

Extended SQL solutions

Exercise #1

- a) SELECT O.ObjectID, O.ObjectType,
COUNT(*) as RentalNumber, SUM(Price) as TotalIncome,
RANK() over (ORDER BY COUNT(*) DESC) as RentalRank,
RANK() over (ORDER BY SUM(Price) DESC) as TotalIncomeRank
FROM Objects O, Rentals R
WHERE O.ObjectID = R.ObjectID
GROUP BY O.ObjectID, O.ObjectType
- b) SELECT O.ObjectID, O.ObjectType, Month
SUM(Price) as TotalIncome,
RANK() over (PARTITION BY Month
ORDER BY SUM(Price) DESC) as TotalIncomeRank
FROM Objects O, Rentals R
WHERE O.ObjectID = R.ObjectID
GROUP BY O.ObjectID, O.ObjectType, Month

NB: The same month in different years, should be managed as a different month. For example, the month January in 2007 is different from the month January in 2006.

Exercise #2

- a) SELECT Province, Region, SUM(TotAmount),
RANK() over (PARTITION by Region
ORDER BY SUM(TotAmount) DESC) as
RANK_TotAmountRegion
FROM SALES S, CUSTOMER C
WHERE S.CustomerID = C.CustomerID
GROUP BY Province, Region;
- b) SELECT Region, Month, SUM(TotAmount),
SUM(SUM(TotAmount)) over (PARTITION by Region
ORDER BY Month
ROWS UNBOUNDED PRECEDING) as CumulativeAmount
FROM SALES S, CUSTOMER C, TIME T
WHERE S.CustomerID=C.CustomerID AND S.TimeID=T.TimeID
GROUP BY Region, Month;

NB: The same month in different years, should be managed as a different month. For example, the month January in 2007 is different from the month January in 2006.