

**Transcript of meeting between DBA (a database expert in your firm) and the Real Estate Company (REC) owner. You can see here the DBA is asking questions about the business needs in preparation for drawing out the ERD.**

*Advice: Remember this conversation is meant to mimic a real conversation between a DBA and someone that doesn't know much about databases. So, there are some pieces of information that talk more about the application layer and/or processes that may not have anything to do with your design of the necessary underlying database. It's part of your job to recognize what's relevant and what's not to create a good relational database to capture the transactions that support their business.*

DBA: So, tell me about what you're doing here at REC. What types of things should I plan to keep up with in the database?

REC Owner: We eventually want a website and mobile app that help our clients and agents manage their real estate details. Basically, a lot of real estate agents work for our company, and they help our clients buy and sell properties. We need a way to keep up with properties for sale and the appointment details of people looking at properties. We're bringing you in as an expert in database design that can design the underlying infrastructure in a relational database to support our business needs.

DBA: I see, so let's take this one piece at a time. Tell me about your clients.

REC Owner: It's important to remember that we can help with either side of a real estate transaction. In our business we tend to think of things as either "seller-side" where clients come to us to list their properties for sale, or "buyer-side," where clients come to us to help them see available properties they might want to buy. This is where we need your help – clients can be either buyers, or sellers, or both!

DBA: Ok. So what types of information do you need to keep up with if it's a "Buyer-Side" client?

REC Owner: Pretty typical contact information stuff. We want their first name, last name, address, phone, and email.

DBA: And then what do you collect for your "Seller-Side" clients?

REC Owner: Same things.

DBA: How are you keeping up with clients right now?

REC Owner: We just have a spreadsheet of client contact information that our admin assistant updates every time we add a new client. The nature of our business is that clients may have little flurries of activity with us and then be dormant for years. Someone we helped buy a house 5 years ago might resurface and want to sell it today, and for us to also help them buy something bigger at the same time.

DBA: Got it. Talk to me about buying houses and the process.

REC Owner: All we want you to help us store is information about showings – which is complicated enough. You don't need to worry about the writing of offers, contracts, etc. I just want what you design to keep up with the showings they schedule and attend.

DBA: And what's a showing?

REC Owner: A showing is the term real estate uses for an appointment where an agent meets interested buying clients at a property to show it to them. So we need to know which clients are being shown the property, which agent is showing the property during that appointment, what time and date it's scheduled for, if they showed up and how long they stayed viewing the property, and any notes the agent will share about their feedback. Now, usually the longer someone stays at a property the more interested they are in it...if they're in and out in 5 minutes, they're not likely to make an offer. Also, sellers love to know why buyers like or don't like the property, but buyers are often hesitant to say why it wasn't a good fit. That said, I want a place that the agent can write a brief note about what their client said about the property after the showing, if they can.

DBA: Ok, now how many agents come to a showing?

REC Owner: You may assume only one agent. Even if another happens to show, there is still one official, licensed agent that's there for the appointment and has permission and access to unlock a house to supervise clients viewing it.

DBA: Is that agent always the same one for that property?

REC Owner: Nope! It's actually more common for the buyers to have an agent they're working with do the showing, so one house might have 5 showings one day and they're associated with 5 different agents. But then sometimes the seller's agent ends up hosting the appointment. So, I can tell you that it's one agent per showing, but it could definitely vary on who that agent is given the circumstances.

DBA: Ok, and is it just one client, too?

REC Owner: No, not necessarily. We often represent couples, in which case both are usually in our client contact list. In that case, it's helpful to know which clients actually attended a showing appointment. For example, let's say a family is moving into town, and sometimes one spouse is in town alone and we show her a bunch of properties, and sometimes they're both in town and we show them both a bunch of properties together. I'd like your solution to let us mark that...which combination of clients saw which houses. Could be interesting data to track patterns.

DBA: Can someone see a property more than once?

REC Owner: Absolutely! It's a big decision. It's really common for a client (or a pair of clients) to see the same property numerous times. In that case, they'd make multiple showing appointments...like maybe one Monday, and again on Friday. We call the second one a second showing, but there's nothing different about it on our end. It's also not uncommon to have cancelled showings. However, we'd like a way to still record the showing was scheduled, which clients were supposed to be involved in the showing, and then some way to note the showing didn't happen. Would be great if the agent could jot down additional notes then, too, like, "client found a house earlier in the week they intend to buy."

DBA: Ok, I feel like I almost understand the buyer-side of your business. One more question. You mentioned buyers often "use their own agent" for showings. Are they assigned an agent?

REC Owner: Not for your purposes of this data. Yes, eventually buyers will need to have a signed agent to represent them when they get to making offers and writing contracts. But, let's keep this phase simple...we don't need to record any agent being assigned to a buyer client. Just note who shows them what houses for this.

DBA: Got it. Let's talk seller-side. How does that work?

REC Owner: Now, agents are assigned listings. That's when properties go on the market. That's the seller-side and that's what's known as getting a listing. So, we have properties that come to us when a client (seller-side) thinks they want to sell. We take in all the information about the property. We want to know the address details. We want to know the square footage. We want to know the number of bedrooms and number of bathrooms. We want to know if there is a garage or not. Those details will be sufficient for this project.

DBA: What about the price?

REC Owner: That's determined kind of separately from the property. That has to be recorded in the listing. Think of it this way – a property might be a house, and we want to know all the same details as the tax people want to know...thorough description of where it is and the details I just mentioned. Then, when they agree to let us try to sell it, we create a listing. A listing is an instance of an agent being assigned (you can assume only one agent per listing) to manage that property being on the market. That's when we determine the date it's officially on the market and the asking price, and we want a place to note both of those things. Remember, too, we could help sell a house multiple times over the years, and that could involve multiple clients. So like if Caleb Jones owns it in 2018 and it sells to Lola Wang in 2021, and then Lola Wang turns around and sells it in 2023 to someone else, we might get the listing from Caleb in 2018 AND the listing from Lola in 2021.

DBA: Ok, is this a situation where a listing needs to involve multiple clients again?

REC Owner: Actually, no. For your purposes, let's just have a listing of a property involve one client. Because even though people often jointly own property and we have to handle that in the contract writing, we don't need to note that for this database because we end up having a primary contact for house listings. That's the person we warn about showing appointments, help get pictures of the house, etc. All the contract writing and stuff is outside the scope of what I want you to focus on.

DBA: Got it. So one client, one agent for each listing. You mentioned listing price and date it's on the market. Is that all you want me to keep track of regarding listings?

REC Owner: I want to know two more things...I want to know if it's active or inactive. That's like a light switch we turn on or off when listing properties – if it's active it's available for showings. When it goes inactive, I want to record if it was sold or taken off the market without a successful sale.

DBA: OK, I think I have what I need to come up with the blueprint of the database. Thanks for meeting with me!