

**Database scripts used to add constrains and create objects:**

-- Create a animal\_type table to create a master record entry

*Create table animal\_type as*

*select distinct animal\_id\_intake as animal\_id, breed, color, animal\_type from raw\_input\_outcome;*

-- Adding primary and foreigh key to existing tables.

*ALTER TABLE animal\_type*

*ADD CONSTRAINT animal\_id\_pk PRIMARY KEY (animal\_id);*

*ALTER TABLE animal\_in\_out*

*ADD CONSTRAINT id\_pk PRIMARY KEY (id);*

*ALTER TABLE animal\_in\_out*

*ADD CONSTRAINT animal\_id\_intake\_fk FOREIGN KEY (animal\_id\_intake) REFERENCES animal\_type (animal\_id);*

**Process**:

1. Sheter\_db database was created in pg\_admin
2. Then using panda’s library created DB connection loaded the raw data into the database.
3. Using SQL Create script created the “animal\_type” master object.
4. Finally created a copy of the raw data, performed needed transformation, and created animal\_in\_out dataset that would be used for analysis.

**Entity Relationship Explanation:**

raw\_inout\_outcome

This is raw data load to meet the assignment requirement. No changes to the base dataset chosen other than column name update to meet the SQL standards.

One to Many

**animal\_type**

This is a copy of raw\_input\_outcome table after removing breed, color, animal\_type and outcome\_subtype columns from the original dataset. This will serve as the main operation table to that would capture the variable information collected during intake along with the transformed columns. In a real world, this object would hold input form data and not the transformed columns. For this exercise we will consider this as our object created after the ETL process.

**animal\_in\_out**

Animal type lookup table. The animal\_id in this table is the primary key that will be a foreign key on the operational table. Ex: ***A unique ID that will be assigned based on animal\_type, Breed and Color***. For this combination we can have many intake entries that vary on different attributes like (day, time, source, age, etc.