**1. Admins Table**

This table stores administrator information.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| id | UUID | Primary key (admin unique ID) |
| nom | STRING | Name of the admin |

**2. Scrutins Table**

This table stores the details of voting sessions (scrutins).

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| id | UUID | Primary key (unique scrutin ID) |
| titre | STRING | Title of the scrutin |
| description | TEXT | Description of the scrutin |
| début | DATETIME | Start date of the scrutin |
| fin | DATETIME | End date of the scrutin |
| statut | STRING | Status of the scrutin (e.g., active, closed) |
| admin\_id | UUID | Foreign key referencing admins.id |

**3. Users Table**

This table stores information about users who vote.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| id | UUID | Primary key (user unique ID) |
| nom | STRING | Name of the user |
| email | STRING | Email address (unique) |
| cin\_hash | STRING | Hash of the CIN (identification) |

**4. OptionVotes Table**

This table stores the voting options for each scrutin.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| id | UUID | Primary key (unique option ID) |
| libelle | STRING | Label/Name of the option |
| scrutin\_id | UUID | Foreign key referencing scrutins.id |

**5. Votes Table**

This table records each vote cast by a user during a scrutin.

| **Column Name** | **Data Type** | **Description** |
| --- | --- | --- |
| id | UUID | Primary key (unique vote ID) |
| voterHash | STRING | Hash of the voter to prevent double voting |
| horodadata | DATETIME | Timestamp when the vote was cast |
| txHash | STRING | Hash of the transaction (for verification) |
| user\_id | UUID | Foreign key referencing users.id |
| scrutin\_id | UUID | Foreign key referencing scrutins.id |
| option\_id | UUID | Foreign key referencing option\_votes.id |

**Summary of Relationships:**

* **Admins and Scrutins**: Each **admin** can create multiple **scrutins** (1:N relationship).
* **Scrutins and OptionVotes**: Each **scrutin** can have multiple **option\_votes** (1:N relationship).
* **Users and Votes**: Each **user** can cast multiple **votes** (1:N relationship).
* **OptionVotes and Votes**: Each **option\_vote** can receive multiple **votes** (1:N relationship).
* **Scrutins and Votes**: Each **scrutin** can receive multiple **votes** (1:N relationship).

+------------------+ +------------------+ +------------------+

| admins | 1 | scrutins | N | users |

+------------------+ +------------------+ +------------------+

| id (PK) |<----- | id (PK) | <----> | id (PK) |

| nom | | titre | | nom |

+------------------+ | description | | email |

| début | | cin\_hash |

| fin | +------------------+

| statut |

| admin\_id (FK) |

+------------------+

|

N

|

+------------------+

| option\_votes |

+------------------+

| id (PK) |

| libelle |

| scrutin\_id (FK) |

+------------------+

|

N

|

+------------------+

| votes |

+------------------+

| id (PK) |

| voterHash |

| horodadata |

| txHash |

| user\_id (FK) |

| scrutin\_id (FK) |

| option\_id (FK) |

+------------------+