

Republic of the Philippines

**Polytechnic University of the Philippines**

**Department of Information Technology**

Santa Maria, Bulacan campus

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**Lan-Based Voting System for Student Council and Organization Elections**

**Bachelor of Science in Information Technology**

Program

Instructor

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BSIT 4-2

1. **Project Title**

**WEB-BASED VOTING SYSTEM FOR STUDENT COUNCIL AND ORGANIZATION ELECTIONS**

1. **Project Overview**

This project intends to solve the project beneficiary’s problems in their current system of voting, which is done manually by using paper ballots and manual counting of votes. In this project, the proponents are proposing the use of the computers to ease up the election process and make it more secure from any fraudulent activities pertinent to the election, ensuring also the confidentiality of the choices of the voters.

Regarding the current system of the school, the method is quite costly because the school needs to print ballots every year since the names of the candidates in the yearly elections are dynamic. Secondly, the results are prone to fraud because the ballots can be tampered and the vote counts can be manipulated. And lastly, the counting of votes take a lot of time because they are counted manually, compared to the proposed system, which can display the results way faster than the manual method.

1. **High-level System Components**

The proposed voting system has two sides which will also define the type of its users, the admin side and the client side. This high-level component is most important to the system; they are prerequisite to the manual proceedings. This component is listed of the following:

* ADMIN-SIDE APPLICATION

1. Login Module – This module requires the authentication to use this software, if the user failed three (3) times to log on to the system, the system will be type the PIN number displayed to the screen and log-in again, if the user failed too many attempts, the system will be locked. Otherwise, proceed to *Module 1*.
2. **Main Menu –** This module is the first that you see after you log-on. This is composing of the module needed on the system, they are enlisted on the following:
   1. **Registering Candidates –** This module is to register the candidates, this module requires manual process, from the requirements up to the finalization of checking of position required to the Student Council, the student must be follow to the implement rules, if the student is not complying his/her requirements to the specific time, his/her qualification will be diminished and dissolved.
   2. **Database Check –** This module is to check the status of the database if there’s online or not. If the problem encountered, contact the administrator.
   3. **Time Set for the Voting –** This module is must set the time for the election proper. If the time is over, the election will be closed and can’t be open it again. It will be one-time only.
   4. **Encoding of Student Name –** This module must be encoding the student name, this information will be confidentially encoding from their student record and saved from the database.
3. **Search Module –** This module is needed for the items search for the required operation. This module is intended for the items that you difficult to find.
4. **Candidate Vote Count –** This module monitored the counting votes. This module is served as unofficial tally.
5. **Accounts and Other Settings –** This module is needed for the security and the other settings. Must it require the secret code from the most superior of the beneficiary for the authentication. This module is composed of sub-system of the following:
   1. **Account Settings**
   2. **Account Monitoring**
   3. **Session Manager for Client**
   4. **Check IP**
   5. **Security Settings**
   6. **Restrict User Administrative**
   7. **Print Current Result (Unoffical Tally)**
6. **Help –** This module is needed for the manuals of the system.
7. **About –** This module is included the information whom created the system and about the software.

* CLIENT-SIDE APPLICATION

1. Login Module – This module requires the authentication to use this software, if the user failed three (3) times to log on to the system, the system will be type the PIN number displayed to the screen and log-in again, if the user failed too many attempts, the system will be locked and must contact the administrator. Otherwise, proceed to *Module 1*. This requires IP Address.
2. Main Menu – This module is the first that you see after you log-on. This is composing of the module needed on the system, they are enlisted on the following:
3. **Vote Candidate/s –** This module is required to vote the candidates from the student. It requires the following before you vote:
   * 1. **Student ID**
     2. **Student Name**
     3. **Grade and Section**
     4. **Code Number (Giving from the Proctor or COMELEC of Student Council)**
     + **After the verification, you can vote within the specific time required, if the election ones close, your vote will be *ABSTAINED.***
4. **Choose your Candidate to Vote –** *If the 1.a. is successfully verified;* you can now vote. Make sure that your choosing candidate is fulfilled decide, if your ones confirm it, you can’t it roll back and after that go to COMELEC and have your index finger in the right hand inked, that will prove that you already voted.
5. **Finish** – This module is exited from the voting and start over.
6. **Help –** This module is needed for the manuals of the system.

**3. About –** This module is included the information whom created the system and about the software.

1. **List of Optional Functional Units**
2. **Security** - This module will assure that the system software will not be susceptible to any fraud, or anything that will tamper the votes or the results of the elections.
3. **System Theme Selector –** allows the administrator to change the visual theme of the system.
4. **Application Architecture**

The project is using the three-tier network architecture, which is composed of the presentation or client tier, business logic tier, and the database tier. The presentation or client tier is what the end-users will see and access while the business logic tier is the one that does the processing of the inputs (i.e. registration and votes), and the outputs (i.e. election results) before being transmitted back to the presentation tier. Meanwhile, every data or information that needs to be stored or retrieved is taken care of by the database tier. It serves as the storage for all the data and information that has been entered in the system, which of course, must be kept secure in order to ensure the integrity of the election results and the safety of the information of those people whose data/information are in the database.

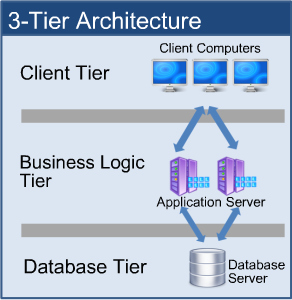


Figure 3.3 Network Specifications

1. **Hardware and Software Specifications**

Any hardware or software specifications e.g. machine type required, operating system and other utilities should be clearly specified for the system to be developed.

1. **Tools and Technologies Used**

The application tools, which are to be used on front and back end of the system to be developed, should be listed. The reasons for these tools should also be enlisted including the host (or development) platform(s), target platform(s), and programming language(s) to be used.