

Discussion 11: Databases

SI 206: Data-Oriented Programming

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Deadlines

- HW6 due this Friday (11/17)

Before We Begin

- Make sure you've installed DB Browser for SQLite
- Working with SQL requires lots of tuples, in Python

```
1  tup_1 = ('item_1', )    # this is a tuple with one item
2  tup_1 = ('item_1')      # this is NOT a tuple, instead it's a string
```

Documentation

Documentation

Drop SQL

Shared Key

Practice Problems

As always, read the documentation.

- Documentation: <https://www.sqlite.org/docs.html>
- Good Tutorial: <https://www.w3schools.com/sql/default.asp>
- Useful things to read: **SELECT, WHERE, JOIN, INSERT, EXISTS**

DROP Table

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- `DROP TABLE IF EXISTS <tablename>` will completely wipe out your table. Be careful when deleting tables! Instead do:
- `CREATE TABLE IF NOT EXISTS <tablename>`: this will create a table if one doesn't exist, but will not overwrite an existing one.

Shared Keys between Tables

Department

EmpNo	EmpName	DepNo
1001	Sahil	101
1004	Kavish	102
1006	Aditya	103
1005	Atul	104

← Foreign Key

Relationship

Employee

Primary Key →

DepNo	DName	Location
101	HR	Delhi
102	Sales	Bangalore
103	Marketing Executive	Hyderabad
104	Technical Engineer	Chennai

Practice Problems

[Documentation](#)[Drop SQL](#)[Shared Key](#)[Practice Problems](#)

Go to Canvas → Assignment → Discussion 11 and clone the GitHub Repo:

<https://classroom.github.com/a/A28mR5IG>

Task 1: Create the 'Patients' table

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Task 1

- Fill in `create_patients_table()`: Create a new table with following fields:
`pet_id (INTEGER), name (TEXT), species_id (INTEGER), age (INTEGER),
cuteness (INTEGER), aggressiveness (INTEGER)`
- Fill in `add_sprinkles`: Insert a row of following data to "Patients" table:
`pet_id: 0, name: 'Sprinkles', species_id: 10, age: 2, cuteness: 99,
aggressiveness: 25`

Task 2: Merge the hospitals

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Task 2

- Fill in `add_pets_from_json()`: Merge the patients info from the JSON file to your "Patients" table.
- Tips: You will need to query "Species" table with the species name to get the species ID.

Task 3: Get non-aggressive pets

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Task 3

- Fill in `non_aggressive_pets()`: Return a list of pet names whose aggressiveness is lower than a given number