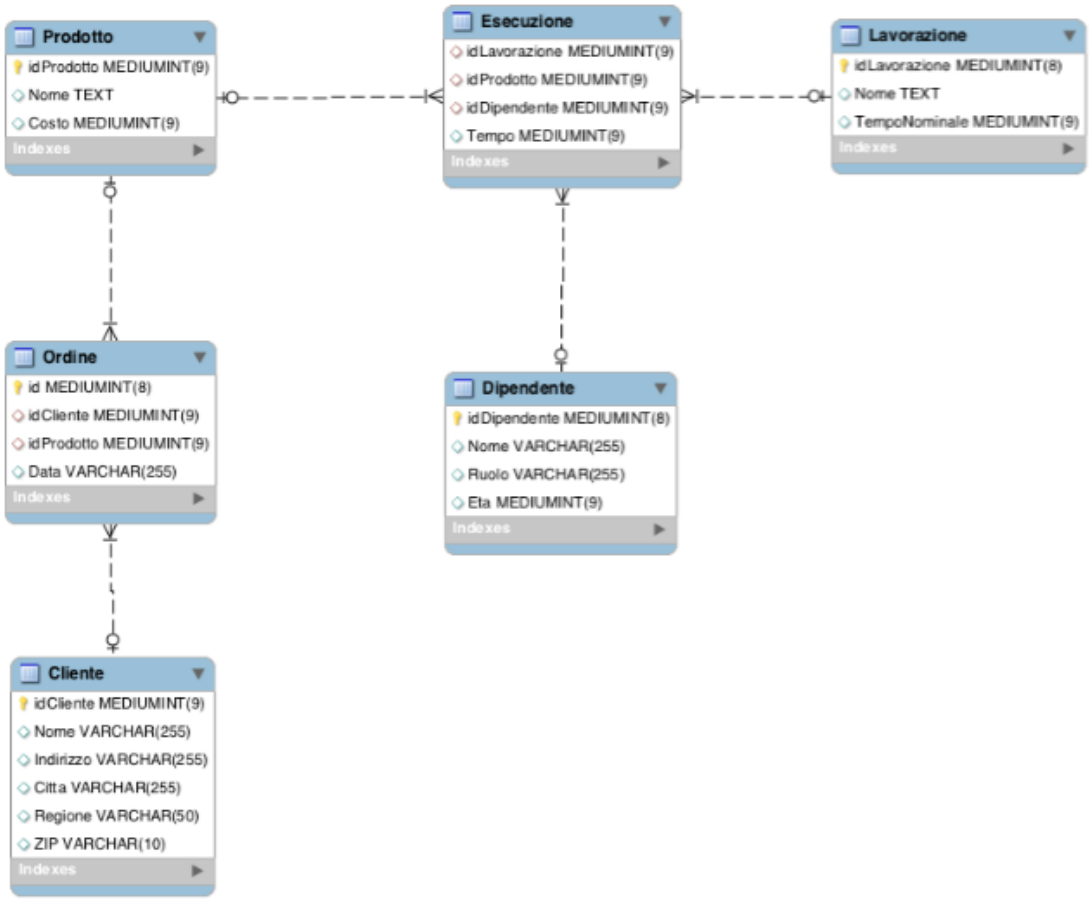
Information Systems

Politecnico di Milano

AA 2014-2015

Optional project

A manufactury's company have collected in its relation database all the information regarding the realization of its products.
The ER scheme above (all the relations are 1:N) corresponds to the utilized DB.



The table "Cliente" (Customer) contains a list of all the company's customers, each one characterized by classic fields (address, city, etc.).
The "Prodotto" (Product) table lists all products that can be ordered. A product is defined by a unique code, a name and the price at which it is sold. Being a product available to a customer, the order table contains, for each tuple, the product requested by the customer on a certain date. If a customer orders more than one product at the same time, the order table contains two tuples.
A product to be made must pass through various stages of processing. These phases are collected in the table "Lavorazione" (Process) that, for each processing, also specifies the time that usually is required for its completion. Given a product it requires different manufacturing operations (e.g., shaping, finishing). Given a single production ("Lavorazione"), this can be also carried out for different products.

The table "Esecuzione" (Execution) collects the detail of the realization of a product. In fact, given a product ("Prodotto") and a process ("Lavorazione"), the table stores the employee who performed the work and the time taken.
After identifying some important **KPI** (3 or 4) and starting from the board E-R in the figure, each group revenues fact-dimension diagram. Identify, on the fact identified, the most appropriate measures.
Using the tools provided by the **Pentaho suite**, each group will produce and deliver the following documents:

- a .pdf file with the *obtained fact-dimension scheme*
- a *.sql file* that recreates the *db structure* corresponding to the *obtained fact-dimension scheme.*.
- *one or more files .ktr able* to populate the database corresponding to the f*act-dimension scheme* obtained *from the data* contained in the provided database attached (ProgSI1415.sql files);
- *an .xml file* that contains the definition of the cube according to the specifications of **Mondrian**.

The evaluation of the work will consist in some queires to the data mart obtained through the tool **Saiku** (http://community.meteorite.bi).

Notes: this is a translation of the assignment given (originally in Italian) as a part of the course "Sistemi Informativi" (Information Systems) taught by Professor Pierluigi Plebani.