



ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA

# Modeling and Processing of Multimedia Data

International Second cycle degree programme (LM) in  
Digital Humanities and Digital Knowledge (DHDK)  
University of Bologna

## Exercises on Relational DBs: Relational schemas and SQL queries

Home page: <http://www-db.disi.unibo.it/courses/DMMMDB/>  
Electronic version: 0.03.CollegialExercises-DBs.pdf  
Electronic version: 0.03.CollegialExercises-DBs-2p.pdf

# Database FASHION

- Here we provide an example of a “toy” database schema that simulates the real life of a little fashion company selling clothing...

**CUSTOMER** (CODE\_CUST, NAME, ADDRESS, E\_MAIL, AGE)

**CLOTHING** (CODE\_CLOTHES, TYPE, BRAND, PRICE, DESCRIPTION)

**ORDER** (CODE\_CUST, CODE\_CLOTHES, NUMBER\_OF\_ITEMS)

Foreign Key: CODE\_CUST REFERENCES CUSTOMER

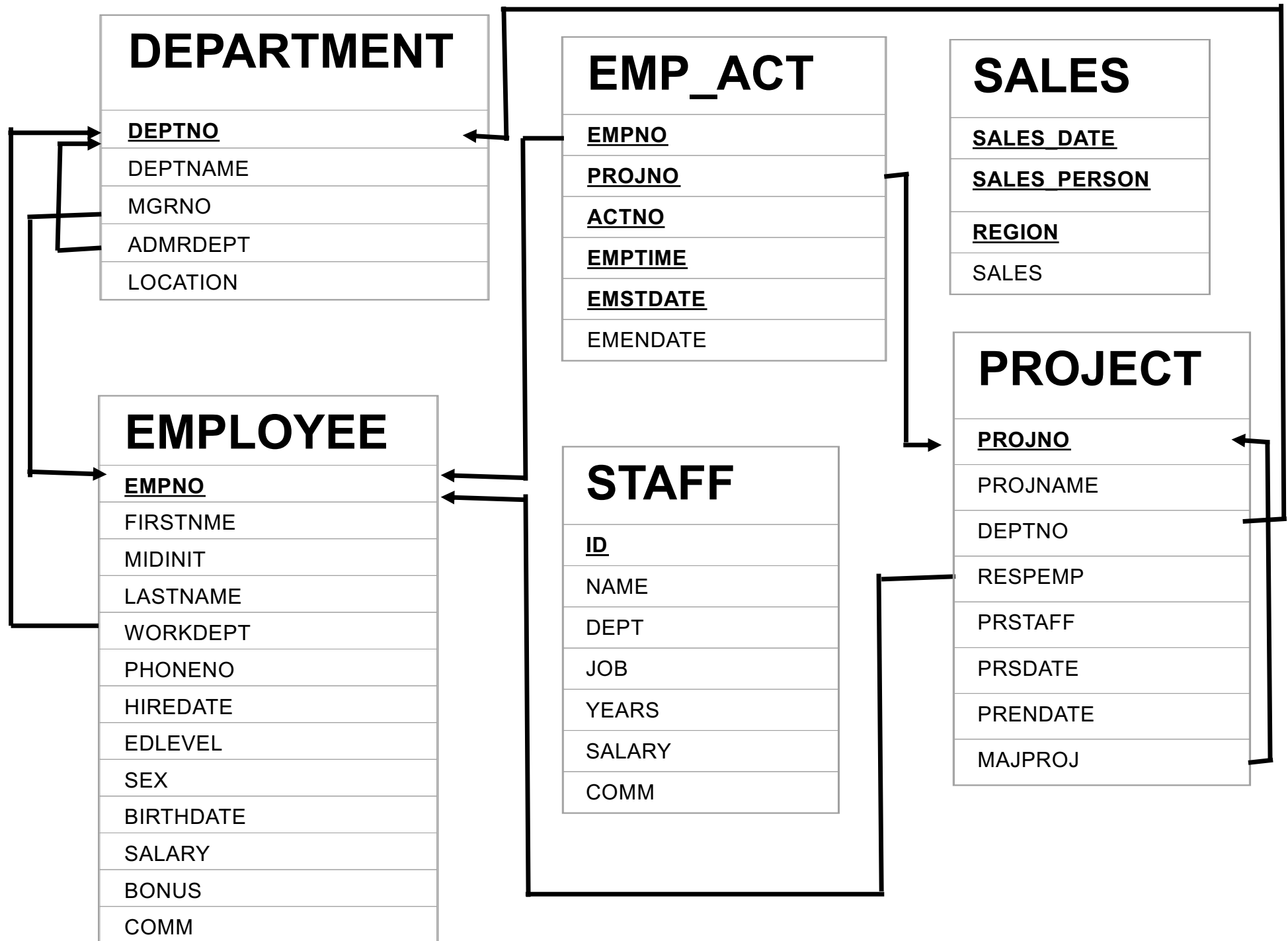
Foreign Key: CODE\_CLOTHES REFERENCES CLOTHING



# Database COMPANY

- Here we provide an example of a real database schema that shapes the real life of a small/medium-size company to show how things can become complex...





# Queries database FASHION

1. “Distinct descriptions of clothing of type "hat" and brand “Armani” costing less than € 100”
2. “Clothing codes of orders related to customers whose code belongs to the set (‘X’, ‘Y’, ‘Z’, ‘T’)”
3. “E-mails of customers whose name starts with ‘BA’”

# Queries database FASHION

4. “Clothes codes, and relative number of orders, for clothing that have been ordered at least 3 times”
5. “Clothes codes, and relative total number of ordered items, by ordering the result (in descendent way) by total number of items and then by clothes code”
6. “Customer codes and total number of ordered clothing for those customers that have ordered at least 500 clothes”
7. “Clothing codes, types, brands, and prices of orders related to customers whose code belongs to the set ('X', 'Y', 'Z', 'T')”

# Queries database COMPANY

1. “Woman employees of the 'D11' department with an annual salary exceeding \$ 22,000”
2. “Ordered list of the names of the departments ending in 'S' and that refer to the master department 'D01’”
3. “Names of staff people who earn over \$ 20,000 but who are not managers”
4. “Employees with 16 years of school education in descending order of department code”
5. “Names of departments that do not have a reference manager”

# Queries database COMPANY

6. “Identification and name of persons belonging to the staff who have not null commission and who have a seniority of service between 3 and 5 years”
7. “Surname and name (alphabetic order 'A-Z' on both) of employees who made sales in 'Quebec' on 1996-04-01”
8. “Data relating to projects whose managers are male, have a school education greater than or equal to 18 years and whose department of affiliation is that of 'PLANNING’”

# Queries database COMPANY

9. “Region name and total sales for each region where the total sales is greater than 30, sorted by total sales in descending order”
  
10. “Name of projects and number of distinct employees working on each project in descending order of number of employees (select only the first 5 records)”