Lab 2: Solutions

Lab 2 is to help you "communicate as a Database Designer".

You have laid out an Entity Relationship Model, and after several rounds of discussion, you confirmed every single details of the model. Finally, you can put it together, and represent it as the Entity Relationship Diagram.
For Case 1 and 2, you will be provided with the Entity Relationship Models, and there will be the correct ERDs, and the solutions are shown below.
For Case 3, you will bring your own Entity Relationship Model you created in Lab 1 (since your client agrees with you for all assumptions you made), and draw the ERD base on your own Entity Relationship Model.

Case 1:

ER Model:

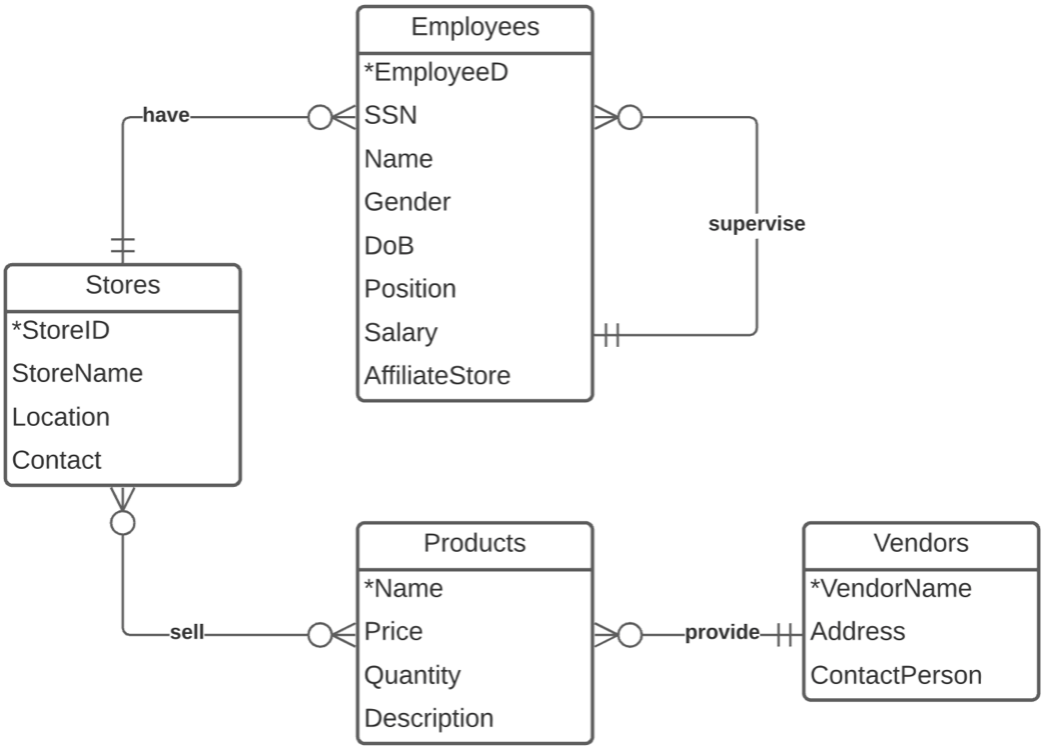
After confirming with the client, the entities and their attributes, identifiers are:

- Stores:*StoreID, StoreName, Location, Contact.
- Employees: *EmployeeID, SSN, name, gender, DoB, position, salary, AffiliateStore.
- Vendors: *VendorName, Address, ContactPerson.
- Products: *Name, Price, Quantity, Description.

The relationships among these entities are.

- A store may have many employees; and one employee must work for one store.
- A store may sell many products, and each product can be sold at many stores.
- A product must belong to one and only one vendor; and a vendor may provide one or more products.
- An employee must be supervised by another employee; and an employee may supervise many other employees.

ERD:



Case 2:

ER Model:

After confirming with the client, possible entities and their attributes, identifiers are:

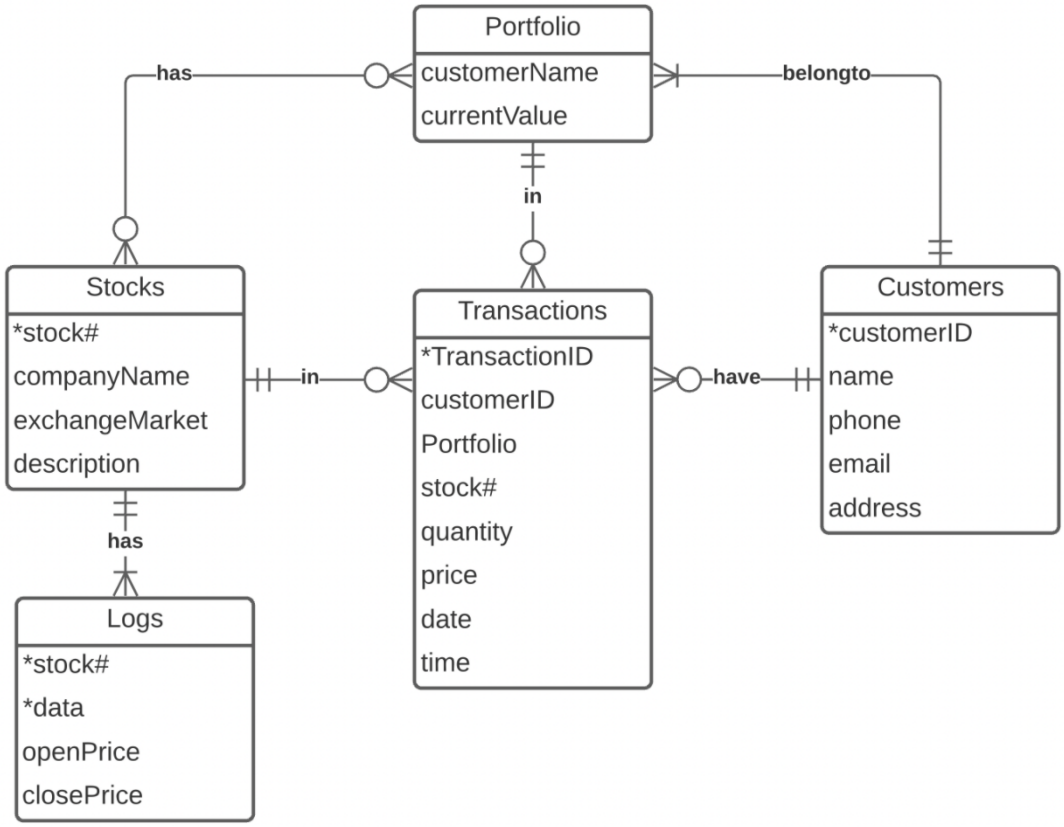
- Stocks: *stock#, companyName, exchangeMarket, description
- Customers: *customerID, name, phone, email, address
- Portfolio: customerName, currentValue
- Logs: *stock#, *date, openPrice, closePrice
- Transactions: *TransactionID, customerID, Portfolio, stock#, quantity, price, date, time

The relationships among these entities are based on my assumptions - I'll discuss with the client later on and make necessary modifications.

- A customer must have one or more portfolios, and a portfolio must belong to one and only one customer.
- A portfolio may have one or more stocks, and a stock may belong to one or more portfolios.
- A stock must have one or more logs, and one log must belong to one and only one stock

- A customer may have one or more transactions, and each transaction must be done by one and only one customer
- A portfolio may be in one or more transactions, and each transaction must include one and only one portfolio
- A transaction must have a stock, and a stock may be in one or more transactions.

ERD:



Case 3:

ERD is based on your own ER Model. Please learn from Case 1 and Case 2, to see if your ERD is correct. You can post it in the discussion board, and let the cohort double check it.