

# Discussion 10

Databases

Reminder:

Use the regrade request form if you have a grade dispute.

<https://forms.gle/yBvRjvrgaKDQUXR7>

You can also find the link the syllabus.

Make sure you installed DB Browser for  
SQLite

# Tips on working with databases

READ READ READ READ READ READ the documentation. Lots of nuance and little details.

Documentation:

<https://www.sqlite.org/docs.html>

Good examples:

<https://www.w3schools.com/sql/default.asp>

Useful things to read: SELECT, WHERE, JOIN, INSERT, IF NOT EXISTS, how to insert values into tables, seeing what gets returned by a Select call, etc.

# Dropping

`DROP TABLE IF EXISTS Tablename` will **completely wipe out** your table. Not useful if you want to keep adding to your table every time your code runs (hint hint final project).

Instead, you can use:

`CREATE TABLE IF NOT EXISTS Tablename`

This will create a table if one doesn't exist, but will not override an existing one.

# Tables with two different keys

Sometimes you may want to have two tables linked by a shared key.

E.g., people and their favourite movie

Name	Favourite Movie
Jane	0
Jack	0
Jenny	3
Jacob	1
Josefina	2

id	Title	Release Date	Genre
0	Exam	2009	Horror
1	Pulp Fiction	1994	Crime
2	Parasite	2019	Comedy / Thriller
3	Celda 211	2009	Prison
4	Monsters Inc	2001	Animation

# Your Task: Animal Hospital!

You have been hired by the great, but not-tech-savvy, local animal hospital! You will help them with a series of tasks.

# Task 1: Create the database and add in Fluffle

1. Create a new table in the database with the following fields:

Pet id, name (string), species\_id (number), age (integer), cuteness (integer), aggressiveness (number)

1. Populate it with the following entry:

Name = Fluffle, species = "Rabbit", age = 3, cuteness = 90, aggressiveness = 100

(You will find what species\_id to enter for Fluffle by looking at the table "Species", which we create for you. Read code / animal\_hospital.db for details)



# Task 1 Output

pet_id	name	species_id	age	cuteness	aggressivity
Filter	Filter	Filter	Filter	Filter	Filter
0	Fluffle	0	3	90	100

## Task 2: Merge the hospitals!

Your animal hospital and another one are merging together. Import their patient list into your table! They provided their patient list in a JSON file.

Task: Read in the JSON file and add the pets to your database.

You will need to search the Species table to know what id to put in for each species.

## Task 3: Help the intern!

You have a new intern who is ready to work on curing animals. However, they are new to the job and do not know how to handle aggressive pets. Return a list of patients they can help with.

Task: Filter the database for pets whose aggressiveness is 10 or lower. Return a list of tuples, the tuples consisting of the name of the animals who are the least aggressive.