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USE `HW_5_DW`;

-- 1. Show a list of Customer Name, Gender, Sales Person's Name and Sales Person's City for all products sold on September 2015, whose Sales Price is more than 20 and Quantity sold is more than 8.

```
SELECT C.CustomerName, C.Gender, SP.SalesPersonName, SP.City
      FROM Dim_Customer C
      INNER JOIN Fact_ProductSales FPS ON C.CustomerID = FPS.CustomerID
      INNER JOIN Dim_SalesPerson SP ON FPS.SalesPersonID = SP.SalesPersonID
      INNER JOIN Dim_Date D ON FPS.SalesDateKey = D.DateKey
      WHERE D.MONTHNAME = "September" AND D.YEAR = "2015" AND FPS.SalesPrice > 20
      AND FPS.Quantity > 8
      GROUP BY C.CustomerName, C.Gender, SP.SalesPersonName, SP.City;
```

	CustomerName	Gender	SalesPersonName	City	
▶	Linda Ronstadt	F	Tom Petty	Boulder	
	Elon Musk	M	Jacob Leis	Lafayette	

-- 2. Show a list of Store Name, Store's City and Product Name for all products sold on March 2017, whose Product Cost is less than 50 and store located in 'Boulder'.

```
SELECT S.StoreName, S.City, P.ProductName
      FROM Dim_Store S
      INNER JOIN Fact_ProductSales FPS ON S.StoreID = FPS.StoreID
      INNER JOIN Dim_Product P ON P.ProductKey = FPS.ProductID
      INNER JOIN Dim_Date D ON FPS.SalesDateKey = D.DateKey
      WHERE D.MONTHNAME = "March" AND D.YEAR = "2017" AND FPS.ProductCost < 50
      AND S.City = "Boulder"
      GROUP BY S.StoreName, S.City, P.ProductName;
```

	StoreName	City	ProductName	
▶	ValueMart Boulder	Boulder	Wheat Flour 1kg	
	ValueMart Boulder	Boulder	Jasmine Rice 5kg	
	ValueMart Boulder	Boulder	SunFlower Oil 1 ltr	

-- 3. Show a list of Top 2 Sales Person's Name by their Total Revenue for 2017, i.e. Top 2 sales person with HIGHEST Total Revenue.

```
SELECT SP.SalesPersonName, SUM(FPS.SalesPrice * FPS.Quantity) AS "Total Revenue"
FROM Dim_SalesPerson SP
INNER JOIN Fact_ProductSales FPS ON FPS.SalesPersonID = SP.SalesPersonID
INNER JOIN Dim_Date D ON D.DateKey = FPS.SalesDateKey
WHERE D.YEAR = 2017
GROUP BY SP.SalesPersonName
ORDER BY SUM(FPS.SalesPrice * FPS.Quantity) DESC
LIMIT 2;
```

	SalesPersonName	Total Revenue	
▶	Julian Brand	2588.00	
	Jasmin Farah	1158.00	

-- 4. Display a Customer Name and Total Revenue who has LOWEST Total Revenue in 2017.

```
SELECT C.CustomerName, SUM(FPS.SalesPrice * FPS.Quantity) AS "Total Revenue"
FROM Dim_Customer C
INNER JOIN Fact_ProductSales FPS ON C.CustomerID = FPS.CustomerID
INNER JOIN Dim_Date D ON D.DateKey = FPS.SalesDateKey
WHERE D.YEAR = 2017
GROUP BY C.CustomerName
ORDER BY SUM(FPS.SalesPrice * FPS.Quantity) ASC
LIMIT 1;
```

	CustomerName	Total Revenue	
▶	Melinda Gates	437.50	

-- 5. Show a list of Store Name (in alphabetical order) and their 'Total Sales Price' for the year between 2010 and 2017.

```
SELECT S.StoreName, SUM(FPS.SalesPrice) AS "Total Sales Price"
FROM Dim_Store S
INNER JOIN Fact_ProductSales FPS ON S.StoreID = FPS.StoreID
INNER JOIN Dim_Date D ON D.DateKey = FPS.SalesDateKey
WHERE D.YEAR >= 2010 AND D.YEAR <= 2017
GROUP BY S.StoreName
ORDER BY S.StoreName;
```

	StoreName	Total Sales Price	
►	ValueMart Berthoud	1554.00	
	ValueMart Boulder	7961.00	
	ValueMart Lyons	1759.50	

-- 6. Display a list of Store Name, Product Name and their Total Profits from product name like 'Jasmine Rice' for 2010.

```
SELECT S.StoreName, P.ProductName, SUM((FPS.SalesPrice * FPS.Quantity) - (FPS.ProductCost * FPS.Quantity)) AS "Total Profit"
FROM Dim_Store S
INNER JOIN Fact_ProductSales FPS ON S.StoreID = FPS.StoreID
INNER JOIN Dim_Product P ON P.ProductKey = FPS.ProductID
INNER JOIN Dim_Date D ON D.DateKey = FPS.SalesDateKey
WHERE D.YEAR = 2010
GROUP BY S.StoreName, P.ProductName;
```

	StoreName	ProductName	Total Profit	
►	ValueMart Boulder	Wheat Flour 1kg	21.00	
	ValueMart Boulder	Jasmine Rice 5kg	50.00	
	ValueMart Boulder	SunFlower Oil 1 ltr	40.00	
	ValueMart Boulder	Dawn Dish Soap, case	130.00	
	ValueMart Boulder	Tide Laundry Detergent 1kg case	76.00	
	ValueMart Lyons	Dawn Dish Soap, case	18.00	
	ValueMart Lyons	Tide Laundry Detergent 1kg case	4.00	
	ValueMart Lyons	Jasmine Rice 5kg	19.00	
	ValueMart Lyons	Wheat Flour 1kg	8.00	
	ValueMart Lyons	SunFlower Oil 1 ltr	19.50	
	ValueMart Bertho...	Wheat Flour 1kg	8.00	
	ValueMart Bertho...	Jasmine Rice 5kg	18.00	
	ValueMart Bertho...	SunFlower Oil 1 ltr	27.00	

-- 7. Display Total Revenue from 'ValueMart Boulder' Store for each Quarter during 2016, sort your result by Quarter in chronological order.

```
SELECT SUM(FPS.SalesPrice * FPS.Quantity) AS "Total Revenue", D.QUARTER
FROM Fact_ProductSales FPS
INNER JOIN Dim_Store S ON S.StoreID = FPS.StoreID
INNER JOIN Dim_Date D ON FPS.SalesDateKey = D.DateKey
WHERE S.StoreName = "ValueMart Boulder" AND D.YEAR = 2016
GROUP BY D.QUARTER
ORDER BY D.QUARTER;
```

	Total Revenue	QUARTER	
►	1622.50	1	
	1144.50	2	
	2259.50	3	
	1492.50	4	

-- 8. Display Customer Name and Total Sales Price for all items purchased by customers Melinda Gates and Harrison Ford.

```
SELECT C.CustomerName, SUM(FPS.SalesPrice) AS "Total Sales Price"
FROM Dim_Customer C
INNER JOIN Fact_ProductSales FPS ON C.CustomerID = FPS.CustomerID
WHERE C.CustomerName = "Melinda Gates" OR C.CustomerName = "Harrison Ford"
GROUP BY C.CustomerName;
```

	CustomerName	Total Sales Price	
►	Harrison Ford	2234.00	
	Melinda Gates	1717.00	

-- 9. Display Store Name, Sales Price and Quantity for all items sold in March 12th 2017.

```
SELECT S.StoreName, FPS.SalesPrice, FPS.Quantity
FROM Dim_Store S
INNER JOIN Fact_ProductSales FPS ON S.StoreID = FPS.StoreID
INNER JOIN Dim_Date D ON FPS.SalesDateKey = D.DateKey
WHERE D.DATE = '2017/03/12';
```

	StoreName	SalesPrice	Quantity	
►	ValueMart Boulder	6.50	8	
	ValueMart Boulder	24.00	3	
	ValueMart Boulder	43.50	9	

-- 10. Display Sales Person's Name and Total Revenue for the best performing Sales Person, i.e., the Sales Person with the HIGHEST Total Revenue.

```
SELECT SP.SalesPersonName, SUM(FPS.SalesPrice * FPS.Quantity) AS "Total Revenue"
FROM Dim_SalesPerson SP
INNER JOIN Fact_ProductSales FPS ON SP.SalesPersonID = FPS.SalesPersonID
GROUP BY SP.SalesPersonName
ORDER BY SUM(FPS.SalesPrice * FPS.Quantity) DESC
LIMIT 1;
```

	SalesPersonName	Total Revenue	
▶	Julian Brand	21164.50	

-- 11. Display the Top 3 Product Name by their HIGHEST Total Profit.

```
SELECT P.ProductName
FROM Dim_Product P
INNER JOIN Fact_ProductSales FPS ON P.ProductKey = FPS.ProductID
GROUP BY P.ProductName
ORDER BY SUM((FPS.SalesPrice * FPS.Quantity) - (FPS.ProductCost * FPS.Quantity)) DESC
LIMIT 3;
```

	ProductName	
▶	SunFlower Oil 1 ltr	
	Jasmine Rice 5kg	
	Tide Laundry Detergent 1kg case	

-- 12. Display Year, MonthName and Total Revenue for the 1st 3 months (i.e. January, February and March) of 2017.

```
SELECT D.YEAR, D.MONTHNAME, SUM(FPS.SalesPrice * FPS.Quantity) AS "Total Revenue"
FROM Dim_Date D
INNER JOIN Fact_ProductSales FPS ON D.DateKey = FPS.SalesDateKey
WHERE D.DATE >= '2017/01/01' AND D.DATE <= '2017/03/31'
GROUP BY D.YEAR, D.MONTHNAME;
```

	YEAR	MONTHNAME	Total Revenue	
▶	2017	January	1417.50	
	2017	February	1595.50	
	2017	March	1954.00	

-- 13. Display Product Name, average product cost and average sales price for the products sold in 2017. Show averages rounded to 2 decimal places.

```
SELECT P.ProductName, ROUND(AVG(FPS.ProductCost),2) AS "Average Product Cost",
ROUND(AVG(FPS.SalesPrice),2) AS "Average Sales Price"
FROM Dim_Product P
INNER JOIN Fact_ProductSales FPS ON P.ProductKey = FPS.ProductID
INNER JOIN Dim_Date D ON FPS.SalesDateKey = D.DateKey
WHERE D.YEAR = 2017
GROUP BY P.ProductName;
```

	ProductName	Average Product C...	Average Sales Price	
►	Wheat Flour 1kg	5.50	6.50	
	Jasmine Rice 5kg	22.50	24.00	
	SunFlower Oil 1 ltr	42.00	43.50	
	Dawn Dish Soap, case	18.00	20.00	
	Tide Laundry Detergent 1kg case	135.00	139.00	

-- 14. Display Customer Name, average sales price and average quantity for all items purchased by customer Melinda Gates. Show averages rounded to 2 decimal places.

```
SELECT C.CustomerName, ROUND(AVG(FPS.SalesPrice),2) AS "Average Sales Price",
ROUND(AVG(FPS.Quantity),2) AS "Average Quantity"
FROM Dim_Customer C
INNER JOIN Fact_ProductSales FPS ON C.CustomerID = FPS.CustomerID
WHERE C.CustomerName = "Melinda Gates"
GROUP BY C.CustomerName;
```

	CustomerName	Average Sales Price	Average Quanti...	
►	Melinda Gates	26.02	4.98	

-- 15. Display Store Name, Maximum sales price and Minimum sales price for store located in 'Boulder' city. Show MIN / MAX rounded to 2 decimal places.

```
SELECT S.StoreName, ROUND(MAX(FPS.SalesPrice),2) AS "Maximum Sales Price" ,  
ROUND(MIN(FPS.SalesPrice),2) AS "Minumum Sales Price"  
FROM Dim_Store S  
INNER JOIN Fact_ProductSales FPS ON S.StoreID = FPS.StoreID  
WHERE S.City = "Boulder"  
GROUP BY S.StoreName;
```

	StoreName	Maximum Sales Price	Minumum Sales Pri...	
▶	ValueMart Boulder	139.00	6.50	