



Acknowledgement

I would like to take this opportunity to express my heartfelt gratitude to Ms. Payal Sharma, my project guide, for her constant guidance, motivation, and valuable support throughout the completion of my project titled “Online Voting System.” Her encouragement, insightful suggestions, and constructive feedback have been instrumental in shaping this project and enhancing my understanding of the topic.

I am deeply thankful to Chandigarh University for providing me with such an excellent learning environment and the necessary resources to carry out this work successfully. The university’s continuous focus on innovation and practical learning inspired me to explore new ideas and implement them effectively in my project.

I would also like to extend my thanks to all my friends and classmates who supported me directly or indirectly during this project. Their cooperation and suggestions helped me to improve the overall quality and presentation of my work.

Lastly, I am grateful to my family for their constant encouragement, patience, and moral support, which kept me motivated throughout this journey. This project has been a valuable learning experience that allowed me to apply my theoretical knowledge to a real-world application like online voting, which has great importance in today’s digital era.

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Abstract

The **Online Voting System** is a web-based application designed to make the voting process more convenient, secure, and transparent through the use of digital technology. The main objective of this project is to replace the traditional manual voting method with an efficient and reliable online platform that allows voters to cast their votes remotely using the internet.

This system ensures data security and privacy by using user authentication and encrypted vote storage, thereby preventing fraudulent practices and multiple voting. It also provides an easy-to-use interface for both administrators and voters, ensuring accessibility for all eligible users. The administrator can manage voter records, view results, and maintain the overall integrity of the election process.

The development of this project aims to save time, reduce errors, and promote digital participation in the democratic process. By implementing this online system, voting can be conducted in a more organized, transparent, and technologically advanced manner, supporting the vision of a **Digital India** and encouraging e-governance initiatives.

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Introduction

Project Title : Online Voting System

In today's digital era, technology plays a crucial role in transforming traditional systems into more efficient and reliable digital platforms. One such transformation is in the process of conducting elections. The traditional voting system, though widely used, often faces several challenges such as long queues at polling booths, manual counting errors, high administrative costs, and risks of vote tampering or duplication. To overcome these issues, the concept of an Online Voting System has emerged as a secure, convenient, and efficient alternative.

The Online Voting System is a web-based application that enables voters to cast their votes electronically through a secure internet connection. This system is designed to ensure transparency, accuracy, and accessibility while maintaining the confidentiality of each vote. It allows eligible voters to log in using their credentials, verify their identity, and vote from any location, thereby saving time and increasing voter participation.

Objective :

The main objective of this project is to design and develop a secure, user-friendly online voting platform that simplifies the election process and enhances the reliability of results. The project aims to:

- Replace the manual voting process with a digital and automated system.
- Ensure data security through encryption and authentication methods.
- Provide an easy-to-use interface for both voters and administrators.
- Reduce the chances of human error and fraudulent activities.
- Promote transparency and encourage higher voter turnout through accessibility.

This project also aligns with the vision of Digital India, aiming to strengthen e-governance and foster digital participation in democratic processes. By implementing the Online Voting System, elections can be conducted in a more organized, efficient, and environment-friendly manner, reducing paperwork and ensuring faster result computation.

Overall, the Online Voting System represents a step toward modernizing the democratic framework of the country, utilizing the power of technology to make the voting process more inclusive, transparent, and trustworthy.

Summary Table

	Basis of Comparison	Traditional Voting System	Online Voting System
S.No.			
1	Voting Method	Conducted manually using paper ballots. Voters must visit polling stations	Conducted electronically through a web-based platform. Voters can vote from anywhere using the internet. Consuming and error-prone.
3	Result Processing	Manual counting; time-consuming and error-prone. Risk of tampering and duplication	Automatic counting; faster and more accurate results. Uses authentication and encryption
4	Security of votes.	for secure voting.	
5	Cost and Efficiency materials.	Requires more manpower and resources once implemented.	Cost-effective and highly efficient

Methodology

The **Online Voting System** project was developed using a systematic and structured approach to ensure its effectiveness, accuracy, and security. The methodology followed the steps below:

1. Requirement Analysis:

In this phase, the needs of both voters and administrators were studied. The main objectives, such as user authentication, data privacy, and result accuracy, were identified and documented.

2. System Design:

The overall design of the system was created, including database structure, user interface layouts, and flow diagrams. Separate modules for voters and administrators were planned to ensure proper functionality and role-based access.

3. Development:

The coding of the system was carried out using web technologies such as **HTML**, **CSS**, **PHP**, and **MySQL**. The front-end provides a user-friendly interface, while the back-end manages data securely and efficiently.

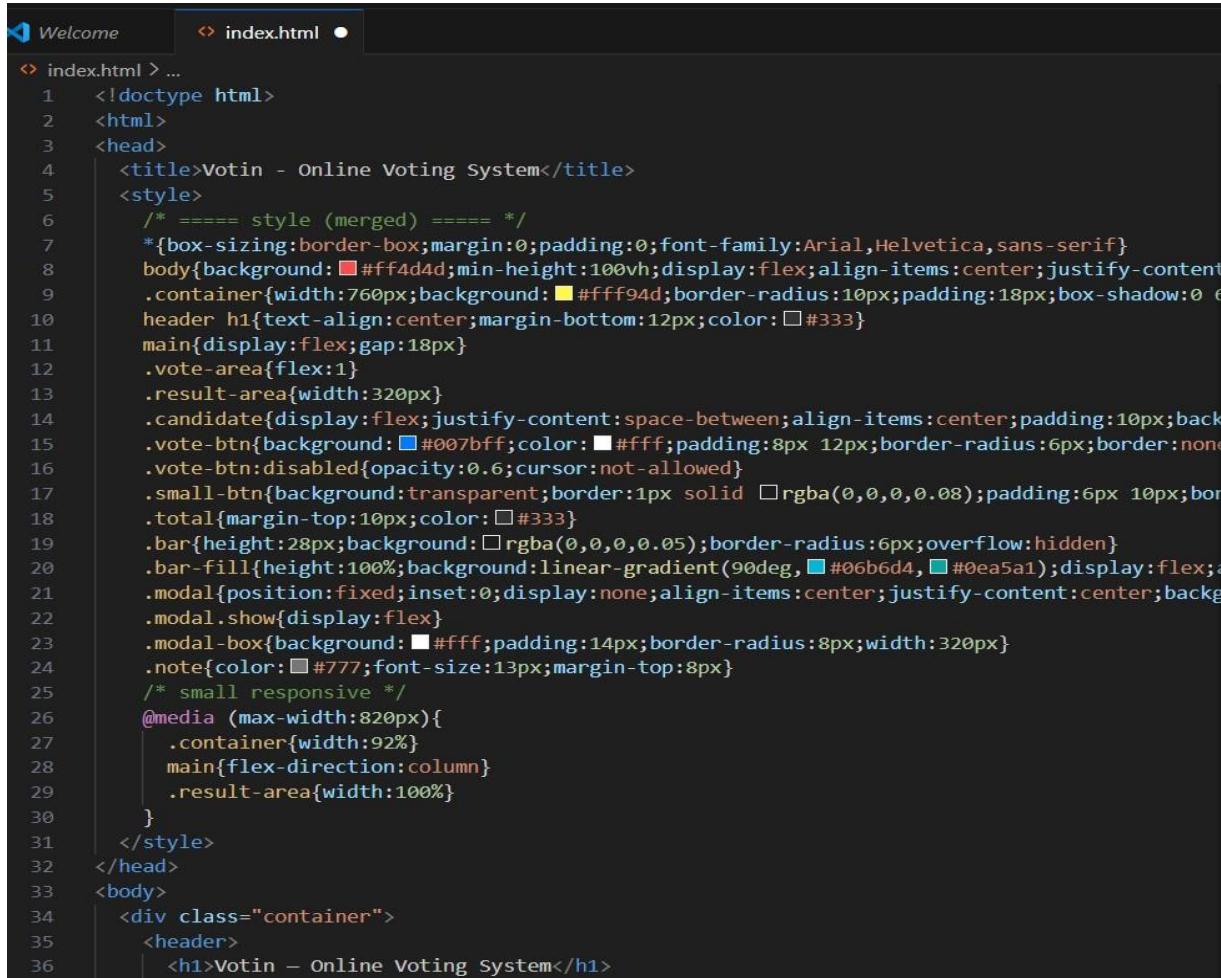
4. Testing:

The system was tested to identify and fix any bugs or errors. Different test cases were applied to verify that the voting process works correctly, securely, and without duplication.

5. Implementation and Evaluation:

After successful testing, the system was implemented and evaluated for performance. User feedback was collected to improve the design and ensure smooth operation during actual use.

Implementation/Code



The screenshot shows a code editor window with the file "index.html" open. The code is written in HTML and CSS, defining a responsive layout for an online voting system. The CSS uses various colors and styles to create a modern interface. The code includes sections for the header, main content area, and footer, along with media queries for smaller screens.

```
<!DOCTYPE html>
<html>
<head>
<title>Votin - Online Voting System</title>
<style>
/* ===== style (merged) ===== */
*{box-sizing:border-box;margin:0;padding:0;font-family:Arial,Helvetica,sans-serif}
body{background:#ff4d4d;min-height:100vh;display:flex;align-items:center;justify-content:center;width:100%;height:100%}
.container{width:760px;background:#fff94d;border-radius:10px;padding:18px;box-shadow:0 6px 12px #333}
header h1{text-align:center;margin-bottom:12px;color:#333}
main{display:flex;gap:18px}
.vote-area{flex:1}
.result-area{width:320px}
.candidate{display:flex;justify-content:space-between;align-items:center;padding:10px;background-color:#fff}
.vote-btn{background:#007bff;color:#fff;padding:8px 12px;border-radius:6px;border:none}
.vote-btn:disabled{opacity:0.6;cursor:not-allowed}
.small-btn{background:transparent;border:1px solid #333;outline:none}
.total{margin-top:10px;color:#333}
.bar{height:28px;background:#rgba(0,0,0,0.05);border-radius:6px;overflow:hidden}
.bar-fill{height:100%;background:linear-gradient(90deg, #06b6d4, #0ea5a1);display:flex;align-items:center}
.modal{position:fixed;inset:0;display:none;align-items:center;justify-content:center;background-color:#fff;backdrop-filter:blur(10px)}
.modal.show{display:flex}
.modal-box{background:#fff;padding:14px;border-radius:8px;width:320px}
.note{color:#777;font-size:13px;margin-top:8px}
/* small responsive */
@media (max-width:820px){
.container{width:92%}
main{flex-direction:column}
.result-area{width:100%}
}
</style>
</head>
<body>
<div class="container">
<header>
<h1>Votin - Online Voting System</h1>
```

```

37   </header>
38
39   <main>
40     <section class="vote-area">
41       <h2>Cast your vote</h2>
42
43       <div class="candidate" id="cand1">
44         <div class="name">Rahul Sharma</div>
45         <button class="vote-btn" data-id="cand1">Vote</button>
46       </div>
47
48       <div class="candidate" id="cand2">
49         <div class="name">Pooja Verma</div>
50         <button class="vote-btn" data-id="cand2">Vote</button>
51       </div>
52
53       <div class="candidate" id="cand3">
54         <div class="name">Aman Singh</div>
55         <button class="vote-btn" data-id="cand3">Vote</button>
56       </div>
57
58       <div class="controls" style="margin-top:12px;">
59         <button id="clearVote" class="small-btn">Clear My vote</button>
60         <button id="resetAll" class="small-btn">Reset All (Admin)</button>
61       </div>
62     </section>
63
64     <aside class="result-area">
65       <h2>Results</h2>
66       <div id="results"></div>
67       <div class="total">Total votes: <span id="totalVotes">0</span></div>
68     </aside>

```

```

69   </main>
70
71   <footer style="margin-top:12px;">
72     <small>Demo – client-side only. Not secure for real elections.</small>
73   </footer>
74 </div>
75
76 <!-- Admin modal -->
77 <div id="modal" class="modal">
78   <div class="modal-box">
79     <h3>Admin Login</h3>
80     <input id="adminPass" type="password" placeholder="Admin password" style="width:100%;padding:10px; margin-bottom:10px;">
81     <div style="display:flex;gap:8px;justify-content:flex-end; margin-top:10px">
82       <button id="adminCancel" class="small-btn">Cancel</button>
83       <button id="adminLogin" class="small-btn">OK</button>
84     </div>
85     <p id="adminMsg" class="note"></p>
86   </div>
87 </div>
88
89 <script>
90   /* ===== script (merged) ===== */
91   const ADMIN_PASSWORD = 'admin123';
92   const CANDIDATES = [
93     { id: 'cand1', name: 'Rahul Sharma' },
94     { id: 'cand2', name: 'Pooja Verma' },
95     { id: 'cand3', name: 'Aman Singh' }
96   ];
97
98   const STORE_KEY = 'votin_votes_v1';
99   const VOTED_FLAG = 'votin_voted_v1';
100
101  function loadVotes(){
102    const raw = localStorage.getItem(STORE_KEY);

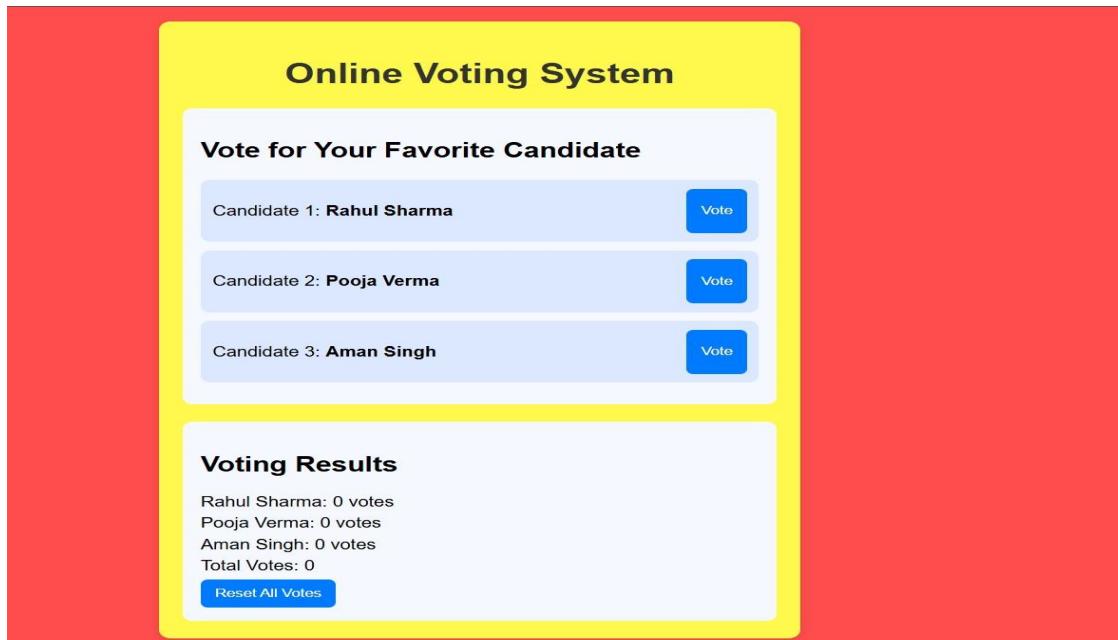
```

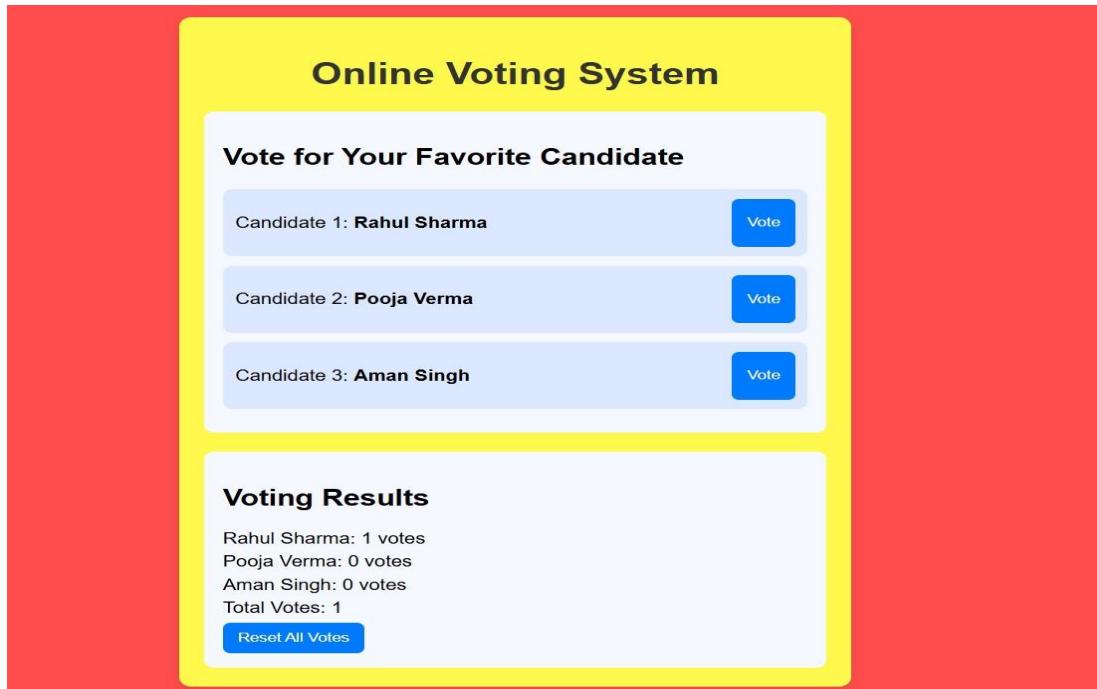
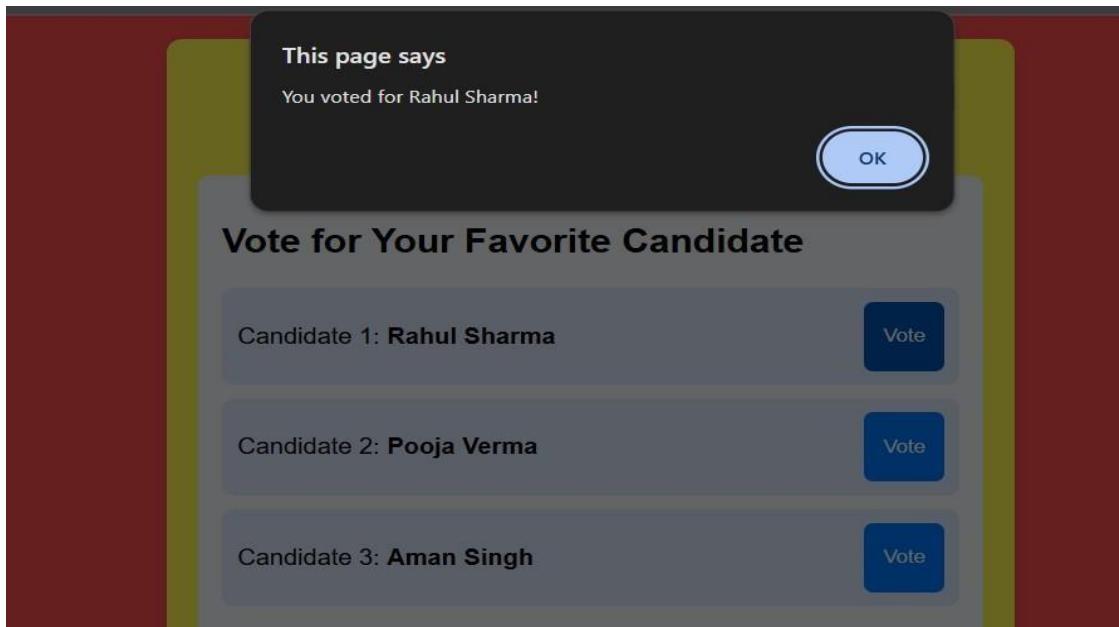
```

161   document.getElementById('adminCancel').addEventListener('click', ()=>{
162     document.getElementById('modal').classList.remove('show');
163     document.getElementById('adminMsg').textContent = '';
164   });
165   document.getElementById('adminLogin').addEventListener('click', ()=>{
166     const pass = document.getElementById('adminPass').value;
167     const msg = document.getElementById('adminMsg');
168     if(pass === ADMIN_PASSWORD){
169       localStorage.removeItem(STORE_KEY);
170       msg.textContent = 'All votes reset.';
171       document.getElementById('modal').classList.remove('show');
172       renderCandidates();
173       renderResults();
174       alert('All votes reset (demo).');
175     } else {
176       msg.textContent = 'Incorrect password.';
177     }
178   });
179
180   // initial render
181   // ensure vote store exists
182   const existing = loadVotes();
183   let changed = false;
184   CANDIDATES.forEach(c => { if(!(c.id in existing)){ existing[c.id]=0; changed = true; }})
185   if(changed) saveVotes(existing);
186
187   renderCandidates();
188   renderResults();
189 });
190 </script>
191 </body>
192 </html>

```

Output :





Reference :

1. Mozilla Developer Network (MDN Web Docs) — For HTML, CSS, and JavaScript documentation.
³ <https://developer.mozilla.org>
2. W3Schools Tutorials —

For web development basics and syntax understanding.

³ <https://www.w3schools.com>

3. GitHub Documentation —

For hosting and managing project repositories.

³ <https://docs.github.com>

4. GeeksforGeeks Articles —

For JavaScript DOM manipulation and event handling examples.

³ <https://www.geeksforgeeks.org>

5. Online Voting Concept Reference:

- Research papers on secure e-voting mechanisms and user interface design inspiration.
- “Online Voting System using HTML, CSS and JavaScript” — sample projects on GitHub & educational tutorials (2024–2025).



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