Pet Store Entity Relationship Diagram, Table Creation, Table Editing

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When designing a database for a local pet store’s grooming services, my primary consideration was ensuring that the tables were normalized to at least a third of normal form. Reducing redundancies and data inconsistencies ensures that users have access to the information they need. This reduces future workload; by spending time considering the column contents when you first create a database, you will spend less time on table management later, which involves dropping or adding data and reducing overall anomalies.

The second consideration was data integrity, considering which columns would be foreign keys and primary keys. These constraints allow the tables to function together and interact within our commands. With these identifiers, the tables can cross-reference each other, ensuring that no two tables hold the same values unnecessarily.

The third consideration I had was future data integration. Adding new customers, groomers and animals should be easy. Adding new appointments should also be as simple. Ensuring that the tables were such that simple commands could add the data necessary for future adaptation was a key element I concentrated on.

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**To create these tables, these are the SQL statements.**

CREATE TABLE PetGroomer (

employee\_id INT PRIMARY KEY,

first\_name VARCHAR(50),

last\_name VARCHAR(50),

phone\_number VARCHAR(20)

);

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CREATE TABLE Customer (

customer\_id INT PRIMARY KEY,

first\_name VARCHAR(50),

last\_name VARCHAR(50),

phone\_number VARCHAR(20)

);

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CREATE TABLE Animal (

animal\_id INT PRIMARY KEY,

breed VARCHAR(50),

age INT,

name VARCHAR(50)

);

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CREATE TABLE Appointment (

appointment\_id INT PRIMARY KEY,

groomer\_id INT,

customer\_id INT,

animal\_id INT,

service\_type VARCHAR(10),

service\_cost DECIMAL(5,2),

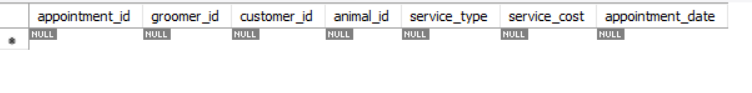
appointment\_date DATE,

FOREIGN KEY (groomer\_id) REFERENCES PetGroomer(employee\_id),

FOREIGN KEY (customer\_id) REFERENCES Customer(customer\_id),

FOREIGN KEY (animal\_id) REFERENCES Animal(animal\_id)

);



**To populate the tables, I would use these statements:**

INSERT INTO PetGroomer (employee\_id, first\_name, last\_name, phone\_number)

VALUES (111, 'Joe', 'Customer', '867-5309'),

(112, 'Pet', 'Washer', '867-5333'),

(113, 'Dog', 'Friend', '867-5331'),

(114, 'Dogneedsa', 'Bath', '867-5334'),

(115, 'Animals', 'Athome', '867-5335');

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INSERT INTO Customer (customer\_id, first\_name, last\_name, phone\_number)

VALUES (1, 'Ihava', 'Dog', '555-1111'),

(2, 'Responsible', 'Owner', '555-2222'),

(3, 'Petsat', 'Thewash', '555-3333'),

(4, 'Buying', 'Dogfood', '555-4444'),

(5, 'Saving', 'Animals', '555-5555');

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INSERT INTO Animal (animal\_id, breed, age, name)

VALUES (101, 'Dalmation', 3, 'Pongo'),

(102, 'Poodle', 5, 'Luna'),

(103, 'Mix', 7, 'Spot'),

(104, 'Chi', 1, 'Tank'),

(105, 'Doodle', 2, 'Hank');

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INSERT INTO Appointment (appointment\_id, groomer\_id, customer\_id, animal\_id, service\_type, service\_cost, appointment\_date)

VALUES (881, 111, 1, 101, 'Both', 20.00, '2024-02-25'),

(882, 112, 2, 102, 'Haircut', 11.00, '2024-03-01'),

(883, 113, 3, 103, 'Bath', 11.00, '2024-03-05'),

(884, 114, 4, 104, 'Both', 20.00, '2024-03-10'),

(885, 115, 5, 105, 'Haircut', 11.00, '2024-03-15');

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**To produce a list with SELECT and Where:**

SELECT \*

FROM PetGroomer

WHERE last\_name = 'Washer';

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**To produce a list with SELECT and ORDER BY:**

SELECT \*

FROM Customer

ORDER BY last\_name;

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**To produce a list with SELECT and GROUP BY:**

SELECT service\_type, COUNT(\*)

FROM Appointment

GROUP BY service\_type;

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**To query a count for a customer name:**

SELECT COUNT(\*),

first\_name,

last\_name

FROM Customer

GROUP BY first\_name, last\_name;

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**To modify the age field:**

UPDATE Animal

SET age = age + 1;

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**To ADD a Column:**

ALTER TABLE Customer

ADD COLUMN email VARCHAR(100);

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**To REMOVE a Column:**

ALTER TABLE Customer

DROP COLUMN email;

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**To DELETE Rows:**

DELETE FROM PetGroomer

WHERE employee\_id = 112;

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**To DELETE a Table:**

DROP TABLE Animal;

A close up of a table

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