From ERD to Relational Schema

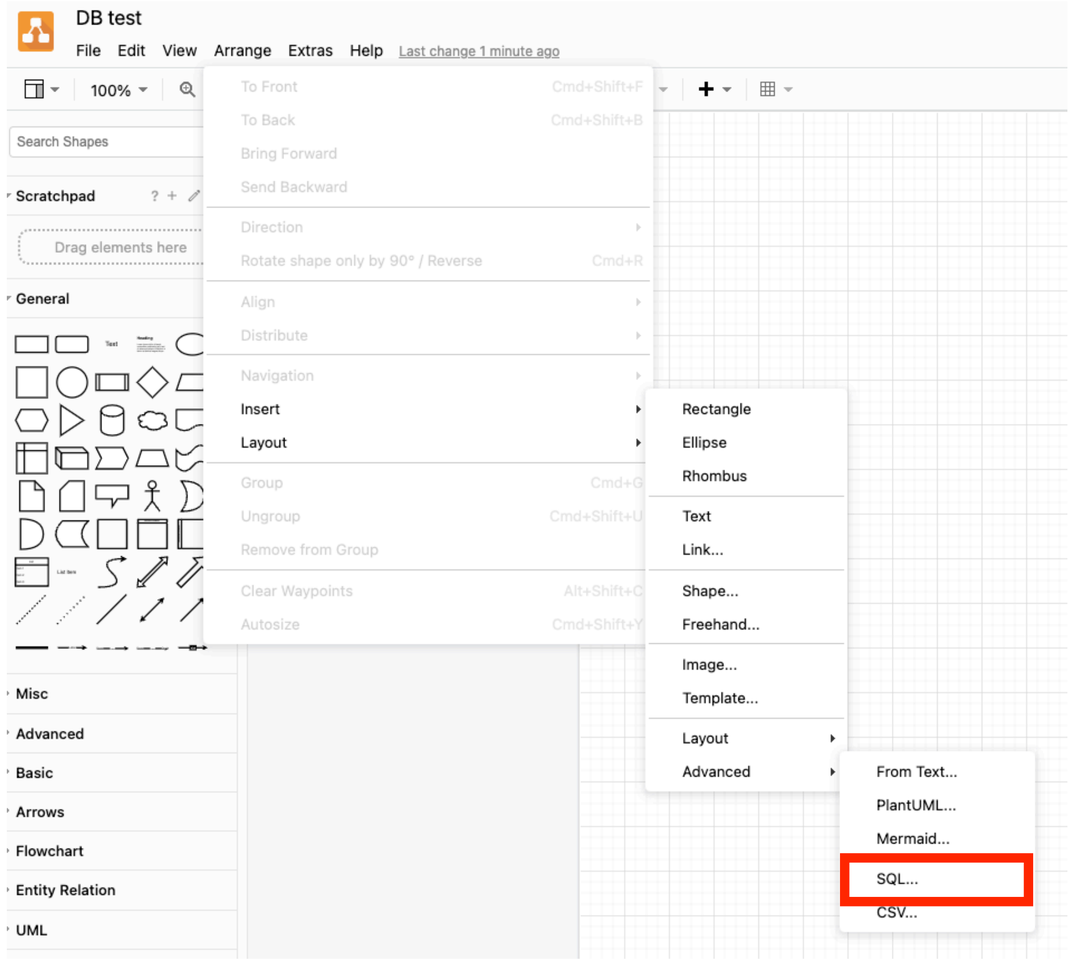
Databases 2022

ERD to Relation schema

- Step to convert a Entity-Relationship diagram into a Relational schema
  - Step 1, convert all entitiy sets into tables
  - Step 2, create relationships between entity sets
  - Step 3, Implement the schema in SQL

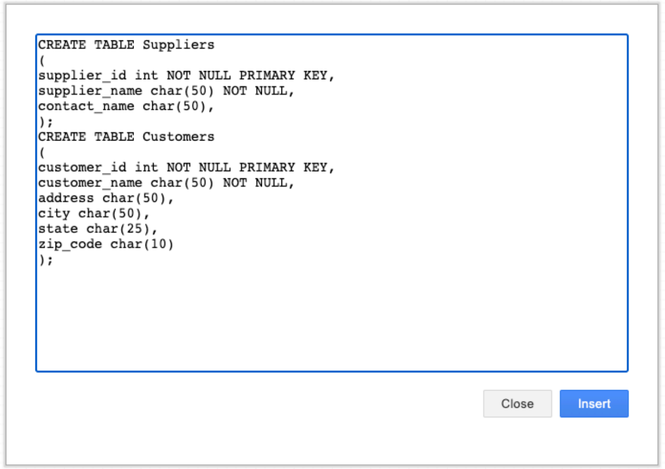
Implementing Relation schema

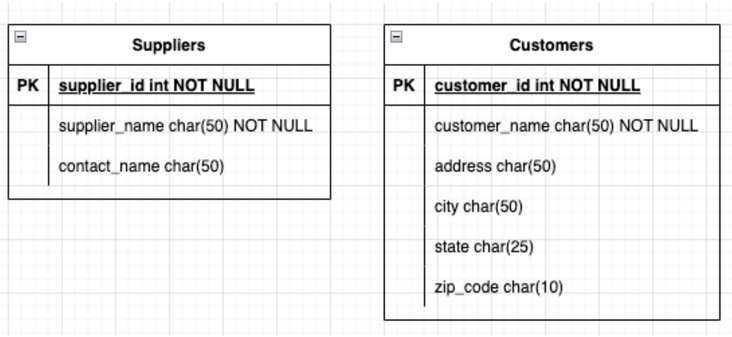
- Once the SQL script has been created, it can be imported into draw.io , following the steps below.
- Click Arrange > Insert > Advanced > SQL. Alternatively, click the + icon in the toolbar, then select Advanced > SQL.



Implementing Relation schema

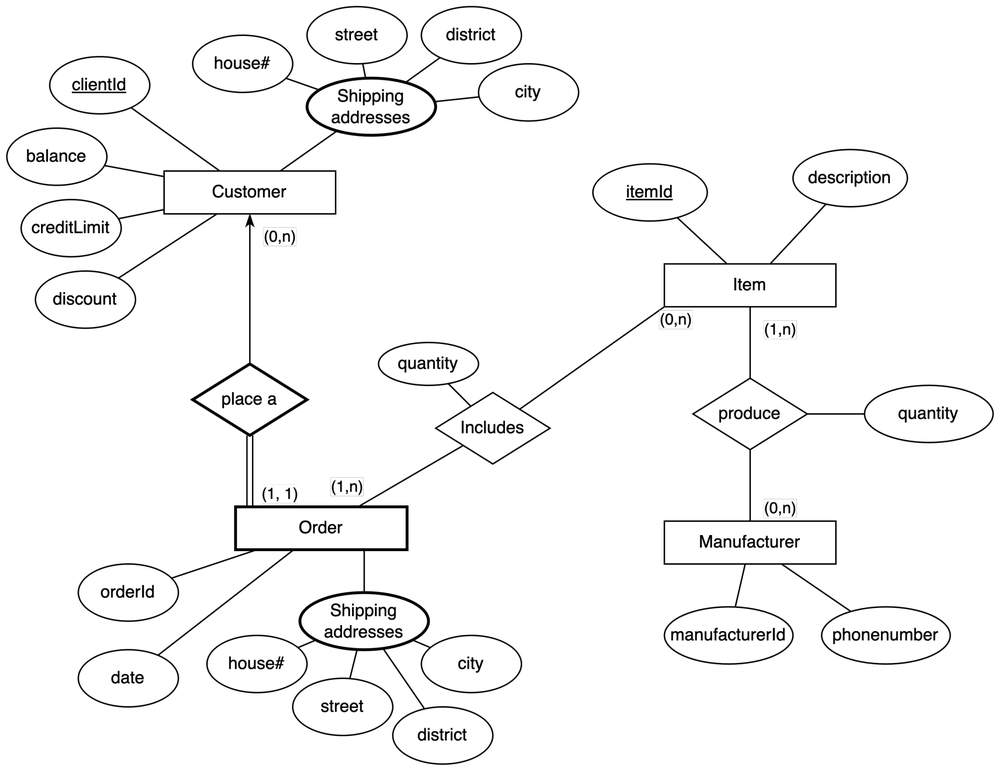
- After that, you will see a popup window with SQL snippet.
- That code will generate a relationship schema like the one shown.





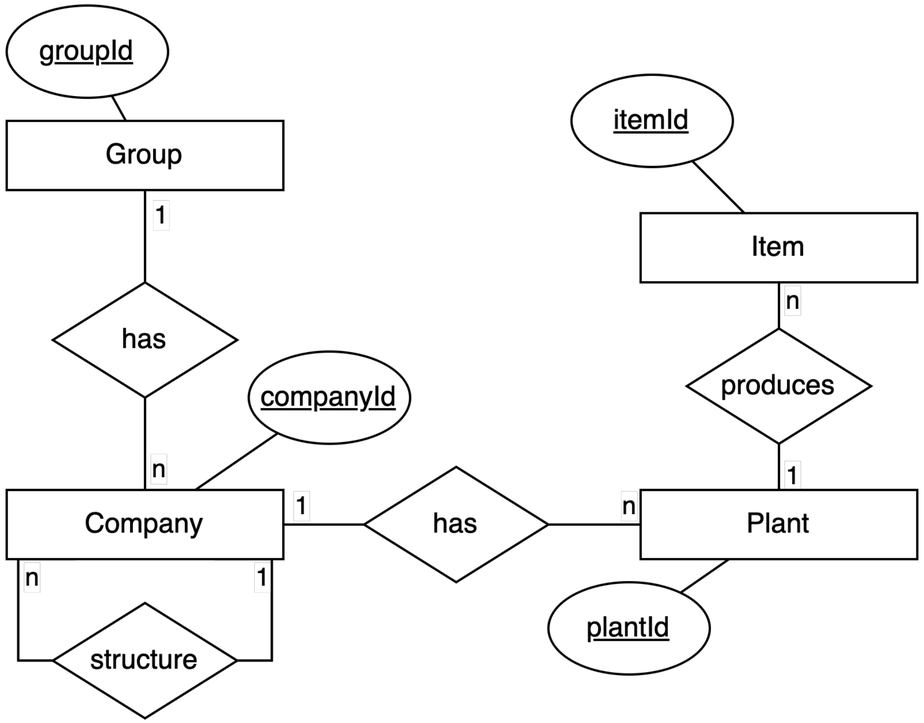
Exercises I

- From the following ERD implement its Relational schema.



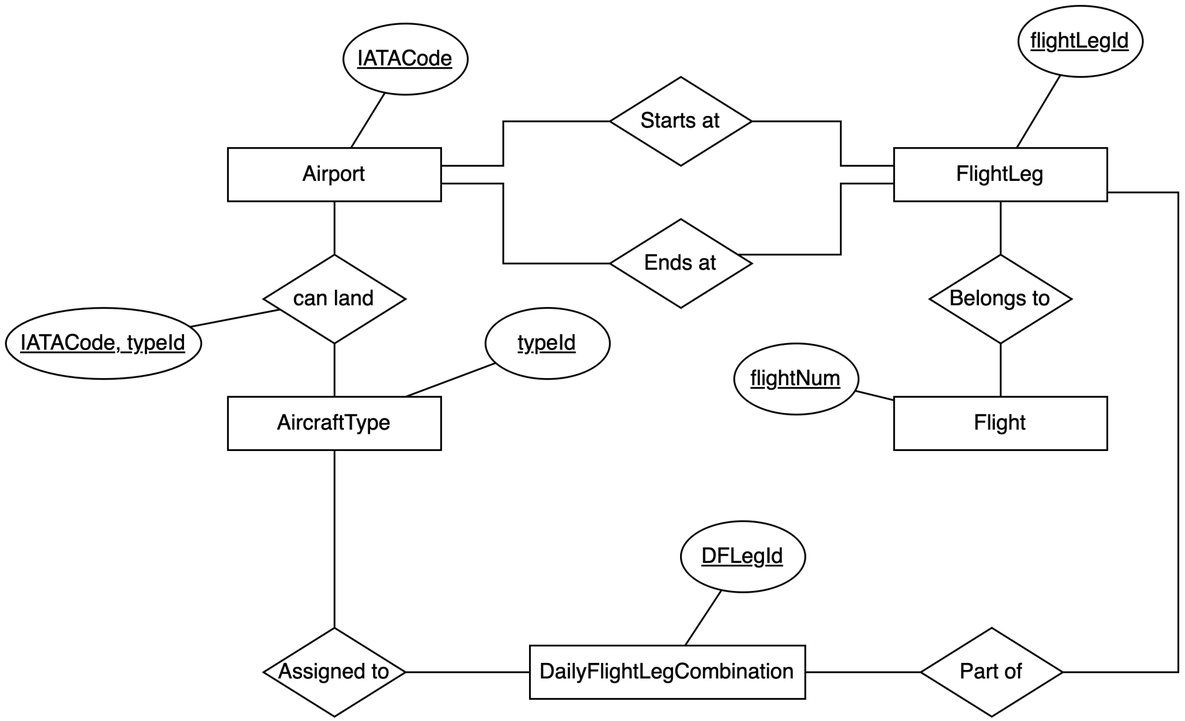
Exercises II

- From the following ERD implement its Relational schema.



Exercises III

- From the following ERD implement its Relational schema.



Exercises IV

From description, implement its relational schema for a dealership who sells both new and used cars, and it operates a service facility.

Base your design on the following business rules:

- A salesperson may sell many cars, but each car is sold by only one salesperson.
- A customer may buy many cars, but each car is bought by only one customer.
- A salesperson writes a single invoice for each car he or she sells.
- A customer gets an invoice for each car he or she buys.
- A customer may come in just to have his or her car serviced; that is, a customer need not buy a car to be classified as a customer.
- When a customer takes one or more cars in for repair or service, one service ticket is written for each car.
- The car dealership maintains a service history for each of the cars serviced. The service records are referenced by the car’s serial number.
- A car brought in for service can be worked on by many mechanics, and each mechanic may work on many cars.
- A car that is serviced may or may not need parts (e.g., adjusting a carburetor or cleaning a fuel injector nozzle does not require providing new parts).

See you next lab :)