Happy Home Database Design

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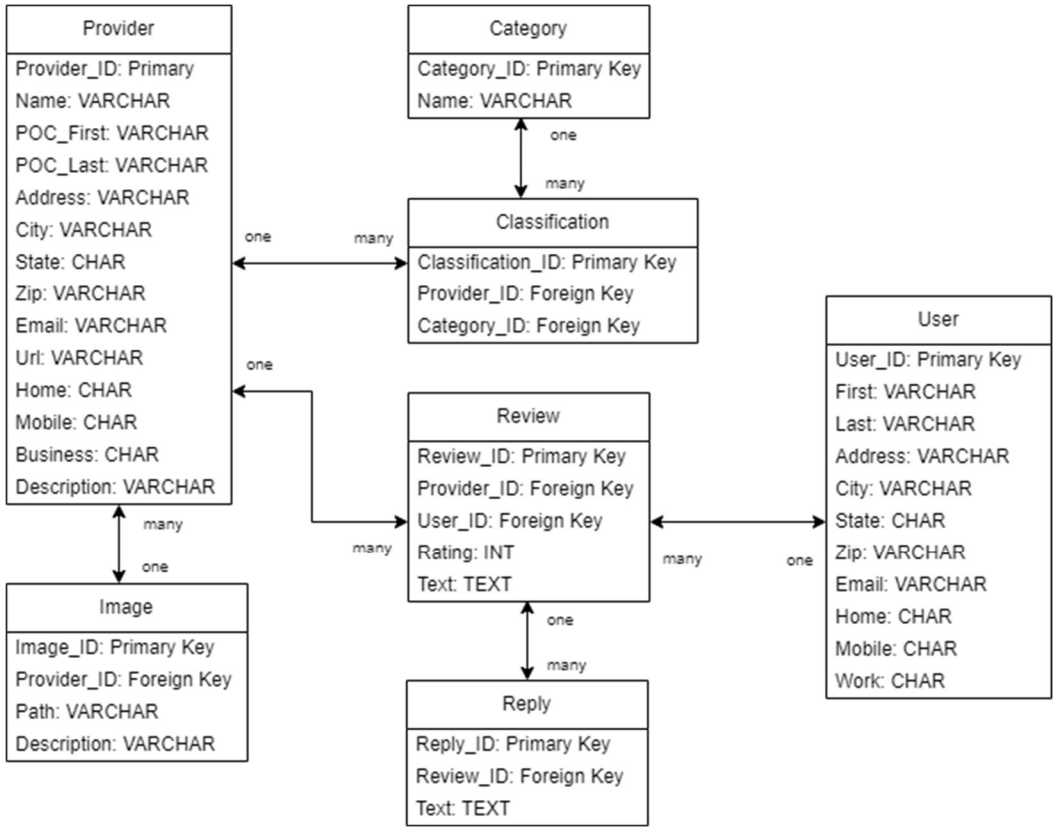
Overview

I will be using PostgreSQL for my web application. I am going to use it because my application will be built with the Django framework and deployed to Heroku and PostgreSQL plays nice with both technologies. My website will use tables with relationships as explained by the following ER diagram:



The application will employ a REST API for database requests with forms on the frontend.

Data Specifications

The following is a list of tables to be created in the SQLite database in the Happy Home web application.

Provider
This table will store data that is collected from registered businesses via a form.

Columns:

Provider_ID	Primary Key
Name	VARCHAR
POC_First	VARCHAR
POC Last	VARCHAR
Address	VARCHAR
City	VARCHAR
State	CHAR
Zip	VARCHAR
Email	VARCHAR
Url	VARCHAR
Home	CHAR
Mobile	CHAR
Business	CHAR
Description	VARCHAR

User
This table will store data that is collected from registered users via a form.

Columns:

User_ID	Primary Key
First	VARCHAR
Last	VARCHAR
Last	VARCHAR
City	VARCHAR
State	CHAR
Zip	VARCHAR
Email	VARCHAR
Home	CHAR
Mobile	CHAR
Work	CHAR

Review
This table will store the reviews left for businesses by users including the star rating and the text.

Columns:

Review_ID	Primary Key
Provider_ID	INT, Foreign Key
User_ID	INT, Foreign Key
Rating	FLOAT
Text	TEXT

Reply
This table will store businesses replies to user reviews

Columns:

Reply_ID	Primary Key
Review_ID	INT, Foreign Key
Text	TEXT

Category
This table will hold the category names. It is needed because businesses can be associated with more than one category.

Columns:

Category_ID	Primary Key
Name	VARCHAR

Classification
This a junction table needed because provider and category have a many to many relationship

Columns:

Classification_ID	Primary Key
Provider_ID	INT, Foreign Key
Category_ID	INT, Foreign Key

Image
This table will hold the path to the picture uploaded by businesses as well as a brief description of the photos. I'm not sure how the pictures will be stored yet so this table may change.

Columns:

Image_ID	Primary Key
Provider_ID	INT, Foreign Key
Path	VARCHAR
Description	VARCHAR

Purpose and Implementation

Provider

Purpose:
Providers are registered businesses. The information in this table needs to be saved so it can be viewed by the users interested in soliciting the business's service.

Implementation:
When business is selected on the create page, the user will be taken to the create business page which contains a form for input of this information. The business profile display page will display some of this information for the users to view and the business profile page will also display this info in a form so that it can be edited.

User

Purpose:
Users are those looking for service/providers. Most of the information in this table is necessary so that businesses that the user is interested in can contact the user and also so the user cannot leave anonymous reviews. The business can verify the user was a actual customer if they leave negative reviews.

Implementation:
When user is selected on the create page, the user will be taken to the create user page which contains a form for input of this information. The user profile page will also display this info in a form so that it can be edited.

Review

Purpose:
This table will store the reviews left by users for businesses. It stores both the rating and the text and is linked to the provider and user tables via foreign keys.

Implementation:
On the business profile display page, there will be a link for 'review company'. This will go to a review page with form to input a rating and a text review. The reviews link will pull the reviews and display the data in the business reviews page. A search of businesses of a category will display the average rating for the business based on the ratings stored in this table.

Reply

Purpose:
This table stores the text of replies left by businesses to reviews left by users. It's a separated table for the sake of scalability. I may allow multiple replies to a single review in the future.

Implementation:
A list of reviews generated by clicking on the reviews link on the business profile page (only accessible by the registered business) will be shown in the business reviews page. Clicking reply redirects the user to the reply page with a one field form where the user (business rep) can leave a text reply.

Category

Purpose:
This table just holds category names. It is necessary because it has a many to many relationship with the Provider table.

Implementation:
When a user searches for businesses of a specific category on the home page, the application will run a query using the category table. It will use a join with the provider table using provider_id to find businesses matching the selected category.

Classification

Purpose:
This table serves as a junction table. It's necessary to link the Provider table to the Category table because they have a many to many relationship.

Implementation:
When a user searches for businesses of a specific category on the home page, the application will run a query using the category table. It will use a join with the provider table using provider_id to find businesses matching the selected category.

Image

Purpose:
This table is needed mainly to link an image stored elsewhere to the business that uploaded it and to it's description. Also, the path will be prepopulated in the image section form on the business profile page.

Implementation:

This is a little unclear at this point but the images will be uploaded via a form on the business profile page but I'm yet not sure how they will be stored. If they are stored in a folder on the server then I will use the image_id to tag them.