**Review Questions**

* What is data normalization? Why is it required?
* What is the main purpose of data de-normalization?
* What are the categories of data models? Explain them briefly.
* What is data independence?
* Please have some exercises of writing SQL scripts.
* Go through the ER model again. Try to draw an ER model for a real-world database.
* Explain briefly the three-schema architecture. Why was it proposed?
* Consider the relational database of Figure 1. Give an expression in the relational algebra to express each of the following queries:
  1. Find the names of all employees.
  2. Find the names of all employees who live in city “Miami”.
  3. Find the names of all employees whose salary is greater than $100,000.
  4. Find the names of all employees who live in “Miami” and whose salary is greater than

$100,000.

employee (person\_name, street, city)

works (person\_name, company\_name, salary) company (company\_name, city)

Figure 1