

Exercise on data warehouse design

Problem specifications

Design a data warehouse to manage the storehouses of an Italian household appliance company, addressing the following issues. The company has storehouses all over Italy. The management needs to analyze the current storehouse usage to decide which ones to expand, reduce, or partially rent.

The management periodically takes out theft insurance against robbery in its storehouses. The cost of the insurance depends on the average daily amount of products stored in the storehouses and on their value. Different insurances exist and the management needs to decide which one is the best. Some insurance policies are specific to a particular storehouse, while others are common to different storehouses of the same city, province, or region.

The insurance costs depend on the following *daily measures*:

- Number of products stored in each storehouse for each type of product
- Value of the products stored in each storehouse for each type of product

To assess the insurance costs, the management needs to analyze the *total number of products stored in each storehouse* and *the total value of the products* for each date, month, 3-month period, 4-month period, semester, and year. This information must be available for each product type, product category, storehouse, and storehouse location (city, province, and region).