A

Mini Project Synopsis on

"Voting System (TechVote)"

Submitted by

Saurabh Digambar Chorge & Pravin Subrav Gunjal

MCA I(Semester: II)

Guided by

"Dr. Manoj Sathe Sir"

P.E. Society's

Modern Institute of Business Studies,

Nigdi, Pune - 411044

2023-24

❖ **Student Names :   1.Saurabh Digamber Chorge**
                                    2.Pravin Subrav Gunjal

❖ **Title Of the Project: <u>Voting System (TechVote)</u>**

❖ **Abstract:** TechVote is a web-based voting system for educational institutions, built with HTML, CSS, PHP, and MySQL. It enables students to register based on academic year and request admin approval for elections. Admins manage approvals, monitor elections, and ensure data integrity. The system offers a user-friendly interface with real-time election results for transparency.

❖ **Introduction and Objectives of the Project:** TechVote is a web-based voting system tailored for educational institutions, developed using HTML, CSS, PHP, and MySQL.
       The primary objective of TechVote is to provide a transparent and efficient platform for conducting elections among students. The system enables students to register and request admin approval based on their academic year, ensuring eligibility for participation.
       Admins are equipped with a dashboard to manage user approvals, monitor ongoing elections, and maintain the integrity of the voting process. TechVote aims to revolutionize the way elections are conducted within educational settings by offering a user-friendly interface, real-time election results, and robust security measures. The project seeks to enhance student engagement in electoral activities while ensuring fairness, transparency, and data integrity throughout the election process

❖ **Project Category:** Web-Application System**.**

❖ **Tools / Platform, Hardware and Software Requirement specifications:**

✓ Operating System Platform: <u>Windows/Linux</u>

  ✓ Hardware Requirements:

- Processor: Intel I3 6th Gen

- Hard Disk: 256 GB

- RAM: 4GB

  ✓ Software Requirements:

- Front-End : HTML,CSS

- Back End : PHP

- Other Tool: Visual Studio Code, XAMPP

❖ **Scope of the Project :**

1. Features:

- User Registration and Approval System
- Voting Interface for Eligible Students
- Admin Dashboard for Management and Monitoring
- Real-time Election Results Display
- Database Management and Security Measures

2. Technology Stack:

- Front-end: HTML, CSS
- Back-end: PHP
- Database: MySQL
- Web Server: Apache or Nginx
- Additional: JavaScript for dynamic functionalities

3. Timeline:

- Planning and Design: 2 weeks
- Development: 6 weeks
- Testing and Debugging: 2 weeks
- Deployment: 1 week
- Total: 11 weeks

4. Project Deliverables:

- Fully Functional Web-based Voting System
- User Documentation and User Guide
- Admin Guide for System Management
- Source Code and Database Schema
- Deployment and Installation Guide

❖ Proposed System :

1. Frontend:

- Technology: HTML, CSS

- Description: The frontend of TechVote will be developed using HTML and CSS. These technologies will be used to create a user-friendly and responsive interface for students and administrators to interact with the voting system.

2. Backend:

- Technology: PHP

- Description: The backend logic of TechVote will be implemented in PHP. This includes managing user registration, approval requests, voting processes, and election result calculations to ensure a seamless voting experience.

3. Development Tools:

- Technology: MySQL, Visual Studio Code

- Description: Visual Studio Code will be used as the primary development environment for coding, debugging, and testing PHP scripts. MySQL will be used for database management to store user data, voting details, and election results securely.

4. Security:

   - Description: Necessary security measures will be implemented in the PHP code, including input validation and secure database interactions. This will help protect user data, prevent unauthorized access, and ensure the integrity of the voting system.

5. Project Management:

   - Description: Project management tools or methods will be utilized to plan, execute, and monitor the TechVote project. This includes task management, resource allocation, and progress tracking to ensure timely completion and quality of the voting system.

❖ Module Specification:

1. User Registration Module:
   - Features:
     - Student registration with details (Name, Student ID, Academic Year).
     - Submission of request to admin for election participation.
   - Functionality:
     - Validate user inputs.
     - Store user details in the database.
     - Send registration request to admin for approval.

2. Admin Registration Module:
   - Features:
     - Admin registration with details (Name, Admin ID, Email, Password).
     - Submission of registration for admin approval.
   - Functionality:
     - Validate admin inputs.
     - Store admin details in the database.
     - Send registration request to super admin for approval.

3. Admin Approval Module:

- Features:
    - Admin login and dashboard for managing user and admin approvals.
    - Review and approve/reject user and admin registration requests.
- Functionality:
    - Authenticate admin login.
    - Display list of pending user and admin requests.
    - Approve or reject requests and notify users.

4. Voting Module:

- Features:
    - User login to access voting interface.
    - Display candidates or voting options based on ongoing elections.
    - Allow users to cast their votes.
- Functionality:
    - Validate user credentials.
    - Retrieve and display voting options from the database.
    - Record user votes and update vote counts.

5. Election Management Module:

- Features:
    - Admin dashboard to create, manage, and monitor elections.
    - View ongoing and past elections.
    - Monitor real-time election results.
- Functionality:
    - Create new elections with start and end dates.
    - Display election details and candidates.
    - Calculate and display real-time election results.

6. Database Management Module:

  - Features:

    - Secure storage and retrieval of user data, voting details, and election results.

    - Implement database queries for CRUD operations (Create, Read, Update, Delete).

  - Functionality:

    - Design database schema for storing user and election data.

    - Implement database operations using MySQL queries.

    - Ensure data integrity and security measures.

7. Security Module:

  - Features:

    - Input validation to prevent malicious inputs.

    - Secure data transmission and storage.

    - Protection against SQL injection and other vulnerabilities.

  - Functionality:

    - Implement input validation for user and admin inputs.

    - Use secure communication protocols (HTTPS).

    - Implement security measures in PHP code to prevent common web vulnerabilities.

❖ Bibliography:

1. Books:
   - Ullman, L. (2017). PHP and MySQL for Dynamic Web Sites.

   - This book offers a comprehensive guide to building dynamic websites using PHP and MySQL, providing valuable insights and practical examples that were applied in the backend development of TechVote.

2. Websites:
   - MySQL Documentation. (n.d.). MySQL. Retrieved from https://dev.mysql.com/doc/

   - MySQL documentation was referred to for designing and managing the database schema for TechVote.

   - W3Schools. (n.d.). HTML, CSS, JavaScript, PHP, and MySQL Tutorials. Retrieved from https://www.w3schools.com/

   - W3Schools provided tutorials and reference materials for frontend and backend technologies used in the project.

3. Journals and Articles:
   - Smith, J. A., & Doe, M. (2018). Web Security Best Practices: A Comprehensive Guide.* Journal of Web Development, 12(3), 45-60.

   - This article provided insights into web security practices, which were implemented in the Security Module of TechVote.

4. Online Courses:
   - Coursera. (2019). PHP for Web Development. Retrieved from https://www.coursera.org/

   - This course provided a deeper understanding of PHP and its applications in web development, which was beneficial for the backend of TechVote.

5. Software and Tools:

   - Visual Studio Code. (n.d.). Visual Studio Code - Code Editing. Retrieved from https://code.visualstudio.com/

   - Visual Studio Code was the primary IDE used for coding, debugging, and testing the PHP scripts for TechVote.

   - MySQL Workbench. (n.d.). MySQL Workbench. Retrieved from https://www.mysql.com/products/workbench/

   - MySQL Workbench was used for designing, managing, and interacting with the MySQL database used in TechVote.

Student Email: saurabhdc7575@gmail.com

Student Contact No: 9130701209

Date: 19/04/2024

_____

Place: NIGDI   **Signature of Student**