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Microsoft

70-461 PRACTICE EXAM

Pass Querying Microsoft SQL Server 2012 Exam

Product Questions: 165

Version: 18.0

Question: 1

You develop a Microsoft SQL Server 2012 server database that supports an application. The application contains a table that has the following definition:

```
CREATE TABLE Inventory
(ItemId int NOT NULL PRIMARY KEY,
ItemsInStore int NOT NULL,
ItemsInWarehouse int NOT NULL)
```

You need to create a computed column that returns the sum total of the ItemsInStore and ItemsInWarehouse values for each row.

Which Transact-SQL statement should you use?

- A. ALTER TABLE Inventory
ADD TotalItems AS ItemsInStore + ItemsInWarehouse
- B. ALTER TABLE Inventory
ADD ItemsInStore - ItemsInWarehouse = TotalItemss
- C. ALTER TABLE Inventory
ADD TotalItems = ItemsInStore + ItemsInWarehouse
- D. ALTER TABLE Inventory
ADD TotalItems AS SUM(ItemsInStore, ItemsInWarehouse);

Answer: A

Explanation:

Reference: <http://technet.microsoft.com/en-us/library/ms190273.aspx>

Question: 2

You develop a Microsoft SQL Server 2012 database. You create a view from the Orders and OrderDetails tables by using the following definition.

```
CREATE VIEW vOrders
WITH SCHEMABINDING
AS
SELECT o.ProductID,
o.OrderDate,
SUM(od.UnitPrice * od.OrderQty) AS Amount
FROM OrderDetails AS od INNER JOIN
Orders AS o ON od.OrderID = o.OrderID
WHERE od.SalesOrderID = o.SalesOrderID
GROUP BY o.OrderDate, o.ProductID
GO
```

You need to improve the performance of the view by persisting data to disk. What should you do?

- A. Create an INSTEAD OF trigger on the view.
- B. Create an AFTER trigger on the view.
- C. Modify the view to use the WITH VIEW_METADATA clause.
- D. Create a clustered index on the view.

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms188783.aspx>

Question: 3

You develop a database for a travel application. You need to design tables and other database objects.

You create the Airline_Schedules table.

You need to store the departure and arrival dates and times of flights along with time zone information.

What should you do?

- A. Use the CAST function.
- B. Use the DATE data type.
- C. Use the FORMAT function.
- D. Use an appropriate collation.
- E. Use a user-defined table type.
- F. Use the VARBINARY data type.
- G. Use the DATETIME data type.
- H. Use the DATETIME2 data type.
- I. Use the DATETIMEOFFSET data type.
- J. Use the TODATETIMEOFFSET function.

Answer: I

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ff848733.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/bb630289.aspx>

Question: 4

You develop a database for a travel application. You need to design tables and other database objects. You create a stored procedure. You need to supply the stored procedure with multiple event names and their dates as parameters. What should you do?

- A. Use the CAST function.
- B. Use the DATE data type.
- C. Use the FORMAT function.
- D. Use an appropriate collation.
- E. Use a user-defined table type.
- F. Use the VARBINARY data type.
- G. Use the DATETIME data type.
- H. Use the DATETIME2 data type.
- I. Use the DATETIMEOFFSET data type.
- J. Use the TODATETIMEOFFSET function.

Answer: E

Question: 5

CORRECT TEXT

You have a view that was created by using the following code:

```
CREATE VIEW Sales.OrdersByTerritory
AS
SELECT OrderID
    ,OrderDate
    ,SalesTerritoryID
    ,TotalDue
FROM Sales.Orders;
```

You need to create an inline table-valued function named Sales.fn_OrdersByTerritory, which must meet the following requirements:

Accept the @T integer parameter.

Use one-part names to reference columns.

Filter the query results by SalesTerritoryID.

Return the columns in the same order as the order used in OrdersByTerritoryView.

Which code segment should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
CREATE FUNCTION Sales.fn_OrdersByTerritory (@T int)
RETURNS TABLE
AS
RETURN
(
SELECT OrderID,OrderDate,SalesTerritoryID,TotalDue
FROM Sales.OrdersByTerritory
WHERE SalesTerritoryID = @T
)
```

Question: 6

CORRECT TEXT

You have a database that contains the tables shown in the exhibit. (Click the Exhibit button.)

OrderDetails			
	Column Name	Data Type	Allow Nulls
	ListPrice	money	<input type="checkbox"/>
	Quantity	int	<input type="checkbox"/>
			<input type="checkbox"/>

Customers			
	Column Name	Data Type	Allow Nulls
PK	CustomerID	int	<input type="checkbox"/>
	FirstName	varchar(100)	<input type="checkbox"/>
	LastName	varchar(100)	<input type="checkbox"/>
			<input type="checkbox"/>

Orders			
	Column Name	Data Type	Allow Nulls
PK	OrderID	int	<input type="checkbox"/>
	OrderDate	datetime	<input type="checkbox"/>
	CustomerID	int	<input type="checkbox"/>
			<input type="checkbox"/>

You deploy a new server that has SQL Server 2012 installed. You need to create a table named Sales.OrderDetails on the new server. Sales.OrderDetails must meet the following requirements:

Write the results to a disk.

Contain a new column named LineItemTotal that stores the product of ListPrice and Quantity for each row.

The code must NOT use any object delimiters.

The solution must ensure that LineItemTotal is stored as the last column in the table. Which code segment should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXTPlease review the explanation part for this answer

CREATE TABLE Sales.OrderDetails (

 ListPrice money not null,

 Quantity int not null,

 LineItemTotal as (ListPrice * Quantity) PERSISTED)

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms174979.aspx>

Reference: <http://technet.microsoft.com/en-us/library/ms188300.aspx>

Question: 7

CORRECT TEXT

You have a database that contains the tables shown in the exhibit. (Click the Exhibit button.)

OrderDetails			
	Column Name	Data Type	Allow Nulls
	ListPrice	money	<input type="checkbox"/>
	Quantity	int	<input type="checkbox"/>

Customers			
	Column Name	Data Type	Allow Nulls
PK	CustomerID	int	<input type="checkbox"/>
	FirstName	varchar(100)	<input type="checkbox"/>
	LastName	varchar(100)	<input type="checkbox"/>
			<input type="checkbox"/>

Orders			
	Column Name	Data Type	Allow Nulls
PK	OrderID	int	<input type="checkbox"/>
	OrderDate	datetime	<input type="checkbox"/>
	CustomerID	int	<input type="checkbox"/>
			<input type="checkbox"/>

You need to create a view named uv_CustomerFullName to meet the following requirements:

The code must NOT include object delimiters.

The view must be created in the Sales schema.

Columns must only be referenced by using one-part names.

The view must return the first name and the last name of all customers.

The view must prevent the underlying structure of the customer table from being changed.

The view must be able to resolve all referenced objects, regardless of the user's default schema.

Which code segment should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

CREATE VIEW Sales.uv_CustomerFullName

WITH SCHEMABINDING

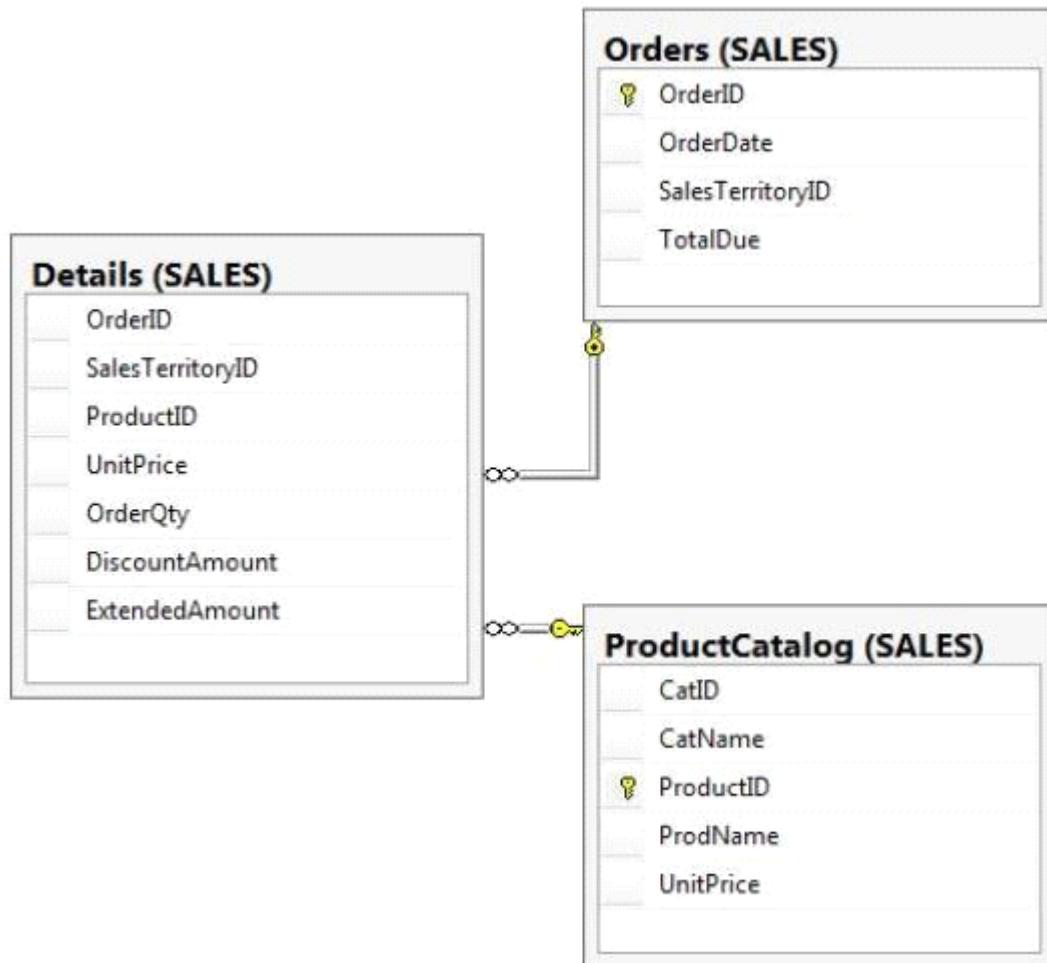
AS

```
SELECT FirstName, LastName
FROM Sales.Customers
Explanation:
Reference: http://msdn.microsoft.com/en-us/library/ms187956.aspx
```

Question: 8

CORRECT TEXT

You have a database that contains the tables shown in the exhibit. (Click the Exhibit button.)



You need to create a query that calculates the total sales of each OrderId from the Sales.Details table. The solution must meet the following requirements:

Use one-part names to reference columns.

Sort the order of the results from OrderId.

NOT depend on the default schema of a user.

Use an alias of TotalSales for the calculated ExtendedAmount.

Display only the OrderId column and the calculated TotalSales column.

Which code segment should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
SELECT OrderID, SUM(ExtendedAmount) AS TotalSales
FROM Sales.Details
GROUP BY OrderID
```

ORDER BY OrderID

Question: 9

You have a Microsoft SQL Server 2012 database that contains tables named Customers and Orders. The tables are related by a column named CustomerID. You need to create a query that meets the following requirements:
Returns the CustomerName for all customers and the OrderDate for any orders that they have placed.
Results must include customers who have not placed any orders.
Which Transact-SQL query should you use?

- A. SELECT CustomerName, OrderDate
FROM Customers
RIGHT OUTER JOIN Orders
ON Customers.CustomerID = Orders.CustomerID
- B. SELECT CustomerName, OrderDate
FROM Customers
JOIN Orders
ON Customers.CustomerID = Orders.CustomerID
- C. SELECT CustomerName, OrderDate
FROM Customers
CROSS JOIN Orders
ON Customers.CustomerID = Orders.CustomerID
- D. SELECT CustomerName, OrderDate
FROM Customers
LEFT OUTER JOIN Orders
ON Customers.CustomerID = Orders.CustomerID

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms177634.aspx>

Question: 10

You create a stored procedure that will update multiple tables within a transaction. You need to ensure that if the stored procedure raises a run-time error, the entire transaction is terminated and rolled back.
Which Transact-SQL statement should you include at the beginning of the stored procedure?

- A. SET XACT_ABORT ON
- B. SET ARITHABORT ON
- C. TRY
- D. BEGIN
- E. SET ARITHABORT OFF
- F. SET XACT_ABORT OFF

Answer: A

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms190306.aspx>
Reference: <http://msdn.microsoft.com/en-us/library/ms188792.aspx>

Question: 11

Your database contains two tables named DomesticSalesOrders and InternationalSalesOrders. Both tables contain more than 100 million rows. Each table has a Primary Key column named SalesOrderId. The data in the two tables is distinct from one another.

Business users want a report that includes aggregate information about the total number of global sales and total sales amounts.

You need to ensure that your query executes in the minimum possible time.

Which query should you use?

- A.

```
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM (
    SELECT SalesOrderId, SalesAmount
    FROM DomesticSalesOrders
    UNION ALL
    SELECT SalesOrderId, SalesAmount
    FROM InternationalSalesOrders
) AS p
```
- B.

```
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM (
    SELECT SalesOrderId, SalesAmount
    FROM DomesticSalesOrders
    UNION
    SELECT SalesOrderId, SalesAmount
    FROM InternationalSalesOrders
) AS p
```
- C.

```
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM DomesticSalesOrders
UNION
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM InternationalSalesOrders
```
- D.

```
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM DomesticSalesOrders
UNION ALL
SELECT COUNT(*) AS NumberOfSales, SUM(SalesAmount) AS TotalSalesAmount
FROM InternationalSalesOrders
```

Answer: A

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms180026.aspx>

Reference: <http://blog.sqlauthority.com/2009/03/11/sql-server-difference-between-union-vs-union-all-optimal-performance-comparison/>

Question: 12

You are a database developer at an independent software vendor. You create stored procedures that contain

proprietary code.

You need to protect the code from being viewed by your customers.

Which stored procedure option should you use?

- A. ENCRYPTBYKEY
- B. ENCRYPTION
- C. ENCRYPTBYPASSPHRASE
- D. ENCRYPTBYCERT

Answer: B

Explanation:

Reference: <http://technet.microsoft.com/en-us/library/bb510663.aspx>

Reference: <http://technet.microsoft.com/en-us/library/ms174361.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms187926.aspx>

Reference: <http://technet.microsoft.com/en-us/library/ms190357.aspx>

Reference: <http://technet.microsoft.com/en-us/library/ms188061.aspx>

Question: 13

You use a Microsoft SQL Server 2012 database.

You want to create a table to store Microsoft Word documents.

You need to ensure that the documents must only be accessible via Transact-SQL queries.

Which Transact-SQL statement should you use?

- A. CREATE TABLE DocumentStore
 - (
 - [Id] INT NOT NULL PRIMARY KEY,
 - [Document] VARBINARY(MAX) NULL
 -)
 - GO
- B. CREATE TABLE DocumentStore
 - (
 - [Id] hierarchyid,
 - [Document] NVARCHAR NOT NULL
 -)
 - GO
- C. CREATE TABLE DocumentStore AS FileTable
- D. CREATE TABLE DocumentStore
 - (
 - [Id] [uniqueidentifier] ROWGUIDCOL NOT NULL UNIQUE,
 - [Document] VARBINARY(MAX) FILESTREAM NULL
 -)
 - GO

Answer: A

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/gg471497.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ff929144.aspx>

Question: 14

You administer a Microsoft SQL Server 2012 database that contains a table named OrderDetail. You discover that the NCI_OrderDetail_CustomerID non-clustered index is fragmented. You need to reduce fragmentation. You need to achieve this goal without taking the index offline. Which Transact-SQL batch should you use?

- A. CREATE INDEX NCI_OrderDetail_CustomerID ON OrderDetail.CustomerID WITH DROP EXISTING
- B. ALTER INDEX NCI_OrderDetail_CustomerID ON OrderDetail.CustomerID REORGANIZE
- C. ALTER INDEX ALL ON OrderDetail REBUILD
- D. ALTER INDEX NCI_OrderDetail_CustomerID ON OrderDetail.CustomerID REBUILD

Answer: B

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms188388.aspx>

Question: 15

You develop a Microsoft SQL Server 2012 database. The database is used by two web applications that access a table named Products.

You want to create an object that will prevent the applications from accessing the table directly while still providing access to the required data.

You need to ensure that the following requirements are met:

Future modifications to the table definition will not affect the applications' ability to access data.

The new object can accommodate data retrieval and data modification.

You need to achieve this goal by using the minimum amount of changes to the existing applications.

What should you create for each application?

- A. views
- B. table partitions
- C. table-valued functions
- D. stored procedures

Answer: A

Question: 16

You develop a Microsoft SQL Server 2012 database.

You need to create a batch process that meets the following requirements:

Returns a result set based on supplied parameters.

Enables the returned result set to perform a join with a table.

Which object should you use?

- A. Inline user-defined function
- B. Stored procedure
- C. Table-valued user-defined function
- D. Scalar user-defined function

Answer: C

Question: 17

You develop a Microsoft SQL Server 2012 database.

You need to create and call a stored procedure that meets the following requirements:

Accepts a single input parameter for CustomerID.

Returns a single integer to the calling application.

Which Transact-SQL statement or statements should you use? (Each correct answer presents part of the solution. Choose all that apply.)

- A. CREATE PROCEDURE dbo.GetCustomerRating
 @CustomerID INT,
 @CustomerRating INT OUTPUT
 AS
 SET NOCOUNT ON
 SELECT @CustomerRating = CustomerOrders/CustomerValue
 FROM Customers
 WHERE CustomerID = @CustomerID
 RETURN
 GO
- B. EXECUTE dbo.GetCustomerRating 1745
- C. DECLARE @CustomerRatingByCustomer INT
 DECLARE @Result INT
 EXECUTE @Result = dbo.GetCustomerRating
 1745,
 @CustomerRatingByCustomer
- D. CREATE PROCEDURE dbo.GetCustomerRating
 @CustomerID INT,
 @CustomerRating INT OUTPUT
 AS
 SET NOCOUNT ON
 SELECT @Result = CustomerOrders/CustomerValue
 FROM Customers
 WHERE CustomerID = @CustomerID
 RETURN @Result
 GO
- E. DECLARE @CustomerRatingByCustomer INT
 EXECUTE dbo.GetCustomerRating
 @CustomerID = 1745,
 @CustomerRating = @CustomerRatingByCustomer OUTPUT
- F. CREATE PROCEDURE dbo.GetCustomerRating
 @CustomerID INT
 AS
 DECLARE @Result INT
 SET NOCOUNT ON
 SELECT @Result = CustomerOrders/CustomerValue
 FROM Customers
 WHERE CustomerID = @CustomerID
 RETURNS @Result
 GO

Answer: A, E

Question: 18

You develop a Microsoft SQL Server 2012 database that contains a heap named OrdersHistorical.

You write the following Transact-SQL query:

```
INSERT INTO OrdersHistorical  
SELECT * FROM CompletedOrders
```

You need to optimize transaction logging and locking for the statement. Which table hint should you use?

- A. HOLDLOCK
- B. ROWLOCK
- C. XLOCK
- D. UPDLOCK
- E. TABLOCK

Answer: E

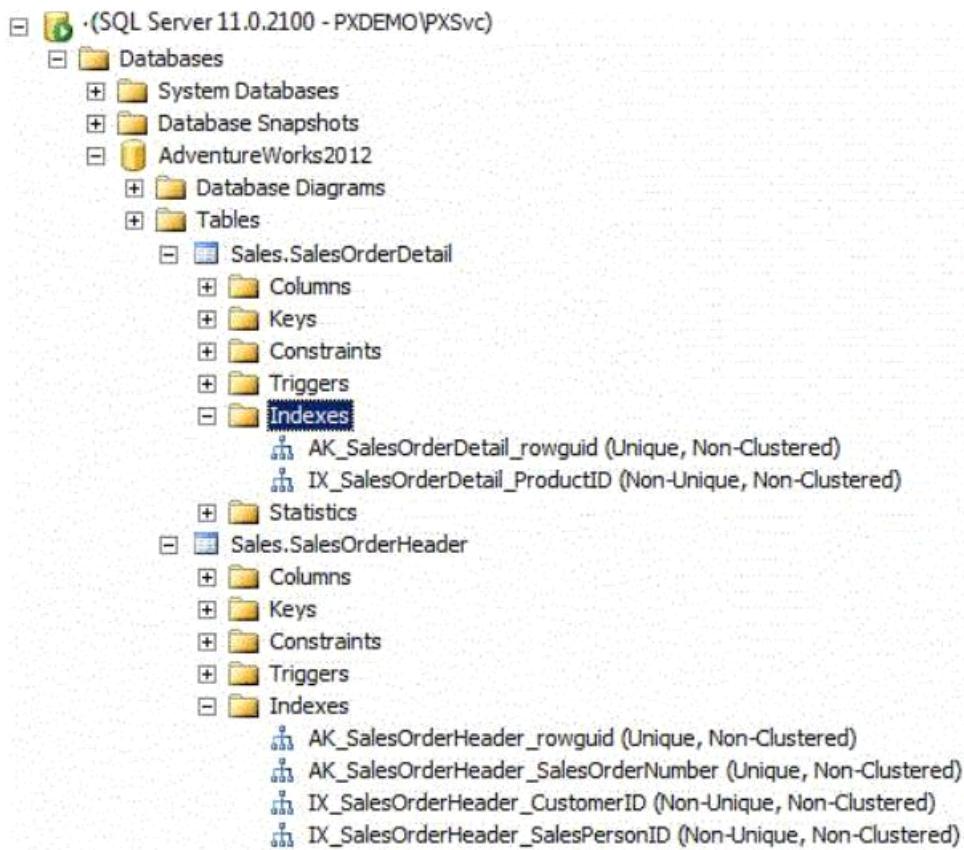
Explanation:

Reference: <http://technet.microsoft.com/en-us/library/ms189857.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms187373.aspx>

Question: 19

You use a Microsoft SQL Server 2012 database that contains two tables named SalesOrderHeader and SalesOrderDetail. The indexes on the tables are as shown in the exhibit. (Click the Exhibit button.)



You write the following Transact-SQL query:

```
SELECT h.SalesOrderID, h.TotalDue, d.OrderQty
FROM Sales.SalesOrderHeader AS h
INNER JOIN Sales.SalesOrderDetail AS d
ON h.SalesOrderID = d.SalesOrderID
WHERE h.TotalDue > 100
AND (d.OrderQty > 5 OR d.LineTotal < 1000.00);
```

You discover that the performance of the query is slow. Analysis of the query plan shows table scans where the estimated rows do not match the actual rows for SalesOrderHeader by using an unexpected index on SalesOrderDetail.

You need to improve the performance of the query.

What should you do?

- A. Use a FORCESCAN hint in the query.
- B. Add a clustered index on SalesOrderId in SalesOrderHeader.
- C. Use a FORCESEEK hint in the query.
- D. Update statistics on SalesOrderId on both tables.

Answer: D

Explanation:

References: <http://msdn.microsoft.com/en-us/library/ms187348.aspx>

Question: 20

Your database contains a table named Purchases. The table includes a DATETIME column named PurchaseTime that stores the date and time each purchase is made. There is a non-clustered index on the PurchaseTime column.

The business team wants a report that displays the total number of purchases made on the current day. You need to write a query that will return the correct results in the most efficient manner. Which Transact-SQL query should you use?

- A.

```
SELECT COUNT(*)  
FROM Purchases  
WHERE PurchaseTime = CONVERT(DATE, GETDATE())
```
- B.

```
SELECT COUNT(*)  
FROM Purchases  
WHERE PurchaseTime = GETDATE()
```
- C.

```
SELECT COUNT(*)  
FROM Purchases  
WHERE CONVERT(VARCHAR, PurchaseTime, 112) = CONVERT(VARCHAR, GETDATE(), 112)
```
- D.

```
SELECT COUNT(*)  
FROM Purchases  
WHERE PurchaseTime >= CONVERT(DATE, GETDATE())  
AND PurchaseTime < DATEADD(DAY, 1, CONVERT(DATE, GETDATE())))
```

Answer: D

Explanation:

Two answers will return the correct results (the "WHERE CONVERT..." and "WHERE ... AND ..." answers). The correct answer for Microsoft would be the answer that is most "efficient". Anybody have a clue as to which is most efficient? In the execution plan, the one that I've selected as the correct answer is the query with the shortest duration. Also, the query answer with "WHERE CONVERT..." threw warnings in the execution plan...something about affecting CardinalityEstimate and SeekPlan.

I also found this article, which leads me to believe that I have the correct answer:
<http://technet.microsoft.com/en-us/library/ms181034.aspx>

Question: 21

You develop a database for a travel application. You need to design tables and other database objects.

You need to store media files in several tables.

Each media file is less than 1 MB in size. The media files will require fast access and will be retrieved frequently.

What should you do?

- A. Use the CAST function.
- B. Use the DATE data type.
- C. Use the FORMAT function.
- D. Use an appropriate collation.
- E. Use a user-defined table type.
- F. Use the VARBINARY data type.
- G. Use the DATETIME data type.
- H. Use the DATETIME2 data type.
- I. Use the DATETIMEOFFSET data type.
- J. Use the TODATETIMEOFFSET function.

Answer: F

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms188362.aspx>

Question: 22

You develop a database for a travel application. You need to design tables and other database objects. You create a view that displays the dates and times of the airline schedules on a report. You need to display dates and times in several international formats. What should you do?

- A. Use the CAST function.
- B. Use the DATE data type.
- C. Use the FORMAT function.
- D. Use an appropriate collation.
- E. Use a user-defined table type.
- F. Use the VARBINARY data type.
- G. Use the DATETIME data type.
- H. Use the DATETIME2 data type.
- I. Use the DATETIMEOFFSET data type.
- J. Use the TODATETIMEOFFSET function.

Answer: C

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/hh213505.aspx>

Question: 23

You are a database developer of a Microsoft SQL Server 2012 database.

You are designing a table that will store Customer data from different sources. The table will include a column that contains the CustomerID from the source system and a column that contains the SourceID.

A sample of this data is as shown in the following table.

SourceID	CustomerID	Customer Name
1	234	John Smith
3	7345	Jason Warren
3	4402	Susan Burk
2	866	Michael Allen

You need to ensure that the table has no duplicate CustomerID within a SourceID. You also need to ensure that the data in the table is in the order of SourceID and then CustomerID.

Which Transact- SQL statement should you use?

- A. CREATE TABLE Customer
(SourceID int NOT NULL IDENTITY,
CustomerID int NOT NULL IDENTITY,
CustomerName varchar(255) NOT NULL);
- B. CREATE TABLE Customer
(SourceID int NOT NULL,
CustomerID int NOT NULL PRIMARY KEY CLUSTERED,

```
CustomerName varchar(255) NOT NULL;
C. CREATE TABLE Customer
(SourceID int NOT NULL PRIMARY KEY CLUSTERED,
CustomerID int NOT NULL UNIQUE,
CustomerName varchar(255) NOT NULL);
D. CREATE TABLE Customer
(SourceID int NOT NULL,
CustomerID int NOT NULL,
CustomerName varchar(255) NOT NULL,
CONSTRAINT PK_Customer PRIMARY KEY CLUSTERED
(SourceID, CustomerID));
```

Answer: D

Question: 24

You have three tables that contain data for vendors, customers, and agents. You create a view that is used to look up telephone numbers for these companies.

The view has the following definition:

```
Create view apt.vwCompanyPhoneList
(Source, CompanyID, CompanyNumber,
 LastName, FirstName, BusinessName, Phone)
as
SELECT 'Customer' as Source
, CustomerID
, CustomerNumber
, CustomerLastName
, CustomerFirstName
, CustomerBusinessName
, Phone
FROM apt.Customer
UNION ALL
SELECT 'Agent' as Source
, AgentID
, AgentNumber
, AgentLastName
, AgentFirstName
, AgentBusinessName
, Phone
FROM apt.Agent
UNION ALL
SELECT 'Vendor' as Source
, VendorID
, VendorNumber
, VendorLastName
, VendorFirstName
, VendorBusinessName
, Phone
FROM apt.Vendor
GO
```

You need to ensure that users can update only the phone numbers by using this view.

What should you do?

- A. Alter the view. Use the EXPAND VIEWS query hint along with each SELECT statement.
- B. Drop the view. Re-create the view by using the SCHEMABINDING clause, and then create an index on the view.
- C. Create an AFTER UPDATE trigger on the view.
- D. Create an INSTEAD OF UPDATE trigger on the view.

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms187956.aspx>

Question: 25

You develop a Microsoft SQL Server 2012 database that contains tables named Employee and Person.

The tables have the following definitions:

```

CREATE TABLE [dbo].[Employee](
    [PersonId] [bigint] NOT NULL,
    [EmployeeNumber] [nvarchar](15) NOT NULL,
    CONSTRAINT [PK_Employee] PRIMARY KEY CLUSTERED
    (
        [PersonId] ASC
    ) ON [PRIMARY]
) ON [PRIMARY]
GO

CREATE TABLE [dbo].[Person](
    [Id] [bigint] NOT NULL,
    [FirstName] [nvarchar](25) NOT NULL,
    [LastName] [nvarchar](25) NOT NULL,
    CONSTRAINT [PK_Person] PRIMARY KEY CLUSTERED
    (
        [Id] ASC
    ) ON [PRIMARY]
) ON [PRIMARY]
GO

```

You create a view named VwEmployee as shown in the following Transact-SQL statement.

```

CREATE VIEW [dbo].[VwEmployee]
AS
SELECT
Employee.EmployeeNumber,
Person.FirstName,
Person.LastName,
Person.Id
FROM Employee
INNER JOIN Person
ON Employee.PersonId = Person.Id
GO

```

Users are able to use single INSERT statements or INSERT...SELECT statements into this view.

You need to ensure that users are able to use a single statement to insert records into both Employee and Person tables by using the VwEmployee view.

Which Transact-SQL statement should you use?

- A. CREATE TRIGGER TrgVwEmployee
ON VwEmployee
FOR INSERT
AS
BEGIN
INSERT INTO Person(Id, FirstName, LastName)
SELECT Id, FirstName, LastName, FROM inserted
INSERT INTO Employee(PersonId, EmployeeNumber)
SELECT Id, EmployeeNumber FROM inserted
END
- B. CREATE TRIGGER TrgVwEmployee
ON VwEmployee
INSTEAD OF INSERT
AS
BEGIN
INSERT INTO Person(Id, FirstName, LastName)

```

SELECT Id, FirstName, LastName, FROM inserted
INSERT INTO Employee(PersonId, EmployeeNumber)
SELECT Id, EmployeeNumber FROM inserted
END
C. CREATE TRIGGER TrgVwEmployee
ON VwEmployee
INSTEAD OF INSERT
AS
BEGIN
DECLARE @ID INT, @FirstName NVARCHAR(25), @LastName NVARCHAR(25), @PersonID
INT, @EmployeeNumber NVARCHAR(15)
SELECT @ID = ID, @FirstName = FirstName, @LastName = LastName, @EmployeeNumber
= EmployeeNumber
FROM inserted
INSERT INTO Person(Id, FirstName, LastName)
VALUES(@ID, @FirstName, @LastName)
INSERT INTO Employee(PersonID, EmployeeNumber)
VALUES(@PersonID, @EmployeeNumber
End
D. CREATE TRIGGER TrgVwEmployee
ON VwEmployee
INSTEAD OF INSERT
AS
BEGIN
INSERT INTO Person(Id, FirstName, LastName)
SELECT Id, FirstName, LastName FROM VwEmployee
INSERT INTO Employee(PersonID, EmployeeNumber)
SELECT Id, EmployeeNumber FROM VwEmployee
End

```

Answer: B

Question: 26

You develop a Microsoft SQL Server 2012 database that contains a table named Products. The Products table has the following definition:

```

CREATE TABLE [dbo].[Products] (
[ProductId] [bigint] NOT NULL,
[RetailPrice] [nvarchar](25) NOT NULL,
[WholeSalePrice] [nvarchar](25) NULL,
[Name] [nvarchar](50) NOT NULL,
[Category] [nvarchar](25) NOT NULL,
CONSTRAINT [PK_Products] PRIMARY KEY CLUSTERED
(
    [ProductId] ASC
) ON [PRIMARY]
) ON [PRIMARY]

```

You need to create an audit record only when either the RetailPrice or WholeSalePrice column is updated. Which Transact-SQL query should you use?

A. CREATE TRIGGER TrgPriceChange ON Products FOR UPDATE AS
IF COLUMNS_CHANGED(RetailPrice, WholesalePrice)

```
-- Create Audit Records
B. CREATE TRIGGER TrgPriceChange ON Products FOR UPDATE AS
IF EXISTS(SELECT RetailPrice from inserted) OR
EXISTS (SELECT WholeSalePnce FROM inserted)
-- Create Audit Records
C. CREATE TRIGGER TrgPriceChange ON Products FOR UPDATE AS
IF COLUMNS_UPDATED(RetailPrice, WholesalePrice)
-- Create Audit Records
D. CREATE TRIGGER TrgPriceChange ON Products FOR UPDATE AS
IF UPDATE(RetailPrice) OR UPDATE(WholeSalePrice)
-- Create Audit Records
```

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/bb510663.aspx>
Reference: <http://msdn.microsoft.com/en-us/library/ms186329.aspx>

Question: 27

A table named Profits stores the total profit made each year within a territory. The Profits table has columns named Territory, Year, and Profit.

You need to create a report that displays the profits made by each territory for each year and its previous year. Which Transact-SQL query should you use?

- A. SELECT Territory, Year, Profit,
LEAD(Profit, 1, 0) OVER (PARTITION BY Territory ORDER BY Year) AS PrevProfit
FROM Profits
- B. SELECT Territory, Year, Profit,
LAG(Profit, 1, 0) OVER (PARTITION BY Year ORDER BY Territory) AS PrevProfit
FROM Profits
- C. SELECT Territory, Year, Profit,
LAG(Profit, 1, 0) OVER (PARTITION BY Territory ORDER BY Year) AS PrevProfit
FROM Profits
- D. SELECT Territory, Year, Profit,
LEAD(Profit, 1, 0) OVER (PARTITION BY Year ORDER BY Territory) AS PrevProfit
FROM Profits

Answer: C

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/hh231256.aspx>
Reference: <http://msdn.microsoft.com/en-us/library/hh213125.aspx>

Question: 28

You use Microsoft SQL Server 2012 database to develop a shopping cart application.

You need to rotate the unique values of the ProductName field of a table-valued expression into multiple columns in the output.

Which Transact-SQL operator should you use?

- A. CROSS JOIN
- B. CROSS APPLY
- C. PIVOT
- D. UNPIVOT

Answer: C

Explanation:
<http://technet.microsoft.com/en-us/library/ms177634.aspx>

Question: 29

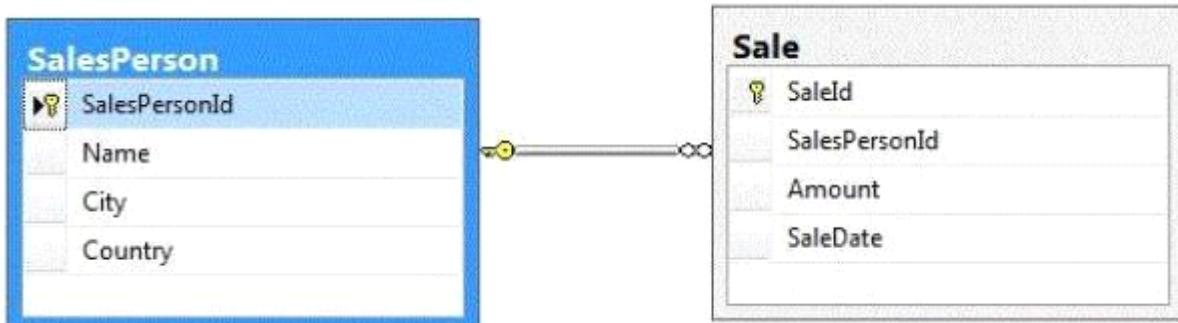
You administer a Microsoft SQL Server database that supports a shopping application.
You need to retrieve a list of customers who live in territories that do not have a sales person.
Which Transact- SQL query or queries should you use? (Each correct answer presents a complete solution. Choose all that apply.)

- A. SELECT CustomerID FROM Customer
WHERE TerritoryID <> SOME(SELECT TerritoryID FROM Salesperson)
- B. SELECT CustomerID FROM Customer
WHERE TerritoryID <> ALL(SELECT TerritoryID FROM Salesperson)
- C. SELECT CustomerID FROM Customer
WHERE TerritoryID <> ANY(SELECT TerritoryID FROM Salesperson)
- D. SELECT CustomerID FROM Customer
WHERE TerritoryID NOT IN(SELECT TerritoryID FROM Salesperson)

Answer: B, D

Question: 30

You support a database structure shown in the exhibit. (Click the Exhibit button.)



You need to write a query that displays the following details:
Total sales made by sales people, year, city, and country
Sub totals only at the city level and country level
A grand total of the sales amount
Which Transact-SQL query should you use?

- A. SELECT SalesPerson.Name, Country, City,
DatePart(yyyy, SaleDate) AS Year, Sum(Amount) AS Total
FROM Sale INNER JOIN SalesPerson

ON Sale.SalesPersonID = SalesPerson.SalesPersonID
GROUP BY GROUPING SETS((SalesPerson.Name, Country, City, DatePart(yyyy, SaleDate)), (Country, City), (Country), ())
B. SELECT SalesPerson.Name, Country, City,
DatePart(yyyy, SaleDate) AS Year, Sum(Amount) AS Total
FROM Sale INNER JOIN SalesPerson
ON Sale.SalesPersonID = SalesPerson.SalesPersonID
GROUP BY CUBE(SalesPerson.Name, Country, City, DatePart(yyyy, SaleDate))
C. SELECT SalesPerson.Name, Country, City,
DatePart(yyyy, SaleDate) AS Year, Sum(Amount) AS Total
FROM Sale INNER JOIN SalesPerson
ON Sale.SalesPersonID = SalesPerson.SalesPersonID
GROUP BY CUBE(SalesPerson.Name, DatePart(yyyy, SaleDate), City, Country)
D. SELECT SalesPerson.Name, Country, City,
DatePart(yyyy, SaleDate) AS Year, Sum(Amount) AS Total
FROM Sale INNER JOIN SalesPerson
ON Sale.SalesPersonID = SalesPerson.SalesPersonID
GROUP BY ROLLUP(SalesPerson.Name, DatePart(yyyy, SaleDate), City, Country)

Answer: A

Explanation:

Be careful with this question, because on exam can be different options for answer.
And none of them is correct: D You should report this question.

Reference: <http://www.grapefruitmoon.net/diving-into-t-sql-grouping-sets/>

Reference: <http://msdn.microsoft.com/en-us/library/ms177673.aspx>

Question: 31

You are developing a database that will contain price information.

You need to store the prices that include a fixed precision and a scale of six digits.

Which data type should you use?

- A. Float
- B. Money
- C. Smallmoney
- D. Numeric

Answer: D

Explanation:

Numeric is the only one in the list that can give a fixed precision and scale.

Reference: <http://msdn.microsoft.com/en-us/library/ms179882.aspx>

Question: 32

You administer a Microsoft SQL Server database that supports a banking transaction management application.

You need to retrieve a list of account holders who live in cities that do not have a branch location.

Which Transact-SQL query or queries should you use? (Each correct answer presents a complete solution. Choose all that apply.)

A. SELECT AccountHolderID
FROM AccountHolder
WHERE CityID NOT IN (SELECT CityID FROM BranchMaster)
B. SELECT AccountHolderID
FROM AccountHolder
WHERE CityID <> ALL (SELECT CityID FROM BranchMaster)
C. SELECT AccountHolderID
FROM AccountHolder
WHERE CityID <> SOME (SELECT CityID FROM BranchMaster)
D. SELECT AccountHolderID
FROM AccountHolder
WHERE CityID <> ANY (SELECT CityID FROM BranchMaster)

Answer: A, B

Explanation:

Verified the answers as correct.

Reference: <http://msdn.microsoft.com/en-us/library/ms188047.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms177682.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms173545.aspx>

Question: 33

You administer a Microsoft SQL Server 2012 database. The database contains a table named Employee. Part of the Employee table is shown in the exhibit. (Click the Exhibit button.)

Employee (jek)	
Column Name	Condensed Type
EmployeeID	int
EmployeeNum	char(10)
LastName	nvarchar(200)
FirstName	nvarchar(200)
MiddleName	nvarchar(200)
DateHired	date
DepartmentID	int
JobTitle	varchar(200)
ReportsToID	int

Column name	Description
EmployeeID(pk)	Uniquely identifies the employee record in the table Used throughout the database by all the other tables that reference the Employee table
EmployeeNum	An alphanumeric value calculated according to company requirements Has to be unique within the Employee table Exists only within the Employee table
DepartmentID	References another table named Department that contains data for each department in the company
ReportsToID	Contains the EmployeeID of the manager to whom an employee reports
ReportsToID	Contains the EmployeeID of the manager to whom an employee reports

Confidential information about the employees is stored in a separate table named EmployeeDat

a. One record exists within EmployeeData for each record in the Employee table. You need to assign the appropriate constraints and table properties to ensure data integrity and visibility. On which column in the Employee table should you create a unique constraint?

- A. DateHired
- B. DepartmentID
- C. EmployeeID
- D. EmployeeNum
- E. FirstName
- F. JobTitle
- G. LastName
- H. MiddleName
- I. ReportsToID

Answer: D

Question: 34

You administer a Microsoft SQL Server 2012 database. The database contains a table named Employee. Part of the Employee table is shown in the exhibit. (Click the Exhibit button.)

Employee (jek)	
Column Name	Condensed Type
EmployeeID	int
EmployeeNum	char(10)
LastName	nvarchar(200)
FirstName	nvarchar(200)
MiddleName	nvarchar(200)
DateHired	date
DepartmentID	int
JobTitle	varchar(200)
ReportsToID	int

Column name	Description
EmployeeID(pk)	Uniquely identifies the employee record in the table Used throughout the database by all the other tables that reference the Employee table
EmployeeNum	An alphanumeric value calculated according to company requirements Has to be unique within the Employee table Exists only within the Employee table
DepartmentID	References another table named Department that contains data for each department in the company
ReportsToID	Contains the EmployeeID of the manager to whom an employee reports
ReportsToID	Contains the EmployeeID of the manager to whom an employee reports

Unless stated above, no columns in the Employee table reference other tables.

Confidential information about the employees is stored in a separate table named EmployeeDat

a. One record exists within EmployeeData for each record in the Employee table.

You need to assign the appropriate constraints and table properties to ensure data integrity and visibility.

On which column in the Employee table should you use an identity specification to include a seed of 1,000 and an increment of 1?

- A. DateHired
- B. DepartmentID
- C. EmployeeID
- D. EmployeeNum
- E. FirstName
- F. JobTitle
- G. LastName
- H. MiddleName
- I. ReportsToID

Answer: C

Question: 35

You administer a Microsoft SQL Server 2012 database that includes a table named Products. The Products table has columns named ProductId, ProductName, and CreatedDateTime.

The table contains a unique constraint on the combination of ProductName and CreatedDateTime.

You need to modify the Products table to meet the following requirements:

Remove all duplicates of the Products table based on the ProductName column.

Retain only the newest Products row.

Which Transact-SQL query should you use?

A. WITH CTEDupRecords

```
AS
(
SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
FROM Products
GROUP BY ProductName
HAVING COUNT(*) > 1
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
AND p.CreatedDateTime > cte.CreatedDateTime
```

B. WITH CTEDupRecords

```
AS
(
SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
FROM Products
GROUP BY ProductName
HAVING COUNT(*) > 1
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
cte.ProductName = p.ProductName
AND cte.CreatedDateTime > p.CreatedDateTime
```

C. WITH CTEDupRecords

```
AS
(
SELECT MIN(CreatedDateTime) AS CreatedDateTime, ProductName
FROM Products
GROUP BY ProductName
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
```

D. WITH CTEDupRecords

```
AS
(
SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
FROM Products
GROUP BY ProductName
HAVING COUNT(*) > 1
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
```

Answer: B

Question: 36

You develop three Microsoft SQL Server 2012 databases named Database1, Database2, and Database3. You have permissions on both Database1 and Database2.

You plan to write and deploy a stored procedure named dbo.usp_InsertEvent in Database3. dbo.usp_InsertEvent must execute other stored procedures in the other databases.

You need to ensure that callers that do not have permissions on Database1 or Database2 can execute the stored procedure.

Which Transact-SQL statement should you use?

- A. USE Database2
- B. EXECUTE AS OWNER
- C. USE Database1
- D. EXECUTE AS CALLER

Answer: B

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms188354.aspx>

Reference: <http://blog.sqlauthority.com/2007/10/06/sql-server-executing-remote-stored-procedure-callingstored-procedure-on-linked-server/>

Question: 37

You administer a Microsoft SQL Server 2012 database that has multiple tables in the Sales schema

a. Some users must be prevented from deleting records in any of the tables in the Sales schema. You need to manage users who are prevented from deleting records in the Sales schema.

You need to achieve this goal by using the minimum amount of administrative effort. What should you do?

- A. Create a custom database role that includes the users. Deny Delete permissions on the Sales schema for the custom database role.
- B. Include the Sales schema as an owned schema for the db_denydatawriter role. Add the users to the db_denydatawriter role.
- C. Deny Delete permissions on each table in the Sales schema for each user.
- D. Create a custom database role that includes the users. Deny Delete permissions on each table in the Sales schema for the custom database role.

Answer: A

Question: 38

You administer a Microsoft SQL Server 2012 database. The database contains a Product table created by using the following definition:

```
CREATE TABLE dbo.Product
(ProductID INT PRIMARY KEY,
 Name VARCHAR(50) NOT NULL,
 Color VARCHAR(15) NOT NULL,
 Size VARCHAR(5) NOT NULL,
 Style CHAR(2) NULL,
 Weight DECIMAL(8,2) NULL);
```

You need to ensure that the minimum amount of disk space is used to store the data in the Product table. What should you do?

- A. Convert all indexes to Column Store indexes.
- B. Implement Unicode Compression.
- C. Implement row-level compression.
- D. Implement page-level compression.

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/cc280449.aspx>
 Reference: <http://msdn.microsoft.com/en-us/library/cc280464.aspx>
 Reference: <http://msdn.microsoft.com/en-us/library/cc280576.aspx>
 Reference: <http://msdn.microsoft.com/en-us/library/ee240835.aspx>

Question: 39

You generate a daily report according to the following query:

```
SELECT c.CustomerName
FROM Sales.Customer c
WHERE Sales.ufnGetLastOrderDate(c.CustomerID) <
DATEADD(DAY, -90, GETDATE())
```

The Sales.ufnGetLastOrderDate user-defined function (UDF) is defined as follows:

```
CREATE FUNCTION Sales.ufnGetLastOrderDate(@CustomerID int)
RETURNS datetime
AS
BEGIN
  DECLARE @lastOrderDate datetime
  SELECT @lastOrderDate = MAX(OrderDate)
  FROM Sales.SalesOrder
  WHERE CustomerID = @CustomerID
  RETURN @lastOrderDate
END
```

You need to improve the performance of the query.

What should you do?

A. Drop the UDF and rewrite the report query as follows:

```
WITH cte(CustomerID, LastOrderDate) AS (
    SELECT CustomerID, MAX(OrderDate) AS [LastOrderDate]
    FROM Sales.SalesOrder
    GROUP BY CustomerID
)
SELECT c.CustomerName
FROM cte
INNER JOIN Sales.Customer c ON cte.CustomerID = c.CustomerID
WHERE cte.LastOrderDate < DATEADD(DAY, -90, GETDATE())
```

B. Drop the UDF and rewrite the report query as follows:

```
SELECT c.CustomerName
FROM Sales.Customer c
WHERE NOT EXISTS (
    SELECT s.OrderDate
    FROM Sales.SalesOrder s
    WHERE s.OrderDate > DATEADD(DAY, -90, GETDATE())
    AND s.CustomerID = c.CustomerID)
```

C. Drop the UDF and rewrite the report query as follows:

```
SELECT DISTINCT c.CustomerName
FROM Sales.Customer c
INNER JOIN Sales.SalesOrder s ON c.CustomerID = s.CustomerID
WHERE s.OrderDate < DATEADD(DAY, -90, GETDATE())
```

D. Rewrite the report query as follows:

```
SELECT c.CustomerName
FROM Sales.Customer c
WHERE NOT EXISTS (SELECT OrderDate FROM Sales.ufnGetRecentOrders(c.CustomerID, 90))
```

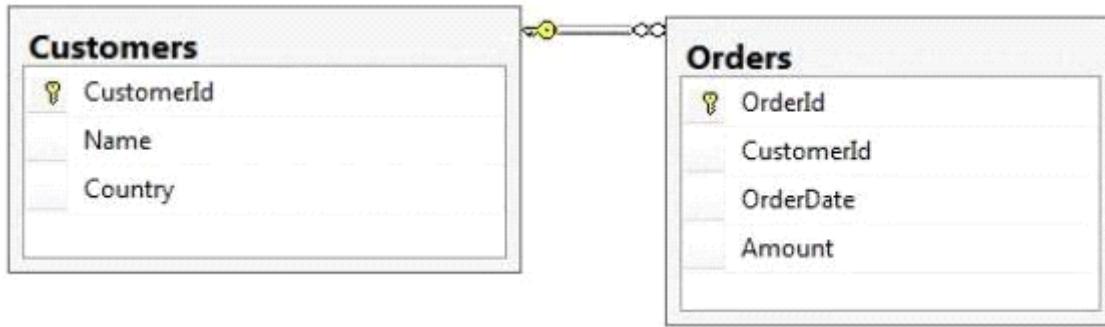
Rewrite the UDF as follows:

```
CREATE FUNCTION Sales.ufnGetRecentOrders(@CustomerID int, @MaxAge datetime)
RETURNS TABLE AS RETURN (
    SELECT OrderDate
    FROM Sales.SalesOrder s
    WHERE s.CustomerID = @CustomerID
    AND s.OrderDate > DATEADD(DAY, -@MaxAge, GETDATE())
```

Answer: A

Question: 40

You administer a Microsoft SQL Server 2012 database named ContosoDb. Tables are defined as shown in the exhibit.
(Click the Exhibit button.)



You need to display rows from the Orders table for the Customers row having the CustomerId value set to 1 in the following XML format:

```

<row OrderId="1" OrderDate="2000-01-01T00:00:00" Amount="3400.00" Name="Customer
A" Country="Australia" />
<row OrderId="2" OrderDate="2001-01-01T00:00:00" Amount="4300.00" Name="Customer
A" Country="Australia" />
  
```

Which Transact-SQL query should you use?

- A. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW
- B. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW, ELEMENTS
- C. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO
- D. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId - Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS
- E. SELECT Name, Country, OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO
- F. SELECT Name, Country, OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS
- G. SELECT Name AS '@Name', Country AS '@Country', OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML PATH ('Customers')
- H. SELECT Name AS 'Customers/Name', Country AS 'Customers/Country', OrderId,
OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML PATH ('Customers')

Answer: A

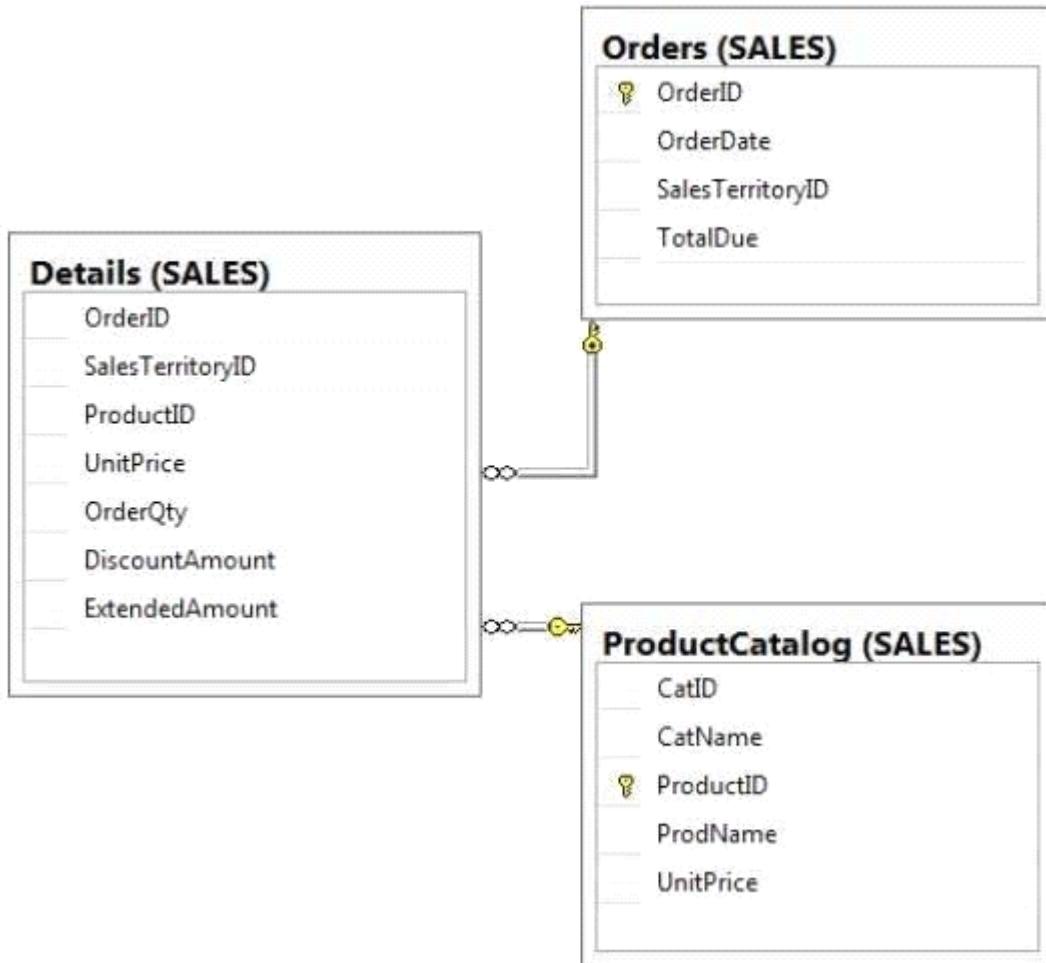
Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/bb510464.aspx>

Question: 41

CORRECT TEXT

You have a database that contains the tables as shown in the exhibit. (Click the Exhibit button.)



You have the following query:

```

SELECT SalesTerritoryID,
       ProductID,
       AVG(UnitPrice),
       MAX(OrderQty),
       MAX(DiscountAmount)
  FROM Sales.Details

```

You need to recreate the query to meet the following requirements:

Reference columns by using one-part names only.

Sort aggregates by SalesTerritoryID, and then by ProductID.

Order the results in descending order from SalesTerritoryID to ProductID.

The solution must use the existing SELECT clause and FROM clause.

Which code segment should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
SELECT SalesTerritoryID,
ProductID,
AVG(UnitPrice),
MAX(OrderQty),
MAX(DiscountAmount)
FROM Sales.Detials
GROUP BY SalesTerritoryID , ProductID
ORDER BY SalesTerritoryID DESC, ProductID DESC
```

Question: 42

CORRECT TEXT

You have a database that contains the tables shown in the exhibit. (Click the Exhibit button).

OrderDetails			
	Column Name	Data Type	Allow Nulls
	ListPrice	money	<input type="checkbox"/>
	Quantity	int	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Customers			
	Column Name	Data Type	Allow Nulls
PK	CustomerID	int	<input type="checkbox"/>
	FirstName	varchar(100)	<input type="checkbox"/>
	LastName	varchar(100)	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>



Orders			
	Column Name	Data Type	Allow Nulls
PK	OrderID	int	<input type="checkbox"/>
	OrderDate	datetime	<input type="checkbox"/>
	CustomerID	int	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

You need to create a query for a report. The query must meet the following requirements:

NOT use object delimiters.

Return the most recent orders first.

Use the first initial of the table as an alias.

Return the most recent order date for each customer.

Retrieve the last name of the person who placed the order.

Return the order date in a column named MostRecentOrderDate that appears as the last column in the report.

The solution must support the ANSI SQL-99 standard.

Which code segment should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
SELECT C.LastName, MAX(O.OrderDate) AS MostRecentOrderDate  
FROM Customers AS C INNER JOIN Orders AS O  
ON C.CustomerID = O.CustomerID  
GROUP BY C.LastName  
ORDER BY MostRecentOrderDate DESC
```

Question: 43

CORRECT TEXT

You have an XML schema collection named Sales.InvoiceSchema.

You need to declare a variable of the XML type named XML1. The solution must ensure that XML1 is validated by using Sales.InvoiceSchema.

Which code segment should you use?

To answer, type the correct code in the answer area.

**Answer: DECLARE @XML1
XML(Sales.InvoiceSchema)**

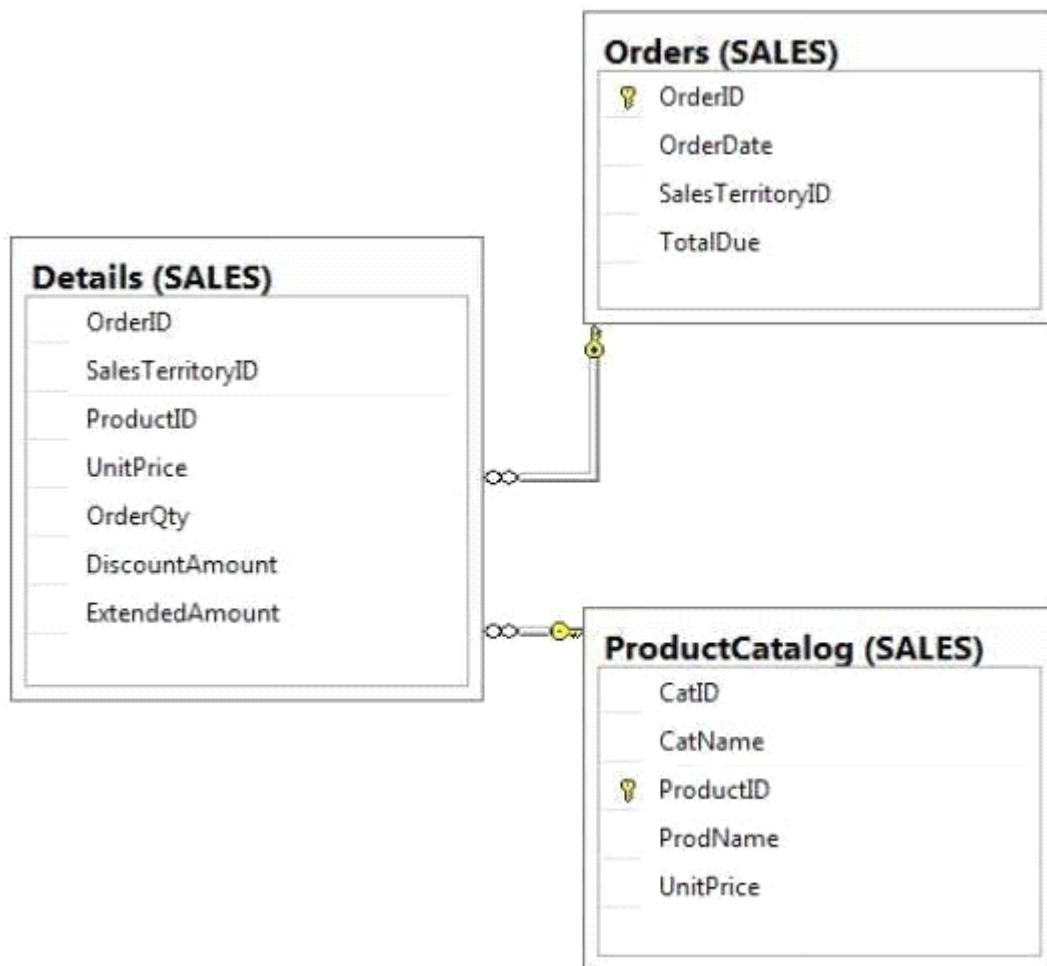
Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms176009.aspx>

Question: 44

CORRECT TEXT

You have a database that contains the tables as shown in the exhibit. (Click the Exhibit button.)



You need to create a query that returns a list of products from Sales.ProductCatalog. The solution must meet the following requirements:

UnitPrice must be returned in descending order.

The query must use two-part names to reference the table.

The query must use the RANK function to calculate the results.

The query must return the ranking of rows in a column named PriceRank.

The list must display the columns in the order that they are defined in the table.

PriceRank must appear last.

Which code segment should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
SELECT ProductCatalog.CatID, ProductCatalog.CatName, ProductCatalog.ProductID,
ProductCatalog.ProdName, ProductCatalog.UnitPrice,
RANK() OVER (ORDER BY ProductCatalog.UnitPrice DESC) AS PriceRank
FROM Sales.ProductCatalog
ORDER BY ProductCatalog.UnitPrice DESC
```

Question: 45

CORRECT TEXT

You have a database that contains the tables shown in the exhibit. (Click the Exhibit button.)

OrderDetails		
Column Name	Data Type	Allow Nulls
ListPrice	money	<input type="checkbox"/>
Quantity	int	<input type="checkbox"/>
		<input type="checkbox"/>

Customers		
Column Name	Data Type	Allow Nulls
CustomerID	int	<input type="checkbox"/>
FirstName	varchar(100)	<input type="checkbox"/>
LastName	varchar(100)	<input type="checkbox"/>
		<input type="checkbox"/>

Orders		
Column Name	Data Type	Allow Nulls
OrderID	int	<input type="checkbox"/>
OrderDate	datetime	<input type="checkbox"/>
CustomerID	int	<input type="checkbox"/>
		<input type="checkbox"/>

You have an application named Appl. You have a parameter named @Count that uses the int data type. App1 is configured to pass @Count to a stored procedure. You need to create a stored procedure named usp_Customers for Appl. Usp_Customers must meet the following requirements:

NOT use object delimiters.

Minimize sorting and counting.

Return only the last name of each customer in alphabetical order.

Return only the number of rows specified by the @Count parameter.

The solution must NOT use BEGIN and END statements.

Which code segment should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
CREATE PROCEDURE usp_Customers @Count int
```

```
AS
```

```
SELECT TOP(@Count) Customers.LastName
```

```
FROM Customers
```

```
ORDER BY Customers.LastName
```

Question: 46

You are developing a database that will contain price information.
You need to store the prices that include a fixed precision and a scale of six digits.
Which data type should you use?

- A. Float
- B. Money
- C. Smallmoney
- D. Decimal

Answer: D

Explanation:

Decimal is the only one in the list that can give a fixed precision and scale.

Reference: <http://msdn.microsoft.com/en-us/library/ms187746.aspx>

Question: 47

You administer a Microsoft SQL Server 2012 database. The database contains a table named Employee. Part of the Employee table is shown in the exhibit. (Click the Exhibit button.)

Column Name	Condensed Type
EmployeeID	int
EmployeeNum	char(10)
LastName	nvarchar(200)
FirstName	nvarchar(200)
MiddleName	nvarchar(200)
DateHired	date
DepartmentID	int
JobTitle	varchar(200)
ReportsToID	int

Column name	Description
EmployeeID(pk)	Uniquely identifies the employee record in the table Used throughout the database by all the other tables that reference the Employee table
EmployeeNum	An alphanumeric value calculated according to company requirements Has to be unique within the Employee table Exists only within the Employee table
DepartmentID	References another table named Department that contains data for each department in the company
ReportsToID	Contains the EmployeeID of the manager to whom an employee reports
ReportsToID	Contains the EmployeeID of the manager to whom an employee reports

Unless stated above, no columns in the Employee table reference other tables.

Confidential information about the employees is stored in a separate table named EmployeeDat

a. One record exists within EmployeeData for each record in the Employee table.

You need to assign the appropriate constraints and table properties to ensure data integrity and visibility.

On which column in the Employee table should you create a self-reference foreign key constraint?

- A. DateHired
- B. DepartmentID
- C. EmployeeID
- D. EmployeeNum
- E. FirstName
- F. JobTitle
- G. LastName
- H. MiddleName
- I. ReportsToID

Answer: I

Question: 48

You use a Microsoft SQL Server 2012 database that contains a table named BlogEntry that has the following columns:

Column name	Data type
Id	bigint
EntryDateTime	datetime
Summary	nvarchar(max)

Id is the Primary Key.

You need to append the "This is in a draft stage" string to the Summary column of the recent 10 entries based on the values in EntryDateTime.

Which Transact-SQL statement should you use?

A. UPDATE TOP(10) BlogEntry

SET Summary.WRITE(N' This is in a draft stage', NULL, 0)

B. UPDATE BlogEntry

SET Summary = CAST(N' This is in a draft stage' as nvarchar(max))

WHERE Id IN(SELECT TOP(10) Id FROM BlogEntry ORDER BY EntryDateTime DESC)

C. UPDATE BlogEntry

SET Summary.WRITE(N' This is in a draft stage', NULL, 0) FROM (

SELECT TOP(10) Id FROM BlogEntry ORDER BY EntryDateTime DESC) AS s

WHERE BlogEntry.Id = s.ID

D. UPDATE BlogEntry

SET Summary.WRITE(N' This is in a draft stage', 0, 0)

WHERE Id IN(SELECT TOP(10) Id FROM BlogEntry ORDER BY EntryDateTime DESC)

Answer: C

Question: 49

You use Microsoft SQL Server 2012 to develop a database application.

You create a stored procedure named DeleteJobCandidate.

You need to ensure that if DeleteJobCandidate encounters an error, the execution of the stored procedure reports the error number.

Which Transact-SQL statement should you use?

A. DECLARE @ErrorVar INT;

DECLARE @RowCountVar INT;

EXEC DeleteJobCandidate

SELECT @ErrorVar = @@ERROR,

@RowCountVar = @@ROWCOUNT;

IF (@ErrorVar <> 0)

PRINT N'Error = ' + CAST(@@ErrorVar AS NVARCHAR(8)) + N', Rows Deleted = ' + CAST(@RowCountVar AS NVARCHAR(8));

GO

B. DECLARE @ErrorVar INT;

DECLARE @RowCountVar INT;

EXEC DeleteJobCandidate

SELECT @ErrorVar = ERROR_STATE(),

@RowCountVar = @@ROWCOUNT;

IF (@ErrorVar <> 0)

PRINT N'Error = ' + CAST(ERROR_STATE() AS NVARCHAR(8)) + N', Rows Deleted = ' + CAST(@RowCountVar AS NVARCHAR(8));

GO

C. EXEC DeleteJobCandidate

IF (ERROR_STATE() != 0)

PRINT N'Error = ' + CAST(@@ERROR AS NVARCHAR(8)) + N', Rows Deleted = ' + CAST(@@ROWCOUNT AS NVARCHAR(8));

GO

D. EXEC DeleteJobCandidate

```
PRINT N'Error = ' + CAST(@@ERROR AS NVARCHAR(8)) + N', Rows Deleted = ' + CAST(@@ROWCOUNT AS NVARCHAR(8));
GO
```

Answer: A

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms190193.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms188790.aspx>

Question: 50

You use Microsoft SQL Server 2012 to create a stored procedure as shown in the following code segment. (Line numbers are included for reference only.)

```
01 CREATE PROCEDURE DeleteCandidate
02 @InputCandidateID INT;
03 AS
04 BEGIN
05     BEGIN TRANSACTION;
06     BEGIN TRY
07         DELETE HumanResources.JobCandidate
08         WHERE JobCandidateID = @InputCandidateID;
09         INSERT INTO Audit.Log(Operation,OperationDate)
10         VALUES('Delete',SYSDATETIME());
11         COMMIT TRANSACTION;
12     END TRY
13     BEGIN CATCH
14
15         COMMIT TRANSACTION
16     ELSE
17         ROLLBACK TRANSACTION;
18     END CATCH
19 END;
```

The procedure can be called within other transactions.

You need to ensure that when the DELETE statement from the HumanResourcesJobCandidate table succeeds, the modification is retained even if the insert into the Audit.Log table fails.

Which code segment should you add to line 14?

- A. IF @@TRANCOUNT = 0
- B. IF (XACT_STATE ())=0
- C. IF (XACT_STATE ())=1
- D. IF @@TRANCOUNT = I

Answer: C

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms189797.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms187967.aspx>

Question: 51

A table named Profits stores the total profit made each year within a territory. The Profits table has columns named Territory, Year, and Profit. You need to create a report that displays the profits made by each territory for each year and its preceding year. Which Transact-SQL query should you use?

- A. SELECT Territory, Year, Profit,
LAG(Profit, 1, 0) OVER(PARTITION BY Year ORDER BY Territory) AS NextProfit
FROM Profits
- B. SELECT Territory, Year, Profit,
LAG(Profit, 1, 0) OVER(PARTITION BY Territory ORDER BY Year) AS NextProfit
FROM Profits
- C. SELECT Territory, Year, Profit,
LEAD(Profit, 1, 0) OVER(PARTITION BY Territory ORDER BY Year) AS NextProfit
FROM Profits
- D. SELECT Territory, Year, Profit,
LEAD(Profit, 1, 0) OVER(PARTITION BY Year ORDER BY Territory) AS NextProfit
FROM Profits

Answer: B

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/hh231256.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/hh213125.aspx>

Question: 52

You use Microsoft SQL Server 2012 to develop a database application.

Your application sends data to an NVARCHAR(MAX) variable named @var.

You need to write a Transact-SQL statement that will find out the success of a cast to a decimal (36,9).

Which code segment should you use?

- A. BEGIN TRY
SELECT
convert (decimal(36,9), @var) as Value,
'True' As BadCast
END TRY
BEGIN CATCH
SELECT
convert (decimal(36,9), @var) as Value,
'False' As BadCast
END CATCH
- B. TRY(
SELECT convert (decimal(36,9), @var)
SELECT 'True' As BadCast
)
CATCH(
SELECT 'False' As BadCast
)
- C. SELECT
CASE
WHEN convert (decimal(36,9), @var) IS NULL
THEN 'True'

```
ELSE 'False'  
END  
AS BadCast  
D. SELECT  
IF(TRY_PARSE(@var AS decimal(36,9)) IS NULL,  
'True',  
'False'  
)  
AS BadCast
```

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/hh213126.aspx>

Question: 53

You are writing a set of queries against a FILESTREAM-enabled database.

You create a stored procedure that will update multiple tables within a transaction.

You need to ensure that if the stored procedure raises a runtime error, the entire transaction is terminated and rolled back.

Which Transact-SQL statement should you include at the beginning of the stored procedure?

- A. SET TRANSACTION ISOLATION LEVEL SERIALIZABLE
- B. SET XACT_ABORT OFF
- C. SET TRANSACTION ISOLATION LEVEL SNAPSHOT
- D. SET IMPLICIT_TRANSACTIONS ON
- E. SET XACT_ABORT ON
- F. SET IMPLICIT_TRANSACTIONS OFF

Answer: E

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms188792.aspx>

Question: 54

You develop a Microsoft SQL Server 2012 database. The database is used by two web applications that access a table named Products.

You want to create an object that will prevent the applications from accessing the table directly while still providing access to the required data.

You need to ensure that the following requirements are met:

Future modifications to the table definition will not affect the applications' ability to access data.

The new object can accommodate data retrieval and data modification.

You need to achieve this goal by using the minimum amount of changes to the applications.

What should you create for each application?

- A. Synonyms
- B. Common table expressions
- C. Views

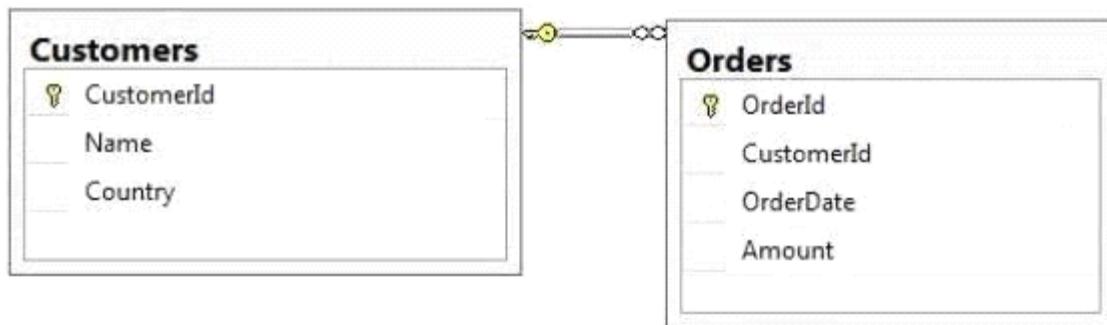
D. Temporary tables

Answer: C

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms190174.aspx>**Question: 55**

You administer a Microsoft SQL Server 2012 database named ContosoDb. Tables are defined as shown in the exhibit.
(Click the Exhibit button.)



You need to display rows from the Orders table for the Customers row having the CustomerId value set to 1 in the following XML format.

```

<Orders OrderId="1" OrderDate="2000-01-01T00:00:00" Amount="3400.00">
  <Customers Name="Customer A" Country="Australia" />
</Orders>
<Orders OrderId="2" OrderDate="2001-01-01T00:00:00" Amount="4300.00">
  <Customers Name="Customer A" Country="Australia" />
</Orders>
  
```

Which Transact-SQL query should you use?

- A. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW
- B. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers=CustomerId = 1
FOR XML RAW, ELEMENTS
- C. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO
- D. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS
- E. SELECT Name, Country, OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO
- F. SELECT Name, Country, OrderId, OrderDate, Amount

```

FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS
G. SELECT Name AS '@Name', Country AS '@Country', OrderId, OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML PATH ('Customers')
H. SELECT Name AS 'Customers/Name', Country AS 'Customers/Country', OrderId,
OrderDate, Amount
FROM Orders INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML PATH ('Customers')

```

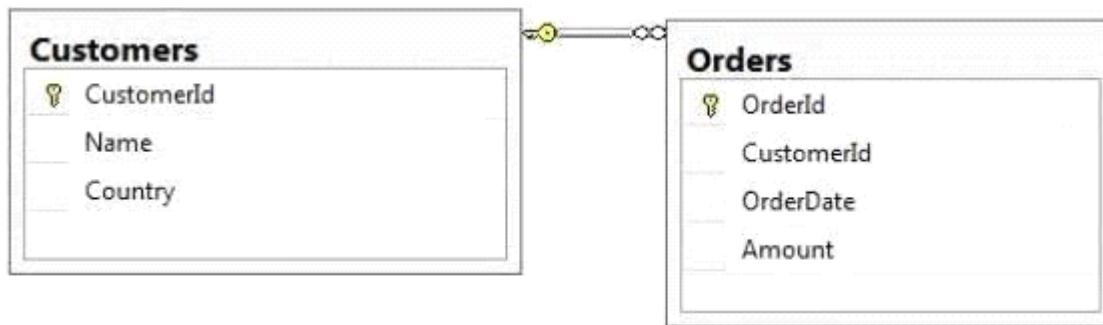
Answer: C

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms188273.aspx>

Question: 56

You administer a Microsoft SQL Server 2012 database named ContosoDb. Tables are defined as shown in the exhibit.
(Click the Exhibit button.)



You need to display rows from the Orders table for the Customers row having the CustomerId value set to 1 in the following XML format.

```

<CUSTOMERS Name="Customer A" Country="Australia">
<ORDERS OrderID="1" OrderDate="2001-01-01" Amount="3400.00" />
<ORDERS OrderID="2" OrderDate="2002-01-01" Amount="4300.00" />
</CUSTOMERS>

```

Which Transact-SQL query should you use?

- A. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW
- B. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW, ELEMENTS
- C. SELECT OrderId, OrderDate, Amount, Name, Country
FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO

D. SELECT OrderId, OrderDate, Amount, Name, Country
 FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
 WHERE Customers.CustomerId = 1
 FOR XML AUTO, ELEMENTS

E. SELECT Name, Country, OrderId, OrderDate, Amount
 FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
 WHERE Customers.CustomerId = 1
 FOR XML AUTO

F. SELECT Name, Country, OrderId, OrderDate, Amount
 FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
 WHERE Customers.CustomerId = 1
 FOR XML AUTO, ELEMENTS

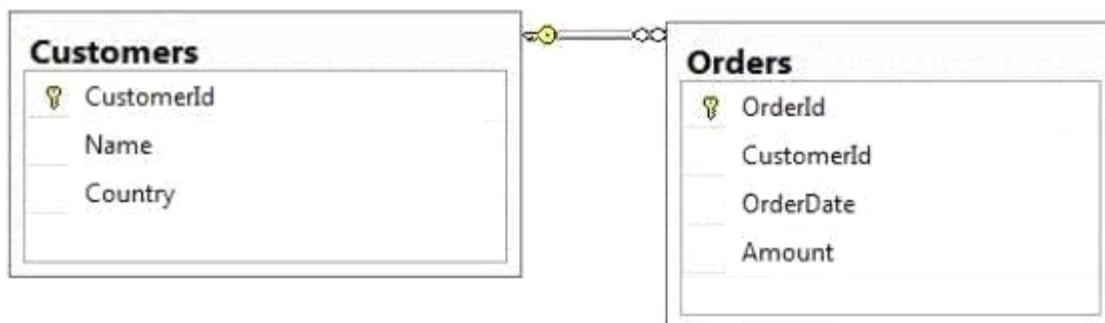
G. SELECT Name AS '@Name', Country AS '@Country', OrderId, OrderDate, Amount
 FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
 WHERE Customers.CustomerId = 1
 FOR XML PATH ('Customers')

H. SELECT Name AS 'Customers/Name', Country AS 'Customers/Country', OrderId, OrderDate, Amount
 FROM Orders INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
 WHERE Customers.CustomerId = 1
 FOR XML PATH ('Customers')

Answer: E

Question: 57

You administer a Microsoft SQL Server 2012 database named ContosoDb. Tables are defined as shown in the exhibit.
 (Click the Exhibit button.)



You need to display rows from the Orders table for the Customers row having the CustomerId value set to 1 in the following XML format.

```

<Orders>
  <OrderId>1</OrderId>
  <OrderDate>2000-01-01T00:00:00</OrderDate>
  <Amount>3400.00</Amount>
  <Customers>
    <Name>Customer A</Name>
    <Country>Australia</Country>
  </Customers>
</Orders>
<Orders>
  <OrderId>2</OrderId>
  <OrderDate>2001-01-01T00:00:00</OrderDate>
  <Amount>4300.00</Amount>
  <Customers>
    <Name>Customer A</Name>
    <Country>Australia</Country>
  </Customers>
</Orders>

```

Which Transact-SQL query should you use?

- A. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW
- B. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW, ELEMENTS
- C. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO
- D. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS
- E. SELECT Name, Country, OrderId, OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO
- F. SELECT Name, Country, OrderId, OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS
- G. SELECT Name AS '@Name', Country AS '@Country', OrderId, OrderDate, Amount
FROM Orders
INNER JOIN Customers ON Orders.CustomerId= Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML PATH ('Customers')
- H. SELECT Name AS 'Customers/Name', Country AS 'Customers/Country', OrderId,

```
OrderDate, Amount FROM Orders  
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId  
WHERE Customers.CustomerId = 1  
FOR XML PATH ('Customers')
```

Answer: D

Question: 58

You develop a Microsoft SQL Server 2012 server database that supports an application.

The application contains a table that has the following definition:

```
CREATE TABLE Inventory (  
    ItemID int NOT NULL PRIMARY KEY,  
    ItemsInStore int NOT NULL,  
    ItemsInWarehouse int NOT NULL)
```

You need to create a computed column that returns the sum total of the ItemsInStore and ItemsInWarehouse values for each row.

The new column is expected to be queried heavily, and you need to be able to index the column. Which Transact-SQL statement should you use?

- A. ALTER TABLE Inventory
ADD TotalItems AS ItemsInStore + ItemsInWarehouse
- B. ALTER TABLE Inventory
ADD TotalItems AS ItemsInStore + ItemsInWarehouse PERSISTED
- C. ALTER TABLE Inventory
ADD TotalItems AS SUM(ItemsInStore, ItemsInWarehouse) PERSISTED
- D. ALTER TABLE Inventory
ADD TotalItems AS SUM(ItemsInStore, ItemsInWarehouse)

Answer: B

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms174979.aspx>

Question: 59

You develop a Microsoft SQL Server 2012 database that contains a table named Customers. The Customers table has the following definition:

```
CREATE TABLE [dbo].[Customers] (  
    [CustomerId] [bigint] NOT NULL,  
    [MobileNumber] [nvarchar](25) NOT NULL,  
    [HomeNumber] [nvarchar](25) NULL,  
    [Name] [nvarchar](50) NOT NULL,  
    [Country] [nvarchar](25) NOT NULL,  
    CONSTRAINT [PK_Customers] PRIMARY KEY CLUSTERED  
    (  
        [CustomerId] ASC  
    ) ON [PRIMARY]  
) ON [PRIMARY]
```

You need to create an audit record only when either the MobileNumber or HomeNumber column is updated. Which Transact-SQL query should you use?

- A. CREATE TRIGGER TrgPhoneNumberChange
ON Customers FOR UPDATE
AS
IF COLUMNS_UPDATED (HomeNumber, MobileNumber)
-- Create Audit Records
- B. CREATE TRIGGER TrgPhoneNumberChange
ON Customers FOR UPDATE
AS
IF EXISTS(SELECT HomeNumber from inserted) OR
EXISTS (SELECT MobileNumber FROM inserted)
-- Create Audit Records
- C. CREATE TRIGGER TrgPhoneNumberChange
ON Customers FOR UPDATE
AS
IF COLUMNS_CHANGED (HomeNumber, MobileNumber)
-- Create Audit Records
- D. CREATE TRIGGER TrgPhoneNumberChange
ON Customers FOR UPDATE
AS
IF UPDATE (HomeNumber) OR UPDATE (MobileNumber)
-- Create Audit Records

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/bb510663.aspx>
Reference: <http://msdn.microsoft.com/en-us/library/ms186329.aspx>

Question: 60

You develop a Microsoft SQL Server 2012 database that has two tables named SavingAccounts and LoanAccounts. Both tables have a column named AccountNumber of the nvarchar data type.

You use a third table named Transactions that has columns named TransactionId, AccountNumber, Amount, and TransactionDate.

You need to ensure that when multiple records are inserted in the Transactions table, only the records that have a valid AccountNumber in the SavingAccounts or LoanAccounts are inserted.

Which Transact-SQL statement should you use?

- A. CREATE TRIGGER TrgValidateAccountNumber
ON Transactions
INSTEAD OF INSERT
AS
BEGIN
INSERT INTO Transactions
SELECT TransactionID, AccountNumber, Amount, TransactionDate FROM inserted
WHERE AccountNumber IN
(SELECT AccountNumber FROM LoanAccounts
UNION SELECT AccountNumber FROM SavingAccounts)

```
END
B. CREATE TRIGGER TrgValidateAccountNumber
ON Transactions
FOR INSERT
AS
BEGIN
INSERT INTO Transactions
SELECT TransactionID, AccountNumber, Amount, TransactionDate FROM inserted
WHERE AccountNumber IN
(SELECT AccountNumber FROM LoanAccounts
UNION SELECT AccountNumber FROM SavingAccounts)
END
C. CREATE TRIGGER TrgValidateAccountNumber
ON Transactions
INSTEAD OF INSERT
AS
BEGIN
IF EXISTS (
SELECT AccountNumber FROM inserted EXCEPT
(SELECT AccountNumber FROM LoanAccounts
UNION SELECT AccountNumber FROM SavingAccounts))
BEGIN
ROLLBACK TRAN
END
END
D. CREATE TRIGGER TrgValidateAccountNumber
ON Transactions
FOR INSERT
AS
BEGIN
IF EXISTS (
SELECT AccountNumber FROM inserted EXCEPT
(SELECT AccountNumber FROM LoanAccounts
UNION SELECT AccountNumber FROM SavingAccounts))
BEGIN
ROLLBACK TRAN
END
END
```

Answer: A

Question: 61

You develop a Microsoft SQL Server 2012 database. You create a view that performs the following tasks:
Joins 8 tables that contain up to 500,000 records each.
Performs aggregations on 5 fields.
The view is frequently used in several reports.
You need to improve the performance of the reports.
What should you do?

- A. Convert the view into a table-valued function.

- B. Convert the view into a Common Table Expression (CTE).
- C. Convert the view into an indexed view.
- D. Convert the view into a stored procedure and retrieve the result from the stored procedure into a temporary table.

Answer: C

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms191432.aspx>

Question: 62

You are a database developer of a Microsoft SQL Server 2012 database.

The database contains a table named Customers that has the following definition:

```
CREATE TABLE Customer
(CustomerID INT NOT NULL PRIMARY KEY,
 CustomerName VARCHAR(255) NOT NULL,
 CustomerAddress VARCHAR(1000) NOT NULL)
```

You are designing a new table named Orders that has the following definition:

```
CREATE TABLE Orders
(OrderID INT NOT NULL PRIMARY KEY,
 CustomerID INT NOT NULL,
 OrderDescription VARCHAR(2000))
```

You need to ensure that the CustomerId column in the Orders table contains only values that exist in the CustomerId column of the Customer table.

Which Transact-SQL statement should you use?

- A. ALTER TABLE Orders
ADD CONSTRAINT FX_Orders_CustomerID FOREIGN KEY (CustomerId) REFERENCES
Customer (CustomerId)
- B. ALTER TABLE Customer
ADD CONSTRAINT FK_Customer_CustomerID FOREIGN KEY {CustomerID} REFERENCES
Orders (CustomerId)
- C. ALTER TABLE Orders
ADD CONSTRAINT CK_Orders_CustomerID
CHECK (CustomerId IN (SELECT CustomerId FROM Customer))
- D. ALTER TABLE Customer
ADD OrderId INT NOT NULL;
ALTER TABLE Customer
ADD CONSTRAINT FK_Customer_OrderID FOREIGN KEY (OrderID) REFERENCES Orders
(OrderID);
- E. ALTER TABLE Orders
ADD CONSTRAINT PK_Orders CustomerId PRIMARY KEY (CustomerID)

Answer: A

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms189049.aspx>

Question: 63

You have three tables that contain data for dentists, psychiatrists, and physicians. You create a view that is used to look up their email addresses and phone numbers.

The view has the following definition:

```
Create view apt.vwProviderList
(Specialty, CompanyID, CompanyNumber, LastName,
 FirstName, BusinessName, Email, Phone)

as

SELECT 'Dentist' as Specialty
, DentistID
, DentistNumber
, DentistLastName
, DentistFirstName
, DentistBusinessName
, Email
, Phone
FROM apt.Dentist
UNION ALL
SELECT 'Psychiatrist' as Specialty
, PsychiatristID
, PsychiatristNumber
, PsychiatristLastName
, PsychiatristFirstName
, PsychiatristBusinessName
, Email
, Phone
SELECT 'Physician' as Specialty
, PhysicianID
, PhysicianNumber
, PhysicianLastName
, PhysicianFirstName
, PhysicianBusinessName
, Email
, Phone
FROM apt.Physician
GO
```

You need to ensure that users can update only the phone numbers and email addresses by using this view. What should you do?

- Alter the view. Use the EXPAND VIEWS query hint along with each SELECT statement.
- Create an INSTEAD OF UPDATE trigger on the view.
- Drop the view. Re-create the view by using the SCHEMABINDING clause, and then create an index on the view.
- Create an AFTER UPDATE trigger on the view.

Answer: B

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms187956.aspx>

Question: 64

You develop a Microsoft SQL Server 2012 database. You create a view from the Orders and OrderDetails tables by using the following definition.

```
CREATE VIEW vOrders
WITH SCHEMABINDING
AS
SELECT o.ProductID,
       o.OrderDate,
       SUM(od.UnitPrice * od.OrderQty) AS Amount
  FROM OrderDetails AS od INNER JOIN
       Orders AS o ON od.OrderID = o.OrderID
 WHERE od.SalesOrderID = o.SalesOrderID
 GROUP BY o.OrderDate, o.ProductID
GO
```

You need to ensure that users are able to modify data by using the view.

What should you do?

- A. Create an AFTER trigger on the view.
- B. Modify the view to use the WITH VIEW_METADATA clause.
- C. Create an INSTEAD OF trigger on the view.
- D. Modify the view to an indexed view.

Answer: C

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms187956.aspx>

Question: 65

Your database contains tables named Products and ProductsPriceLog. The Products table contains columns named ProductCode and Price. The ProductsPriceLog table contains columns named ProductCode, OldPrice, and NewPrice. The ProductsPriceLog table stores the previous price in the OldPrice column and the new price in the NewPrice column.

You need to increase the values in the Price column of all products in the Products table by 5 percent. You also need to log the changes to the ProductsPriceLog table.

Which Transact-SQL query should you use?

- A. UPDATE Products SET Price = Price * 1.05
OUTPUT inserted.ProductCode, deleted.Price, inserted.Price
INTO ProductsPriceLog(ProductCode, OldPrice, NewPrice)
- B. UPDATE Products SET Price = Price * 1.05
OUTPUT inserted.ProductCode, inserted.Price, deleted.Price
INTO ProductsPriceLog(ProductCode, OldPrice, NewPrice)
- C. UPDATE Products SET Price = Price * 1.05
OUTPUT inserted.ProductCode, deleted.Price, inserted.Price * 1.05

```
INTO ProductsPriceLog(ProductCode, OldPrice, NewPrice)
D. UPDATE Products SET Price = Price * 1.05
INSERT INTO ProductsPriceLog(ProductCode, OldPrice, NewPrice)
SELECT ProductCode, Price, Price * 1.05 FROM Products
```

Answer: A

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms177564.aspx>

Question: 66

You are developing a database application by using Microsoft SQL Server 2012.

An application that uses a database begins to run slowly.

Your investigation shows the root cause is a query against a read-only table that has a clustered index.

The query returns the following six columns:

One column in its WHERE clause contained in a non-clustered index

Four additional columns

One COUNT (*) column based on a grouping of the four additional columns

You need to optimize the statement.

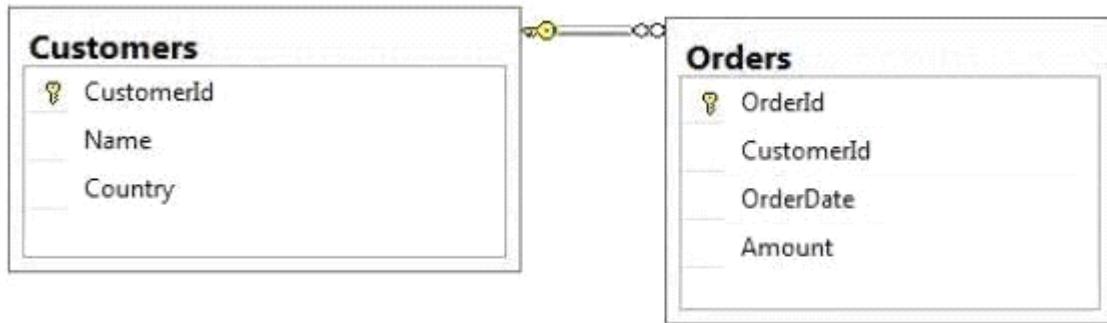
What should you do?

- A. Add a HASH hint to the query.
- B. Add a LOOP hint to the query.
- C. Add a FORCESEEK hint to the query.
- D. Add an INCLUDE clause to the index.
- E. Add a FORCESCAN hint to the Attach query.
- F. Add a columnstore index to cover the query.
- G. Enable the optimize for ad hoc workloads option.
- H. Cover the unique clustered index with a columnstore index.
- I. Include a SET FORCEPLAN ON statement before you run the query.
- J. Include a SET STATISTICS PROFILE ON statement before you run the query.
- K. Include a SET STATISTICS SHOWPLAN_XML ON statement before you run the query.
- L. Include a SET TRANSACTION ISOLATION LEVEL REPEATABLE READ statement before you run the query.
- M. Include a SET TRANSACTION ISOLATION LEVEL SNAPSHOT statement before you run the query.
- N. Include a SET TRANSACTION ISOLATION LEVEL SERIALIZABLE statement before you run the query.

Answer: F

Question: 67

You administer a Microsoft SQL Server 2012 database named ContosoDb. Tables are defined as shown in the exhibit.
(Click the Exhibit button.)



You need to display rows from the Orders table for the Customers row having the CustomerId value set to 1 in the following XML format.

```

<Customers>
  <Name>Customer A</Name>
  <Country>Australia</Country>
  <Orders>
    <OrderId>1</OrderId>
    <OrderDate>2000-01-01T00:00:00</OrderDate>
    <Amount>3400.00</Amount>
  </Orders>
  <Orders>
    <OrderId>2</OrderId>
    <OrderDate>2001-01-01T00:00:00</OrderDate>
    <Amount>4300.00</Amount>
  </Orders>
</Customers>
  
```

Which Transact-SQL query should you use?

- A. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW
- B. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML RAW, ELEMENTS
- C. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO
- D. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS
- E. SELECT Name, Country, OrderId, OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO
- F. SELECT Name, Country, OrderId, OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1

FOR XML AUTO, ELEMENTS

G. SELECT Name AS '@Name', Country AS '@Country', OrderId, OrderDate, Amount FROM Orders

INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId

WHERE Customers.CustomerId = 1

FOR XML PATH ('Customers')

H. SELECT Name AS 'Customers/Name', Country AS 'Customers/Country', OrderId, OrderDate, Amount FROM Orders

INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId

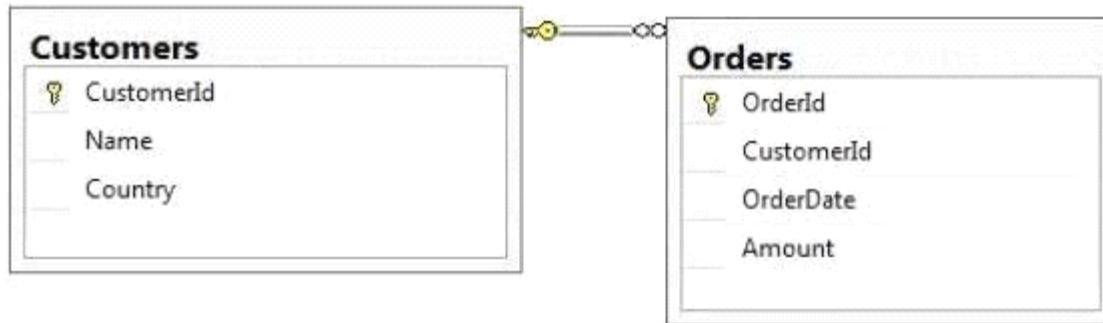
WHERE Customers.CustomerId = 1

FOR XML PATH ('Customers')

Answer: F

Question: 68

You administer a Microsoft SQL Server 2012 database named ContosoDb. Tables are defined as shown in the exhibit. (Click the Exhibit button.)



You need to display rows from the Orders table for the Customers row having the CustomerId value set to 1 in the following XML format.

```

<Customers Name="Customer A" Country="Australia">
    <OrderId>1</OrderId>
    <OrderDate>2000-01-01T00:00:00</OrderDate>
    <Amount>3400.00</Amount>
</Customers>
<Customers Name="Customer A" Country="Australia">
    <OrderId>2</OrderId>
    <OrderDate>2001-01-01T00:00:00</OrderDate>
    <Amount>4300.00</Amount>
</Customers>
  
```

Which Transact-SQL query should you use?

A. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders

INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId

WHERE Customers.CustomerId = 1

FOR XML RAW

B. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders

INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId

WHERE Customers.CustomerId = 1

FOR XML RAW, ELEMENTS

C. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO

D. SELECT OrderId, OrderDate, Amount, Name, Country FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS

E. SELECT Name, Country, OrderId, OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO

F. SELECT Name, Country, OrderId, OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML AUTO, ELEMENTS

G. SELECT Name AS '@Name', Country AS '@Country', OrderId, OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML PATH ('Customers')

H. SELECT Name AS 'Customers/Name', Country AS 'Customers/Country', OrderId,
OrderDate, Amount FROM Orders
INNER JOIN Customers ON Orders.CustomerId = Customers.CustomerId
WHERE Customers.CustomerId = 1
FOR XML PATH ('Customers')

Answer: G

Question: 69

You use Microsoft SQL Server 2012 to write code for a transaction that contains several statements.
There is high contention between readers and writers on several tables used by your transaction.
You need to minimize the use of the tempdb space. You also need to prevent reading queries from blocking writing queries.
Which isolation level should you use?

- A. SERIALIZABLE
- B. SNAPSHOT
- C. READ COMMITTED SNAPSHOT
- D. REPEATABLE READ

Answer: C

Explanation:
Reference: <http://msdn.microsoft.com/en-us/library/ms173763.aspx>

Question: 70

You create a table that has the StudentCode, SubjectCode, and Marks columns to record mid-year marks for students.

The table has marks obtained by 50 students for various subjects.

You need to ensure that the top half of the students arranged by their average marks must be given a rank of 1 and the remaining students must be given a rank of 2. Which Transact-SQL query should you use?

- A. SELECT StudentCode as Code,
RANK() OVER (ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode
- B. SELECT Id, Name, Marks,
DENSE_RANK() OVER (ORDER BY Marks DESC) AS Rank
FROM StudentMarks
- C. SELECT StudentCode as Code,
DENSE_RANK() OVER (ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode
- D. SELECT StudentCode as Code,
NTILE (2) OVER (ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode
- E. SELECT StudentCode AS Code,Marks AS Value FROM (
SELECT StudentCode, Marks AS Marks,
RANK() OVER (PARTITION BY SubjectCode ORDER BY Marks ASC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1
- F. SELECT StudentCode AS Code,Marks AS Value FROM (
SELECT StudentCode, Marks AS Marks,
RANK() OVER (PARTITION BY SubjectCode ORDER BY Marks DESC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1
- G. SELECT StudentCode AS Code,Marks AS Value FROM (
SELECT StudentCode, Marks AS Marks,
RANK () OVER (PARTITION BY StudentCode ORDER BY Marks ASC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1
- H. SELECT StudentCode AS Code,Marks AS Value FROM (
SELECT StudentCode, Marks AS Marks,
RANXO OVER (PARTITION BY StudentCode ORDER BY Marks DESC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1

Answer: D

Question: 71

You create a table that has the StudentCode, SubjectCode, and Marks columns to record mid-year marks for students. The table has marks obtained by 50 students for various subjects.

You need to ensure that the following requirements are met:

Students must be ranked based on their average marks.

If one or more students have the same average, the same rank must be given to these students.

Consecutive ranks must be skipped when the same rank is assigned.

Which Transact-SQL query should you use?

A. SELECT StudentCode as Code,
RANK() OVER(ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode

B. SELECT Id, Name, Marks,
DENSE_RANK() OVER(ORDER BY Marks DESC) AS Rank
FROM StudentMarks

C. SELECT StudentCode as Code,
DENSE_RANK() OVER(ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode

D. SELECT StudentCode as Code,
NTILE(2) OVER(ORDER BY AVG (Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode

E. SELECT StudentCode AS Code,Marks AS Value FROM (
SELECT StudentCode, Marks AS Marks,
RANK() OVER(PARTITION BY SubjectCode ORDER BY Marks ASC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1

F. SELECT StudentCode AS Code,Marks AS Value FROM (
SELECT StudentCode, Marks AS Marks,
RANK() OVER(PARTITION BY SubjectCode ORDER BY Marks DESC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1

G. SELECT StudentCode AS Code,Marks AS Value FROM (
SELECT StudentCode, Marks AS Marks,
RANK() OVER(PARTITION BY StudentCode ORDER BY Marks ASC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1

H. SELECT StudentCode AS Code,Marks AS Value FROM (
SELECT StudentCode, Marks AS Marks,
RANK() OVER(PARTITION BY StudentCode ORDER BY Marks DESC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1

Answer: A

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms189798.aspx>

Question: 72

You create a table that has the StudentCode, SubjectCode, and Marks columns to record mid-year marks for students.

The table has marks obtained by 50 students for various subjects.

You need to retrieve the students who scored the highest marks for each subject along with the marks.

Which Transact-SQL query should you use?

- A. SELECT StudentCode as Code, RANK() OVER(ORDER BY AVG(Marks) DESC) AS Value
FROM StudentMarks

GROUP BY StudentCode
B. SELECT Id, Name, Marks, DENSE_RANK() OVER(ORDER BY Marks DESC) AS Rank
FROM StudentMarks
C. SELECT StudentCode as Code, DENSE_RANK() OVER(ORDER BY AVG(Marks) DESC) AS
Value
FROM StudentMarks
GROUP BY StudentCode
D. SELECT StudentCode as Code, NTILE(2) OVER(ORDER BY AVG(Marks) DESC) AS Value
FROM StudentMarks
GROUP BY StudentCode
E. SELECT StudentCode AS Code, Marks AS Value FROM (SELECT StudentCode, Marks AS Marks,
RANK() OVER(PARTITION BY SubjectCode ORDER BY Marks ASC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1
F. SELECT StudentCode AS Code, Marks AS Value FROM (SELECT StudentCode, Marks AS Marks,
RANK() OVER(PARTITION BY SubjectCode ORDER BY Marks DESC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1
G. SELECT StudentCode AS Code, Marks AS Value FROM (SELECT StudentCode, Marks AS Marks,
RANK() OVER(PARTITION BY StudentCode ORDER BY Marks ASC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1
H. SELECT StudentCode AS Code, Marks AS Value FROM (SELECT StudentCode, Marks AS Marks,
RANK() OVER(PARTITION BY StudentCode ORDER BY Marks DESC) AS Rank
FROM StudentMarks) tmp
WHERE Rank = 1

Answer: F

Question: 73

You use a contained database named ContosoDb within a domain. You need to create a user who can log on to the ContosoDb database. You also need to ensure that you can port the database to different database servers within the domain without additional user account configurations.

Which type of user should you create?

- A. SQL user without login
- B. SQL user with a custom SID
- C. SQL user with login
- D. Domain user

Answer: A

Question: 74

You administer several Microsoft SQL Server 2012 database servers. Merge replication has been configured for an

application that is distributed across offices throughout a wide area network (WAN). Many of the tables involved in replication use the XML and varchar (max) data types. Occasionally, merge replication fails due to timeout errors. You need to reduce the occurrence of these timeout errors. What should you do?

- A. Set the Merge agent on the problem subscribers to use the slow link agent profile.
- B. Create a snapshot publication, and reconfigure the problem subscribers to use the snapshot publication.
- C. Change the Merge agent on the problem subscribers to run continuously.
- D. Set the Remote Connection Timeout on the Publisher to 0.

Answer: A

Question: 75

You administer a Microsoft SQL Server 2012 database that has Trustworthy set to On. You create a stored procedure that returns database-level information from Dynamic Management Views. You grant User1 access to execute the stored procedure. You need to ensure that the stored procedure returns the required information when User1 executes the stored procedure. You need to achieve this goal by granting the minimum permissions required. What should you do? (Each correct answer presents a complete solution. Choose all that apply.)

- A. Create a SQL Server login that has VIEW SERVER STATE permissions. Create an application role and a secured password for the role.
- B. Modify the stored procedure to include the EXECUTE AS OWNER statement. Grant VIEW SERVER STATE permissions to the owner of the stored procedure.
- C. Create a SQL Server login that has VIEW SERVER STATE permissions. Modify the stored procedure to include the EXECUTE AS {newlogin} statement.
- D. Grant the db_owner role on the database to User1.
- E. Grant the sysadmin role on the database to User1.

Answer: D, E

Question: 76

You develop a Microsoft SQL Server 2012 database that contains tables named Customers and Orders. The tables are related by a column named CustomerId.

You need to create a query that meets the following requirements:

Returns the CustomerName for all customers and the OrderDate for any orders that they have placed.

Results must not include customers who have not placed any orders.

Which Transact-SQL query should you use?

- A.

```
SELECT CustomerName, OrderDate
FROM Customers
LEFT OUTER JOIN Orders
ON Customers.CustomerID = Orders.CustomerId
```
- B.

```
SELECT CustomerName, OrderDate
FROM Customers
RIGHT OUTER JOIN Orders
ON Customers.CustomerID = Orders.CustomerId
```
- C.

```
SELECT CustomerName, OrderDate
FROM Customers
CROSS JOIN Orders
```

```
ON Customers.CustomerId = Orders.CustomerId  
D. SELECT CustomerName, OrderDate  
FROM Customers  
JOIN Orders  
ON Customers.CustomerId = Orders.CustomerId
```

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms177634.aspx>

Question: 77

You develop a Microsoft SQL Server 2012 database. You need to create a batch process that meets the following requirements:

Status information must be logged to a status table.

If the status table does not exist at the beginning of the batch, it must be created.

Which object should you use?

- A. Scalar user-defined function
- B. Inline user-defined function
- C. Table-valued user-defined function
- D. Stored procedure

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms186755.aspx>

Question: 78

You administer a database that includes a table named *Customers* that contains more than 750 rows. You create a new column named *PartitionNumber* of the int type in the table.

You need to assign a *PartitionNumber* for each record in the *Customers* table. You also need to ensure that the *PartitionNumber* satisfies the following conditions:

Always starts with 1.

Starts again from 1 after it reaches 100.

Which Transact-SQL statement should you use?

- A. CREATE SEQUENCE CustomerSequence AS int
START WITH 0
INCREMENT BY 1
MINVALUE 1
MAXVALUE 100
UPDATE Customers SET PartitionNumber = NEXT VALUE FOR CustomerSequence
DROP SEQUENCE CustomerSequence
- B. CREATE SEQUENCE CustomerSequence AS int
START WITH 1
INCREMENT BY 1
MINVALUE 1

```
MAXVALUE 100
CYCLE
UPDATE Customers SET PartitionNumber = NEXT VALUE FOR CustomerSequence
DROP SEQUENCE CustomerSequence
C. CREATE SEQUENCE CustomerSequence AS int
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 100
UPDATE Customers SET PartitionNumber = NEXT VALUE FOR CustomerSequence + 1
DROP SEQUENCE CustomerSequence
D. CREATE SEQUENCE CustomerSequence AS int
START WITH 1
INCREMENT BY 1
MINVALUE 0
MAXVALUE 100
CYCLE
UPTATE Customers SET PartitionNumber = NEXT VALUE FOR CustomerSequence
DROP SEQUENCE CustomerSequence
```

Answer: B

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ff878091.aspx>

Question: 79

You use Microsoft SQL Server 2012 to develop a database application.

You need to create an object that meets the following requirements:

Takes an input variable

Returns a table of values

Cannot be referenced within a view

Which object should you use?

A. Scalar-valued function

B. Inline function

C. User-defined data type

D. Stored procedure

Answer: D

Question: 80

You are a database developer for an application hosted on a Microsoft SQL Server 2012 server.

The database contains two tables that have the following definitions:

```

CREATE TABLE Customer
(CustomerID int NOT NULL PRIMARY KEY,
 CustomerName varchar(50) NOT NULL)

CREATE TABLE Orders
(OrderID int NOT NULL PRIMARY KEY,
 CustomerID int NOT NULL FOREIGN KEY REFERENCES Customer (CustomerID),
 OrderAmount money NOT NULL,
 ShippingCountry varchar(50) NOT NULL)

```

Global customers place orders from several countries.

You need to view the country from which each customer has placed the most orders.

Which Transact-SQL query do you use?

A. SELECT c.CustomerID, c.CustomerName, o.ShippingCountry

```

FROM Customer c
INNER JOIN
(SELECT CustomerID, ShippingCountry,
RANK() OVER (PARTITION BY CustomerID
ORDER BY COUNT(OrderAmount) DESC) AS Rnk
FROM Orders
GROUP BY CustomerID, ShippingCountry) AS o
ON c.CustomerID = o.CustomerID
WHERE o.Rnk = 1

```

B. SELECT c.CustomerID, c.CustomerName, o.ShippingCountry

```

FROM
(SELECT c.CustomerID, c.CustomerName, o.ShippingCountry,
RANK() OVER (PARTITION BY CustomerID
ORDER BY COUNT(o.OrderAmount) ASC) AS Rnk
FROM Customer c
INNER JOIN Orders o
ON c.CustomerID = o.CustomerID
GROUP BY c.CustomerID, c.CustomerName, o.ShippingCountry) cs
WHERE Rnk = 1

```

C. SELECT c.CustomerID, c.CustomerName, o.ShippingCountry

```

FROM Customer c
INNER JOIN
(SELECT CustomerID, ShippingCountry,
RANK() OVER (PARTITION BY CustomerID
ORDER BY OrderAmount DESC) AS Rnk
FROM Orders
GROUP BY CustomerID, ShippingCountry) AS o
ON c.CustomerID = o.CustomerID
WHERE o.Rnk = 1

```

D. SELECT c.CustomerID, c.CustomerName, o.ShippingCountry

```

FROM Customer c
INNER JOIN
(SELECT CustomerID, ShippingCountry,
COUNT(OrderAmount) DESC) AS OrderAmount
FROM Orders
GROUP BY CustomerID, ShippingCountry) AS o
ON c.CustomerID = o.CustomerID
ORDER BY OrderAmount DESC

```

Answer: A

Question: 81

You use Microsoft SQL Server 2012 to develop a database application.

You need to implement a computed column that references a lookup table by using an INNER JOIN against another table.

What should you do?

- A. Reference a user-defined function within the computed column.
- B. Create a BEFORE trigger that maintains the state of the computed column.
- C. Add a default constraint to the computed column that implements hard-coded values.
- D. Add a default constraint to the computed column that implements hard-coded CASE statements.

Answer: A

Question: 82

You administer a Microsoft SQL Server 2012 database named ContosoDb. The database contains a table named Suppliers and a column named IsActive in the Purchases schema

a. You create a new user named ContosoUser in ContosoDb. ContosoUser has no permissions to the Suppliers table. You need to ensure that ContosoUser can delete rows that are not active from Suppliers. You also need to grant ContosoUser only the minimum required permissions. Which Transact-SQL statement should you use?

- A. GRANT DELETE ON Purchases.Suppliers TO ContosoUser
- B. CREATE PROCEDURE Purchases.PurgeInactiveSuppliers
WITH EXECUTE AS USER = 'dbo'
AS
DELETE FROM Purchases.Suppliers WHERE IsActive = 0
GO
GRANT EXECUTE ON Purchases.PurgeInactiveSuppliers TO ContosoUser
- C. GRANT SELECT ON Purchases.Suppliers TO ContosoUser
- D. CREATE PROCEDURE Purchases.PurgeInactiveSuppliers
AS
DELETE FROM Purchases.Suppliers WHERE IsActive = 0
GO
GRANT EXECUTE ON Purchases.PurgeInactiveSuppliers TO ContosoUser

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms188354.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms187926.aspx>

Question: 83

You administer a Microsoft SQL Server 2012 server. You plan to deploy new features to an application. You need to evaluate existing and potential clustered and non-clustered indexes that will improve performance.

What should you do?

- A. Query the sys.dm_db_index_usage_stats DMV.
- B. Query the sys.dm_db_missing_index_details DMV.
- C. Use the Database Engine Tuning Advisor.
- D. Query the sys.dm_db_missing_index_columns DMV.

Answer: C

Question: 84

You administer a Microsoft SQL Server database named Sales. The database is 3 terabytes in size. The Sales database is configured as shown in the following table.

Filegroup	File
PRIMARY	<ul style="list-style-type: none">• Sales.mdf
XACTIONS	<ul style="list-style-type: none">• Sales_1.ndf• Sales_2.ndf• Sales_3.ndf
ARCHIVES	<ul style="list-style-type: none">• SalesArch_1.ndf• SalesArch_2.ndf

You discover that Sales_2.ndf is corrupt. You need to recover the corrupted data in the minimum amount of time. What should you do?

- A. Perform a file restore.
- B. Perform a transaction log restore.
- C. Perform a restore from a full backup.
- D. Perform a filegroup restore.

Answer: A

Question: 85

Your database contains a table named SalesOrders. The table includes a DATETIME column named OrderTime that stores the date and time each order is placed. There is a non-clustered index on the OrderTime column.

The business team wants a report that displays the total number of orders placed on the current day.

You need to write a query that will return the correct results in the most efficient manner.

Which Transact-SQL query should you use?

- A. SELECT COUNT(*) FROM SalesOrders WHERE OrderTime = CONVERT(DATE, GETDATE())
- B. SELECT COUNT(*) FROM SalesOrders WHERE OrderTime = GETDATE()
- C. SELECT COUNT(*) FROM SalesOrders WHERE CONVERT(VARCHAR, OrderTime, 112) = CONVERT(VARCHAR, GETDATE(), 112)
- D. SELECT COUNT(*) FROM SalesOrders WHERE OrderTime >= CONVERT(DATE, GETDATE()) AND OrderTime < DATEADD(DAY, 1, CONVERT(DATE, GETDATE()))

Answer: D

Question: 86

Your application contains a stored procedure for each country. Each stored procedure accepts an employee identification number through the @EmpID parameter.

You plan to build a single process for each employee that will execute the stored procedure based on the country of residence.

Which approach should you use?

- A. A recursive stored procedure
- B. Trigger
- C. An UPDATE statement that includes CASE
- D. Cursor
- E. The foreach SQLCLR statement

Answer: D

Question: 87

You use Microsoft SQL Server 2012 to develop a database application.

You create a stored procedure named dbo.ModifyData that can modify rows.

You need to ensure that when the transaction fails, dbo.ModifyData meets the following requirements:

Does not return an error

Closes all opened transactions

Which Transact-SQL statement should you use?

- A. BEGIN TRANSACTION
BEGIN TRY
EXEC dbo.ModifyData
COMMIT TRANSACTION
END TRY
BEGIN CATCH
IF @@TRANCOUNT = 0
ROLLBACK TRANSACTION;
END CATCH
- B. BEGIN TRANSACTION
BEGIN TRY
EXEC dbo.ModifyData
COMMIT TRANSACTION
END TRY
BEGIN CATCH
IF @@ERROR != 0
ROLLBACK TRANSACTION;
THROW;
- C. BEGIN TRANSACTION
BEGIN TRY
EXEC dbo.ModifyData
COMMIT TRANSACTION
END TRY

```
BEGIN CATCH
IF @@TRANCOUNT = 0
ROLLBACK TRANSACTION;
THROW;
END CATCH
D. BEGIN TRANSACTION
BEGIN TRY
EXEC dbo.ModifyData
COMMIT TRANSACTION
END TRY
BEGIN CATCH
IF @@ERROR != 0
ROLLBACK TRANSACTION;
END CATCH
```

Answer: D

Question: 88

You are developing a database application by using Microsoft SQL Server 2012.

An application that uses a database begins to run slowly.

You discover that during reads, the transaction experiences blocking from concurrent updates.

You need to ensure that throughout the transaction the data maintains the original version.

What should you do?

- A. Add a HASH hint to the query.
- B. Add a LOOP hint to the query.
- C. Add a FORCESEEK hint to the query.
- D. Add an INCLUDE clause to the index.
- E. Add a FORCESCAN hint to the Attach query.
- F. Add a columnstore index to cover the query.
- G. Enable the optimize for ad hoc workloads option.
- H. Cover the unique clustered index with a columnstore index.
- I. Include a SET FORCEPLAN ON statement before you run the query.
- J. Include a SET STATISTICS PROFILE ON statement before you run the query.
- K. Include a SET STATISTICS SHOWPLAN_XML ON statement before you run the query.
- L. Include a SET TRANSACTION ISOLATION LEVEL REPEATABLE READ statement before you run the query.
- M. Include a SET TRANSACTION ISOLATION LEVEL SNAPSHOT statement before you run the query.
- N. Include a SET TRANSACTION ISOLATION LEVEL SERIALIZABLE statement before you run the query.

Answer: M

Question: 89

You are developing a database application by using Microsoft SQL Server 2012.

You have a query that runs slower than expected.

You need to capture execution plans that will include detailed information on missing indexes recommended by the query optimizer.

What should you do?

- A. Add a HASH hint to the query.
- B. Add a LOOP hint to the query.
- C. Add a FORCESEEK hint to the query.
- D. Add an INCLUDE clause to the index.
- E. Add a FORCESCAN hint to the Attach query.
- F. Add a columnstore index to cover the query.
- G. Enable the optimize for ad hoc workloads option.
- H. Cover the unique clustered index with a columnstore index.
- I. Include a SET FORCEPLAN ON statement before you run the query.
- J. Include a SET STATISTICS PROFILE ON statement before you run the query.
- K. Include a SET STATISTICS SHOWPLAN_XML ON statement before you run the query.
- L. Include a SET TRANSACTION ISOLATION LEVEL REPEATABLE READ statement before you run the query.
- M. Include a SET TRANSACTION ISOLATION LEVEL SNAPSHOT statement before you run the query.
- N. Include a SET TRANSACTION ISOLATION LEVEL SERIALIZABLE statement before you run the query.

Answer: K

Question: 90

You are developing a database application by using Microsoft SQL Server 2012.
An application that uses a database begins to run slowly.
You discover that a large amount of memory is consumed by single-use dynamic queries.
You need to reduce procedure cache usage from these statements without creating any additional indexes.
What should you do?

- A. Add a HASH hint to the query.
- B. Add a LOOP hint to the query.
- C. Add a FORCESEEK hint to the query.
- D. Add an INCLUDE clause to the index.
- E. Add a FORCESCAN hint to the Attach query.
- F. Add a columnstore index to cover the query.
- G. Enable the optimize for ad hoc workloads option.
- H. Cover the unique clustered index with a columnstore index.
- I. Include a SET FORCEPLAN ON statement before you run the query.
- J. Include a SET STATISTICS PROFILE ON statement before you run the query.
- K. Include a SET STATISTICS SHOWPLAN_XML ON statement before you run the query.
- L. Include a SET TRANSACTION ISOLATION LEVEL REPEATABLE READ statement before you run the query.
- M. Include a SET TRANSACTION ISOLATION LEVEL SNAPSHOT statement before you run the query.
- N. Include a SET TRANSACTION ISOLATION LEVEL SERIALIZABLE statement before you run the query.

Answer: G

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/cc645587.aspx>

Question: 91

CORRECT TEXT

You have a database that contains the tables as shown below:

OrderDetails		
Column Name	Data Type	Allow Nulls
ListPrice	money	<input type="checkbox"/>
Quantity	int	<input type="checkbox"/>
		<input type="checkbox"/>

Customers			
	Column Name	Data Type	Allow Nulls
	CustomerID	int	<input type="checkbox"/>
	FirstName	varchar(100)	<input type="checkbox"/>
	LastName	varchar(100)	<input type="checkbox"/>
			<input type="checkbox"/>

Orders			
	Column Name	Data Type	Allow Nulls
	OrderID	int	<input type="checkbox"/>
	OrderDate	datetime	<input type="checkbox"/>
	CustomerID	int	<input type="checkbox"/>
			<input type="checkbox"/>

You have a stored procedure named Procedure1. Procedure1 retrieves all order ids after a specific date. The rows for Procedure1 are not sorted. Procedure1 has a single parameter named Parameter1. Parameter1 uses the varchar type and is configured to pass the specific date to Procedure1. A database administrator discovers that OrderDate is not being compared correctly to Parameter1 after the data type of the column is changed to datetime. You need to update the SELECT statement to meet the following requirements:

The code must NOT use aliases.

The code must NOT use object delimiters.

The objects called in Procedure1 must be able to be resolved by all users.

OrderDate must be compared to Parameter1 after the data type of Parameter1 is changed to datetime.

Which SELECT statement should you use?

To answer, type the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
SELECT Orders.OrderID
FROM Orders
WHERE Orders.OrderDate>CONVERT(datetime,@Parameter1)
```

Question: 92

You use Microsoft SQL Server 2012 database to develop a shopping cart application.
You need to invoke a table-valued function for each row returned by a query.
Which Transact-SQL operator should you use?

- A. CROSS JOIN
- B. UNPIVOT
- C. PIVOT
- D. CROSS APPLY

Answer: D

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms175156.aspx>

Question: 93

DRAG DROP

You develop a database application for a university. You need to create a view that will be indexed that meets the following requirements:

Displays the details of only students from Canada.

Allows insertion of details of only students from Canada.

Which four Transact-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

WITH ENCRYPTION
WITH CHECK OPTION
WITH SCHEMABINDING
WITH VIEW_METADATA
CREATE VIEW dbo.CanadianStudents
CREATE INDEXED VIEW dbo.CanadianStudents
AS SELECT s.LastName, s.FirstName, s.JobTitle, a.Country, e.LastQualification FROM Student s INNER JOIN NativeAddress a ON a.AddressID = s.AddressID INNER JOIN EducationHistory e ON s.StudentID = e.StudentID WHERE a.Country = 'Canada'



Answer:

WITH ENCRYPTION	CREATE VIEW dbo.CanadianStudents
	WITH SCHEMABINDING
WITH VIEW_METADATA	AS SELECT s.LastName, s.FirstName, s.JobTitle, s.Country, e.LastQualification FROM Student s INNER JOIN NativeAddress a ON a.AddressID = s.AddressID INNER JOIN EducationHistory e ON s.StudentID = e.StudentID WHERE a.Country = 'Canada'
CREATE INDEXED VIEW dbo.CanadianStudents	WITH CHECK OPTION

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms187956.aspx>

Question: 94

DRAG DROP

You create the following stored procedure. (Line numbers are included for reference only.)

```
01 CREATE PROCEDURE dbo.InsertCountryRegion
02     @CountryRegionCode nvarchar(3),
03     @Name nvarchar(50)
04 AS
05 BEGIN
06     SET NOCOUNT ON;
07     ...
08 END;
```

You need to ensure that the stored procedure performs the following tasks:

If a record exists, update the record.

If no record exists, insert a new record.

Which four Transact-SQL statements should you insert at line 07? (To answer, move the appropriate statements from the list of statements to the answer area and arrange them in the correct order.)

```

UPDATE CountryRegion
SET Name = @Name
WHERE CountryRegionCode = @CountryRegionCode

WHEN NOT MATCHED BY SOURCE THEN

WHEN NOT MATCHED BY TARGET THEN

WHEN MATCHED THEN UPDATE SET Name =
source.Name

MERGE CountryRegion AS target
USING (SELECT @CountryRegionCode, @Name)
AS source (CountryRegionCode, Name)
ON (target.CountryRegionCode =
source.CountryRegionCode)

IF (@@ROWCOUNT > 0)

INSERT INTO CountryRegion
(CountryRegionCode, Name)
VALUES (@CountryRegionCode, @Name);

INSERT (CountryRegionCode, Name)
VALUES (source.CountryRegionCode,
source.Name);

```

**Answer:**

```

UPDATE CountryRegion
SET Name = @Name
WHERE CountryRegionCode = @CountryRegionCode

WHEN NOT MATCHED BY SOURCE THEN

MERGE CountryRegion AS target
USING (SELECT @CountryRegionCode, @Name)
AS source (CountryRegionCode, Name)
ON (target.CountryRegionCode =
source.CountryRegionCode)

WHEN MATCHED THEN UPDATE SET Name =
source.Name

WHEN NOT MATCHED BY TARGET THEN
/ \
    INSERT (CountryRegionCode, Name)
    VALUES (source.CountryRegionCode,
    source.Name);

IF (@@ROWCOUNT > 0)

INSERT INTO CountryRegion
(CountryRegionCode, Name)
VALUES (@CountryRegionCode, @Name);

```

Explanation:

Reference: <http://technet.microsoft.com/en-us/library/bb510625.aspx>

Question: 95**DRAG DROP**

You use Microsoft SQL Server 2012 to develop a database application.

You create two tables by using the following table definitions.

```

CREATE TABLE Employees
(
    empid int NOT NULL
    , mgrid int NULL
    , empname varchar(25) NOT NULL
    , salary money NOT NULL
    CONSTRAINT PK_Employees PRIMARY KEY(empid)
);
CREATE TABLE Departments
(
    deptid INT NOT NULL PRIMARY KEY
    , deptname VARCHAR(25) NOT NULL
    , deptmgrid INT NULL REFERENCES Employees(empid)
);

```

You need to write a Transact-SQL statement that will support the following query:

```

SELECT D.deptid, D.deptname, D.deptmgrid
    , ST.empid, ST.empname, ST.mgrid
FROM Departments AS D
    CROSS APPLY getsubtree(D.deptmgrid) AS ST;

```

Which six Transact-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

```

CREATE FUNCTION dbo.getsubtree(@empid AS
INT)
RETURNS @TREE TABLE (
    empid INT NOT NULL
    ,empname VARCHAR(25) NOT NULL
    ,mgrid INT NULL
    ,lvl INT NOT NULL)
AS
BEGIN
    WITH Employees_Subtree(empid, empname,
    mgrid, lvl)
    AS
    (SELECT empid, empname, mgrid, 0
    FROM Employees WHERE empid = @empid
    UNION ALL
    SELECT e.empid, e.empname, e.mgrid, es.lvl+1
    FROM Employees AS e
    JOIN Employees_Subtree AS es
    ON e.mgrid = es.empid)
    SELECT * FROM Employees_Subtree;
END

```



```

CREATE PROCEDURE dbo.getsubtree(@empid AS
INT)
AS
BEGIN
    RETURN
END

```

```

INSERT INTO @TREE

SELECT empid, empname, mgrid, 0
FROM Employees
WHERE empid = @empid
UNION ALL
SELECT e.empid, e.empname, e.mgrid, es.lvl+1
FROM Employees AS e
JOIN Employees_Subtree AS es
ON e.mgrid = es.empid

```

Answer:

```
CREATE PROCEDURE dbo.getsubtree(@empid AS
INT)
AS
BEGIN
```

```
SELECT empid, empname, mgrid, 0
FROM Employees
WHERE empid = @empid
UNION ALL
SELECT e.empid, e.empname, e.mgrid, es.lvl+1
FROM Employees AS e
JOIN Employees_Subtree AS es
ON e.mgrid = es.empid
```

```
CREATE FUNCTION dbo.getsubtree(@empid AS
INT)
RETURNS @TREE TABLE (
    empid INT NOT NULL
    ,empname VARCHAR(25) NOT NULL
    ,mgrid INT NULL
    ,lvl INT NOT NULL)
AS
BEGIN
```

()

```
WITH Employees_Subtree(empid, empname,
mgrid, lvl)
AS
(SELECT empid, empname, mgrid, 0
FROM Employees WHERE empid = @empid
UNION ALL
SELECT e.empid, e.empname, e.mgrid, es.lvl+1
FROM Employees AS e
JOIN Employees_Subtree AS es
ON e.mgrid = es.empid)
```

()

```
INSERT INTO @TREE
```

```
SELECT * FROM Employees_Subtree;
```

```
RETURN
END
```

Question: 96

DRAG DROP

You use Microsoft SQL Server 2012 to develop a database application.

You create a table by using the following definition:

```
CREATE TABLE Prices (
Priceld int IDENTITY(1,1) PRIMARY KEY,
ActualPrice NUMERIC(16,9),
PredictedPrice NUMERIC(16,9)
)
```

You need to create a computed column based on a user-defined function named udf_price_index. You also need to ensure that the column supports an index.

Which three Transact-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

```
CREATE FUNCTION udf_price_index
    (@actualprice FLOAT, @predictedprice
    FLOAT)
RETURNS FLOAT
```

```
ALTER TABLE Prices ADD [PriceIndex]
AS dbo.udf_price_index([ActualPrice],
[PredictedPrice]) PERSISTED
```

```
ALTER TABLE Prices ADD [PriceIndex]
AS dbo.udf_price_index([ActualPrice],
[PredictedPrice])
```

```
AS
BEGIN
    SELECT @priceindex = CASE
        WHEN @predictedprice = 0 THEN 0
        ELSE @actualprice/@predictedprice
    END
END
GO
```

```
CREATE FUNCTION udf_price_index
    (@actualprice NUMERIC(16,9),
    @predictedprice NUMERIC(16,9))
RETURNS NUMERIC(16,9)
WITH SCHEMABINDING
```

```
AS
BEGIN
    DECLARE @priceindex NUMERIC(16,9)
    SELECT @priceindex = CASE
        WHEN @predictedprice = 0 THEN 0
        ELSE @actualprice/@predictedprice
    END
    RETURN @priceindex
END
GO
```



Answer:

```
CREATE FUNCTION udf_price_index
    (@actualprice FLOAT, @predictedprice
    FLOAT)
RETURNS FLOAT
```

```
ALTER TABLE Prices ADD [PriceIndex]
AS dbo.udf_price_index([ActualPrice],
[PredictedPrice])
```

```
AS
BEGIN
    SELECT @priceindex = CASE
        WHEN @predictedprice = 0 THEN 0
        ELSE @actualprice/@predictedprice
    END
END
GO
```

```
CREATE FUNCTION udf_price_index
    (@actualprice NUMERIC(16,9),
    @predictedprice NUMERIC(16,9))
RETURNS NUMERIC(16,9)
WITH SCHEMABINDING
```

```
AS
BEGIN
    DECLARE @priceindex NUMERIC(16,9)
    SELECT @priceindex = CASE
        WHEN @predictedprice = 0 THEN 0
        ELSE @actualprice/@predictedprice
    END
    RETURN @priceindex
END
GO
```

```
ALTER TABLE Prices ADD [PriceIndex]
AS dbo.udf_price_index([ActualPrice],
[PredictedPrice]) PERSISTED
```

Question: 97

DRAG DROP

You use Microsoft SQL Server 2012 to develop a database that has two tables named Div1Cust and Div2Cust. Each table has columns named DivisionID and CustomerId. None of the rows in Div1Cust exist in Div2Cust.

You need to write a query that meets the following requirements:

The rows in Div1Cust must be combined with the rows in Div2Cust.

The result set must have columns named Division and Customer.

Duplicates must be retained.

Which three Transact-SQL statements should you use? (To answer, move the appropriate statements from the list of statements to the answer area and arrange them in the correct order.)

```

EXCEPT
SELECT DivisionID, CustomerID
FROM Div2Cust

SELECT DISTINCT DivisionID, CustomerID
FROM Div1Cust, Div2Cust

INTERSECT
SELECT DivisionID AS Division, CustomerID AS
Customer
FROM Div1Cust

UNION ALL
INNER JOIN
UNION
SELECT DivisionID, CustomerID FROM Div1Cust,
Div2Cust
ON Div1Cust.CustID = Div2Cust.CustID
SELECT DivisionID, CustomerID
FROM Div1Cust

```

**Answer:**

```

SELECT DivisionID AS Division, CustomerID AS Customer
FROM Div1Cust
UNION ALL
SELECT DivisionID, CustomerID
FROM Div2Cust

```

Question: 98

DRAG DROP

You create a view based on the following statement:

```

CREATE VIEW dbo.vwItemList
AS
SELECT
    b.BatchID
    , b.MailItemID
    , c.ContractNum
    , c.FirstName + ' ' + c.LastName as ContractName
    , a.Address1
    , a.City + ', ' + a.State + ' ' + a.Zip
FROM BatchLog b
join Contract c on b.MailItemID = c.ContractID
join Address a on a.ContractID = c.ContractID
WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH(GETDATE(),-2));

```

You grant the Select permission to User1 for this view.

You need to change the view so that it displays only the records that were processed in the month prior to the current month. You need to ensure that after the changes, the view functions correctly for User1.

Which four Transact-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

```

DROP VIEW dbo.vwItemList;
GO
CREATE VIEW dbo.vwItemList
AS

ALTER VIEW dbo.vwItemList
AS

WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH
(GETDATE(),-2))
and b.ProcessDate <= EOMONTH(GETDATE(),-1);

WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH
(GETDATE(),-2))
and b.ProcessDate < dateadd(d, 1,EOMONTH
(GETDATE(),-1));

SELECT
    b.BatchID
    , b.MailItemID
    , c.ContractNum
    , c.FirstName + ' ' + c.LastName as
ContractName
    , a.Address1
    , a.City + ', ' + a.State + ' ' + a.Zip
FROM BatchLog b
join Contract c on b.MailItemID =
c.ContractID
join Address a on a.ContractID =
c.ContractID

GO
GRANT SELECT ON SCHEMA::vwItemList TO
User1;

```

**Answer:**

```

DROP VIEW dbo.vwItemList;
GO
CREATE VIEW dbo.vwItemList
AS

WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH
(GETDATE(),-2))
and b.ProcessDate <= EOMONTH(GETDATE(),-1);

GO
GRANT SELECT ON SCHEMA::vwItemList TO
User1;

```

```

ALTER VIEW dbo.vwItemList
AS

SELECT
    b.BatchID
    , b.MailItemID
    , c.ContractNum
    , c.FirstName + ' ' + c.LastName as
ContractName
    , a.Address1
    , a.City + ', ' + a.State + ' ' + a.Zip
FROM BatchLog b
join Contract c on b.MailItemID =
c.ContractID
join Address a on a.ContractID =
c.ContractID

WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH
(GETDATE(),-2))
and b.ProcessDate < dateadd(d, 1,EOMONTH
(GETDATE(),-1));

```

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/hh213020.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms186819.aspx>

Reference: <http://msdn.microsoft.com/en-us/library/ms173846.aspx>

Question: 99

DRAG DROP

You use a Microsoft SQL Server 2012 database.

You need to create an indexed view within the database for a report that displays Customer Name and the total revenue for that customer.

Which four T-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

```
CREATE VIEW Sales.vwCustomerRevenue  
AS  
WITH SCHEMABINDING
```

```
CREATE VIEW  
Sales.vwCustomerRevenue  
WITH SCHEMABINDING  
AS
```

```
SELECT  
O.CustomerID  
, C.CustomerName  
, SUM(O.SubTotal) as CustomerTotal  
, COUNT_BIG(*) as RecCount  
FROM Sales.SalesOrderHeader AS O  
JOIN Sales.Customer as C on C.CustomerID =  
O.CustomerID
```

```
GROUP BY  
O.CustomerID  
, C.CustomerName
```

```
GO  
CREATE UNIQUE CLUSTERED INDEX  
idx_vwCustomerRevenue  
ON Sales.vwCustomerRevenue (CustomerID);
```

```
GO  
CREATE UNIQUE INDEX idx_vwCustomerRevenue  
ON Sales.vwCustomerRevenue (CustomerID);
```



Answer:

```
CREATE VIEW Sales.vwCustomerRevenue
AS
WITH SCHEMABINDING
```

```
GROUP BY
O.CustomerID
, C.CustomerName
```

```
CREATE VIEW
Sales.vwCustomerRevenue
WITH SCHEMABINDING
AS

SELECT
O.CustomerID
, C.CustomerName
, SUM(O.SubTotal) as CustomerTotal
, COUNT_BIG(*) as RecCount
FROM Sales.SalesOrderHeader AS O
JOIN Sales.Customer as C on C.CustomerID = O.CustomerID
GO
CREATE UNIQUE CLUSTERED INDEX
idx_vwCustomerRevenue
ON Sales.vwCustomerRevenue (CustomerID);

GO
CREATE UNIQUE INDEX idx_vwCustomerRevenue
ON Sales.vwCustomerRevenue (CustomerID);
```

Explanation:

Reference: <http://msdn.microsoft.com/en-us/library/ms191432.aspx>

Read all restrictions for indexed views.

Also read this useful

question:

<http://stackoverflow.com/questions/12419330/how-to-create-indexed-view-with-select-distinct-statement-in-sql-2005>

Question: 100

DRAG DROP

You administer a Microsoft SQL Server 2012 database. You use an OrderDetail table that has the following definition:

```
CREATE TABLE [dbo].[OrderDetail]
([SalesOrderID] [int] NOT NULL,
[SalesOrderDetailID] [int] IDENTITY(1,1) NOT NULL,
[CarrierTrackingNumber] [nvarchar](25) NULL,
[OrderQty] [smallint] NOT NULL,
[ProductID] [int] NOT NULL,
[SpecialOfferID] [int] NULL,
[UnitPrice] [money] NOT NULL);
```

You need to create a non-clustered index on the SalesOrderID column in the OrderDetail table to include only rows that contain a value in the SpecialOfferID column. Which four Transact-SQL statements should you use?

(To answer, move the appropriate statements from the list of statements to the answer area and arrange them in the correct order.)

Where

FILTER ON

**Special Offer ID is not
NULL**

**ON
dbo.OrderDetail(SalesOrderID)**

**ON
dbo.OrderDetail(SalesOrderID)
AS FILTERED_INDEX**

**CREATE NONCLUSTERED
INDEX
FIndex_SpecialOfferID**

**CREATE NONCLUSTERED
FILTERED INDEX
FIndex_SpecialOrderID**

Answer:**CREATE NONCLUSTERED
INDEX
FIndex_SpecialOfferID****ON
dbo.OrderDetail(SalesOrderID)****Where****Special Offer ID is not
NULL****Question: 101****DRAG DROP**

You want to add a new GUID column named BookGUID to a table named dbo.Book that already contains data. BookGUID will have a constraint to ensure that it always has a value when new rows are inserted into dbo.Book. You need to ensure that the new column is assigned a GUID for existing rows.

Which four Transact-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

newid()	
newguid()	
WITH VALUES	
WITH EXISTING	
CONSTRAINT CK_BookGuid CHECK	
CONSTRAINT DF_BookGuid DEFAULT	
ALTER TABLE dbo.Book ADD BookGuid VARCHAR(10) NOT NULL	
ALTER TABLE dbo.Book ADD BookGuid Uniqueidentifier NULL	

Answer:

newguid()	
WITH EXISTING	
CONSTRAINT CK_BookGuid CHECK	
ALTER TABLE dbo.Book ADD BookGuid VARCHAR(10) NOT NULL	
ALTER TABLE dbo.Book ADD BookGuid Uniqueidentifier NULL	
CONSTRAINT DF_BookGuid DEFAULT	
newid()	
WITH VALUES	

Explanation:

Actually, in the real world, you don't have to use WITH VALUES at the end of the statement and it works just as well. But because the question specifically states which FOUR TSQL statements to use, we have to include it.

Reference: <http://msdn.microsoft.com/en-us/library/ms190273.aspx>

Question: 102

CORRECT TEXT

You need to create a view named uv_CustomerFullNames. The view must prevent the underlying structure of the customer table from being changed.

Part of the correct T-SQL statement has been provided in the answer area. Provide the complete code.

```
CREATE VIEW sales.uv_CustomerFullNames
AS SELECT
FirstName,
LastName
FROM Sales.Customers
```

Answer:

CORRECT TEXTPlease review the explanation part for this answer

```
CREATE VIEW sales.uv_CustomerFullNames
```

```
WITH SCHEMABINDING
AS SELECT
FirstName,
LastName
FROM Sales.Customers
```

Question: 103

CORRECT TEXT

You need to create a table named OrderDetails on a new server. OrderDetails must meet the following requirements:

Contain a new column named LineItemTotal that stores the product of ListPrice and Quantity for each row.

The calculation for a line item total must not be run every time the table is queried.

The code must NOT use any object delimiters.

The solution must ensure that LineItemTotal is stored as the last column in the table.

Part of the correct T-SQL statement has been provided in the answer area. Provide the complete code.

```
CREATE TABLE OrderDetails
(
ListPrice money NOT NULL,
Quantity int NOT NULL,
)
```

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
CREATE TABLE OrderDetails
(
ListPrice money NOT NULL,
Quantity int NOT NULL,
LineItemTotal AS (ListPrice * Quantity) PERSISTED
)
```

Question: 104

CORRECT TEXT

You have a database named Sales that contains the tables shown in the exhibit. (Click the Exhibit button.)

OrderDetails		
Column Name	Data Type	Allow Nulls
ListPrice	money	<input type="checkbox"/>
Quantity	int	<input type="checkbox"/>

Customers		
Column Name	Data Type	Allow Nulls
CustomerID	int	<input type="checkbox"/>
FirstName	varchar(100)	<input type="checkbox"/>
LastName	varchar(100)	<input type="checkbox"/>
		<input type="checkbox"/>



Orders		
Column Name	Data Type	Allow Nulls
OrderID	int	<input type="checkbox"/>
OrderDate	datetime	<input type="checkbox"/>
CustomerID	int	<input type="checkbox"/>
		<input type="checkbox"/>

You have an application named App1. You have a parameter named @Count that uses the int data type. App1 is configured to pass @Count to a stored procedure.

You need to create a stored procedure named usp_Customers for App1 that returns only the number of rows specified by the @Count parameter.

The solution must NOT use BEGIN, END, or DECLARE statements.

Part of the correct Transact-SQL statement has been provided in the answer area. Complete the Transact-SQL statement

```
CREATE PROCEDURE usp_Customers
LastName
FROM Customers
ORDER BY LastName
```

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
CREATE PROCEDURE usp_Customers @Count int
SELECT TOP(@Count)
Customers.LastName
FROM Customers
ORDER BY Customers.LastName
```

Question: 105

CORRECT TEXT

You need to create a query that calculates the total sales of each OrderID from a table named Sales.Details. The table contains two columns named OrderID and ExtendedAmount.

The solution must meet the following requirements:

Use one-part names to reference columns.

Start the order of the results from OrderID.

NOT depend on the default schema of a user.

Use an alias of TotalSales for the calculated ExtendedAmount.

Display only the OrderID column and the calculated TotalSales column.

Provide the correct code in the answer area.

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
SELECT  
OrderID,  
SUM(ExtendedAmount) AS TotalSales  
FROM Sales.Details  
GROUP BY OrderID  
ORDER BY OrderID
```

Question: 106

CORRECT TEXT

You have an XML schema collection named Sales.InvoiceSchema.

You need to declare a variable of the XML type named invoice. The solution must ensure that the invoice is validated by using Sales.InvoiceSchema.

The solution must ensure that the invoice variable is validated by using Sales.InvoiceSchema schema.

Provide the correct code in the answer area.

Answer: DECLARE

@invoice

XML(Sales.InvoiceSchema)

Question: 107

CORRECT TEXT

You have a view that was created by using the following code:

```
CREATE VIEW Sales.OrdersByTerritory  
AS  
SELECT OrderID  
,OrderDate  
,SalesTerritoryID  
,TotalDue  
FROM Sales.Orders;
```

You need to create an inline table-valued function named Sales.fn_OrdersByTerritory. Sales.fn_OrdersByTerritory must meet the following requirements:

Use one-part names to reference columns.

Return the columns in the same order as the order used in OrdersByTerritoryView.

Part of the correct T-SQL statement has been provided in the answer area. Provide the complete code.

```
RETURNS TABLE  
AS  
RETURN  
(SELECT  
    OrderID,  
    OrderDate,
```

Answer:

CORRECT TEXT Please review the explanation part for this answer

```
CREATE FUNCTION Sales.fn_OrdersByTerritory (@T int)
```

```
RETURNS TABLE
```

```
AS
```

```
RETURN
```

```
(
```

```
SELECT
```

```
    OrderID,
```

```
    OrderDate,
```

```
    SalesTerritoryID,
```

```
    TotalDue
```

```
FROM Sales.OrdersByTerritory
```

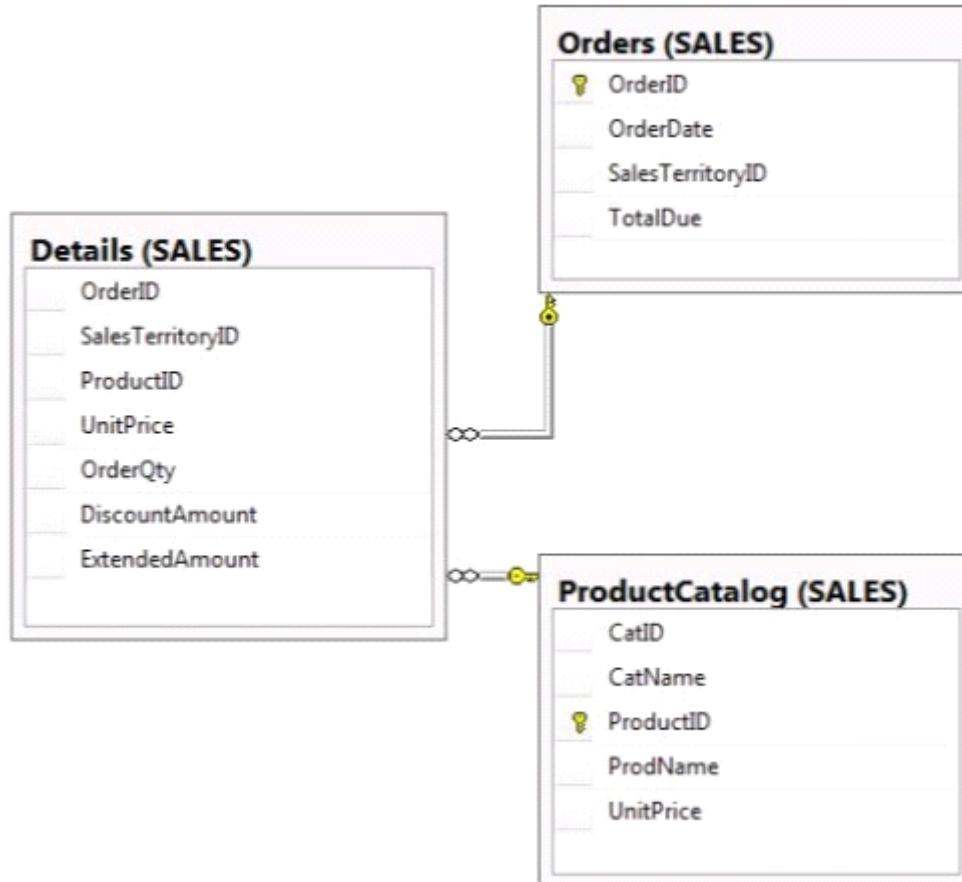
```
WHERE SalesTerritoryID=@T
```

```
)
```

Question: 108

CORRECT TEXT

You have a database named Sales that contains the tables as shown in the exhibit. (Click the Exhibit button.)



You need to create a query that meets the following requirements:

References columns by using one-part names only.

Groups aggregates only by SalesTerritoryID, and then by ProductID.

Orders the results in descending order by SalesTerritoryID and then by ProductID in descending order for both.

Part of the correct T-SQL statement has been provided in the answer area. Provide the complete code.

```
SELECT SalesTerritoryID,  
       ProductID,  
       AVG(UnitPrice),  
       MAX(OrderQty),  
       MAX(DiscountAmount)  
  FROM Sales.Details
```

Answer:

CORRECT TEXT Please review the explanation part for this answer

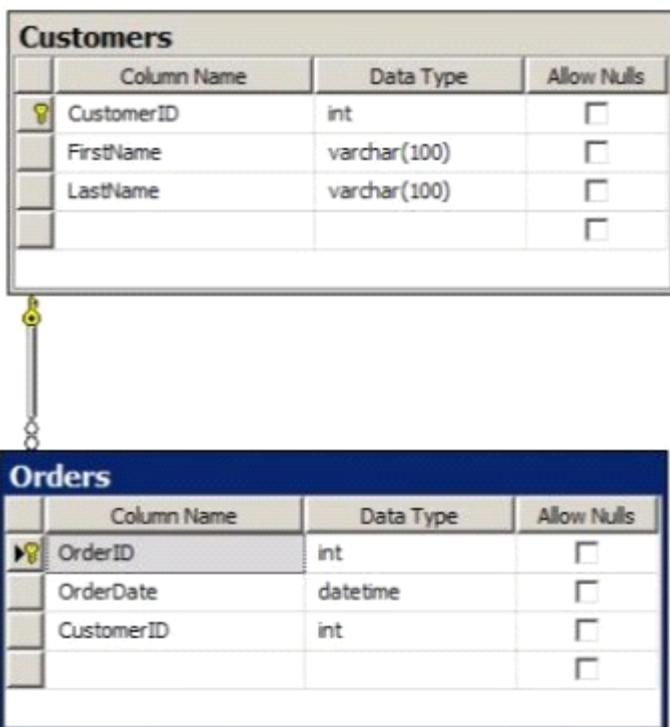
```
SELECT SalesTerritoryID,  
       ProductID,  
       AVG(UnitPrice),  
       MAX(OrderQty)  
       MAX(DiscountAmount)  
  FROM Sales.Details  
 GROUP BY SalesTerritoryID, ProductID  
 ORDER BY SalesTerritoryID DESC, ProductID DESC
```

Question: 109

CORRECT TEXT

You have a database named Sales that contains the tables shown in the exhibit. (Click the Exhibit button).

OrderDetails		
Column Name	Data Type	Allow Nulls
ListPrice	money	<input type="checkbox"/>
Quantity	int	<input type="checkbox"/>
		<input type="checkbox"/>



You need to create a query for a report. The query must meet the following requirements:

NOT use object delimiters.

Use the first initial of the table as an alias.

Return the most recent order date for each customer.

Retrieve the last name of the person who placed the order.

The solution must support the ANSI SQL-99 standard.

Part of the correct T-SQL statement has been provided in the answer area. Provide the complete code.

```
SELECT LastName,
MAX(OrderDate) AS MostRecentOrderDate
```

Answer:

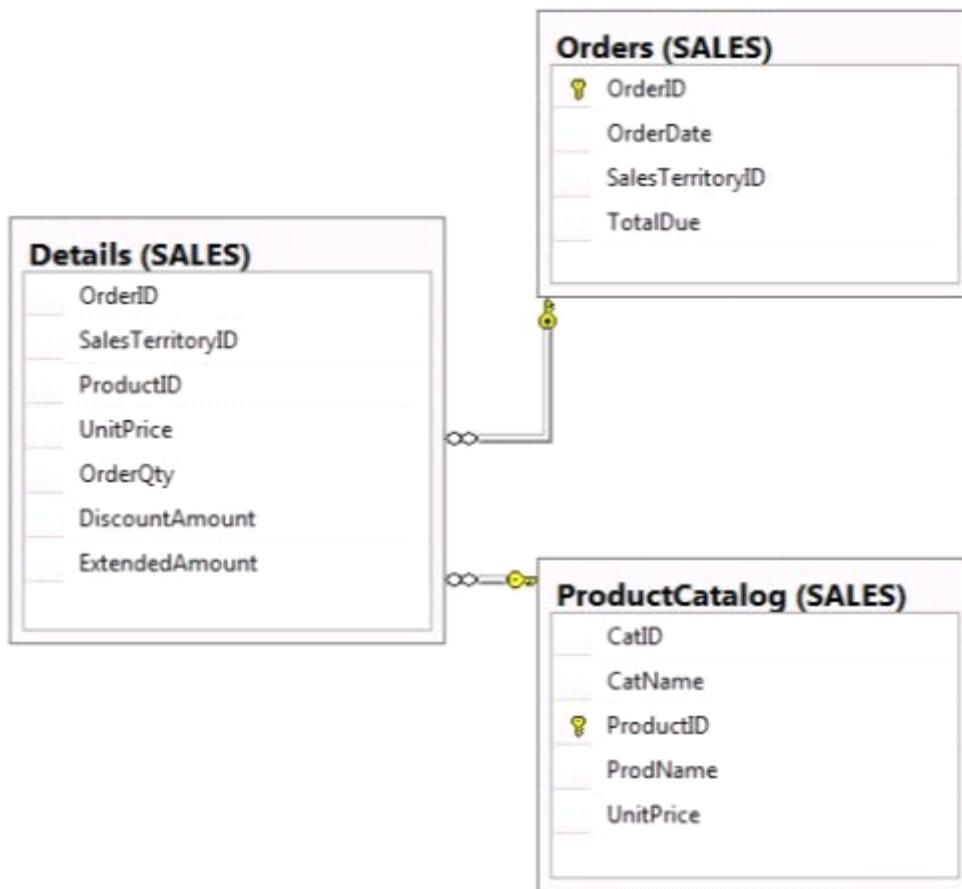
CORRECT TEXT Please review the explanation part for this answer

```
SELECT C.LastName,
MAX(O.OrderDate) AS MostRecentOrderDate
FROM Customers AS C INNER JOIN Orders AS O
ON C.CustomerID=O.CustomerID
GROUP BY C.LastName
ORDER BY MAX (O.OrderDate) DESC
```

Question: 110

CORRECT TEXT

You have a database named Sales that contains the tables as shown in the exhibit. (Click the Exhibit button.)



You need to create a query that returns a list of products from Sales.ProductCatalog. The solution must meet the following requirements:

UnitPrice must be returned in descending order.

The query must use two-part names to reference the table.

The query must use the RANK function to calculate the results.

The query must return the ranking of rows in a column named PriceRank.

The list must display the columns in the order that they are defined in the table. PriceRank must appear last.

Part of the correct T-SQL statement has been provided in the answer area. Provide the complete code.

```

SELECT CatID, CatName, ProductID, ProdName, UnitPrice,
FROM Sales.ProductCatalog
ORDER BY PriceRank
    
```

Answer:

CORRECT TEXT Please review the explanation part for this answer

```

SELECT ProductCatalog.CatID, ProductCatalog.CatName, ProductCatalog.ProductID, ProductCatalog.ProdName,
ProductCatalog.UnitPrice,
RANK() OVER (ORDER BY ProductCatalog.UnitPrice DESC) AS PriceRank
FROM Sales.ProductCatalog
ORDER BY ProductCatalog.UnitPrice DESC
    
```

Question: 111

Your database contains a table named Customer that has columns named CustomerID and Name.

You want to write a query that retrieves data from the Customer table sorted by Name listing 20 rows at a time.
You need to view rows 41 through 60.
Which Transact-SQL query should you create?

- A. `SELECT * FROM Customer ORDER BY Name FETCH ROWS BETWEEN 41 AND 60`
- B. `SELECT * FROM Customer ORDER BY Name OFFSET 40 ROWS FETCH NEXT 20 ROWS ONLY`
- C. `SELECT TOP 20 * FROM Customer ORDER BY Name`
- D. `WITH Data AS (SELECT *,Rn = ROW_NUMBER() OVER(ORDER BY CustomerID, Name) FROM Customer)
SELECT * FROM Data WHERE Data.Rn BETWEEN 40 AND 60`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: B

Question: 112

You are developing a database that will contain price information.
You need to store the prices that include a fixed precision and a scale of six digits.
Which data type should you use?

- A. Real
- B. Small money
- C. Money
- D. Decimal

Answer: D

Question: 113

You develop a database application. You create four tables. Each table stores different categories of products.
You create a Primary Key field on each table.
You need to ensure that the following requirements are met:
The fields must use the minimum amount of space.
The fields must be an incrementing series of values.
The values must be unique among the four tables.
What should you do?

- A. Create a ROWVERSION column.
- B. Create a SEQUENCE object that uses the INTEGER data type.
- C. Use the INTEGER data type along with IDENTITY
- D. Use the UNIQUEIDENTIFIER data type along with NEWSEQUENTIALID()
- E. Create a TIMESTAMP column.

Answer: D

Question: 114

DRAG DROP

You write the following SELECT statement to get the last order date for a particular customer.

```
SELECT dbo.ufnGetLastOrderDate(CustomerId)
FROM Customer
```

You need to create the user-defined function to return the last order date for the specified customer.

Which five Transact-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

SQL statements

Answer Area

```
SELECT @OrderDate = MAX(OrderDate) AS
OrderDate
FROM Sales
WHERE CustomerID = @CustomerID
RETURN @OrderDate
END
```

```
SELECT TOP 1 OrderDate
FROM Sales
WHERE CustomerID = @CustomerID
ORDER BY OrderDate
END
```

```
INSERT @OrderDate
SELECT MAX(OrderDate) AS OrderDate
FROM Sales
WHERE CustomerID = @CustomerID
RETURN
END
```

```
BEGIN
```

```
CREATE FUNCTION dbo.ufnGetLastOrderDate
(@CustomerId int)
```

```
CREATE FUNCTION dbo.ufnGetLastOrderDate
(@CustomerId int)
```

```
DECLARE @OrderDate datetime
```

```
RETURNS datetime AS
```

```
RETURNS @OrderDate TABLE (OrderDate datetime)
AS
```

Answer:

Box 1:

```
CREATE FUNCTION dbo.ufnGetLastOrderDate
(@CustomerId int)
```

Box 2:

```
RETURNS datetime AS
```

Box 3:

```
BEGIN
```

Box 4:

```
DECLARE @OrderDate datetime
```

Box 5:

```
SELECT @OrderDate = MAX(OrderDate) AS  
OrderDate  
FROM Sales  
WHERE CustomerID = @CustomerID  
RETURN @OrderDate  
END
```

Note:

- * First function header
- * Then declare that the function returns a datetime
- * Thirdly begin the function body.
- * Fourthly declare the return variable
- * At last include the code that retrieves the required date.

Question: 115

Your application contains a stored procedure for each country. Each stored procedure accepts an employee identification number through the @EmpID parameter.

You need to build a single process for each employee that will execute the appropriate stored procedure based on the country of residence.

Which approach should you use?

- A. A SELECT statement that includes CASE
- B. Cursor
- C. BULK INSERT
- D. View
- E. A user-defined function

Answer: E

SQL Server user-defined functions are routines that accept parameters, perform an action, such as a complex calculation, and return the result of that action as a value. The return value can either be a single scalar value or a result set.

Question: 116

You are developing a database application by using Microsoft SQL Server 2012.

An application that uses a database begins to run slowly.

You discover that the root cause is a query against a frequently updated table that has a clustered index. The query returns four columns: three columns in its WHERE clause contained in a non-clustered index and one additional column.

You need to optimize the statement.

What should you do?

- A. Add a HASH hint to the query.

- B. Add a LOOP hint to the query.
- C. Add a FORCESEEK hint to the query.
- D. Add an INCLUDE clause to the index.
- E. Add a FORCESCAN hint to the Attach query.
- F. Add a columnstore index to cover the query.
- G. Enable the optimize for ad hoc workloads option.
- H. Cover the unique clustered index with a columnstore index.
- I. Include a SET FORCEPLAN ON statement before you run the query.
- J. Include a SET STATISTICS PROFILE ON statement before you run the query.
- K. Include a SET STATISTICS SHOWPLAN_XML ON statement before you run the query.
- L. Include a SET TRANSACTION ISOLATION LEVEL REPEATABLE READ statement before you run the query.
- M. Include a SET TRANSACTION ISOLATION LEVEL SNAPSHOT statement before you run the query.
- N. Include a SET TRANSACTION ISOLATION LEVEL SERIALIZABLE statement before you run the query.

Answer: C

Question: 117

You administer a Microsoft SQL Server 2012 database. The database contains a table named Employee. Part of the Employee table is shown in the exhibit. (Click the Exhibit button.)

Column name	Description
EmployeeID	<ul style="list-style-type: none"> • Uniquely identifies the employee record in the table • Used throughout the database by all the other tables that reference the Employee table
EmployeeNum	<ul style="list-style-type: none"> • An alphanumeric value calculated according to company requirements • Has to be unique within the Employee table • Exists only within the Employee table
DepartmentID	<ul style="list-style-type: none"> • References another table named Department that contains data for each department in the company
ReportsToID	<ul style="list-style-type: none"> • Contains the EmployeeID of the manager to whom an employee reports

Employee (jek)	
Column Name	Condensed Type
EmployeeID	int
EmployeeNum	char(10)
LastName	nvarchar(200)
FirstName	nvarchar(200)
MiddleName	nvarchar(200)
DateHired	date
DepartmentID	int
JobTitle	varchar(200)
ReportsToID	int

Unless stated above, no columns in the Employee table reference other tables.

Confidential information about the employees is stored in a separate table named EmployeeDat

a. One record exists within EmployeeData for each record in the Employee table.

You need to assign the appropriate constraints and table properties to ensure data integrity and visibility.

On which column in the Employee table should you create a Foreign Key constraint that references a different table in the database?

- A. DateHired
- B. DepartmentID
- C. EmployeeID
- D. EmployeeNum
- E. FirstName
- F. JobTitle
- G. LastName
- H. MiddleName
- I. ReportsToID

Answer: C

Use the EmployeeID, which would be used as a primary key in the Employee table, when defining a foreign key constraint from another table in the database.

Question: 118

You administer a Microsoft SQL Server 2012 database.

The database contains a table named Employee. Part of the Employee table is shown in the exhibit. (Click the Exhibit button.)

Employee (jek)	
Column Name	Condensed Type
EmployeeID	int
EmployeeNum	char(10)
LastName	nvarchar(200)
FirstName	nvarchar(200)
MiddleName	nvarchar(200)
DateHired	date
DepartmentID	int
JobTitle	varchar(200)
ReportsToID	int

Column name	Description
EmployeeID	<ul style="list-style-type: none"> Uniquely identifies the employee record in the table Used throughout the database by all the other tables that reference the Employee table
EmployeeNum	<ul style="list-style-type: none"> An alphanumeric value calculated according to company requirements Has to be unique within the Employee table Exists only within the Employee table
DepartmentID	<ul style="list-style-type: none"> References another table named Department that contains data for each department in the company
ReportsToID	<ul style="list-style-type: none"> Contains the EmployeeID of the manager to whom an employee reports

Unless stated above, no columns in the Employee table reference other tables.

Confidential information about the employees is stored in a separate table named EmployeeDat

a. One record exists within EmployeeData for each record in the Employee table.

You need to assign the appropriate constraints and table properties to ensure data integrity and visibility.

On which column in the Employee table should you create a Primary Key constraint for this table?

- A. DateHired
- B. DepartmentID
- C. EmployeeID
- D. EmployeeNum
- E. FirstName
- F. JobTitle
- G. LastName
- H. MiddleName
- I. ReportsToID

Answer: C

Question: 119

You create a view based on the following statement:

```
CREATE VIEW dbo.vwBatchList
AS
SELECT
    b.BatchID
    , b.MailItemID
    , c.ContractNum
    , c.FirstName + ' ' + c.LastName as ContractName
    , a.Address1
    , a.City + ', ' + a.State + ' ' + a.Zip
FROM BatchLog b
join Contract c on b.MailItemID = c.ContractID
join Address a on a.ContractID = c.ContractID
WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH(GETDATE(),-2));
```

You grant the Select permission to User1.

You need to change the view so that it displays only the records that were processed in the month prior to the current month. You need to ensure that after the changes, the view functions correctly for User1.

Which Transact-SQL statement should you use?

- C A.

```
DROP VIEW dbo.vwBatchList;
GO
CREATE VIEW dbo.vwBatchList
AS
SELECT
    -
WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH(GETDATE(),-2))
    and b.ProcessDate < dateadd(d, 1,EOMONTH(GETDATE(),-1));
```
- C B.

```
ALTER VIEW dbo.vwBatchList
AS
SELECT
    -
WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH(GETDATE(),-2))
    and b.ProcessDate <= EOMONTH(GETDATE(),-1);
```
- C C.

```
ALTER VIEW dbo.vwBatchList
AS
SELECT
    -
WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH(GETDATE(),-2))
    and b.ProcessDate < dateadd(d, 1,EOMONTH(GETDATE(),-1));
```
- C D.

```
DROP VIEW dbo.vwBatchList;
GO
CREATE VIEW dbo.vwBatchList
AS
SELECT
    -
WHERE
    b.ProcessDate >= dateadd(d, 1,EOMONTH(GETDATE(),-2))
    and b.ProcessDate <= EOMONTH(GETDATE(),-1);
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

Question: 120

You have a Microsoft SQL Server database that includes two tables named EmployeeBonus and BonusParameters. The tables are defined by using the following Transact-SQL statements:

```
CREATE TABLE [dbo].[EmployeeBonus] (
[EmpNumber] [int] NOT NULL,
[Quarterly] [tinyint] NULL,
[HalfYearly] [tinyint] NULL,
[Yearly] [tinyint] NULL
) ON [PRIMARY]

CREATE TABLE [dbo].[BonusParameters] (
[AvailableBonus] [money] NOT NULL,
[CompanyPerformance] [tinyint] NOT NULL
) ON [PRIMARY]
```

The tables are used to compute a bonus for each employee. The EmployeeBonus table has a non-null value in either the Quarterly, HalfYearly or Yearly column. This value indicates which type of bonus an employee receives. The BonusParameters table contains one row for each calendar year that stores the amount of bonus money available and a company performance indicator for that year.

You need to calculate a bonus for each employee at the end of a calendar year.

Which Transact-SQL statement should you use?

A. SELECT

```
    CAST(CHOICE((Quarterly * AvailableBonus * CompanyPerformance)/40,
    (HalfYearly * AvailableBonus * CompanyPerformance)/20,
    (Yearly * AvailableBonus * CompanyPerformance)/10) AS 'Bonus'
```

FROM

```
    EmployeeBonus, BonusParameters
```

B. SELECT "Bonus" =

```
    CASE EmployeeBonus
        WHEN Quarterly=1 THEN (Quarterly * AvailableBonus * CompanyPerformance)/40
        WHEN HalfYearly=1 THEN (HalfYearly * AvailableBonus * CompanyPerformance)/20
        WHEN Yearly=1 THEN (Yearly * AvailableBonus * CompanyPerformance)/10
    END
```

FROM EmployeeBonus, BonusParameters

C. SELECT

```
    CAST(COALESCE((Quarterly * AvailableBonus * CompanyPerformance)/40,
    (HalfYearly * AvailableBonus * CompanyPerformance)/20,
    (Yearly * AvailableBonus * CompanyPerformance)/10) AS 'Bonus'
```

FROM

```
    EmployeeBonus, BonusParameters
```

D. SELECT

```

    NULLIF(NULLIF((Quarterly * AvailableBonus * CompanyPerformance)/40,(HalfYearly * AvailableBonus * CompanyPerformance)/20),
           (Yearly * AvailableBonus * CompanyPerformance)/10) AS 'Bonus'
FROM
    EmployeeBonus, BonusParameters

```

Answer: B

Question: 121

You administer a Microsoft SQL Server 2012 database that includes a table named Products. The Products table has columns named ProductId, ProductName, and CreatedDateTime.

The table contains a unique constraint on the combination of ProductName and CreatedDateTime.

You need to modify the Products table to meet the following requirements:

- Remove all duplicates of the Products table based on the ProductName column.
- Retain only the newest Products row.
- Which Transact-SQL query should you use?

```

A. WITH CTEDupRecords
AS
(
SELECT MIN(CreatedDateTime) AS CreatedDateTime, ProductName
FROM Products
GROUP BY ProductName
HAVING COUNT(*) > 1
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
cte.ProductName = p.ProductName
AND cte.CreatedDateTime >
p.CreatedDateTime
B. WITH CTEDupRecords
AS
(
SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
FROM Products
GROUP BY ProductName
HAVING COUNT(*) > 1
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
AND p.CreatedDateTime <
cte.CreatedDateTime
C. WITH CTEDupRecords
AS
(
SELECT MIN(CreatedDateTime) AS CreatedDateTime, ProductName

```

```
FROM Products
GROUP BY ProductName
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
D. WITH CTEDupRecords
AS
(
SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
FROM Products
GROUP BY ProductName
HAVING COUNT(*) > 1
)
DELETE p
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
```

Answer: B

Question: 122

You use Microsoft SQL Server 2012 to develop a database application.

You need to create an object that meets the following requirements:

Takes an input parameter

Returns a table of values

Can be referenced within a view

Which object should you use?

- A. inline table-valued function
- B. user-defined data type
- C. stored procedure
- D. scalar-valued function

Answer: A

Incorrect answers:

Not B: A user-defined data type would not be able to take an input parameter.

Not C: A stored procedure cannot be used within a view.

Not D: A scalar-valued would only be able to return a single simple value, not a table.

Question: 123

HOTSPOT

You are designing an order entry system that uses an SQL Server database. The database includes the following tables:

Purchasing.Customers

CustomerId
AccountBalance

Purchasing.Orders

OrderId
CustomerId

You need to ensure that Orders are added to the Orders table only for customers that have an account balance of zero. How should you complete the relevant Transact-SQL statement? To answer, select the correct Transact-SQL statement from each list in the answer area.

Answer Area

CREATE Purchasing.ZeroBalance ON Purchasing.Orders

RULE
TRIGGER
FUNCTION
NOTIFICATION EVENT

AFTER

INSERT
ON INSERT
AFTER INSERT
BEFORE INSERT

AS
IF EXISTS (SELECT *
 FROM Purchasing.Orders AS o
 JOIN inserted AS i
 ON o.OrderId = i.OrderId
 JOIN Purchasing.Customers AS c
 ON c.CustomerID = o.CustomerID

WHERE
 c.AccountBalance > 0
 c.AccountBalance = 0
 c.AccountBalance < 0

)
BEGIN
 DUMP TRANSACTION;
 ROLLBACK TRANSACTION;
RETURN
END;
GO

Answer:

Answer Area

```

CREATE PURCHASING.ZEROBALANCE ON PURCHASING.ORDERS
  AS
    IF EXISTS (SELECT *
                FROM Purchasing.Orders AS o
                JOIN inserted AS i
                  ON o.OrderId = i.OrderId
                JOIN Purchasing.Customers AS c
                  ON c.CustomerID = o.CustomerID
               WHERE c.AccountBalance > 0
                  OR c.AccountBalance = 0
                  OR c.AccountBalance < 0)
    BEGIN
      DUMP TRANSACTION;
      ROLLBACK TRANSACTION;
    END;
    GO
  
```

The code shows a CREATE TRIGGER statement for a table named PURCHASING.ZEROBALANCE. The trigger is defined on the PURCHASING.ORDERS table. It uses an IF EXISTS clause to check if there are any rows in the inserted table where the customer account balance is greater than 0, equal to 0, or less than 0. If such rows exist, it begins a transaction, performs a dump, and then rolls back the transaction. The trigger ends with an END; statement and a GO command.

Explanation:

The Transact SQL CREATE TRIGGER command creates a DML, DDL, or logon trigger. A trigger is a special kind of stored procedure that automatically executes when an event occurs in the database server. DML triggers execute when a user tries to modify data through a data manipulation language (DML) event. DML events are INSERT, UPDATE, or DELETE statements on a table or view. These triggers fire when any valid event is fired, regardless of whether or not any table rows are affected.

Partial syntax is:

```

CREATE TRIGGER [ schema_name . ]trigger_name
ON { table | view }
[ WITH <cdml_trigger_option> [ ,...n ] ]
{ FOR | AFTER | INSTEAD OF }
{ [ INSERT ] [ , ] [ UPDATE ] [ , ] [ DELETE ] }
  
```

Reference: CREATE TRIGGER (Transact-SQL)

<https://msdn.microsoft.com/en-us/library/ms189799.aspx>

Question: 124

You are writing a set of queries against a FILESTREAM-enabled database.

You create a stored procedure that will update multiple tables within a transaction.

You need to ensure that if the stored procedure raises a run-time error, the entire transaction is terminated and rolled back.

Which Transact-SQL statement should you include at the beginning of the stored procedure?

- A. SET IMPLICIT_TRANSACTIONS ON
- B. SET TRANSACTION ISOLATION LEVEL SNAPSHOT
- C. SET IMPLICIT_TRANSACTIONS OFF
- D. SET TRANSACTION ISOLATION LEVEL SERIALIZABLE
- E. SET XACT_ABORT OFF
- F. SET XACT_ABORT ON

Answer: F

When SET XACT_ABORT is ON, if a Transact-SQL statement raises a run-time error, the entire transaction is terminated and rolled back.

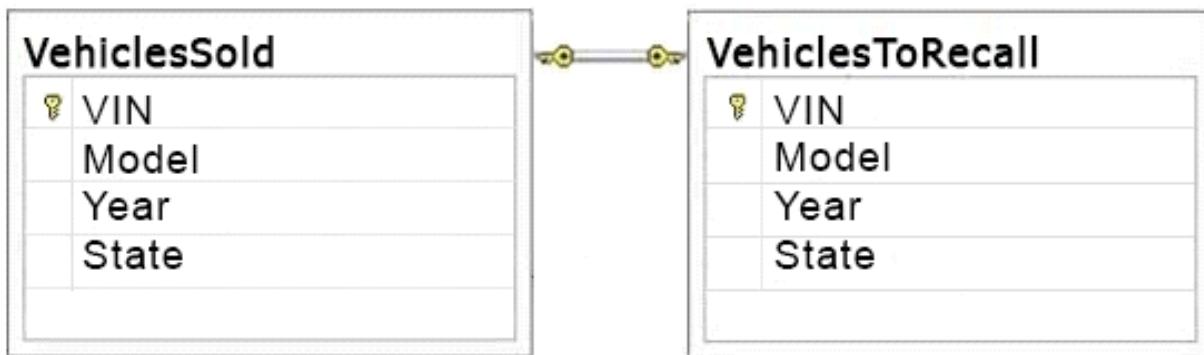
Reference: SET XACT_ABORT (Transact-SQL)

<https://msdn.microsoft.com/en-us/library/ms188792.aspx>

Question: 125

HOTSPOT

You are developing an SQL Server database for an automobile manufacturer. The manufacturer maintains the list of vehicles sold and vehicles that have been recalled. The tables are shown below:



You have the following Transact-SQL code. Line numbers are included for reference only.

```

01 MERGE VehiclesToRecall AS recall
02 USING VehiclesSold AS sold
03 ON recall.VIN = sold.VIN
04
05 WHEN NOT MATCHED BY TARGET
06
07 THEN INSERT(VIN, Model, Year, State)
08     VALUES(sold.VIN, sold.Model, sold.Year, sold.State)
09 WHEN MATCHED
10 THEN UPDATE SET recall.VIN = sold.VIN
11 WHEN NOT MATCHED BY SOURCE
12
13 THEN DELETE;

```

You must update the VehiclesToRecall table with the list of vehicles that were recalled in 2014. You must maximize the performance of the operation.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

Answer Area**Yes No**

You must add the following Transact-SQL code at line 04: AND sold.Year = 2014 AND recall.Year = 2014	<input type="radio"/> <input type="radio"/>
You must add the following Transact-SQL code at line 06 AND sold.Year = 2014	<input type="radio"/> <input type="radio"/>
You must add the following Transact-SQL code at line 12: AND recall.Year = 2014	<input type="radio"/> <input type="radio"/>

Answer:**Answer Area****Yes No**

You must add the following Transact-SQL code at line 04: AND sold.Year = 2014 AND recall.Year = 2014	<input checked="" type="checkbox"/> <input type="radio"/>
You must add the following Transact-SQL code at line 06 AND sold.Year = 2014	<input checked="" type="checkbox"/> <input type="radio"/>
You must add the following Transact-SQL code at line 12: AND recall.Year = 2014	<input type="radio"/> <input checked="" type="checkbox"/>

Reference: MERGE (Transact-SQL)

<https://msdn.microsoft.com/en-us/library/bb510625.aspx>**Question: 126**

You are developing a Microsoft SQL Server 2012 database for a company. The database contains a table that is defined by the following Transact-SQL statement:

```
CREATE TABLE [dbo].[Employees] (
    [EmpNumber] [int] NOT NULL,
    [Surname] [varchar](40) NOT NULL,
    [GivenName] [varchar](20) NOT NULL,
    [PersonalIDNumber] [varchar](11) NOT NULL,
    [Gender] [varchar](1) NULL,
    [DateOfBirth] [date] NOT NULL)
```

You use the following Transact-SQL script to insert new employee data into the table. Line numbers are included for reference only.

```
01 BEGIN TRY
02 INSERT INTO [dbo].[Employees]([EmpNumber],[Surname],[GivenName],[Gender],[DateOfBirth],[PersonalIDNumber])
03     VALUES (132,'Williams','John', 'M', '1/1/1990',NULL)
04 END TRY
05 BEGIN CATCH
06
07 END CATCH
```

If an error occurs, you must report the error message and line number at which the error occurred and continue

processing errors.

You need to complete the Transact-SQL script.

Which Transact-SQL segment should you insert at line 06?

- A. SELECT ERROR_LINE(), ERROR_MESSAGE()
- B. DECLARE @message NVARCHAR(1000),@severity INT, @state INT;
SELECT @message = ERROR_MESSAGE(), @severity = ERROR_SEVERITY(), @state = ERROR_STATE();
RAISERROR (@message, @severity, @state);
- C. DECLARE @message NVARCHAR(1000),@severity INT, @state INT;
SELECT @message = ERROR_MESSAGE(), @severity = ERROR_SEVERITY(), @state = ERROR_STATE();
THROW (@message, @severity, @state);
- D. THROW;

Answer: B

When the code in the CATCH block finishes, control passes to the statement immediately after the END CATCH statement. Errors trapped by a CATCH block are not returned to the calling application. If any part of the error information must be returned to the application, the code in the CATCH block must do so by using mechanisms such as SELECT result sets or the RAISERROR and PRINT statements.

Reference: TRY...CATCH (Transact-SQL)

<https://msdn.microsoft.com/en-us/library/ms175976.aspx>

Question: 127

HOTSPOT

You are developing an SQL Server database. The database contains two tables and a function that are defined by the following Transact-SQL statements.

```

CREATE TABLE [dbo].[SalesOrderDetail](
    [SalesOrderID] [int] NOT NULL,
    [SalesOrderDetailID] [int] IDENTITY(1,1) NOT NULL,
    [OrderQty] [smallint] NOT NULL,
    [ProductID] [int] NOT NULL,
    [UnitPrice] [money] NOT NULL,
    [LineTotal] [numeric](38, 6) NOT NULL,
CONSTRAINT [PK_SalesOrderDetail] PRIMARY KEY CLUSTERED
(
    [SalesOrderDetailID] ASC
))

CREATE TABLE [dbo].[SalesOrderHeader](
    [SalesOrderID] [int] IDENTITY(1,1) NOT NULL,
    [OrderDate] [datetime] NOT NULL,
    [Status] [tinyint] NOT NULL,
    [PurchaseOrderNumber] [nvarchar](25) NULL,
    [AccountNumber] [nvarchar](15) NULL,
    [CustomerID] [int] NOT NULL,
    [TotalDue] [money] NOT NULL,
CONSTRAINT [PK_SalesOrderHeader] PRIMARY KEY CLUSTERED
(
    [SalesOrderID] ASC
))

CREATE FUNCTION TopSellingProducts
(
    @date datetime
)
RETURNS TABLE
AS
RETURN
(
    SELECT TOP 5
        COUNT([SalesOrderDetail].ProductID) [count],
        [SalesOrderDetail].ProductID
    FROM [SalesOrderHeader]
    INNER JOIN [SalesOrderDetail] ON [SalesOrderHeader].[SalesOrderID] = [SalesOrderDetail].[SalesOrderID]
    WHERE [OrderDate] >= dateadd(day,datediff(day,1,@date),0)
        AND [OrderDate] < dateadd(day,datediff(day,0,@date),0)
    GROUP BY [SalesOrderDetail].ProductID
    ORDER BY COUNT ([SalesOrderDetail].ProductID) DESC
)

```

You need to create a query to determine the total number of products that are sold each day for the five top-selling products on that particular day.

How should you complete the relevant Transact-SQL script? To answer, select the appropriate Transact-SQL statements from each list in the answer area.

Answer Area

```
JOIN OrderDates (OrderDate)
WITH OrderDates (OrderDate)
APPLY OrderDates (OrderDate)
SELECT OrderDates (OrderDate)
```

AS

(

```
SELECT MAX([OrderDate]) FROM [SalesOrderHeader]
SELECT TOP 5 [OrderDate] FROM [SalesOrderHeader]
SELECT DISTINCT OrderDate FROM [SalesOrderHeader]
SELECT TopSellingProducts(OrderDate) FROM [SalesOrderHeader]
```

)

SELECT

```
[OrderDate],
SUM(T.[count])
```

FROM OrderDates

```
JOIN TopSellingProducts(OrderDates, OrderDate) AS T
PIVOT ON TopSellingProducts(OrderDates, OrderDate) AS T
CROSS JOIN TopSellingProducts(OrderDates, OrderDate) AS T
CROSS APPLY TopSellingProducts(OrderDates, OrderDate) AS T
```

GROUP BY [OrderDate]

Answer:

Answer Area

```

JOIN OrderDates (OrderDate)
WITH OrderDates (OrderDate)
APPLY OrderDates (OrderDate)
SELECT OrderDates (OrderDate)

AS
(
    SELECT MAX([OrderDate]) FROM [SalesOrderHeader]
    SELECT TOP 5 [OrderDate] FROM [SalesOrderHeader]
    SELECT DISTINCT OrderDate FROM [SalesOrderHeader]
    SELECT TopSellingProducts(OrderDate) FROM [SalesOrderHeader]
)
SELECT
    [OrderDate],
    SUM(T.[count])
FROM OrderDates
JOIN TopSellingProducts(OrderDates, OrderDate) AS T
PIVOT ON TopSellingProducts(OrderDates, OrderDate) AS T
CROSS JOIN TopSellingProducts(OrderDates, OrderDate) AS T
CROSS APPLY TopSellingProducts(OrderDates, OrderDate) AS T
GROUP BY [OrderDate]

```

The APPLY operator allows you to invoke a table-valued function for each row returned by an outer table expression of a query. T

There are two forms of APPLY: CROSS APPLY and OUTER APPLY. CROSS APPLY returns only rows from the outer table that produce a result set from the table-valued function. OUTER APPLY returns both rows that produce a result set, and rows that do not, with NULL values in the columns produced by the table-valued function.

Reference: Using APPLY

[https://technet.microsoft.com/en-us/library/ms175156\(v=sql.105\).aspx](https://technet.microsoft.com/en-us/library/ms175156(v=sql.105).aspx)

Question: 128

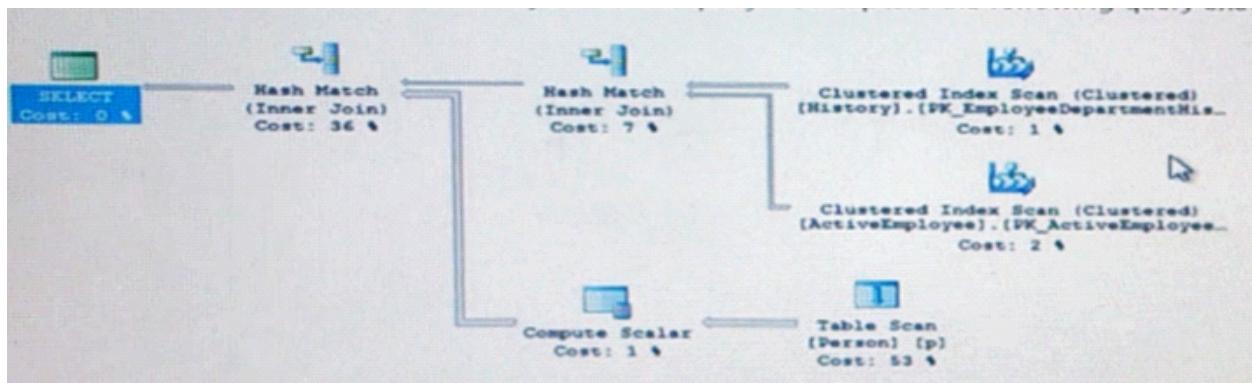
You are maintaining a Microsoft SQL Server database. You run the following query:

```

SELECT
    e.[ID]
    , p.[Title]
    , p.[GivenName] + ' ' + ' ' + p.[SurName]
    , e.[JobTitle]
    , edh.[StartDate]
FROM [ActiveEmployee] e
INNER JOIN [Person] p ON p.[ID] = e.[ID]
INNER JOIN [History] edh ON e.[ID] = edh.[ID]
WHERE edh.EndDate IS NULL

```

You observe performance issues when you run the query. You capture the following query execution plan:



You need to ensure that the query performs returns the results as quickly as possible.
Which action should you perform?

- A. Add a new index to the ID column of the Person table.
- B. Add a new index to the EndDate column of the History table.
- C. Create a materialized view that is based on joining data from the ActiveEmployee and History tables.
- D. Create a computed column that concatenates the GivenName and SurName columns.

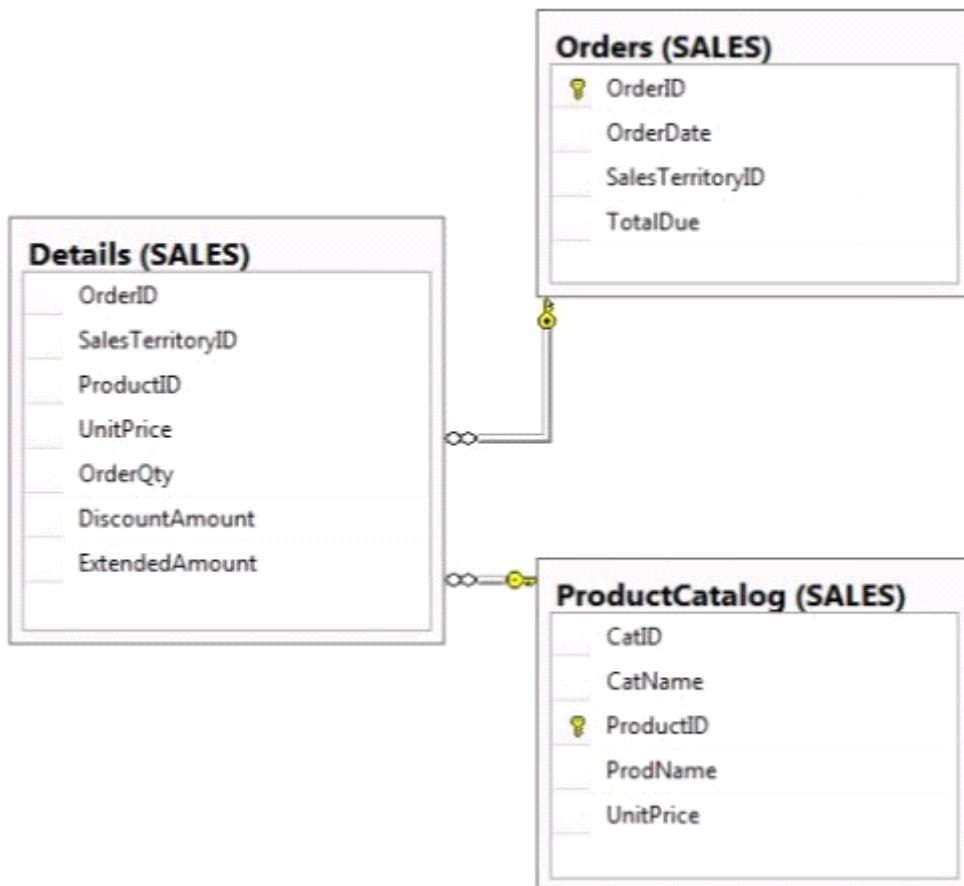
Answer: A

Cost is 53% for the Table Scan on the Person (p) table. This table scan is on the ID column, so we should put an index on it.

Question: 129

CORRECT TEXT

You have a database named Sales that contains the tables as shown in the exhibit. (Click the Exhibit button.)



You need to create a query that returns a list of products from Sales.ProductCatalog. The solution must meet the following requirements:

Return rows ordered by descending values in the UnitPrice column.

Use the Rank function to calculate the results based on the UnitPrice column.

Return the ranking of rows in a column that uses the alias PriceRank.

Use two-part names to reference tables.

Display the columns in the order that they are defined in the table. The PriceRank column must appear last.

Part of the correct T-SQL statement has been provided in the answer area. Provide the complete code.

```

1 SELECT CatID, CatName, ProductID, ProdName, UnitPrice,
2 FROM Sales.ProductCatalog
3 ORDER BY PriceRank

```

Answer: `SELECT
CatID, CatName,
ProductID,
ProdName, UnitPrice,
RANK (ORDER BY`

```

UnitPrice DESC) OVER () AS PriceRank
FROM Sales.ProductCatalog
ORDER BY PriceRank
Explanation:
Reference: RANK (Transact-SQL)
https://msdn.microsoft.com/en-us/library/ms176102.aspx

```

Question: 130

CORRECT TEXT

You have a database named Sales that contains the tables as shown in the exhibit. (Click the Exhibit button.)

	Column Name	Data Type	Allow Nulls
	ListPrice	money	<input type="checkbox"/>
	Quantity	int	<input type="checkbox"/>

	Column Name	Data Type	Allow Nulls
 CustomerID	int	<input type="checkbox"/>	
FirstName	varchar(100)	<input type="checkbox"/>	
LastName	varchar(100)	<input type="checkbox"/>	



	Column Name	Data Type	Allow Nulls
 OrderID	int	<input type="checkbox"/>	
OrderDate	datetime	<input type="checkbox"/>	
CustomerID	int	<input type="checkbox"/>	

You need to create a query for a report. The query must meet the following requirements:

Return the last name of the customer who placed the order.

Return the most recent order date for each customer.

Group the results by CustomerID.

Order the results by the most recent OrderDate.

Use the database name and table name for any table reference.

Use the first initial of the table as an alias when referencing columns in a table.

The solution must support the ANSI SQL-99 standard and must NOT use object identifiers.

Part of the correct T-SQL statement has been provided in the answer area. Complete the SQL statement.

```
1 SELECT LastName,
2 MAX(OrderDate) AS MostRecentOrderDate
```

**Answer: SELECT
o.LastName,**

```
MAX(o.OrderData) AS MostRecentOrderData
FROM Sales.Orders AS o
GROUP BY o.CustomerID
ORDER BY o.OrderDate DESC
```

Question: 131

CORRECT TEXT

You need to create a query that calculates the total sales of each OrderID from a table named Sales.Details. The table contains two columns named OrderID and ExtendedAmount.

The solution must meet the following requirements:

Use one-part names to reference columns.

Order the results by OrderID with the smallest value first.

NOT depend on the default schema of a user.

Use an alias of TotalSales for the calculated ExtendedAmount.

Display only the OrderID column and the calculated TotalSales column.

Provide the correct code in the answer area.

Key Words:

ADD	CREATE	EXTERNAL	LIKE	PUBLIC	TABLE
ALL	CROSS	FETCH	LINENO	RAISERROR	TABLESAMPLE
ALTER	CURRENT	FILE	LOAD	READ	TEXTSIZE
AND	CURRENT_DATE	FILLCFACTOR	MERGE	READTEXT	THEN
ANY	CURRENT_TIME	FOR	NATIONAL	RECONFIGURE	TO
AS	CURRENT_TIMESTAMP	FOREIGN	NOCHECK	REFERENCES	TOP
ASC	CURRENT_USER	FREETEXT	NONCLUSTERED	REPLICATION	TRAN
AUTHORIZATION	CURSOR	FREETEXTTABLE	NOT	RESTORE	TRANSACTION
BACKUP	DATABASE	FROM	NULL	RESTRICT	TRIGGER
BEGIN	DBCC	FULL	NULLIF	RETURN	TRUNCATE
BETWEEN	DEALLOCATE	FUNCTION	OF	REVERT	TRY_CONVERT
BREAK	DECLARE	GOTO	OFFSETS	REVOKE	TSEQUAL
BROWSE	DEFAULT	GRANT	ON	RIGHT	UNION
BULK	DELETE	GROUP	OPEN	ROLLBACK	UNIQUE
BY	DENY	HAVING	OPENDATASOURCE	ROWCOUNT	UNPIVOT
CASCADE	DESC	HOLDLOCK	OPENQUERY	ROWGUIDCOL	UPDATE
CASE	DISK	IDENTITY	OPENROWSET	RULE	UPDATETEXT
CHECK	DISTINCT	IDENTITY_INSERT	OPENXML	SAVE	USE
CHECKPOINT	DISTRIBUTED	IDENTITYCOL	OPTION	SCHEMA	USER
CLOSE	DOUBLE	IF	OR	SECURITYAUDIT	VALUES
CLUSTERED	DROP	IN	ORDER	SELECT	VARYING
COALESCE	DUMP	INDEX	OUTER	SEMANTICKEYPHRASETABLE	VIEW
COLLATE	ELSE	INNER	OVER	SEMANTICSIMILARITYDETAILSTABLE	WAITFOR
COLUMN	END	INSERT	PERCENT	SEMANTICSIMILARITYTABLE	WHEN
COMMIT	ERRL VL	INTERSECT	PIVOT	SESSION_USER	WHERE
COMPUTE	ESCAPE	INTO	PLAN	SET	WHILE
CONSTRAINT	EXCEPT	IS	PRECISION	SETUSER	WITH
CONTAINS	EXEC	JOIN	PRIMARY	SHUTDOWN	WITHIN GROUP
CONTAINSTABLE	EXECUTE	KEY	PRINT	SOME	WRITETEXT
CONTINUE	EXISTS	KILL	PROC	STATISTICS	
CONVERT	EXIT	LEFT	PROCEDURE	SYSTEM_USER	

Answer: SELECT

**OrderId,
SUM(ExtendedAmount)
AS TotalSales**

```
FROM Sales.Details  
ORDER BY OrderID ASC
```

Question: 132

You are a database developer for an application hosted on a Microsoft SQL Server 2012 server.

The database contains two tables that have the following definitions:

```
CREATE TABLE Customer  
(CustomerID int NOT NULL PRIMARY KEY,  
 CustomerName varchar(50) NOT NULL)  
  
CREATE TABLE Orders  
(OrderID int NOT NULL PRIMARY KEY,  
 CustomerID int NOT NULL FOREIGN KEY REFERENCES Customer (CustomerID),  
 OrderAmount money NOT NULL,  
 ShippingCountry varchar(50) NOT NULL)
```

Global customers place orders from several countries.

You need to view the country from which each customer has placed the most orders.

Which Transact-SQL query do you use?

- A.

```
SELECT CustomerID, CustomerName, ShippingCountry  
FROM  
(SELECT c.CustomerID, c.CustomerName, o.ShippingCountry,  
RANK() OVER (PARTITION BY c.CustomerID  
ORDER BY COUNT(o.OrderAmount) ASC) AS Rnk  
FROM Customer c  
INNER JOIN Orders o  
ON c.CustomerID = o.CustomerID  
GROUP BY c.CustomerID, c.CustomerName,  
o.ShippingCountry) cs  
WHERE Rnk = 1
```
- B.

```
SELECT c.CustomerID, c.CustomerName, o.ShippingCountry  
FROM Customer c  
INNER JOIN  
(SELECT CustomerID, ShippingCountry,  
COUNT(OrderAmount) AS OrderAmount  
FROM Orders  
GROUP BY CustomerID, ShippingCountry) AS o  
ON c.CustomerID = o.CustomerID  
ORDER BY OrderAmount DESC
```
- C.

```
SELECT CustomerID, CustomerName, ShippingCountry  
FROM  
(SELECT c.CustomerID, c.CustomerName,  
o.ShippingCountry,  
RANK() OVER (PARTITION BY c.CustomerID  
ORDER BY o.OrderAmount DESC) AS Rnk  
FROM Customer c  
INNER JOIN Orders o
```

```

ON c.CustomerID = o.CustomerID
GROUP BY c.CustomerID, c.CustomerName,
o.ShippingCountry) cs
WHERE Rnk = 1
D. SELECT c.CustomerID, c.CustomerName, o.ShippingCountry
FROM Customer c
INNER JOIN
(SELECT CustomerID, ShippingCountry,
RANK() OVER (PARTITION BY CustomerID
ORDER BY COUNT(OrderAmount) DESC) AS Rnk
FROM Orders
GROUP BY CustomerID, ShippingCountry) AS o
ON c.CustomerID = o.CustomerID
Where o.Rnk = 1

```

Answer: C

Question: 133

DRAG DROP

You develop an SQL Server database. The database contains a table that is defined by the following T-SQL statements:

```

CREATE TABLE Employees
(employeeNumber INT,
 surName VARCHAR(100),
 givenName VARCHAR(25),
 dateOfBirth DATE,
 workPhone VARCHAR(12));

```

The table contains duplicate records based on the combination of values in the surName, givenName, and dateOfBirth fields.

You need to remove the duplicate records.

How should you complete the relevant Transact-SQL statements? To answer, drag the appropriate code segment or segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Transact-SQL segments

- Row_number()
- Rank()
- PARTITION BY surName
- PARTITION BY employeeNumber
- ORDER BY
- GROUP BY
- DELETE FROM CTE WHERE Ct > 1
- DELETE FROM CTE WHERE Ct= 1

Answer Area

```

WITH CTE
AS (
    SELECT surName,
    givenName,
    DateOfBirth,
    Row_number() OVER (PARTITION BY surName, givenName, DateOfBirth ORDER BY employeeNumber) AS Ct
    FROM   dbo.Employees)
DELETE FROM CTE WHERE Ct > 1

```

Answer:

Answer Area

```

WITH CTE
AS (
    SELECT surName,
           givenName,
           DateOfBirth,
           Row_number()
OVER (
    PARTITION BY surName
    , givenName, DateOfBirth
    ORDER BY
        (SELECT 1)) AS Ct
)
FROM   dbo.Employees
DELETE FROM CTE WHERE Ct > 1

```

Example:

let us write a query which will delete all duplicate data in one shot. We will use a CTE (Common Table Expression) for this purpose. We will read in future posts what a CTE is and why it is used. On a lighter note, CTE's can be imagined as equivalent to temporary result sets that can be used only in an underlying SELECT, INSERT, UPDATE, DELETE or CREATE VIEW statement.

```

;WITH CTE AS
(
SELECT Name
      , City
      , [State]
      , ROW_NUMBER() OVER(PARTITION BY Name, City, [State] ORDER BY [Name]) AS Rnum
FROM Persons
)
DELETE FROM CTE WHERE Rnum <> 1

```

In the code by saying WHERE Rnum <> 1, we are asking SQL Server to keep all the records with Rank 1, which are not duplicates, and delete any other record. After executing this query in SQL Server Management Studio, you will end up with no duplicates in your table. To confirm that just run a simple query against your table.

Reference: How to Remove Duplicates from a Table in SQL Server

<http://social.technet.microsoft.com/wiki/contents/articles/22706.how-to-remove-duplicates-from-a-table-in-sql-server.aspx>

Question: 134

You are developing a database that will contain price information.

You need to store the prices that include a fixed precision and a scale of six digits.

Which data type should you use?

- A. Smallmoney
- B. Numeric
- C. Money
- D. Varchar

Answer: B

Numeric data types that have fixed precision and scale.

decimal[(p[, s])] and numeric[(p[, s])]

where

* p (precision)

The maximum total number of decimal digits that will be stored, both to the left and to the right of the decimal point. The precision must be a value from 1 through the maximum precision of 38. The default precision is 18.

* (scale)

The number of decimal digits that will be stored to the right of the decimal point.

Incorrect answers:

Not A, not C: The money and smallmoney data types are accurate to a ten-thousandth of the monetary units that they represent.

Not C: The money and smallmoney data types are accurate to a ten-thousandth of the monetary units that they represent.

Reference: decimal and numeric (Transact-SQL)

<https://msdn.microsoft.com/en-us/library/ms187746.aspx>

Question: 135

You have a database application that uses Microsoft SQL Server 2012. You have a query named Query1 that returns four columns from a frequently updated table that has a clustered index. Three of the columns are referenced in the WHERE clause of the query. The three columns are part of a non-clustered index. The fourth column is not referenced in the WHERE clause.

Users report that the application begins to run slowly. You determine that the root cause for the performance issue is Query1.

You need to optimize the statement.

What should you do?

- A. Add a HASH hint to the query.
- B. Add a LOOP hint to the query.
- C. Add a FORCESEEK hint to the query.
- D. Add an INCLUDE clause to the index.
- E. Add a FORCESCAN hint to the Attach query.
- F. Add a columnstore index to cover the query.
- G. Enable the optimize for ad hoc workloads option.
- H. Cover the unique clustered index with a columnstore index.
- I. Include a SET FORCEPLAN ON statement before you run the query.
- J. Include a SET STATISTICS PROFILE ON statement before you run the query.
- K. Include a SET STATISTICS SHOWPLAN_XML ON statement before you run the query.
- L. Include a SET TRANSACTION ISOLATION LEVEL REPEATABLE READ statement before you run the query.
- M. Include a SET TRANSACTION ISOLATION LEVEL SNAPSHOT statement before you run the query.
- N. Include a SET TRANSACTION ISOLATION LEVEL SERIALIZABLE statement before you run the query.

Answer: K

SET SHOWPLAN_XML (Transact-SQL) causes SQL Server not to execute Transact-SQL statements. Instead, SQL Server returns detailed information about how the statements are going to be executed in the form of a well-defined XML document

Incorrect:

Not F: Columnstore indexes in the SQL Server Database Engine can be used to significantly speed-up the processing time of common data warehousing queries. Typical data warehousing workloads involve summarizing large amounts of data. But in this question the query is run on a table that is updated frequently, not a warehousing table.

Reference: SET SHOWPLAN_XML (Transact-SQL)

<https://msdn.microsoft.com/en-us/library/ms187757.aspx>

Question: 136

You are developing a database in SQL Server 2012 to store information about current employee project assignments. You are creating a view that uses data from the project assignment table. You need to ensure that the view does not become invalid if the schema of the project assignment table changes. What should you do?

- A. Create the view by using an account in the sysadmin role.
- B. Add a DDL trigger to the project assignment table to re-create the view after any schema change.
- C. Create the view in a new schema.
- D. Add a DDL trigger to the view to block any changes.

Answer: B

DDL triggers are a special kind of trigger that fire in response to Data Definition Language (DDL) statements. They can be used to perform administrative tasks in the database such as auditing and regulating database operations.

Reference: DDL Triggers

[https://technet.microsoft.com/en-us/library/ms190989\(v=sql.105\).aspx](https://technet.microsoft.com/en-us/library/ms190989(v=sql.105).aspx)

Question: 137

You are maintaining a Microsoft SQL Server database that stores order information for an online store website. The database contains a table that is defined by the following Transact-SQL statement:

```
CREATE TABLE [dbo].[SalesOrderHeader] (
    [SalesOrderID] [int] IDENTITY(1,1) NOT NULL,
    [OrderDate] [datetime] NOT NULL,
    [Status] [tinyint] NOT NULL,
    [PurchaseOrderNumber] [nvarchar](25) NULL,
    [AccountNumber] [nvarchar](15) NULL,
    [CustomerID] [int] NOT NULL,
    [TotalDue] [money] NOT NULL,
CONSTRAINT [PK_SalesOrderHeader] PRIMARY KEY CLUSTERED
(
    [SalesOrderID] ASC
) ON [PRIMARY]
```

You need to ensure that purchase order numbers are used only for a single order.

What should you do?

- A. Create a new CLUSTERED constraint on the PurchaseOrderNumber column.
- B. Create a new UNIQUE constraint on the PurchaseOrderNumber column.
- C. Create a new PRIMARY constraint on the PurchaseOrderNumber column.
- D. Create a new FOREIGN KEY constraint on the PurchaseOrderNumber column.

Answer: B

You can use UNIQUE constraints to make sure that no duplicate values are entered in specific columns that do not participate in a primary key. Although both a UNIQUE constraint and a PRIMARY KEY constraint enforce uniqueness, use a UNIQUE constraint instead of a PRIMARY KEY constraint when you want to enforce the uniqueness of a column, or combination of columns, that is not the primary key.

Reference: UNIQUE Constraints
[https://technet.microsoft.com/en-us/library/ms191166\(v=sql.105\).aspx](https://technet.microsoft.com/en-us/library/ms191166(v=sql.105).aspx)

Question: 138

CORRECT TEXT

You have a view that was created by using the following code:

```
CREATE VIEW Sales.OrdersByTerritory
AS
SELECT OrderID
    ,OrderDate
    ,SalesTerritoryID
    ,TotalDue
FROM Sales.Orders;
```

You need to create an inline table-valued function named Sales.fn_OrdersByTerritory that returns sales information from a specified SalesTerritoryID. Sales.fn_OrdersByTerritory must meet the following requirements:

Use one-part names to reference columns.

Return all the columns in the OrdersByTerritory View. The function should return the same columns as they exist in the OrdersByTerritory view and in the same order.

Declare the input variable as @T.

Use SalesTerritoryID as an integer.

Part of the correct T-SQL statement has been provided in the answer area. Provide the complete code.

```
RETURNS TABLE
AS
RETURN
(SELECT
    OrderID,
    OrderDate,
```

Key Words

ADD	CREATE	EXTERNAL	LIKE	PUBLIC	TABLE
ALL	CROSS	FETCH	LINENO	RAISERROR	TABLESAMPLE
ALTER	CURRENT	FILE	LOAD	READ	TEXTSIZE
AND	CURRENT_DATE	FILLCODE	MERGE	READTEXT	THEN
ANY	CURRENT_TIME	FOR	NATIONAL	RECONFIGURE	TO
AS	CURRENT_TIMESTAMP	FOREIGN	NOCHECK	REFERENCES	TOP
ASC	CURRENT_USER	FREETEXT	NONCLUSTERED	REPLICATION	TRAN
AUTHORIZATION	CURSOR	FREETEXTTABLE	NOT	RESTORE	TRANSACTION
BACKUP	DATABASE	FROM	NULL	RESTRICT	TRIGGER
BEGIN	DBCC	FULL	NULIF	RETURN	TRUNCATE
BETWEEN	DEALLOCATE	FUNCTION	OF	REVERT	TRY_CONVERT
BREAK	DECLARE	GOTO	OFFSETS	REVOKE	TSEQUAL
BROWSE	DEFAULT	GRANT	ON	RIGHT	UNION
BULK	DELETE	GROUP	OPEN	ROLLBACK	UNIQUE
BY	DENY	HAVING	OPENDATASOURCE	ROWCOUNT	UNPIVOT
CASCADE	DESC	HOLDLOCK	OPENQUERY	ROWGUIDCOL	UPDATE
CASE	DISK	IDENTITY	OPENROWSET	RULE	UPDATETEXT
CHECK	DISTINCT	IDENTITY_INSERT	OPENXML	SAVE	USE
CHECKPOINT	DISTRIBUTED	IDENTITYCOL	OPTION	SCHEMA	USER
CLOSE	DOUBLE	IF	OR	SECURITYAUDIT	VALUES
CLUSTERED	DROP	IN	ORDER	SELECT	VARYING
COALESCE	DUMP	INDEX	OUTER	SEMANTICKEYPHRASETABLE	VIEW
COLLATE	ELSE	INNER	OVER	SEMANTICSIMILARITYDETAILSTABLE	WAITFOR
COLUMN	END	INSERT	PERCENT	SEMANTICSIMILARITYTABLE	WHEN
COMMIT	ERRL VL	INTERSECT	PIVOT	SESSION_USER	WHERE
COMPUTE	ESCAPE	INTO	PLAN	SET	WHILE
CONSTRAINT	EXCEPT	IS	PRECISION	SETUSER	WITH
CONTAINS	EXEC	JOIN	PRIMARY	SHUTDOWN	WITHIN GROUP
CONTAINSTABLE	EXECUTE	KEY	PRINT	SOME	WRITETEXT
CONTINUE	EXISTS	KILL	PROC	STATISTICS	
CONVERT	EXIT	LEFT	PROCEDURE	SYSTEM_USER	

Answer: CREATE

FUNCTION**Sales.fn_OrdersByTerritory
(@T integer)**

```
RETURNS TABLE
AS
RETURN
(SELECT
OrderID,
OrderDate,
SalesTerritoryID,
TotalDue
FROM Sales.OrdersByTerritory
WHERE SalesTerritoryID = @T)
Reference: Inline User-Defined Functions
https://technet.microsoft.com/en-us/library/ms189294\(v=sql.105\).aspx
```

Question: 139

You have a database that contains a table named Customer. The customer table contains a column named LastName that has a column definition of varchar(50).

An application named App1 reads from the table frequently.

You need to change the column definition to nvarchar(100). The solution must minimize the amount of time it takes for App1 to read the data.

Which statement should you execute?

A

```
SELECT CustomerId, CAST(LastName as nvarchar(100)), FirstName, ...
INTO Customer_New
FROM Customer
GO
DROP TABLE Customer
GO
EXEC sp_rename 'Customer_New', 'Customer', 'Table'
GO
```

B

```
ALTER TABLE Customer
ALTER LastName nvarchar(100)
GO
```

C

```
ALTER TABLE Customer
ALTER COLUMN LastName nvarchar(100)
GO
```

D

```

ALTER TABLE Customer
ADD LastName2 nvarchar(100)
GO
UPDATE Customer
    SET LastName2 = LastName
GO
ALTER TABLE Customer
DROP COLUMN LastName
GO
EXEC sp_rename 'Customer.LastName2', 'LastName', 'column'
GO

```

- A) Option A
 B) Option B
 C) Option C
 D) Option D

Answer: C

Explanation:

To change the data type of a column in a SQL Server (or Microsoft access) table , use the following syntax:

ALTER TABLE table_name

ALTER COLUMN column_name datatype

References: https://www.w3schools.com/SQL/sql_alter.asp

Question: 140

You are maintaining a SQL Server database that uses the default settings. The database contains a table that is defined by the following Transact-SQL statement:

```

CREATE TABLE [dbo].[Address] (
    [AddressID] [int] IDENTITY(1,1) NOT NULL,
    [AddressLine1] [nvarchar](60) NOT NULL,
    [AddressLine2] [nvarchar](60) NULL,
    [Region] [nvarchar](60) NOT NULL,
    [City] [nvarchar](30) NOT NULL,
    [PostalCode] [nvarchar](15) NOT NULL,
CONSTRAINT [PK_Address] PRIMARY KEY CLUSTERED
(
    [AddressID] ASC
)

```

You must write a query that returns the AddressLine1, AddressLine2, and Region fields separated by carriage returns. You must return an empty string for any null values.

- A SELECT [AddressLine1] + CHAR(13) + IIF([AddressLine2] IS NULL, '', [AddressLine2]) + CHAR(13) + [Region]
FROM [Address]
- B SELECT [AddressLine1] + CHAR(13) + [AddressLine2] + CHAR(13) + [Region]
FROM [Address]
- C SELECT [AddressLine1] + CHAR(13) + FORMAT([AddressLine2], 'IS NULL') + CHAR(13) + [Region]
FROM [Address]
- D SELECT CONCAT ([AddressLine1], CHAR(13), [AddressLine2], CHAR(13), [Region])
FROM [Address]

- A) Option A
B) Option B
C) Option C
D) Option D

Answer: A

Explanation:

Char(13) is a carriage return.

Use the IIF construct to return an empty string for NULL values of the Adressline2 column.

IIF returns one of two values, depending on whether theBoolean expression evaluates to true or false in SQL Server.

References: <https://msdn.microsoft.com/en-us/library/hh213574.aspx>

Question: 141

A table named Profits stores the total profit made each year within a territory. The Profits table has columns named Territory, Year, and Profit.

You need to create a report that displays the profits made by each territory for each year and its previous year.

Which Transact-SQL query should you use?

- A. SELECT Territory, Year, Profit, LEAD(Profit, 1, 0) OVER (PARTITION BY Territory ORDER BY Year) AS PreviousYearProfit
FROM Profits
- B. SELECT Territory, Year, Profit, LAG(Profit, 1, 0) OVER (PARTITION BY Year ORDER BY Territory) AS PreviousYearProfit
FROM Profits
- C. SELECT Territory, Year, Profit, LAG(Profit, 1, 0) OVER (PARTITION BY Territory ORDER BY Year) AS PreviousYearProfit
FROM Profits
- D. SELECT Territory, Year, Profit, LEAD(Profit, 1, 0) OVER (PARTITION BY Year ORDER BY Territory) AS PreviousYearProfit
FROM Profits

Answer: C

Explanation:

LAG accesses data from a previous row in the same result set without the use of a self-join in SQL Server 2016. LAG provides access to a row at a given physical offset that comes before the current row. Use this analytic function in a SELECT statement to compare values in the current row with values in a previous row.

Use ORDER BY Year, not ORDER BY Territory.

Example: The following example uses the LAG function to return the difference in sales quotas for a specific employee over previous years. Notice that because there is no lag value available for the first row, the default of zero (0) is returned.

USE AdventureWorks2012;

GO

SELECT BusinessEntityID, YEAR(QuotaDate) AS SalesYear, SalesQuota AS CurrentQuota,

```
LAG(SalesQuota, 1,0) OVER (ORDER BY YEAR(QuotaDate)) AS PreviousQuota  
FROM Sales.SalesPersonQuotaHistory  
WHERE BusinessEntityID = 275 and YEAR(QuotaDate) IN ('2005','2006');
```

Question: 142

Your database contains a table named Products that has columns named ProductID and Name.
You want to write a query that retrieves data from the Products table sorted by Name listing 15 rows at a time.
You need to view rows 31 through 45.
Which Transact-SQL query should you create?

A

```
WITH Data AS (SELECT *,Rn = ROW_NUMBER() OVER(ORDER BY ProductID, Name) FROM Products)  
SELECT * FROM Data WHERE Data.Rn BETWEEN 30 AND 45
```

B

```
SELECT TOP 15 * FROM Products ORDER BY Name
```

C

```
SELECT * FROM Products ORDER BY Name OFFSET 30 ROWS FETCH NEXT 15 ROWS ONLY
```

D

```
SELECT * FROM Products ORDER BY Name FETCH ROWS BETWEEN 31 AND 45
```

- A) Option A
- B) Option B
- C) Option C
- D) Option D

Answer: C

Explanation:

The OFFSET-FETCH clause provides you with an option to fetch only a window or page of results from the result set. OFFSET-FETCH can be used only with the ORDER BY clause.

Example: Skip first 10 rows from the sorted resultset and return next 5 rows.

```
SELECT First Name + ' ' + Last Name FROM Employees ORDER BY First Name OFFSET 10 ROWS FETCH NEXT 5 ROWS ONLY;
```

References: [https://technet.microsoft.com/en-us/library/gg699618\(v=sql.110\).aspx](https://technet.microsoft.com/en-us/library/gg699618(v=sql.110).aspx)

Question: 143

A database named AdventureWorks contains two tables named Production.Product and Sales.SalesOrderDetail. The tables contain data on the available products and a detailed order history.

The Production.Product table contains the following two columns:

- ProductID
- Name

The Sales.SalesOrderDetail table contains the following three columns:

- SalesOrderID
- ProductID
- OrderQty

You need to create a query listing all of the products that were never ordered.

Which statements should you execute?

A

```
SELECT ProductID  
FROM Production.Product  
EXCEPT  
SELECT ProductID  
FROM sales.SalesOrderDetail  
ORDER BY ProductID
```

B

```
SELECT ProductID  
FROM Production.Product  
ORDER BY ProductID  
EXCEPT  
SELECT ProductID  
FROM sales.SalesOrderDetail
```

C

```
SELECT ProductID  
FROM Production.Product  
INTERSECT  
SELECT ProductID  
FROM sales.SalesOrderDetail  
ORDER BY ProductID
```

D

```
SELECT ProductID  
FROM Production.Product  
ORDER BY ProductID  
INTERSECT  
SELECT ProductID  
FROM sales.SalesOrderDetail
```

- A) Option A
- B) Option B
- C) Option C
- D) Option D

Answer: A

Explanation:

EXCEPT and INTERSECT returns distinct rows by comparing the results of two queries.

EXCEPT returns distinct rows from the left input query that aren't output by the right input query.

Column names or aliases in ORDER BY clauses must reference column names returned by the left-side query.

Example: The following query returns any distinct values from the query to the left of the EXCEPT operator that are not also found on the right query.

```
-- Uses AdventureWorks  
SELECT CustomerKey  
FROM FactInternetSales  
EXCEPT
```

```
SELECT CustomerKey  
FROM DimCustomer  
WHERE DimCustomer.Gender = 'F'  
ORDER BY CustomerKey;  
--Result: 9351 Rows (Sales to customers that are not female.)
```

Question: 144

You plan to write a query for a new business report that will contain several nested queries. You need to ensure that a nested query can call a table-valued function for each row in the main query. Which query operator should you use in the nested query?

- A. CROSS APPLY
- B. INNER JOIN
- C. OUTER JOIN
- D. PIVOT

Answer: A

Explanation:

The APPLY operator allows you to invoke a table-valued function for each row returned by an outer table expression of a query. The table-valued function acts as the right input and the outer table expression acts as the left input. The right input is evaluated for each row from the left input and the rows produced are combined for the final output. The list of columns produced by the APPLY operator is the set of columns in the left input followed by the list of columns returned by the right input.

There are two forms of APPLY: CROSS APPLY and OUTER APPLY. CROSSAPPLY returns only rows from the outer table that produce a result set from the table-valued function. OUTER APPLY returns both rows that produce a result set, and rows that do not, with NULL values in the columns produced by the table-valued function.

References: [https://technet.microsoft.com/en-us/library/ms175156\(v=sql.105\).aspx](https://technet.microsoft.com/en-us/library/ms175156(v=sql.105).aspx)

Question: 145

You are designing a table for a SQL Server database. The table uses horizontal partitioning. You have the following requirements:

- Each record in the table requires a unique key.
- You must minimize table fragmentation as the table grows.

You need to choose the appropriate data type for the key value.

What should you do?

- A. Use the NEWID function to create a unique identifier.
- B. Use the NEWSEQUENTIALID function to create a unique identifier.
- C. Generate a random value that uses the bigint datatype.
- D. Generate a random value that uses the char(16) data type.

Answer: B

Explanation:

Horizontal partitioning divides a table into multiple tables. Each table then contains the same number of columns, but fewer rows. For example, a table that contains 1 billion rows could be partitioned horizontally into 12 tables, with each smaller table representing one month of data for a specific year. Any queries requiring data for a specific month

only reference the appropriate table.

NEWSEQUENTIALID creates a GUID that is greater than any GUID previously generated by this function on a specified computer since Windows was started. After restarting Windows, the GUID can start again from a lower range, but is still globally unique. When a GUID column is used as a row identifier, using NEWSEQUENTIALID can be faster than using the NEWID function. This is because the NEWID function causes random activity and uses fewer cached data pages. Using NEWSEQUENTIALID also helps to completely fill the data and index pages.

References:<https://msdn.microsoft.com/en-us/library/ms189786.aspx>

Question: 146

You are a database developer of a Microsoft SQL Server database.

You are designing a table that will store Customer data from different sources. The table will include a column that contains the CustomerID from the source system and a column that contains the SourceID.

A sample of this data is as shown in the following table.

SourceID	CustomerID	Customer Name
1	234	John Smith
3	7345	Jason Warren
3	4402	Susan Burk
2	866	Michael Allen

You need to ensure that the table has no duplicate CustomerID within a SourceID. You also need to ensure that the data in the table is in the order of SourceID and then CustomerID.

Which Transact-SQL statement should you use?

- A. CREATE TABLE Customer(SourceID int NOT NULL,CustomerID int NOT NULL,CustomerName varchar(255) NOT NULLCONSTRAINT UQ_Customer UNIQUE(SourceID, CustomerID));
- B. CREATE TABLE Customer(SourceID int NOT NULL UNIQUE,CustomerID int NOT NULL UNIQUE,CustomerName varchar(255) NOT NULL);
- C. CREATE TABLE Customer(SourceID int NOT NULL PRIMARY KEY CLUSTERED,CustomerID int NOT NULL UNIQUE,CustomerName varchar(255) NOT NULL);
- D. CREATE TABLE Customer(SourceID int NOT NULL,CustomerID int NOT NULL,CustomerName varchar(255) NOT NULL,CONSTRAINT PK_Customer PRIMARY KEY CLUSTERED(SourceID, CustomerID));

Answer: D

Explanation:

A PRIMARY KEY is a constraint that enforces entity integrity for a specified column or columns by using a unique index. Only one PRIMARY KEY constraint can be created for each table.

We need to use both SourceID and CustomerID, in that order, in the PRIMARY KEY constraint.

References:<https://msdn.microsoft.com/en-us/library/ms188066.aspx>

Question: 147

DRAG DROP

You maintain a SQL Server database that is used by a retailer to track sales and salespeople. The database includes two tables and two triggers that are defined by the following Transact-SQL statements:

```

CREATE TABLE [dbo].[BonusLevel] (
    [BonusLevelID] [int] NOT NULL,
CONSTRAINT [PK_BonusLevel] PRIMARY KEY CLUSTERED
(
[BonusLevelID] ASC
))

CREATE TABLE [dbo].[Employee] (
    [EmployeeID] [int] NOT NULL,
    [BonusLevelID] [int] NULL DEFAULT ((1)),
    [SalesCount] [int] NOT NULL DEFAULT ((0)),
CONSTRAINT [PK_Employee] PRIMARY KEY CLUSTERED
(
    [EmployeeID] ASC
))

CREATE TRIGGER dbo.SetBonusLevel
    ON dbo.Employee
    AFTER UPDATE
AS
BEGIN
    IF UPDATE (SalesCount)
    BEGIN
        UPDATE dbo.Employee
        SET BonusLevelId = SalesCount % 10
        WHERE EmployeeID in (SELECT EmployeeID FROM inserted)
    END
END

CREATE TRIGGER dbo.CheckForBonusBump
    ON dbo.Employee
    AFTER UPDATE
AS
BEGIN
    IF UPDATE (BonusLevelId)
    BEGIN
        UPDATE dbo.Employee
        SET SalesCount = SalesCount + dbo.CurrentOnlineSales()
        WHERE EmployeeID in (SELECT EmployeeID FROM inserted)
    END
END

```

During days with a large sales volume, some new sales transaction fail and report the following error: Arithmetic overflow error converting expression to data type int.

You need to ensure that the two triggers are applied once per sale, and that they do not interfere with each other. How should you complete the relevant Transact-SQL statement? To answer, drag the appropriate Transact-SQL segments to the correct location or locations. Each Transact-SQL segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

SQL segments

ON
OFF
0
-1
TRUE
FALSE

Answer Area

ALTER DATABASE Sales
SET RECURSIVE_TRIGGERS SQL segment
EXEC sp_configure 'show advanced options', 1;
GO
RECONFIGURE;
GO
EXEC sp_configure 'nested triggers', SQL segment

Answer:

Explanation:

Answer Area

ALTER DATABASE Sales
SET RECURSIVE_TRIGGERS OFF
EXEC sp_configure 'show advanced options', 1;
GO
RECONFIGURE;
GO
EXEC sp_configure 'nested triggers', 0

Box 1: OFF

Box 2: 0

Only direct recursion of AFTER triggers is prevented when the RECURSIVE_TRIGGERS database option is set to OFF. To disable indirect recursion of AFTER triggers, also set the nested triggers server option to 0.

Note: Both DML and DDL triggers are nested when a trigger performs an action that initiates another trigger. These actions can initiate other triggers, and so on. DML and DDL triggers can be nested up to 32 levels. You can control

whether AFTER triggers can be nested through the nested triggers server configuration option.
If nested triggers are allowed and a trigger in the chain starts an infinite loop, the nesting level is exceeded and the trigger terminates.
References:<https://msdn.microsoft.com/en-us/library/ms190739.aspx>

Question: 148

CORRECT TEXT

You have a database named SALES that stored the sales data and the salespeople for your company. You need to create a function that is passed a ProductID and then returns a list of SalesOrderID values for orders that must be associated to a salesperson in the future. The function must be able to return multiple SalesOrderID values. Part of the correct Transact-SQL has been provided in the answer area below. Enter the code in the answer area that resolves the problem and meets the stated goals or requirements. You can add code within the code that has been provided as well as below it.

```
1 CREATE FUNCTION dbo.OrdersWithNoSalesPerson(@ProductID INT)
2 RETURNS
3 AS
4     header.SalesOrderID
5 FROM Sales.SalesOrderDetail detail
6 INNER JOIN Sales.SalesOrderHeader header
7 on header.SalesOrderID = detail.SalesOrderID
8 WHERE header.SalesPersonID
9 AND detail.ProductID = @ProductID;
10 GO
```

Keywords

ADD	DESC	KILL	ROW_NUMBER
ALL	DISK	LEFT	ROWGUIDCOL
ALTER	DISTINCT	LIKE	RULE
AND	DISTRIBUTED	LINENO	SAVESCHEMA
ANY	DOUBLE	LOAD	SCHEMABINDING
AS	DROP	MAX	SECURITYAUDIT
ASC	DUMP	MERGE	SELECT
AUTHORIZATION	ELSE	NATIONAL	SEMANTICKEYPHRASETABLE
BACKUP	END	NOCHECK	SEMANTICSIMILARITYDETAILTABLE
BEGIN	ERRLVL	NONCLUSTEREDNOT	SEMANTICSIMILARITYTABLE
BETWEEN	ERROR_NUMBER	NULL	SESSION_USER
BREAK	ESCAPE	NULLIF	SET
BROWSE	EXCEPT	OF	SETUSER
BULK	EXEC	OFF	SHUTDOWN
BY	EXECUTE	OFFSETS	SNAPSHOT
CASCADE	EXISTS	ON	SOME
CASE	EXIT	OPEN	STATISTICS
CAST	EXTERNAL	OPENDATASOURCE	SYSTEM_USER
CATCH	FETCH	OPENQUERY	TABLE
CHECK	FILE	OPENROWSET	TABLESAMPLE
CHECKPOINT	FILESTREAM	OPENXML	TEXTSIZE
CLOSE	FILLFACTOR	OPTION	THEN
CLUSTERED	FOR	OR	TO
COALESCE	FORFOREIGN	ORDER	TOP
COLLATE	FREETEXT	OUTER	TRAN
COLUMN	FREETEXTTABLE	OVER	TRANSACTION
COMMIT	FROM	PERCENT	TRIGGER
COMPUTE	FULL	PERSISTED	TRUNCATE
CONCAT	FUNCTION	PIVOT	TRY_CONVERT
CONSTRAINT	GETDATE	PLAN	TSEQUAL
CONTAINS	GO	PRECISION	UNION
CONTAINSTABLE	GOTO	PRIMARY	UNIQUE
CONTINUE	GRANT	PRINT	UNPIVOT
CONVERT	GROUP	PROC	UPDATE
CREATE	HAVING	PROCEDURE	UPDATETEXT
CROSS	HOLDLOCK	PUBLIC	USE
CREATE	IDENTITY	RAISERROR	USER
CROSS	IDENTITY_INSERT	RANK	VALUES
CURRENT	IDENTITYCOL	READ	VARYING
CURRENT_DATE	IF	READTEXT	VIEW
CURRENT_TIME	IFF	RECONFIGURE	WAITFOR
CURRENT_TIMESTAMP	IN	REFERENCES	WHEN
CURRENT_USER	INDEX	REPEATABLE	WHERE
CURSOR	INNER	REPLICATION	WHILE
DATABASE	INSERT	RESTORE	WITH
DATETIME	INT	RESTRICT	WITHIN GROUP
DBCC	INTERSECT	RETURNREVERT	WRITETEXT
DEALLOCATE	INTO	REVOKE	XML
DECLAREDEFAULT	IS	RIGHT	
DELETE	ISNULL	ROLLBACK	
DENSE_RANK	JOIN	ROWCOUNT	
DENY	KEY		

Use the Check Syntax button to verify your work. Any syntax or spelling errors will be reported by line and character position.

**Answer: WHERE
header.SalesPersonID
IS NULL**

Explanation:

On line 8 add: IS NULL to get:

```
CREATE FUNCTION dbo.OrdersWithNoSalesPerson(@ProductID INT)
RETURNS
AS
header.SalesOrderID
FROM Sales.SalesOrderDetail detail
INNER JOIN Sales.SalesOrderHeader header
on header.SalesOrderID = detail.SalesOrderID
WHERE header.SalesPersonID IS NULL
AND detail.ProductID = @ProductID;
GO
```

Note: IS NULL determines whether a specified expression is NULL. If the value of expression is NULL, IS NULL returns TRUE; otherwise, it returns FALSE.

To determine whether an expression is NULL, use IS NULL or IS NOT NULL instead of comparison operators (such as = or !=). Comparison operators return UNKNOWN when either or both arguments are NULL.

References:<https://msdn.microsoft.com/en-us/library/ms188795.aspx>

Question: 149

CORRECT TEXT

You have an XML schema collection named Sales.InvoiceSchema.

You need to declare a variable of the XML type named Invoice. The solution must ensure that the Invoice variable is validated against the Sales.InvoiceSchema schema.

Part of the correct Transact-SQL has been provided in the answer area below. Enter the Transact-SQL in the answer area that resolves the problem and meets the stated goals or requirements. You can add Transact-SQL within the Transact-SQL segment that has been provided as well as below it.

```
1  DECLARE
```

Keywords

ADD	DESC	KILL	ROW_NUMBER
ALL	DISK	LEFT	ROWGUIDCOL
ALTER	DISTINCT	LIKE	RULE
AND	DISTRIBUTED	LINENO	SAVESCHEMA
ANY	DOUBLE	LOAD	SCHEMABINDING
AS	DROP	MAX	SECURITYAUDIT
ASC	DUMP	MERGE	SELECT
AUTHORIZATION	ELSE	NATIONAL	SEMANTICKEYPHRASETABLE
BACKUP	END	NOCHECK	SEMANTICSIMILARITYDETAILTABLE
BEGIN	ERRLVL	NONCLUSTEREDNOT	SEMANTICSIMILARITYTABLE
BETWEEN	ERROR_NUMBER	NULL	SESSION_USER
BREAK	ESCAPE	NULLIF	SET
BROWSE	EXCEPT	OF	SETUSER
BULK	EXEC	OFF	SHUTDOWN
BY	EXECUTE	OFFSETS	SNAPSHOT
CASCADE	EXISTS	ON	SOME
CASE	EXIT	OPEN	STATISTICS
CAST	EXTERNAL	OPENDATASOURCE	SYSTEM_USER
CATCH	FETCH	OPENQUERY	TABLE
CHECK	FILE	OPENROWSET	TABLESAMPLE
CHECKPOINT	FILESTREAM	OPENXML	TEXTSIZE
CLOSE	FILLFACTOR	OPTION	THEN
CLUSTERED	FOR	OR	TO
COALESCE	FORFOREIGN	ORDER	TOP
COLLATE	FREETEXT	OUTER	TRAN
COLUMN	FREETEXTTABLE	OVER	TRANSACTION
COMMIT	FROM	PERCENT	TRIGGER
COMPUTE	FULL	PERSISTED	TRUNCATE
CONCAT	FUNCTION	PIVOT	TRY_CONVERT
CONSTRAINT	GETDATE	PLAN	TSEQUAL
CONTAINS	GO	PRECISION	UNION
CONTAINSTABLE	GOTO	PRIMARY	UNIQUE
CONTINUE	GRANT	PRINT	UNPIVOT
CONVERT	GROUP	PROC	UPDATE
CREATE	HAVING	PROCEDURE	UPDATETEXT
CROSS	HOLDLOCK	PUBLIC	USE
CREATE	IDENTITY	RAISERROR	USER
CROSS	IDENTITY_INSERT	RANK	VALUES
CURRENT	IDENTITYCOL	READ	VARYING
CURRENT_DATE	IF	READTEXT	VIEW
CURRENT_TIME	IFF	RECONFIGURE	WAITFOR
CURRENT_TIMESTAMP	IN	REFERENCES	WHEN
CURRENT_USER	INDEX	REPEATABLE	WHERE
CURSOR	INNER	REPLICATION	WHILE
DATABASE	INSERT	RESTORE	WITH
DATETIME	INT	RESTRICT	WITHIN GROUP
DBCC	INTERSECT	RETURNREVERT	WRITETEXT
DEALLOCATE	INTO	REVOKE	XML
DECLAREDEFAULT	IS	RIGHT	
DELETE	ISNULL	ROLLBACK	
DENSE_RANK	JOIN	ROWCOUNT	
DENY	KEY		

Use the Check Syntax button to verify your work. Any syntax or spelling errors will be reported by line and character position.

**Answer: DECLARE
@Invoice xml
(Sales.InvoiceSchema)**

Explanation:

Update line 1.

You can use a DECLARE statement to create a variable of xml type, as the following example shows.

DECLARE @x xml

Further, create a typed xml variable by specifying an XML schema collection, as shown in the following example.

DECLARE @x xml (Sales.StoreSurveySchemaCollection)

References:<https://msdn.microsoft.com/en-us/library/bb522510.aspx>

Question: 150

CORRECT TEXT

You have a data warehouse that contains the data for all the customers of your company.

You need to create a query dynamically generates a SELECT statement from a table named CUSTOMERS. The SELECT statement must generate a full list of columns.

Part of the correct Transact-SQL has been provided in the answer area below. Enter the code in the answer area that resolves the problem and meets the stated goals or requirements. You can add code within the code that has been provided as well as below it.

```
1 SELECT 'SELECT' +
2     STUFF (
3         SELECT ', [ ' + name + ' ]'
4         FROM
5             WHERE id = OBJECT_ID('Customers') AND
6                 name <> 'me'
7                 FOR      (''), 1, 1, '') +
8 'FROM [Customers]'
```

Keywords

ADD	DESC	KILL	ROW_NUMBER
ALL	DISK	LEFT	ROWGUIDCOL
ALTER	DISTINCT	LIKE	RULE
AND	DISTRIBUTED	LINENO	SAVESCHEMA
ANY	DOUBLE	LOAD	SCHEMABINDING
AS	DROP	MAX	SECURITYAUDIT
ASC	DUMP	MERGE	SELECT
AUTHORIZATION	ELSE	NATIONAL	SEMANTICKEYPHRASETABLE
BACKUP	END	NOCHECK	SEMANTICSIMILARITYDETAILTABLE
BEGIN	ERRLVL	NONCLUSTEREDNOT	SEMANTICSIMILARITYTABLE
BETWEEN	ERROR_NUMBER	NULL	SESSION_USER
BREAK	ESCAPE	NULLIF	SET
BROWSE	EXCEPT	OF	SETUSER
BULK	EXEC	OFF	SHUTDOWN
BY	EXECUTE	OFFSETS	SNAPSHOT
CASCADE	EXISTS	ON	SOME
CASE	EXIT	OPEN	STATISTICS
CAST	EXTERNAL	OPENDATASOURCE	SYSTEM_USER
CATCH	FETCH	OPENQUERY	TABLE
CHECK	FILE	OPENROWSET	TABLESAMPLE
CHECKPOINT	FILESTREAM	OPENXML	TEXTSIZE
CLOSE	FILLFACTOR	OPTION	THEN
CLUSTERED	FOR	OR	TO
COALESCE	FORFOREIGN	ORDER	TOP
COLLATE	FREETEXT	OUTER	TRAN
COLUMN	FREETEXTTABLE	OVER	TRANSACTION
COMMIT	FROM	PERCENT	TRIGGER
COMPUTE	FULL	PERSISTED	TRUNCATE
CONCAT	FUNCTION	PIVOT	TRY_CONVERT
CONSTRAINT	GETDATE	PLAN	TSEQUAL
CONTAINS	GO	PRECISION	UNION
CONTAINSTABLE	GOTO	PRIMARY	UNIQUE
CONTINUE	GRANT	PRINT	UNPIVOT
CONVERT	GROUP	PROC	UPDATE
CREATE	HAVING	PROCEDURE	UPDATETEXT
CROSS	HOLDLOCK	PUBLIC	USE
CREATE	IDENTITY	RAISERROR	USER
CROSS	IDENTITY_INSERT	RANK	VALUES
CURRENT	IDENTITYCOL	READ	VARYING
CURRENT_DATE	IF	READTEXT	VIEW
CURRENT_TIME	IFF	RECONFIGURE	WAITFOR
CURRENT_TIMESTAMP	IN	REFERENCES	WHEN
CURRENT_USER	INDEX	REPEATABLE	WHERE
CURSOR	INNER	REPLICATION	WHILE
DATABASE	INSERT	RESTORE	WITH
DATETIME	INT	RESTRICT	WITHIN GROUP
DBCC	INTERSECT	RETURNREVERT	WRITETEXT
DEALLOCATE	INTO	REVOKE	XML
DECLAREDEFAULT	IS	RIGHT	
DELETE	ISNULL	ROLLBACK	
DENSE_RANK	JOIN	ROWCOUNT	
DENY	KEY		

Use the Check Syntax button to verify your work. Any syntax or spelling errors will be reported by line and character position.

Answer: XML PATH

Explanation:

In line 7 add XML PATH to get the following line:

FOR XML PATH (' ') , 1, 1, ') +

Here is how it works:

1. Get XML element string with FOR XML

Adding FOR XML PATH to the end of a query allows you to output the results of the query as XML elements, with the element name contained in the PATH argument. For example, if we were to run the following statement:

```
SELECT ',' + name  
FROM temp1  
FOR XML PATH ("")
```

By passing in a blank string (FOR XML PATH("")), we get the following instead:

```
,aaa,bbb,ccc,ddd,eee
```

2. Remove leading comma with STUFF

The STUFF statement literally "stuffs" one string into another, replacing characters within the first string. We, however, are using it simply to remove the first character of the resultant list of values.

```
SELECT abc = STUFF( (SELECT ',' + NAME  
FROM temp1  
FOR XML PATH(''))  
, 1, 1, '')  
FROM temp1
```

Note: The full code will be:

```
SELECT 'SELECT' +  
STUFF ((  
SELECT ',[' + name + ']'  
FROM  
WHERE id = OBJECT_ID('Customers') AND  
...name <> 'me'  
FOR XML PATH (' ')), 1, 1, ' ') +  
'FROM[Customers] '
```

References: <http://stackoverflow.com/questions/31211506/how-stuff-and-for-xml-path-work-in-sql-server>

Question: 151

CORRECT TEXT

You have a SQL database that contains a table named Products.

You are implementing a stored procedure that retrieves the list of products, performs custom business logic and then retrieves the list of products again.

The custom business logic in the stored procedure does not modify data from the Products table.

The stored procedure contains the following:

```
01  
02 GO  
03 BEGIN TRANSACTION;  
04 GO  
05 SELECT *  
06   FROM Products  
07   WHERE ProductID=123 ;  
08 GO  
09 ...  
10 SELECT  
11   FROM Products  
12   WHERE ProductID=123;  
13 GO  
14 ...  
15 COMMIT TRANSACTION ;  
16 GO
```

You need to complete line 01 of the stored procedure to ensure that when the transaction occurs, the data read from the SELECT * FROM Products statement on line 05 is identical to the data read from the SELECT * FROM Products statement on line 10. The solution must maximize concurrency.

Part of the correct Transact-SQL has been provided in the answer area below. Enter the code in the answer area that resolves the problem and meets the stated goals or requirements. You can add code within the code that has been provided as well as below it.

```
1 SET TRANSACTION ISOLATION LEVEL ;
```

Keywords

ADD	DESC	KILL	ROW_NUMBER
ALL	DISK	LEFT	ROWGUIDCOL
ALTER	DISTINCT	LIKE	RULE
AND	DISTRIBUTED	LINENO	SAVESCHEMA
ANY	DOUBLE	LOAD	SCHEMABINDING
AS	DROP	MAX	SECURITYAUDIT
ASC	DUMP	MERGE	SELECT
AUTHORIZATION	ELSE	NATIONAL	SEMANTICKEYPHRASETABLE
BACKUP	END	NOCHECK	SEMANTICSIMILARITYDETAILTABLE
BEGIN	ERRLVL	NONCLUSTEREDNOT	SEMANTICSIMILARITYTABLE
BETWEEN	ERROR_NUMBER	NULL	SESSION_USER
BREAK	ESCAPE	NULLIF	SET
BROWSE	EXCEPT	OF	SETUSER
BULK	EXEC	OFF	SHUTDOWN
BY	EXECUTE	OFFSETS	SNAPSHOT
CASCADE	EXISTS	ON	SOME
CASE	EXIT	OPEN	STATISTICS
CAST	EXTERNAL	OPENDATASOURCE	SYSTEM_USER
CATCH	FETCH	OPENQUERY	TABLE
CHECK	FILE	OPENROWSET	TABLESAMPLE
CHECKPOINT	FILESTREAM	OPENXML	TEXTSIZE
CLOSE	FILLFACTOR	OPTION	THEN
CLUSTERED	FOR	OR	TO
COALESCE	FORFOREIGN	ORDER	TOP
COLLATE	FREETEXT	OUTER	TRAN
COLUMN	FREETEXTTABLE	OVER	TRANSACTION
COMMIT	FROM	PERCENT	TRIGGER
COMPUTE	FULL	PERSISTED	TRUNCATE
CONCAT	FUNCTION	PIVOT	TRY_CONVERT
CONSTRAINT	GETDATE	PLAN	TSEQUAL
CONTAINS	GO	PRECISION	UNION
CONTAINSTABLE	GOTO	PRIMARY	UNIQUE
CONTINUE	GRANT	PRINT	UNPIVOT
CONVERT	GROUP	PROC	UPDATE
CREATE	HAVING	PROCEDURE	UPDATETEXT
CROSS	HOLDLOCK	PUBLIC	USE
CREATE	IDENTITY	RAISERROR	USER
CROSS	IDENTITY_INSERT	RANK	VALUES
CURRENT	IDENTITYCOL	READ	VARYING
CURRENT_DATE	IF	READTEXT	VIEW
CURRENT_TIME	IFF	RECONFIGURE	WAITFOR
CURRENT_TIMESTAMP	IN	REFERENCES	WHEN
CURRENT_USER	INDEX	REPEATABLE	WHERE
CURSOR	INNER	REPLICATION	WHILE
DATABASE	INSERT	RESTORE	WITH
DATETIME	INT	RESTRICT	WITHIN GROUP
DBCC	INTERSECT	RETURNREVERT	WRITETEXT
DEALLOCATE	INTO	REVOKE	XML
DECLAREDEFAULT	IS	RIGHT	
DELETE	ISNULL	ROLLBACK	
DENSE_RANK	JOIN	ROWCOUNT	
DENY	KEY		

Use the Check Syntax button to verify your work. Any syntax or spelling errors will be reported by line and character position.

**Answer: REPEATABLE
READ**

Explanation:

Add REPEATABLE READ to line 1 to get:

SET TRANSACTIONISOLATION LEVEL REPEATABLE READ;

REPEATABLE READ specifies that statements cannot read data that has been modified but not yet committed by other transactions and that no other transactions can modify data that has been read by the current transaction until the current transaction completes.

Question: 152

CORRECT TEXT

You create a table by using the following Transact-SQL Statement:

```
CREATE TABLE Products
{
    Name nvarchar ( 10),
    SubName nvarchar ( 10)
};
```

You need to return a result set that has a single column named DisplayInformation. The result set must contain the Name value if the Name value is NOT NULL, otherwise the result set must contain the SubName value.

Part of the correct Transact-SQL has been provided in the answer area below. Enter the code in the answer area that resolves the problem and meets the stated goals or requirements. You can add code within the code that has been provided as well as below it.

```
1 SELECT      (Name, SubName)
2 FROM        Products;
```

Keywords

ADD	DESC	KILL	ROW_NUMBER
ALL	DISK	LEFT	ROWGUIDCOL
ALTER	DISTINCT	LIKE	RULE
AND	DISTRIBUTED	LINENO	SAVESCHEMA
ANY	DOUBLE	LOAD	SCHEMABINDING
AS	DROP	MAX	SECURITYAUDIT
ASC	DUMP	MERGE	SELECT
AUTHORIZATION	ELSE	NATIONAL	SEMANTICKEYPHRASETABLE
BACKUP	END	NOCHECK	SEMANTICSIMILARITYDETAILTABLE
BEGIN	ERRLVL	NONCLUSTEREDNOT	SEMANTICSIMILARITYTABLE
BETWEEN	ERROR_NUMBER	NULL	SESSION_USER
BREAK	ESCAPE	NULLIF	SET
BROWSE	EXCEPT	OF	SETUSER
BULK	EXEC	OFF	SHUTDOWN
BY	EXECUTE	OFFSETS	SNAPSHOT
CASCADE	EXISTS	ON	SOME
CASE	EXIT	OPEN	STATISTICS
CAST	EXTERNAL	OPENDATASOURCE	SYSTEM_USER
CATCH	FETCH	OPENQUERY	TABLE
CHECK	FILE	OPENROWSET	TABLESAMPLE
CHECKPOINT	FILESTREAM	OPENXML	TEXTSIZE
CLOSE	FILLFACTOR	OPTION	THEN
CLUSTERED	FOR	OR	TO
COALESCE	FORFOREIGN	ORDER	TOP
COLLATE	FREETEXT	OUTER	TRAN
COLUMN	FREETEXTTABLE	OVER	TRANSACTION
COMMIT	FROM	PERCENT	TRIGGER
COMPUTE	FULL	PERSISTED	TRUNCATE
CONCAT	FUNCTION	PIVOT	TRY_CONVERT
CONSTRAINT	GETDATE	PLAN	TSEQUAL
CONTAINS	GO	PRECISION	UNION
CONTAINSTABLE	GOTO	PRIMARY	UNIQUE
CONTINUE	GRANT	PRINT	UNPIVOT
CONVERT	GROUP	PROC	UPDATE
CREATE	HAVING	PROCEDURE	UPDATETEXT
CROSS	HOLDLOCK	PUBLIC	USE
CREATE	IDENTITY	RAISERROR	USER
CROSS	IDENTITY_INSERT	RANK	VALUES
CURRENT	IDENTITYCOL	READ	VARYING
CURRENT_DATE	IF	READTEXT	VIEW
CURRENT_TIME	IFF	RECONFIGURE	WAITFOR
CURRENT_TIMESTAMP	IN	REFERENCES	WHEN
CURRENT_USER	INDEX	REPEATABLE	WHERE
CURSOR	INNER	REPLICATION	WHILE
DATABASE	INSERT	RESTORE	WITH
DATETIME	INT	RESTRICT	WITHIN GROUP
DBCC	INTERSECT	RETURNREVERT	WRITETEXT
DEALLOCATE	INTO	REVOKE	XML
DECLAREDEFAULT	IS	RIGHT	
DELETE	ISNULL	ROLLBACK	
DENSE_RANK	JOIN	ROWCOUNT	
DENY	KEY		

Use the Check Syntax button to verify your work. Any syntax or spelling errors will be reported by line and character position.

**Answer: SELECT IIF
(Name IS NOT NULL,
Name, SubName)**

Explanation:

Update line 1 to get the following:

```
SELECT IIF (Name IS NOT NULL, Name, SubName)
FROM Products;
```

IIF returns one of two values, depending on whether the Boolean expression evaluates to true or false in SQL Server.

Syntax: IIF (boolean_expression, true_value, false_value)

If the value of expression is NULL, IS NULL returns TRUE; otherwise, it returns FALSE.

If the value of expression is NULL,IS NOT NULL returns FALSE; otherwise, it returns TRUE.

To determine whether an expression is NULL, use IS NULL or IS NOT NULL instead of comparison operators (such as = or !=). Comparison operators return UNKNOWN when either or both arguments are NULL

References:<https://msdn.microsoft.com/en-us/library/hh213574.aspx>

<https://msdn.microsoft.com/en-us/library/ms188795.aspx>

Question: 153

CORRECT TEXT

You have a SQL Server database that contains all of the customer data for your company.

You need to extract a random 1,000 row sample from a table Customers.

Part of the correct Transact-SQL has been provided in the answer area below. Enter the code in the answer area that resolves the problem and meets the stated goals or requirements. You can add code within the code that has been provided as well as below it.

```
1 SELECT *
2 FROM Customers
3 TABLESAMPLE SYSTEM (
```

Keywords

ADD	DESC	KILL	ROW_NUMBER
ALL	DISK	LEFT	ROWGUIDCOL
ALTER	DISTINCT	LIKE	RULE
AND	DISTRIBUTED	LINENO	SAVESCHEMA
ANY	DOUBLE	LOAD	SCHEMABINDING
AS	DROP	MAX	SECURITYAUDIT
ASC	DUMP	MERGE	SELECT
AUTHORIZATION	ELSE	NATIONAL	SEMANTICKEYPHRASETABLE
BACKUP	END	NOCHECK	SEMANTICSIMILARITYDETAILTABLE
BEGIN	ERRLVL	NONCLUSTEREDNOT	SEMANTICSIMILARITYTABLE
BETWEEN	ERROR_NUMBER	NULL	SESSION_USER
BREAK	ESCAPE	NULLIF	SET
BROWSE	EXCEPT	OF	SETUSER
BULK	EXEC	OFF	SHUTDOWN
BY	EXECUTE	OFFSETS	SNAPSHOT
CASCADE	EXISTS	ON	SOME
CASE	EXIT	OPEN	STATISTICS
CAST	EXTERNAL	OPENDATASOURCE	SYSTEM_USER
CATCH	FETCH	OPENQUERY	TABLE
CHECK	FILE	OPENROWSET	TABLESAMPLE
CHECKPOINT	FILESTREAM	OPENXML	TEXTSIZE
CLOSE	FILLFACTOR	OPTION	THEN
CLUSTERED	FOR	OR	TO
COALESCE	FORFOREIGN	ORDER	TOP
COLLATE	FREETEXT	OUTER	TRAN
COLUMN	FREETEXTTABLE	OVER	TRANSACTION
COMMIT	FROM	PERCENT	TRIGGER
COMPUTE	FULL	PERSISTED	TRUNCATE
CONCAT	FUNCTION	PIVOT	TRY_CONVERT
CONSTRAINT	GETDATE	PLAN	TSEQUAL
CONTAINS	GO	PRECISION	UNION
CONTAINSTABLE	GOTO	PRIMARY	UNIQUE
CONTINUE	GRANT	PRINT	UNPIVOT
CONVERT	GROUP	PROC	UPDATE
CREATE	HAVING	PROCEDURE	UPDATETEXT
CROSS	HOLDLOCK	PUBLIC	USE
CREATE	IDENTITY	RAISERROR	USER
CROSS	IDENTITY_INSERT	RANK	VALUES
CURRENT	IDENTITYCOL	READ	VARYING
CURRENT_DATE	IF	READTEXT	VIEW
CURRENT_TIME	IFF	RECONFIGURE	WAITFOR
CURRENT_TIMESTAMP	IN	REFERENCES	WHEN
CURRENT_USER	INDEX	REPEATABLE	WHERE
CURSOR	INNER	REPLICATION	WHILE
DATABASE	INSERT	RESTORE	WITH
DATETIME	INT	RESTRICT	WITHIN GROUP
DBCC	INTERSECT	RETURNREVERT	WRITETEXT
DEALLOCATE	INTO	REVOKE	XML
DECLAREDEFAULT	IS	RIGHT	
DELETE	ISNULL	ROLLBACK	
DENSE_RANK	JOIN	ROWCOUNT	
DENY	KEY		

Use the Check Syntax button to verify your work. Any syntax or spelling errors will be reported by line and character position.

Answer:
TABLESAMPLE
SYSTEM (1000 ROWS)

Explanation:

Update line 3 to get the following:

```
SELECT *  
FROM Customers  
TABLESAMPLE SYSTEM (1000 ROWS)
```

The TABLESAMPLE clause limits the number of rows returned from a table in the FROM clause to a sample number orPERCENT of rows.

Syntax: TABLESAMPLE [SYSTEM] (sample_number [PERCENT | ROWS])

References: [https://technet.microsoft.com/en-us/library/ms189108\(v=sql.105\).aspx](https://technet.microsoft.com/en-us/library/ms189108(v=sql.105).aspx)

Question: 154

You develop a stored procedure for a wholesale glass manufacturing company. The stored procedure uses a cursor to read all row-based combinations of the following tables:

Table Name	Description
GlassType	a listing of all of the glass types that the company manufactures
GlassSize	the height, width, and thickness of a piece of glass

You observe that the stored procedure returns results very slowly.

You need to improve the execution speed of the stored procedure.

Which cursor type should you use?

- A. GLOBAL FORWARD_ONLY
- B. LOCAL FAST_FORWARD
- C. LOCAL STATIC READ_ONLY FORWARD_ONLY
- D. GLOBAL STATIC

Answer: B

Explanation:

FAST_FORWARD specifies a FORWARD_ONLY, READ_ONLY cursor with performance optimizations enabled.

References: <https://msdn.microsoft.com/en-us/library/ms180169.aspx>

Question: 155

DRAG DROP

You use Microsoft SQL Server to develop a database application.

You create a stored procedure named usp_calculategrowth. The stored procedure modifies rows and can result in several different exceptions.

You need to ensure that when the stored procedure is executed, the following requirements are met:

- The calling application can receive a custom error message.
- The error is readable from the Windows Event Viewer of the server.
- The error is readable in the SQL Error log.

Which six Transact-SQL statements should you use? (To answer, move the appropriate SQL statements from the list of statements to the answer area and arrange them in the correct order.)

SQL statements

```

THROW;

Exec usp_calculategrowth

BEGIN TRY

END TRY

RAISERROR ('Error in calculation', 16, 1) WITH LOG

EXEC xp_logevent 50000,
N'Error in calculation'

BEGIN CATCH

END CATCH

```

Answer Area**Answer:**

Explanation:

Answer Area

```

BEGIN TRY

Exec usp_calculategrowth

END TRY

BEGIN CATCH

EXEC xp_logevent 50000,
N'Error in calculation'

END CATCH

```

Box 1: BEGIN TRY

A TRY...CATCH construct consists of two parts: a TRY block and a CATCH block. When an error condition is detected in a Transact-SQL statement that is inside a TRY block, control is passed to a CATCH block where the error can be processed.

A TRY block starts with the BEGIN TRY statement and ends with the END TRY statement.

Box 2: Exec usp_calculategrowth

Box 3: END TRY

Box 4: BEGIN CATCH

A TRY block must be followed immediately by a CATCH block. A CATCH block starts with the BEGIN CATCH statement and ends with the END CATCH statement.

Box 5: EXEC xp_logevent ...

xp_logevent logs a user-defined message in the SQL Server log file and in the Windows Event Viewer. xp_logevent can be used to send an alert without sending a message to the client.

Incorrect:

Not RAISERROR: RAISERROR generates an error message and initiates error processing for the session.

The message is returned as a server error message to the calling application or to an associated CATCH block of a TRY...CATCH construct. New applications should use THROW instead.

Box 6: END CATCH

References:

<https://msdn.microsoft.com/en-us/library/ms186244.aspx>

[https://technet.microsoft.com/en-us/library/ms179296\(v=sql.105\).aspx](https://technet.microsoft.com/en-us/library/ms179296(v=sql.105).aspx)

Question: 156

DRAG DROP

You need to create a stored procedure that enters values into multiple tables. The solution must ensure that if a single insert fails, none of the values are inserted into the tables.

How should you complete the stored procedure? To answer, drag the appropriate values to the correct locations. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Values

```
BEGIN
BEGIN TRANSACTION
BEGIN TRY
COMMIT TRANSACTION
ROLLBACK
SAVE TRANSACTION
```

Answer Area

```
CREATE PROCEDURE AddOrder
    @CustomerId INT,
    @Orders OrderType READONLY
AS
    Value
    INSERT INTO LogTable
        (CustomerId, Action)
    VALUES
        (@CustomerId, 'Order Placed')
    Value
    INSERT INTO Orders
        (CustomerId)
    VALUES
        (@CustomerId)

    SET @OrderId = SCOPE_IDENTITY()

    INSERT INTO OrderDetails
        (OrderId, PartId, Quantity, Cost)
    SELECT @OrderId, PartId, Quantity, Cost
    FROM @Orders
END TRY
BEGIN CATCH
    Value
END CATCH
    Value
```

Answer:

Explanation:

- Box 1: BEGIN TRY
- Box 2: SAVE TRANSACTION
- Box 3: ROLLBACK
- Box 4: COMMIT TRANSACTION

References: <https://msdn.microsoft.com/en-us/library/ms188378.aspx>

Question: 15

You have several SQL Server queries.

You plan to optimize the queries to improve performance.

You run the queries in SQL Server Management Studio.

You need to compare query runs to expose the indexing issues of the queries.

Which three actions should you perform from SQL Server Management Studio? Each correct answer presents part of the solution.

- A. Enable the Debug option.

- B. Add the STATISTICS TIME execution setting to the query.
- C. Add the STATISTICS IO execution setting to the query.
- D. Add the STATISTICS PROFILE execution setting to the query.
- E. Enable the Include Actual Execution Plan option.

Answer: B,C,E

Explanation:

E: An execution plan is the result of the query optimizer's attempt to calculate the most efficient way to implement the request represented by the T-SQL query you submitted. To generate the first execution plan, you can enable the Include Actual Execution Plan option.

B: SET STATISTICS TIME displays the number of milliseconds required to parse, compile, and execute each statement.

C: STATISTICS IO causes SQL Server to display information regarding the amount of disk activity generated by Transact-SQL statements. This is useful information for optimizing queries.

The information include Scan count:

Number of seeks/scans started after reaching the leaf level in any direction to retrieve all the values to construct the final dataset for the output.

Scan count is 0 if the index used is a unique index or clustered index on a primary key and you are seeking for only one value. For example WHERE Primary_Key_Column = <value>.

Scant count is 1 when you are searching for one value using a non-unique clustered index which is defined on a non-primary key column. This is done to check for duplicate values for the keyvalue that you are searching for. For example WHERE Clustered_Index_Key_Column = <value>.

Scan count is N when N is the number of different seek/scan started towards the left or right side at the leaf level after locating a key value using the index key.

Question: 158

You have a vendor application that uses a scalar function.

You discover that the queries for the application run slower than expected.

You need to gather the runtime information of the scalar function.

What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

- A. Enable the Include Actual Execution Plan option.
- B. Enable the Display Estimated Execution Plan option.
- C. Create and then enable a profiler trace.
- D. Create and then enable an extended events trace.
- E. Run the Database Engine Tuning Advisor.

Answer: A,D

Explanation:

A: An execution plan is the result of the query optimizer's attempt to calculate the most efficient way to implement the request represented by the T-SQL query you submitted. To generate the first execution plan, you can enable the Include Actual Execution Plan option.

D: SQL Server Extended Events can be used to capture User Defined Function(UDF) counts

References:<https://www.mssqltips.com/sqlservertip/4100/how-to-find-udfs-causing-sql-server-performance-issues/>

Question: 159

HOTSPOT

You are developing a SQL Server database for an order management system. The database contains a table that is defined by the following Transact-SQL statement:

```
CREATE TABLE [dbo].[Orders]
[OrderNumber] [int] NOT NULL,
[Quantity] [varchar](40) NOT NULL,
[OrderedDate] [varchar](20) NOT NULL
)
```

Transactions must commit if there are no errors. Transactions must roll back if constraint violations occur.

You need to create the Transact-SQL script to insert new orders.

How should you complete the relevant Transact-SQL script? To answer, select the appropriate Transact-SQL statements from each list in the answer area.

Answer Area

```
SET XACT_ABORT ON;
SET XACT_ABORT OFF;

BEGIN TRY
    BEGIN TRANSACTION;
        INSERT INTO [dbo].[Orders] ([OrderNumber], [Quantity], [OrderedDate])
            VALUES (152, NULL, GETDATE())
        COMMIT TRANSACTION;
END TRY
BEGIN CATCH

    IF @@TRANCOUNT = 0
    IF (XACT_STATE()) = 1
    IF (XACT_STATE()) = -1

        ROLLBACK TRANSACTION;

    IF @@TRANCOUNT = 0
    IF (XACT_STATE()) = 1
    IF (XACT_STATE()) = -1

        COMMIT TRANSACTION;
END CATCH
```

Explanation:

Answer:

Answer Area

```

SET XACT_ABORT ON;
SET XACT_ABORT OFF;

BEGIN TRY
    BEGIN TRANSACTION;
        INSERT INTO [dbo].[Orders] ([OrderNumber], [Quantity], [OrderedDate])
            VALUES (152, NULL, GETDATE())
        COMMIT TRANSACTION;
END TRY
BEGIN CATCH

    IF @@TRANCOUNT = 0
    IF (XACT_STATE()) = 1
    IF (XACT_STATE()) = -1

        ROLLBACK TRANSACTION;

    IF @@TRANCOUNT = 0
    IF (XACT_STATE()) = 1
    IF (XACT_STATE()) = -1

        COMMIT TRANSACTION;
END CATCH

```

Box 1: SET XACT_ABORT ON;

XACT_ABORT specifies whether SQL Server automatically rolls back the current transaction when a Transact-SQL statement raises a run-time error.

When SET XACT_ABORT is ON, if a Transact-SQL statement raises a run-time error, the entire transaction is terminated and rolled back.

Box 2: IF (XACT_STATE()) = -1

If XACT_STATE has the value of -1, then the current request has an active user transaction, but an error has occurred that has caused the transaction to be classified as an uncommittable transaction. The request cannot commit the transaction or roll back to a savepoint; it can only request a full rollback of the transaction.

Box 3: IF (XACT_STATE()) = 1

If XACT_STATE has the value of 1, then the current request has an active user transaction. The request can perform any actions, including writing data and committing the transaction.

References:

<https://msdn.microsoft.com/en-us/library/ms188792.aspx>

<https://msdn.microsoft.com/en-us/library/ms189797.aspx>

Question: 160

You generate a daily report according to the following query:

```

SELECT c.CustomerName
FROM Sales.Customer c
WHERE Sales.ufnGetLastOrderDate(c.CustomerID) <
DATEADD(DAY, -90, GETDATE())

```

The Sales.ufnGetLastOrderDate user-defined function (UDF) is defined as follows:

```

CREATE FUNCTION Sales.ufnGetLastOrderDate(@CustomerID int)
RETURNS datetime
AS
BEGIN
    DECLARE @lastOrderDate datetime
    SELECT @lastOrderDate = MAX(OrderDate)
    FROM Sales.SalesOrder
    WHERE CustomerID = @CustomerID
    RETURN @lastOrderDate
END

```

You need to improve the performance of the query.

What should you do?

A

Drop the UDF and rewrite the report query as follows:

```

SELECT c.CustomerName
FROM Sales.Customer c
INNER JOIN Sales.SalesOrder s on c.CustomerID = s.CustomerID
GROUP BY c.CustomerID
HAVING MAX(s.OrderDate) < DATEADD(DAY, -90, GETDATE())

```

B

Drop the UDF and rewrite the report query as follows:

```

SELECT c.CustomerName
FROM Sales.Customer c
WHERE NOT EXISTS (
    SELECT s.OrderDate
    FROM Sales.SalesOrder s
    WHERE s.OrderDate > DATEADD(DAY, -90, GETDATE())
    AND s.CustomerID = c.CustomerID)

```

C

Drop the UDF and rewrite the report query as follows:

```

SELECT DISTINCT c.CustomerName
FROM Sales.Customer c
INNER JOIN Sales.SalesOrder s on c.CustomerID = s.CustomerID
WHERE s.OrderDate < DATEADD(DAY, -90, GETDATE())

```

D

Rewrite the report query as follows:

```
SELECT c.CustomerName
FROM Sales.Customer c
WHERE NOT EXISTS (SELECT OrderDate FROM Sales.ufnGetRecentOrders(c.CustomerID, 90))
```

Rewrite the UDF as follows:

```
CREATE FUNCTION Sales.ufnGetRecentOrders(@CustomerID int, @MaxAge datetime)
RETURNS @OrderTable TABLE (OrderDate datetime)
AS
BEGIN
    INSERT @OrderTable
    SELECT OrderDate
    FROM Sales.SalesOrder s
    WHERE s.CustomerID = @CustomerID
        AND s.OrderDate > DATEADD (DAY, -@MaxAge, GETDATE())
    RETURN
END
```

- A) Option A
- B) Option B
- C) Option C
- D) Option D

Answer: A

Question: 161

You need to build a table structure for a stored procedure to support data entry from a website form. The website form must meet the following requirements:

- Users must validate their age as 18 or older to use the website.
- Users who leave the date of birth field blank, or who enter an invalid date, must receive an error message.

Which two actions should you perform? Each correct answer presents part of the solution.

- A. Add the CHECK constraint to the table structure.
- B. Add the DATEPART function to the stored procedure.
- C. Add the DEFAULT constraint to the table structure.
- D. Add the SYSDATETIMEOFFSET function to the stored procedure.
- E. Add the ISDATE function to the stored procedure.

Answer: D,E

Explanation:

SYSDATETIMEOFFSET returns a datetimeoffset(7) value that contains the date and time of the computer on which the instance of SQL Server is running.

ISDATE returns 1 if the expression is a valid date, time, or datetime value; otherwise, 0.

References:<https://msdn.microsoft.com/en-us/library/bb677334.aspx>

Question: 162

You administer a Microsoft SQL Server database that includes a table named Products. The Products table has columns named ProductId, ProductName, and CreatedDateTime.

The table contains a unique constraint on the combination of ProductName and CreatedDateTime.

You need to modify the Products table to meet the following requirements:

- Remove all duplicates of the Products table based on the ProductName column.
- Retain only the newest Products row.

Which Transact-SQL query should you use?

A

```
WITH CTEDupRecords
AS
(
    SELECT MIN(CreatedDateTime) AS CreatedDateTime, ProductName
    FROM Products
    GROUP BY ProductName
    HAVING COUNT(*) > 1
)
DELETE Products
FROM Products p
JOIN CTEDupRecords cte ON
cte.ProductName = p.ProductName
AND cte.CreatedDateTime > p.CreatedDateTime
```

B

```
WITH CTEDupRecords
AS
(
    SELECT MIN(CreatedDateTime) AS CreatedDateTime, ProductName
    FROM Products
    GROUP BY ProductName
    HAVING COUNT(*) > 1
)
DELETE Products
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName
AND p.CreatedDateTime > cte.CreatedDateTime
```

C

```

WITH CTEDupRecords
AS
(
    SELECT MIN(CreatedDateTime) AS CreatedDateTime, ProductName
    FROM Products
    GROUP BY ProductName
)
DELETE Products
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName

```

D

```

WITH CTEDupRecords
AS
(
    SELECT MAX(CreatedDateTime) AS CreatedDateTime, ProductName
    FROM Products
    GROUP BY ProductName
    HAVING COUNT(*) > 1
)
DELETE Products
FROM Products p
JOIN CTEDupRecords cte ON
p.ProductName = cte.ProductName

```

- A) Option A
- B) Option B
- C) Option C
- D) Option D

Answer: B**Question: 163**

You use a Microsoft SQL Server database that contains a table named BlogEntry that has the following columns:

Column name	Data type
Id	bigint
EntryDateTime	datetime
Summary	nvarchar(max)

Id is the Primary Key.

You need to append the "This is in a draft stage" string to the Summary column of the recent 10 entries based on the values in EntryDateTime.

Which Transact-SQL statement should you use?

A

```
UPDATE BlogEntry  
SET Summary = CAST(N'This is in a draft stage' as nvarchar(max))  
WHERE Id IN (SELECT TOP (10) Id FROM BlogEntry ORDER BY EntryDateTime DESC)
```

B

```
UPDATE BlogEntry SET Summary.WRITE(N'This is in a draft stage', NULL, 0) FROM  
(SELECT TOP (10) Id FROM BlogEntry ORDER BY EntryDateTime DESC) AS s  
WHERE BlogEntry.Id = s.ID
```

C

```
UPDATE TOP (10) BlogEntry SET Summary.WRITE(N'This is in a draft stage', 0, 0)
```

D

```
UPDATE BlogEntry SET Summary.WRITE(N'This is in a draft stage', 0, 0) FROM  
(SELECT TOP (10) Id FROM BlogEntry ORDER BY EntryDateTime DESC) AS s  
WHERE BlogEntry.Id = s.ID
```

- A) Option A
- B) Option B
- C) Option C
- D) Option D

Answer: B

Explanation:

The UPDATE SET column_name.WRITE (expression,@Offset,@Length) command specifies that a section of the value of column_name is to be modified. expression replaces @Length units starting from @Offset of column_name. If @Offset is NULL, the update operation appends expression at the end of the existing column_name value and @Length is ignored.

Question: 164

DRAG DROP

You develop a SQL Server database for a large multinational company.

You must develop a stored procedure to loop through employee information and return data for one employee at a time.

How should you complete the stored procedure? To answer, drag the appropriate Transact-SQL segment to the correct locations in the answer area. Each Transact-SQL segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Transact-SQL statements

CURSOR VARYING OUTPUT

FORWARD_ONLY STATIC

CURSOR OUTPUT

DEALLOCATE

CLOSE

UPDATE

FORWARD_ONLYFAST_FORWARD

Answer Area

```

CREATE PROCEDURE dbo.uspGetEmployees
    @EmployeeCursor Transact-SQL statement
AS
    SET NOCOUNT ON;
    SET @EmployeeCursor = CURSOR
        Transact-SQL statement FOR
            SELECT surName, givenName
            FROM Employees;
        OPEN @EmployeeCursor;
        WHILE (@@FETCH_STATUS = 0)
            BEGIN
                FETCH NEXT FROM @EmployeeCursor;
            END;
        Transact-SQL statement @EmployeeCursor;
        Transact-SQL statement @EmployeeCursor;
GO

```

Answer:

Answer Area

```

CREATE PROCEDURE dbo.uspGetEmployees
    @EmployeeCursor CURSOR VARYING OUTPUT
AS
    SET NOCOUNT ON;
    SET @EmployeeCursor = CURSOR
        FORWARD_ONLY STATIC FOR
            SELECT surName, givenName
            FROM Employees;
    OPEN @EmployeeCursor;
    WHILE (@@FETCH_STATUS = 0)
        BEGIN
            FETCH NEXT FROM @EmployeeCursor;
        END;
        CLOSE @EmployeeCursor;
        DEALLOCATE @EmployeeCursor;
GO

```

Box 1: CURSOR VARYING OUTPUT

Transact-SQL stored procedures can use the cursor data type only for OUTPUT parameters. If the cursor data type is specified for a parameter, both the VARYING and OUTPUT parameters are required. If the VARYING keyword is specified for a parameter, the data type must be cursor and the OUTPUT keyword must be specified.

Box2: FORWARD_ONLY STATIC

Box 3: CLOSE

Box 4: DEALLOCATE

References:[https://technet.microsoft.com/en-us/library/ms175498\(v=sql.105\).aspx](https://technet.microsoft.com/en-us/library/ms175498(v=sql.105).aspx)

Question: 165

DRAG DROP

You have a SQL Server database named CUSTOMERS.

You need to sign a stored procedure named SelectCustomers in the CUSTOMERS database.

Which four statements should you execute in sequence? To answer, move the appropriate statements from the list of statements to the answer area and arrange them in the correct order.

Statements

```

ADD SIGNATURE TO SelectCustomers
BY CERTIFICATE SelectCustomers;

GRANT EXEC ON SelectCustomers
TO SelectCustomerUser;

CREATE LOGIN SelectCustomersLogin
FROM CERTIFICATE SelectCustomer-
sCertificate;

GRANT EXEC ON SelectCustomers
TO SelectCustomersLogin;

CREATE CERTIFICATE SelectCustomer-
sCertificate
WITH SUBJECT 'Procedure Signing';

CREATE USER SelectCustomersUser
FROM CERTIFICATE SelectCustomer-
sCertificate;

```

Answer Area**Answer:****Answer Area**

```

CREATE CERTIFICATE SelectCustomer-
sCertificate
WITH SUBJECT 'Procedure Signing';

CREATE USER SelectCustomersUser
FROM CERTIFICATE SelectCustomer-
sCertificate;

GRANT EXEC ON SelectCustomers
TO SelectCustomerUser;

ADD SIGNATURE TO SelectCustomers
BY CERTIFICATE SelectCustomers;

```

There are four steps involved in signing a module:

References:[https://msdn.microsoft.com/en-us/library/bb669102\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/bb669102(v=vs.110).aspx)