# Proposal Approved and Feedback Monitoring System

A

Design Project

Presented to the Faculty of

Computer Engineering Department

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In Partial Fulfillment

Of the Course Requirements for Degree

Bachelor of Science in Computer Engineering

By

Egamino, Lawrence Jay A.

Villanueva, Rainiel A.

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# CHAPTER 1

# THE PROBLEM AND ITS BACKGROUND

This chapter presents the discussion of the problems and its background. It also introduces the theoretical and conceptual framework, purpose in dealing with the problems, significance of the study, scope and limitation of the study.

## 1.1 Introduction

Information technologies offer new ways to communicate, collaborate and participate in learning processes. Since technology is changing the methods through which education is delivered, colleges and universities across the world are confronting several transformations which affect the nature of the courses and degree programs they offer. These technological innovations have also driven the growth of distance learning opportunities, as students who are time bound –due to job or personal responsibilities or place bound–due to geographic location or physical disabilities– can now access courses and degree programs at their convenience. Because of the rapid growth of distance and global technology, as some authors point out, they allow for convenient and flexible system environments without space, distance or time restrictions”

Android Based/Web Based Proposal Approved and Evaluation Monitoring System is a system that will help the committees and students to lessen the time consumed of passing and checking of the proposals with effortless and in a convenient way.

In this study, the researchers aim to develop an effective educational material for the committees and students to be more productive and lessen the time consumed for both parties.

The proposed software includes important features such as uploading proposals, evaluations, and announcements.

To develop and achieve this study, the researchers need programming knowledge (web technologies such as PHP, MySQL, HTML, CSS and JavaScript), PHP framework such as CodeIgniter XAMPP server or WAMPP server, SUBLIME TEXT or any web programming IDE's text editor, HTML & CSS and laptop or desktop computers.

## 1.2 Background of the Study

The Polytechnic University of the Philippines is one of the universities in the Philippines has 25 colleges. One of its colleges is the College of Engineering and it has 6 departments. The Computer Engineering Department uses manually inclined proposals where the Computer Engineering Students proposing a proposals in a manual way. University committees and students are facing difficulties in data collection, interpretation and evaluation.

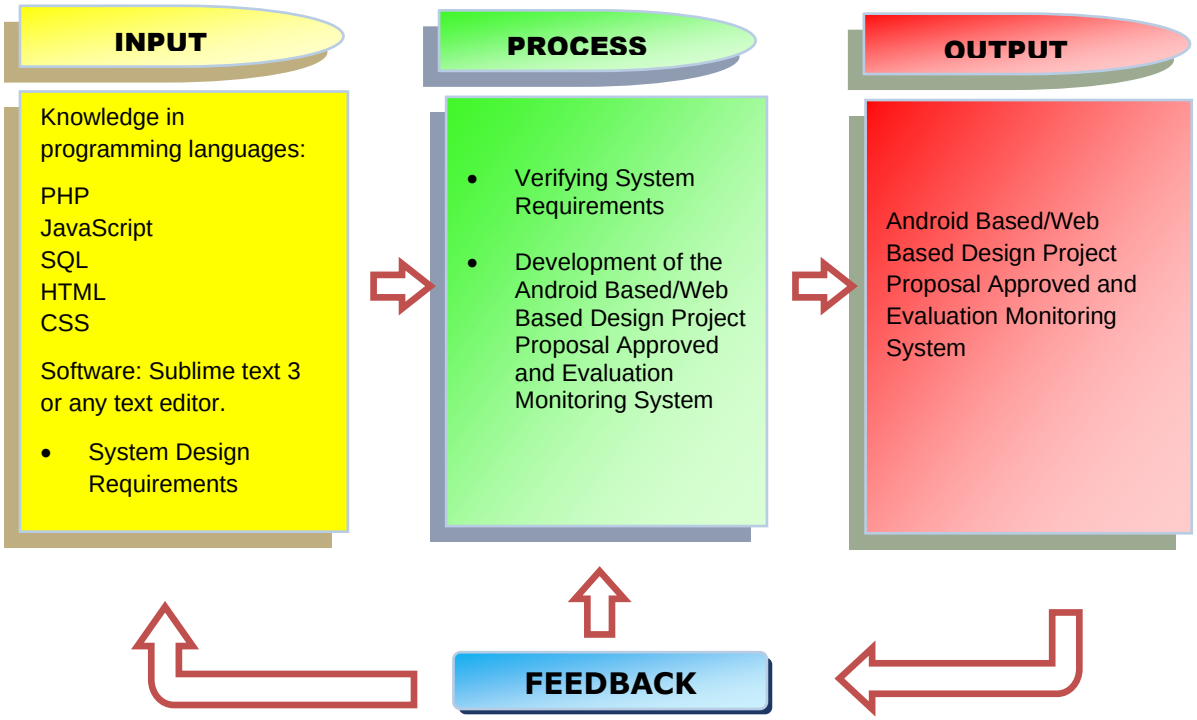
Using the proposed study it could be a powerful automated system enables administrators to compile results, produce statistics, and generate reports on a course evaluation form and the comments written by the committees as unstructured data that help in studying the performance of individual students to identify their strength, potential and weaknesses.

## 1.3 Theoretical Framework

## 1.4 Research Paradigm

The conceptual model was corroborating on the IPO Model based on the General Systems Theory proposed by Ludwig von Bertalanffy. The proponent finds the paradigm significant to the variables being assessed in the study.

Each conception conferred in the theoretical framework has its complement in the variables of the study.




*Fiaure 1 Research Paradiam*

## 1.5 Statement of the Problem

The study aims to design and develop Proposal Approved and Evaluation Monitoring System Specifically, the proponent seeks to find the answer to the following questions:

1. What is the level of acceptance by the respondents on the developed Proposal Approved and Evaluation Monitoring System in terms of:
   a. Functionality
   b. Reliability
   c. Usability
   d. Performance

## 1.7 Significance of the Study

The purpose of developing Android Based/Web based Proposal Approved and Evaluation Monitoring System is to precisely monitor the proposal of the students. And being use by committee to view the proposal of their students and can help the committees quickly response and process the student's proposals. Committees can give comments to their student's proposals as well.

This software system will benefit the following:

- **Students**. The users of this software system will be easy for them to monitor their proposal and if it's disapproved they can pass another proposal again and again. It is a paperless method and convenient way of passing their proposal to the committees.

- **Committees**. It will be easy for them to handle the files of their students and their work will be easily and quickly as they never expected. And it is also for the safety of their files because it will be done in a systematized manner, there will be back-up and security program.

- **Researchers**. The researchers will also benefit from this study because they will be able to apply what they have studied and learned in school. It will enable them to learn more and allow them to face the challenges in the computer world. Through this study they will be able to develop their skills and abilities in programming and writing codes. This software system will also benefit the future researchers in providing them information and necessary details needed in conducting related researches in the future.

## 1.8 Scope and Limitations

The study will focus on the development of Proposal Approved and Evaluation Monitoring System. It covers proposed proposals of CpE Students, the reason is that for faster way of monitoring the student's proposals and lessen the cost: paperless.

- The system shall be uploaded to the hosting server so that students and committees can access the system.
- The database maintenance will focus on viewing, adding and editing committees and students account; maintaining and managing table entries of student progress report and user's log; and monitoring of user's activities in the system.
- The other features can be retrieved by students over the schools' via online.
- Proposal shall be accessed by the students.
- Committees can view and edit proposals in the proposed system.

## 1.9 Definition of Terms

- **Committees**. College professors who are responsible in monitoring the thesis proposals of the students and evaluate the result.

- **Functionality**. The system performs the purposes for which it was designed allowing maximum access, security and control. It is the essential purpose of any product or services.

- **HTML** (Hypertext Markup Language) is the set of markup symbols or codes inserted in a file intended for display on a World Wide Web browser page (Rouse, 2016). In this study it refers to the programming language use in our system.

- **CSS** is a stylesheet language used for describing the presentation of a document written in a markup language.

- **JavaScript** often abbreviated as JS, is a high-level, dynamic, weakly typed, object-based, multi-paradigm, and interpreted programming language. Alongside HTML and CSS, JavaScript is one of the three core technologies of World Wide Web content production.

- **PHP** (Hypertext Preprocessor) is found on most web servers and is used by developers to create dynamic and database driven websites. It is a server-side scripting language that is typically embedded into HTML pages to add features that HTML can't do by itself (Kyrnin, 2016). In this study, it refers to the programming language to present the system.

- **WampServer** refers to a software stack for the Microsoft Windows operating system, created by Romain Bourdon and consisting of the Apache web server, OpenSSL for SSL support, MySQL database and PHP programming language.

# CHAPTER 2

## REVIEW OF RELATED LITERATURE AND STUDIES

This chapter discuss and review the various local and foreign literature and studies that have relevance on the current investigation. It further explains and expound on the subject of the study making it more interesting and well supported.

### 2.1 FOREIGN LITERATURE

According to Jonathan Stark (September 2010) that JavaScript is a scripting language that you can add to an HTML page to make it more interactive and convenient for the user, For example, you can write some JavaScript that will inspect the value typed in a form to make sure they are valid. Or, you can have JavaScript show or hide elements of a page depending on where the user clicks. JavaScript can even contact the web server to execute database changes without refreshing the current web page. Like any modern scripting language JavaScript has variables, arrays, Objects, and all the typical control structures (e.g., if, while, for).

As the official Android website describes this platform. “Android is a software stack for mobile devices that includes an operating system, middleware and key applications” (What is Android,” 2012). Android provides the “core set of applications including an email client, SMS program, calendar, maps, browser, contacts, and others” (What is Android,” 2012), while additional applications can be downloaded through Google Play service (Bishop, 2012)

### 2.2 FOREIGN STUDIES

(Saleem, Alfawaer, Al-Zoubi, 2008), A web-based project evaluation system was developed for CAS in order to enhance the projects evaluation process performance and increase the CAS staff productivity. In addition

this web-based evaluation system can promote the academicians of CAS convenience by offering them a web option for performing their evaluation tasks which can be available anywhere anytime. Implementing this system will return in many benefit for both CAS academicians and managerial staff at the same time. The CAS staff can save time and effort and keep informed of the students' projects details anywhere anytime. In addition the students can access the system and view their projects evaluation details like corrections and recommendations and grading. Some work and further studies still need to be conducted for this system in order to make it more functional and reliable such as expanding and generalizing the system to include all CAS postgraduate programs and fully integrating the system database as mentioned in the recommendations section.

## 2.3 LOCAL LITERATURE

Albano, Canlas, Fabregas, Mateo (2007) in their book entitled “Basic Foundation of Information technology”, stated that working with today’s computers and information and communications technology (ICT) can be both exciting and extremely challenging. Modern computers are concerned mostly with information processing that includes information needed for business transactions like booking e-tickets for travel or entertainment, information on products and material during manufacturing process or information needed to track and control complex processes or satellite systems operations. Computers are also used to help the physically-challenged users by controlling the devices that help them. They are also used in mapping networks, electricity wires or pipelines or to provide users with detailed maps of land use from the collected information feed by satellite observation. The effective and efficient use of these information, according to the authors, has now become important in managing most organizations, may it be businesses or industries. Furthermore, information is now considered as an organization’s major resource, along with man, money, material and methods. ICT professionals and specialists have an

important and difficult part to play to effective apply computers and computing technology to attain effective processing of information. Information processing and computing services for organizations are crucial in today's world. To ensure that the development process and smooth operation of computing and information services that support the operations in the strategic level of the organization are effective is a very important function that extends beyond system management and administration.

The most commonly used tools to develop dashboard performance are thru Microsoft Excel mentioned by Kawanoto and Mathers (2007). Both of them believe that Excel met the criteria in implementing the simple design and delivers results in a short span of time. It delivers the readily available solutions for team members' software familiarity, seeking to produce a proof of concepts and produce quick results. Few (2007) agreed on the concept of Kawanoto that Excel is a good alternative source for turning into a variable dashboard.

According to former DECS Director Nilo Rosas (2007) in his precious insights during the 1997 Information Technology and Telecommunications Education Congress regarding the application of Information Technology to the education sector, he stated that the computer as a tool for rapid change, must be harnessed by the education sector to obtain its benefits from its tremendous capabilities. He however lamented about the fact that the Philippines education system is not equipped to deal with rapid change. Thus, added that prior to the adoption of new technologies a change in mind set must first take place in the administration and teacher of the learning institution. Proper orientation and subsequent training must remove perceived threats to the new technologies. He said. "People take time to learn; systems take long to change; the uses of computers for instructions, administrative and research requires a transitional period during which a lot of training must be available for administrators and teachers."

## 2.4 LOCAL STUDIES

Jose A. Fadul (2014) Another local study from Philippine Rice Research Institute (PhiliRice) which is related to the proponent's study is about the use of Internet in PhiliRice. It is found out that its employees heavily used the Internet for searching information about different products and services. They also utilized it for research, for both official and unofficial purposes. Solis (2005) still positively regarded the unofficial use of the Internet since it provides a venue for employees to learn more and explore more. The internet technology is the core component needed by the researcher in developing Android Based/Web Based Design Project Proposal Approved and evaluation Monitoring System.

According to Anido (2009), school administrators need to take the lead in the use of information Technology in their respective colleges and universities, specifically in building a technology-enhanced school environment and establishing Information and Communication Technology in school operations and management. The successful deployment of a web-based Teaching Performance Evaluation System demonstrates that here are a lot of opportunities where information technologies can be applied to provide administrators with competitive tools in the decision-making process, in the delivery of basic services, and in the design of programs and development plans of action to address student and faculty needs.

A study made by Maligat (2012) enumerated the disadvantages of manual system and the advantages of an automated evaluation system. According to the study, the use of manual system is frequently a problem of the respondents. Classes are interrupted most of the time while sometimes it requires bringing of bulky papers which are some of the highest and least concern when it comes to using the manual faculty evaluation tool.

The computerized evaluation system is very much effective in terms of being user-friendly, providing accurate results, lesser time interruption, erasure free, and lessens the time when evaluating.

The respondents were very much satisfied. They were very much convinced that the new system can alleviate their problem when it comes to faculty evaluation.

Evaluators will only be able to gain access to the program using university computers since it is only available in Intranet, or within the University's network.

This is to minimize the chances of virus attacks and program hijackers. The online evaluation, however, will be available on the internet should the OVRAA order for it to be (Mendoza, n.d)

**2.5 Synthesis and Relevance of Related Literature and Studies**

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# Chapter 3

# RESEARCH METHODOLOGY

This chapter deals with the methods of research to be used, the population, sample size and sampling technique. The descriptions of the respondents and the instruments needed to gather data and statistical treatment of data is also covered in this chapter.

## 3.1 Methods of Research

**Development Research** is a problem oriented and interdisciplinary research methodology. Development research is performed in order to optimize and gain a sound basis for development activities and may be characterized by two purposes (Van den Akker & Plomp, 1993): development of prototypical products; generating methodological directions for design and evaluation of such products. This method used for development of prototypical software, starting from design, development, and evaluation of the software. The prototypical products challenges are efficiency, creativity, and practicality.

## 3.2 Population, Sample Size, and Sampling Technique

The respondents of the study are the Computer Engineering Students and Committees of the College of Engineering of the Polytechnic University of the Philippines that will pilot the implementation of the system once the web-based application is completed. The respondents were chosen based on its function in the Institution.

The researcher identified respondents in this study through Purposive sampling that will apply in the study. Purposive sampling, also known as judgmental, selective or subjective sampling, is a type of non-probability sampling technique. Non-probability sampling focuses on sampling techniques where the units that are investigated are based on the

judgment of the researcher. Furthermore, to obtain accuracy on their responses, the system will be presented to each class before getting their responses to questionnaire.

**Table 1. Population of the Respondents**

| Respondents | Number | Percentage |
|---|---|---|
| Committees | 10 | 20% |
| CpE Students | 40 | 80% |
| **TOTAL** | **50** | **100** |

### 3.3 Locale of the Study and Description of Respondents

The respondents are basically the Computer Engineering Students and Committees. The Chairperson who keep the records of students' thesis proposals and admin who technically knowledgeable in the database of the student's thesis proposals, as well as the committees of Computer engineering department who will viewed and evaluate the students' thesis proposals. The percentage distribution of the respondents according to their position is presented in Table 1 below.

### 3.4 Research Instrument

The researchers will preparing questionnaires to determine the response of the respondents towards to the system will develop over the concept being deliberated. Also, the software evaluation instrument that will use for this system is the standard criteria used in evaluating transaction processing system. It determines the usability of the system in terms of functionality, reliability, usability, and performance.

The researcher used the Likert scale to address the measurement of the perception of the respondents about Proposal Approved and Evaluation Monitoring System. A Likert scale is a psychometric response scale often

used in questionnaires, and is the most widely used scale in survey research. When responding to a Likert questionnaire item, respondents specify their level of agreement to a statement. The researcher will use ranks from one to five: Five being the highest and one being the lowest rank. Table 2 shows the Likert scale to quantify the responses to the questions with the following criteria used.

**Table 2 Rating Scale Criteria**

| Rating | Verbal Interpretation | | |
|---|---|---|---|
| 4.21 – 5.00 | Strongly Agree | Very Important | Highly Acceptable |
| 3.31 – 4.20 | Agree | Important | Acceptable |
| 2.61 – 3.30 | Partly Agree | Moderately Important | Moderately Acceptable |
| 1.81 – 2.60 | Disagree | Slightly Important | Fairly Acceptable |
| 1.0 – 1.80 | Strongly Disagree | Not Important at all | Not Acceptable |

**Data Gathering Procedure**

The researcher used instruments in gathering data to obtain the necessary information needed in the study such as interview, observation, internet research and survey. The researcher had conducted a survey to determine their assessment in terms of the different issues the opinion of the respondents towards the developed system and used that information for further enhancement of the system. Pretest-posttest designs are the preferred method to compare participant groups and measure the degree of change occurring as a result of treatments or interventions. Post surveys

would also give to the respondents pertaining to the acceptability of the proposed system in an online teachers' evaluation.

### 3.5 Statistical Treatment of Data

For statistical treatment of data, the researcher used Frequency Percentage and Weighted Mean (WM). Frequency percentage is derived by multiplying each of the relative frequency values by 100%. The formula is:

$$P = ( f / N ) \times 100\%$$

Where: P = percentage

f = frequency

N = total frequency

This formula was used to evaluate problem number one, and two. On the other hand, the questionnaire that requires rating scale (1 to 5) was evaluated using the weighted mean. According to Steve Simon (2003-05) Weighted Mean is used when two or more means are combined to develop an aggregate mean, the influence of each mean must be weighted by the number of cases in its subgroup. Weighted mean is the sum all of the scores in the distribution, as weighted by their frequency, divided by the total number of scores in the distribution. This statistical treatment was used to determine the level of acceptance and approval among the respondents in using the proposed system with respect to results that was taken from the evaluation sheets/questionnaire. The formula for the weighted mean is shown below:

$$\text{Weighted Mean (WM)} = \frac{\sum f\,(x_1 + x_2 + x_3 + \ldots + x_n)}{N}$$

where: $\sum f\,(x_1 + x_2 + x_3 + \ldots + x_n)$ = sum of all Means (M) of each criterion

N = total number of criteria for evaluation

## System Architecture

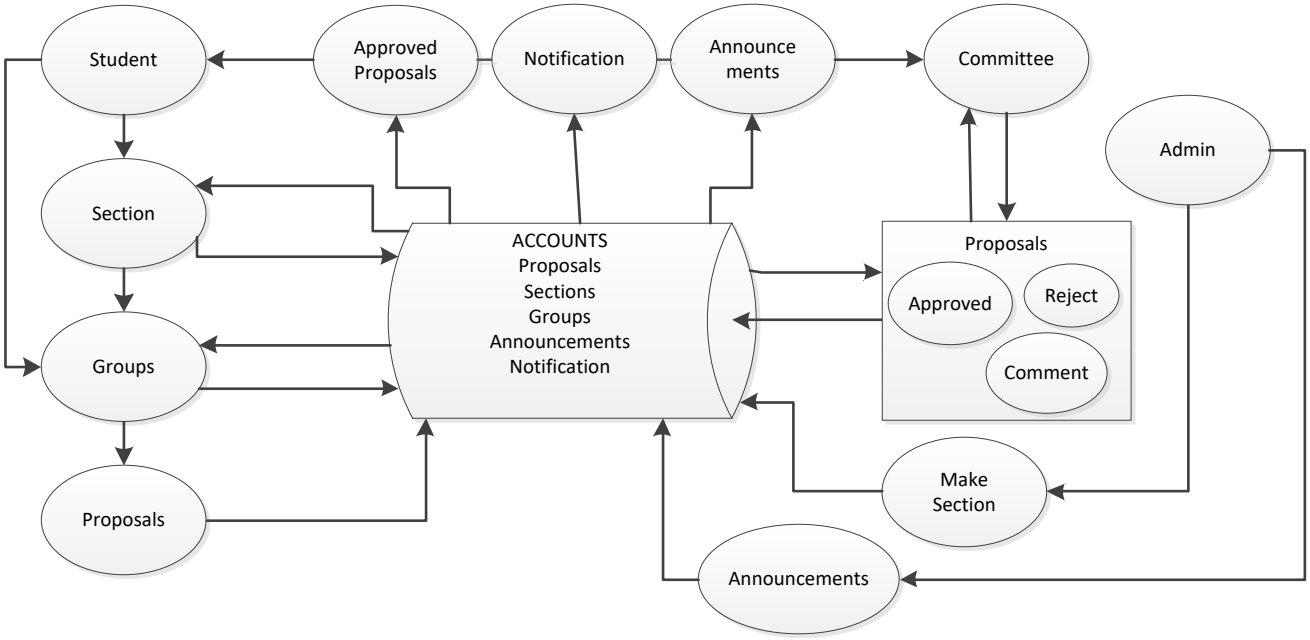


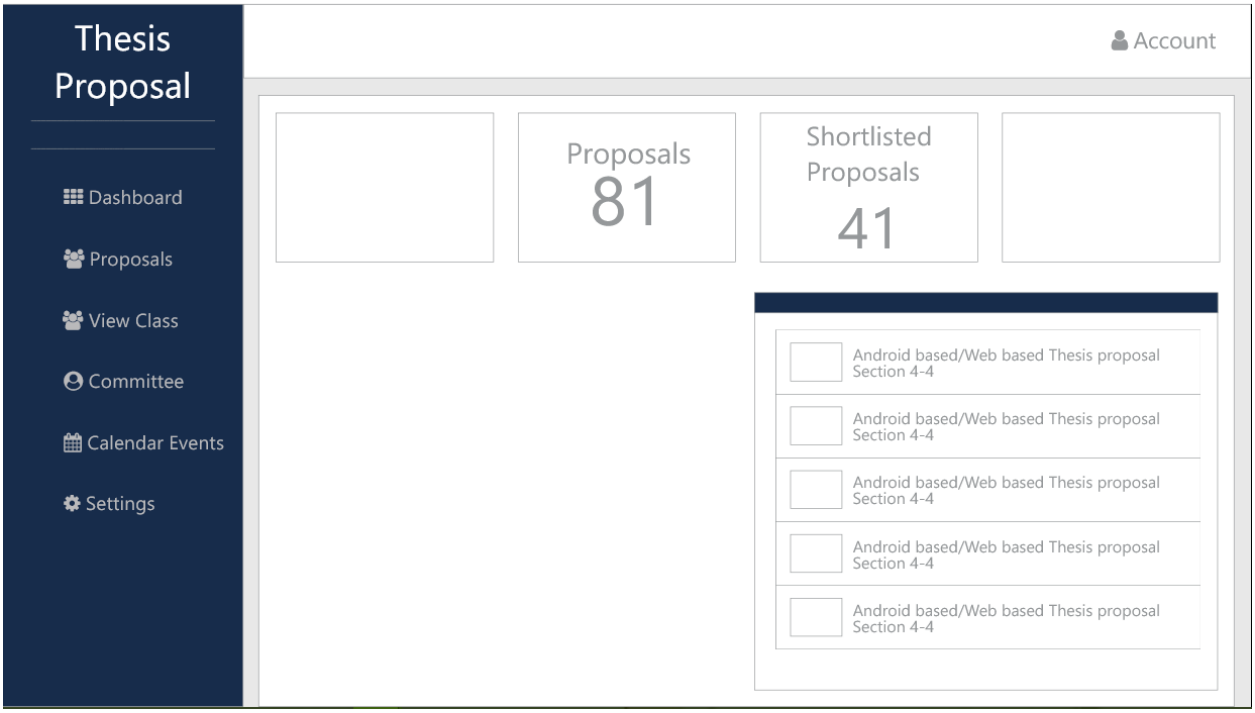

*Figure 2* ***Block diagram***

This system architecture is for students who are taking Thesis, all the student need to pass some proposal first before they need to make the chapters of their thesis. The Admin will make a section in this system and

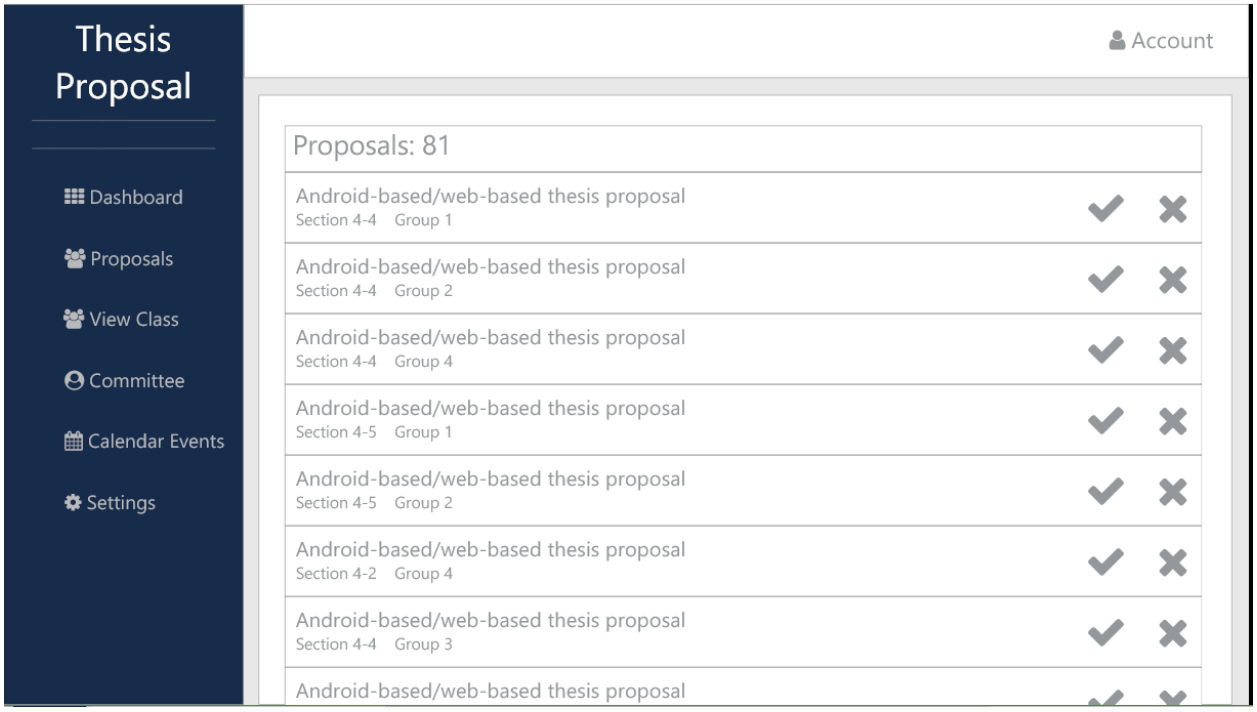
student must join a section and student must form a group also and that group will be helping each other for their research and prototype of their thesis. After forming a group, they will need to pass a proposal. The proposal will save to the database, the committee will see your proposal and evaluate if it's approved or reject, they will comment if they like to leave a comment on your proposal, committee can leave some announcements too. This system will also send some notification to the committee if there is new proposal, Students and committee can view also the approved proposals just like in the department of Computer Engineering of Polytechnic University of the Philippines.

## System Design

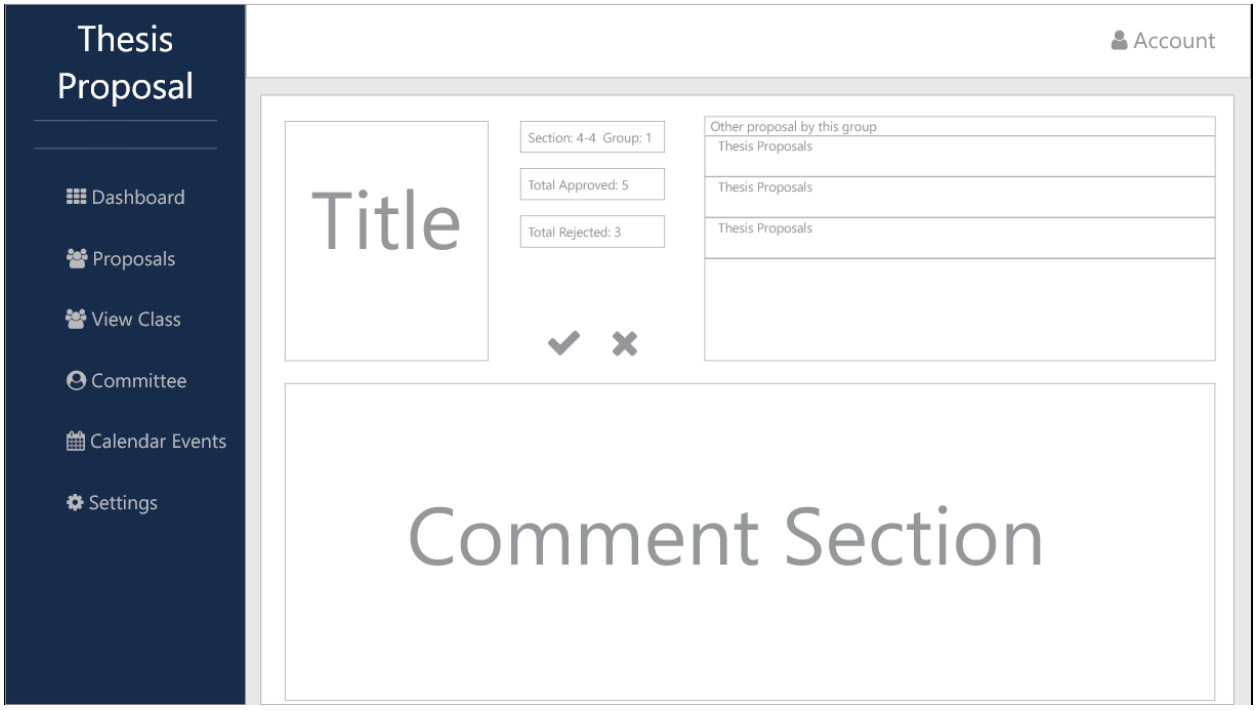
- **Dashboard**



- **Lists of Proposals**




- **when proposal “clicked”**



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