
Exercises on the extensions of the SQL language

Exercise #1

The following relations are given on rentals of different types of objects for a seaside resort (primary keys are underlined, optional attributes are denoted with *):

OBJECTS (ObjectID, ObjectType)

CUSTOMERS (CustomerID, Name, Surname)

TIME (TimeID, Date, Month, Year)

RENTALS (TimeID, CustomerID, ObjectID, Price)

a) Show, for each object

- The object code
- The object type
- The object total rentals (number of times the object has been rented)
- The object total income (SUM(price))
- The object rank according to its total rentals
- The object rank according to its total income

b) Show, for each object and month

- the object code
- the object type
- the month
- the total income for the object in the current month (SUM(price))
- the object rank according to its total monthly income, separately for each month

Exercise #2

Customer(CustomerID, CustomerSurname, Province, Region)

Category(CategoryID, CatName)

Agent(AgentID, AgSurname, Agency)

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

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

a) 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

b) 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