

## Esercizio sulle viste materializzate

### Dato il seguente schema relazionale di un data mart

INCOME (LID, SID, CID, TID, #Consulting, Income)  
SERVICE (SID, Service, ServiceType, ServiceCategory)  
TIME (TID, Date, Month, 2M, 3M, 4M, 6M, Year)  
LOCATION (LID, Headquarter, City, Region, Geographic\_Area, #Consultants)  
COMPANY (CID, ServiceCategory, CompanyType, Nationality)

### Define the query in SQL associated with the materialized view that can be used to efficiently answer all three of the following queries:

- For each type of services and semester, select the total income and the total number of consulting, carried out by the consultants of the offices located in Lombardy.
- Considering only Italian and German companies, select for each region and service, the total income and the total number of consulting, separately for each year.
- Considering only the income of 2017, 2018, and 2019, for each service category and company nationality, select the six-month income and the average six-month income per consulting.

Considering the following statistics:

- Time period: 10 years
- Number of services  $\pm 100$
- Number of types  $\pm 10$
- Number of companies  $\pm 200$
- Number of headquarters  $\pm 90$
- Number of Nationalities  $\pm 5$
- Number of Region  $\pm 10$