--Task 7: Aggregate Functions

--Task 7 **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?

/\*Pulls data from the FactSales$ table, Rounds the CostAmount field to 2 decimal places, Returns the first 10 rows ,Displays the result as RoundedCost\*/

SELECT top (10) ROUND(costamount, 2) AS RoundedCost FROM uop.dbo.FactSales$ ;

/\*The query will return a single number — the count of rows in the FactWaste table where the waste occurred in October.\*/

SELECT Count(\*) from uop.dbo.FactSales$ WHERE Month(FullDateTime) =10;

SELECT Sum(Amount) AS [Total Number of Waste] from uop.dbo.FactWaste$;

SELECT AVG(Amount) AS [Average Waste] from uop.dbo.FactWaste$;

SELECT MAX(Amount) AS [The Most Costly Waste] from uop.dbo.FactWaste$;

SELECT MIN(Amount) AS [The Least Costly Waste] from uop.dbo.FactWaste$;

--1. What is the average cost of all the sales during 2019?

SELECT AVG(CostAmount) AS AverageCost

FROM uop.dbo.FactSales$

WHERE YEAR(FullDateTime) = 2019;

--2. What is the average profit(Amount-Cost) of all the sales during 2019?

SELECT AVG(SalesAmount - CostAmount) AS AverageProfit

FROM uop.dbo.FactSales$

WHERE YEAR(FullDateTime) = 2019;

--3. What is the most profitable sale?

SELECT TOP 1 SalesAmount, Quantity, ProductCode, CostAmount, SalesAmount, (SalesAmount - CostAmount) AS Profit, FullDateTime

FROM uop.dbo.FactSales$

ORDER BY Profit DESC;

--4. What is the least costly sale?

SELECT TOP 1 SalesAmount, Quantity, ProductCode, CostAmount, (SalesAmount - CostAmount) AS Profit, FullDateTime

FROM uop.dbo.FactSales$

ORDER BY CostAmount ASC;

--5. How many sales exist for december 2020?

SELECT COUNT(\*) AS SalesCount

FROM uop.dbo.FactSales$

WHERE YEAR(FullDateTime) = 2020 AND MONTH(FullDateTime) = 12;

--6. Round the average sale amount in 3 decimal places.

SELECT ROUND(AVG(SalesAmount), 3) AS AverageSaleAmount

FROM uop.dbo.FactSales$;

[ EXTRA QUERIES FOR PRACTICE]

-- List the details of the sales that have more than the average cost amount.

Select SalesAmount, Quantity, ProductCode, CostAmount

From uop.dbo.FactSales$

Where CostAmount > (Select AVG(costAmount) from uop.dbo.FactSales$)

-- next

SELECT MIN(SalesAmount) AS [The Least Costly Waste] from uop.dbo.FactSales$;