EXAM
Databases Modeling, DW modeling, SQL Queries

The project work can be done **by groups of 3-4 people**.

DEADLIANE of the whole project: 15 May 2020

Exercise 1 (10)
Design the **conceptual and the logical model of a database** respecting the following requirements:

The database will register information about a library and the books loans. The loans processing system is based on the operational database with the following characteristics. The database must contain information about books characterized by a title, an author (or more authors), the publication year, the editorial company and by the people who borrowed that book. For each author of a book the information of interest is the name and surname, the nationality, the year of birth and the year of death, his or biography and the books authored. The database also must record information about people borrowing books. Each person is uniquely identified by a code and is characterized by a name, surname, the books borrowed. Given a loan of a book is interesting to maintain information about date of the loan and the date of return of the book and a flag indicating that the loan is concluded.

Exercise 2 (6)
Solve the following three queries on the database Sakila.
1. List of actors of English films
2. List of films with the title containing the letter "f" and released after 1958 or with a title starting with "T".
3. List of actors worked only in English film
4. List of actors surname and name such that the actors played only in movies of the category "Family"
5. List for each film with more that 10 rentals , the total rental amount and the average of the rental duration

Deliver a script file with text of query and SQL query

Instructions for the delivery of the material of each exercise:

- **Ex.1:** you need to deliver
  1. a picture of the conceptual model (file name containing the students names ex: **RossiVerdi-Ex1Conceprual.png**)
  2. a picture of the logical model (file name ex: **RossiVerdi-Ex1Logical.png**)
- **Ex.2:** you need to deliver: **file with text of query and SQL query** (file name ex: **RossiVerdi-Ex2.sql**)

These files must be sent within 15 May together with the second part of the exam.

Send the zip file to the email: anna.monreale@unipi.it. The subject of the email must be**: [Exam Main2020]: names of students.** So for example: **[Exam Main2020]: Rossi, Verdi**