Project Phase III Report

On

ONLINE VOTING SYSTEM

Submitted for the requirement of

Project course

BACHELOR OF ENGINEERING
COMPUTER SCIENCE & ENGINEERING

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ABSTRACT

The project's major goal is to create an online voting system that is both secure and user-friendly. In terms of safety and security, the voting issue remains a major concern. This system is concerned with the design and implementation of a web-based voting system that uses fingerprint and aadhaar cards to give high performance and security.

The planned Online Voting System allows voters to scan their fingerprints, which are then compared to images stored in a database collected from the government's Aadhaar card database. The voting mechanism is simplified because all users must log in using their Aadhaar card number and vote for their preferred candidates. The use of a biometric fingerprint provides sufficient security, reducing the number of dummy votes.

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Features/ characteristics identification

Many private organizations have welcomed the shift to digital voting systems- especially when online voting boasts many advantages, inclusive of accessibility, ease of use, security, reduced costs, accuracy, and expanded turnout. For corporations searching to use online voting, it's necessary to understand not each and every service gives all the critical points to carry out a secure and reliable contest. Some features/ characteristics of our online voting system are below mentioned.

- Nominations Services
- Ballot Features
- Full-Service Management
- Social Media Integration
- Security
- Tabulation

Constraints Identification

There are 4 major constraints in project management to consider.

1. Time: We'll try to submit our project before the due date, otherwise, make sure we will submit it on the day of due date.

2. Cost:
   - The preliminary fees of conducting an online election can be relatively high.
   - Many online election builders will cost a rate to a contracting entity calculated by voters using the service.
   - Also, the price for database offerings will be varying as per subscription and company to company like Microsoft Azure, Amazon's AWS, XAMPP, etc.
   - All hardware prices will be described as per the contract or may be furnished by the organization.
   - Salary of team members as per contract.

3. Scope:
   - Saves time and reduces human intervention.
   - No one can cast votes on behalf of others and multiple times.
   - No fraud vote can be submitted.
   - The technology makes life easier, already several societies like IEEE moved to online voting, soon others will join.

4. Benefits:
   - Eases vote management.
   - Save time and money
   - Votes are protected, no fraud vote can be submitted through online system.
   - The system can be used anytime and from anywhere by the Voters.

Analysis of features and finalization subject to constraints

- **Nominations Services-** The chosen online voting provider should offer nominations services, which streamlines the process of selecting candidates before the election. Members can easily nominate someone through online petitions or simple forms that only require an email address. The service will include application assistance, the ability to upload pertinent information, and opportunities for review.

- **Ballot Features-** Among the most critical items in an election is an easy-to-understand ballot. A reputable voting management agency should offer customizable online ballots that meet your organization's needs. These ballots will include the number of open positions, candidate biographies and pictures, and an option for write-in candidates. Depending on what's being decided in an election, ballots may include space for specific issues or amendments, the choice to abstain, options for a quorum or proxy, and the attachment of additional documents. It will also include the organization's logo and brand colors.

- **Full-Service Management-** It's crucial for online voting service to provide a seamless election experience, so members of the organization shouldn't have to lift a finger, except to participate in the vote. The company you partner with should set up and manage the election from the nominations stage to the final tabulation and analysis process. The service will also provide 24/7 technical support to the organization and individual voters should they have trouble accessing the ballots.

- **Social Media Integration-** A secure election vendor will offer this integration once the voting process is complete. Once a member completes their ballot, they'll be redirected to a page containing a "Thank You" message and social media icons for LinkedIn, Face book, or Twitter. If they click on these buttons, they can share that they've successfully cast their ballot and encourage fellow members to do the same.

- **Security-** Along with the ballots, security should always be a top priority. This means you will engage a service provider that offers a wide range of protection options. Each member should only be allowed to vote once through the software and ballots should remain secret. Full user authentication will be done before casting a vote with the registering of the user's national ID, voter ID, and other important documents.

- **Tabulation-** A comprehensive election feature will ensure organizations have access to tabulation so they can view results whenever they want.

Problem statement:

The online voting system is the system implemented to make the voting system easy for both polling and also for the administrator to view and check the result for each area individually. Here the voting is done anywhere with in spite of the area in which they reside.

The voters or the administrator can login only if they already have a user id and password. New user can be only created by the administrator after going through certain authentication process. The voter can login with his user id only if he has not casted the vote already. If he has already casted the vote the voter status is changed to voted and he cannot login with that user id unless the administrator refreshes the voting system.

The administrator controls all parts of the online voting system except the vote casting part which is restricted to the voters only. The administrator is the only one who can create new voter. The administrator is the soul controller of the online voting system. He can create new nominees for the election and he can view the individual election status for each locality. The graphs are enabled to show the election status easily. So it's important to be neutral as an administrator for a fair election, which is the same thing that is done by the election commission of India during the on ground elections of any sort.
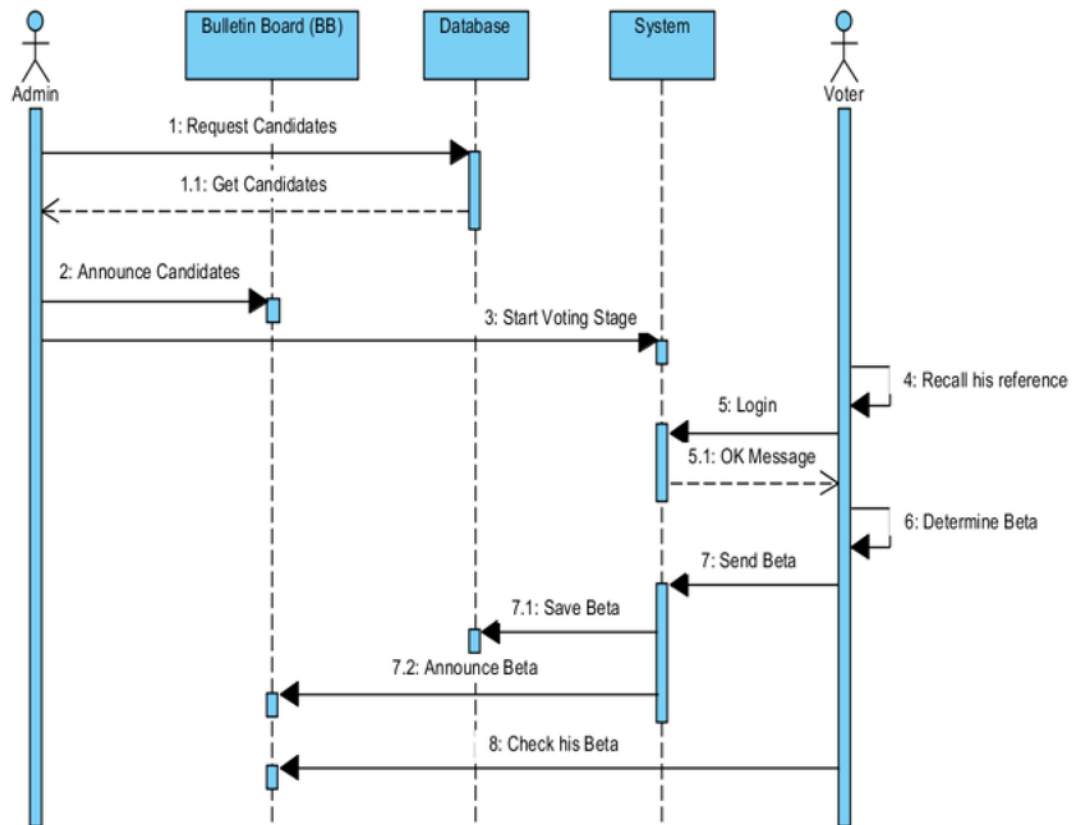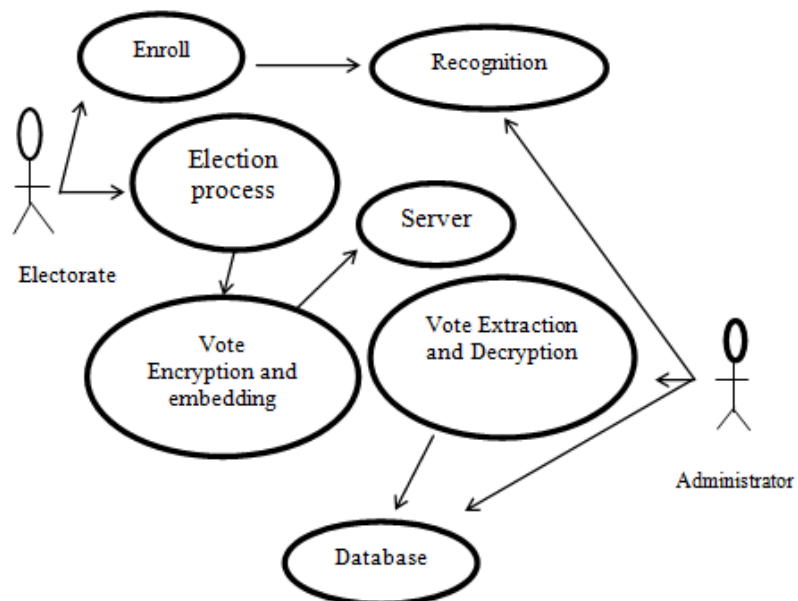
Gantt Chart:
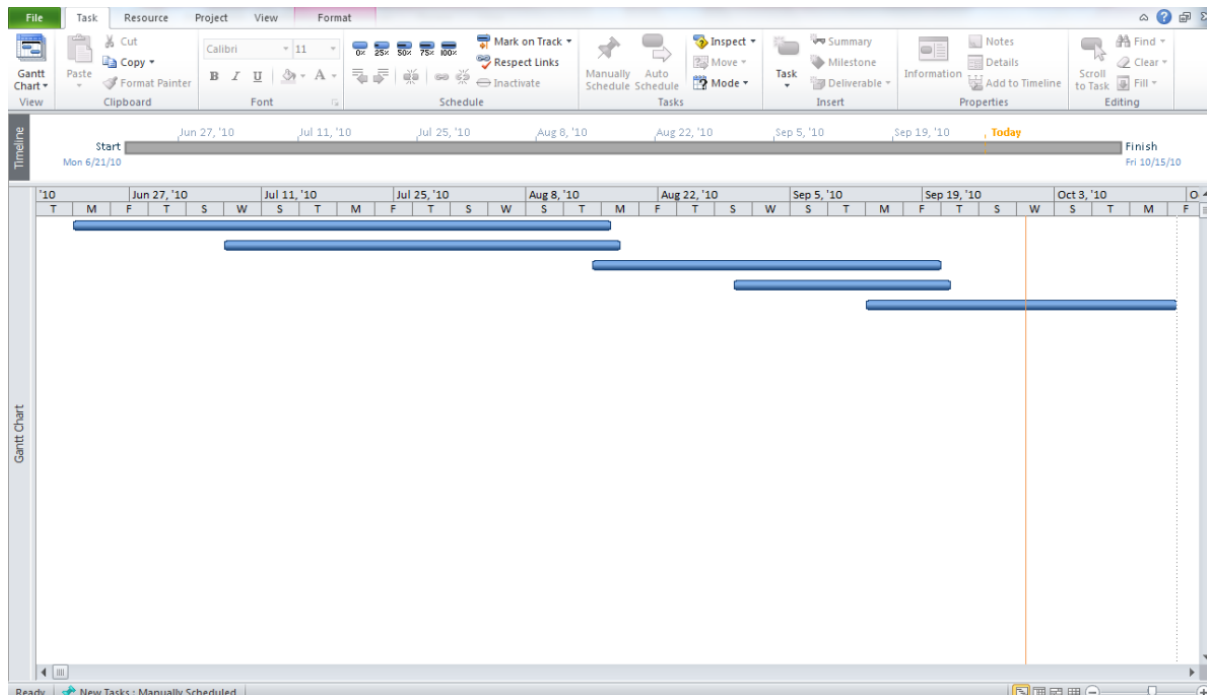
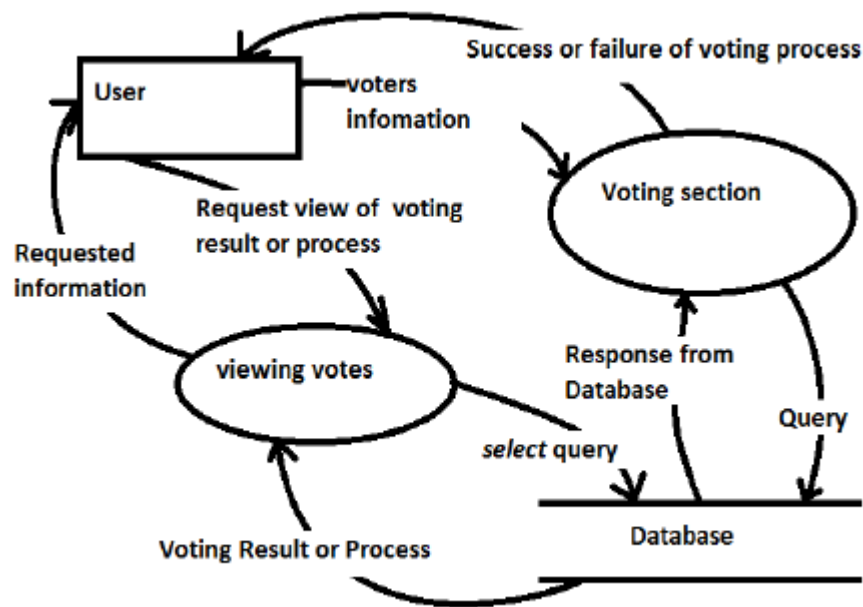The Gantt chart for Online Voting System

Design selection

Sequence Diagram

Use Case Diagram

Data Flow Diagram (DFD)

E-R Diagram