We started with the HomeOwner entity, which contains attributes pertinent a HomeOwner: their first_name and last_name, contact information (telephone, email), address, city, state, zip_code, home_type, sqft (square footage), (number of) floors, construction_type, and yard_sqft (square footage of the yard). It also contains a unique owner_id for each HomeOwner (the table's primary key).

Each HomeOwner can also have multiple Plants. These Plants will need a surface area to easily calculate a quote for different Services. This gives us the HasPlant relation, which relates the many (or one, or none) Plant entities to a single HomeOwner entity.

A HomeOwner can have a Bank, while a service provider **must** have a Bank. This is because there would be no other way for the app to send the provider their money. The columns of the Bank relation are the primary key bank_id, and the bank_name.

Inside of the OwnerBank and ProviderBank relations, the persons routing# and account# are stored.

A ServiceProvider can have a CreditCard, while a HomeOwner **must** have a CreditCard. A HomeOwner needs a CreditCard in order to pay for the service. We only store the card#, card_type, expiration_date, and card_holder_name (the 3-digit pin is *not* stored for security). The primary key for a CreditCard is the card# and card_type tuple.

The ServiceProvider entity contains information regarding the provider itself, such as a business_name, contact information (telephone, email), and address. Each provider also has a provider_id attribute, which is its primary key.

Each ServiceProvider will also need Service*s* they can provide. This is handled in the Service table, which has a name and description. It also has a service_id attribute, being the tables primary key. This entity is related to the ServiceProvider entity with a ProvidesService relation. This relation includes the price the provider charges per sqft for the service.

Each ServiceProvider can also have multiple different License*s*. They don't *have* to have a License, but they will be able to display certain License*s* if they have them. The Licensee table has the columns license_id (primary key) and name.

A ServiceProvider also can also service (with the ServicesArea relation) multiple ServiceArea*s* (entity table). A ServiceProvider must service at least one area, but they may service more. An area is defined by zip_code. However, the city and state are also recorded in this table.

To relate the HomeOwner and ServiceProvider entities, there is another entity, Hires. This relation has a quote which is the estimated price, the date of the quote, and whether the request if final (is_contract column). It also has a job_id attribute (primary key).

Each time a ServiceProvider is hired, there is an opportunity for a Complaint to be registered for the job. A Complaint has a comment, which is the actual reason for the filed complaint, and a response from the ServiceProvider. It also has a unique complaint_id, which is the primary key for the relation.