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CIS 244

For my project, I picked an online consultation platform because it's something real and common that a lot of people actually use. I decided to include users like consultants and clients, along with consultations and payments, to make the system feel complete and like something that would exist in real life. Consultants have to be linked to their specialties and available times, while clients should be able to book appointments easily. The consultations are where the actual interaction happens, so I wanted to make sure that part includes the date, time, and topic. Payments are important too because they keep track of what's been paid for and how. I even thought about adding a messages table later on for support chats or notes between the client and consultant, just to make it feel more real and helpful. I chose all this because I wanted the system to cover the full experience from booking to paying, and maybe even follow up.

I created a system based on an online consultation platform. This idea came from a conversation I had with someone who works in tech support for a health and wellness startup. They explained how consultants manage appointments, clients need booking options, and everything needs to be tracked, including payments and notes from sessions. That inspired me to structure my project around a system where clients can book consultations with consultants, and payments are tied to each session.

I identified four data entities for the system. The first is Consultants, which includes details like their name, specialty, and availability. The second is Clients, who are the users booking the sessions. The third is Consultations, which track the interaction between clients and consultants, including the date, time, topic, and links to both parties. The fourth entity is Payments, which records the payment method, amount, and status for each consultation.

I did both a hand drawn ER diagram and a digital version using Draw.io to help me visualize the relationships between the entities in my system. I was able to see that one consultant can handle many consultations, and a client can book multiple consultations. I also made sure to represent that each consultation is linked to one payment. I built the database in Microsoft Access by creating four tables and

setting up relationships with foreign keys. After that, I wrote create table statements and ran them in MySQL Workbench to recreate the same structure using code.

One of the biggest challenges was keeping the IDs consistent when linking foreign keys, especially in Access. In MySQL, I got an error for running the CREATE DATABASE command twice, but I learned to fix it by skipping it. Another challenge was uploading everything to GitHub, but I figured out how to add my Access file, SQL script, diagrams, and report all in one place.

This project helped me connect the dots between real business needs and database design. Even though I only had a short conversation, hearing directly from someone in the field gave me context and made the work feel more realistic. I now feel more confident designing databases and understanding how they support everyday business operations.