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CSCI 331– Database Systems

THREE TOP QUERIES

The screenshot displays the SQL Server Enterprise Manager interface. The top menu bar includes File, Edit, View, Query, Project, Tools, Window, and Help. The toolbar contains icons for New Query, MDX, DMX, XMLA, DAX, and other query-related functions. The main window shows a query titled 'SQLQuery28.sql - l...rksDW2017 (sa (77))*' with the following SQL code:

```
--It joins two tables DimProduct and factResellerSales and filter out a spanish product name,  
--english product name, reseller key, carrier tracking number, product standard cost and order quantity  
USE AdventureWorksDW2017;  
  
SELECT d.SpanishProductName  
      ,d.EnglishProductName  
      ,F.ResellerKey  
      ,F.CarrierTrackingNumber  
      ,F.ProductStandardCost  
      ,F.OrderQuantity  
FROM   dbo.DimProduct AS d  
JOIN   dbo.FactResellerSales AS F ON d.ProductKey = F.ProductKey;
```

The query results are displayed in a table with the following columns: SpanishProductName, EnglishProductName, ResellerKey, CarrierTrackingNumber, ProductStandardCost, and OrderQuantity. The results show 13 rows of data, including products like 'Montaña: 100, negra, 42', 'Mountain-100 Black, 42', 'Jersey con logotipo de m...', 'Long-Sleeve Logo Je...', 'Calcetines para bicicleta ...', 'Mountain Bike Socks,...', 'AWC Logo Cap', 'Casco deportivo: 100, azul', 'Sport-100 Helmet, Blue', and 'Carretera: 650, roja, 44', 'Road-650 Red, 44'.

At the bottom of the window, a status bar indicates: 'Query executed successfully. localhost, 12001 (15.0 RTM) sa (77) AdventureWorksDW2017 00:00:02 60,855 rows'.

	SpanishProductName	EnglishProductName	ResellerKey	CarrierTrackingNumber	ProductStandardCost	OrderQuantity
1	Montaña: 100, negra, 42	Mountain-100 Black, 42	676	4911-403C-98	1898.0944	1
2	Montaña: 100, negra, 44	Mountain-100 Black, 44	676	4911-403C-98	1898.0944	3
3	Montaña: 100, negra, 48	Mountain-100 Black, 48	676	4911-403C-98	1898.0944	1
4	Montaña: 100, plateada, 38	Mountain-100 Silver, 38	676	4911-403C-98	1912.1544	1
5	Montaña: 100, plateada, 42	Mountain-100 Silver, 42	676	4911-403C-98	1912.1544	1
6	Montaña: 100, plateada, 44	Mountain-100 Silver, 44	676	4911-403C-98	1912.1544	2
7	Montaña: 100, plateada, 48	Mountain-100 Silver, 48	676	4911-403C-98	1912.1544	1
8	Jersey con logotipo de m...	Long-Sleeve Logo Je...	676	4911-403C-98	31.7244	3
9	Jersey con logotipo de m...	Long-Sleeve Logo Je...	676	4911-403C-98	31.7244	1
10	Calcetines para bicicleta ...	Mountain Bike Socks,...	676	4911-403C-98	3.3963	6
11		AWC Logo Cap	676	4911-403C-98	5.7052	2
12	Casco deportivo: 100, azul	Sport-100 Helmet, Blue	676	4911-403C-98	12.0278	4
13	Carretera: 650, roja, 44	Road-650 Red, 44	117	6431-4D57-83	413.1463	1

File Edit View Query Project Tools Window Help

WideWorldImportersDW Execute

SQLQuery28.sql - l...portersDW (sa (77))* csci331-server.Wid...tersDW - Diagram_1*

```
--  
  
USE WideWorldImportersDW;  
  
SELECT year(P.[Date Key]) AS Year  
      ,P.[Ordered Quantity]  
      ,P.[Received Outers]  
      ,P.[Ordered Outers]  
      ,P.[Is Order Finalized]  
FROM Fact.Purchase AS P  
WHERE P.[Ordered Quantity] IN (  
      SELECT MAX(O.Quantity)  
      FROM Fact.[Order] AS O  
      INNER JOIN Fact.Sale AS S ON O.Quantity = S.Quantity  
      )  
GROUP BY year(P.[Date Key])  
      ,P.[Ordered Quantity]  
      ,P.[Received Outers]  
      ,P.[Ordered Outers]  
      ,P.[Is Order Finalized]
```

62 %

Results Messages

	Year	Ordered Quantity	Received Outers	Ordered Outers	Is Order Finalized
1	2014	360	15	15	1
2	2015	360	15	15	1
3	2013	360	36	36	1
4	2013	360	30	30	1
5	2016	360	15	15	1

Query executed successfully. localhost, 12001 (15.0 RTM) sa (77) WideWorldImportersDW 00:00:00 5 rows

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SQLQuery28.sql - localhost, 12001.AdventureWorks2017 (sa (77... Quick Launch (Ctrl+Q)

File Edit View Query Project Tools Window Help

AdventureWorks2017 Execute

SQLQuery28.sql - l...Works2017 (sa (77))* csci331-server.Wid...tersDW - Diagram_1*

```
--It filters out the employee history with employee name, birthdate, maximum vacation hour they took while working, marital status, startdate and enddate.
USE AdventureWorks2017;

WITH EmplHistory
AS (
    SELECT E.BirthDate
        ,E.JobTitle
        ,E.VacationHours
        ,UPPER(E.MaritalStatus) AS MaritalStatus
        ,ED.StartDate
        ,ED.EndDate
        ,ED.DepartmentID
    FROM HumanResources.Employee AS E
    INNER JOIN HumanResources.EmployeeDepartmentHistory AS ED ON E.BusinessEntityID = ED.BusinessEntityID
)
SELECT D.Name
    ,FORMAT(H.BirthDate, 'd', 'en-US') as BirthDate
    ,MAX(H.VacationHours) as MaxVacationHour
    ,H.JobTitle
    ,H.MaritalStatus
    ,H.StartDate
    ,H.EndDate
FROM EmplHistory AS H
INNER JOIN HumanResources.Department AS D ON H.DepartmentID = D.DepartmentID
WHERE H.EndDate IS NOT NULL
GROUP BY D.Name
    ,FORMAT(H.BirthDate, 'd', 'en-US')
    ,H.JobTitle
    ,H.MaritalStatus
```

51 %

Results Messages

	Name	BirthDate	MaxVacationHour	JobTitle	MaritalStatus	StartDate	EndDate
1	Engineering	12/23/1974	48	Senior Tool Designer	S	2007-12-05	2010-05-30
2	Finance	1/6/1976	0	Chief Financial Officer	M	2009-01-31	2013-11-13
3	Marketing	2/10/1978	49	Purchasing Manager	S	2011-02-25	2011-07-30
4	Production	11/6/1981	45	Scheduling Assistant	M	2009-01-07	2011-08-31
5	Purchasing	3/19/1975	40	Marketing Manager	S	2007-12-20	2009-07-14
6	Quality Assurance	2/10/1978	49	Purchasing Manager	S	2011-07-31	2012-07-14

Query executed successfully. localhost, 12001 (15.0 RTM) sa (77) AdventureWorks2017 00:00:00 6 rows

THREE WORST QUERIES:

SQLQuery28.sql - localhost, 12001.WideWorldImportersDW (sa... Quick Launch (Ctrl+Q)

File Edit View Query Project Tools Window Help

WideWorldImportersDW Execute

SQLQuery28.sql - l...portersDW (sa (77))* csci331-server.Wid...tersDW - Diagram_1*

```
USE WideWorldImportersDW;

SELECT O.[Customer Key]
,year(o.[Order Date Key]) AS OrderYear
,o.Quantity
,c.Customer
,c.Category
,c.[Primary Contact]
FROM Fact.[Order] AS o
JOIN Dimension.Customer AS c ON O.[Customer Key] = c.[Customer Key]
WHERE o.[Order Date Key] = '20130105';
```

83 %

Results Messages

	Customer Key	OrderYear	Quantity	Customer	Category	Primary Contact
1	0	2013	10	Unknown	N/A	N/A
2	2	2013	4	Tailspin Toys (Sylvanite, MT)	Novelty Shop	Lorena Cindric
3	6	2013	7	Tailspin Toys (Jessie, ND)	Novelty Shop	Biswajeet Thakur
4	42	2013	50	Tailspin Toys (Arietta, NY)	Novelty Shop	Chandrakanta Raut
5	64	2013	6	Tailspin Toys (Hodgdon, ME)	Novelty Shop	Rohana Kaskar
6	75	2013	6	Tailspin Toys (Windsor Locks, CT)	Novelty Shop	Vlasta Srbova
7	80	2013	30	Tailspin Toys (Valdese, NC)	Novelty Shop	Bharat Ankitham
8	100	2013	3	Tailspin Toys (Tunnelhill, PA)	Novelty Shop	Bhavani Bhowmick
9	102	2013	1	Tailspin Toys (Fieldbrook, CA)	Novelty Shop	Tea Koppel
10	107	2013	6	Tailspin Toys (Glen Avon, CA)	Novelty Shop	Karie Mercier
11	109	2013	40	Tailspin Toys (South Laguna, CA)	Novelty Shop	Ae-Cha Joo
12	116	2013	48	Tailspin Toys (Rafael Capó, PR)	Novelty Shop	Toma Nastase
13	122	2013	7	Tailspin Toys (McClave, CO)	Novelty Shop	Mauri Enestam
14	135	2013	10	Tailspin Toys (Terre du Lac, MO)	Novelty Shop	Gaurav Sikdar

Query executed successfully. localhost, 12001 (15.0 RTM) sa (77) WideWorldImportersDW 00:00:00 125 rows

SQLQuery28.sql - localhost, 12001.Northwinds2020TSQVL6 (sa (... Quick Launch (Ctrl+Q)

File Edit View Query Project Tools Window Help

Northwinds2020TSQVL6 Execute

Object Explorer

SQLQuery28.sql - l...020TSQVL6 (sa (77))* csci331-server.Wid...tersDW - Diagram_1*

```
USE Northwinds2020TSQVL6;

SELECT E.EmployeeFirstName
      ,E.EmployeeLastName
      ,(
        SELECT count(O.CustomerId)
        FROM Sales.[Order] AS O
        ) AS NoOfOrder
FROM HumanResources.Employee AS E
GROUP BY E.EmployeeFirstName
        ,E.EmployeeLastName;
```

100 %

Results Messages

	EmployeeFirstName	EmployeeLastName	NoOfOrder
1	Don	Funk	830
2	Judy	Lew	830
3	Maria	Cameron	830
4	Patricia	Doyle	830
5	Paul	Suurs	830
6	Russell	King	830
7	Sara	Davis	830
8	Sven	Mortensen	830
9	Yael	Peled	830

Query executed successfully. localhost, 12001 (15.0 RTM) sa (77) Northwinds2020TSQVL6 00:00:00 9 rows

Ln 1 INS

SQLQuery28.sql - localhost, 12001.WideWorldImportersDW (sa... Quick Launch (Ctrl+Q)

File Edit View Query Project Tools Window Help

WideWorldImportersDW Execute

Object Explorer

SQLQuery28.sql - l...portersDW (sa (77))* csci331-server.Wid...tersDW - Diagram_1*

```
USE WideWorldImportersDW;

WITH OrderSale
AS (
    SELECT O.[Customer Key]
        ,O.Quantity
        ,O.[City Key]
        ,O.[Picked Date Key]
        ,O.[Tax Amount]
    FROM Fact.[Order] AS O
)
SELECT OS.Quantity
    ,OS.[Tax Amount]
    ,S.[Delivery Date Key]
    ,OS.[City Key]
    ,MIN(S.Profit) AS Profit
FROM OrderSale AS OS
INNER JOIN Fact.Sale AS S ON OS.[Customer Key] = S.[Customer Key]
WHERE S.[Delivery Date Key] = '20140102'
    AND OS.Quantity = 2
GROUP BY OS.Quantity
    ,OS.[Tax Amount]
    ,S.[Delivery Date Key]
```

68 %

Results Messages

	Quantity	Tax Amount	Delivery Date Key	City Key	Profit
1	2	3.90	2014-01-02	56939	-108.00
2	2	3.90	2014-01-02	80871	-108.00
3	2	9.60	2014-01-02	38583	-108.00
4	2	9.60	2014-01-02	88084	-108.00
5	2	9.60	2014-01-02	60508	-108.00
6	2	9.00	2014-01-02	69283	-108.00
7	2	3.90	2014-01-02	67099	-108.00
8	2	10.50	2014-01-02	75493	-108.00
9	2	10.20	2014-01-02	82995	-108.00
10	2	569.70	2014-01-02	103655	-108.00

Query executed successfully. localhost, 12001 (15.0 RTM) sa (77) WideWorldImportersDW 00:00:00 2,582 rows

THREE WORST BUT CORRECTED:

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The main window shows a SQL query in the 'SQLQuery28.sql' file, connected to the 'Northwinds2020TSQLV6' database. The query is as follows:

```
USE Northwinds2020TSQLV6;

SELECT E.EmployeeId, E.EmployeeFirstName
      ,E.EmployeeLastName
      ,(
        SELECT count(O.Freight)
        FROM Sales.[Order] AS O
      ) AS Freight
FROM HumanResources.Employee AS E
GROUP BY E.EmployeeId, E.EmployeeFirstName
      ,E.EmployeeLastName;
```

The 'Results' pane at the bottom shows the output of the query, which is a table with 5 columns: EmployeeId, EmployeeFirstName, EmployeeLastName, and Freight. The table contains 9 rows of data.

	EmployeeId	EmployeeFirstName	EmployeeLastName	Freight
1	1	Sara	Davis	830
2	2	Don	Funk	830
3	3	Judy	Lew	830
4	4	Yael	Peled	830
5	5	Sven	Mortensen	830
6	6	Paul	Suurs	830
7	7	Russell	King	830
8	8	Maria	Cameron	830
9	9	Patricia	Doyle	830

The status bar at the bottom indicates that the query was executed successfully, returning 9 rows in 00:00:00 seconds.

SQLQuery28.sql - localhost, 12001.Northwinds2020TSQLV6 (sa (... Quick Launch (Ctrl+Q)

File Edit View Query Project Tools Window Help

Northwinds2020TSQLV6 Execute

Object Explorer

SQLQuery28.sql - l...020TSQLV6 (sa (77))* csci331-server.Wid...tersDW - Diagram_1*

```
-- It shows the total number of orders shipped to France and group by customerId, Orderdate and shipio
USE Northwinds2020TSQLV6;

WITH OrderSale
AS (
    SELECT O.CustomerId
        ,OD.Quantity
        ,O.ShipToCountry
        ,O.OrderDate
    FROM Sales.[Order] AS O
    INNER JOIN Sales.OrderDetail AS OD ON O.OrderId = OD.OrderId
)
SELECT OS.CustomerId
    ,OS.OrderDate
    ,OS.ShipToCountry
    ,SUM(OS.Quantity) AS TotalQuantity
FROM OrderSale AS OS
WHERE OS.ShipToCountry LIKE '%FRANCE'
GROUP BY OS.CustomerId
```

83 %

Results Messages

	CustomerId	OrderDate	ShipToCountry	TotalQuantity
1	7	2014-07-25	France	50
2	7	2014-09-04	France	80
3	7	2014-11-22	France	138
4	7	2015-02-05	France	99
5	7	2015-02-18	France	69
6	7	2015-06-05	France	30
7	7	2015-06-12	France	63
8	7	2015-06-30	France	50
9	7	2015-08-12	France	25
10	7	2015-09-23	France	12

Query executed successfully. localhost, 12001 (15.0 RTM) sa (77) Northwinds2020TSQLV6 00:00:00 76 rows

SQLQuery28.sql - localhost, 12001.WideWorldImportersDW (sa... Quick Launch (Ctrl+Q)

File Edit View Query Project Tools Window Help

WideWorldImportersDW Execute

Object Explorer SQLQuery28.sql - l...portersDW (sa (77))* csci331-server.Wid...tersDW - Diagram_1*

```
USE WideWorldImportersDW;

SELECT O.[Customer Key]
, year(o.[Order Date Key]) AS OrderYear
, o.Quantity
, o.[Unit Price]
, c.[Postal Code]
FROM Fact.[Order] AS o
JOIN Dimension.Customer AS c ON O.[Customer Key] = c.[Customer Key]
WHERE o.[Order Date Key] = '20130105'
AND o.[Customer Key] > 0;
```

100 %

Results Messages

	Customer Key	OrderYear	Quantity	Unit Price	Postal Code
1	2	2013	4	13.00	90216
2	6	2013	7	13.00	90298
3	42	2013	50	1.28	90124
4	64	2013	6	32.00	90673
5	75	2013	6	13.00	90456
6	80	2013	30	32.00	90541
7	100	2013	3	13.00	90788
8	102	2013	1	32.00	90205
9	107	2013	6	13.00	90782
10	109	2013	40	4.10	90247

Query executed successfully. localhost, 12001 (15.0 RTM) sa (77) WideWorldImportersDW 00:00:00 91 rows

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