology.** Alternatively, the grades can perform operations such as; can improve the use of manual operation in the office of the registrar; to determine the problems encountered whenever there are delays in releasing the grades; to lessen the consumed time in searching the grades of the students.

Grades are important for advance learning; it is the result of what the student has done after several times in school, so grades are important for the students.

On the other hand, there are students who want to secure their grades; however, some students sometimes they misplaced their printed grades, so student gets timid whenever they want to ask in the registrar's office for new one especially when they have much work to finish.



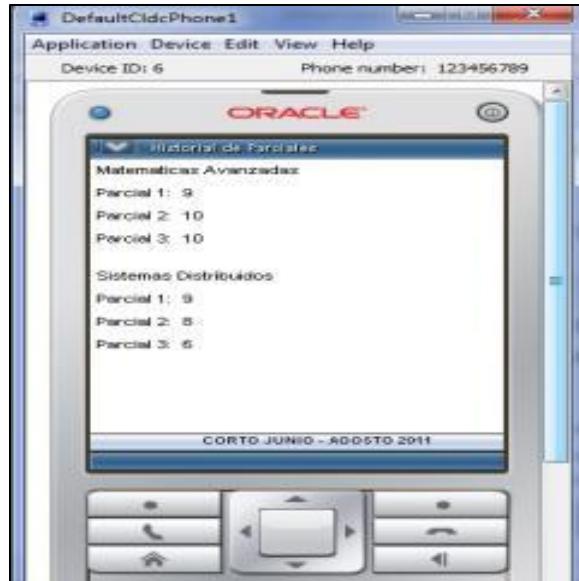
Source: Thesis in IT Online Grade Encoding and Inquiry System via SMS

**Figure 7.** Conceptual framework of an Online Grade Encoding and Inquiry System via SMS Technology.

| Student ID | Student Name                 | Address                             | Age | Birth Date | Birth Place              |
|------------|------------------------------|-------------------------------------|-----|------------|--------------------------|
| 200912140  | Janneth Sebastian D. Stevens | Damaser Ing.                        | 24  | 1990-01-20 | Sanchez, Neg.            |
| 200912110  | Zohreh Sebastian D. Stevens  | Cebato Tower, Baguio, Negros        | 21  | 1991-12-05 | Roxas N.S., Saudi-Arabia |
| 200914022  | Ramonson Jocelyn             | Cebato St., Mactan City             | 23  | 1993-07-11 | Cebu S. Mactan City      |
| 200918110  | Aldana                       | University of Negros Occidental     | 19  | 1994-01-01 | Tambac, Negros Occ.      |
| 200918110  | Mariel Jon Isaguirre         | College of Saint Benilde, Cebu City | 20  | 1992-10-21 | Mandaue City             |
| 200919200  | Gabriel Capulante            | Bugas Jr. High R.                   | 22  | 2001-09-08 | Bacolod City             |
| 200914520  | Connie Daniel Dominguez      | Cebu City, Philippines              | 23  | 1993-03-02 | Fardesman City           |
| 200918010  | glenice ascolis              | Capoletto                           | 22  | 1993-09-16 | Capoletto                |

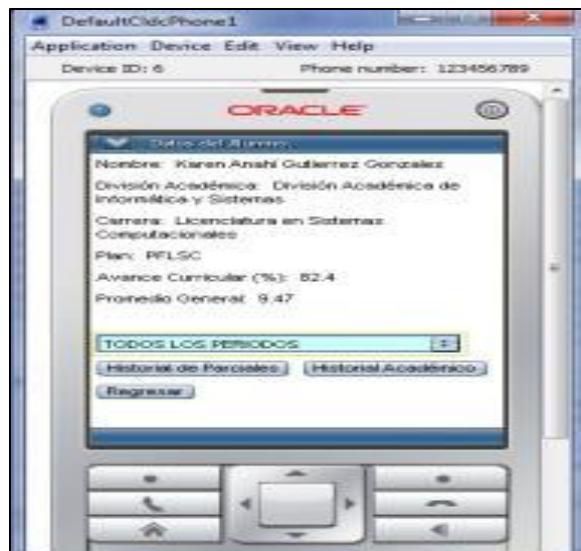
  

| Subject     | Description                                    | Units | Pre Requisites |
|-------------|------------------------------------------------|-------|----------------|
| English     | Analysis of Structure & Information Technology |       |                |
| Mathematics | Year 1                                         |       |                |
| Mathematics | Year 2                                         |       |                |
| Mathematics | Year 3                                         |       |                |
| Mathematics | Year 4                                         |       |                |
| Mathematics | Year 5                                         |       |                |
| Mathematics | Year 6                                         |       |                |
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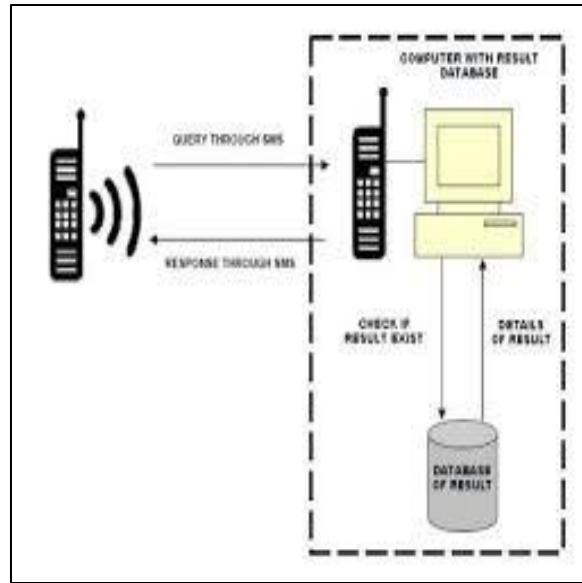
Source:Grade Query System using Mobile Devices for Students of Juarez Autonomous University of Tabasco

**Figure 9.**Initial Screen of Grade Query



Source:Grade Query System using Mobile Devices for Students of Juarez Autonomous University of Tabasco

**Figure 10.**Initial Screen and Options Menu



Source:Grade Query System using Mobile Devices for Students of Juarez Autonomous University of Tabasco

**Figure 11.**Partial Exams Result



Source:Grade Query System using Mobile Devices for Students of Juarez Autonomous University of Tabasco

**Figure 12.**Shows the conceptual framework of Grade

The above figures shows the Grading system using mobile query. This explains how grading system could work by applying Grading system in mobile query.

Both the professor and the web will evaluate using the grading system, and then the final grade will be computed. Many researchers says that this is the most helpful tool for learning, it involves organizing, integrate ideas, to review and the ability to interpret the application of information.

Computer-Based instruction techniques are the best example of the integration of science and technology.

## **HTML**

It is the text mark-up language trend given on the World Wide Web. If you have always written a school report or business memo, you have encountered text mark-up. Your files likely came back to take over in red ink, favour of your teacher, usually the symbols or acronyms given in this editorial mark-up to propose changes for you to clarify.

### **History of HTML**

This chapter intends to distribute facts on how HTML was applied and used today. In 1989, World Wide Web (www) began to CERN- European

laboratory in Switzerland. CERN is the place where logic thinkers meet to engage in the contemplation of complex atomic phenomena that occur on a minuscule scale in time and space. This is the place where technology begins. Tim Berners-Lee invented Web. He was working on computing services when he came up with the concept. He thought that by using hypertext, you could quickly display part of another paper that holds directly relevant text or diagrams. Tim had already served on document production and text processing, and had developed his first hypertext ‘Enquire’, in 1980 for personal use. Tim’s prototype Web browser in the NeXT computer came out in 1990. Hypertext was coming into vogue and being used on computers. The system was widely distributed. Then, the new domain name system had made it much easier to address a machine on a internet. A domain name comprises a series of letters separated by dots, for example: www.fb.com. These names are the easy-to-use alternative to the much less manageable and cumbersome IP address numbers. A program called distributed name Name service (DNS) maps domain names onto IP addresses, keeping the IP address ‘hidden’. As a result, email addresses became simpler. To Tim Berners-Lee, global hypertext links seemed feasible, but it was a matter of finding the correct approach to implement them. Using an existing hypertext package was impractical for a number of reasons. Therefore, any hypertext tool to be used worldwide must have into many types of computers existed such as: Personal computers, macintoshes, UNIX machines and simple terminals. Also, many desktop publishing methods were in vogue: SGML, Interleaf, Latex, Microsoft Word, and Troff among many others. Tim

demonstrated a basic, but attractive way of publishing text by developing some software, himself, and also his own simple protocol-HTTP-for retrieving other documents text via hypertext links. Tim's own protocol, HTTP, stands for Hypertext Mark-up Language; his implementation was held on a NeXT workstation. He encourage others build upon his ideas and to design further software for displaying HTML, and for setting up their own HTML documents ready for access. The HTML that tim invented was strongly based on SGML(Standard Generalized Mark-up Language), an internationally agreed upon method for marking up text into structural units such as paragraphs, heading, list, list items and so on. SGML could be implemented on any machine. The language was independent of the formatter (the browser or other viewing software) which display text on screen. The pairs of tags such as <TITLE> and </TITLE> is taken directly from SGML, which does exactly the same. SGML elements used in tim's HTML included (paragraph); H1 through H6 (Heading level 1 through heading level 6); OL(ordered lists); UL(unordered lists); LI(list items) and various others. What SGML not include of course, are hypertext links: using anchor element with the HREF attribute was purely tim's invention, as was the now-famous 'www.name.name' format for addressing machines on the Web. Certainly the simplicity of HTML, and the use of the anchor element A for creating hypertext links, was that made tim's invention useful. In September 1991, the WWW-talk mailing list was started, a kind of electronic discussion group in which enthusiasts could exchange ideas and gossip. By 1992, Dave Raggett from England was one of his early enthusiasts, following dave visited

tim. Dave looked through printed media to get an idea of what sort of HTML features would be important when that information was published online. When dave return to England, he composed HTML+, a richer version of the original HTML. However, tim's ideas had caught the eye of Joseph Hardin and Dave Thompson, both of the National Center for Supercomputer Applications, a research institute at the University of Illinois at Champaign-Urbana. They managed to connect the computer at CERN and download copies of two free web browsers. Realizing the importance of what they saw, NCSA decided to develop a browser of their own to be called mosaic. Marc Andreessen and Eric Bina were the genius programmers in the NCSA. In dec. 1992, Dave Raggett, Tim Berners-Lee, Dan Connolly and others debeted how images(photographs, diagrams, illustrations and so on) should be inserted into HTML documents in an electronic discussion group called WWW-talk. Marc Andreessen introduced an idea for IMG tag by the Mosaic team. The coming of HTML 4, the OBJECT tag potentially replaces IMG. In march 1993, Lou Montulli released the Lynx browser version 2.0-a text-based browser used DOS without OS. Lou Montulli worked with Netscape Communications Corp., while early 1993 Dave Raggett started to make his own browser and Eric Bina and the NCSA gang were hard at hacking through the night , Dave labs in Bristol. In april 1993, version 1 of the Mosaic browser was released for Sun Microsystems lines workstation. In late 1993 large companies underestimate the importance of the web. Dave Raggett's work was slow due to lack of money from team developers so he had to develop much of system single-handedly. Like other huge computer companies, Hewlett-Packard

was quiet unconvinced that the internet would be a success. There was also misconception that the internet was mostly for academics. Dave also used the browser to show text flow around images, flows and other aspects of HTML at the first www conference in Geneva in 1994. The Arena browser was later used for development work at CERN. In May 1994, spyglass, Inc., signed a multi-million dollar licensing agreement with NCSA to distribute a commercially enhanced version of Mosaic. In August of that same year, the University of Illinois of Champaign-Urbana, the home of NCSA, assigned all future commercial rights for NCSA Mosaic to spyglass. In May 1994, the first World Wide Web conference is held in Geneva, with HTML+ on show. Marc Andreessen and Jim Clark saw themselves as joint creators of a wonderful new technology. With 380 attendees from Europe and United States all was merry for the first www conference organized by CERN in May 1994, but the two programmers and Eric Bina do not attend. Dan Conolly who defined HTML2 gave presentation entitled Interoperability: Why Everyone Wins, it explains the importance of proper HTML specification in the web. Dave Raggett had been working on HTML+ which agreed in the conference that should lead for the development of HTML3 standard. Dave together with CERN, developed Arena further as a proof-of-concept browser for this work. Using Arena, Dave Raggett, Henrick Frystyk Nielsen, Hakon Lie and others demonstrated text flow around a figure with captions re sizable tables, image background, math and other features. In early 1994, an engineering task force working group was set up to deal with HTML. The (IETF) is the international standard and development body of the internet

and is a large, open community of network designers, operators, vendors, and researchers concerned with the evolution and smooth operation of the internet architecture. Security, Network routing, and Applications is clone in working groups of the IETF. In July 1994, HTML specification for HTML 2 is released. Dan and colleagues collected all the HTML tags and collated them into draft document what Tim Berners-Lee called HTML 2. The draft was circulated for comment. HTML 2 has document type definition, a kind of mathematically precise description of the language.

**November 1994.** Netscape is formed during 1993, Marc Andreessen became irritated on the Mosaic instead of being charged of it. Upon graduating, he left NCSA and went to California where he met Jim Clark of Silicon Valley. They formed Mosaic Communications which became Netscape Communications Corp. in November, 1994. It was successful and many users would mistakenly think that Netscape invented the Web. Netscape began inventing its own HTML tags and rarely made an appearance at the big WWW conferences.

**Late 1994.** The World Wide Web consortium forms- to fulfill the potential of the web, WWW Consortium were formed and recruited many of the famous names in the Web community. Headed up by Tim Berners-Lee, here are some of the Web legendary today (1997):

- Dave Raggett on HTML of United Kingdom.
- Arnaud le Hors on HTML of France.
- Dan Connolly on HTML of United States.
- Henrik Frystyk Nielsen on HTTP and on enabling the Web to go faster of Denmark.
- Hakon Lie in style sheets of Norway. He is located in France, working at INRIA.
- Bert Bos on style sheets and layout of Netherlands.
- Jim Miller on investigating technologies that could be used in rating the content of Web pages of United States.
- Chris Lilley on style sheets and font support of United Kingdom.

***March 1995.***A furor over the HTML Tables specification- Dave Raggett's HTML 3 draft had tackled the tabular organization in HTML. At the 32<sup>nd</sup> meeting of the IETF from Massachusetts, Dave found a group from SGML who were responsible for table specification for it opposes the CALS table model which is used by US Navy for complex documentation. HTML tables were not in HTML originally is at last faced from HTML 3 draft to HTML 3.2 and continue to used it to provide a Web design for sort out pictures and text on the screen.

***August 1995.***Microsoft's Internet Explorer browser come out- Version of 1.0 of Microsoft Corp.'s Internet Explorer was publicized which later compete with Netscape's browser and evolve its HTML features which become their business. ActiveX feature made Microsoft's browser exceptional, and Netscape developed

a plug-in called Ncompass to handle ActiveX. In November 1995, Microsoft's Internet Explorer version 2.0 arrived for its Windows NT and Windows 95 Operating Systems.

**September 1995.**Netscape submits a proposal for frames- Netscape submitted a proposal for frames, the proposal was implemented but nobody was surprised.

**November 1995.**The HTML working group runs into problems- HTML working group was an excellent in making ideas, but things do not settle down. The volume of email user climb and, HTML working group become great through the vast popularity of the Web. The HTML working group emailed each other in a passion of electronic activity that no time was left for programming and losing position to the browser dealers.

**November 1995.**Vendors unite to form a new group dedicated to developing an HTML standard- in November 1995 Raggett called the browser companies representatives and recommend they meet as small group dedicated to standardize HTML and they made quick and effective decisions about HTML.

**November 1995.**Style sheets for HTML documents design to take shape- World Wide Web Consortium programmers met in Versailles near Paris to converse about the deployment of Cascading Style Sheets- this name involves

that more than one style sheet can relate to construct the absolute appearance of the data.

**November 1995.** Internalization of HTML Internet Draft- Gavin Nicol and others present a paper on the internalization of the Web.

**December 1995.** The HTML working group is dismantled- Since the IETF HTML working group was having difficulties coming to quick agreement, they set apart.

**February 1996.** The HTML ERB is formed- World Wide Web group formed the HTML Editorial Review Board (ERB) to aid with the standardization process which consists of representatives from huge computer companies that communicate through email and telephone and meet just about four times a year. Dan Connolly of W3 group and author of HTML 2 achieved the rough meeting skillfully. Dan makes sure that all representatives must listen to each other's point. In ERB preparation meeting, specific describing of new feature of HTML was made electronically available for ERB members to read. At the meeting, the proponent will explain some specifications and then dearly hoped that all who were present also agree that the summarize ideas were sound. When writing, the next HTML standard, code-named *Cougar*, has begun its journey in this direction. The BLINK tag was exile in an HTML ERB meeting.

Netscape would only abolish it if Microsoft agreed to get rid of MARQUEE; the deal was hit and both tags disappeared. Tough decisions were made for the OBJECT specs which became part of the HTML, but not until 1997.

**April 1996.**The W3 Consortium working draft on Scripting come out-based on initial draft by Kindel, it derived from Netscape's extensions for JavaScript.

**July 1996.**Microsoft seems more interested than first imagined in open standards- in April 1996, Microsoft's Internet Explorer become available for Macintosh and Windows 3.1 systems. These included the remarkable MARQUEE tag made text dance about all over the screen.

**December 1996.**Work on 'Cougar' is begun- The HTML ERB became the HTML Working Group and began to work on 'Cougar', the next version of HTML with completion late Spring 1997, eventually become HTML 4. With all sorts of innovations for the disabled support for international languages and much more, HTML 4 breaks away from simplicity and charm of HTML of earlier years!

**January 1997.**HTML 3.2 is ready- In January 1997, The W3 Consortium formally endorsed HTML 3.2 as an HTML cross-industry specification. By providing a neutral forum, the W3 Consortium had successfully obtained agreement upon a standard version of HTML and took the existing IETF HTML 2

standard and incorporated features from HTML+ and HTML 3. HTML 3.2 included tables, applets, text flow around images, subscripts and superscripts.

**Update- Spring 1998.**Cougar has fully materialized as HTML 4.0 and is a W3C Proposed Recommendation.

**HTML Creation.**2003-06-03: the World Wide Web was invented by Tim Berners-Lee and Robert Cailliau in 1990. In 1989, while working at CERN (the European Organization for Nuclear Research), both men made proposals for hypertext systems.

HTML consists of a series of short **codes** typed into a text-file which is called Tags. The text is then **saved as an html file**, and **viewed through a browser**, like *Internet Explorer* or *Netscape Navigator*. This browser reads the file and translates the text into a visible form.

## **Types of HTML**

The most common version of HTML in use is HTML 4. The new version of HTML, which is entering the industry, is HTML 5. HTML can be divided into three categories: transitional, strict, and frameset. These types apply to how HTML is used, not necessarily to the section of tags.

Transitional is the most common type of HTML. It has flexible syntax. If tags are misspelled, the browsers do not correct web developers' errors, and they display content anyway.



*Source: Types of HTML*

**Figure 13.** Transitional HTML

Strict is meant to return rules into HTML ad make it more reliable. This style of HTML is important on phones, where the processing power may be limited. A clean and error-free code helps to load pages faster.

- ```
<!DOCTYPE html>
```
- **HTML 4.01 Strict**  
<!DOCTYPE HTML PUBLIC "-//W3C//DTD  
HTML 4.01//EN"  
"http://www.w3.org/TR/html4/strict.dtd">
  - **HTML 4.01 Transitional**  
<!DOCTYPE HTML PUBLIC "-//W3C//DTD  
HTML 4.01 Transitional//EN"  
"http://www.w3.org/TR/html4/loose.dtd">

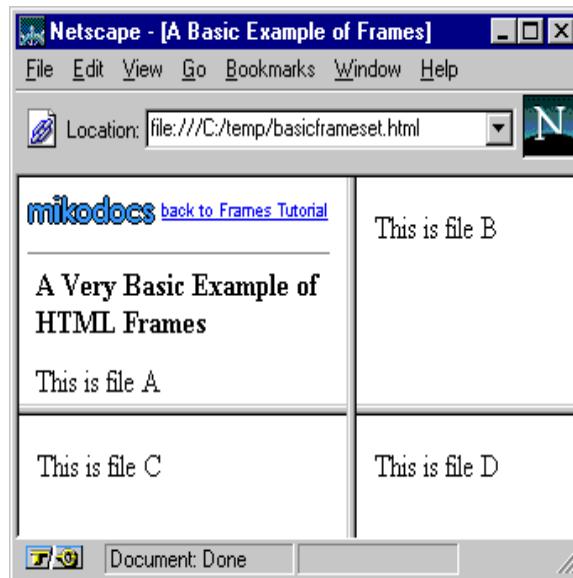
*Source: Types of html*

**Figure 14.** Strict HTML

Frameset allows web developers to create a mosaic of HTML

documents. Multiple documents can be connected into a single screen.

This technique is often used to create a menu system.



*Source: Types of html*

**Figure 15.** Frameset HTML

### Link types

In HTML, the following link types indicate the relationship between two documents, in which one links to the other using an `<a>`, `<area>`, or `<link>` element.

Here are the list of the defined link types and their significance in HTML:

*Alternate(`<a>`, `<area>`, `<link>`)* if the element is `<link>` and the `rel` attribute also contains the style sheet type, the link defines an alternative style sheet; in

that case the title attribute must be present and not be the empty string. If the type is set to application/rss + xml or application/atom + xml, the link defines a syndication feed.

*Archives (HTML 5)*(, , ) defines a hyperlink to a document that contains an archive link to this one.

*Note:* Although recognized, the singular archive is incorrect and must be avoided.

*Author (HTML 5)*(, , ) defines a hyperlink to a page describing the author or providing a way to contact the author.

*Note:* This may be a mailto: hyperlink, but this is not recommended on public pages as robot harvesters will quickly lead to a lot of spam sent to the address. Although recognized, the rev attribute on , , or<link> elements with a link type of made is incorrect and should be replaced by the rel attribute with this link type.

*Bookmark* (, ) indicates that the hyperlink is a permalink for the nearest ancestor <article> element.

*External (HTML 5)*(, ) indicates that the hyperlink leads to a resource outside the site of the current page; that is, following the link will make the user leave the site.

*First (HTML 5)(, , )* indicate that the hyperlink leads to the first resource of the *sequence* the current page is in.

*Note:* Other link types related to linking resources in the same sequence are last, prev, next.

*Help (, , )* defines a resource for representing the page in the user interface, usually an icon (auditory or visual).

*Icon (HTML)()* the media, type and sizes attributes allow the browser to select the most appropriate icon for this context.

*Note:* Apple's iOS does not use this link type, or the sizes attribute, like others mobile browsers do, to select a Webpage icon for Web Clip or a start-up placeholder.

*Index (, , )* indicates that the page is part of a *hierarchical* structure and that the hyperlink leads to the top level resource of that structure.

*Last (HTML 5) (, , )* indicates that the hyperlink leads to the *last* resource of the *sequence* the current page is in.

*Note:* Other link types related to linking resources in the same sequence are first, prev, next.

*License (HTML 5)* ([<a>](#), [<area>](#), [<link>](#)) indicates that the hyperlink leads to a document describing the licensing information.

*Note:* Although recognized, the synonym copyright is incorrect and must be avoided.

*Next* ([<a>](#), [<area>](#), [<link>](#)) indicates that the hyperlink leads to frames even though HTML 3.2 specification did not support this feature.

*Preload* ([<link>](#)) tells the browser to download a resource because this source will be needed later during the current navigation.

*Prev* ([<a>](#), [<area>](#), [<link>](#)) indicates that the hyperlink leads to the preceding resource of the sequence the current page is in.

*Note:* Other link types related to linking resources in the same sequence are first, last, next.

*Search* ([<a>](#), [<area>](#), [<link>](#)) indicates that the hyperlink reference is a document whose interface is specially designing for searching in this document, or site, and its resources.

*Style Sheet (HTML 5)* ([<link>](#)) defines an external resource to be used as a style sheet. If the type is not set, the browser should assume it is a text/css style sheet until further inspection.

*Sidebar (HTML 5)* (`<a>`, `<area>`, `<link>`) indicates that the hyperlink leads to a source that would be better suited for a secondary browsing context, like a *sidebar*. Browsers that don't have such a context will ignore this keyword.

*Tag* (`<a>`, `<area>`, `<link>`) indicates that the hyperlink refers to a document describing a *tag* that applies to this document.

*Nofollow (HTML 5)*(`<a>`, `<area>`) indicates that the linked document is not endorsed by the author of this one. This link type may be used by some search engines that use popularity ranking techniques.

*Noreferrerer (HTML 5)*(`<a>`, `<area>`) prevents the browser, when navigating to another page, to send this page name, or any other value, as referrer via the Referrer: HTTP header. (In Firefox, before Firefox 37, this worked only in links found in pages. Links clicked in the UI, like “Open in a new tab” via that contextual menu, doesn’t abide for this value).

*Pingback (HTML 5)* (`<link>`) defines an external resource URI to call if one make a comment or a citation about the webpage. The protocol used to make such a call is defined in the [Pingback 1.0](#) specification.

*Note:* if the X-Pingback: HTTP header is also present, this header has precedence over the `<link>` element with this link type.

*Preconnect (<link>)* Hints the browser to open in advance the connection to the linked web site, without disclosing any private information.

*Prefetch (HTML 5) (<a>, <area>, <link>)* Hints the browser to fetch in advance the linked resource, as it will likely be requested by the user.

*Note:* the [Link Prefetch FAQ](#) has details on which links can be prefetch and on alternative methods.

## **Versions of HTML**

**HTML 1.0 (1989-1994).** The first version of HTML that supported inline images and text controls and was very limited in terms of styling and presentation of content.

**HTML 2.0 (1995).** This specification supported more browsers and was considerably improved to support forms with limited set of form elements such as text boxes, etc.

**HTML 3.20 (1997).** These versions included support for creating tables and expanded options for form elements and also allow web pages to include complex mathematical equations.

**HTML 4.01 (1999).** This version added support for style sheets and scripting ability for multimedia elements to possibly change the appearance/look of the website by changing just the style sheet(s) itself.

## **Historical roots of html**

Tim Berners-Lee, a researcher from the Conseil Europeen stream Recherche nucleaire (CERN) laboratory in Geneva, Switzerland. In 1989, Berners-Lee had a task to create a hypertext delivery environment that can be used as an interface for scientific facts, that can read this information equally well in Macintosh systems with small screens, NeXT Workstations, IBM PCs, and any various of platforms.

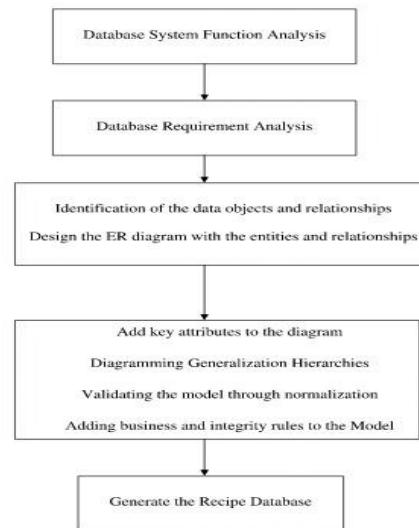
The HTML languages are usually defined as the application of Standard Generalized Markup Language (SGML), that serves as a basis to define the markup languages. Many flavours of HTML as a structured language have a connection with SGML.

## DATABASE

It is a software system that constructs databases and also manipulates data for many applications is called database management system.

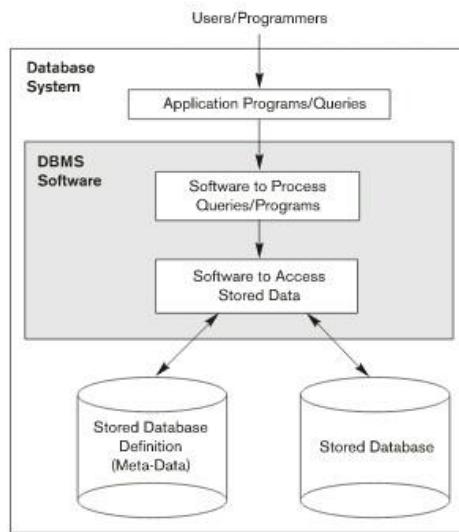
Database management system allows users to create database and also to maintain their database. Databases involve data types, structures and constraints of data.

Databases has many purposes where computers are used like business, electronic commerce, engineering, medicine, genetics, law, education, and library science.



*Source: Design and implementation of database for recipes*

**Figure 16.**How database management system Generates



*Source: Fundamentals of database system*

**Figure17.** How data stored in databases

## Characteristic of Database

One of the characteristics of database management system is that it manages different tasks and different users.

Databases are generated manually or computerized and also Databases may differ in different size and complexity. One of the examples of a large commercial database is Amazon.com. It holds data that is over 20 million books, CD's, videos, DVD'd, games, electronics, apparel, and other items.

In our society, Database and database system are important component. Most of us encountered things that are connected in database that is involve in our everyday lives. For example, if we go to the bank to deposit or withdraw funds, if we make a hotel or airline reservation, if we access a computerized

library catalog to search for a bibliographic item, or if we purchase something online-such as a book, toy, or computer-chances are that our activities will involve someone or some computer program accessing a database. Even purchasing items at a supermarket often automatically updates the database that holds the inventory of grocery items.

Database management system (DBMS) is a software application that uses databases to handle different data. It also provide logical model of data that separates them on how they are physically stored.

It is a kind of database management system where more structural, the redundancy is very low, and also provide strong query unction.

In relational database system, the data is stored in row and column style. The row and column is called table and database system is compose of group of table.

```

1 string cmdText = "SELECT * FROM Product WHERE id=@ID";
2 SqlCommand command = new SqlCommand(cmdText, conn);
3 command.Parameters.Add(new SqlParameter("@ID", id));
4 SqlDataReader reader = command.ExecuteReader(); // INV-Q1 executed
5 reader.Read();
6 result = Load(reader);
7 return result;

```

*Source: Impact analysis of database schema change*

**Figure18.** Database query to insert data

**Database Tables.**All data are stored in a database and each data must have different identifier for each record or they must have different id's.

In entering data in databases, the tables must be created. And the number of fields and data types must be specified.

```
CREATE TABLE Movies (
    title      CHAR(100),
    year       INT,
    length     INT,
    genre      CHAR(10),
    studioName CHAR(30),
    producerC# INT,
    PRIMARY KEY (title, year)
);
```

Source: *Database systems, The complete book*

**Figure19.** Database query to create table

**STUDENT**

Name	Student_number	Class	Major
Smith	17	1	CS
Brown	8	2	CS

**COURSE**

Course_name	Course_number	Credit_hours	Department
Intro to Computer Science	CS1310	4	CS
Data Structures	CS3320	4	CS
Discrete Mathematics	MATH2410	3	MATH
Database	CS3380	3	CS

**SECTION**

Section_identifier	Course_number	Semester	Year	Instructor
85	MATH2410	Fall	07	King
92	CS1310	Fall	07	Anderson
102	CS3320	Spring	08	Knuth
112	MATH2410	Fall	08	Chang
119	CS1310	Fall	08	Anderson
135	CS3380	Fall	08	Stone

**GRADE\_REPORT**

Student_number	Section_identifier	Grade
17	112	B
17	119	C
8	85	A
8	92	A
8	102	B
8	135	A

**PREREQUISITE**

Course_number	Prerequisite_number
CS3380	CS3320
CS3380	MATH2410
CS3320	CS1310

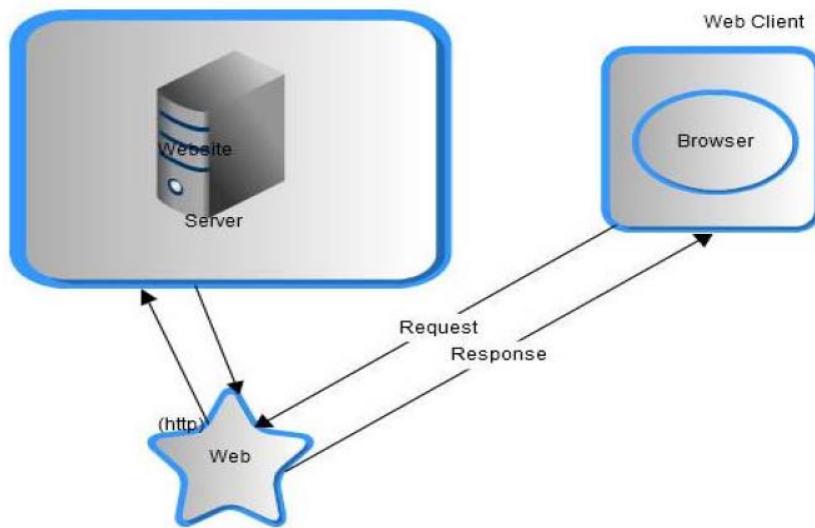
Source: *Fundamentals of database management systems*

**Figure20.** Data that is stored to database (Course and student information)

There are applications that are used in temporal databases, which records time-referenced data. These includes financial applications such as portfolio management, accounting, and banking; record-keeping applications such as personnel, medical-record, and inventory management; scheduling applications such as airline, train, and hotel reservations and project management; and scientific applications such as weather monitoring

## PHP

PHP is a scripting language that connects SSI (Server Side Includes) and Perl, intentionally for web environment. The Open Source software movement, PHP has gained quite subsequent and one of the frontrunners; the implementation of Web pages is a dynamic content. The popularity of PHP is like C syntax and plainness and it was designed by RasmusLerdof just for displaying his resume and collect data off his visitors. Because of the PHP language developers now can create a powerful website; to achieve this they require a database application such as MySQL. In doing this you need to have a background in Hypertext Markup Language (HTML).



Source: Comparison of Web Development Technologies – ASP.NET & PHP

**Figure21 . Simple Web Environment**

The dynamic Web content it was created by the open - source scripting language called PHP. One of the fastest scripting languages is PHP and it was easy to learn. To make dynamic web applications with Apache and MySQL is called WAMP server. The developers to make Web applications by offer the in-built Apache, PHP and MySQL database. PhpMyAdmin allows running the database easily. WAMP have all these features inherent in it which will assist the developers to make the development faster. In 1995 Apache was released. Apache is flexible and powerful; this server is use in PHP implementation and has a lot of support from its website. MySQL is open source software that is potential for anyone to use. Everyone can download the MySQL software from Internet for free. SQL stands for Structured Query Language which is a consistent language used to access the databases. This is a relational database that stores data in divide tables which adds flexibility. MySQL is easy to use and have a high presentation along with the dependability. MySQL can run on 20 different platforms. Time and memory can be saving by using the MySQL.

**History of PHP.** RasmusLerdorf was the creator of PHP in 1995 and he was an engineer at Yahoo, he needs an easier in creating his website but HTML gave him power and flexibility. Basically, he need a help in his web browser by writing scripts, create content and handle data. He created a technology that give him was his need, by the use the Perl language it was entitled “Personal Home Page/Forms Interpreter”. Afterwards the name “Personal Home Page/Forms

Interpreter” abridged to PHP/FI and finally renamed “PHP: Hypertext Preprocessor”. PHP/FI version 1.0 certainly not really used it in outer of his own website. The opening of PHP/FI 2.0 the changes was began; in 1997 PHP 3 was released.

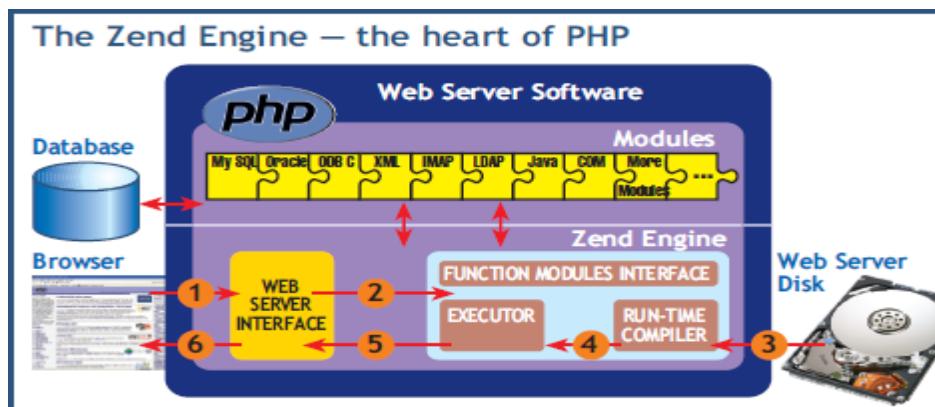
**PHP/FI 2.**In 1997 a rewrite came with PHP/FI 22, but at that time Rasmus handled it exclusively. AndiGutmans and ZeevSuraski came into PHP/FI after it was release and they looking for a language to build up an e – commerce solution in university project but they find out that PHP/FI is powerful and its language wanted many frequent features. The while loops was implemented and it was interesting it was the scanner in pointing a file that position can be save and the whole loop was check through and re-executed.

“The best way to be ready for the future is to invent it.” – John Sculley.

**PHP 3.**Zeev and Andi decided to team up with Rasmus in rewrite the scripting language to launch the PHP 3, and the new name is PHP: Hypertext Preprocessor, to emphasize that PHP is a dissimilar product and can use it many person. Zeev and Andi designed the implemented new expansion API. The new API can access in databases, spell checkers and other technologies, which many attracted developers that was not in the core. In June 1998 PHP 3 was released, the approximate installed PHP consist about 50,000 domains. PHP3 was the first version having installed base more than a one million domains.

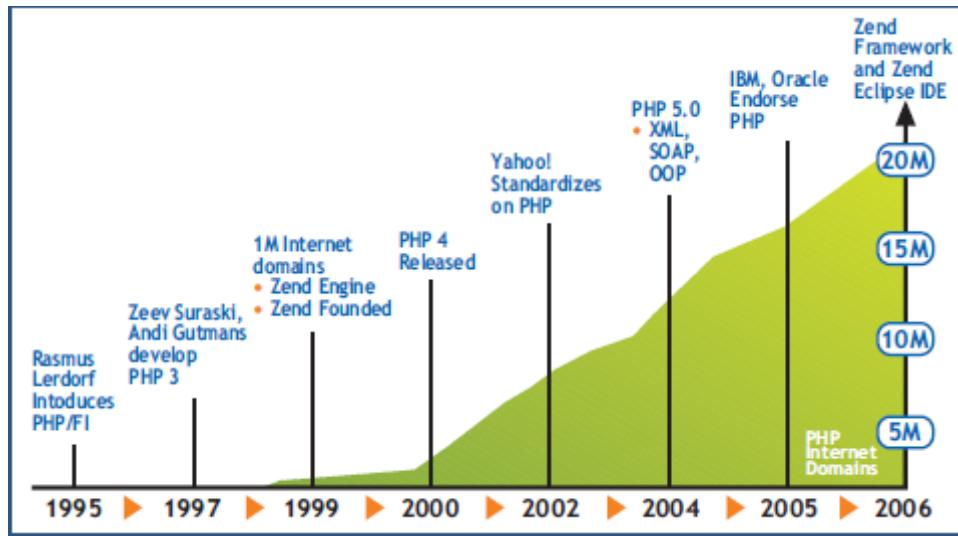
**PHP 4.** In late 1998, Zeev and Andi looked back their work on PHP 3, they think it can be rewrite, and PHP 4 came with a “compile first and execute later”. The PHP 4 was released on May 22, 2002, the new of it is the Zend Engine, because of the new execution the PHP 4 it was much better in PHP 3.

**PHP 5.** After the release of PHP 4, Andi come up with rewriting the Zend Engine to Zend Engine II: Feature Overview and Design” in this the object oriented was being rewritable. The basic language is the same but the many feature added and many changes in the PHP 5. The rewrite of XML functionality in PHP 5 the new SimpleXML extends it ridiculously easy to control XML document. Additional technologies is the new SOAP, and MySQLi.



Source: An Overview on PHP

**Figure 22.** Example of Zend Engine PHP4



Source: An Overview on PHP

**Figure 23.** Evolution of PHP

A Web developer or enterprise developer look to robustness Oracle Engine and PHP with the effortlessness, and presentation. Each PHP coders contribute several recipes to help in both technologies.

PHP programmer developed appliance for Oracle Database. It connects between the PHP and Oracle books and it show how PHP scripting language functions with Oracle Database. The basic building blocks needed to make far above the ground – performance PHP Oracle Web applications.

Web application is designing that PHP use it for designing, Livshit and Lam, they finding the security vulnerabilities in Java applications as the result in their analyzation supported by binary decisions. In a method similar to the string output of PHP programs with a context-free grammar is accessible. While

primarily targeted at the validation of HTML output, the author claims that it can also be used for the discovery of cross-site scripting vulnerabilities.

The widely used scripting language is PHP. Java and C# have the same features of PHP language and the general – idea programming language that supports both practical and object oriented programming. The PHP's success with it contributor its simplicity, which translates into shorter development cycles, easier maintenance, and lower training costs.

	<b>Variable</b>	<b>Definition</b>
1	<code>GLOBALS</code>	References all variables available in global scope
2	<code>_SERVER</code>	Server and execution environment information
3	<code>_GET</code>	HTTP GET variables
4	<code>_POST</code>	HTTP POST variables
5	<code>_FILES</code>	HTTP File upload variables
6	<code>_COOKIE</code>	HTTP Cookies
7	<code>_SESSION</code>	Session variables
8	<code>_REQUEST</code>	HTTP Request variables
9	<code>_ENV</code>	Environment variables

Source: *PHP SuperGlobals: Supersized Trouble*

**Figure 24.** Variables in PHP

Web application development platform, powering over 80 percent of all websites because of PHP platforms. Because of the vulnerabilities of the PHP needs a special attention, many application can have an effect on the general security and health condition of the entire web. The Hacker Intelligence Initiative (HII) they explore the vulnerability of related in the PHP and how they work

together with other distinctiveness and safety weaknesses in this environment. That is, a programmer declares the variable name and can use it contained by the scope it was confirmed in – inside specific functions (local variables) or a specific script (global variables). These variables are available to the PHP script in both scopes, with no need for clear statement. The PHP framework carries a long history of safety intimidation connected to the take priority over of internal variables by external input.

PHP developers are easy to learn and it just may represent the world of mobile development to a entire new batch of developers. Keep your skills present and stay on top of the latest PHP news and best practices by interpretation each new question about PHP.

To develop dynamic and interactive web applications is PHP that a powerful language. PHP is a language can join and control a database. On the other hand database management is done by the Structure Query Language (SQL). Common database operations are INSERT, UPDATE, DELETE and SELECT. The PHP language have many a advantage it is a server – side scripting language designed only for web based applications and the software frameworks considerably decrease the amount of time, effort and resources requisite to develop and maintain web applications.

Example: Insert process

Employee ID 444  
Name Robert  
Job System Administrator  
Salary 25000  
Department ID 130  
Submit Query

Insert Complete

Source: PHP Framework for Database Management Based on MVC Pattern

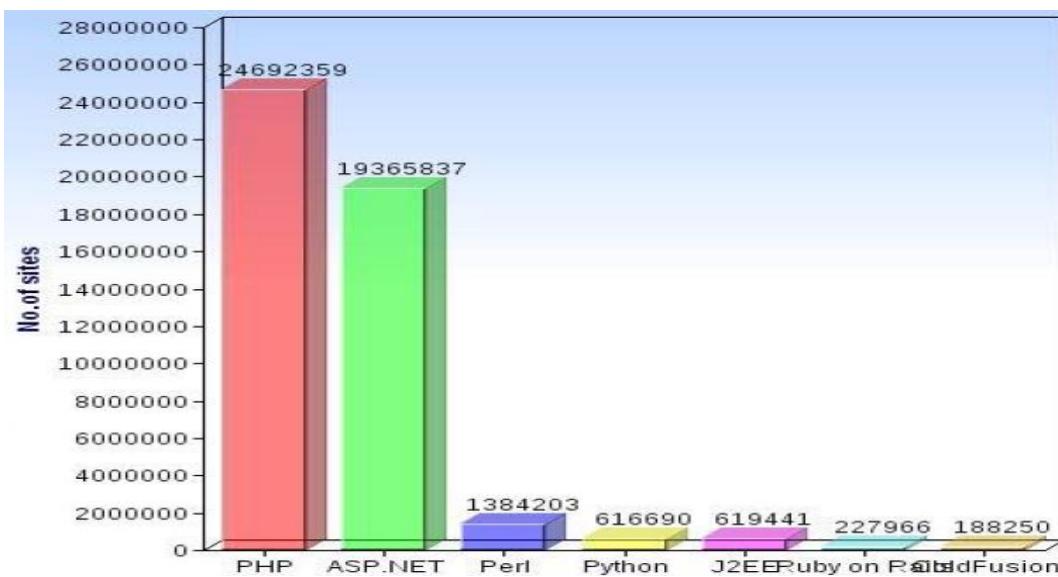
**Figure25.** Insert Interface with PHP Connections

Employee ID	Employee Name	Job	Salary	Department ID	Action
1111	Somchai	Programmer	15000	128	<a href="#">Delete</a> <a href="#">Update</a>
2222	Wichit	DBA	13500	42	<a href="#">Delete</a> <a href="#">Update</a>
3333	Somjal	Programmer	16500	128	<a href="#">Delete</a> <a href="#">Update</a>
4444	Robert	System Administrator	25000	130	<a href="#">Delete</a> <a href="#">Update</a>

Source: PHP Framework for Database Management Based on MVC Pattern

**Figure26.** Delete and Update Interface with PHP Connections

PHP and ASP are programming languages that can create a dynamic website. The difference between ASP and PHP, PHP can run in Windows, Solaris, Unix and Linux but ASP runs only in Window based platforms. PHP uses C/C++ as a main language and it was similar to other syntax. Because of many programmer uses C++, PHP is more popular than ASP. PHP programming language doesn't have a Visual programming tool a lot of programmer that it was an advantage of PHP, PHP is easy to learn compare to ASP because PHP is more steady and bigger companies use to reduce the cost of ASP platforms.

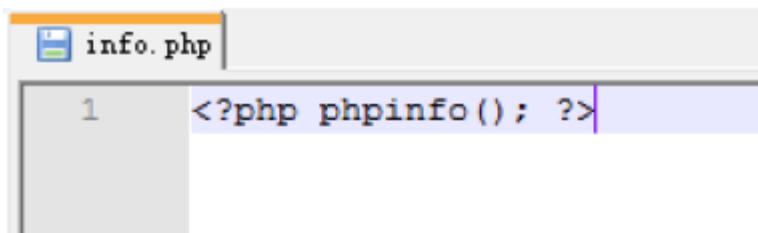


*Source: Comparison of Web Development Technologies – ASP.NET & PHP*

**Figure 27.**Bargraph comparison of PHP and ASP

Dynamic Web sites can build because of the powerful PHP programming language. To construct commercial excellence databases with the MySQL relational data management system. Web programming easily reached for beginners are the PHP and MySQL because it was powerful and easy to use.

The quality of the website directly development tools affect. The developer use PHP and HTML to create the homepage. The website were built is have a high performance, secure, stable and an easy – to – sustain environment. The external binary code and the server do not bear any extra burden in PHP but HTTP can combine forces with PHP. The open and close tags of PHP <?php and ?>.



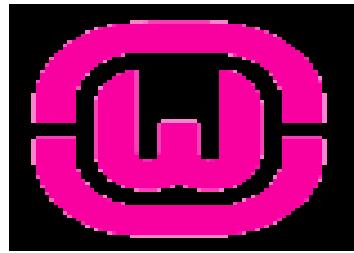
```
1 <?php phpinfo(); ?>
```

Source: *Web – Based library Management System with PHP and MySQL*

**Figure 28.** PHP tags

## **WAMP**

**Definition.** Wamp is composed of Apache, MySQL, and one of Perl, PHP, or Python in Microsoft Windows operating system. Apache HTTP server is a web server software. PHP stands for Hypertext Preprocessor. It is a type of HTML languages which are executed on the server. MySQL server is a small relational database management system. Actually they are entirely independent programs to each other, however they are usually used together, and have increasingly high compatibility degrees. So, these packages turned into a powerful web application platform.

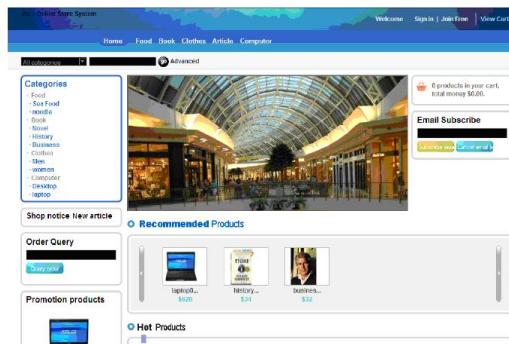


*Source: Building a WAMP Platform.*

**Figure29.**Wamp

Electronic Commerce is also known as E-Commerce, E-Commerce is an application where you can buy and sell through internet based a browser or a system. There are some related to E-Commerce System such as ASP.NET and J2EE, But these systems have their own: disadvantages and weaknesses, to solve problems, to improve the system efficiency. There are some comparison in

these different performance of their technology through arithmetic operations, database operation, and file operation to acquire the result of in which scenario is appropriate to use specific technology.

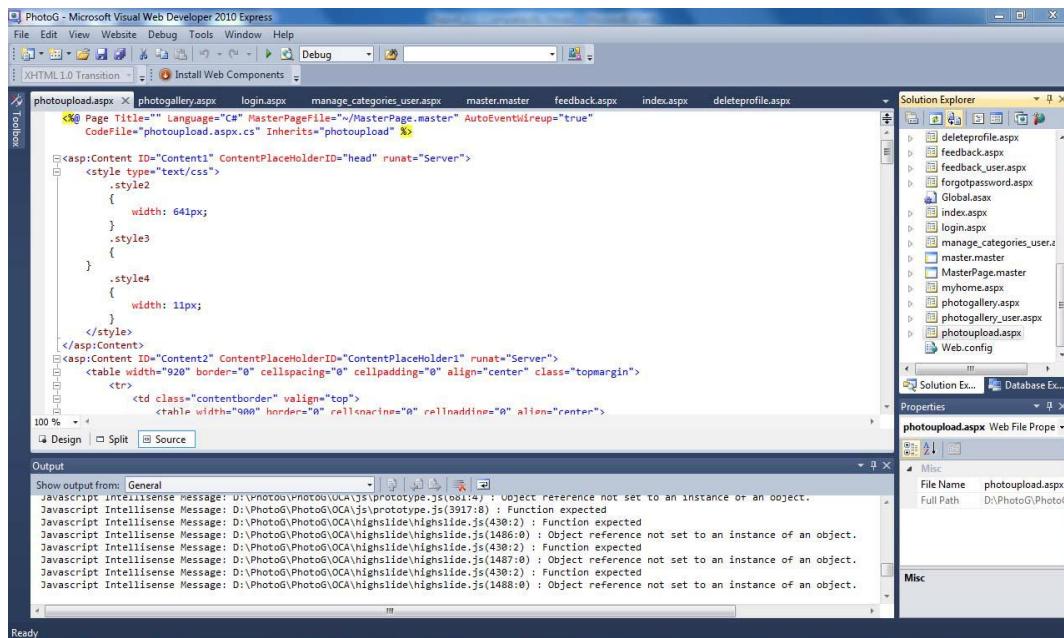
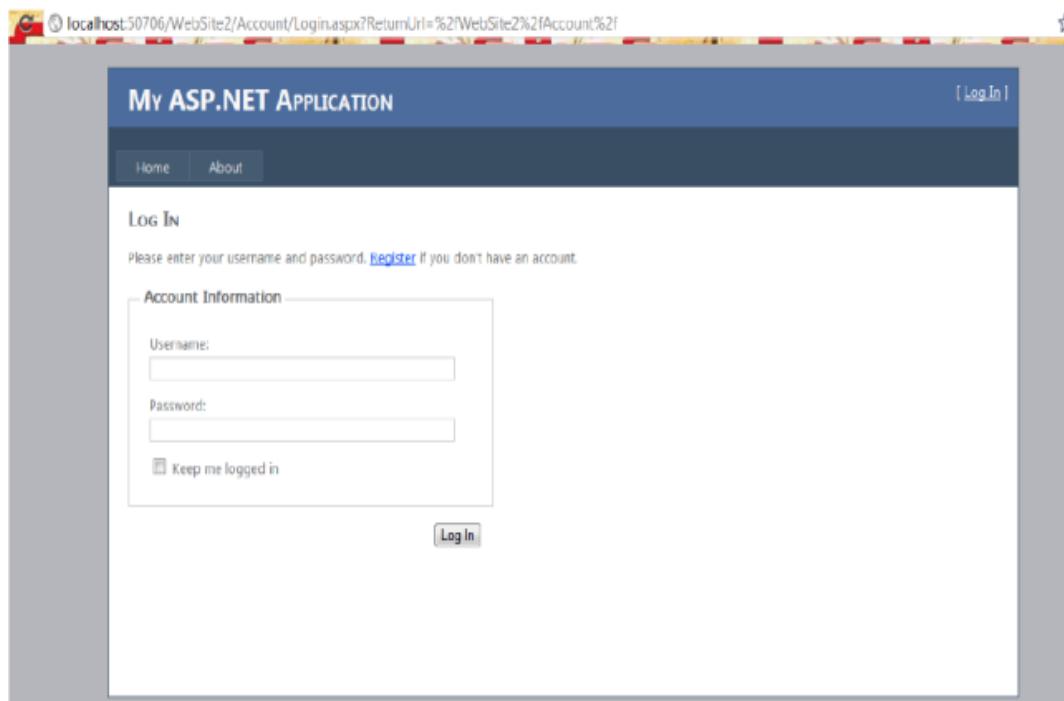


*Source: Development of E- Commerce Web*

*Application Using WAMP*

**Figure30.**Online Store Homepage

PHP is an open source of scripting languages for making a dynamic web ,and it is one of the fastest scripting language around the globe, easily to use. Most of script took a long time to compile and execute but its null filled with PHP codes cates. WAMP server is a web development platform on windows allowing you tocreate dynamic web applications with Apache and MySQL. Apache server is useful and flexible web server. It is used in PHP implementation and it has features to run virtually on all of computer platforms. From the beginning it is used to run primarily on UNIX web server, But now it can run on all flaours of UNIX also on Windows platform.



Source: Comparison of web Development Technologies- ASP.NET & PHP Implementation in

**PHP**

**Figure31.** Comparison of PHP and ASP.NET

Smart devices has facilitated the connection of the people and device in an easier and faster way in the globe. There's a high amount of information that can absorb with smart devices and can used to improve the aspect of people in a regular life and also the services that gives to users.



**Figure32.** Interface of location

This project is about making a web applications about Indian cricketer named “Bishan Singh Bedi”.these website have features like discussion forums, shopping cart, slide show and RSS feeds, Introductory videos, photo gallery, lectures and training sessions ,registration, event scheduling and calendar events.

Source: *A Web Application Development for BishanBedi*

**Figure33.**Online Web Application homepage

To install a wamp server just click on its icon to start the installation process, then close those application that are still open in windows then click next and read the license agreement then after you read it click on “I accept the agreement”, then click next. You have to choose where WampServer2 is installed I would recommend leave it to default of drive c, then click next .The next choice is a matter of personal preference. Leave blank or make your choice, then click next, then click “install”. Wamp Server ask you what browser usually that you use. After that click on “allow access” to your private network. Leave the default values, then click next. After that Click on the “Launch WampServer 2 now” box to enter a tick, then click on the “Finish” button.



*Source: Installation the Server Software*

**Figure34.** Installation of wamp

Ella Mathematics is a kind of a web based e( electronic) learning system, this system focuses on the improvement of elementary school students in mathematics learning in Sweden. This system has been partially completed since 2012 except descriptive statistics module summarizing students' performance in the learning process. This projects reports the presents and describes the design and implementation of such descriptive statistics module, which the student can review their grades and learning progress; the teachers easily to check and compare the status of each students, as well as parents to compare their children's grades and learning progress with average to other students.

Staden									
Namn	Uppgift 1	Uppgift 2	Uppgift 3	Uppgift 4	Uppgift 5	Avg by student	STD by student	Mode by student	Median by student
Daniel	2	2	0	0	2	1.2	1.1	2,	2
Anna	2	0	2	2	0	1.2	1.1	2,	2
Merry	0	2	2	0	1	1	1	0,2,	1
Brown	2	0	0	0	1	0.6	0.89	0,	0
Skyla	0	2	0	1	2	1	1	0,2,	1
Booth	0	0	0	2	2	0.8	1.1	0,	0
Avg by uppgift	1	1	0.67	0.83	1.33				
STD by uppgift	1.1	1.1	1.03	0.98	0.82				
Mode by uppgift	2,0,	2,0,	0,	0,	2,				
Median by uppgift	1	1	0	0.5	1.5				

Source: *Ella Mathematics*

**Figure35.** Student Progress

In this master thesis work a website was design for an event to add and search events. A user must a register as a member to subscribe this system. When there is a new event added, this system will sent automatically to all members who subscribe this kind of event through email with attachment of a calendar event life. When users search an event, they could find the location of the event using a google map and also find events of the same day and nearby events



Source: Build and Design an Event Calendar Website

**Figure36.** Location of events

Adruino and Wamp Server are two softwares that are involved in this system. Wamp Server use to set-up the local server which the web pages is hosted by accessing through LAN, each user can view their electricity consumption through local server, and if the user exceeds the limits of the energy usages, the user will get a notification about their power consumption.



Source: An Automated Energy Metering

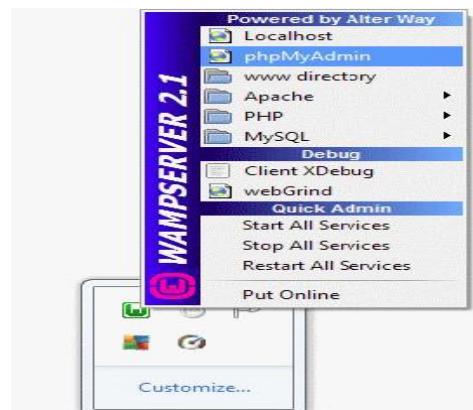
System- Homed Based Approach

**Figure37.**Notification

Wamp is an acronym for Windows,Apache,MySQL,Php. It was created after the lamp, where referring to all open source/ free approach which uses LINUX instead of WINDOWS

Each of the element of WAMP provides an essential layer of functionality.

- Microsoft Windows is the operating system that required.
- Apache is the Web server
- MySQL is the database management system or database server.
- PHP is an object-oriented Web scripting language



*Source: Development of an Interactive  
e-Learning Management System.*

**Figure38.** Toolbar in Wamp

This study is about to develop a system which is College Student Allocation System, It requires a Wamp server and Web application framework in this system.

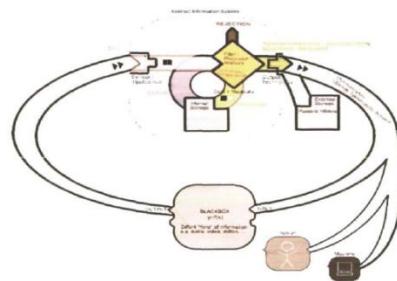
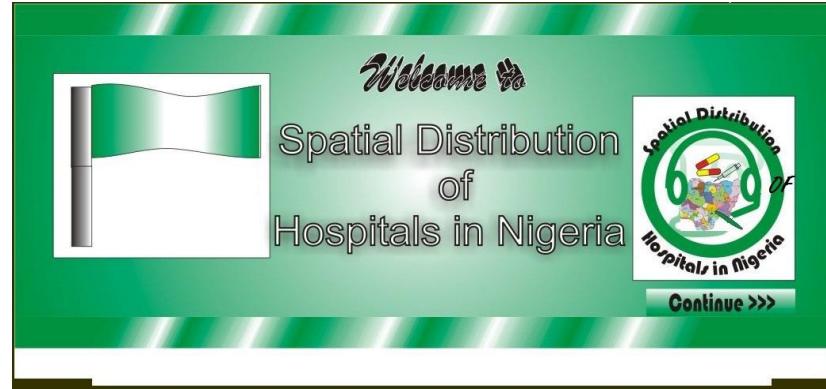


Figure 1: Image: Abstract Information System

*Source: College Student Allocation System.*

### **Figure39.Flow Diagram**

This system will help the user to identify where health care facilities are concentrated, and how to locate anytime. Some of the resources are used in this system: Macromedia dream weaver, Java Scripting, PHP, MYSQL; the WAMP server; while the UML are used for the system design.

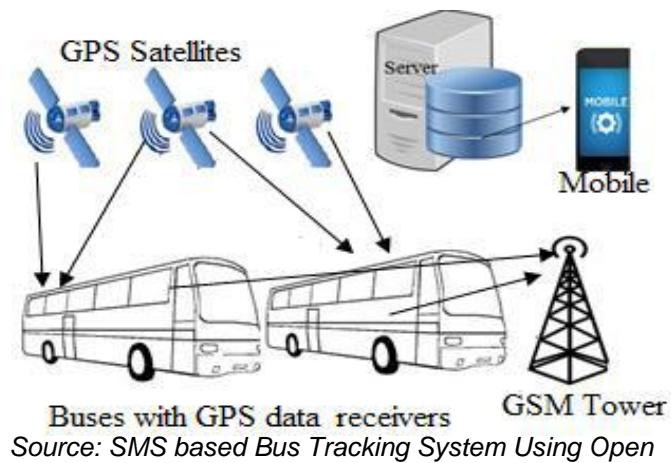


*Source: A Distributed Information System for Health Care Facilities*

*In Nigeria: A Web-Based Spatial Approach*

**Figure40.**Homepage

This system required to used Wamp server and an application to trace the bus written in PHP with MySQL for storing of those details.



*Source Technologies.*

**Figure41.** Data flow diagram

This system has two main modes of communication using Wamp Server. First is PubSub where the client can send and receive messages from the topic it is subscribed. Second is RPC which consists of a client, where asking for the result of a function that lies on the server.

Wamp server, ALOV, Quantum GIS and MySQL are used in first Web GIS framework while Apache Tomcat server, Geo Server, Quantum GIS, PostgreSQL and PostGIS have been used in second Web GIS framework. These two Web GIS frameworks have been seriously compared to give out the fitness of each for particular application and their performance.

## CONCEPTUAL MODEL OF THE STUDY

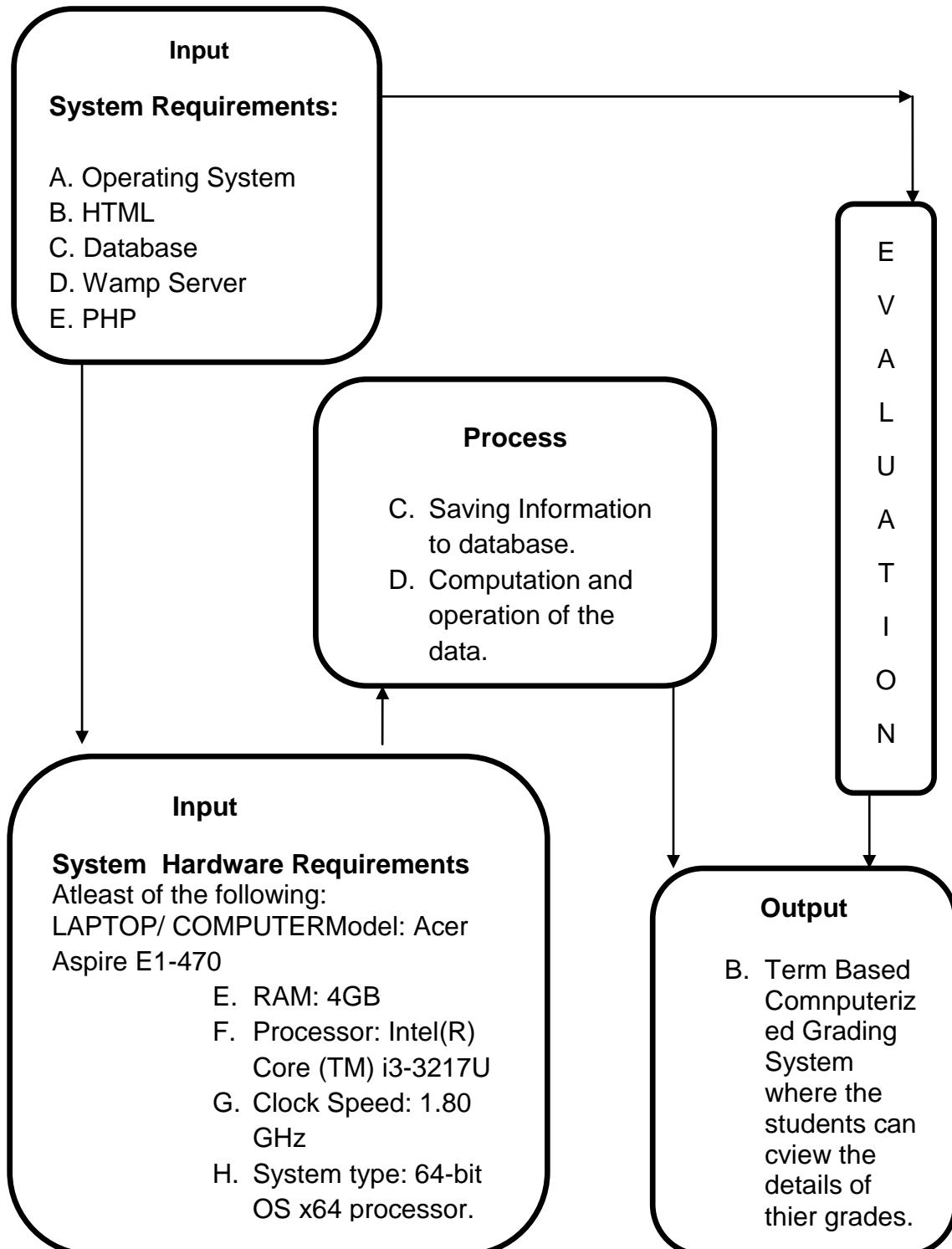


Figure42. Conceptual framework

The process of the computerized grading system: First, it will need software applications to run this system. These are operating system, html, database, wamp server and php. For the system to run and process the data, it will need a laptop/computer.

Those input data will be saved into the database of our system for computation and displaying. After processing, the grading system will allow to students, professors and registrar to view the information they need. For students, they can view their current subjects enrolled, grades (prelim, midterm, and finals) and forum. For professor, they can view their subjects loaded, to encode grades and also forum. For registrar, they can view all student information and grades for printing purposes.

## OPERATIONAL DEFINITION OF TERMS

**Program** provides a computer or other machine with coded instructions for the automatic performance of a particular task.

**Retrieval** is the process of getting something back from somewhere

**Website** is a set of related web pages typically serve from a single web domain.

**SVD** is a factorization of a real or complex matrix. It has many useful applications in signal processing and statistics.

**Query** ask a question about something, especially in order to express one's doubts about it or to check its validity or accuracy.

**Software** is any set of machine-readable instructions that directs a computer processor to perform specific operations.

**HTML** is the text markup language currently used on the World Wide Web

**Mark up Language** is a system for annotating a document in a way that is syntactically distinguishable from the text.

**Interface** is a shared boundary across which two separate components of a computer system exchange information.

**Application** is a set of computer programs designed to permit the user to perform a group of coordination functions, tasks or activities.

**Computer Programming** is a process that leads from an original formulation of a computing problem to execute computer program.

**Browser** is a software application for retrieving, presenting and traversing information resources on the worldwide web.

**Web server** is a computer system that processes requests via HTTP, the basic network protocol used to distribute information on the worldwide web.

**PHP** is an object-oriented Web scripting language. Stands for Hypertext Preprocessor. It is a kind of HTML embedded language which executed on the server.

**Web Page** a hypertext document connected to the world wide web.

**Server** is both a running instance of some software that is capable of accepting requests from clients and computer that executes such software

**Programming Languages** usually refers to high language. Each language has a unique set of keywords and a special syntax for organizing program instructions.

**Database** is a collection of information that is organized so that it can easily be accessed, managed, and updated.

**Wampserver** is an acronym for Windows, Apache ,MySql, Php is a web development platform on windows allowing you to create dynamic web applications with Apache and MySQL. Apache server is useful and flexible web server. It is used in PHP implementation and it has features to run virtually on all of computer platforms

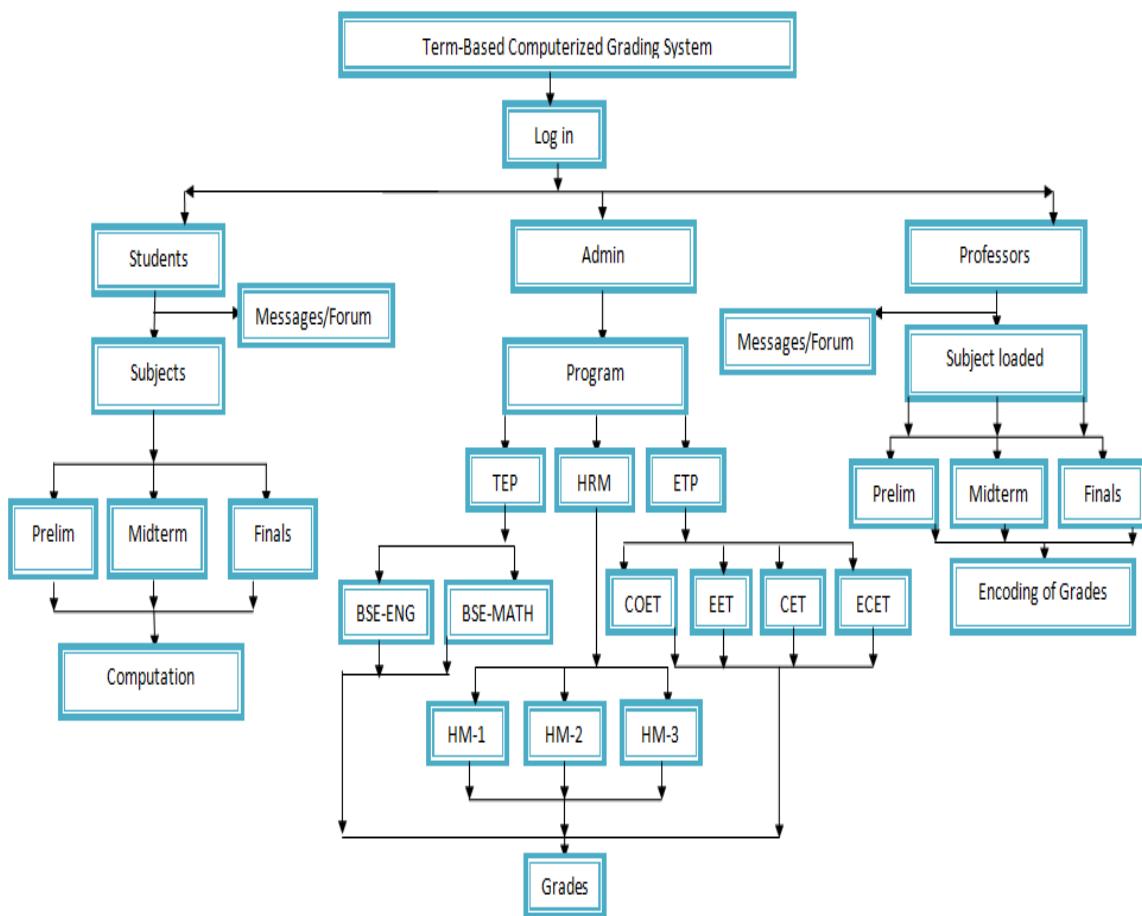
**Apache** is the world's most widely used web software. Originally based on the NCSA Httpd server, development of apache began in 1995 after worked on the NCSA code stalled.

**MySQL** is the database management system or database server.

## CHAPTER 3

### METHODOLOGY

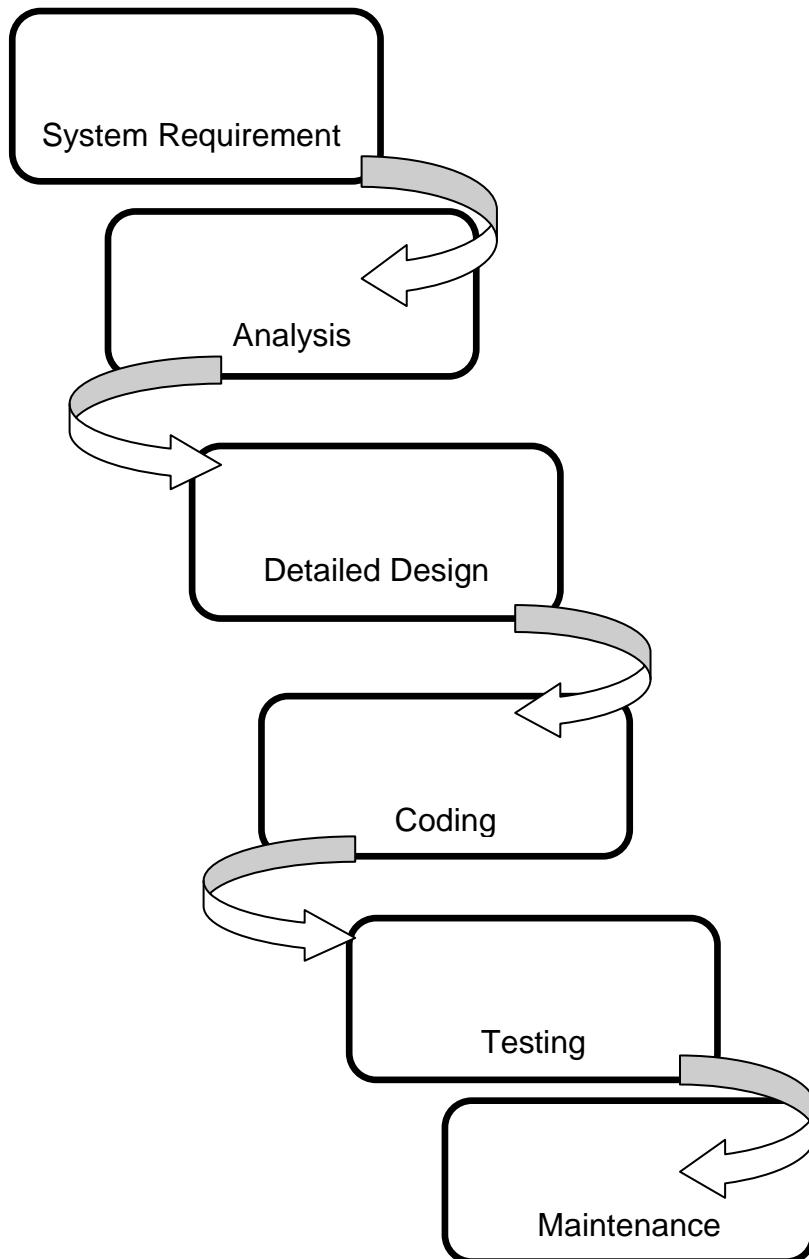
This chapter represents the project design, project development, operation and testing procedure as well as the evaluation procedure.



**Figure 43.** Block Diagram

## PROJECT DESIGN

The diagram shows the flow, process and operation inside the prototype (Figure).



**Figure 44.** Waterfall Model

## **PROJECT DEVELOPMENT**

The development of the Term-Based Computerized Grading System will need this process. These are the System Requirements, Analysis, Detailed Design, Coding, Testing and maintenance.

### **G. System Requirements**

This is the phase where the programmers and client needs to know the details of said system. (Operating System, Web server, Microsoft Office)

### **H. Analysis**

In this phase, the system programmers analyze the data and information gathered.

### **I. Detailed Design**

In this phase, the researchers start the design and interface of the system.

### **J. Coding**

In this phase, the programmers start the codes for the said system.

### **K. Testing**

When all of the functions of the system is ready, the researchers test the system in this phase.

### **L. Maintenance**

In this phase, the system is now ready and will maintain the functionality of the system.

## **OPERATION AND TESTING PROCEDURE**

### **OPERATION PROCEDURE**

1. Turn on your computer.
2. Make sure that the computer is up to date in order to be updated on the latest upgrade of the software.
3. Turn on your Wamp server application. Make sure that the folder files of the system were saved on the c:/wamp/www on your computer.
4. Open your browser.
5. Type the “localhost” on the URL textbox in the browser.
6. Choose the folder name of the system in the browser and open it. There will have a new tab in the browser by clicking it.
7. Go to the new tab to open the system.
8. The system is now running you will now choose what type of user you are.
9. After choosing a user, you will now just type your username and password to log in.

**Table 2**  
**DESCRIPTION AND INDICATOR**

Description	Indicator
Log-In	Gives permission to enter the homepage of the user's profile.
<b>Student</b>	
View Previous Grades	The grades of the student since the previous semester and year will be shown in the homepage.
Forum	The conversation of the students and the professors belong to the specific subject.
Prelim, Midterm and Finals button	The grades of the student can be view according to its period.
<b>Professors</b>	
Encode	The list of students enrolled on a specific subject will appear then encode the grades per term.
Encode per Class	Choose a class where they can encode the grades.
Forum	The conversation of the students and the professors belong to the specific subject handled.

<b>Admin</b>	
Search per Student	The name of the student will appear linked, and the course and section also appear.
Linked Name	The admin is able to view the student's current and previous academic information especially the grades.
Grades	The admin can view and print the grades.
Search per Course	The page contains radio button: the program; and the course which has course, section and year.

## **EVALUATION PROCEDURE**

The researchers are going to conduct a questionnaire for students, and also for professionals to evaluate their system. The correspondence is composed of 10 students, 10 workers, and 5 outsiders. And a Total of 25 persons.

The questionnaire is composed of questions with criteria. Those are functionality, usability, reliability, efficiency, portability and maintainability.

In computation of the questionnaire, every questions rating will be added and it is called mean. After getting the mean of all questions, it will be added to get the sum. This will rate the system if it is a feasible system or not. Results were interpreted for the equivalent descriptive rating using table 3.

**Table 3**

**Rating Scale for Interpreting the evaluation Result**

<b>NUMERICAL RATING</b>	<b>INTERPRETATION</b>
<b>5</b>	<b>EXCELLENT</b>
<b>4</b>	<b>VERY GOOD</b>
<b>3</b>	<b>GOOD</b>
<b>2</b>	<b>FAIR</b>
<b>1</b>	<b>POOR</b>

**Table 4****Evaluation Question**

Evaluation instrument for Users

For the acceptability of

**TERM-BASED COMPUTERIZED GRADING SYSTEM****EVALUATION CRITERIA****Name:** \_\_\_\_\_**Date:** \_\_\_\_\_**Course/Program:** \_\_\_\_\_**Year/Section:** \_\_\_\_\_

<b>CRITERIA</b>	<b>RATING</b>				
<b>A. FUNCTIONALITY</b>	1	2	3	4	5
1. Suitability. Software performs the tasks required.					
2. Accurateness. The result is as expected.					
3. Interoperability. System interacts with other systems.					
4. Security. Software prevents unauthorized access.					
<b>B. Usability</b>					
1. Understandability. The software is easy to use.					
2. Learnability. The system is easily learned.					
3. Operability. The system is used without much effort.					
4. Attractiveness. GUI interface looks good.					

<b>C. Reliability</b>				
1. Maturity. Most of the faults in the software been eliminated over time.				
2. Fault Tolerance. Software handles errors.				
3. Recoverability. Software resumes working and restores lost data.				
<b>D. Efficiency</b>				
1. Time Behaviour. The system responds quickly.				
2. Resource Utilization. System utilizes resources efficiently.				
<b>E. Portability</b>				
1. Adaptability. The software can be moved to other environments.				
2. Installability. The software is installed easily.				
3. Conformance. The software complies with portability standards.				
4. Replaceability. The software is easily replaced with other software.				
<b>F. Maintability</b>				
1. Analyzability. Faults are easily diagnosed.				
2. Changeability. The software is easily modified.				

3. Stability. The software continues to function if changes are made.					
4. Testability. The software is tested easily.					

Thank you for your cooperation.

Comments/Suggestions:

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Signature of the Respondent

## **CHAPTER 4**

### **RESULTS AND DISCUSSIONS**

This chapter presents the project description and structure, capabilities and limitation and the evaluation results for the project prototype.

#### **Project Description**

The Term-Based Computerized Grading System is designed purposely for the students and professors of Mariano Quinto Alarilla Polytechnic College. The main objective of this project is to develop a computer base grading system that is user-friendly, time valuable and systematically efficient. This system is also created to view the grades by the students and to have educational communication between students and professors. Therefore, it will help to maximize the purpose of grading system.

#### **Project Structure**

The ways to work a system properly follows the instruction guide. The following figures will help us to visualize the content, to identify the steps and also to familiarize the system.



**Figure 45.** System's Log in Page

In Figure 45, shows the Log in page of the system. To access the whole system, a registered username and password must be entered.

HOME		PROFILE		MESSAGE		FORUM		LOG-OUT	
Subject Code	Subject Description	Unit	Professor	Grade	Numerical Percentage	Forum	Prelim	Midterm	Finals
RFD 2	Project Development (Computer Hardware Servicing)	2	Ms. Matus, April	Enrolled		<a href="#">Click Me</a>			
COET 311	Object Oriented Programming	4	Mr. Montes, Mark Aeron	Enrolled		<a href="#">Click Me</a>			
COET 312	Software Engineering	4	Mr. Tayao, NIA	Enrolled		<a href="#">Click Me</a>			
COET 313	Operating System	3	Ms. Matus, April	Enrolled		<a href="#">Click Me</a>			
COET 314	System Analysis and Design	3	Ms. Matus, April	Enrolled		<a href="#">Click Me</a>			
MIT 311	Microprocessor & Interfacing Techniques	5	Engr. Bantigue, Myra Fa	Enrolled		<a href="#">Click Me</a>			
Comp 311	AutoCAD 2	2	Arch. Rubio, Ramon	Enrolled		<a href="#">Click Me</a>			
RPD 1	Research and Thesis Writing	3	Engr. Grimaldo, Kim Dowell	Enrolled		<a href="#">Click Me</a>			
Rizal 311	Rizals Life Works and Writing	3	Mr. Aguirre, Marck Genio	Enrolled		<a href="#">Click Me</a>			

**Figure 46.** (Student) Profile Page

In Figure 46, shows the current grades together with its Units and Professors to a certain subject and a forum where the students and professors can discuss about a certain subject.

Academic Records			
COET - 1 A 1st Semester			
Subject Code	Subject Description	Unit	Grade
ET 111	Basic Electricity (Lec)	3	2.50
Math 111	College Algebra	3	2.50
Math 112	Plane and Spherical Trigonometry	3	2.00
Chem 111	General Chemistry	4	2.25
Draw 111	Basic Engineering Drawing	1	2.50
Fil 111	Komunikasyon sa Akademikong Filipino	3	2.50
Eng 111	Communication & Thinking Skills	3	1.75
Comp 111	Computer Fundamentals	1	1.50
P.E. 111	Physical Fitness and Gymnastics	2	1.75
N.S.T.P. 111	Civic Welfare Training Service	3	1.50
EL 111	Basic Electricity (Lab)	3	2.25
COET - 1 A 2nd Semester			
Subject Code	Subject Description	Unit	Grade
ET 121	Basic Electronics	3	2.50
EL 121	Electrical Technology 1	3	2.25

**Figure 47.** (Student) Previous Grades Page

In this Figure (Figure 47), it shows the previous subjects, subject code, units and grade for every semester every year.

Project Development (Computer Hardware Servicing)			
Name	Message	Date	Delete
Austria, Christian Delos Santos	hello	2016-03-07 05:42:16	delete message
Buello, Analiza Pauline	Hello!! :)	2016-03-07 05:41:20	delete message
Austria, Christian Delos Santos	hello	2016-03-07 05:41:02	delete message

Messages...

Input Here

**Figure 48.** (Student) Forum Page

In Figure (Figure 48), shows the page where a student can post messages for a certain subject.

The screenshot shows a web-based professor profile system. At the top, there's a navigation bar with links for HOME, PROFILE, PERSONAL INFO, MESSAGE, GRADES (which is highlighted in blue), CHANGE FORUM, and LOG-OUT. Below the navigation is a sidebar featuring a photo of a woman in academic regalia and the text "Ms. April D Matus Faculty Member". The main content area has a banner with two people at desks. Below the banner, the word "PROFESSORS" is displayed in large, bold letters. A link "To View previous subjects handled Click Here" is present. Underneath, there's a section titled "Current Subjects" with a table:

Subjects	Subject Code	Units	Encode	Forum
Operating System	COET 313	3	<a href="#">Click Me!</a>	<a href="#">Click Me!</a>
System Analysis and Design	COET 314	3	<a href="#">Click Me!</a>	<a href="#">Click Me!</a>
Education Technology 2	EdTech 2	3	<a href="#">Click Me!</a>	<a href="#">Click Me!</a>
Project Development (Computer Hardware Servicing)	RPD 2	2	<a href="#">Click Me!</a>	<a href="#">Click Me!</a>
Computer Fundamentals and Concepts	ICT 1	3	<a href="#">Click Me!</a>	<a href="#">Click Me!</a>
Computer Fundamentals	Comp 111	1	<a href="#">Click Me!</a>	<a href="#">Click Me!</a>
Computer Fundamentals	Comp 111	1	<a href="#">Click Me!</a>	<a href="#">Click Me!</a>

**Figure 49.** (Professor) Profile Page

In Figure 49, presents the Professor's current subjects handled with subject code and units. This is also where professors can encode grades and post message in the forum.

The screenshot shows the same web-based professor profile system. The navigation bar and sidebar are identical to Figure 49. The main content area displays a table of previous subjects handled:

Subjects Name	Subject Codes	Course	Semester	Year
Digital Electronics & Techniques	ECET 212	ECET	1st	2012-2013
Digital Electronics & Techniques	COET 212	COET	1st	2012-2013
Computer Fundamentals and Programming	Comp 121	EET	2nd	2012-2013
Computer Fundamentals and Programming	Comp 121	ECET	2nd	2012-2013
Computer Programming 1	Comp 121	COET	2nd	2012-2013
Computer System Organization w/ Assembly Language	COET 221	COET	2nd	2012-2013
Computer Fundamentals and Concepts	ICT 1	BSE_Eng	1st	2013-2014
Computer Fundamentals	ICT 1	BSE_Math	1st	2013-2014
Computer Fundamentals and Concepts	ICT 1	BSE_Eng	1st	2013-2014
Microprocessor Interfacing Techniques	ECET 311L	ECET	1st	2013-2014
Microprocessor	ECET 311	ECET	1st	2013-2014
Operating System	COET 313	COET	1st	2013-2014
Microprocessor & Interfacing Techniques	MIT 311	COET	1st	2013-2014
Digital Electronics & Techniques	ECET 212	ECET	1st	2013-2014
Digital Electronics & Techniques	COET 212	COET	1st	2013-2014
Computer Applications	ICT 2	BSE_Eng	2nd	2013-2014
Computer Applications	ICT 2	BSE_Eng	2nd	2013-2014
Computer System Organization w/ Assembly Language	COET 221	COET	2nd	2013-2014

**Figure 50.** (Professor) previous subjects handled

In Figure 50, shows the previous subjects handled with subject code, semester and year. This page can also show the students enrolled to a subject/s and its grades by clicking the linked name of subject/s.



The screenshot shows a professor's dashboard with a sidebar featuring a photo of Ms. April D Matus and her title 'Faculty Member'. The main content area has tabs for HOME, PROFILE, MESSAGE, FORUM, and LOG-OUT. Below these tabs is a table with columns: Name, Quiz%, Performance %, Project %, Examination%, and Numerical Grade. The table lists 15 students with their corresponding numerical grades.

Name	Quiz%	Performance %	Project %	Examination%	Numerical Grade
Banawon , Ana Lea	-	-	-	-	2.00
Bertulfo , Ma. Ruth	-	-	-	-	2.25
Borondia , Rica	-	-	-	-	2.75
Buella , Analiza	-	-	-	-	2.25
Butay , Marey Mae	-	-	-	-	2.25
Camo , Diane Angelie	-	-	-	-	2.25
Dela Cruz , Elisha Mae	-	-	-	-	Inc. / 3.00
Espadilla , Marche	-	-	-	-	3.00
Libante , Crizelle	-	-	-	-	1.50
Molina , Camille	-	-	-	-	Inc. / 3.00
Ogalisco , Sarah	-	-	-	-	2.50
Oro , Anna Jane	-	-	-	-	Inc. / 3.00
Pineda , Alexandrine	-	-	-	-	2.75
Ramirez , Christine Joyce	-	-	-	-	Inc. / 3.00
Sumaya , Angelica	-	-	-	-	1.50
Tanghal , Divine Grace	-	-	-	-	2.75

**Figure 51. (Professor) Enrolled students of previous subject handled**

This page shows the enrolled students of a previous subject handled by the professors and the numerical grades.



The screenshot shows a professor's dashboard with a sidebar featuring a photo of Ms. April D Matus and her title 'Faculty Member'. The main content area has tabs for HOME, PROFILE, MESSAGE, FORUM, and LOG-OUT. Below these tabs is a table with columns: Name, Prelim, Midterm, Finals, and Numerical Grade. A note above the table says 'Note: To encode per class click here!'. The table lists 15 students with their grades for Prelim, Midterm, and Finals, and a 'n/a' entry for Numerical Grade. At the bottom left, it says 'Waiting for iContent.us...'.

Name	Prelim	Midterm	Finals	Numerical Grade
Banawon , Ana Lea	88	7	40	n/a
Bertulfo , Ma. Ruth	66	5	5	n/a
Borondia , Rica	0	5	5	n/a
Buella , Analiza	0	5	5	n/a
Butay , Marey Mae	0	5	5	n/a
Camo , Diane Angelie	0	5	5	n/a
Dela Cruz , Elisha Mae	90	5	7	n/a
Espadilla , Marche	84	5	8	n/a
Libante , Crizelle	0	5	7	n/a
Molina , Camille	0	5	57	n/a
Ogalisco , Sarah	0	5	5	n/a
Oro , Anna Jane	0	5	4	n/a
Pineda , Alexandrine	7	5	5	n/a
Ramirez , Christine Joyce	0	5	5	n/a

**Figure 52. (Professor) Encoding of grades for every student per subject**

In Figure 52, shows the list of students enrolled to a subject where professors can encode grades per semester, it has link in the upper side where a professor can encode grades per class.



**Figure 53.** (Professor) Encoding of grades per class-choosing of term

In Figure 53, shows the terms. Professors must first choose a term before encoding of grades per class. Output is shown in the **Figure 54**.

Name	Quiz%	Performance %	Project %	Examination %	Prelim Grade
1. Banawon , Ana Lea	82	90	90	90	88
2. Bertulfo , Ma. Ruth	9	80	80	80	66
3. Borondia , Rica	0	0	0	0	
4. Buella , Analiza	0	0	0	0	
5. Butay , Marey Mae	0	0	0	0	
6. Camo , Diane Angelle	0	0	0	0	
7. Dela Cruz , Elisha Mae	90	90	90	90	90
8. Espadilla , Marche	85	75	85	87	84
9. Libante , Crizelle	0	0	0	0	
10. Molina , Camille	0	0	0	0	
11. Ogalisco , Sarah	0	0	0	0	
12. Oro , Anna Jane	0	0	0	0	
13. Pineda , Alexandrine	7	7	7	7	7
14. Ramirez , Criselda					

**Figure 54.** (Professor) Encoding of grades per class- output

In Figure 54, shows the output list of students enrolled to a subject after choosing a term. Professors can encode the quiz, performance, project, examination, semester grade and numerical grade. Click submit button below for saving.



**Figure 55.** (Admin) Search Page

In Figure 55, shows whether per student or per admin search of the grade to be print.



**Figure 56.** (Admin) Per student search Page

In Figure 56, shows the search window for viewing the grade of student per student, just type the student's no. and click the linked name to view the previous grades of the student per term shown in the **figure 57**.

Subject Code	Subject Description	Unit	Grade
ET 111	Basic Electricity (Lec)	3	2.50
Math 111	College Algebra	3	2.00
Math 112	Plane and Spherical Trigonometry	3	2.25
Chem 111	General Chemistry	4	1.75
Draw 111	Basic Engineering Drawing	1	1.75
Fil 111	Komunikasyon sa Akademikong Filipino	3	2.00

**Figure 57.** (Admin) student's printable grade page

Figure 57 shows the printable grades of the student for a particular semester. Click the print button to show the final output shown in the **figure 58**.

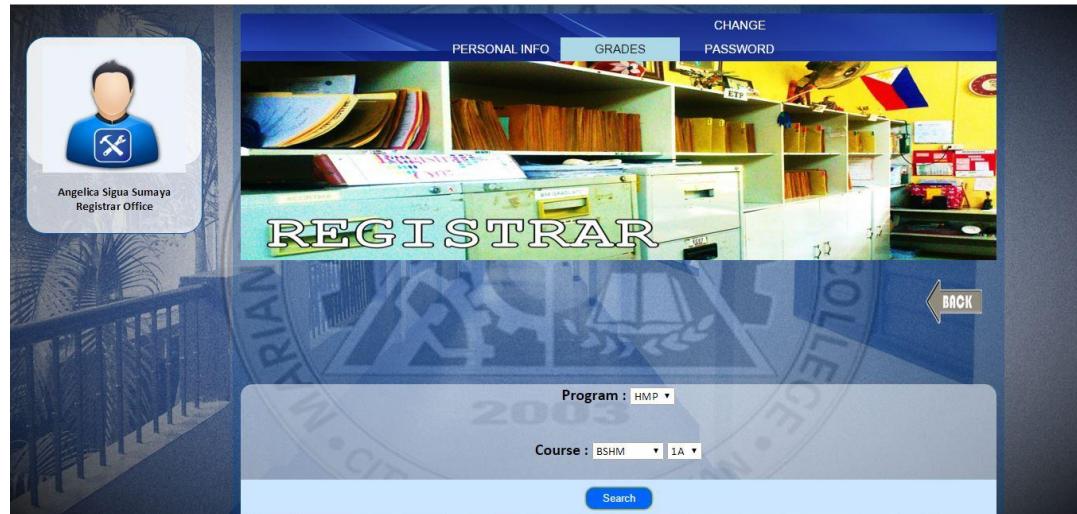
Subject Code	Subject Description	Unit	Grade
ET 111	Basic Electricity (Lec)	3	2.50
Math 111	College Algebra	3	2.00
Math 112	Plane and Spherical Trigonometry	3	2.25
Chem 111	General Chemistry	4	1.75
Draw 111	Basic Engineering Drawing	1	1.75
Fil 111	Komunikasyon sa Akademikong Filipino	3	2.00
Erg 111	Communication & Handling Skills	3	1.50
Cmpu 111	Computer Fundamentals	1	1.50
P.E. 111	Physical Fitness and Gymnastics	2	1.75
N.S.S. 111	Civic Welfare Training Service	2	1.25
EL 111	Basic Electricity (Lab)	3	2.25

Subject Code	Subject Description	Unit	Grade
ET 112	Basic Electronics	3	2.25
EL 112	Electrical Technology I	3	2.00
Math 121	Advanced College Algebra	2	2.00
Math 122	Analytic Geometry	2	2.25
Math 123	Solid Measurement	2	2.50
CATB 111	Engineering Aided Drawing	1	1.75

**Figure 58.** (Admin) print preview of grade

In Figure 59, shows the ready to print output. Press *ctrl+P* key to the print hard copy.



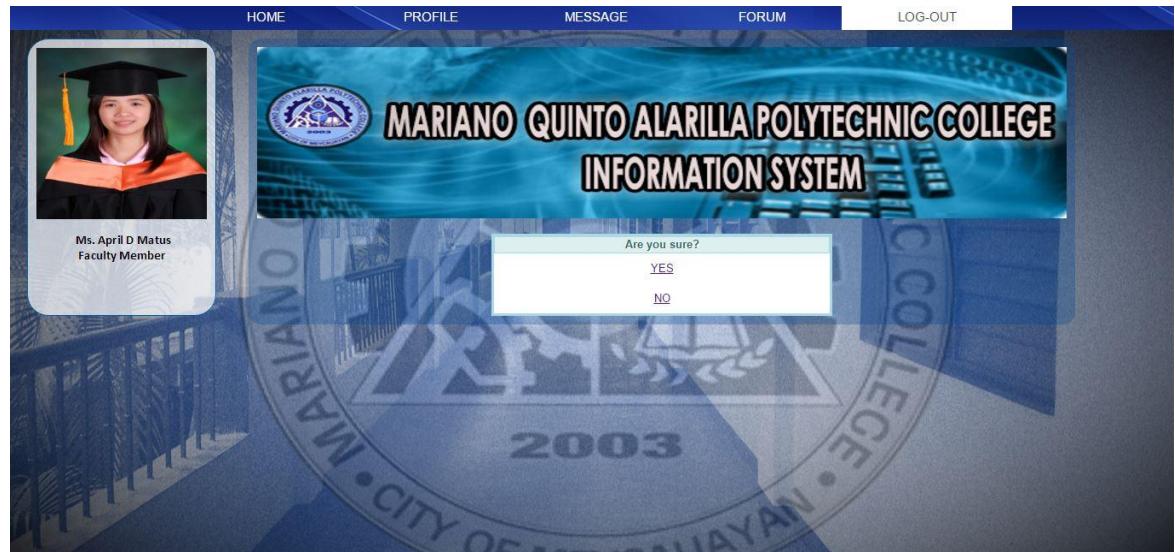
**Figure 59.** (Admin) student's per course search page

In Figure 60, shows the search window for viewing the grade of student per program. Output is shown in **Figure 60**.

Subjects	Professor	Units	Subject Code	Confirm
Physical Fitness and Gymnastics	Mr. Postrado, N/A	2	P.E. 1	<a href="#">select</a>
Komunikasyon sa Akademikong Filipino	Mr. Beltran, Bernard	3	Fil 1	<a href="#">select</a>
Communication Arts	Mr. Gaza, Gerard	3	Eng 1	<a href="#">select</a>
National Service Training Program 1	Mr. Beltran, Bernard	3	N.S.T.P. 1	<a href="#">select</a>
Principles of Tourism 1	Mr. Herrera, Harry	3	Tour 1	<a href="#">select</a>
Environmental Science	Mr. Meron, Renato	3	NS 1	<a href="#">select</a>
Principles of Safety, Hygiene and Sanitation	Mrs. Ampuan, Maricris	3	NS 2	<a href="#">select</a>
Literature	Mrs. Dela Rosa, Rona	3	Lit 1	<a href="#">select</a>
Business Math	Mrs. Dacaymat, Imelda	3	Math 1	<a href="#">select</a>

**Figure 60.** (Admin) per course search output Page

In Figure 60, shows the subjects to a certain course the admin entered. Also shows the enrolled students by selecting the link at the right side. Output is shown in **Figure 61**.



**Figure 61.** The Log out Page

In Figure 61, shows the confirmation box for logging out in the system.

## PROJECT CAPABILITIES AND LIMITATIONS

After developing the system, the researchers conduct a testing procedure to find its capabilities and limitations.

### CAPABILITIES

**1.** The system can be accessed by three users account, the student, professors and the admin.

**2. Students**– can view their current and previous grades.

– can access forum per subject in the student's profile.

**4. Professors**– can encode grades per student and per class for every term.

– can view their current and previous subjects handled.

– can access forum per subject in professor's profile.

– can view encoding report– includes the subject, name of professor, date and time of encoding grades.

**5. Admin**– can update the system specifically the design.

– can search per course or per student to print the grades.

– can view current subjects and grade of student's.

– can view previous subjects and grade of student's.

## LIMITATIONS

Here are the authorized and restricted activities of each user in the system;

- 1. Admin**– Authorized to update the system but not deleting or editing of grades.
- 2. Professors**– The only authorized user to encode grades of the students.
- 3. Students**– Access on viewing the grades by using a registered account only.
  - Not allowed to print any records from the system.
- 4.** This study is only limited to use by Mariano Quinto Alarilla Polytechnic College.
- 5.** This study cannot view online.

## PROJECT EVALUATION RESULTS

The researchers have achieved to develop the project. About this system, it takes a lot of changes and question on how this system can help. But in the other hand, it proves that it can help to assist the professor's to compute and to encode the grades of thier students. Computation and encoding of grades is complicated it undergoes many error's and conflict's but still the researcher's find a way to solve the problem's.

The researcher conduct a survey for them to know the satisfaction of the user to the system. The tables below show the results in functionality, usability, reliability, efficiency, portability, Maintability. While, the last table presents the overall mean of this project.

**Table5**  
**Functionality**

Indicators	Mean	Rating
<b>1. Suitability. Software performs the task required.</b>	4.23	Very Good
<b>2. Acurateness. The result is as expected.</b>	4.15	Very Good
<b>3. Interoperability. System interacts with other systems.</b>	4.08	Very Good
<b>4. Security. Software prevents unauthorized access.</b>	4.31	Very Good
<b>Total Mean Average</b>	<b>4.19</b>	<b>Very Good</b>

The outcome of assesment about the system's functionality performance got an overall mean of 4.19, which is equal to Very Good rating. It indicates that the user is satisfied with the functionality and being a user friendly of this system.

**Table 6****Usability**

<b>Indicators</b>	<b>Mean</b>	<b>Rating</b>
<b>1. Understandability. The software is easy to use.</b>	5.00	Excellent
<b>2. Learnability. The system is easily learned.</b>	5.00	Excellent
<b>3. Operability. The system is used without much effort.</b>	5.00	Excellent
<b>4. Attractiveness. GUI interface looks good.</b>	4.23	Very Good
<b>Total Mean Average</b>	<b>4.81</b>	Very Good

The outcome of assessment about the system's functionality performance got an overall mean of 4.81, which is equal to Very Good rating. It indicates that the user is satisfied with the usability of this system.

**Table 7****Reliability**

<b>Indicators</b>	<b>Mean</b>	<b>Rating</b>
<b>1. Maturity. Most of the faults in the software have been eliminated over time.</b>	4.10	Very Good
<b>2. Fault tolerance. Software handles errors.</b>	4.00	Very Good
<b>3. Recoverability. Software resumes working and restores lost data.</b>	4.00	Very Good
<b>Total Mean Average</b>	<b>4.03</b>	<b>Very Good</b>

The outcome of assessment about the system's functionality performance got an overall mean of 4.03, which is equal to Very Good rating. It indicates that the user is satisfied with the reliability of this system.

**Table 8**

**Efficiency**

<b>Indicators</b>	<b>Mean</b>	<b>Rating</b>
<b>1. Time Behaviour. The system responds quickly.</b>	4.23	Very Good
<b>2. Resource Utilization. The system utilize resources efficiency.</b>	3.77	Good
<b>Total Mean Average</b>	<b>4.00</b>	<b>Very Good</b>

The outcome of assessment about the system's functionality performance got an overall mean of 4.00, which is equal to Very Good rating. It indicates that the user is satisfied with the efficiency of this system.

**Table 9****Portability**

<b>Indicators</b>	<b>Mean</b>	<b>Rating</b>
<b>1. Adaptability. The software can be moved to other environments</b>	3.85	Good
<b>2. Installability. The software is installed easily.</b>	4.15	Very Good
<b>3. Conformance. The software complies with portability standards.</b>	4.08	Very Good
<b>4. Replaceability. The software is easily replaced with other software.</b>	4.00	Very Good
<b>Total Mean Average</b>	<b>4.02</b>	<b>Very Good</b>

The outcome of assessment about the system's functionality performance got an overall mean of 4.02, which is equal to Very Good rating. It indicates that the user is satisfied with the portability of this system.

**Table 10****Maintability**

<b>Indicators</b>	<b>Mean</b>	<b>Rating</b>
<b>1. Analyzability. Faults are easily diagnosed.</b>	4.08	Very Good
<b>2. Changeability. The software is easily modified.</b>	3.92	Good
<b>3. Stability. The software continues to function if changes are made.</b>	3.85	Good
<b>4. Testability. The software is tested easily</b>	4.38	Very Good
<b>Total Mean Average</b>	<b>4.06</b>	<b>Very Good</b>

The outcome of assessment about the system's functionality performance got an overall mean of 4.06, which is equal to Very Good rating. It indicates that the user is satisfied with the maintainability of this system.

**Table11**  
**Overall Result**

INDICATORS	MEAN	RATING
<b>FUNCTIONALITY</b>	4.19	Very Good
<b>USABILITY</b>	4.81	Very Good
<b>RELIABILITY</b>	4.03	Very Good
<b>EFFICIENCY</b>	4.00	Very Good
<b>PORTABILITY</b>	4.02	Very Good
<b>MAINTABILITY</b>	4.06	Very Good
<b>OVERALL</b>	<b>4.22</b>	<b>Very Good</b>

The table show's the overall result of the survey. It shows the mean result have reach 4.22 which is equivalent to Very Good rating. It serves as the notification that the system has reached the satisfaction of the user about functionality, usability, reliability, efficiency, portability and maintability of the system.

## CHAPTER 5

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### SUMMARY OF FINDINGS

The objective of this study is to plan and construct a Computerized Term-Based Computerized Grading System.

#### CONCLUSION

The researcher decided to develop a system that will benefit the users. This system has the advantage for students to view their grades every prelim, midterm and finals. The professor would be able to encode more efficiently and comfortably of encoding the grades of student. Admin could also search student's grade specifically.

Term-based computerized grading system is developed and for following reason:

8. For student to view the full details of their grades.
9. To provide a system that will allow students to view their current & previous grades.
10. To briefly discuss about a subject in forum.
11. Avoiding of realization of student grades.
12. To give the accurate percentage of the student grades.
13. To benefit professors for their performance during encode of grades.
14. For the registrar to search student's grade specifically for printing.

## **RECOMMENDATION**

The following recommendations are for related research & development purpose for the future benefits of our system. This will serve as upcoming features for the next update.

1. Can add files in forum section (docx, ppt, pdf).
2. Can add photos to the forum section.
3. Pop-up notifications.
4. Refresh button.
5. To have a mobile application version.
6. The students can view their balances.

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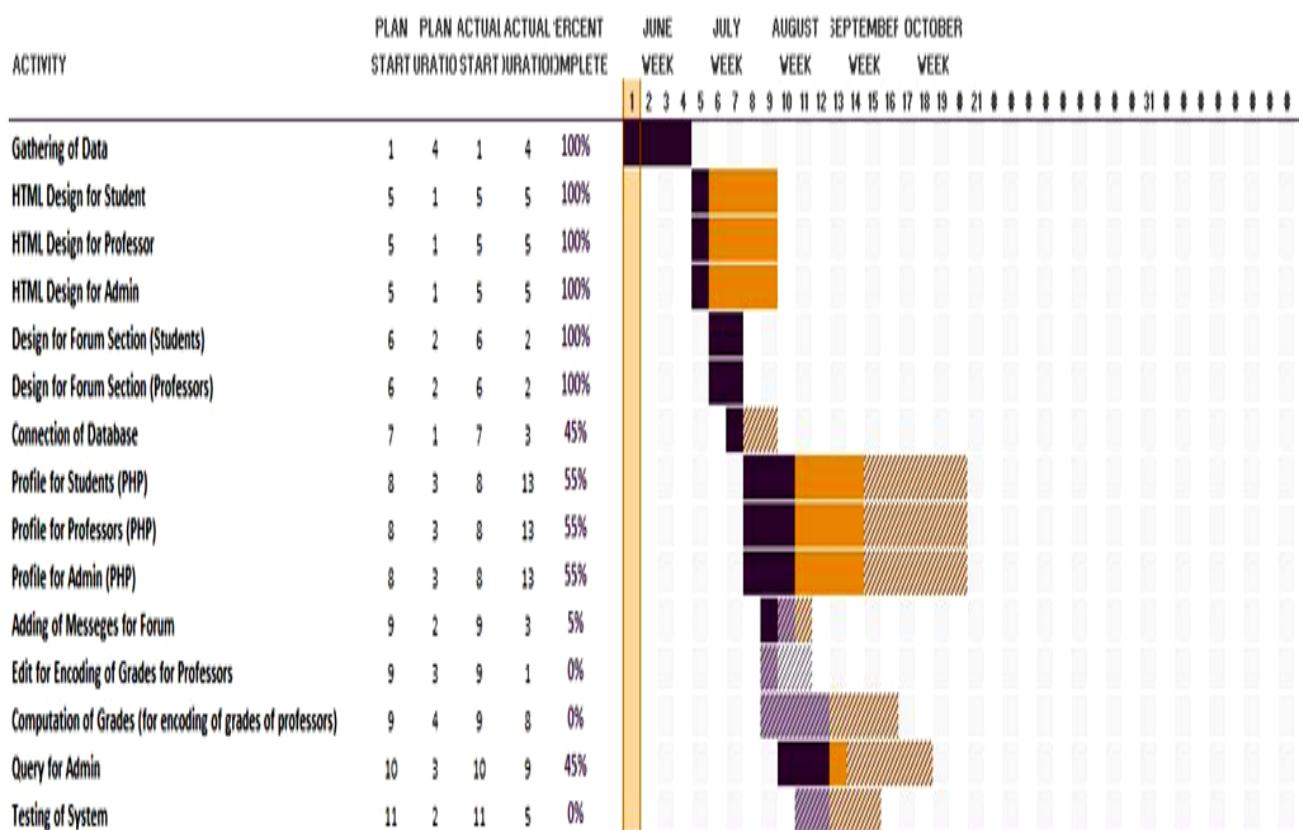
## APPENDICES

### APPENDIX A

#### GANTT CHART

#### Term-Based Computerized Grading System Project Planner

Period Highlights 1 ▾ Plan Actual % Complete Actual (beyond plan) % Complete (beyond plan)



**APPENDIX B**  
**TOTAL BUDGETARY REQUIREMENTS**

PARTICULAR	AMOUNT
3. Personal Services	
1.1 Technical Consultant	Php 300.00
1.2 Consultant Labor	N/A
1.2.1 Laboratory Testing	N/A
1.2.2 Others Please Specify	
a.	N/A
b.	N/A
c.	N/A
	Php. 300.00
Total Personal Services	
4. Maintenance and Other Operating Expences	
2.1 Travel Expences	Php 350.00
2.2 Materials and Supplies	Php 700.00
2.3 Sundries/ Laboratory Fees	N/A
2.4 Other Services, Please Specify	
d. Printing Fee/ Xerox(For Documentation)	Php 600.00
e. Ring Binding/ Book Binding	Php 310.00

f. N/A	N/A
Total Maintenance and Other	Php 1,960.00
Operating Expenses	
TOTAL BUDGET	Php 2,260.00

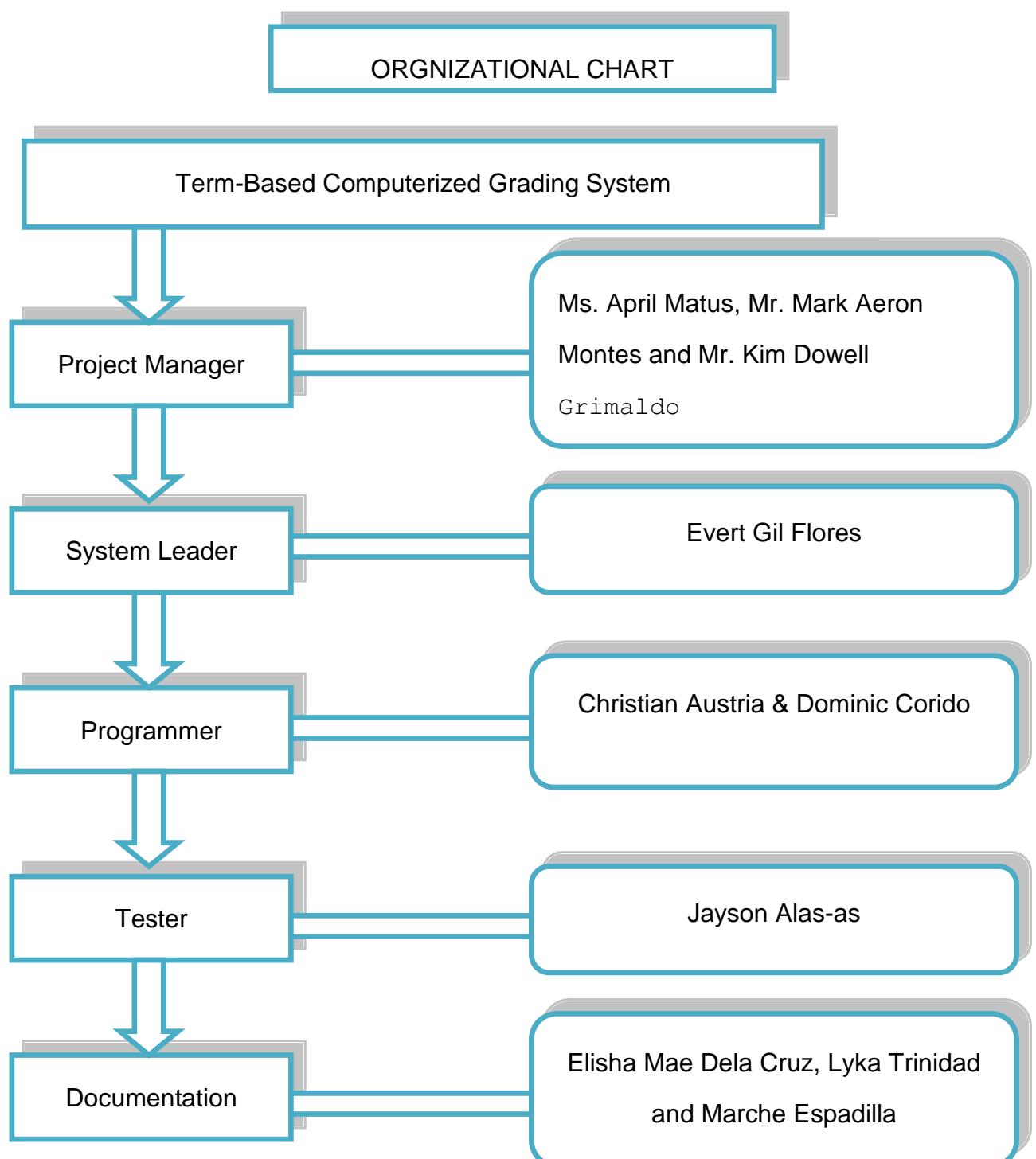
#### BILL OF MATERIALS AND SUPPLIES

Quantity	Unit	Specification	Unit Price	Total Price
3	Bundle	Bond Paper	Php 120.00	Php 360.00

## APPENDIX C

### PROJECT MANAGEMENT

#### A. ORGANIZATIONAL CHART



## B. DUTIES AND RESPONSIBILITIES.

Designation	Duties and Responsibilities	Remarks
System Leader	<p>Managing the tasks of system programmers,</p> <p>Tester and Document manager and Gives tasks and assignments to the group.</p>	OK
Programmer	<p>Correct errors by making appropriate change for efficiency of the system.</p> <p>And also Builds the codes of the system and also its design.</p>	OK
Tester	<p>Conduct trial runs of programs and software applications to be sure to produce the desired information and ensures</p>	OK

	<p>that the instructions are correct. And also Testing the whole system. Checking the codes and also looking for errors in the system for progress</p>	
Document Manger	To keep all files needed in the system. And also Compile the files and is responsible for the papers of the system.	OK

**APPENDIX D**  
**WORK BREAKDOWN STRUCTURE**

**C. TARGETS AND INDICATORS**

TARGETS	DURATION	EXPECTED OUTPUT
Account Management <ul style="list-style-type: none"> <li>• Login/Security</li> <li>• CRUD</li> </ul>	7 DAYS	The log in interface for the user is finished and secured.
Arrange/Organize the database <ul style="list-style-type: none"> <li>• Grades</li> <li>• Accounts of Prof</li> </ul>	7 DAYS	The user's information is saved on the database.
Profile/Account of professors <ul style="list-style-type: none"> <li>• Subjects loaded with link for encoding</li> </ul>	7 DAYS	The list of the professor's subject handled which will be found on their profile (the first page after logging in) and the buttons and links are functional.
Encoding of grades <ul style="list-style-type: none"> <li>• List of Students Name</li> </ul>	14 DAYS	The list of the students were grouped according to its enrolled subjects and

<ul style="list-style-type: none"> <li>• Encoding of Quiz, Participation, project, Exam, Final Grade(Prelim, Midterm, Finals)</li> </ul>		<p>the encoding of grades can compute the encoded data, the data can be recorded to the database.</p>
<p>Making Interface/Account for admin</p> <ul style="list-style-type: none"> <li>• For printing of the submitted grades of instructors</li> </ul>	<p>14 DAYS</p>	<p>The information about the students was recorded and the grades were ready to print.</p>
<p>Interface for list of Subjects of students per course and section with links for admin to view grades</p>	<p>7 DAYS</p>	<p>The response of Per course section is that the user / admin must choose to the buttons will appear after clicking per course button, and whenever the button was clicked results will appear on the bottom part of the webpage. Links are functional, can view here all the subjects that a student is enrolled.</p>
<p>List of grades(prelim,</p>	<p>14 DAYS</p>	<p>The list of grades can view</p>

midterm, final) of students per subject, course and section for admin to print for approval		the grades and is ready to print.
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#### D. COST DIMENSION

ACTIVITIES	MATERIALS & SUPPLIES	TOOLS & EQUIPMENTS	LABOR/ SERVICES	TOTAL COST
1.Data Gathering	Bond Paper	N/A	N/A	Php 60.00
2.Project Designing & Planing	Bond Paper	N/A	Internet	Php 100.00
3.Programming & Testing	N/A	Computer	N/A	N/A
4.Implementaation & Maintenunce	N/A	Computer	N/A	N/A
5.Documentation	Bond Paper	Computer	N/A	Php 230.00
<b>OVERALL TOTAL COST</b>	Bond Paper	N/A		Php 442.00
				Php 360.00

**APPENDIX E**  
**SAMPLE EVALUATION INSTRUMENT**

**TERM-BASED COMPUTERIZED GRADING SYSTEM EVALUATION**

**CRITERIA**

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

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

**Course/Program:** \_\_\_\_\_

**Year/Section:** \_\_\_\_\_

CRITERIA	RATING				
<b>A. FUNCTIONALITY</b>	1	2	3	4	5
1. Suitability. Software performs the tasks required.					
2. Accurateness. The result is as expected.					
3. Interoperability. System interacts with other systems.					
4. Security. Software prevents unauthorized access.					
<b>B. Usability</b>					
1. Understandability. The software is easy to use.					
2. Learnability. The system is easily learned.					
3. Operability. The system is used without much effort.					
4. Attractiveness. GUI interface looks good.					

<b>C. Reliability</b>				
1. Maturity. Most of the faults in the software been eliminated over time.				
2. Fault Tolerance. Software handles errors.				
3. Recoverability. Software resumes working and restores lost data.				
<b>D. Efficiency</b>				
1. Time Behaviour. The system responds quickly.				
2. Resource Utilization. System utilizes resources efficiently.				
<b>E. Portability</b>				
1. Adaptability. The software can be moved to other environments.				
2. Installability. The software is installed easily.				
3. Conformance. The software complies with portability standards.				
4. Replaceability. The software is easily replaced with other software.				
<b>F. Maintability</b>				
1. Analyzability. Faults are easily diagnosed.				
2. Changeability. The software is easily modified.				
3. Stability. The software continues to function if				

changes are made.					
4. Testability. The software is tested easily.					

Thank you for your cooperation.

Comments/Suggestions:

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Signature of the Respondent

**JAYSON ALAS-AS**

1197 Don Bernardo Homes Pantoc,  
Meycauayan City, Bulacan  
09059345974  
[jaysonalasas@yahoo.com](mailto:jaysonalasas@yahoo.com)

**OBJECTIVE:**

I am looking for a suitable job and opportunity where I could use my knowledge and skills, and also to develop my personality as a career person while utilizing my skills.

**EDUCATIONAL BACKGROUND:**

TERTIARY	:	Mariano Quinto Alarilla Polytechnic College Old MC Annex, Malhacan, Meycauayan, Bulacan Computer Engineering Technology 2013 – Present
SECONDARY	:	Assemblywoman Felicita G. Bernardino Memorial Trade School Lias, Marilao, Bulacan 2009-2013

**TRAININGS AND SEMINARS ATTENDED:**

- 5's tips of safety  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- Electronic multimedia trends and innovations  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- Basic principles of concrete and composition of concrete  
March 21, 2015  
Mariano Quinto Alarilla Polytechnic College
- Testing of concrete slump test and compression test

March 21, 2015

Mariano Quinto Alarilla Polytechnic College

- Steam generators and boilers

March 28, 2015

Mariano Quinto Alarilla Polytechnic College

- Hvac

Mar 28, 2015

Mariano Quinto Alarilla Polytechnic College

### **TECHNICAL SKILLS:**

- Communicative, capable of establishing a positive and productive connection with types of people.
- Accepts direction easily and willing to invest time and effort to complete a certain task.
- Willing to work hard to achieve established objectives.
- Self-motivated and willing to work under pressure to achieve certain objectives
- Oriented in Autocad application
- Programming(tasm, database, DevC++)
- Oriented in Microsoft Offices

### **CHARACTER REFERENCES:**

Architect.Ramon Rubio

Professor

Marianio Quinto Alarilla Polytechnic College

09166736209

Engr. Kim Dowell Grimaldo

Professor

Marianio Quinto Alarilla Polytechnic College

09328560726

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

JAYSON ALAS-AS

Applicant

**CHRISTIAN DS. AUSTRIA**

B2 L2 Villa Samantha Brgy. Lawa Meycauayan City Bulacan  
09358635743

[Christiaanustria167@gmail.com](mailto:Christiaanustria167@gmail.com)



**OBJECTIVE:**

To seek challenging assignment and responsibility, with an opportunity for growth and career advancement as successful achievement.

**EDUCATIONAL BACKGROUND:**

TERTIARY : Mariano Quinto Alarilla Polytechnic College  
Old MC Annex, Malhacan, Meycauayan, Bulacan  
Computer Engineering Technology  
2013 – Present

SECONDARY : Dalandanan National High School  
G. Lazaro St. Dalandanan Valenzuela City  
2009-2013

**TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- On The Job Training Needs And Requirements  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- Programmable weather forecasting  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- 5's tips of safety  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
- Electronic multimedia trends and innovations  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College

- Basic principles of concrete and composition of concrete  
March 21, 2015  
Mariano Quinto Alarilla Polytechnic College
- Testing of concrete slump test and compression test  
March 21, 2015  
Mariano Quinto Alarilla Polytechnic College
- Steam generators and boilers  
March 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- Hvac  
Mar 28, 2015  
Mariano Quinto Alarilla Polytechnic College

**SKILLS:**

- Autocad (2D&3D)
- Programming Language(C#, C++, PHP, HTML, Mysql Database, Tasm)

**CHARACTER REFERENCES:**

Engr. Kim Dowel Grimaldo  
Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09278802102

Engr. Noel Andrew Alegre  
Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09065561690

Arch. Ramon Rubio  
Architect/Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09166736209

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

CHRISTIAN AUSTRIA  
Applicant

**DOMINIC ESTEPA CORIDO**

B5 L13 Northville 4C Lambakin, Marilao, Bulacan

09071566763/09468333885

[DominicCorido@yahoo.com](mailto:DominicCorido@yahoo.com)

**OBJECTIVE:**

I would like to have a job which I can share my knowledge, skills and be effective in handling responsibilities and perseverance that will help to the success of your company.

**EDUCATIONAL BACKGROUND:**

TERTIARY : Mariano Quinto Alarilla Polytechnic College  
Old MC Annex, Malhacan, Meycauayan, Bulacan  
Computer Engineering Technology  
2013 – Present

SECONDARY : Seed Academy Foundation Inc.  
Lambakin, Marilao, Bulacan  
2009-2013

**TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- On The Job Training Needs And Requirements  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- Programmable weather forecasting  
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Mariano Quinto Alarilla Polytechnic College
  - Steam generators and boilers  
March 28, 2015  
Mariano Quinto Alarilla Polytechnic College
  - Hvac  
Mar 28, 2015  
Mariano Quinto Alarilla Polytechnic College

**SKILLS:**

- AutoCAD
- Adept in Computer Programming Languages ( Assembly Language, Data Base & C++)
- Basic Networking
- Microsoft office

**CHARACTER REFERENCES:**

Engr. Marlon M. Latagan  
Engineering Technology Program Head  
Mariano Quinto Alarilla Polytechnic College  
0906-451-7727

Mr. Mark Aeron M. Montes  
Office of the Registrar / IT Professor  
Mariano Quinto Alarilla Polytechnic College  
0906-451-7727

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

DOMINIC CORIDO  
Applicant

**ELISHA MAE CESAR DELA CRUZ**

114 Little Baguio Street, Malhacan, Meycauayan City, Bulacan

09752299640/09157434358

elishamaedelacruz@gmail.com

**OBJECTIVE:**

To be a good worker, to use my skills and knowledge that I've learn and to make sure that I will do the position that was given to me

**EDUCATIONAL BACKGROUND:**

TERTIARY : Mariano Quinto Alarilla Polytechnic College  
Old MC Annex, Malhacan, Meycauayan, Bulacan  
Computer Engineering Technology  
2013 – Present

SECONDARY : Assemblywoman Felicita G. Bernardino Memorial  
Trade School  
Lias, Marilao, Bulacan  
2009-2013

**ACHIEVEMENTS:**

CHED STUPAF's Scholar  
2014 – Present

**TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- On The Job Training Needs And Requirements  
February 28, 2015  
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- Steam generators and boilers
- March 28, 2015  
Mariano Quinto Alarilla Polytechnic College
- Hvac
- Mar 28, 2015  
Mariano Quinto Alarilla Polytechnic College

**CHARACTER REFERENCES:**

Jacqueline Lea Tarnate  
Teacher  
09356171701  
Meycauayan, Bulacan

Daniel Lim  
Youth Pastor  
09178421090  
UPCI St. Francis Chapter

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

ELISHA MAE DELA CRUZ  
Applicant

**MARCHE CASTRO ESPADILLA**

1244 East Road, Raminel, Vientereales, Valenzuela City

09484915622

[espadillamarche@yahoo.com.ph](mailto:espadillamarche@yahoo.com.ph)

**OBJECTIVE:**

To acquire valuable knowledge and skills to complement those that I have learned from school in an actual job environment. In return, I offer my service and determination to be an asset to your company.

**EDUCATIONAL BACKGROUND:**

TERTIARY : Mariano Quinto Alarilla Polytechnic College  
Old MC Annex, Malhacan, Meycauayan, Bulacan  
Computer Engineering Technology  
2013 – Present

SECONDARY : San Pascual Academy  
San Pascual, Ubay, Bohol  
2009-2013

**TRAININGS AND SEMINARS ATTENDED:**

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- Hvac  
Mar 28, 2015  
Mariano Quinto Alarilla Polytechnic College

**CHARACTER REFERENCES:**

Engr. Marlon M. Latagan  
Engineering Technology Program Head  
Mariano Quinto Alarilla Polytechnic College  
0906-451-7727

April Matus  
Instructor  
Mariano Quinto Alarilla Polytechnic College  
09336023231

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

MARCHE CASTRO ESPADILLA  
Applicant

**EVERT GIL DE PEDRO FLORES**  
191 Lanillo St. Daungan, Malhacan,  
City of Meycauayan, Bulacan  
09056875802  
[floresevert72@yahoo.com](mailto:floresevert72@yahoo.com)



### **OBJECTIVE:**

I would like to have a job which I can share my knowledge, be effective enough in handling responsibilities and perseverance that will contribute to the success of your company.

### **EDUCATIONAL BACKGROUND:**

TERTIARY	:	Mariano Quinto Alarilla Polytechnic College Old MC Annex, Malhacan, Meycauayan, Bulacan Computer Engineering Technology 2013 – Present
SECONDARY	:	Assemblywoman Felicita G. Bernardino Memorial Trade School Lias, Marilao, Bulacan 2009-2013

### **ACHIEVEMENTS:**

Mariano Quinto Alarilla Polytechnic College  
Full Scholar  
A.Y. 2013-2014

Linabelle Villarica Scholar  
A.Y. 2013-2014

CHED STUFAP'S Scholar  
2014-up to present

### **TRAININGS AND SEMINARS ATTENDED:**

- Crisis management in education and industry set  
February 28, 2015

- Mariano Quinto Alarilla Polytechnic College
- Programmable weather forecasting  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
  - 5's tips of safety  
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  - Electronic multimedia trends and innovations  
March 07, 2015  
Mariano Quinto Alarilla Polytechnic College
  - Basic principles of concrete and composition of concrete  
March 21, 2015  
Mariano Quinto Alarilla Polytechnic College

**TECHNICAL SKILLS:**

- Computer Literate (MS Word and offices)
- Basic Programming(C++ and C#)

**CHARACTER REFERENCES:**

Crisostomo Velasco Jr.  
Mathematics instructor  
Assemblywoman Felicita G. Bernardino Memorial Trade School  
09178223694

April Matus  
Instructor  
Mariano Quinto Alarilla Polytechnic College  
09336023231

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

EVERT GIL DE PEDRO FLORES  
Applicant

**LYKA J. TRINIDAD**

265 Balaongan St. Pantoc, Meycauayan City Bulacan  
09069450136

[Lycka\\_12@ymail.com](mailto:Lycka_12@ymail.com)



**OBJECTIVE:**

I am currently looking for a position in an environment that offers a greater challenge and experience in line with my field.

**EDUCATIONAL BACKGROUND:**

TERTIARY	:	Mariano Quinto Alarilla Polytechnic College Old MC Annex, Malhacan, Meycauayan, Bulacan Computer Engineering Technology 2013 – Present
SECONDARY	:	San Roque National High School 2008-2012

**TRAININGS AND SEMINARS ATTENDED:**

- The Future of Web Base Design and Programming
- Mobile Phones Latest Trends and Innovations
- Trends and Innovations in Structural and Drafting Design
- On The Job Training Needs And Requirements  
September 26, 2013  
Mariano Quinto Alarilla Polytechnic College
- Disaster Preparedness Program
- Crisis Management in Education and Industry  
March 08, 2014
- 5'S(Sort, Systematize, Sweep, Sanitize and self-discipline)
- Photovoltaic Solar System
- Maritime Industry Safety
- Role of Automation in Offshore Industry  
March 22, 2014  
Mariano Quinto Alarilla Polytechnic College

- Nanotechnology the Future Demands
  - Pre-engineered Metal Building Technology
  - Programmable Weather Forecasting
  - Electro Multimedia Trends & Innovations
- March 29, 2014  
Mariano Quinto Alarilla Polytechnic College

**CHARACTER REFERENCES:**

Engr. Kim Dowel Grimaldo  
Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09278802102

Engr. Noel Andrew Alegre  
Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09065561690

Arch. Ramon Rubio  
Architect/Engineering Instructor  
Mariano Quinto Alarilla Polytechnic College  
09166736209

I hereby certify that the above information is true and correct to the best of my knowledge and belief.

LYKA TRINIDAD  
Applicant

