Part 1

A screenshot of a computer

Description automatically generated

1. Your client received news of a new expert moving into town and they are considering to contact them for possibly restoring some of the items, so your client needs to store the contact info for this expert into the database. Does your ERD allow for this?

Yes, as there is an entity that stores expert information, including address and phone number.

1. Some items belong in a set, although they can be sold separately. Does your ERD store this information? If not, how can you modify it, so this is possible?

No, this ERD is does not store this information as it is. However, by adjusting the items entity, we can add a tertiary relation to items that can still allow the same item to be part of another item.

1. Some items gain and lose value very quickly, depending on trends and availability. Your client wants to record the price history for some of these hot items, so that they can later analyze trends. Can you modify your ERD to accommodate this?

The following ERD needs a week entity that relies on the entity “Items”. This weak entity would be named “Item Price History”. It will use the PK of Items as its own key and then will have attributes such as “Current Price” and “Price Update Date”.

Part 2

A diagram of a server

Description automatically generated

1. How would you change your diagram if the cost of the service is not set? Frequently these services are personalized and the cost varies by case, determined for example by the time required for the completion (i.e. the service has a price that is $x per hour, and you also need the time required to calculate the cost for each patient)?

I would move the price attribute to the associative entity “Visit Services”. Since every visit is different or based on per patient, it meets the criteria of personal cost per patient that can be adjusted say if the rate would change per service. Then I would add duration which would calculate attribute “Start Time” and “End Time”.

1. How would your diagram change if there are more than 1 dentists working in the office? You could then need to know who is the dentists for each visit and who is the dentist who is performing each of the services (not the lab services).

We would need to create a “Dentist” entity with dentist id and name which each dentist could have many visits associated to them.

1. Now nurses have different ranks, ad some nurses supervise others. Can you change your diagram to take this into account?

Yes, by giving the “Nurses” entity a unitary relationship to itself that one nurse supervises other nurses.