

MINI PROJECT-2

SYNOPSIS



Department of Computer Science &
Application

Institute of Engineering & Technology

SUBMITTED TO: -

Ms.Gurpreet Kaur

SUBMITTED BY: -

Vanshika Verma(201500772)

Navdha Verma (201500432)

Madhuri Jadon(201500379)

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Declaration

We hereby declare that the work in the project report entitled "Go Vote" GLA University, Mathura for the award of the degree of "B.Tech" is an authentic record of my work carried out during the Sixth semester the Third year, 2023 under the supervision of Ms.Gurpreet Kaur . The matter embodied in this project report has not been

submitted elsewhere by anybody for the award of any other degree/diploma.

S.NO	Name	University Roll No.
1.	Vanshika Verma	201500772
2.	Navdha Verma	201500498
3.	Madhuri Jadon	201500379

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Vanshika Verma(201500772)

Navdha Verma(201500432)

Madhuri Jadon(201500379)

ABSTRACT

An “go voting system” is a digital platform that allows users to cast their votes securely and conveniently via the internet. The system typically includes a user interface for voters to access the ballot, as well as a backend database for storing and tabulating the results.

The benefits of an ‘go voting system’ include increased accessibility, faster tabulation of results, and reduced costs associated with traditional paper-based voting methods. However, it also presents some challenges, such as ensuring the security and privacy of the voting process, preventing fraud or manipulation, and providing equal access to all eligible voters.

Overall, an “go voting system “can be a valuable tool for organizations looking to streamline their voting processes and increase voter participation, provided that appropriate security measures are in place to protect the integrity of the election.

INTRODUCTION

1.1. Objective

1.2. The objective of an "go voting system" is to provide a secure, accessible, and convenient platform for voters to cast their votes in an election or a referendum using the internet. By using an "go voting system", voters can cast their vote from any location at any time, without the need to physically visit a polling station.

The key objectives of an go voting system include:

Increasing accessibility: Go voting makes it easier for voters who may have difficulty accessing a polling station, such as those who live far away, are disabled, or have mobility issues.

Enhancing convenience: Go voting allows voters to cast their ballots from the comfort of their homes or offices, at a time that is convenient for them.

Improving efficiency: Go voting can streamline the voting process and reduce the need for physical resources like paper, ballot boxes, and poll workers, making the election process more efficient.

Increasing accuracy: Go voting systems can reduce the likelihood of human error or mistakes, as well as reduce the risk of fraud and tampering.

Increasing voter turnout: Go voting systems can make it easier for people to vote, which can lead to higher voter turnout and a more engaged electorate.

Overall, the objective of an go voting system is to provide a secure and reliable platform for voters to exercise their democratic rights, while making the process more accessible and convenient for everyone involved.

1.2 PROJECT OVERVIEW

The general overview of an go voting system would include the following features:

User registration: A user can register with the system by providing their personal information such as name, address, and email.

Authentication: The system authenticates the user's identity using various methods such as biometrics, OTP (One Time Password) or digital signatures

Ballot creation: The system creates a ballot with the list of candidates and issues that the user can vote on.

Voting: The user can cast their vote online by selecting their preferred candidate or issue.

Vote counting: The system collects all the votes and calculates the results in realtime.

Security: The system should be designed to prevent any attempts to manipulate or tamper with the voting process.

Auditing and logging: The system should have a mechanism to log all activities and provide an audit trail for each vote cast.

Accessibility: The system should be designed to be accessible to all users, including those with disabilities.

Reporting: The system should be able to generate reports on the voting results, including a breakdown of votes cast by candidate and issue.

It is important to note that the implementation of an online voting system requires careful consideration of security, privacy, and legal issues. Any online voting system must be designed and developed with these concerns in mind to ensure that the integrity of the voting process is maintained.

REQUIREMENTS

- **SOFTWARE REQUIREMENT**

- **HARDWARE REQUIREMENT**

SOFTWARE REQUIREMENT

The software requirements for an online voting system would depend on the specific features and functionality needed by the system. Here are some common requirements that such a system might have:

Web-based application: The online voting system should be a web-based application accessible through a standard web browser. The application should be designed to handle a large number of users at the same time.

User authentication and authorization: The system should be able to authenticate users and authorize them to vote. This could be done using a variety of methods such as username/password, two-factor authentication, or biometric authentication.

Secure transmission and storage of votes: The system should ensure that votes are transmitted and stored securely to prevent tampering or unauthorized access. Encryption should be used to protect sensitive data, such as user credentials and votes.

User interface: The system should provide a user-friendly interface that is easy to navigate and use. The interface should allow users to view their voting options, make selections, and submit their votes.

Results tabulation: The system should be able to tabulate the results of the vote in real-time and display the results to authorized parties.

Audit logging: The system should maintain a detailed audit log of all user activity, including login attempts, votes cast, and system configuration changes.

Backup and recovery: The system should have a backup and recovery mechanism in place to ensure that data is not lost in the event of a system failure.

Compliance with legal and regulatory requirements: The system should comply with all legal and regulatory requirements for conducting online voting, such as data privacy laws and election laws.

HARDWARE REQUIREMENT

Servers: The online voting system would require servers to host the web application and database, handle user authentication and authorization, and tabulate and store the results of the vote. The number of servers required would depend on the expected number of users and the complexity of the application.

Network infrastructure: The online voting system would require a reliable and secure network infrastructure to transmit data between users and the servers hosting the application and database. The network should be designed to handle a large number of users and have sufficient bandwidth to support real-time vote tabulation.

Storage: The online voting system would require a large amount of storage to store user credentials, votes, and audit logs. The storage should be scalable and redundant to ensure data is not lost in the event of a hardware failure.

Load balancers: If the online voting system is expected to handle a large number of users, load balancers may be needed to distribute traffic across multiple servers to ensure optimal performance.

Firewalls: The online voting system should be protected by firewalls to prevent unauthorized access and attacks from malicious actors.

Backup power supply: The online voting system should have a backup power supply, such as a generator or uninterruptible power supply (UPS), to ensure that the system remains operational in the event of a power outage. Physical security: The servers hosting the online voting system should be physically secured in a data center or other secure location to prevent unauthorized access or tampering. It is important to note that the hardware requirements of an online voting system can vary significantly depending on the size and complexity of the system, as well as the specific security and regulatory requirements that must be met.

Tools Requirement

- Visual Studio Code

Web Development Tools Requirement

- JavaScript
- CSS

- MySql
- HTML

PROJECT DESCRIPTION

An online voting system is a software application designed to allow eligible voters to cast their votes securely and conveniently from any location using the internet. The system provides an alternative to traditional paper-based voting methods and can offer several benefits, including increased voter participation, reduced costs, and improved efficiency.

The online voting system consists of two main components: the user interface and the backend system. The user interface is a web application that allows voters to access the voting system using a web browser on a computer, tablet, or smartphone. The backend system is responsible for processing and storing the votes and maintaining the integrity and security of the system.

When a voter logs into the system, they are presented with a ballot containing the available voting options. The system authenticates the voter using a secure login process, such as a username and password or biometric authentication.

Once authenticated, the voter can make their selections and submit their vote. The backend system is responsible for securely storing and processing the votes. The system uses encryption and other security measures to ensure that the votes are protected against tampering or unauthorized access. The system also maintains a detailed audit log of all user activity, including login attempts and votes cast. After the voting period ends, the system tabulates the votes and generates a report of the results. The system can also provide real-time updates on the progress of the vote counting process to authorized parties, such as election officials or candidates. The online voting system must comply with all legal and regulatory requirements for conducting online voting, such as data privacy laws and election laws. The system should also undergo rigorous testing and security audits to ensure that it is secure and reliable.

Overall, an online voting system provides a convenient and secure way for eligible voters to cast their votes from any location using the internet. With the appropriate security measures and compliance with legal and regulatory requirements, an online voting system can be an effective tool for improving the efficiency and accessibility of the voting process.

WORKING

The working of an online voting system involves several steps, including:

System setup: The online voting system is set up by creating the necessary servers, databases, and software to host the system. The system is designed to handle a large number of users and ensure data privacy and security.

User registration: Eligible voters must register with the system by providing their personal information, such as name, address, and voter identification number. The system verifies the voter's identity and eligibility to vote.

Ballot creation: The system generates a ballot containing the available voting options. The ballot may include information about the candidates or issues, as well as instructions for voting.

User authentication: When a voter logs into the system, they are authenticated using a secure login process, such as a username and password or biometric authentication.

Voting: The voter makes their selections on the ballot and submits their vote. The system records the vote and verifies that it has been properly cast.

Vote tabulation: After the voting period ends, the system tabulates the votes and generates a report of the results. The system can also provide real-time updates on the progress of the vote counting process to authorized parties, such as election officials or candidates.

Auditing: The system maintains a detailed audit log of all user activity, including login attempts and votes cast. The audit log can be used to verify the integrity and security of the system.

Security: The online voting system uses encryption and other security measures to ensure that the votes are protected against tampering or unauthorized access. The system undergoes rigorous testing and security audits to ensure that it is secure and reliable.

IMPLEMENTATION

Implementing an online voting system involves several steps and considerations to ensure that the system is secure, transparent, and reliable. Here are some general steps that could be followed:

Define the requirements: First, you need to define the requirements of the online voting system. This includes deciding who will be eligible to vote, what kind of election it is, and what kind of security measures will be in place.

Choose a reliable platform: Select a platform that can provide a secure and reliable online voting system. The platform must be able to handle a large number of users and provide robust security features to prevent hacking and other malicious activities.

Design the system: Develop the user interface, database schema, and application logic for the system. The design should consider user experience, data security, and accessibility.

Develop and test the system: Develop the system and perform rigorous testing to ensure that the system is functioning correctly and securely.

Implement security measures: Implement security measures such as encryption, authentication, access control, and auditing to ensure that the system is secure and transparent.

Conduct a pilot test: Conduct a pilot test of the system to evaluate its effectiveness, usability, and security.

Rollout the system: Rollout the system to the intended users after conducting a successful pilot test.

Monitor and maintain the system: Monitor the system for any security breaches or technical issues and maintain it regularly to ensure that it remains secure and reliable.

Overall, implementing an online voting system requires careful planning, technical expertise, and security measures to ensure that the system is secure and reliable.

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Faculty Guidelines:

Ms.Gurpreet Kaur (Technical Trainer at GLA University)

GitHub Repository link:

<https://github.com/vanshikaa/Mini-Project-2.git>

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