Chapter 14 Pets and Owners

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Instructions:

Create an SQLite database named **pets.db** and add the related tables **Owners**and **Pets**. The **Pets**table should include a field that links to the **OwnerID** field.  Use the following SQL statements to create the tables with a one-to-many relationship:

**Owners:**

"""CREATE TABLE IF NOT EXISTS Owners (OwnerID INTEGER PRIMARY KEY NOT NULL, OwnerName TEXT, OwnerPhone TEXT)"""

**Pets:**

"""CREATE TABLE IF NOT EXISTS Pets (PetID INTEGER PRIMARY KEY NOT NULL, PetName TEXT, PetType TEXT, PetBreed TEXT, OwnerID INTEGER, FOREIGN KEY (OwnerID) REFERENCES Owners(OwnerID))"""

 Hint: You can copy/paste this code into your execute statement(s) to ensure correct SQL syntax.

Read in the comma-delimited text files and insert the data into their respective tables.

 Hint: Remember to commit your changes to the database.

Using nested loops, display the pet information below each owner as shown in the sample output.

|  |
| --- |
| Owner |
| + name: String  + phone: String  + pets: [String] |

Data:

Class

- Owner(name, phone, pets)

Variables

- owners: [Owner], array of owner objects

- pets\_owners\_connection: Connection to “PetsOwners.db”

- pets\_owners\_cursor: cursor for database to perform sql operations

- pets\_table: String, sql create for Pets table

- owners\_table: String, sql create for Owners Table

- input\_file: opens “owners.txt” or “pets.txt”

- fields: values of the comma separated rows in the text files

While looping through database table rows

- owner: specific owner read from the owners table

- owner\_results: rows queried from owners table

- pet: specific pet read from the pet table

- pet\_results: rows queried from pets table

Process:

Initialize owners array, which will hold class Owner as elements

Try:

- set up database connect, create tables

Try

- open Owners.txt

- iterate through the lines

- map line values to owner table fields

- display exception if failed

Try

- INSERT owner details into Owners table

- show error if failed

Try

- open Pets.txt

- iterate through the lines

- maps line values to Pets table fields

- display exception if failed

Try

- INSERT pet details into Pets table

- show error if failed

Try

- SELECT \* FROM Owners

- Iterate over those rows

- create Owner object with name and phone. Set pets array to []

Try

- Then SELECT \* Pets WHERE pet’s ownerID matches owner’s ownerID

- append pet data to owner.pets array

Then append the constructed Owner to the owners array

Then displayOwners -> Will loop through the owners array, display their name, phone, and pets

Output:

Output the owner, phone, and every pet they own, organized by owner