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| Business Template  **Subject areas** |
| **Logo / Image** |

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# Business Description

## Business background

An independent commission is tasked with collecting and managing detailed information related to political elections. This database will serve as the central repository for all campaign-related activities, tracking interactions with voters, managing resources like volunteers and donations, and analyzing public sentiment and campaign events.

## Problems. Current Situation

Here is the completed documentation for your assignment on the **Political Campaign** topic, based on the requirements and the template you provided.

* **1. Business Description**
* **1.1 Business background**

An independent commission is tasked with collecting and managing detailed information related to political elections. This database will serve as the central repository for all campaign-related activities, tracking interactions with voters, managing resources like volunteers and donations, and analyzing public sentiment and campaign events.

* **1.2 Problems. Current Situation**

Currently, campaign data is likely fragmented across multiple systems, spreadsheets, and documents. This makes it difficult to:

* Get a single, unified view of a person (e.g., is a specific voter also a donor and a volunteer?).
* Effectively manage and deploy volunteers based on their availability and assigned tasks.
* Track the flow of money, including all donations and their sources.
* Correlate campaign events (like rallies or social media pushes) with changes in survey results or voter sentiment.
* Systematically log and address problems that arise during the campaign and on election day.

## the Benefits of implementing a database. Project Vision

**Project Vision:** To create a single source of truth that empowers the commission to efficiently manage campaign operations, ensure data integrity, and perform powerful, real-time analysis.

**Benefits:**

* **Centralized Management:** All data on voters, donors, volunteers, and events is in one place.
* **Resource Optimization:** Efficiently assign volunteers to tasks and events based on their roles and availability.
* **FinancialTransparency:** Maintain a clear, auditable record of all contributions and financial activities.
* **Data-Driven Decisions:** Analyze survey results and event feedback to adjust campaign strategy.
* **Issue Tracking:** Ensure all problems are documented, assigned, and resolved in a timely manner.

# Model description

## Definitions & Acronyms

 **Voter:** A member of the public registered to vote.

 **Donor:** An individual or organization that contributes money to the campaign.

 **Volunteer:** An individual who contributes their time to campaign tasks.

 **Event:** A scheduled campaign activity, such as a rally, town hall, or social media engagement.

 **Task:** A specific, actionable item assigned to one or more volunteers.

 **PK:** Primary Key

 **FK:** Foreign Key

 **M:N:** Many-to-Many Relationship

## A screenshot of a computer screen AI-generated content may be incorrect.Logical Scheme

Here is the completed documentation for your assignment on the **Political Campaign** topic, based on the requirements and the template you provided.

* **1. Business Description**
* **1.1 Business background**

An independent commission is tasked with collecting and managing detailed information related to political elections1. This database will serve as the central repository for all campaign-related activities, tracking interactions with voters, managing resources like volunteers and donations, and analyzing public sentiment and campaign events.

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Currently, campaign data is likely fragmented across multiple systems, spreadsheets, and documents. This makes it difficult to:

* Get a single, unified view of a person (e.g., is a specific voter also a donor and a volunteer?).
* Effectively manage and deploy volunteers based on their availability and assigned tasks2.
* Track the flow of money, including all donations and their sources3.
* Correlate campaign events (like rallies or social media pushes) with changes in survey results or voter sentiment4.
* Systematically log and address problems that arise during the campaign and on election day5.
* **1.3 The benefits of implementing a database. Project Vision**

**Project Vision:** To create a single source of truth that empowers the commission to efficiently manage campaign operations, ensure data integrity, and perform powerful, real-time analysis.

**Benefits:**

* **Centralized Management:** All data on voters, donors, volunteers, and events is in one place6.
* **Resource Optimization:** Efficiently assign volunteers to tasks and events based on their roles and availability7.
* **FinancialTransparency:** Maintain a clear, auditable record of all contributions and financial activities8.
* **Data-Driven Decisions:** Analyze survey results and event feedback to adjust campaign strategy.
* **Issue Tracking:** Ensure all problems are documented, assigned, and resolved in a timely manner9.
* **2. Model description**
* **2.1 Definitions & Acronyms**
* **Voter:** A member of the public registered to vote.
* **Donor:** An individual or organization that contributes money to the campaign10.
* **Volunteer:** An individual who contributes their time to campaign tasks11.
* **Event:** A scheduled campaign activity, such as a rally, town hall, or social media engagement12.
* **Task:** A specific, actionable item assigned to one or more volunteers13.
* **PK:** Primary Key
* **FK:** Foreign Key
* **M:N:** Many-to-Many Relationship
* **2.2 Logical Scheme**

*(This is where you would insert your graphical image, e.g., DB\_Name\_Surname\_HW\_PoliticalCampaign\_diagram.png. The tables below describe the structure of that diagram.)*

* **2.3 Objects**

This model includes 15 tables designed in 3rd Normal Form (3NF) to minimize redundancy and ensure data integrity.

* **Table Description**

| **Table Name** | **Field name** | **Field Description** | **Data Type** |
| --- | --- | --- | --- |
| **Addresses** | AddressID | Unique identifier for an address, PK | INT (PK) |
|  | Street | Street name and number | VARCHAR(255) |
|  | City | City name | VARCHAR(100) |
|  | State | State or region | VARCHAR(50) |
|  | ZipCode | Postal code | VARCHAR(20) |
| **Voters** | VoterID | Unique identifier for a voter, PK | INT (PK) |
|  | FirstName | Voter's first name 14 | VARCHAR(100) |
|  | LastName | Voter's last name 15 | VARCHAR(100) |
|  | Email | Voter's contact email | VARCHAR(255) |
|  | Phone | Voter's contact phone | VARCHAR(50) |
|  | AddressID | Link to the voter's address, FK 16 | INT (FK) |
|  | VoterStatus | e.g., 'Registered', 'Inactive' | VARCHAR(50) |
| **Donors** | DonorID | Unique identifier for a donor, PK | INT (PK) |
|  | FirstName | Donor's first name 17 | VARCHAR(100) |
|  | LastName | Donor's last name 18 | VARCHAR(100) |
|  | Email | Donor's contact email | VARCHAR(255) |
|  | AddressID | Link to the donor's address, FK 19 | INT (FK) |
|  | DonorType | e.g., 'Individual', 'Organization' | VARCHAR(50) |
| **Contributions** | ContributionID | Unique identifier for a donation, PK | INT (PK) |
|  | DonorID | Who made the donation, FK 20 | INT (FK) |
|  | Amount | The monetary value of the contribution 21 | DECIMAL(10, 2) |
|  | ContributionDate | When the donation was made | DATE |
| **Volunteers** | VolunteerID | Unique identifier for a volunteer, PK | INT (PK) |
|  | FirstName | Volunteer's first name 22 | VARCHAR(100) |
|  | LastName | Volunteer's last name 23 | VARCHAR(100) |
|  | Email | Volunteer's contact email 24 | VARCHAR(255) |
|  | Phone | Volunteer's contact phone 25 | VARCHAR(50) |
|  | Availability | Text describing when they can help 26 | VARCHAR(255) |
| **VolunteerRoles** | RoleID | Unique identifier for a role, PK | INT (PK) |
|  |  | RoleName | e.g., 'Canvasser', 'Phone Banker' 27 | VARCHAR(100) |
|  | Description | Details of the role's responsibilities | TEXT |  |
| **EventTypes** | EventTypeID | Unique identifier for an event type, PK | INT (PK) |  |
|  |  | TypeName | e.g., 'Rally', 'Town Hall', 'Social Media' 28 | VARCHAR(100) |
| **Events** | EventID | Unique identifier for an event, PK | INT (PK) |  |
|  | EventTypeID | What kind of event it is, FK 29 | INT (FK) |  |
|  | EventName | The public name of the event | VARCHAR(255) |  |
|  | Location | Venue or online URL | VARCHAR(255) |  |
|  | EventDate | Date and time of the event | DATETIME |  |
| **Tasks** | TaskID | Unique identifier for a task, PK | INT (PK) |  |
|  | EventID | Event this task is related to (Nullable), FK | INT (FK) |  |
|  | RoleID | The primary role needed for this task, FK | INT (FK) |  |
|  | TaskName | Short name for the task (e.g., 'Set up chairs') | VARCHAR(255) |  |
|  | Description | Detailed description of what needs to be done | TEXT |  |
| **VolunteerTaskAssignments** | VolunteerID | Volunteer assigned, PK/FK 30 | INT (PK, FK) |  |
|  | TaskID | Task to be done, PK/FK 31 | INT (PK, FK) |  |
|  | HoursLogged | Hours spent on this task by this volunteer | DECIMAL(5, 2) |  |
| **Surveys** | SurveyID | Unique identifier for a survey, PK | INT (PK) |  |
|  | SurveyName | Name of the survey (e.g., 'Q3 Voter Sentiment') 32 | VARCHAR(255) |  |
|  | DateConducted | When the survey was run | DATE |  |
| **SurveyQuestions** | QuestionID | Unique identifier for a question, PK | INT (PK) |  |
|  | SurveyID | The survey this question belongs to, FK | INT (FK) |  |
|  | ParentQuestionID | For branching logic (if Q\_2 depends on Q\_1), FK | INT (FK, Nullable) |  |
|  | QuestionText | The text of the survey question | TEXT |  |
| **SurveyResponses** | ResponseID | Unique identifier for a response, PK | INT (PK) |  |
|  | QuestionID | The question being answered, FK | INT (FK) |  |
|  | VoterID | The voter who gave the response, FK 33 | INT (FK) |  |
|  | ResponseValue | The answer provided by the voter | VARCHAR(1000) |  |
| **IssuesLog** | IssueID | Unique identifier for a problem, PK | INT (PK) |  |
|  | EventID | Related event (if applicable), FK | INT (FK, Nullable) |  |
|  | Description | Details of the problem that arose 34 | TEXT |  |
|  | DateReported | When the problem was logged 35 | DATETIME |  |
|  | Status | e.g., 'New', 'In Progress', 'Resolved' | VARCHAR(50) |  |
| **OppositionResearch** | ResearchID | Unique identifier for a research item, PK | INT (PK) |  |
|  | Topic | Subject of the research 36 | VARCHAR(255) |  |
|  | Summary | Key findings | TEXT |  |
|  | Source | Where the information came from | VARCHAR(255) |  |

* **Comments on table relationships**

This model achieves 3NF by separating distinct entities. For example, Addresses is a separate table to avoid redundant data entry in the Voters and Donors tables. EventTypes and VolunteerRoles are also lookup tables to ensure consistent naming.

* **Voters/Donors and Addresses (1:N):** One Address can be used by many Voters or Donors (e.g., a household).
* **Donors and Contributions (1:N):** One Donor can make many Contributions.
* **Events and EventTypes (1:N):** One EventType (like 'Rally') can apply to many Events.
* **Events and Tasks (1:N):** One Event can require many Tasks.
* **Volunteers and VolunteerTaskAssignments (1:M):** One Volunteer can be assigned to many tasks.
* **Tasks and VolunteerTaskAssignments (1:M):** One Task can be assigned to many Volunteers.
* **The M:N Relationship:** The relationship between Volunteers and Tasks is many-to-many. A volunteer can be assigned multiple tasks, and a single task (e.g., "Make phone calls") can be assigned to many volunteers37. This is implemented using the **VolunteerTaskAssignments** linking table. This table holds attributes specific to the link, like HoursLogged.
* **Surveys and SurveyQuestions (1:N):** One Survey is composed of many SurveyQuestions.
* **Voters and SurveyResponses (1:N):** One Voter can provide many SurveyResponses (one for each question they answer).
* **SurveyQuestions and SurveyResponses (1:N):** One Question can have many Responses (from different voters).
* **Advanced Feature (Self-Referential):** The **SurveyQuestions** table has a ParentQuestionID column. This FK points back to SurveyQuestions.QuestionID. This allows for a "skip-logic" or branching structure, where a question is only asked if a specific answer was given to a parent question.
* **Advanced Feature (Composite Key):** The primary key for **VolunteerTaskAssignments** is the composite key (VolunteerID, TaskID). This ensures that the same volunteer cannot be assigned to the exact same task more than once.

## Objects

**Table: Volunteers**

|  |  |  |  |
| --- | --- | --- | --- |
| Volunteer ID | FirstName | LastName | Availability |
| 1  2 | Alice | Brown | 'Weekends' |
| Bob | Johson | 'Mon/Wed evenings' |

Table: events

|  |  |  |  |
| --- | --- | --- | --- |
| **EventID** | **EventTypeID** | **EventName** | **EventDate** |
| 10 | 1 | 'Get Out the Vote Rally' | '2025-11-01 18:00' |
|  |  |  |  |

Table: Tasks

| **TaskID** | **EventID** | **RoleID** | **TaskName** |
| --- | --- | --- | --- |
| 500 | 10 | 1 | 'Set up 100 chairs' |
| 501 | NULL | 2 | 'Phone bank shift' |

**Table: VolunteerTaskAssignments** (The M:N table)

| **VolunteerID** | **TaskID** | **HoursLogged** |
| --- | --- | --- |
| 1 | 500 | 3.5 |
| 2 | 501 | 2.0 |
| 1 | 501 | 2.0 |

In this example, Alice (1) helped set up chairs for the rally. Both Alice (1) and Bob (2) participated in the 'Phone bank shift' task, showing the M:N relationship in action