/\*Task 14: Over and PARTITION BY

--Task 14 **ROUGH WORK[DOUBLE CHECK FOR ERRORS]** - **work [ REMOVE UOP.DBO. AND THE $ SIGN AND THEN EXECUTE THE QUERIES.]**

for example the query

**SELECT \* FROM uop.dbo.FactSales$;**

Should be typed as

**SELECT \* FROM FactSales;**

Try the following queries and have a look at the results. What are the differences between them? Do they do what you expect?

We can use the PARTITION BY clause with the Over clause to specify the column on which we need to perform aggregation.\*/

*SELECT Month(FullDate) As [Month], Year(FullDate) As [Year], ActionTaken, Min(Amount) OVER(PARTITION BY ActionTaken) As MinAmount, AVG(Amount) OVER(PARTITION BY ActionTaken) As AverageAmount from uop.dbo.FactWaste$ Order By Year(FullDate), Month(FullDate), ActionTaken;*

*SELECT ROW\_NUMBER() OVER(PARTITION BY EmployeeType ORDER BY EmployeeLastName) AS "Row Number", EmployeeLastName, EmployeeFirstName, EmployeeType from uop.dbo.DimEmployee$ Where EmployeeActive <> 'No';*

/\*Now your turn.

1. List the Sum, average min and maximum of sales per promotion type, print the date in dmy format and order it by year. \*/

SELECT

dp.PromotionType,

FORMAT(dt.FullDateTime, 'dd-MM-yyyy') AS SalesDate\_DMY,

dt.DTYear AS SalesYear,

SUM(fs.SalesAmount) OVER (PARTITION BY dp.PromotionType) AS TotalSales,

AVG(fs.SalesAmount) OVER (PARTITION BY dp.PromotionType) AS AvgSales,

MIN(fs.SalesAmount) OVER (PARTITION BY dp.PromotionType) AS MinSales,

MAX(fs.SalesAmount) OVER (PARTITION BY dp.PromotionType) AS MaxSales

FROM

UOP.DBO. FactSales$ fs

JOIN

UOP.DBO.DimPromotion$ dp ON fs.PromotionID = dp.PromotionID

JOIN

UOP.DBO.DimDateTime$ dt ON fs.FullDateTime = dt.FullDateTime

ORDER BY

dt.DTYear;

/\*2. List the profit (SalesAmount-CostAmount) and row number of sales per month, print the date in dmy format and order it by month for the year 2020. \*/

SELECT

FORMAT(dt.FullDateTime, 'dd-MM-yyyy') AS SalesDate\_DMY,

dt.DTMonth AS SalesMonth,

dt.DTYear AS SalesYear,

fs.SalesAmount,

fs.CostAmount,

(fs.SalesAmount - fs.CostAmount) AS Profit,

ROW\_NUMBER() OVER (

PARTITION BY dt.DTMonth

ORDER BY fs.FullDateTime

) AS RowNumberPerMonth

FROM

UOP.DBO.FactSales$ fs

JOIN

UOP.DBO.DimDateTime$ dt ON fs.FullDateTime = dt.FullDateTime

WHERE

dt.DTYear = 2020

ORDER BY

dt.DTMonth, fs.FullDateTime;