A

Mini Project Report

on

POLLSTER : A VOTING SYSTEM

Submitted in partial fulfillment of the requirements for the

degree

Second Year Engineering – Computer Science Engineering (Data Science)

by

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Academic year: 2024-25

CERTIFICATE

This to certify that the Mini Project report on POLLSTER: A Voting system has been submitted by Mr.Kalpesh Remje (23107088), Mr.Tanay Bandekar(23107079)**,** Mr.Shantaram Gawas (23107108) Mr.Ajit Gophane(23107080) who are bonafide students of A. P. Shah Institute of Technology, Thane as a partial fulfillment of the requirement for the degree in **Computer Science Engineering (Data Science)**, during the academic year **2024-2025** in the satisfactory manner as per the curriculum laid down by University of Mumbai.

Prof.Richa Singh
Guide

Prof. Anagha Aher
HOD, CSE(Data Science)

Dr. Uttam D. Kolekar
Principal

External Examiner:
1.

Internal Examiner:
1.

Place: A. P. Shah Institute of Technology, Thane
Date:

ACKNOWLEDGEMENT

This project would not have come to fruition without the invaluable help of our guide prof. **Richa Singh** Expressing gratitude towards our HoD, **prof. Anagha Aher**, and the Department of Computer Science Engineering (Data Science) for. providing us with the opportunity as well as the support required to pursue this project. We would also like to thank our project coordinator **Prof. Rajashri Chaudhari and Prof. Vaibhav Yavalkar** who gave us his/her valuable suggestions and ideas when we were in need of them. We would also like to thank our peers for their helpful suggestions.

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Chapter 1

Introduction

Pollster: A Voting System aims to address the inefficiencies of conventional voting by providing a fully digital platform. The system allows users to create polls, vote on various topics, and view results in real time. Pollster ensures the integrity of the voting process through unique user authentication, thereby preventing fraud and multiple votes by the same participant.

The scope of this project includes the design and implementation of a user-friendly, secure online voting platform. It supports a wide range of voting scenarios, from single-choice to multi-choice questions, with the flexibility to handle polls with large numbers of participants. The system also provides real-time voting statistics and transparent results, ensuring fairness in all voting processes.

1.1.Purpose:

The purpose of the Pollster: A Voting System project is to design and implement a secure, efficient, and user-friendly digital voting platform that overcomes the limitations of traditional voting methods. This system seeks to streamline the voting process by eliminating the logistical challenges. By leveraging modern technologies, Pollster will also reduce waiting times at polling stations, minimize administrative overhead, and decrease the environmental impact associated with paper-based voting.. It not only improves participation rates but also reduces the time and cost involved in conducting elections. The project ultimately aims to deliver a scalable and adaptable solution suitable for various voting scenarios, from organizational elections to public voting and surveys, making the voting experience more inclusive, efficient, and associated with paper ballots and manual counting while enhancing accessibility for a broader audience, enabling remote participation without compromising the security or integrity of the process accessible for all citizens, regardless of their location and hence increase the productivity of all common people .

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1.2. Problem statement:

The traditional voting process faces several deep-rooted issues that hinder its effectiveness, inclusivity, and reliability, ultimately affecting public trust in democratic systems. Long queues at polling stations, especially during peak hours or in densely populated areas, create frustration and dissuade voters from participating, particularly the elderly, people with disabilities, or those with limited time due to work or family commitments. These queues are not merely inconvenient but pose a significant barrier to fair and equitable participation in elections, limiting access for vulnerable populations.

For voters in rural or remote areas, logistical challenges further restrict their ability to vote. Long distances, combined with inadequate public transport options, make it difficult for many to reach polling stations, creating disparities in voter turnout based on geographical location and contributing to unequal representation.

Moreover, the manual vote counting process is fraught with risks, including miscalculations and administrative mistakes, which can distort the election outcomes and reduce confidence in the fairness of results. These issues are often exacerbated by delays in announcing results, leaving room for speculation, misinformation, and diminished public trust. Voters expect both transparency and efficiency, but traditional systems frequently fall short in delivering timely, accurate results.

The manual nature of counting also introduces delays that are frustrating for voters who expect fast results in today's fast-paced world. Delayed results can spark misinformation, rumors, and mistrust, leading to a lack of faith in the electoral process. In the digital age, modernizing the voting system can address these persistent challenges by fostering a more inclusive, efficient, and transparent process that not only encourages higher voter participation but also restores public confidence in democratic institutions by ensuring that every vote is accurately counted and results are promptly delivered.

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1.3. Objectives:

i) Promote Accessibility: Ensure the platform is accessible to all users, including those with disabilities or those living far from polling places, thereby increasing voter participation and inclusivity.

ii) Reduce long queues: Eligible voters can avoid long queues at polling places by enabling remote voting, which significantly assists individuals by saving time and decreasing the potential for vote manipulation.

iii) Facilitate User-Friendly Experience: Design an accessible user interface that simplifies the voting process, ensuring that users of all technical backgrounds can participate without confusion**.**

iv) Decrease Vote Counting Errors**:** Implement automated vote counting to reduce human errors, ensuring more accurate and reliable election results.

1.4. Scope:

The scope of the Pollster: An Online Voting System project encompasses the design, development, and implementation of an online voting platform aimed at modernizing the electoral process. The primary objectives include incorporating essential voting system features such as user registration and authentication, enabling administrators to create and manage elections, and allowing users to cast their votes remotely and securely. The project aims to implement automated vote counting mechanisms that minimize errors while providing real-time results display to ensure transparency in the electoral process.

The user interface will be designed to be intuitive and user-friendly for both voters and administrators, with accessibility features included to accommodate users with disabilities. The target audience includes voters wishing to participate in elections and administrators overseeing the electoral process. However, the project has limitations, as it is designed specifically for online voting and may not be suitable for large-scale national elections or include features for offline voting or paper ballot integration. By clearly defining this scope, the project aims to deliver a functional and efficient online voting system that meets the needs of its users while ensuring a secure and transparent voting experience.

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Chapter 2

Proposed System

The proposed system, Pollster, is designed to revolutionize the voting process by providing a secure, user-friendly online platform for conducting elections. By leveraging modern technology, the system addresses the common challenges faced in traditional voting methods, such as long queues, accessibility issues, and errors in vote counting.

2.1 Features and Functionality:

i. User Registration and Authentication:
   a. Voters can easily register online, providing necessary details to create a secure account.

ii. Remote Voting:
   a. Voters can cast their votes from any location with internet access, eliminating the need for physical polling places and significantly reducing wait times.
   b. A user-friendly interface guides voters through the voting process, ensuring clarity and ease of use.

iii. Automated Vote Counting:
   a. The system automates the vote counting process, reducing the likelihood of human error and ensuring accuracy.
   b. Votes are tabulated in real-time, providing immediate updates on election results.

iv. Real-Time Results Display:
   a. As votes are cast, results are updated in real-time, allowing voters and administrators to monitor progress during the election.
   b. Detailed reports and analytics can be generated, providing insights into voter participation and trends.

v. Accessibility Features:
   a. The platform includes features designed to accommodate users with disabilities, ensuring that everyone can participate in the electoral process.

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Chapter 3

Project Outcomes

The Pollster: An Online Voting System project aims to achieve several key outcomes that enhance the voting experience for users and improve the overall electoral process. These outcomes include:

1. Reduction of Physical Queues: By enabling remote voting, the system significantly reduces the need for voters to visit polling places physically, thereby minimizing wait times and improving accessibility for individuals, such as the elderly and people with disabilities.

2. Increased Voter Participation: The convenience of online voting is expected to encourage higher voter turnout, as individuals can cast their votes from any location without the constraints of travel or long queues.

3. Enhanced Election Efficiency: The automated processes for voter registration, authentication, and vote counting streamline the electoral workflow, allowing administrators to conduct elections more efficiently and effectively.

4. Accurate and Timely Results: The implementation of automated vote counting minimizes errors and enables the display of real-time results, ensuring transparency and boosting confidence in the electoral process.

Chapter 4

Software Requirements

1. **Operating System**:
    a. Windows 10 or later
    b. Linux (Ubuntu 20.04 or later)

2. **Java Environment**:
    a. Java Development Kit (JDK) 11 or later
    b. Java Runtime Environment (JRE) 11 or later

3. **Development Environment**:
    a. NetBeans IDE

4. **Database Management System**:
    a. MySQL 5.7 or later

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Chapter 5

Project Design

1. System Architecture

- Frontend: Developed using Java with a user-friendly interface that allows voters and administrators to interact seamlessly with the system.
- Backend: Implemented in Java, managing user authentication, voting processes, and database interactions.
- Database: MySQL is used for securely storing user data, election details, and voting records.

2. Key Pages and Functionality

- Login Page:
  - Allows users (voters and administrators) to securely log into the system.
  - Features include username/password authentication and options for password recovery.
- Registration Page:
  - Enables new users to create accounts by providing necessary personal information and verifying their identity.
  - Ensures user data is securely stored in the database.
- Vote Candidate Page:
  - Provides voters with a list of candidates or propositions for the current election.
  - Features an intuitive interface for users to cast their votes easily and securely.
- View Results Page:
  - Displays real-time results of the election, including total votes cast, candidate standings, and percentages.
  - Ensures transparency in the voting process by providing users with up-to-date information.

- Admin Manage Elections Page:
    - Allows administrators to create, manage, and schedule elections.
    - Includes functionality to add candidates, set election dates, and manage voter registrations.
- Admin Schedule Elections Page:
    - Provides tools for administrators to set up and organize future elections.
    - Facilitates the scheduling of election timelines and candidate information.

4. User Interface Design

- Simple and Intuitive Layout: The UI is designed for easy navigation, featuring clear buttons and forms that guide users through the voting process.
- Accessibility: Ensures that all users, including those with disabilities, can easily interact with the system

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Chapter 6

Project Scheduling

GANTT CHART TEMPLATE

Smartsheet Tip A Gantt chart's visual timeline allows you to see details about each task as well as project dependencies.

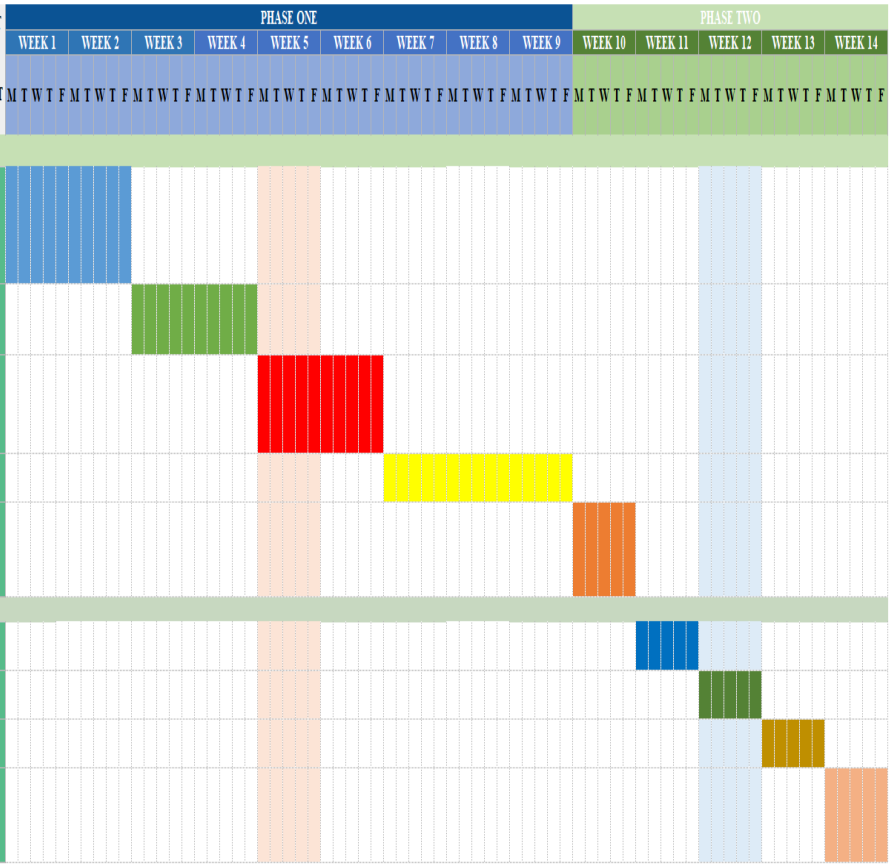
PROJECT TITLE: POLLSTER : A Voting System

INSTUTUTE & DEPARTMENT N: AP SHAH INSTITUTE OF TECHNOLOGY(CSE-Data Science)

PROJECT GUIDE: Prof. Richa Singh

DATE: 10-9-24

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION(Weeks)	PERCENTAGE OF TASK COMPLETE
1	**Project Conception and Initiation**					
1.1	Group formation and Topic finalization. Identifying the scope and objectives of the Mini Project	Shantaram Gawas Tanay Bandekar	7-9-24	7-23-24	2	100%
1.2	Identifying the functionalities of the Mini Project	kalpesh Remje Ajit Gophane	7-23-24	8-6-24	2	100%
1.3	Discussing the project topic with the help of paper prototype.	kalpesh Remje Ajit Gophane Shantaram Gawas Tanay Bandekar	8-6-24	8-20-24	2	100%
1.4	Designing the Graphical User Interface(GUI)	Ajit Gophane Kalpesh Remje	8-20-24	9-10-24	3	100%
1.5	Presentation I	kalpesh Remje Ajit Gophane Shantaram Gawas Tanay Bandekar	9-10-24	9-17-24	1	100%
2	**Project Design and Implementation**					
2.1	Database Design	Shantaram Gawas Tanay Bandekar	9-17-24	9-24-24	1	100%
2.2	Database Connectivity of all modules	Ajit Gophane	9-24-24	10-1-24	1	100%
2.3	Integration of all modules and Report Writing	Ajit Gophane Tanay Bandekar	10-1-24	10-8-24	1	100%
2.4	Presentation II	kalpesh Remje Ajit Gophane Shantaram Gawas Tanay Bandekar	10-8-24	#######	1	100%



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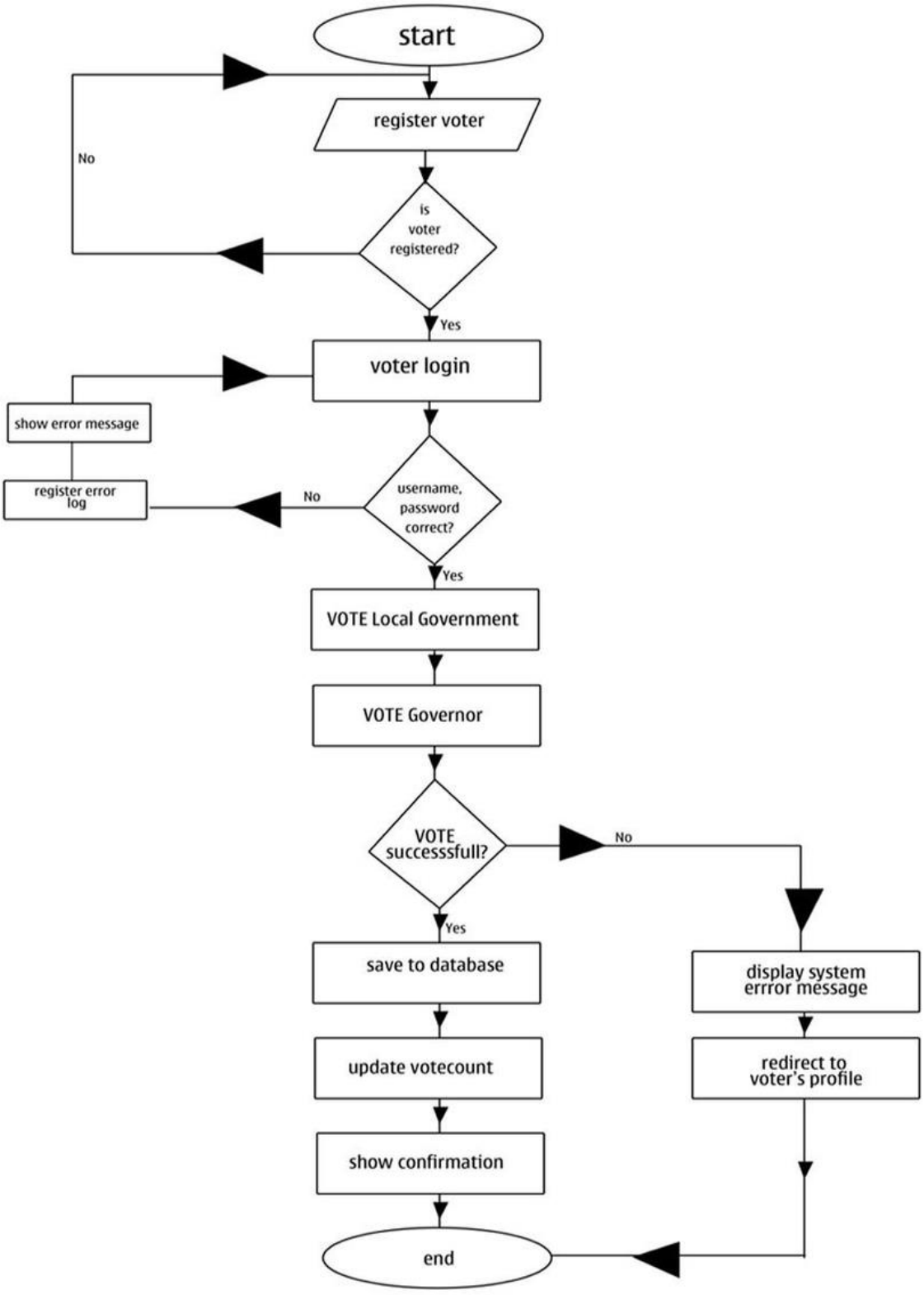
start
register voter
No
is voter registered?
Yes
voter login
show error message
register error log
No
username, password correct?
Yes
VOTE Local Government
VOTE Governor
VOTE successsfull?
No
Yes
save to database
update votecount
show confirmation
display system errror message
redirect to voter's profile
end

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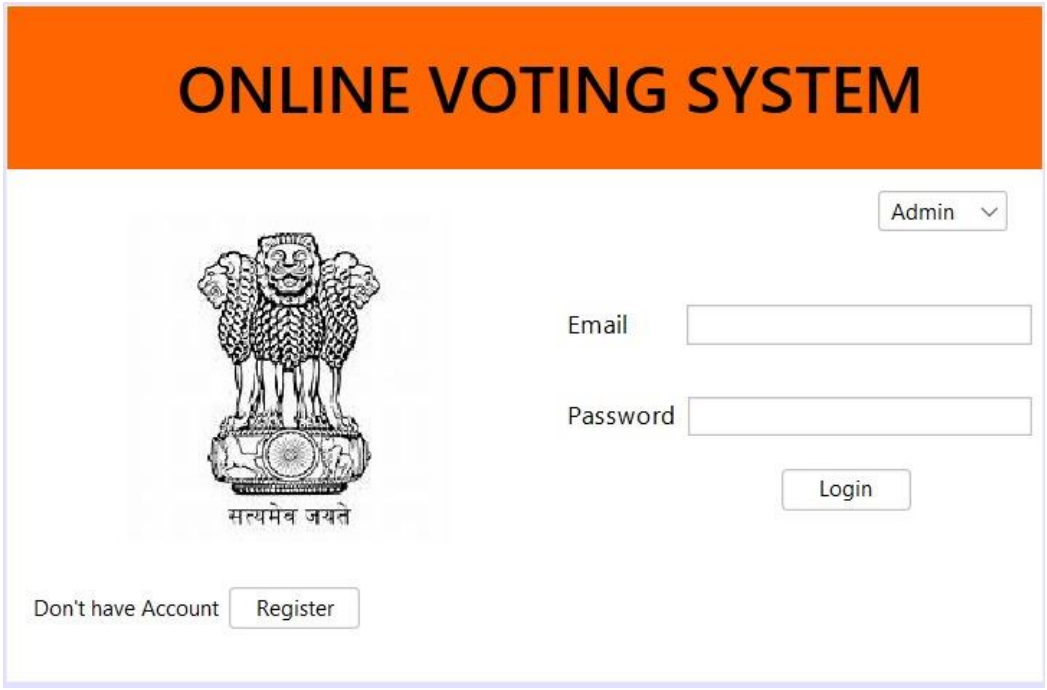
Chapter 7

Results



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ONLINE VOTING SYSTEM
REGISTRATION
Admin
Name
DOB
Email
Gender
Male
Phone
Adhaar No
Address
Voter ID
Password
Register
Already Registered
Login

:


ONLINE VOTING SYSTEM
Admin
Logout
VOTE
FOR INDIA
Add Elections
Add Candidates
View Resuls

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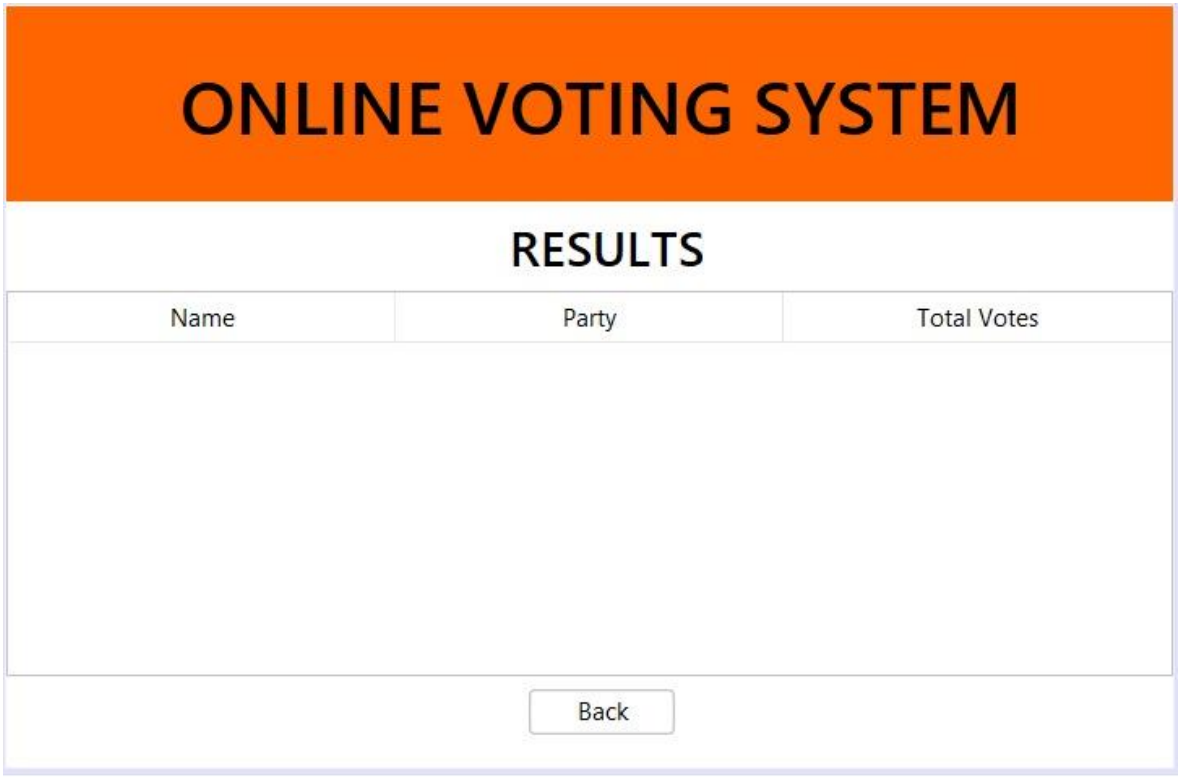
ONLINE VOTING SYSTEM
RESULTS
Name
Party
Total Votes
Back

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Chapter 8

Conclusion

The Pollster online voting system represents a significant advancement in the electoral process, demonstrating the potential of technology to enhance democracy. Through its user-friendly interface, robust security features, and efficient vote counting mechanisms, the system successfully addressed many challenges associated with traditional voting methods. The project achieved its objectives of increasing voter accessibility, participation, and trust in the electoral process.

Feedback from users highlighted the system's ease of use and effectiveness in streamlining the voting experience, confirming its positive impact on electoral engagement. The scalable architecture ensures that Pollster can adapt to various election sizes, making it a versatile solution for future voting needs.

Overall, the successful implementation of the Pollster system not only fulfills the project requirements but also lays the groundwork for future innovations in online voting, ultimately contributing to a more inclusive and efficient democratic process.

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