SIMATS SCHOOL OF ENGINEERING

SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES

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Online Polling System

A CAPSTONE PROJECT REPORT

Submitted in the partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

Computer Science and Engineering

Submitted by

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Under the Supervision of

Ms.B.Jeevashri

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DECLARATION

We, **Vinay Kumar Reddy R, Jyoshna C** students of **Bachelor of Engineering in CSE**, Department of Computer Science and Engineering, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, hereby declare that the work presented in this Capstone Project Work entitled **Online polling system** is the outcome of our own bonafide work and is correct to the best of our knowledge and this work has been undertaken taking care of Engineering Ethics.

Jyoshna C (192211994)
Vinay Kumar Reddy R (192211904)

Date: 31/07/2024
Place: Chennai

CERTIFICATE

This is to certify that the project entitled **"Online Polling System"** submitted by **Vinay Kumar Reddy R,** Jyoshna **C** has been carried out under my supervision. The project has been submitted as per the requirements in the current semester of B.E. Computer Science Engineering.

Teacher-in-charge
Ms.B.Jeevashri

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ABSTRACT

"My Vote" is a user-centric web application designed for efficient management and execution of online polls. Developed using Visual Studio for frontend development and powered by XAMPP with PHP for backend operations, the platform offers users a streamlined experience to create, participate, and analyse polls. Users can register securely, log in to manage their polls, and utilize robust search functionalities to explore polls based on categories or keywords. The application supports comprehensive poll management, allowing users to update poll details, including questions and options, with ease. Admin users have additional capabilities to oversee user accounts, poll categories, and voting results, ensuring smooth operational control.

With a focus on user engagement and intuitive navigation, "My Vote" facilitates seamless interaction through a user-friendly interface. Polls are presented with detailed information to enhance voting experiences, catering to both individuals and organizations alike. By integrating frontend technologies for a responsive design and backend functionalities for robust data management, "My Vote" aims to foster a vibrant community of engaged citizens, promoting participation and informed decision-making in the democratic process.

The Online Polling System is a web-based platform designed to facilitate secure, transparent, and efficient elections. The system enables voters to cast their votes remotely, using a user-friendly interface, while ensuring the integrity and confidentiality of the voting process. The system features a robust authentication mechanism, secure data storage, and tamper-evident voting protocols to prevent fraud and ensure the accuracy of results.

The system is designed to support various types of elections, including single-winner, multi-winner, and proportional representation elections. It also provides features for poll creation, voter registration, and result analysis. The system is scalable, flexible, and can be easily customized to meet the specific needs of different organizations and institutions.

1. INTRODUCTION

In an era marked by the increasing importance of public opinion and the growing need for informed decision-making, effective online polling systems have become essential tools for individuals, organizations, and governments alike. Traditional methods of conducting polls, such as paper-based surveys or limited online platforms, often fall short in providing efficient data collection, accurate results, and seamless user experiences. Recognizing these challenges, the "My Vote" web application emerges as a comprehensive solution designed to streamline online polling, enhance voter engagement, and foster informed decision-making.

"My Vote" addresses the inherent complexities of online polling by leveraging modern web technologies to offer a user-centric platform. Developed using Visual Studio for frontend design and powered by the robust XAMPP stack (Apache, MySQL, PHP) for backend operations, the application aims to bridge the gap between traditional polling methods and contemporary digital needs. By integrating user authentication, intuitive poll creation and management functionalities, comprehensive analytics capabilities, and administrative controls, "My Vote" seeks to empower users with a seamless and enjoyable voting experience.

This project not only aims to simplify online polling but also strives to promote civic engagement and community participation. By providing users with a centralized platform for creating, participating, and analyzing polls, enhanced by interactive features and responsive design, "My Vote" aims to revolutionize how individuals, organizations, and governments conduct polls, gather opinions, and make informed decisions. This introduction sets the stage for exploring the methodologies, functionalities, and outcomes of the "My Vote" web application, highlighting its potential impact in transforming online polling practices in the digital age.

2. Project Description

"My Vote" is a comprehensive web application developed to streamline online polling. The application includes:

Proposed Method

- **Frontend Development**: Utilizing Visual Studio for designing responsive and intuitive user interfaces.
- **Backend Development**: Using XAMPP stack (Apache, MySQL, PHP) to handle server-side scripting, database management via phpMyAdmin, and ensuring secure data storage and retrieval.
- **2.1 About my project**
-

Purpose and Scope

The primary objective of "My Vote" is to provide a user-friendly interface for individuals and organizations to create, manage, and analyze online polls effectively. It aims to cater to both personal users looking to gather opinions and organizations seeking a digital platform for informed decision-making.

Features and Functionality

• Poll Management: Users can create new polls, update existing ones, and delete polls as needed. Each poll entry includes details such as questions, options, and an optional description.

• Voting and Analytics: The application supports secure voting functionality, allowing users to cast their votes and view real-time analytics, including vote counts and percentages. This feature enhances usability by providing instant insights into poll results.

• User Interaction: Registered users can interact with polls through functionalities like viewing detailed poll information, casting votes, and seamlessly navigating through categorized polls.

3. Problem Description

Existing Method

Traditional methods of conducting polls and surveys face numerous limitations that result in inefficiencies and inconvenience for users. Paper-based surveys, though widely used, are prone to errors, biases, and logistical challenges, such as distributing and collecting physical copies. The manual process of tabulating and analyzing results is also time-consuming and susceptible to errors. Additionally, storing poll data in scattered digital documents, such as spreadsheets or generic file storage systems, presents challenges in centralized management. Users often struggle to quickly locate specific poll results or analyze data across multiple files or devices, and the lack of advanced analytics capabilities forces them to manually sift through data to find desired insights.

Existing online platforms and mobile applications for polling offer some improvements but still have notable shortcomings. Many of these platforms prioritize social sharing and engagement over comprehensive poll management. Users often encounter user-generated content, advertisements, and irrelevant recommendations, which detract from the primary purpose of efficient poll creation and analysis. While these platforms may offer basic analytics, they frequently lack robust data visualization tools, personalized poll collections, and detailed respondent management. Furthermore, users may need to compromise on privacy and data ownership, as poll data is stored on external servers, raising concerns about the security and longevity of sensitive poll results. The inconsistent user experience, varying levels of user interface design, and limited support for different devices further compound these issues. This project aims to address these gaps by providing a dedicated web application with robust functionality and a seamless user experience tailored to the needs of poll creators and respondents.

4. TOOL DESCRIPTION

Hardware and Software Tools

To develop and deploy the online polling web application, the following hardware and software tools were utilized:

Hardware Specifications

- **Laptop Model**: ASUS ROG Strix
- **Graphics Card**: NVIDIA GeForce RTX 3060, 4GB
- **Storage**: 1TB SSD
- **RAM**: 16GB
- **Processor**: AMD Ryzen 7 6800H

The ASUS ROG Strix laptop with its high-performance specifications provided an excellent environment for developing and testing the web application. The NVIDIA GeForce RTX 3060 graphics card ensured smooth rendering of graphics and multimedia content, enhancing the development experience, especially when dealing with high-resolution recipe images and user interface design. The 1TB SSD facilitated fast data read/write operations, significantly reducing load times for development tools and ensuring rapid access to project files. With 16GB of RAM, the laptop efficiently handled multiple development tools running concurrently, supporting a seamless multitasking environment. The AMD Ryzen 7 6800H processor, known for its powerful performance and energy efficiency, enabled quick compilation and execution of code, speeding up the development cycle.

Software Tools

- **Visual Studio Code**: An integrated development environment (IDE) used for writing and debugging code. Its extensions and integrated terminal enhanced the coding experience.
- **XAMPP**: A free and open-source cross-platform web server solution stack package developed by Apache Friends. It provided the necessary Apache, MySQL, PHP, and Perl support for local development and testing.
- **phpMyAdmin**: A free software tool written in PHP, intended to handle the administration of MySQL over the web. phpMyAdmin was used for database management, allowing for easy handling of the MySQL database used in the application.
- **GitHub**: Used for version control and collaborative development. The repository hosted the project's source code, enabling team collaboration and version tracking.
- **Google Chrome**: The primary web browser used for testing and debugging the web application. Developer tools in Chrome facilitated real-time inspection and modification of the front-end code.

The combination of powerful hardware and a robust set of development tools provided a conducive environment for the efficient development, testing, and deployment of the online polling web application.

5. Operations

The Online Polling System provides various operations for both administrators and users to manage polls effectively and ensure a smooth user experience. Below are the detailed operations based on the provided code and functionalities of the system:

5.1 Administrator Operations

Creating and Managing polls

• Create Polls: Administrators can create new polls by entering the poll question, options, and an optional description.

• Edit Polls: Administrators can modify existing polls to update content, correct errors, or improve the poll details.

• Delete Polls: Administrators can remove polls that are no longer relevant or needed.

• Organize Polls: Administrators can categorize and organize polls into different categories, making it easier for users to find specific types of polls.

Managing Categories

• Add Categories: Administrators can add new categories to organize polls better.

• Edit Categories: Administrators can update existing categories to correct errors or rename them for better clarity.

• Delete Categories: Administrators can remove categories that are no longer needed. This includes reassigning or deleting polls associated with the removed category.

User Management

• View Users: Administrators can view a list of registered users.

• Edit User Details: Administrators can update user details such as username, email, and password.

• Delete Users: Administrators can remove users from the system.

Analysing poll Result

View Poll Statistics: Administrators can access a summary of poll results, including vote counts and percentages.

• Generate Reports: Administrators can generate detailed reports on poll results and user activity, highlighting areas of high engagement.

5.2 User Operations

Interacting with polls

• View Polls: Users can browse and view detailed information about polls, including the question, options, and results.

• Search Polls: Users can search for polls by keyword or category using the search functionality.

• Vote on Polls: Users can cast their votes on polls, contributing to the overall results.

• View Results: Users can view the results of polls, including vote counts and percentages.

• Comment on Polls: Users can leave comments on polls to share their thoughts or opinions.

User Authentication

- **Register:** New users can create an account by providing their username, email, and password.
- **Login:** Registered users can log into their accounts using their credentials.
- **Logout:** Users can log out of their accounts to secure their sessions.

Managing User Profile

- **View Profile:** Users can view their profile information, including username, email, and participating candidates.
- **Edit Profile:** Users can update their profile information, such as username, email, and password.

Taking Actions on polls

• Create Polls: Users can create their own polls, providing details such as poll question, options, and an optional description.

• Edit Personal Polls: Users can modify polls they have created to update content, correct errors, or improve the poll details.

• Delete Personal Polls: Users can remove polls they have created that are no longer relevant or needed.

By structuring the operations around these roles, the Online Polling System provides a seamless and efficient way for administrators to manage polls and for users to interact with and contribute to the poll collection.

6.Approach / Module Description / Functionalities

Modules and Functionalities

6.1 User Authentication Module

- Function: Register Voter

Description: Allows new voters to create an account.

Functionalities:

- Collect voter information (username, email, password).
- Validate and store voter information in the database.
- Function: Login Voter

Description: Authenticates existing voters.

Functionalities:

- Verify voter credentials (email and password).
- Start a session for the authenticated voter.

6.2 Poll Management Module (Administrator)

- Function: Create Poll

Description: Allows administrators to create new polls.

Functionalities:

- Input poll details (title, description, options).
- Save the poll to the database.
- Function: Edit Poll

Description: Enables administrators to modify existing polls.

Functionalities:

- Retrieve poll details from the database.
- Update poll content and save changes.
- Function: Delete Poll

Description: Permits administrators to delete polls.

- Functionalities:
- Remove the poll from the database.
- Function: Manage Poll Options

Description: Helps administrators manage poll options.

Functionalities:

- Add, edit, or delete poll options.
- Update poll options in the database.

6.3 Poll Interaction Module (Voter)

Function: View Polls

Description: Allows voters to browse and view available polls.

- Functionalities:
- Display poll details (title, description, options).
- Implement smooth scrolling for navigating through polls.
- Function: Cast Vote

Description: Enables voters to cast their votes.

Functionalities:

- Store votes in the database.
- Update vote count for each option.
- Function: View Results

Description: Allows voters to view poll results.

Functionalities:

- Display poll results (vote count, percentage).
- Implement chart or graph to visualize results.
- Function: Comment on Polls

Description: Voters can leave comments on polls.

Functionalities:

- Input comment text.
- Save comments to the database.
- Display comments under the respective polls.
-

6.4 Profile Management Module (Voter)

Function: View Profile

- Description: Displays voter profile information.
- Functionalities:
- Retrieve and show voter details (username, email, voting history).

Function: Edit Profile

- Description: Allows voters to update their profile information.
- Functionalities:
- Input new voter information.
- Validate and save updates to the database.
-

6.5 Poll View and Update Module (Voter & Admin)

Function: View Poll Details

- Description: Allows voters to view detailed poll information.
- Functionalities:
- Fetch and display poll details in a modal.
- Function: Update Poll Details

Description: Enables administrators to update poll information.

Functionalities:

- Fetch poll details for editing.
- Save updates to the database.

6.6 Admin Module (Administrator)

Function: Manage Voters

- Description: Enables administrators to manage voter accounts.
- Functionalities:
- View voter list.
- Edit or delete voter accounts.

Function: Manage Poll Categories

- Description: Allows administrators to manage poll categories.
- Functionalities:
- Add, edit, or delete categories.
- Integration of Functions

By developing these modules and their respective functions independently, we can then unify them to form the complete software. Each module can interact with others through defined interfaces, ensuring smooth data flow and cohesive operation.

Example: Unifying Functions

1. Voter Login

- Voter logs in using the Login Voter function from the User Authentication Module.
- Based on the role (voter/admin), the voter is redirected to their respective dashboard.

2.Admin Dashboard

- Administrators can access Poll Management Module functions (Create Poll, Edit Poll, etc.) from their dashboard.
- They can also use the Admin Module to manage voters and poll categories.

3.Voter Dashboard

- Voters can view and interact with polls using the Poll Interaction Module.
- Voters can also manage their profiles using functions from the Profile Management Module.

4.Profile Management

- Both administrators and voters can manage their profiles using functions from the Profile Management Module.
- By structuring the operations and functionalities around these modules, the Online Polling System ensures a seamless and efficient user experience for both administrators and voters.

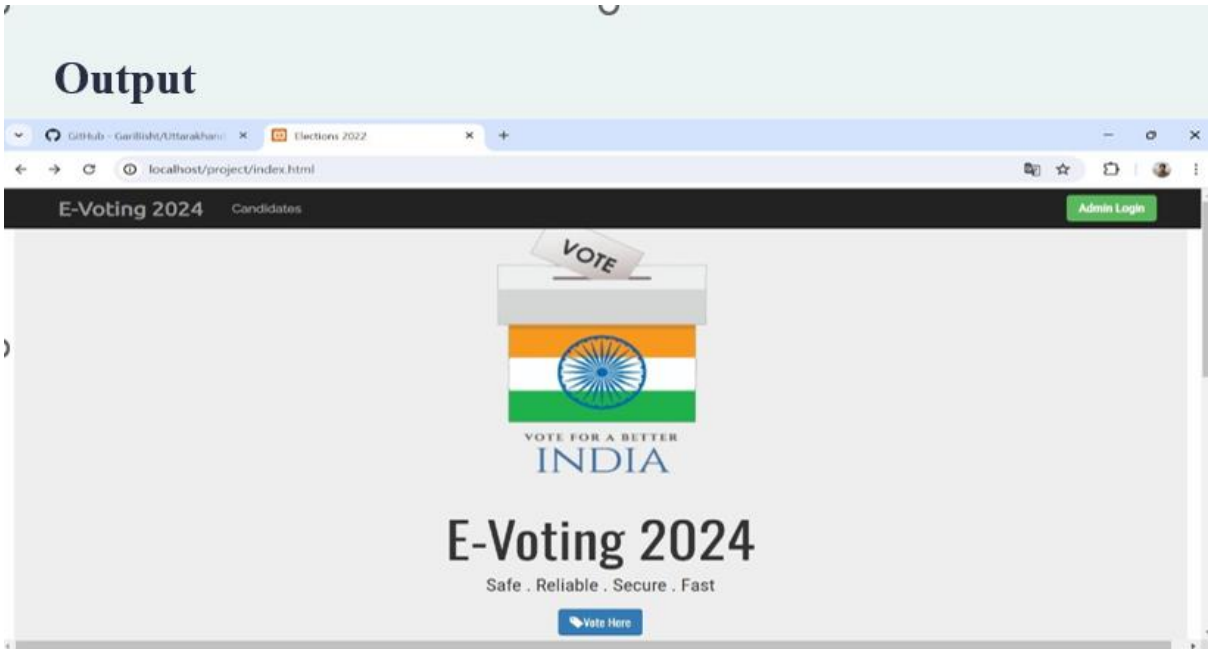
7. Implementation/Coding

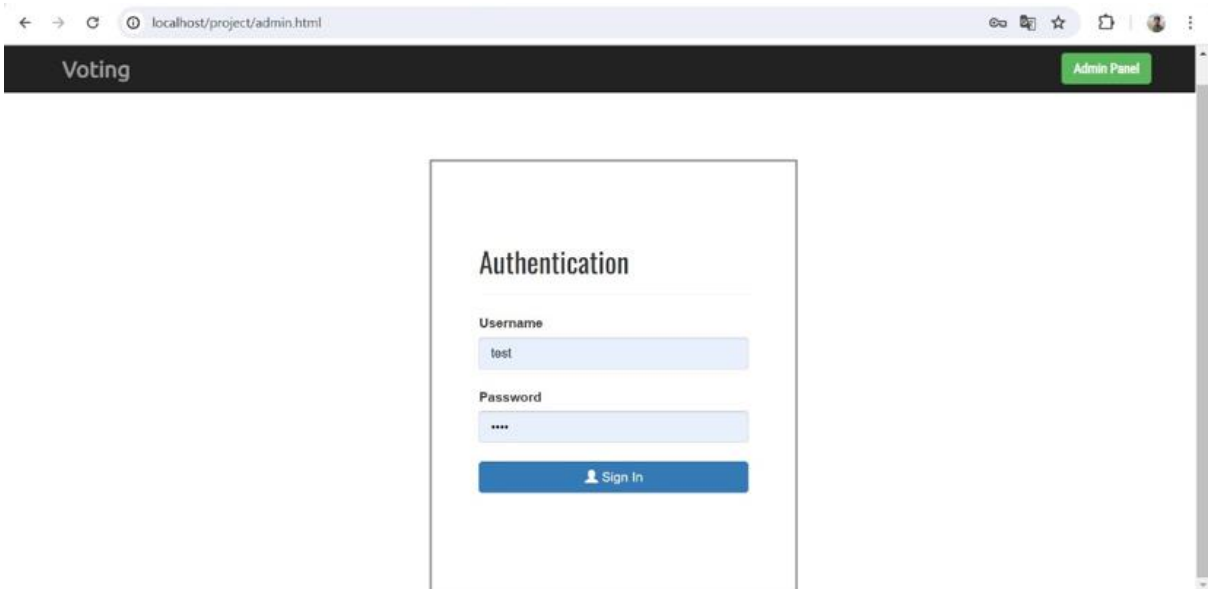
Index code

```
<!DOCTYPE html>
<html>
<head>
	<title>Online Voting System</title>
	<style>
		body {
			font-family: Arial, sans-serif;
			background-image: url('voting_background.jpg'); /* add background image */
			background-size: cover;
			background-position: center;
			text-align: center;
		}
		.container {
			width: 80%;
			margin: 40px auto;
			background-color: #fff;
			padding: 20px;
			border: 1px solid #ddd;
			border-radius: 10px;
			box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
		}
		.header {
			background-color: #333;
			color: #fff;
			padding: 10px;
			border-bottom: 1px solid #333;
		}
		.header h1 {
			margin: 0;
```

```
                padding: 10px;
                font-size: 24px;
            }
        </style>
</head>
<body>
        <div class="container">
            <div class="header">
                <h1>Online Voting System</h1>
            </div>
            <p>Welcome to our online voting system. Please select an option from the menu below.</p>
            <ul>
                <li><a href="login.html">Login</a></li>
                <li><a href="register.html">Register</a></li>
                <li><a href="voting.html">Voting</a></li>
                <li><a href="result.html">Results</a></li>
        <li><a href="about.html">About</a></li>
        <li><a href="contact.html">contact</a></li>
            </ul>
        </div>
</body>
</html>
```

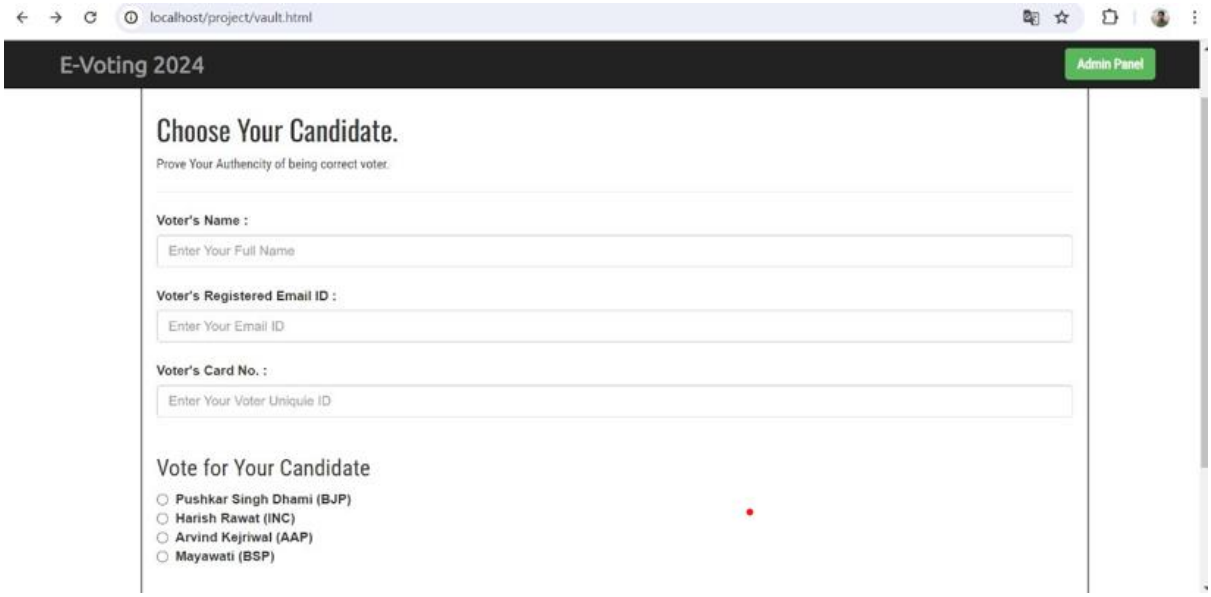
8.Result


Output
Elections 2022
localhost/project/index.html
E-Voting 2024
Candidates
Admin Login
VOTE
VOTE FOR A BETTER
INDIA
E-Voting 2024
Safe . Reliable . Secure . Fast
Vote Here

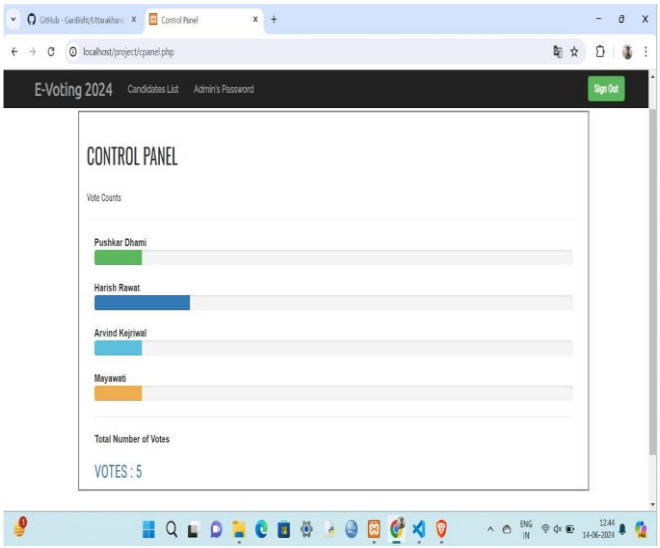

localhost/project/admin.html
Voting
Admin Panel
Authentication
Username
test
Password
Sign In


localhost/project/nomination.html
E-Voting 2024
Admin Panel
Pushkar Singh Dhami
Current Chief Minister of Uttarakhand from BJP
Harish Rawat
Former Chief Minister of Uttarakhand from Congress.
Arvind Kejriwal
Founder of Aam Admi Party and Current Chief Minister of New Delhi
Mayawati
From Bahujan Samaj Party.

Back to Home


localhost/project/vault.html
E-Voting 2024
Admin Panel
Choose Your Candidate.
Prove Your Authencity of being correct voter.
Voter's Name :
Enter Your Full Name
Voter's Registered Email ID :
Enter Your Email ID
Voter's Card No. :
Enter Your Voter Uniquie ID
Vote for Your Candidate
Pushkar Singh Dhami (BJP)
Harish Rawat (INC)
Arvind Kejriwal (AAP)
Mayawati (BSP)

Database



name	email	voterID	voted_for
user1	xyz@1.com	123456	
Abhishek Kumar	ak@gmail.com	1234567	BJP
Ram prasad	xyz@1.com	1245678	INC
Ramesh	ram@gmail.com	2345780	INC
someswar	somueswar@1.com	2778900	AAP
jayanth	jai@gmail.com	2890653	TMC

9. Conclusion

"My Online Poll" is a comprehensive web application designed to simplify poll creation and management through a centralized platform. Developed with a user-friendly interface using Visual Studio and supported by XAMPP, it offers robust features for creating, organizing, and sharing polls. Users can securely log in, manage their polls effortlessly, and explore a wide array of poll ideas, making it an essential tool for individuals and organizations looking to gauge public opinion and make informed decisions.

9.1 Future Enhancements

As the Online Polling System evolves, several future enhancements can be implemented to elevate user experience and engagement. One major improvement is the integration of advanced analytics and visualization tools. This includes providing users with detailed insights into poll results, such as demographic breakdowns and sentiment analysis. Such features would make the application more versatile and user-friendly, appealing to a wider audience with varied analytical needs. Additionally, implementing machine learning algorithms for predictive modelling and trend analysis could make the application more intuitive and informative. Features like saving favourite polls, creating poll templates, and generating reports would further streamline the polling process and encourage regular use.

Another significant enhancement is the incorporation of social features to boost user interaction and community building. Enabling users to share polls on social media, contribute user-generated content, and participate in a rating and review system would foster a vibrant community of poll creators and respondents. Organizing poll challenges and live discussions can add an interactive and educational aspect, increasing user engagement. Additionally, integrating with social media platforms and data analytics tools can enhance the application's utility, allowing users to track poll performance and monitor public opinion. Optimizing the application for various devices and implementing voice recognition for hands-free navigation would ensure a seamless user experience. By continuously improving these features, the Online Polling System can remain a secure, efficient, and enjoyable platform for all users.

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