

Extended SQL

Problem specifications

The following relations are given (primary keys are underlined, optional attributes are denoted with *):

Customer(CustomerID, CustomerSurname, Province, Region)

Category(CategoryID, CategoryName)

Agent(AgentID, AgentSurname, Agency)

Time(TimeID, Month, Quarter, Semester, Year)

Sales(TimeID, CustomerID, ItemCategoryID, AgentID, TotAmount, NumSoldItems, TotDiscount)

Solve the following queries in SQL.

1. Show for each category of items,
 - The category
 - The total sale amount for the category
 - The total number of sold items within the category
 - The rank of the category according to its total sale amount
 - The rank of the category according to its total number of sold items
 - Sort the result for increasing value of total number of sold items within the category

2. Show, for each province
 - The province
 - The region of the province
 - The total sale amount for the province
 - The rank of the province according to its total sale amount, separately for each region
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3. Show, for each province and month
 - The province
 - The region of the province
 - The month
 - The total sale amount for the province in the current month
 - The rank of the province according to its total sale amount, separately for each month

4. Show, for each region and month
 - The region
 - The month
 - The total sale amount for the region in the current month
 - The cumulative sale amount for increasing months, separately for each region