**Objective:**  
This project modernizes the electoral process by integrating digital technologies with robust biometric security. By replacing traditional paper-based voter slips with digital SMS (or GSM-based) notifications, and by implementing dual-stage fingerprint verification combined with dynamic shift allocation, the system ensures secure, transparent, and convenient elections. Only voters who cast their vote receive government incentives (such as tax waivers/subsidies), thereby increasing public trust.

**Key Features:**

**Digital Slip Distribution:**  
Voters, whose unique voter IDs are linked with Aadhaar and their mobile numbers, receive digital slips (via SMS or simulated messages) indicating their assigned voting slot. Initially, all voters select Slot 1; when it fills, remaining voters are re‑allocated to subsequent shifts.

**Dynamic Shift Allocation:**  
The election day is divided into four shifts:

Shift 1: 9:00–11:00 AM

Shift 2: 11:00–1:00 PM

Shift 3: 1:00–3:00 PM

Shift 4 (Final Slot): 3:00–4:00 PM  
Voters not voting in their chosen slot receive reminder messages and are re‑allocated until they cast their vote.

**Biometric Verification:**  
Two AS608 fingerprint modules are used:

**Module 1 (Entry Verification):** Verifies the designated employee (via thumb) and the voter (via index finger).

**Module 2 (Vote Confirmation):** The voter re‑verifies with a thumb scan just before the vote is recorded.

**Vote Casting and Counting:**  
Voters select a political party using push buttons; votes are recorded digitally and tallied at the end of the election.

**Cheating Detection and Error Handling:**  
Any fingerprint mismatches, duplicate votes, or cheating attempts (e.g., unauthorized voting or impersonation) trigger error messages, sound an audible buzzer, and flag the incident.

**GSM Messaging & Buzzer Alert:**  
A GSM module sends real SMS messages (or simulated messages) for digital slip distribution and reminders. An active buzzer sounds along with the red LED during error conditions.

**Timekeeping with DS1302 RTC:**  
The DS1302 RTC module provides accurate time via its 3‑wire interface, enabling dynamic shift allocation.