For this project, I created a database system for a dog walking and grooming business. The idea was to design a system that helps the business keep track of its customers, pets, services, employees, appointments, and payments. The goal was to make everything more organized, which is something that's super important for small businesses to run smoothly.

To make sure the database was useful, I interviewed the owner of a local business called Dog House Spa located at 24 E 97th St, New York, NY. His name is Alon, and he gave me a lot of great insights into how the business works. Based on our conversation, I realized the main focus of the database should be on tracking things like customer information, the pets they bring in, the services they request, and when those services are scheduled. Alon mentioned that the business needs to stay on top of appointments and payments, so I made sure those were also central to the design.

One of the most important parts of the database is the customer table, which stores basic info about each client, like their name, phone number, email, and address. This is important for the business to stay connected with customers and make sure services are scheduled correctly. The pet table stores details about each pet, such as their name, breed, age, and any health issues they may have. This helps the business take better care of the pets by knowing what they need.

The employee table was another essential part of the system. Since the business has both dog walkers and groomers, I created a table to keep track of their roles and schedules. Alon emphasized how important it is to match the right employee with each appointment, so this table helps the business assign tasks to employees who are available.

I also created a service table, which keeps track of the services the business offers, such as dog walking and grooming. Each service has a price and description, which helps the business ensure they're charging customers the right amount. The appointment table ties everything together by linking customers, employees, and services, and it also tracks when the appointments are scheduled and their current status, whether they're completed, canceled, or still upcoming.

Finally, the payment table keeps track of the payments customers make for their services. Alon mentioned that this was important because it helps the business stay on top of its finances and know which services have been paid for.

While building this system, I faced a few challenges that made me really think through how to design everything. One of the biggest challenges was figuring out how to connect all the tables. For example, I had to make sure that each customer could have multiple pets, that each pet was linked to the right customer, and that appointments were properly connected to customers, employees, and services. Getting these connections right was crucial for the database to work properly.

Another challenge was dealing with foreign key constraints. These are used to ensure that the relationships between tables are valid, but they can be tricky to work with. For instance, if I tried to insert an appointment with a CustomerID or EmployeeID that didn't exist, the database would throw an error. It took a while to get everything linked up correctly, but once I figured it out, it made everything work much more smoothly.

I also had to make sure that the data stayed consistent. If a customer was deleted, for example, I had to make sure that their pets and appointments were also deleted to avoid

leaving orphan records. This was something I hadn't really considered at first, but it's a super important part of keeping the data clean and organized.

Looking ahead, there are a few things I could do to improve the system. Alon mentioned that it would be helpful to add a loyalty program for regular customers, so that's something I'd consider adding. It would be a great way for the business to reward loyal customers and keep them coming back.

I also thought it would be useful to add appointment reminders. Since the business relies heavily on appointments, having an automated system to send reminders to customers and employees would help reduce the number of missed appointments.

Another improvement could be integrating online payments. Right now, customers pay in person, but adding an option for online payments would make things more convenient for both customers and the business. This could be done through an integration with a payment service like PayPal or Stripe.

Lastly, tracking the service history for each pet could be a helpful addition. Alon said that it's important for employees to know what services have already been provided to each pet, so adding this feature would improve customer care.

Overall, this project was a great learning experience. I got to build a practical database that could actually help a real business run more smoothly. The interview with Alon was super helpful in understanding what the business needed, and it guided my decisions about what to include in the database. Even though I ran into a few challenges with data relationships and foreign key constraints, I was able to figure them out and build a functional system. In the

future, I’d love to add even more features to make the system more interactive and user-friendly for the business.