**ELECTA - Finalized Database Schema (v3.0)**

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**Introduction** This document outlines the complete relational database schema for the ELECTA platform. It includes the foundational tables for administration, user management, and content (v2.0), as well as the new, dedicated schema for the Charter Compliance Module (v3.0).

**Section 1: Core Administration Tables (v2.0)**

**1.1 Admins**

* **Rationale:** A dedicated table for administrators is required to manage internal users and give meaning to the various admin\_id foreign keys throughout the schema. This directly reflects the roles defined in the project's Deep Dive on the Admin Panel.
* **Schema:**
  + id (UUID, Primary Key)
  + email (Text, Unique)
  + full\_name (Text)
  + role (Enum: SUPER\_ADMIN, DATA\_EDITOR, MODERATOR, VERIFICATION\_OFFICER)
  + last\_login\_at (Timestamp)
  + created\_at (Timestamp)

**1.2 AuditLogs**

* **Rationale:** To fulfill the core "Auditability" principle, a dedicated, append-only audit table isolates the audit trail from primary data tables, ensuring a clean, performant, and secure log of all critical actions.
* **Schema:**
  + id (UUID, Primary Key)
  + admin\_id (Foreign Key to Admins)
  + action (Enum: CREATE, UPDATE, DELETE, APPROVE, REJECT)
  + table\_name (Text, e.g., 'Candidates', 'Questions')
  + entity\_id (UUID, The ID of the record that was changed)
  + changes (JSONB, Stores the before/after state)
  + timestamp (Timestamp, Defaults to now())

**Section 2: Content & User Management Tables (v2.0)**

**2.1 Citizens Table (Updated)**

* **Rationale:** Enhancements add security metadata, activity tracking, and crucial feedback for the NID rejection workflow. Soft-deletion (

deleted\_at) is used for data recovery and compliance.

* **Schema:**
  + id (UUID, Primary Key)
  + mobile\_number (Text, Unique, Indexed)
  + password\_hash (Text)
  + verification\_status (Enum: MOBILE\_VERIFIED, PENDING\_NID, NID\_VERIFIED, REJECTED\_NID)
  + role (Enum: CITIZEN, TRUSTED\_CONTRIBUTOR)
  + nid\_number\_encrypted (Encrypted Blob)
  + encryption\_scheme (Text, e.g., 'AES-256-GCM')
  + rejection\_reason (Text, Nullable)
  + nid\_photo\_front\_url, nid\_photo\_back\_url, selfie\_photo\_url (Text)
  + last\_login\_at (Timestamp)
  + created\_at, updated\_at (Timestamps)
  + deleted\_at (Timestamp, Nullable)

**2.2 Sources Table (Updated)**

* **Rationale:** Provides better context and attribution for data editors and the public.
* **Schema:**
  + id (UUID, Primary Key)
  + source\_reference (Text, URL or S3 path)
  + source\_type (Enum: URL, PDF, IMAGE)
  + description (Text, Nullable, e.g., "Election affidavit 2024, Page 5")
  + external\_publisher\_name (Text, Nullable, e.g., "Prothom Alo")
  + credibility\_tier (Enum: TIER\_1\_GOVERNMENT, TIER\_2\_NEWS\_MEDIA, TIER\_3\_EXPERT)
  + uploaded\_by\_admin\_id (Foreign Key to Admins)
  + created\_at (Timestamp)

**2.3 Candidates Table (Updated)**

* **Rationale:** The status field is essential for editorial workflows, and claimed\_by\_candidate\_id prepares for Phase 2 self-claim functionality.
* **Schema:**
  + id (UUID, Primary Key)
  + full\_name (Text), party\_id (FK)
  + profile\_photo\_url, bio, vision\_statement (Text)
  + status (Enum: DRAFT, PUBLISHED, ARCHIVED)
  + claimed\_by\_candidate\_id (Foreign Key to Candidates, Nullable)
  + created\_at, updated\_at (Timestamps)
  + deleted\_at (Timestamp, Nullable)

**2.4 Factual Record Tables (Standardized)**

* **Rationale:** Standardized structure for all factual data tables (e.g., EducationRecords, AssetRecords). The

is\_disputed field is a placeholder for the Phase 2 Public Challenge System.

* **Standard Fields:**
  + id, candidate\_id, source\_id
  + ... (specific data fields for that record type)
  + is\_disputed (Boolean, Default: false)
  + created\_by\_admin\_id (Foreign Key to Admins)
  + created\_at, updated\_at (Timestamps)

**2.5 Questions & Answers Tables (Updated)**

* **Rationale:** Adding moderation and sourcing metadata creates a more auditable and manageable Q&A system.
* **Questions Schema:**
  + id, question\_text, status, submitted\_by\_citizen\_id, addressed\_to\_candidate\_id
  + moderated\_by\_admin\_id (Foreign Key to Admins, Nullable)
  + moderation\_reason (Text, Nullable)
  + created\_at (Timestamp)
  + deleted\_at (Timestamp, Nullable)
* **Answers Schema:**
  + id, question\_id, answer\_text, posted\_by\_admin\_id, source\_document\_id
  + visibility\_status (Enum: PUBLIC, HIDDEN, FLAGGED)
  + response\_channel (Enum: EMAIL, DASHBOARD, OTHER)
  + created\_at (Timestamp)

**Section 3: Charter Compliance Module Schema (v3.0)**

**Rationale:** This new set of tables is designed to track political party compliance against the clauses of the national "July Charter." The schema is version-aware, evidence-based, and flexible to support the platform's goal of becoming a key accountability engine.

**3.1 CharterVersions (New Table)**

* **Purpose:** Stores different versions of the July Charter to future-proof the system.
* **Schema:**
  + id (UUID, Primary Key)
  + version\_name (Text, e.g., "Final Ratified Text 2025-07-31")
  + effective\_date (Date)
  + review\_deadline (Date)
  + is\_active (Boolean)

**3.2 CharterClauses (New Table)**

* **Purpose:** Holds the specific, individual clauses of a given Charter version.
* **Schema:**
  + id (UUID, Primary Key)
  + version\_id (Foreign Key to CharterVersions)
  + clause\_number (Text, e.g., "5.2a")
  + title (Text)
  + clause\_text\_json (JSONB, for flexibility with evolving text)
  + clause\_group (Text, e.g., "Judiciary", "Anti-Corruption")

**3.3 ComplianceEvidence (New Table)**

* **Purpose:** A dedicated table to store links to documents and other evidence used for compliance assessments.
* **Schema:**
  + id (UUID, Primary Key)
  + file\_url (Text, URL or S3 path)
  + description (Text)
  + uploaded\_at (Timestamp)
  + uploaded\_by\_admin\_id (Foreign Key to Admins)

**3.4 PartyComplianceRecords (New Table)**

* **Purpose:** The core tracking table that links parties to charter clauses and their compliance status.
* **Schema:**
  + id (UUID, Primary Key)
  + party\_id (Foreign Key to PoliticalParties)
  + clause\_id (Foreign Key to CharterClauses)
  + evidence\_id (Foreign Key to ComplianceEvidence)
  + compliance\_status (Enum: COMPLIANT, NON\_COMPLIANT, PARTIALLY\_COMPLIANT, UNDER\_REVIEW, NOT\_APPLICABLE)
  + public\_notes (Text, Editor's justification for the ruling)
  + last\_assessed\_at (Timestamp)
  + next\_review\_due\_at (Timestamp)
  + assessed\_by\_admin\_id (Foreign Key to Admins)

**3.5 PoliticalParties Table (Updated for v3.0)**

* **Purpose:** Adding Charter-specific metadata.
* **Schema Additions:**
  + charter\_signed\_at (Timestamp, Nullable)
  + charter\_compliance\_badge (Enum: FULLY\_COMPLIANT, PARTIALLY\_COMPLIANT, NON\_COMPLIANT, PENDING\_ASSESSMENT, Nullable)