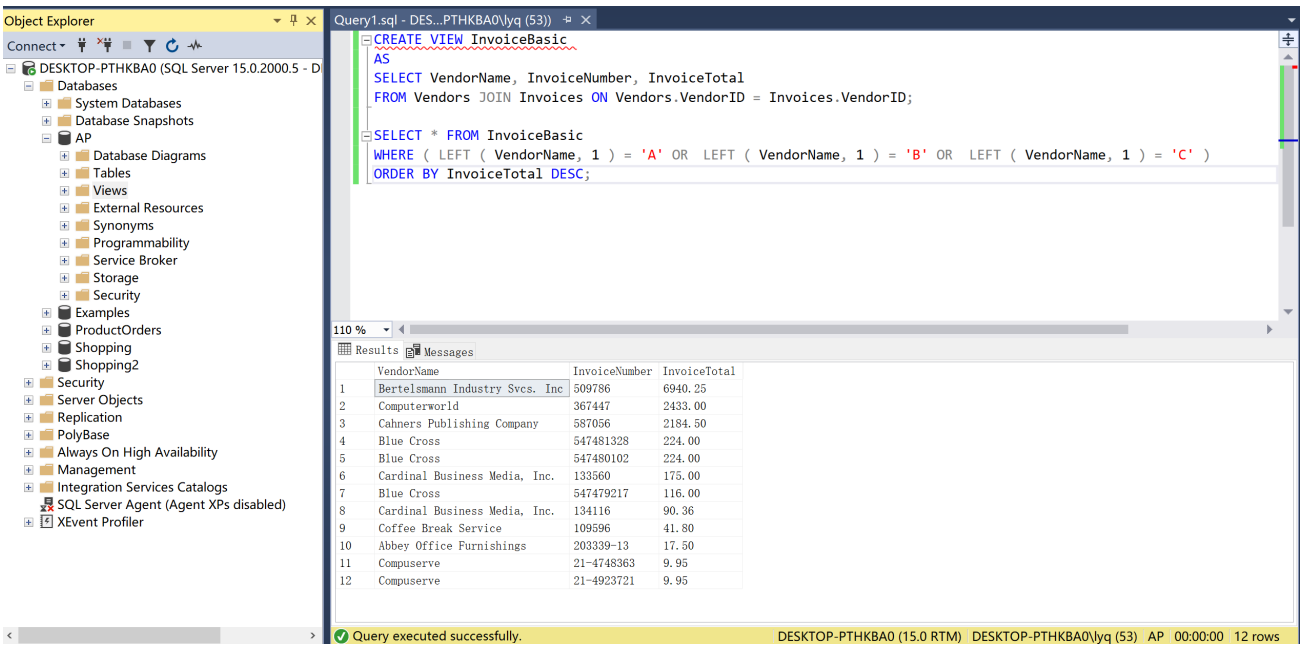
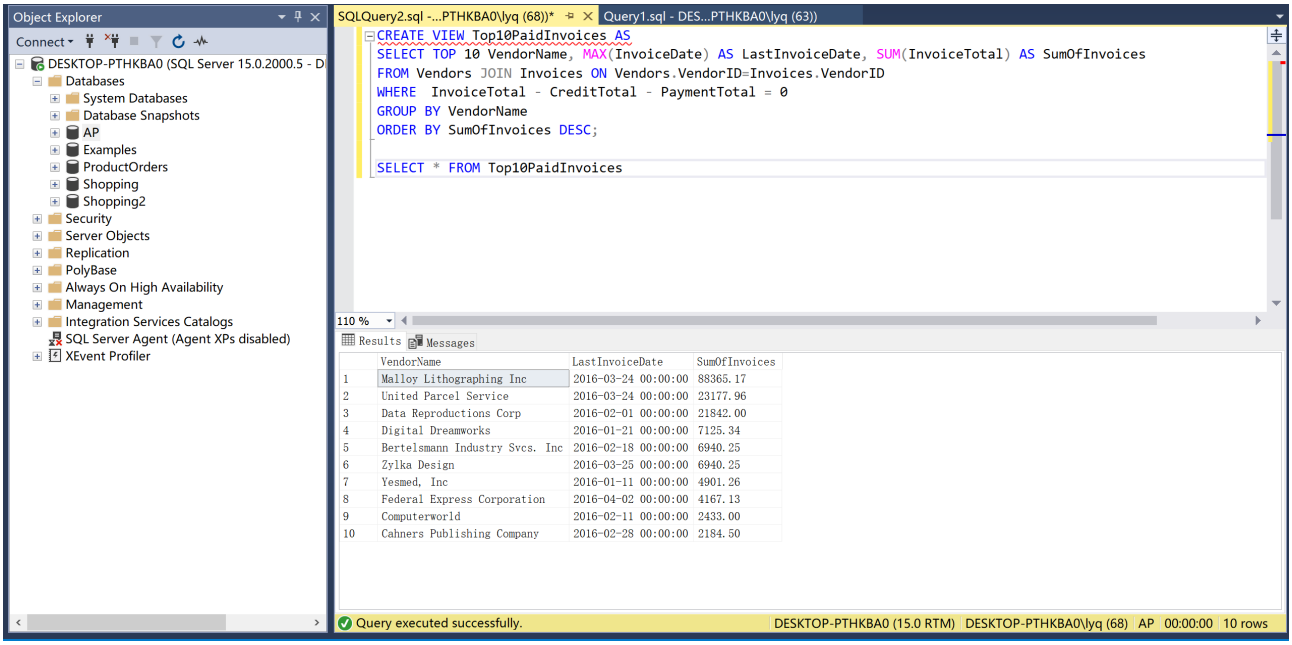
Lab 8: Views, Scripts

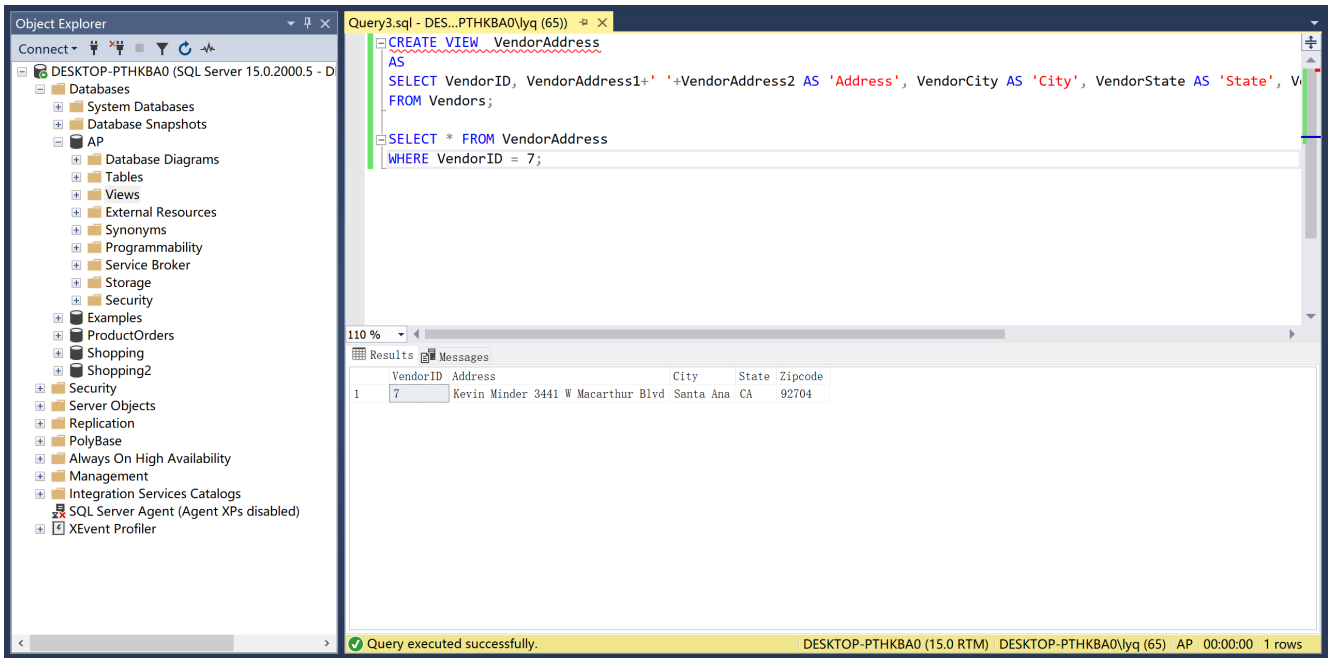
1. Write a view named InvoiceBasic that returns three columns: VendorName, InvoiceNumber, InvoiceTotal. Then, write a SELECT statement that returns all the columns in the view, sorted by InvoiceTotal from smallest to largest, where the first letter of the vendor name is A, B, or C.



2. Create a view named Top10PaidInvoices that returns three columns for each vendor: VendorName, LastInvoiceDate (the most recent invoice date), and SumOfInvoices (the sum of the InvoiceTotal column). Return only the 10 vendors with the largest SumOfInvoices and include only paid invoices (i.e. InvoiceTotal - CredeitTotal - PaymentTotal = 0). Then write a SELECT statement to show results of the view.

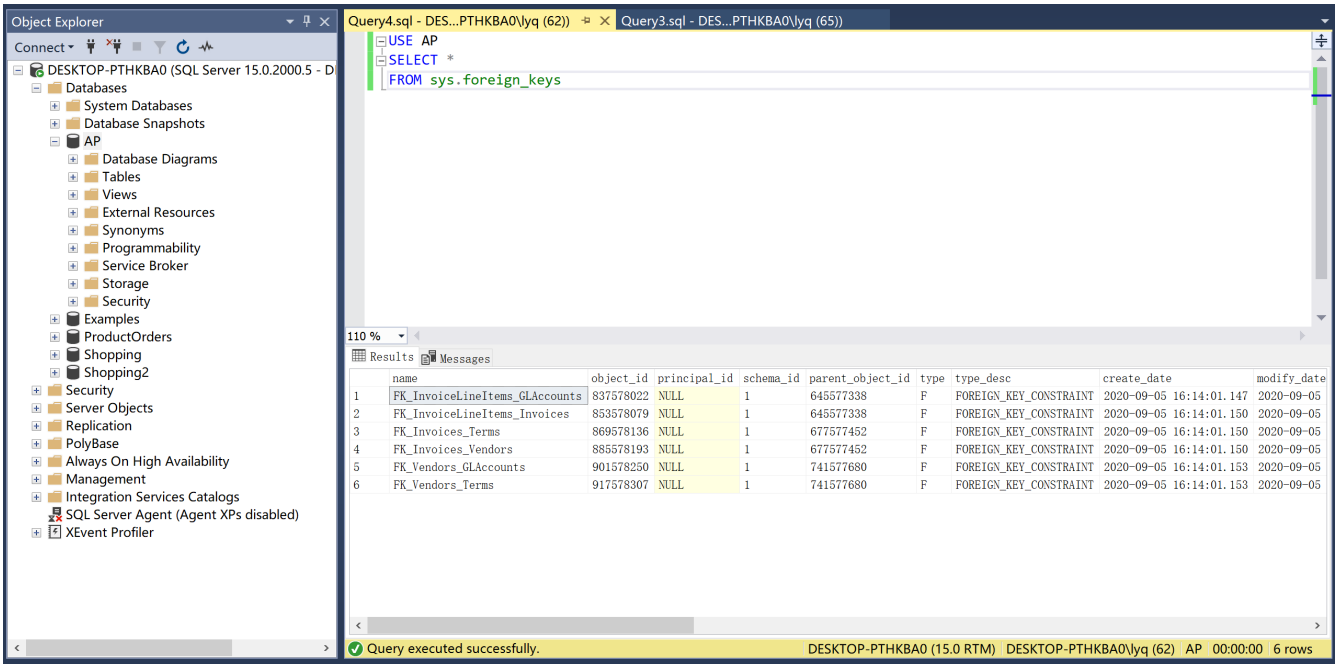


3. Create an updatable views named VendorAddress that returns the VendorID, Address (i.e. VendorAddress1 + ‘ ’ + VendorAddress2), and the city, state, and zipcode columns for each vendor. Whenever VendorAddress2 is NULL, substitute the NULL with a blank space. Then write a SELECT query to examine the result set where VendorID=7. Write a SELECT statement to verify the result.

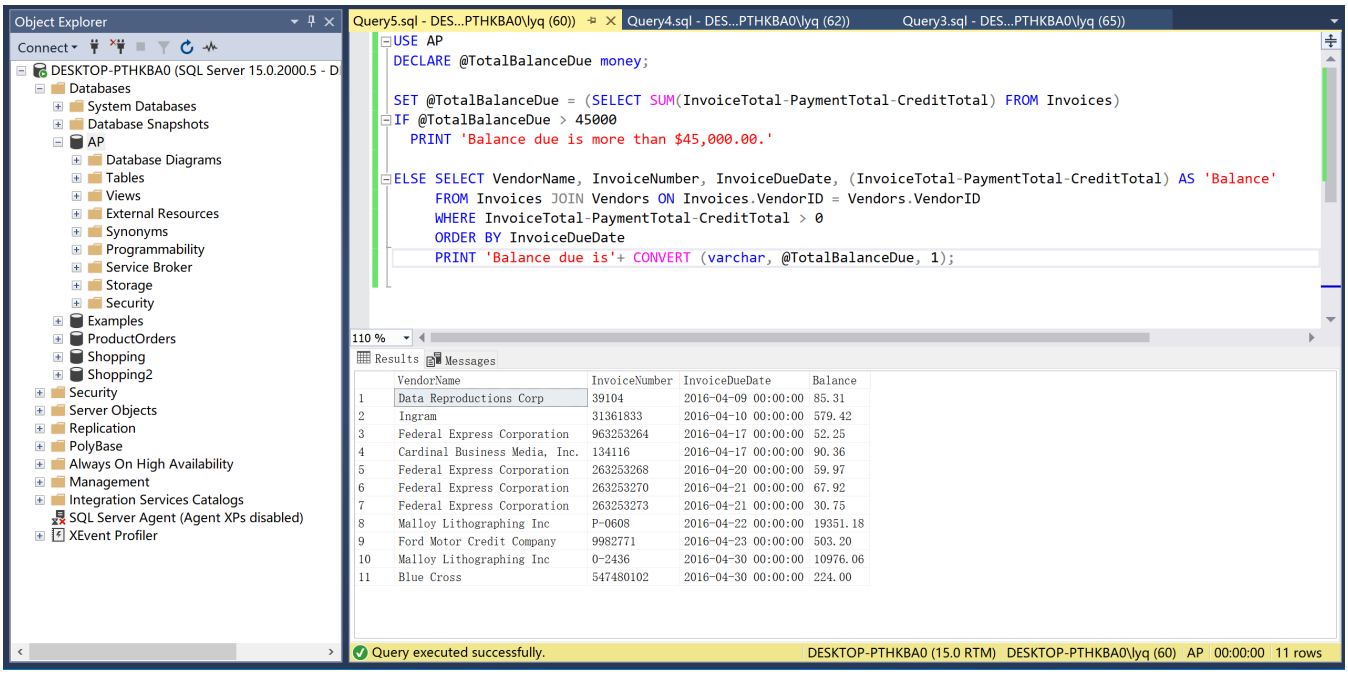


4. Write a SELECT statement that selects all the columns for the catalog view that returns information about foreign keys in the AP database. How many foreign key(s) is/are defined in the AP database and what is/are they?

As we could see in the screenshot, there are 6 foreign keys in the AP database, they are : InvoiceLineItems.GLAccounts, InvoiceLineItems.Invoices, Invoices.Terms, Invoices.Vendors, Vendors.GLAccount, Vendors.Terms.



5. Write a script that declares and sets a variable named @TotalBalanceDue, which is equal to the total outstanding balance due. What is the datatype of the variable @TotalBalanceDue? If that balance due is less than $45,000.00, the script should return a result set consisting of VendorName, InvoiceNumber, InvoiceDueDate, and Balance for each invoice with a balance due, sorted with the newest due date last. Then also return the value of @TotalBalanceDue in the format of "Balance due is ...". If the total outstanding balance due is more than $45,000.00, the script should return the message "Balance due is more than $45,000.00".

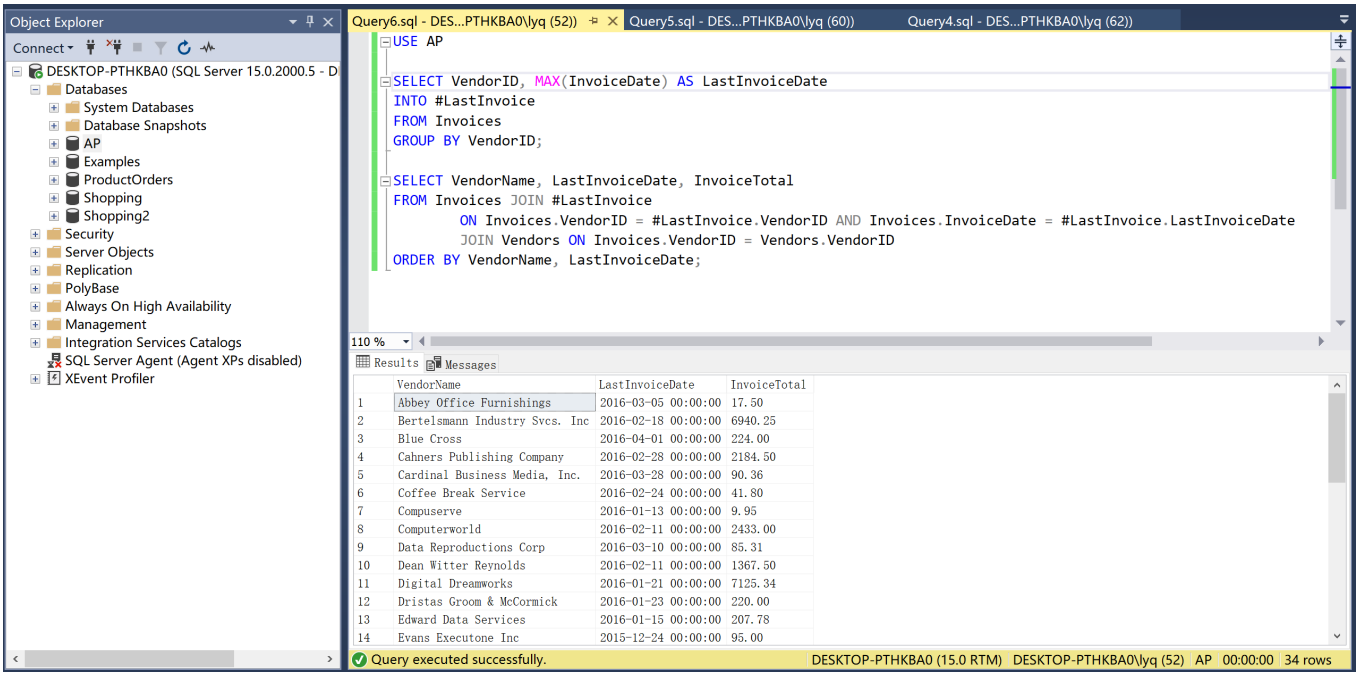


	VendorName	InvoiceNumber	InvoiceDueDate	Balance
1	Data Reproductions Corp	39104	2016-04-09 00:00:00	85.31
2	Ingram	31361833	2016-04-10 00:00:00	579.42
3	Federal Express Corporation	963253264	2016-04-17 00:00:00	52.25
4	Cardinal Business Media, Inc.	134116	2016-04-17 00:00:00	90.36
5	Federal Express Corporation	263253268	2016-04-20 00:00:00	59.97
6	Federal Express Corporation	263253270	2016-04-21 00:00:00	67.92
7	Federal Express Corporation	263253273	2016-04-21 00:00:00	30.75
8	Malloy Lithographing Inc	P-0608	2016-04-22 00:00:00	19351.18
9	Ford Motor Credit Company	9982771	2016-04-23 00:00:00	503.20
10	Malloy Lithographing Inc	0-2436	2016-04-30 00:00:00	10976.06
11	Blue Cross	547480102	2016-04-30 00:00:00	224.00

6. Explain the execution result generated by the following script. Then Write a script that generates the same result set but uses a temporary table in place of the derived table. Make sure your script tests for the existence of any objects it creates.

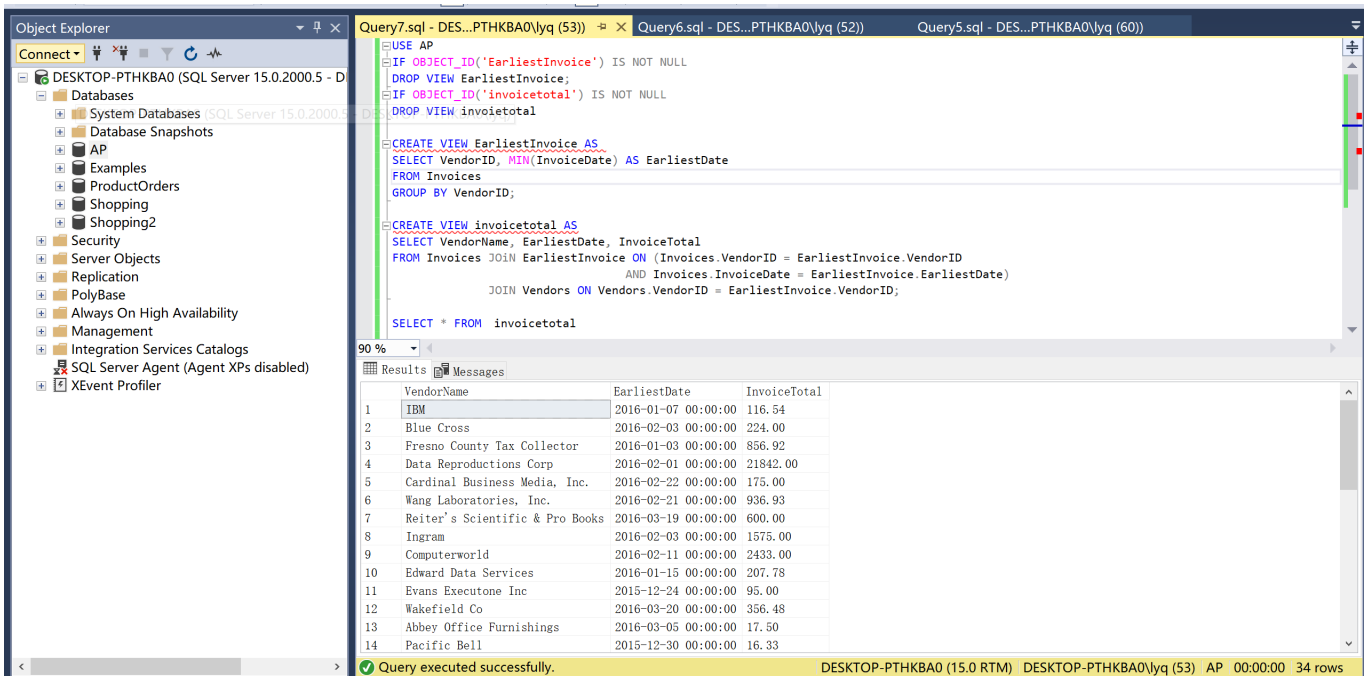
```
USE AP;
SELECT VendorName,LastInvoiceDate, InvoiceTotal
FROM Invoices
JOIN (SELECT VendorID, MAX(InvoiceDate) AS LastInvoiceDate
FROM Invoices
GROUP BY VendorID) AS LastInvoice
ON (Invoices.VendorID = LastInvoice.VendorID AND
Invoices.InvoiceDate = LastInvoice.LastInvoiceDate) JOIN Vendors ON
Invoices.VendorID = Vendors.VendorID ORDER BY VendorName,
LastInvoiceDate;
```

This script returns each vendor's the last invoice date and invoice total.



	VendorName	LastInvoiceDate	InvoiceTotal
1	Abbey Office Furnishings	2016-03-05 00:00:00	17.50
2	Bertelsmann Industry Svcs. Inc	2016-02-18 00:00:00	6940.25
3	Blue Cross	2016-04-01 00:00:00	224.00
4	Cahners Publishing Company	2016-02-28 00:00:00	2184.50
5	Cardinal Business Media, Inc.	2016-03-28 00:00:00	90.36
6	Coffee Break Service	2016-02-24 00:00:00	41.80
7	Compuserve	2016-01-13 00:00:00	9.95
8	Computerworld	2016-02-11 00:00:00	2433.00
9	Data Reproductions Corp	2016-03-10 00:00:00	85.31
10	Dean Witter Reynolds	2016-02-11 00:00:00	1367.50
11	Digital Dreamworks	2016-01-21 00:00:00	7125.34
12	Dristas Groom & McCormick	2016-01-23 00:00:00	220.00
13	Edward Data Services	2016-01-15 00:00:00	207.78
14	Evans Executone Inc	2015-12-24 00:00:00	95.00

7. Write a script that generates the date and invoice total of the earliest invoice issued by each vendor, using a view instead of a derived table. Also write the script that creates the view, then use SELECT statement to show result of the view. Make sure that your script tests for the existence of the view. The view doesn't need to be redefined each time the script is executed.



8. Write a script that uses dynamic SQL to return a single column that represents the number of rows in the first table in the current database. The script should automatically choose the table that appears first alphabetically, and it should exclude tables named dtproperties and sysdiagrams. Name the column CountOfTable, where Table is the chosen table name. Show results for AP database.