A Mini Project Report

On

ONLINE VOTING SYSTEM

Submitted in partial fulfillment of the

Requirements for the award of degree of

Bachelor of Technology

In

Computer Science and Engineering

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CERTIFICATE

This is to certify that the project entitled **"ONLINE VOTING SYSTEM"** being submitted by **ANAM GOVARDHAN REDDY** bearing the Hall Ticket number **14H61A05J4**, **SREEHITHA REDDY** bearing the Hall Ticket number **14H61A05K8, NISHAATH GULE** bearing the Hall Ticket number **14H61A05K9** and **ANIL KUMAR** bearing hall ticket number **14H61A05K0** in partial fulfillment of the requirements for the award of the degree of the **Bachelor of Technology** in **Computer Science and Engineering** to **Anurag Group of Institutions (Formerly CVSR College of Engineering)** is a record of bonafide work carried out by them under my guidance and supervision from May 2017 to Oct 2017.

The results presented in this project have been verified and found to be satisfactory. The results embodied in this project report have not been submitted to any other University for the award of any other degree or diploma.

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DECLARATION

We hereby declare that the project work entitled "**ONLINE VOTING SYSTEM**" submitted to **Anurag Group of Institutions (Formerly CVSR College of Engineering)** in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology (B.Tech)** in Computer Science and Engineering is a record of an original work done by us under the guidance of Ms.Srilatha and this project work have not been submitted to any other university for the award of any other degree or diploma.

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ABSTRACT

Online Voting System is a web based system that facilitates the running of elections and surveys online. Users are individuals who interact with the system. All user interaction is performed remotely through the user's web browser. Users are provided with an online registration form before voting user should fill online form and submit details, using the provided details such as email and password information user can login and vote. If conditions are not correct entry will be canceled. It contains two level of user's administrator level and voter level where each level has different functionality.

1. INTRODUCTION

1.1 PURPOSE

Online Voting System aims to reduce the complexity and overall cost of the election process. Using this platform the voters can vote for their intended party/individual in spite of their absence from the particular locality. The effort that the administrators of election put in is greatly reduced and this system makes it extremely convenient for the administrators to monitor and declare the results of the election swiftly and efficiently.

This platform will provide a much secure and easier way to conduct elections which usually are very hectic and time consuming events. The time overheads are minimized which will potentially save huge amounts of resources and money that are generally required for conducting an election. The online implementation of this system will provide better opportunities for people to vote for their candidate which will ultimately be a greater good for the entire community. Sometimes, for various reasons, people will be unable to take part in voting and this system is a perfect solution to help those and everyone else to participate in the election. Not only does this platform save time and resources but by using this election can be managed in a more effortless fashion and will be just a secure as other voting processes.

1.2 SCOPE

Online Voting System offers a tremendous scope as it can be used for an election of any scale, be it a smaller election involving a few people or a huge elections catering for large number of people. Its applications are varied and will cater to all the needs that any of the election processes may incur. With its user friendly design and extremely secure operation, it will provide a service that most of the users will be charmed to utilize.

1.3 FEATURES

The following are the features provided by this platform,

- Users can vote for their candidate
- Users can update their profile
- Results can be displayed swiftly

2. EXISTING SYSTEM

In the current scenario, people have to physically go to a location to participate in the election and wait in long lines to vote. The organizations have to dedicate a lot of resources, money and personnel to conduct a successful. It takes up a lot of time and effort to efficiently manage things optimally. Sometimes physical records are used to collect and store the data which makes the sensitive information prone to unintentional human errors. This results in loss of important data which is highly difficult to retrieve again.

Disadvantages:

- It is a long and time consuming process.
- Involves a lot of resources which can be used elsewhere.
- Due to some unforeseen circumstances, not all people can be physically present to cast their vote.

3. PROBLEM STATEMENT

The discussion of e-democracy and online voting have been frequently discussed and debated upon since the drastic rise of the internet. There is no faster tool at our disposal than the internet and it will be an utter disservice if it is not used to its optimum extent. It is only logical to transform every operation that is carried out physically right now into an online system. Online Voting System is an elegant solution to the problems we face in the current electoral system and it needs to be addressed soon. This system renders all the problems that the current system has obsolete and it grants a new way of conducting this process. Online voting could reduce cost, time and make voting more convenient.

4. PROPOSED SYSTEM

This online voting system renders the entire process of conducting an election digital which inherently makes the tasks easy, efficient and effortless. The interface provided to the users will serve as a competent medium to perform all the election related operations, such as enrolling the candidates, casting the votes and displaying the results of the election, with great convenience. The users can participate in the election without having to be physically present at the location to cast their vote. Since the data is collected and processed digitally, the scope of human errors becomes minute thereby providing a swift and accurate service to everyone.

Advantages:

- It makes the entire process efficient, convenient and hassle-free.
- It saves a lot of time.
- It ensures security of the data and processes.
- It renders the entire process simpler.

5. TECHNOLOGIES USED

PHP is used as one of the prominent Programming languages for writing the code for this project. It is a server scripting language and a powerful tool for making dynamic and interactive web pages.

PHP is a widely-used, free, and efficient alternative to competitors such as Microsoft's ASP.

Hardware and Software Requirements

a) Software Requirements

- Client-side Technologies: Html, JavaScript, CSS.
- Server-side Technologies: PHP
- Web Server: Apache Tomcat Server7.0
- Database: MySQL
- Operating System : Windows 7/8/9/10
- Tools :Wamp Server (or) Xamp Server

b) Hardware Requirements:

- Hard disk : Minimum of 10GB and above
- RAM : Minimum of 512MB and above
- Processor : Intel i5

6. SOFTWARE REQUIREMENT SPECIFICATION

6.1 SRS:

Software Requirement Specification (SRS) is the starting point of the software developing activity. As system grew more complex it became evident that the goal of the entire system cannot be easily comprehended. Hence the need for the requirement phase arose. The software project is initiated by the client needs. The SRS is the means of translating the ideas of the minds of clients (the input) into a formal document (the output of the requirement phase.)

The SRS phase consists of two basic activities:

6.1.1 Problem/Requirement Analysis:

The process is order and more nebulous of the two, deals with understand the problem, the goal and constraints.

6.1.2 Requirement Specification:

Here, the focus is on specifying what has been found giving analysis such as representation, specification languages and tools, and checking the specifications are addressed during this activity.

The Requirement phase terminates with the production of the validate SRS document. Producing the SRS document is the basic goal of this phase.

6.1.3 Document Conventions:

We have used Times New Roman (text size 12).Bold Font is used for Main Headings (text size of 16). Bold font is used for sub headings (text size of 14).

Font: Times New Roman

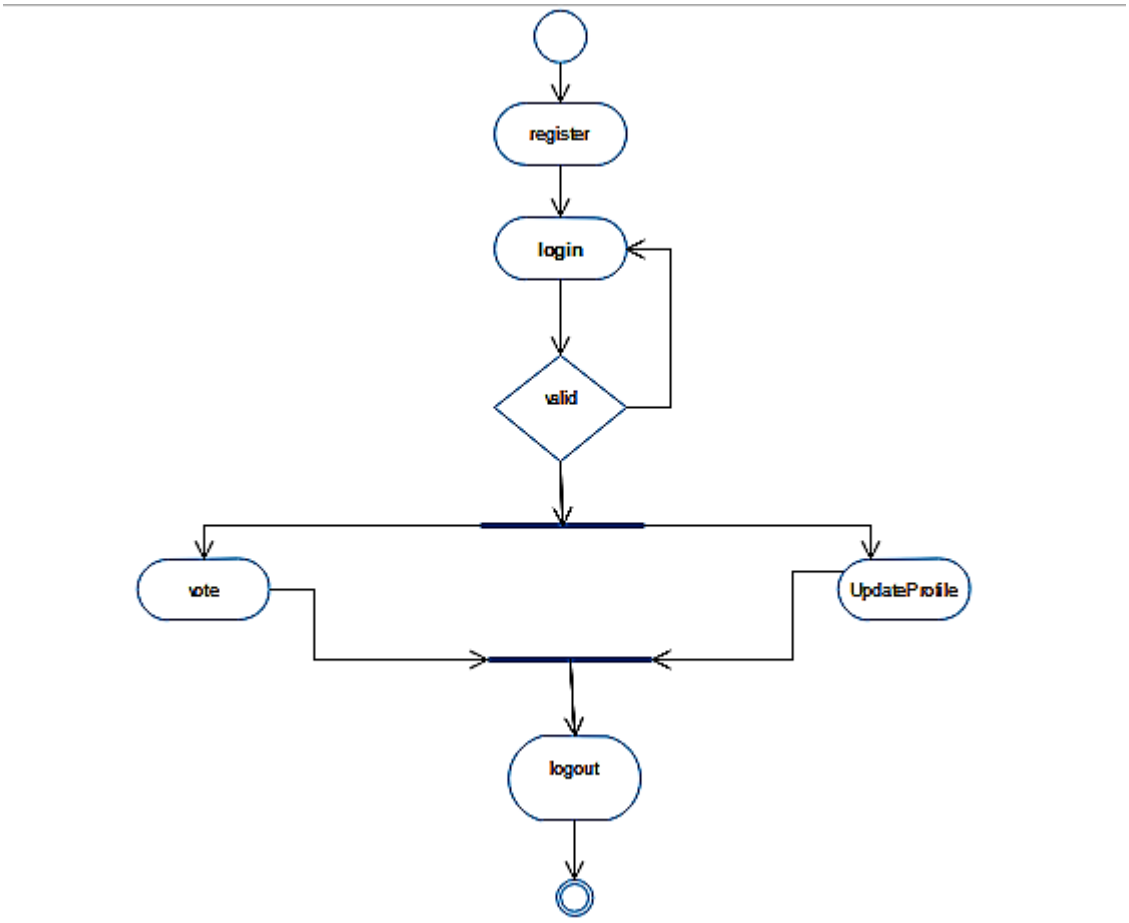
Main Heading: Bold Font

6.2. Actors:

6.2.1. Voter

A person who votes or has the right to vote at an election, in this case a user whose credentials are valid and also given privileges to access information and update information

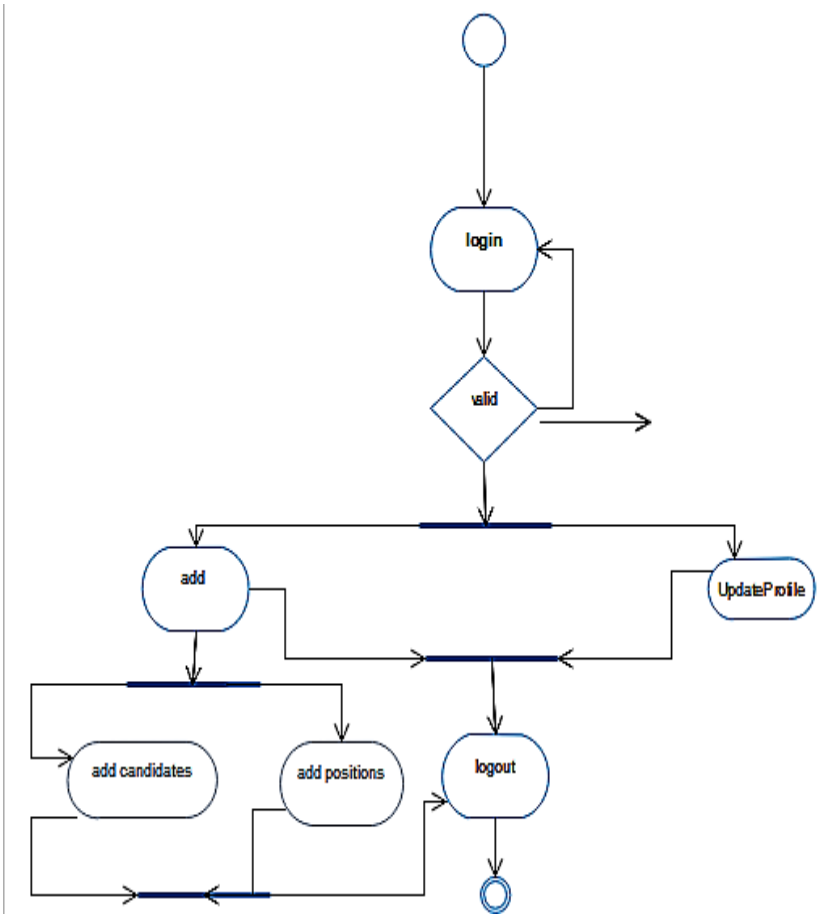
1. **Voter Activity Diagram**



6.2.2. Admin

A person responsible for running a System who has special privileges including the privileges of Voter –the special privileges include adding of candidates and positions, assigning candidates to positions and calculating the result after the voting session completion.

2. Admin Activity Diagram



7. ARCHITECTURE

7.1 Software Development Life Cycle (SDLC)

7.1.1 SDLC Methodologies

This document plays a vital role in the Software Development Life Cycle (SDLC) as it describes the complete requirement of the system. It means for use by developers and will be the basic during testing phase. Any changes made to the requirements in the future will have to go through formal change approval process.

7.1.2 Spiral Model

Spiral Model was defined by Barry Boehm in his 1988 article, "A spiral Model of Software Development and Enhancement. This model was not the first model to discuss iterative development. The spiral model is similar to the incremental model, with more emphasis placed on risk analysis. The spiral model has four phases: Planning, Risk Analysis, Engineering and Evaluation. A software project repeatedly passes through these phases in iterations (called Spirals in this model). The baseline spirals, starting in the planning phase, requirements are gathered and risk is assessed. Each subsequent spiral builds on the baseline spiral.

As originally envisioned, the iterations were typically 6 months to 2 years long. Each phase starts with a design goal and ends with a client reviewing the progress thus far. Analysis and engineering efforts are applied at each phase of the project, with an eye toward the end goal of the project.

The steps for Spiral Model can be generalized as follows:

- The new system requirements are defined in as much details as possible. This usually involves interviewing a number of users representing all the external or internal users and other aspects of the existing system.
- A preliminary design is created for the new system.

- A first prototype of the new system is constructed from the preliminary design. This is usually a scaled-down system, and represents an approximation of the characteristics of the final product.
- A second prototype is evolved by a fourfold procedure:
    1. Evaluating the first prototype in terms of its strengths, weakness, and risks.
    2. Defining the requirements of the second prototype.
    3. Planning and designing the second prototype.
    4. Constructing and testing the second prototype.
- At the customer option, the entire project can be aborted if the risk is deemed too great. Risk factors might involve development cost overruns, operating-cost miscalculation, or any other factor that could, in the customer's judgment, result in a less-than-satisfactory final product.
- The existing prototype is evaluated in the same manner as was the previous prototype, and if necessary, another prototype is developed from it according to the fourfold procedure outlined above.
- The preceding steps are iterated until the customer is satisfied that the refined prototype represents the final product desired.
- The final system is constructed, based on the refined prototype.
- The final system is thoroughly evaluated and tested. Routine maintenance is carried on a continuing basis to prevent large scale failures and to minimize down time.

The following diagram shows how a spiral model acts like:

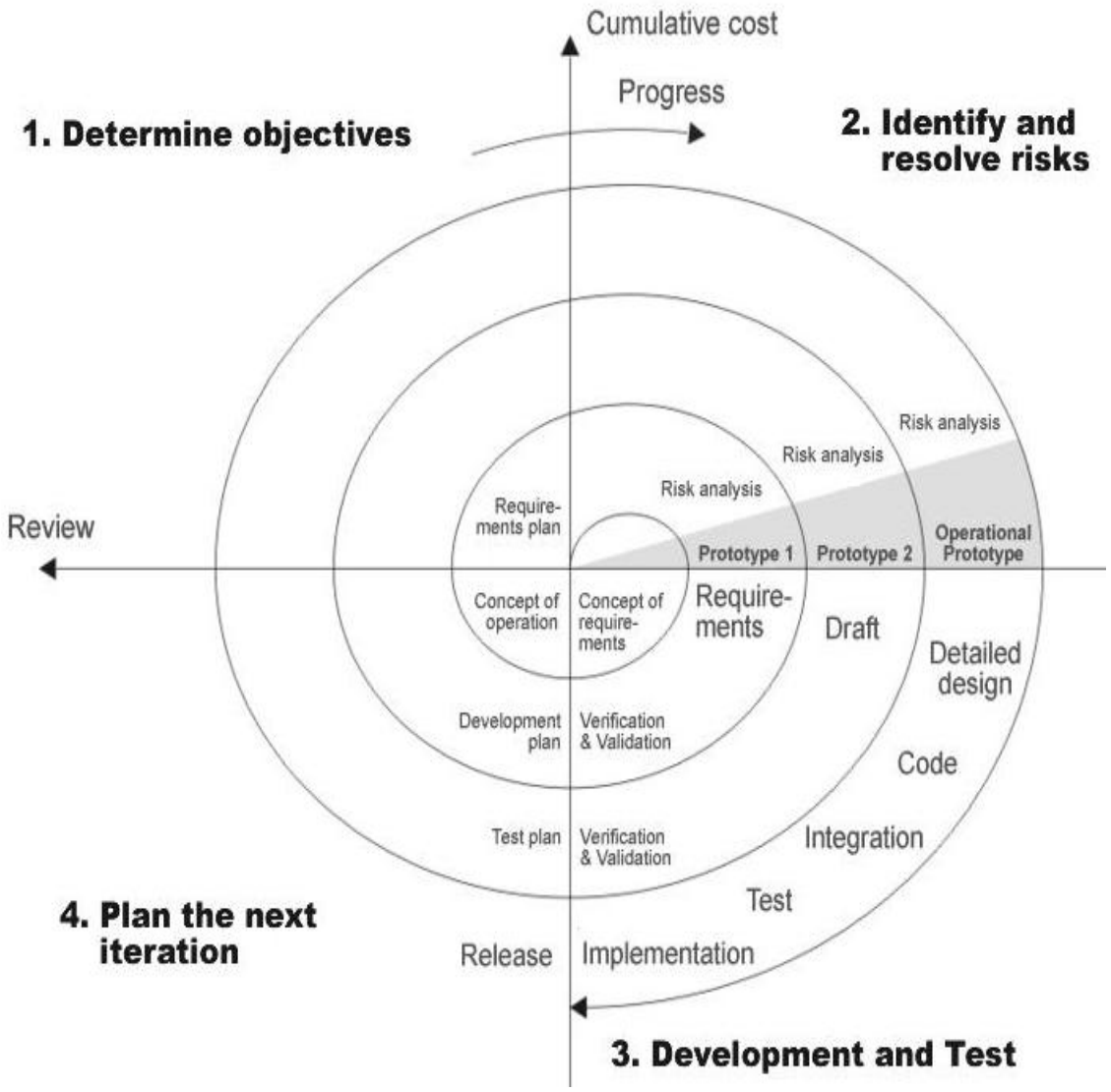


Figure 6.1 Spiral Model

- **Planning Phase:** Requirements are gathered during the planning phase. Requirements like 'BRS' that is 'Business Requirement Specifications' and 'SRS' that is 'System Requirement specifications'.

- **Risk Analysis:** In the **risk analysis phase**, a process is undertaken to identify risk and alternate solutions. A prototype is produced at the end of the risk analysis phase. If any risk is found during the risk analysis then alternate solutions are suggested and implemented.

- **Engineering Phase:** In this phase software is **developed**, along with testing at the end of the phase. Hence in this phase the development and testing is done.

- **Evaluation phase:** This phase allows the customer to evaluate the output of the project to date before the project continues to the next spiral.

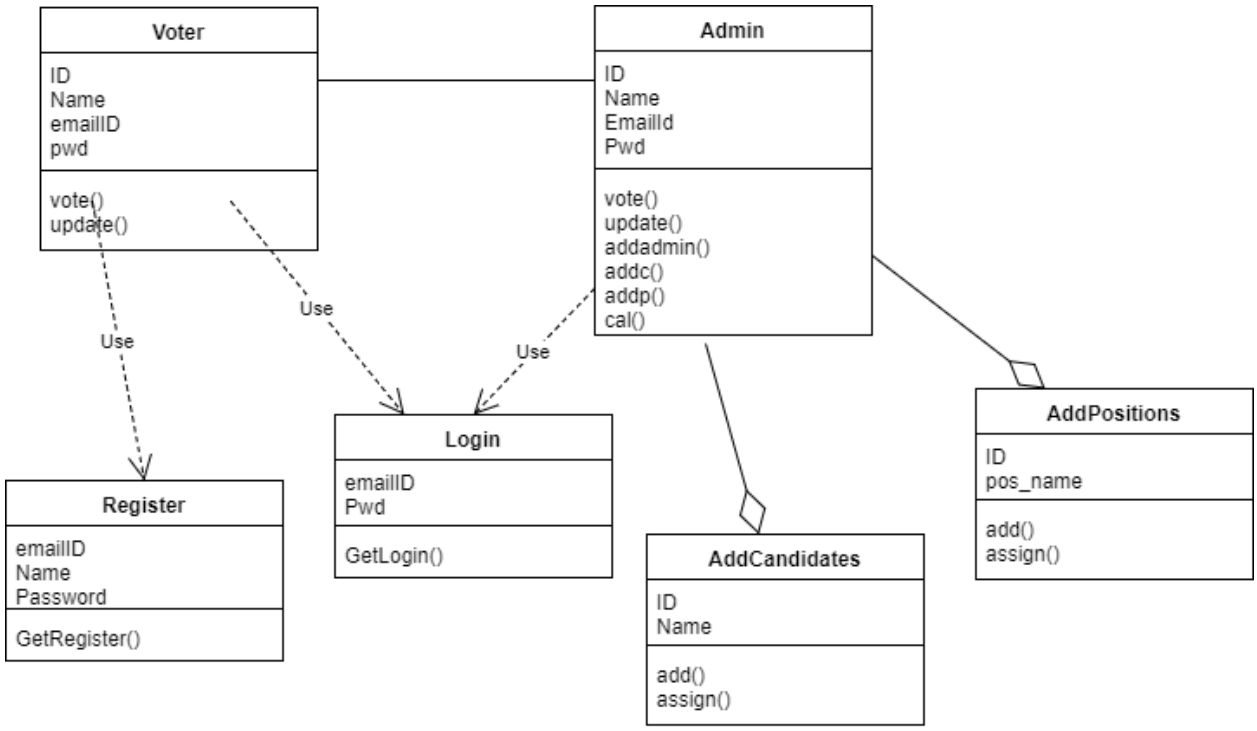
8. UML Diagrams

The Unified Modeling Language (UML) is a standard language for writing software blue prints. The UML is a language for

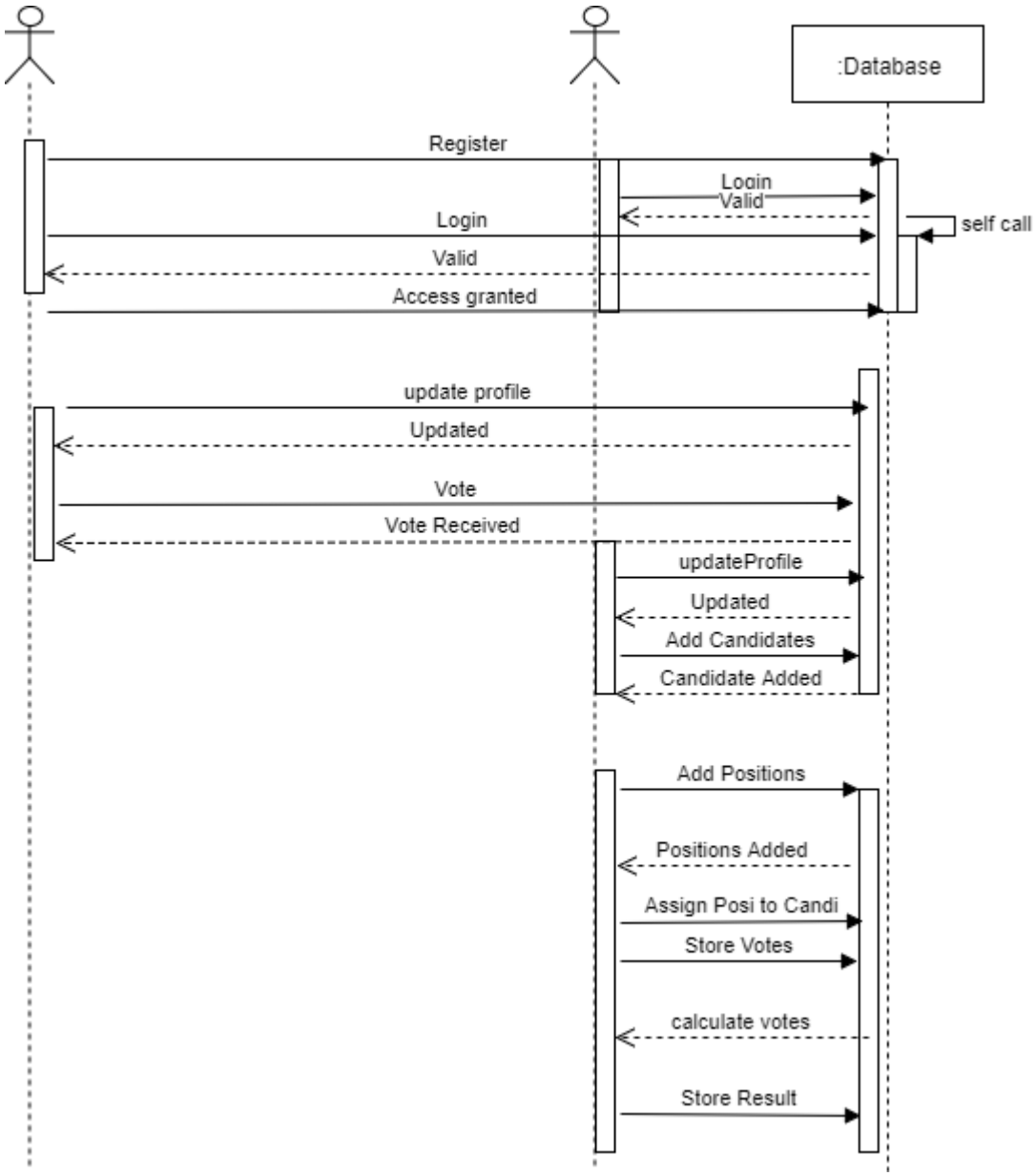
- Visualizing
- Specifying
- Constructing
- Documenting the artifacts of a software intensive system.

The UML is a language which provides vocabulary and the rules for combining words in that vocabulary for the purpose of communication. A modeling language is a language whose vocabulary and the rules focus on the conceptual and physical representation of a system. Modeling yields an understanding of a system.

8.1. Class Diagram



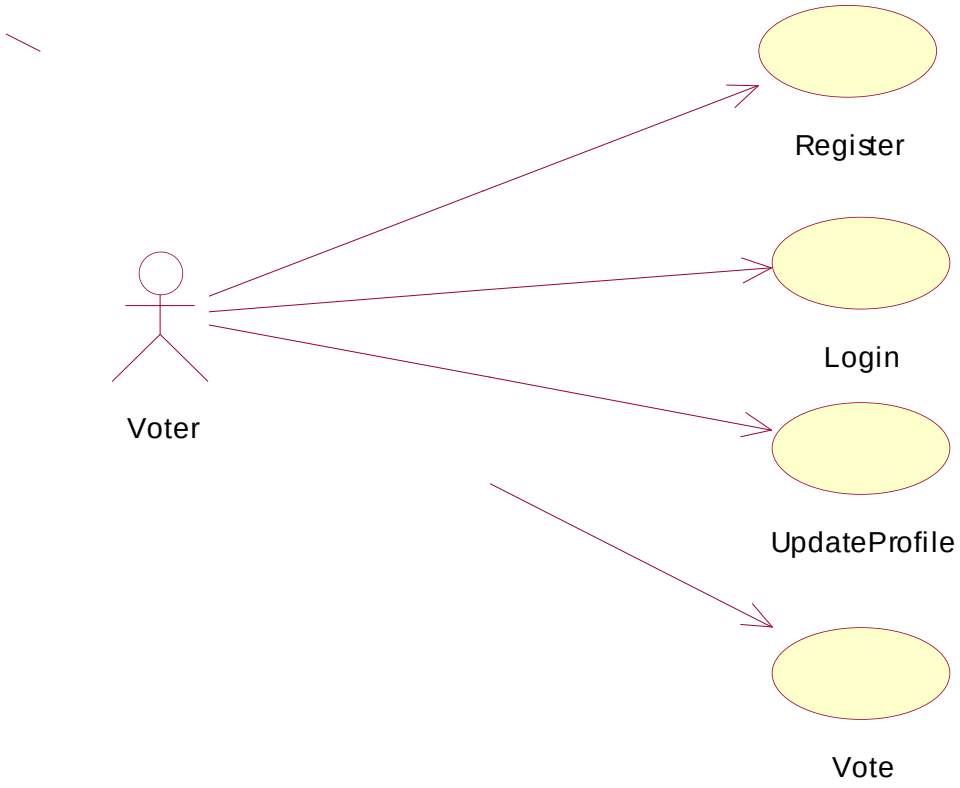
8.2. Sequence Diagram



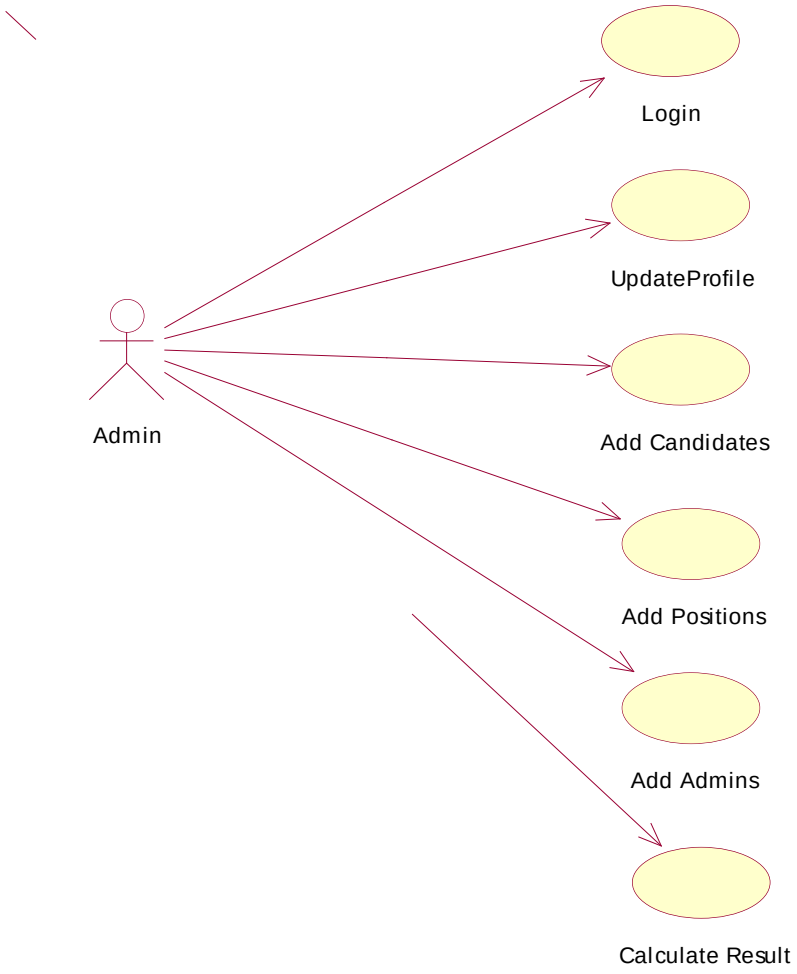
9. USE CASE

In software and systems engineering, a use case is a list of actions or event steps typically defining the interactions between a role (known in the Unified Modeling Language as an actor) and a system to achieve a goal. The actor can be a human or other external system.

9.1. Use Case Diagram Voter:



9.2. Use Case Diagram Admin:



9.3. Parameters:

9.3.1. Voter Parameters:

1. Default.php
2. Index.html
3. Index.php
4. Registeracc.php

5. Save.php
6. Student.php
7. Vote.php
8. Manage-profile.php
9. Connection.php
10. Checklogin.php
11. Access-denied.php

9.3.2. Admin parameters:

1. Login.html
2. Index.php
3. Logout.php
4. Manage-admins.php
5. Positions.php
6. Refresh.php
7. Results.php
8. Checklogin.php
9. Candidates.php
10. Admin.php
11. Access-denied.php

9.4. User Functionalities:

9.4.1. Voter Functionalities:

1) Personal details

2) Candidate details

3) Selection of positions

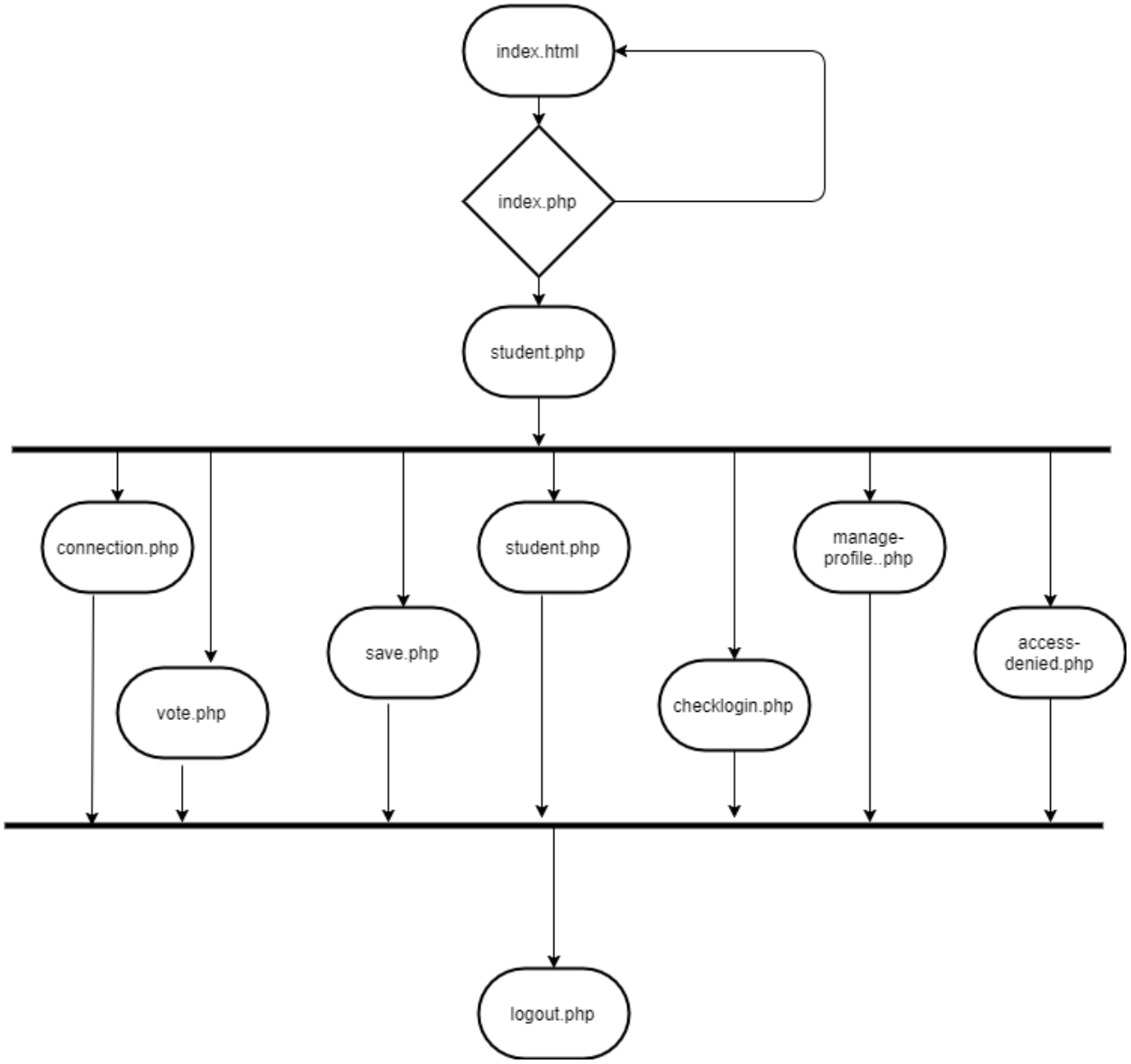
4) Vote

9.4.2. Admin Functionalities:

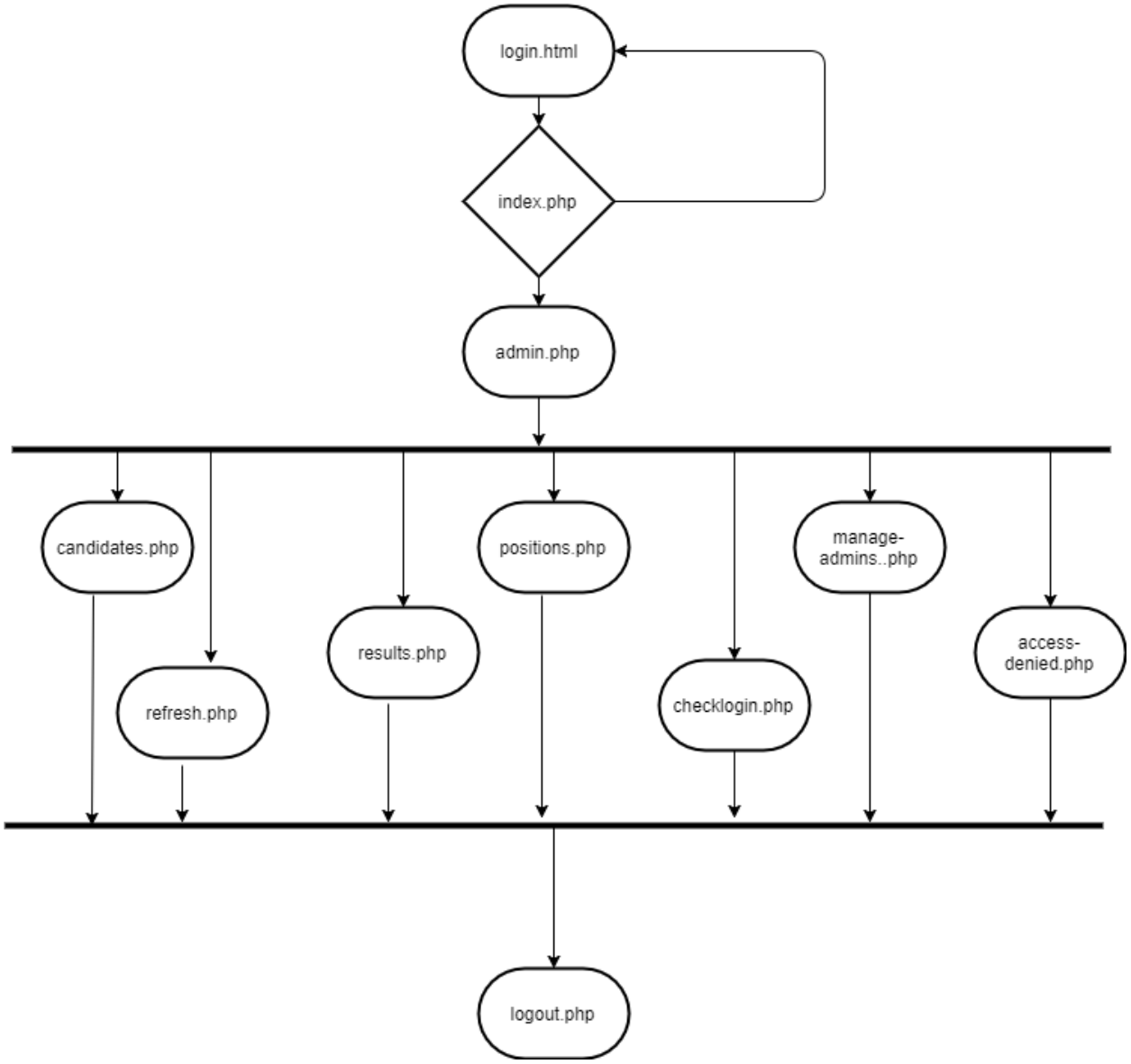
1. Personal details
2. Add Candidates & Positions
3. Remove Candidates & Position
4. Assign Candidates to Positions
5. Update profile
6. Calculate Result

9.5. Flow Charts:

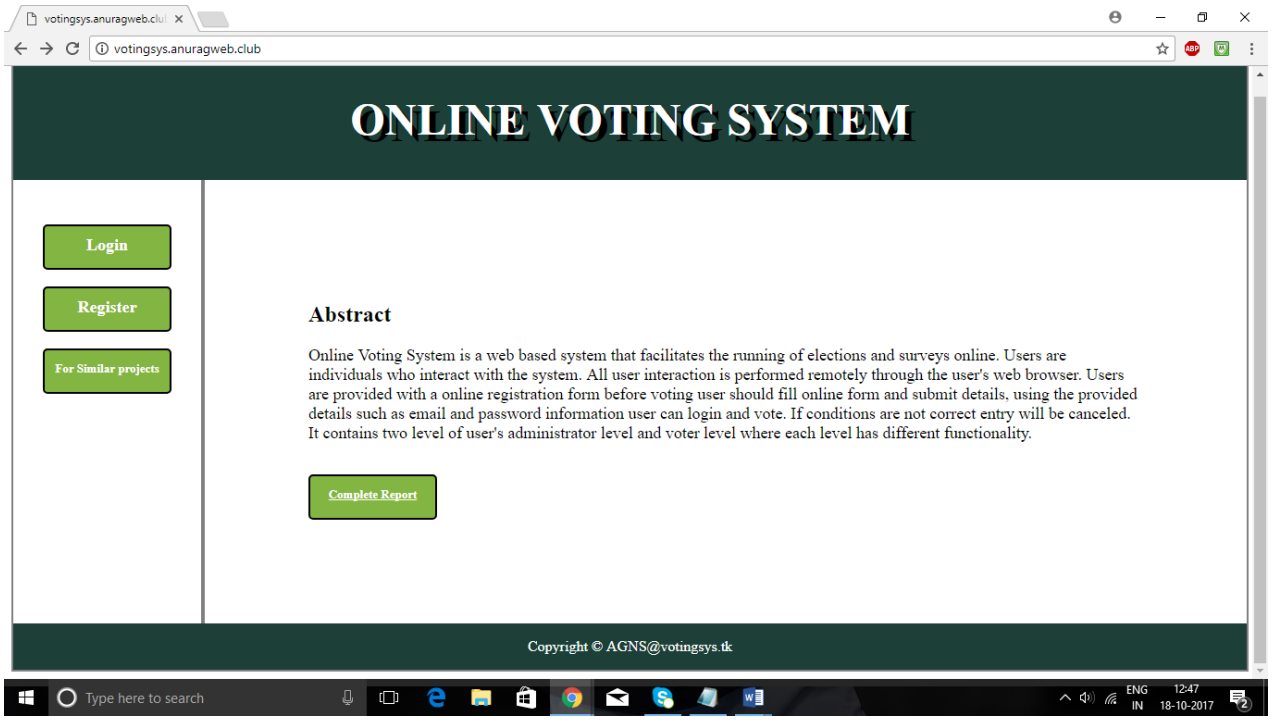
9.5.1. Voter Flow Chart:



9.5.2. Admin Flowchart

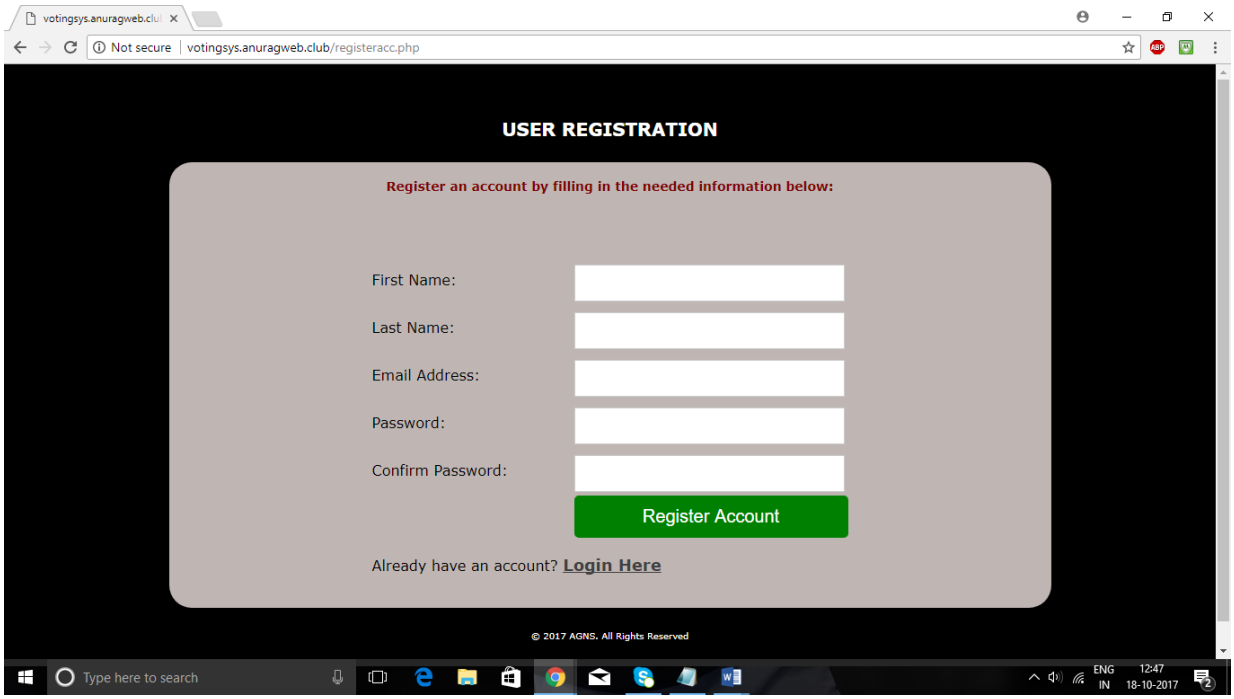


10. USER MANUAL



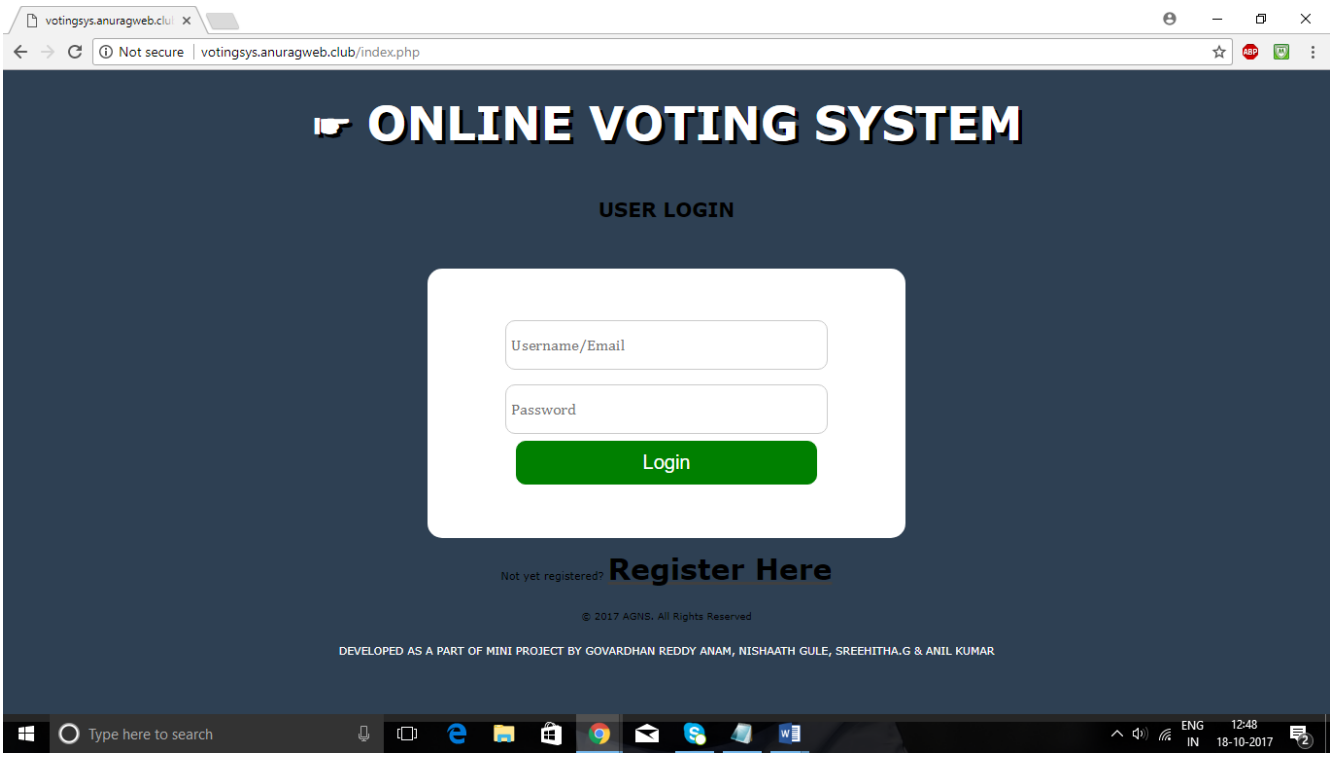
[Figure 10.1- HOME PAGE]

Open the website by typing www.votingsys.anuragweb.club Choose from above choices whether to login or register



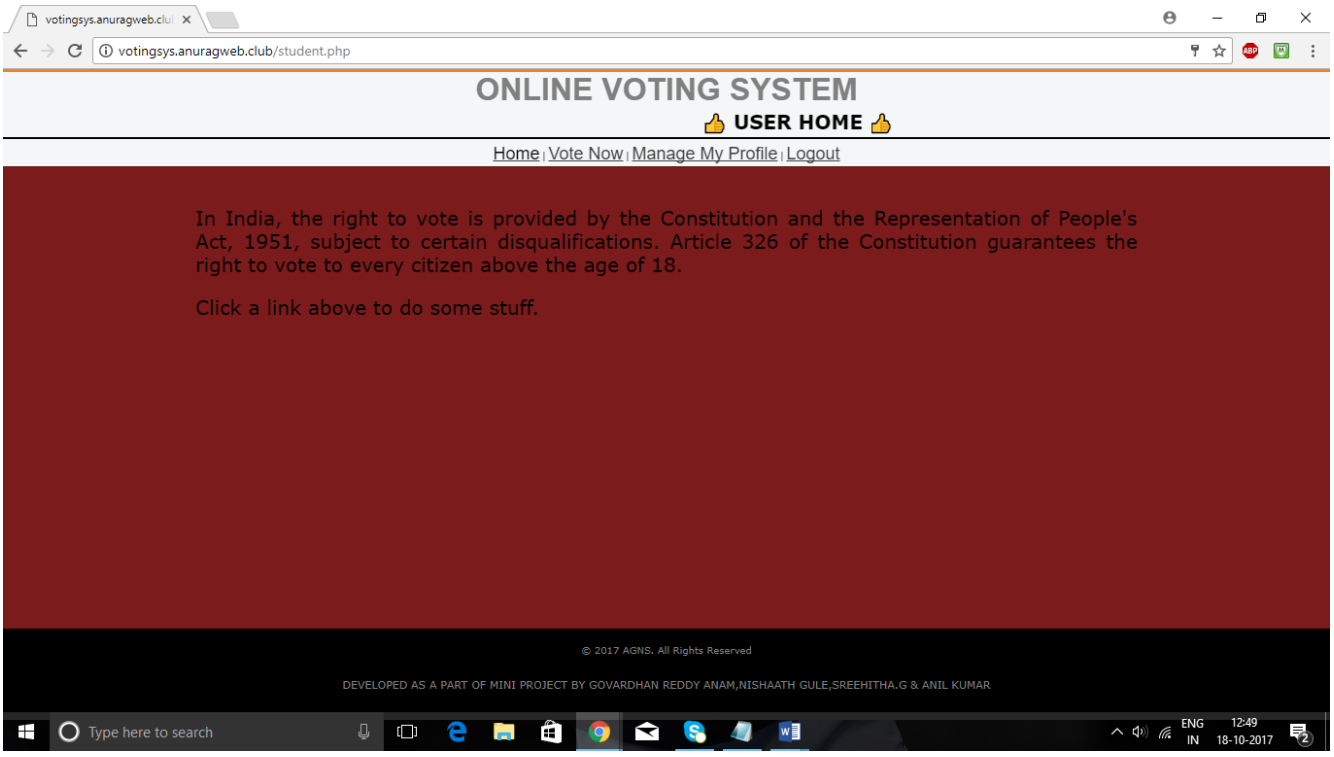
[Figure 10.2 -REGISTRATION PAGE]

Open registration page if you are a new user



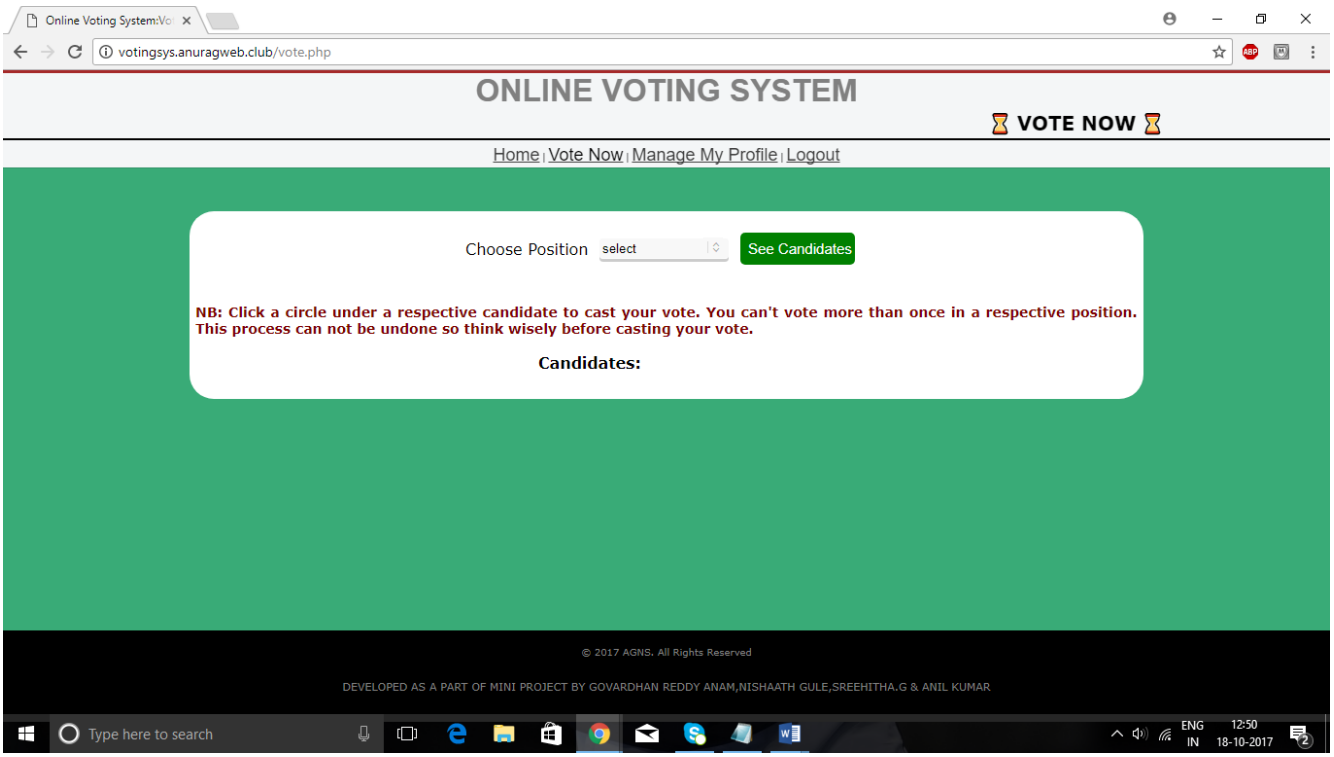
[Figure10.3-LOGIN PAGE]

Open login page if you are a existing user enter valid credentials to access



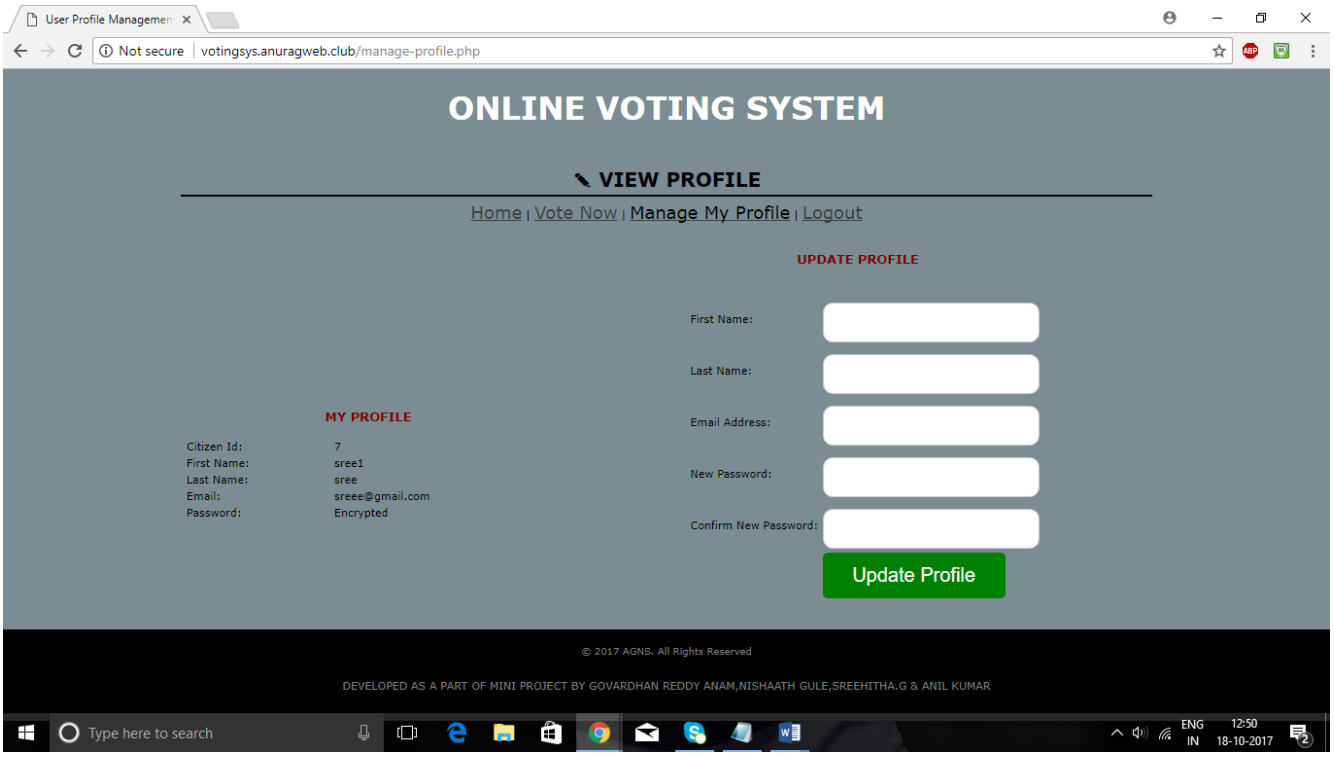
[Figure 10.4-VOTING HOME PAGE]

Upon log in follow the instructions written on home page



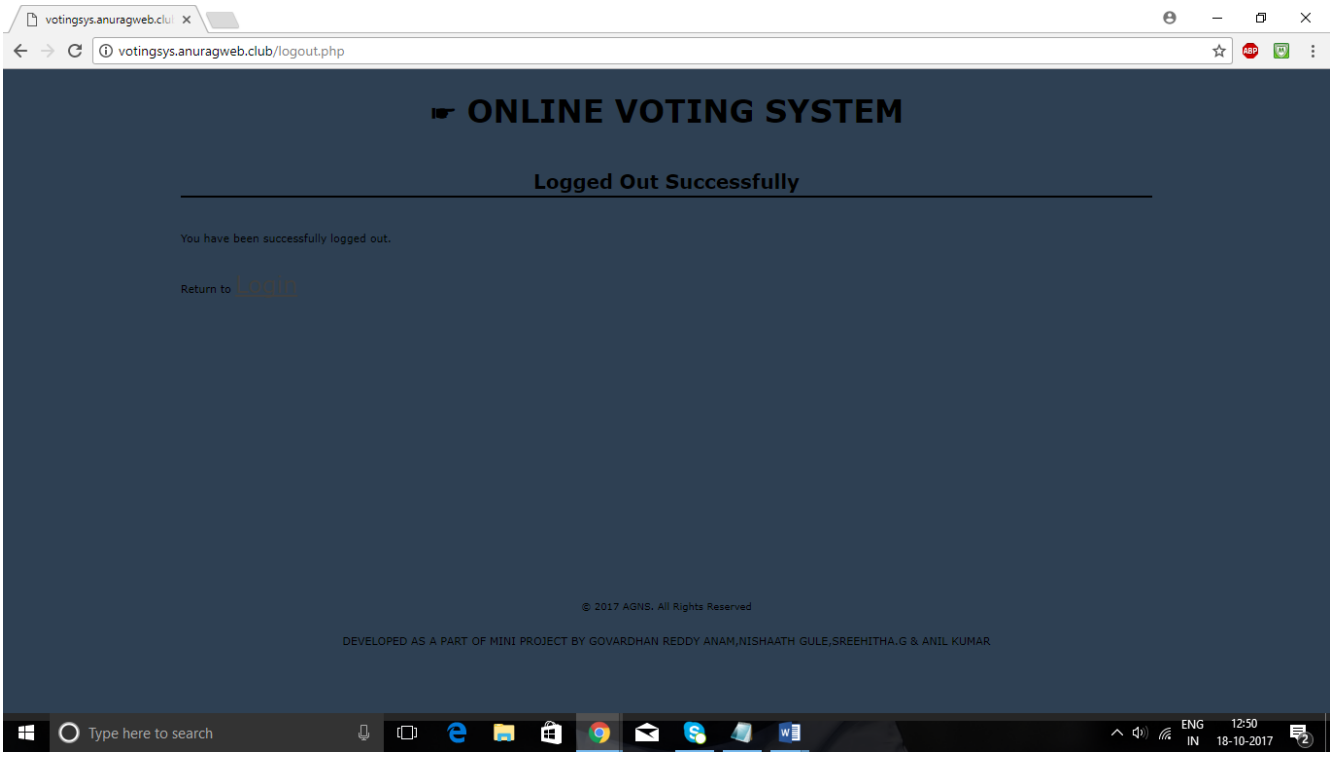
[Figure 10.5-ONLINE VOTING SYSTEM PAGE]

To vote click on vote now and choose positions to display its candidates and among them vote for desired candidates of your choice



[Figure 10.6-MANAGE MY PROFILE PAGE]

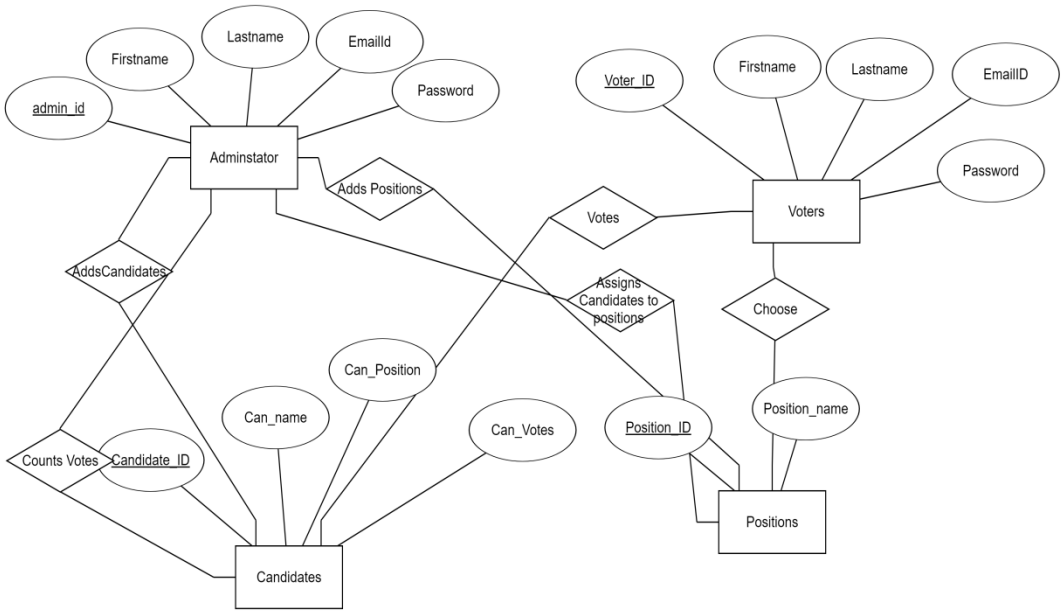
Click manage-profile to update your profile



[Figure 10.7-LOGOUT PAGE]

Click “logout” to logout of your session

10.1. Entity-Relationship Diagram (Database)



10.2 Database Table Schemas:

10.2.1 Voter Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**member_id** 🔑	int(5)			No	*None*		AUTO_INCREMENT
2	**first_name**	varchar(45)	latin1_swedish_ci		No	*None*		
3	**last_name**	varchar(45)	latin1_swedish_ci		No	*None*		
4	**email**	varchar(45)	latin1_swedish_ci		No	*None*		
5	**password**	varchar(45)	latin1_swedish_ci		No	*None*		

10.2.2 Candidate Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**candidate_id**	int(5)			No	*None*		AUTO_INCREMENT
2	**candidate_name**	varchar(45)	latin1_swedish_ci		No	*None*		
3	**candidate_position**	varchar(45)	latin1_swedish_ci		No	*None*		
4	**candidate_cvotes**	int(11)			No	*None*		

10.2.3 Positions Table

position_id	position_name
12	president
13	vice-president
14	seceratary

10.2.4 Admin Table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**admin_id**	int(5)			No	*None*		AUTO_INCREMENT
2	**first_name**	varchar(45)	latin1_swedish_ci		No	*None*		
3	**last_name**	varchar(45)	latin1_swedish_ci		No	*None*		
4	**email**	varchar(45)	latin1_swedish_ci		No	*None*		
5	**password**	varchar(45)	latin1_swedish_ci		No	*None*		

11. TESTING

11.1 Introduction

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub-assemblies, assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

11.2 Types of Tests

11.2.1 Functional Testing

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation and user manuals. Organization and preparation of functional tests is focused on requirements, key functions or special test cases. In addition systematic coverage pertaining to identify Business process flows, data fields, predefined processes and successive processes must be considered for testing. Before functional testing is complete, additional tests are identified and the effective value of current tests is determined.

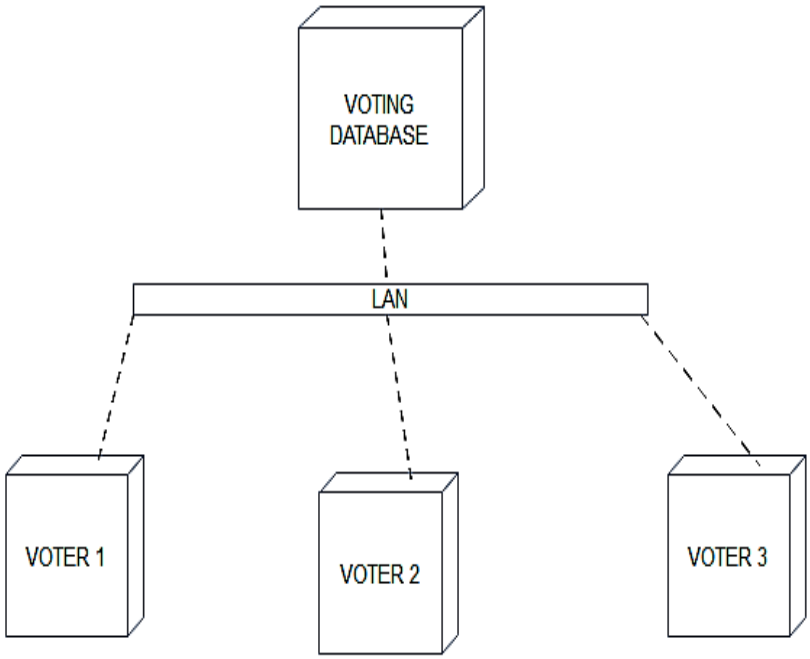
11.2.2 Unit Testing

Unit testing is essentially for the verification of the code produced during the coding phase and the goal is test the internal logic of the module/program. In the Generic code project, the unit testing is done during coding phase of data entry forms whether the functions are working properly or not. In this phase all the drivers are tested they are rightly connected or not. Unit testing is usually conducted as part of a combined code and unit test phase of the software lifecycle, although it is not uncommon for coding and unit testing to be conducted as two different phases.

11.3 TEST CASES

TEST CASE ID	TEST CASE NAME	TEST CASE DESCRIPTION	INPUT	EXPECTED OUTPUT STATUS	ACTUAL OUTPUT STATUS
01.	Authorization Test	Login Page (Admin And User) And Registration(User)	Registration And Login Details	PASS	PASS
02.	Profile Retrieval And Edit	Displaying Profile Details And Providing Edit Form	Desired Profile Details	PASS	PASS
03.	Voting Process	Retrieving Vote Input From User And Calculating The Number Of Votes	User 'S Vote	PASS	PASS
04.	Adding Administrators And Profile Edit(Admin)	Displaying Profile Details , Providing Edit Form And Add Form(Admin)	Admin's Input	PASS	PASS
05.	Adding Candidates And Assigning Positions To Candidates	Adding Candidate Name And Assigning Positions To Candidates Added	Admin's Input	PASS	PASS

12. DEPLOYMENT DIAGRAM



13. CONCLUSION AND FURTHER ENHANCEMENTS

Online Voting System has several applications that can save a lot of time, effort and capital. With its easy to use and crystal clear interface, any person would be able to use it efficiently. There is a lot of scope to make several future enhancements to the platform. Currently, it is developed as a Website, but it can be expanded to IOS and Android mobile applications which will broaden the spectrum of users that can use its services. The secure architecture will minimize the malpractices that occur during an election, providing accurate results. It will serve as a great tool for any type of electoral process, be it a large one involving huge numbers of people or a small one involving only a handful of people. The applications of this project will provide a great service to its users, making things convenient and simple.

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