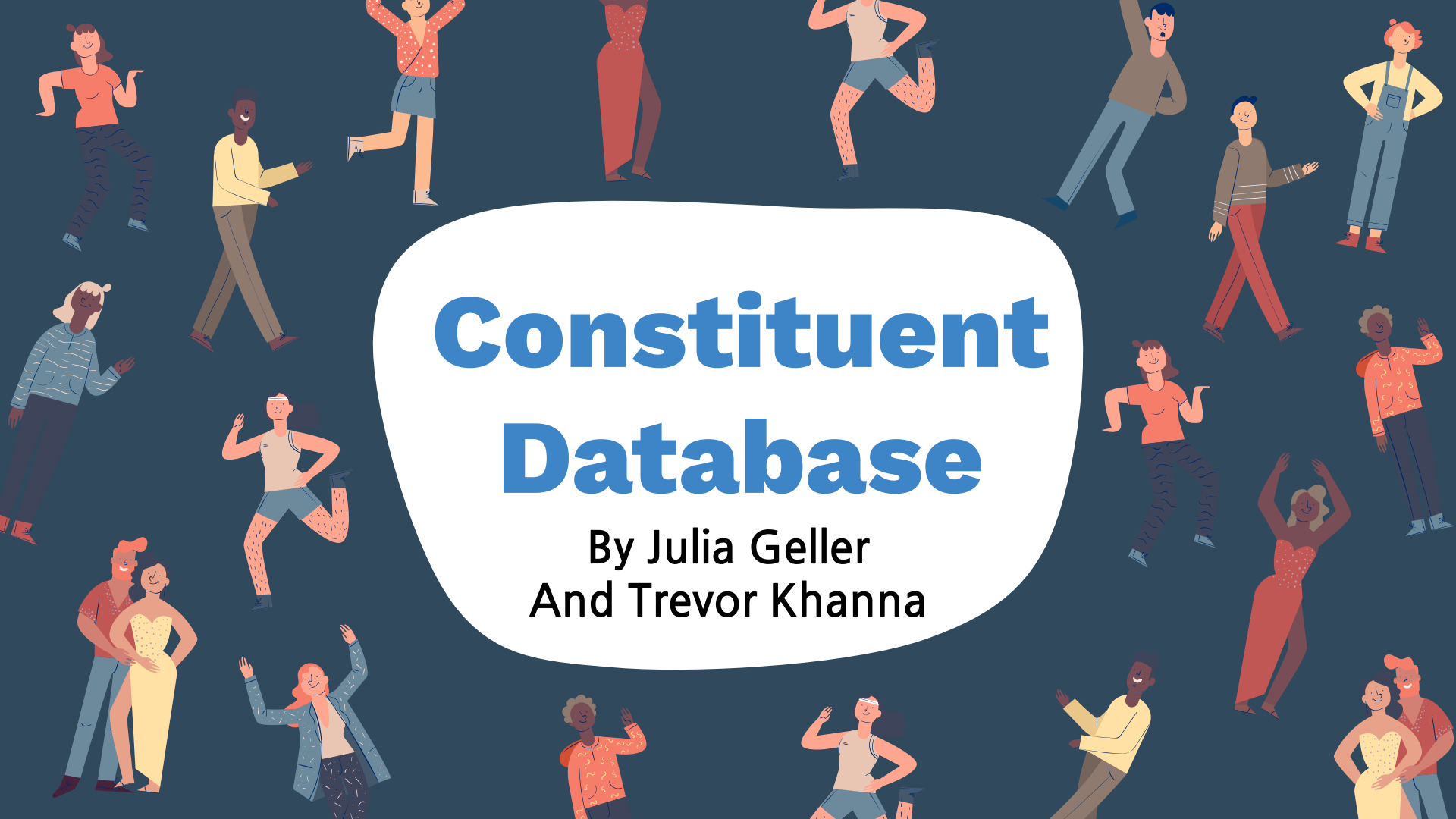


Constituent Database

By Julia Geller
And Trevor Khanna

The Challenge of Politics

Only **20% of Americans trust** their **elected officials** to do “what is right” according to the Pew Research center.

Trust in Government

- Lack of trust in Government
- Build trust through communication

Goals of Our Database

Promote Communication & Effective Management

Phone Communication

Promote communication between constituents and politicians

Newsletters

Enable leaders to easily send out newsletters

City-wide Events

Create mechanisms to analyze attendance at city events

Political Parties

Show politicians which ideologies are represented in their district

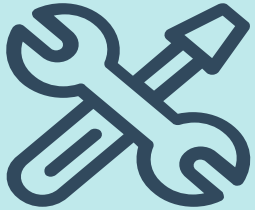
Addresses

Effectively reach all residents' homes

Database Uses

Simple Tasks: Adding and Modifying Data

1. Add constituents to newsletter lists
2. Add an address
3. Add a new constituent
4. Update a constituent’s work phone number
5. Delete an event



Simple Tasks: Retrieving Data

1. Retrieve the addresses of all constituents
2. Retrieve all supervisor names
3. Retrieve all newsletter names
4. Retrieve all primary languages spoken by constituents
5. Retrieve the names of all callers

Complex Tasks

1. Return the two-hour time slot during a week when more constituents pick up their phone
2. Output the number of eligible voters in each ward
3. Return the average percent of people who rsvp yes and come to events
4. Return the percent of people affiliated with a political groups in a ward
5. Return the number of people attending a particular political event and the number attendees above capacity

Extra Functionality

1. Incorrect Input Types
    a. String instead of Int
2. Non-Valid Inputs
    a. Referencing Nonexistent Value
3. Exceptions/Errors
4. User Determines When to Stop
5. Confirmation Of Successful Task

System Architecture

Database

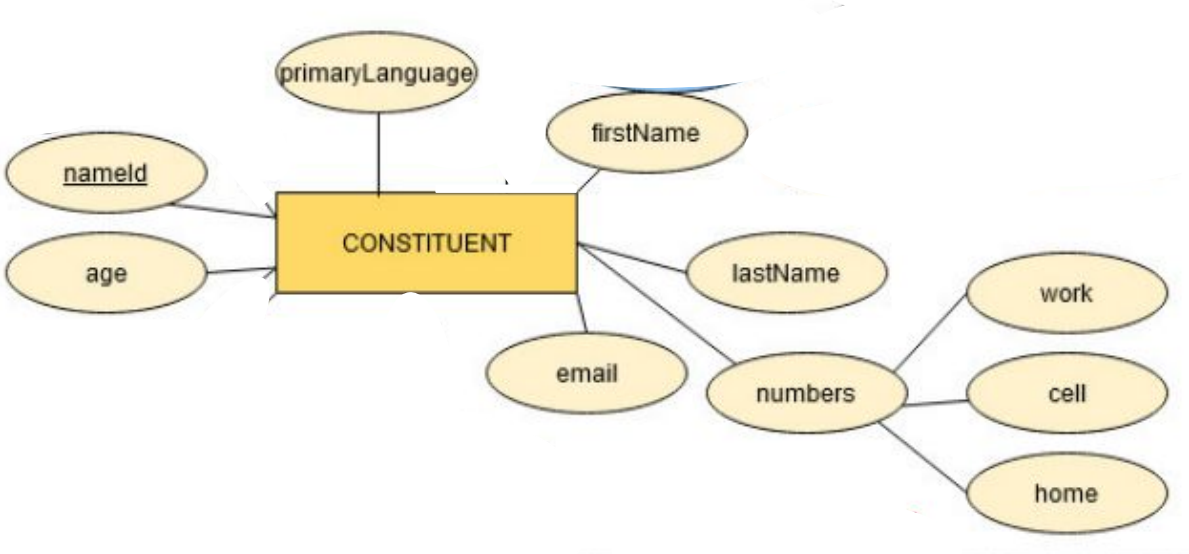
1. Used MariaDB to create database
2. Assembled in phpMyAdmin

Interface

1. Java
   a. Source Code
   b. User Interface
2. Written in Eclipse
3. MariaDB jar to Translate from MySQL to Java
4. Talks to database through XAMPP
   a. Apache Web Server

Database Design

Constituents



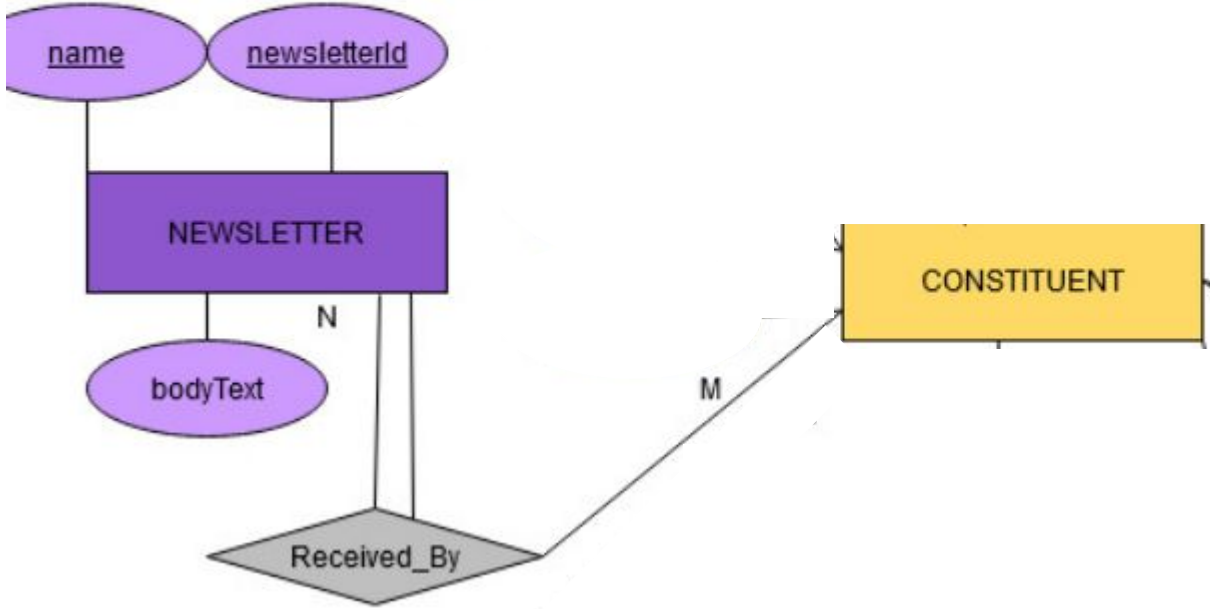
Highlights

- Name
- Phone numbers
- Age
- Language

Data Source

- Voter registration lists

Newsletters



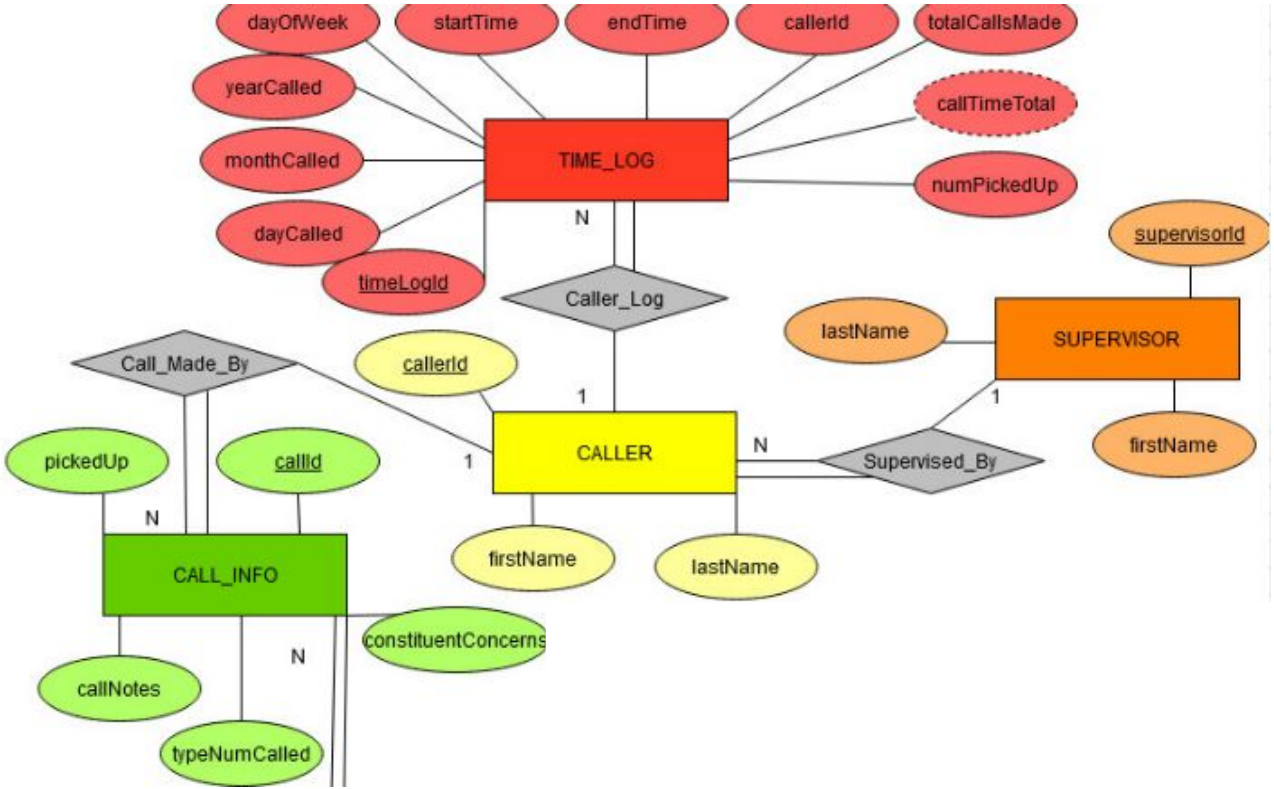
Highlights

- Name of Newsletter
- Text in newsletter

Data Source

- Politician's Head of Communications

Calling



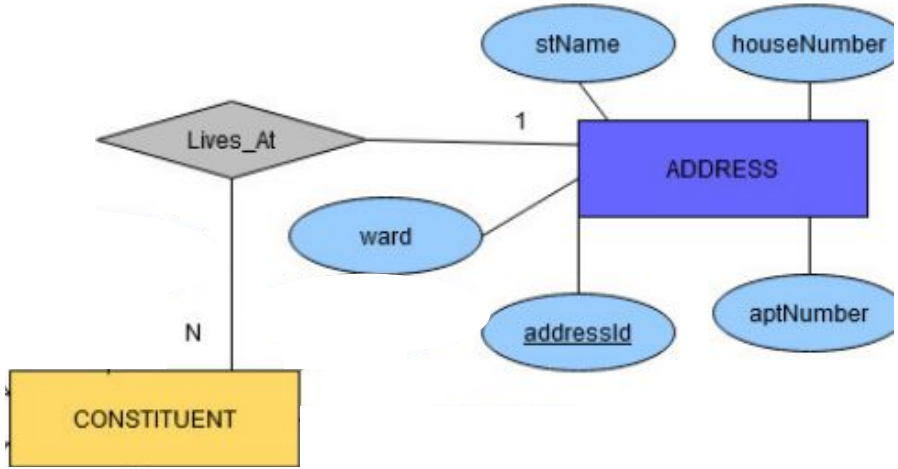
Highlights

- Callers
- Individual conversations
- Supervisors
- Sessions of calling

Data Source

- Collected by Politician's team

Addresses



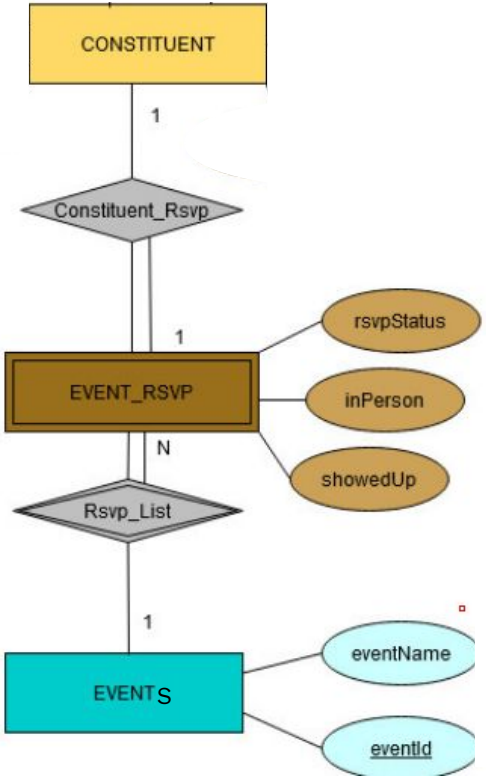
Highlights

- Ward
- House Information

Data Source

- Voter registration lists

Event-tracking



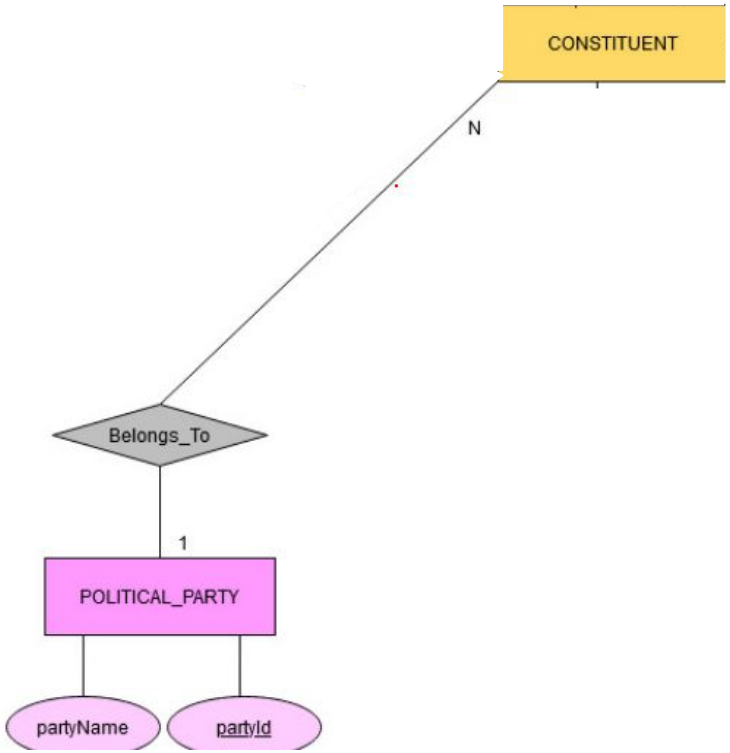
Highlights

- Constituent rsvp’s
- Who attended
- Event name
- Event Id

Data Source

- Collected by Politician’s team

Political Parties



Highlights

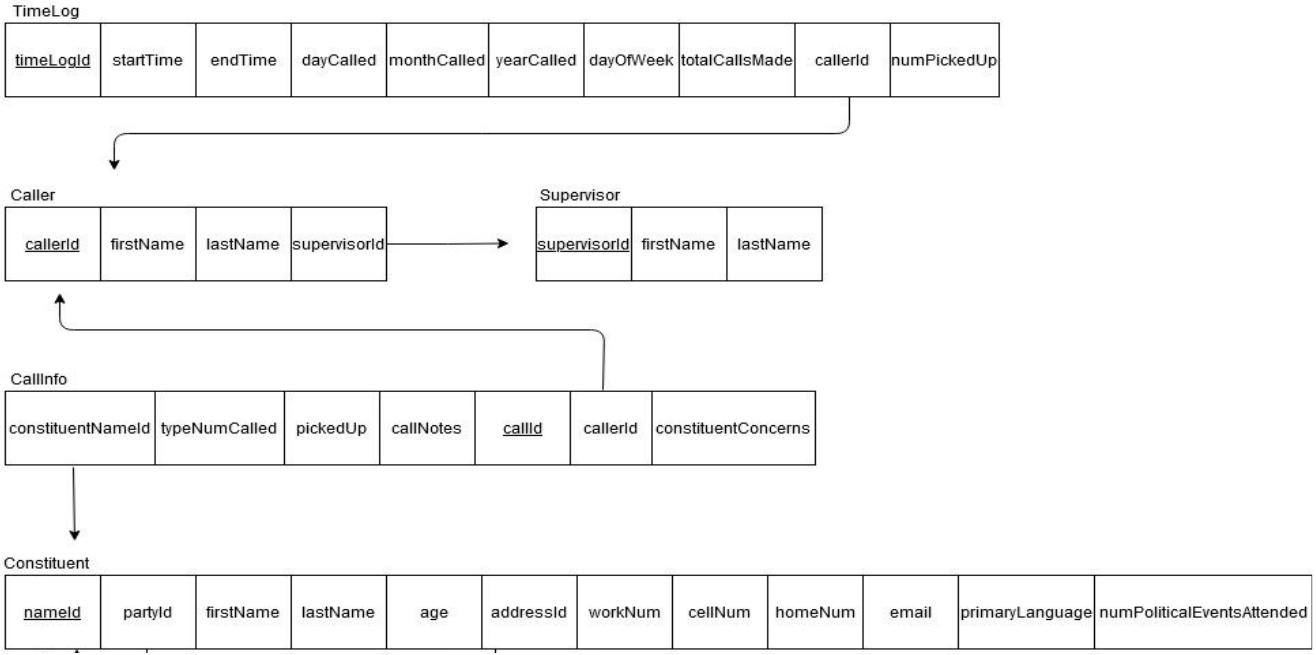
- Political parties in each ward

Data Source

- Voter registration lists

Logical Design

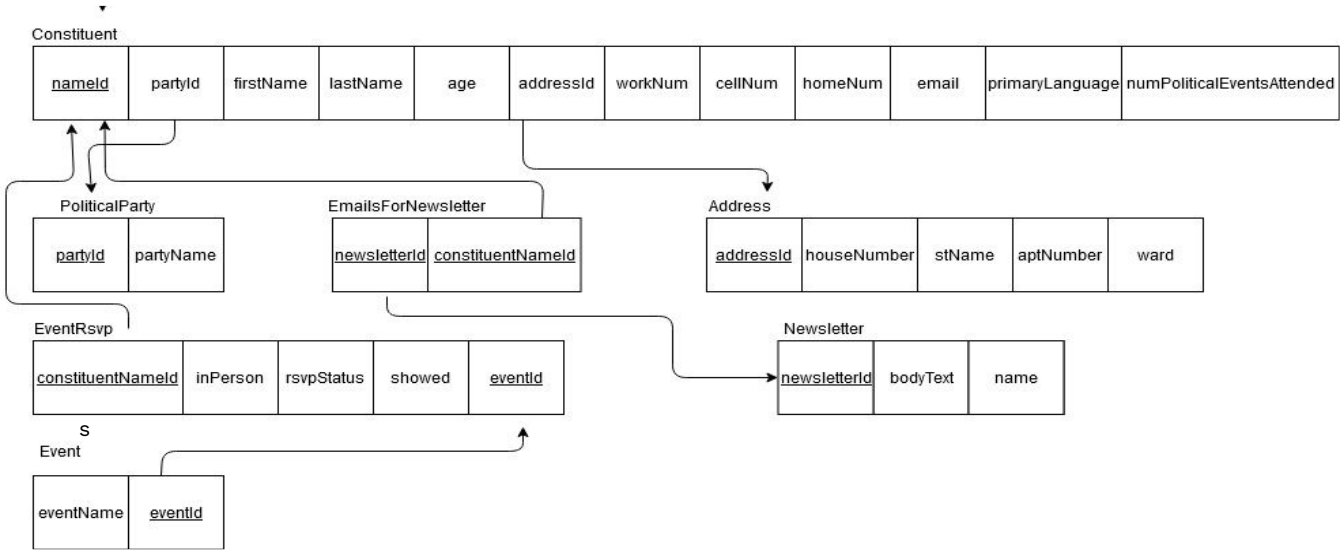
Map



Unique Identifiers

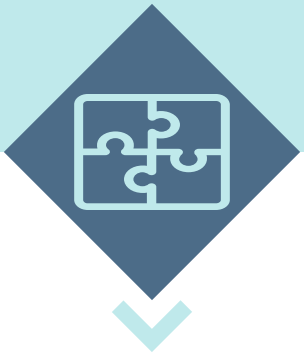
- **TimeLog:** Timelog Id
- **Caller:** Caller Id
- **Supervisor:** Supervisor Id
- **CallInfo:** Call Id
- **Constituent:** Name Id

Map



Unique Identifiers

- **Political Party:**
  Party Id
- **Address:**
  Address Id
- **Event Rsvp:**
  Constituent Name Id
  Event Id
- **Event:**
  Event Id
- **Emails for Newsletter:**
  Newsletter Id
  Constituent Name Id



Physical Design Choices

Indexes and Denormalization

Index on constituents

- Convenience

No other indexes

- Small data-sets
- High storage costs
- Not useful to index addresses

No denormalization

- Not worth the storage costs

Thank you!