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eVote

Online Voting System Application

APPLICATION PROJECT

**INTRODUCTION**

In today's digital age, traditional voting systems often encounter challenges such as low participation, manual errors, and high costs. To address these issues, this project proposes the development of an Online Voting System Application that enables users to vote securely and conveniently using their mobile devices. This system will streamline election processes, ensuring fairness, transparency, and efficiency.

**OBJECTIVES**

* To develop a secure, fast, and reliable mobile application for voting.
* To ensure voter privacy and prevent fraudulent activities.
* To promote higher voter turnout by making voting more accessible.
* To provide real-time result computation and transparent reporting.
* To simplify the management of candidates, voters, and elections.

**FEATURES**

**User Side:**

* **Registration and Login**
  + Secure signup using email or student ID.
  + Login authentication with password or OTP.
* **Voter Authentication**
  + Verify eligibility before granting access to the ballot.
* **Voting Dashboard**
  + Display ongoing elections and candidates.
  + Allow voting with restrictions (one vote per category).
* **Voting Confirmation**
  + Display receipt or confirmation after voting.
* **View Election Results**
  + After voting ends, voters can view official results graphically.

**Admin Side:**

* **Candidate Management**
  + Add, edit, or remove candidate profiles.
* **Election Management**
  + Open and close voting periods.
* **Voter Management**
  + Approve, block, or manage registered voters.
* **Analytics Dashboard**
  + View turnout statistics, votes cast, and election reports.
* **Audit Logs**
  + Maintain records for transparency and security reviews.

**TECH STACK**

1. Frontend (User Interface)

* React Native (JavaScript/TypeScript) - Cross-platform framework for building Android/iOS mobile apps with reusable components.
* Android Studio (Java/Kotlin) - For native Android module development and debugging.
* XML - Defines Android screen layouts and UI elements.
* Figma - Designs app prototypes, wireframes, and UI/UX components before implementation.

2. Backend (Server-Side & Logic Handling)

* Node.js + Express.js - Lightweight server to handle API requests, business logic, and Firebase integration..
* Firebase Authentication - Manages user sign-in (email, Google, or phone).

3. Platform

* Android OS - Primary target for mobile app deployment.