

Database Design in 3NF

employees (id, first_name, last_name, ssn, date_of_birth, phone, role, active)

stores (id, name, street, city, state, zip, phone, latitude, longitude, active)

assignments (id, store_id, employee_id, start_date, end_date, pay_level)

shifts (id, assignment_id, date, start_time, end_time, notes)

shift_jobs (id, shift_id, job_id)

jobs (id, name, description, active)

users (id, email, password_digest, employee_id)

Underlines:

Solid underlined fields are primary keys;

Dotted underlined fields are foreign keys;

Double underlined fields are composite keys that are both primary and foreign keys.

Database Design Notes:

1. The users table will be created by nifty_authentication, devise, or other authentication solution for Rails. The contents of this table may vary slightly from what is specified based on the gem's generators and requirements.
2. Strictly speaking, having zip code in the locations table creates a transitive dependency, but given the limited size of the system (the greater Pittsburgh area) there is no need to normalize and move zip code and primary city & state into its own table.
3. A employee's current assignment is determined by finding the employee's assignment that has a NULL value in end_date.
4. Instead of a username, users will log in with their email address and password. Consequently, emails must be unique.
5. All phone numbers and social security numbers are saved as a string of numbers without any other characters. Phone numbers include area code, prefix, and suffix as one numerical string.