

REPORT FOR TASK 4, VARIANT 8

1. First subtask:

a:

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left displays the database structure for 'LT-BY-AKOSYUK'. The 'Person.CountryRegionHst' table is highlighted, showing its columns: ID (PK, int, not null), Action (nvarchar(6), not null), ModifiedDate (datetime, not null), SourceID (nvarchar(3), not null), and UserName (nvarchar(100), not null). The 'Constraints' section shows a primary key constraint on ID and a foreign key constraint on SourceID. The 'Triggers' section shows a trigger named 'TR_CountryRegion_AI'. The SQL Editor on the right contains the following code:

```
1 USE ALEXEY_KOSYUK;
2 GO
3
4 -- a
5 CREATE SCHEMA [Person];
6 GO
7 CREATE TABLE [Person].[CountryRegionHst]
8 (
9     [ID] INT IDENTITY(1, 1) PRIMARY KEY,
10    [Action] NVARCHAR(6) NOT NULL,
11    [ModifiedDate] DATETIME NOT NULL CONSTRAINT [DF_CountryRegionHst_ModifiedDate] DEFAULT GETDATE(),
12    [SourceID] NVARCHAR(3) NOT NULL,
13    [UserName] NVARCHAR(100) NOT NULL CONSTRAINT [DF_CountryRegionHst_UserName] DEFAULT CURRENT_USER,
14    CONSTRAINT [CH_CountryRegionHst_Action] CHECK([Action] IN ('INSERT', 'UPDATE', 'DELETE'))
15 );
16 GO
17
18 -- b
19 USE AdventureWorks2012;
20 GO
21
22 -- AFTER INSERT
23 CREATE TRIGGER [TR_CountryRegion_AI] ON [Person].[CountryRegion]
24 AFTER INSERT
25 AS
26 BEGIN
27     INSERT INTO [ALEXEY_KOSYUK].[Person].[CountryRegionHst]
28     (
29         [Action],
30         [SourceID]
31     )
32     SELECT
33         'INSERT',
34         [I].[CountryRegionCode]
35     FROM [INSERTED] AS [I];
36 END
37 GO
38
39 -- AFTER UPDATE
40 CREATE TRIGGER [TR_CountryRegion_AU] ON [Person].[CountryRegion]
41 AFTER UPDATE
42 AS
43 BEGIN
44     INSERT INTO [ALEXEY_KOSYUK].[Person].[CountryRegionHst]
45     (
46         [Action],
47         [SourceID]
48     )
49     SELECT
50         'UPDATE',
51         [I].[CountryRegionCode]
52     FROM [INSERTED] AS [I];
53 END
54 GO
```

The Messages pane at the bottom shows that the commands completed successfully. The status bar at the bottom indicates that the query was executed successfully.

b:

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left displays the database structure for 'AdventureWorks2012'. The 'Person.CountryRegion' table is highlighted, showing its columns: CountryRegionCode (PK, nvarchar(3), not null), Name (Name(nvarchar(50)), not null), and ModifiedDate (datetime, not null). The 'Constraints' section shows a primary key constraint on CountryRegionCode. The 'Triggers' section shows a trigger named 'TR_CountryRegion_AI'. The SQL Editor on the right contains the following code:

```
17 GO
18
19 -- b
20 USE AdventureWorks2012;
21 GO
22
23 -- AFTER INSERT
24 CREATE TRIGGER [TR_CountryRegion_AI] ON [Person].[CountryRegion]
25 AFTER INSERT
26 AS
27 BEGIN
28     INSERT INTO [ALEXEY_KOSYUK].[Person].[CountryRegionHst]
29     (
30         [Action],
31         [SourceID]
32     )
33     SELECT
34         'INSERT',
35         [I].[CountryRegionCode]
36     FROM [INSERTED] AS [I];
37 END
38 GO
39
40 -- AFTER UPDATE
41 CREATE TRIGGER [TR_CountryRegion_AU] ON [Person].[CountryRegion]
42 AFTER UPDATE
43 AS
44 BEGIN
45     INSERT INTO [ALEXEY_KOSYUK].[Person].[CountryRegionHst]
46     (
47         [Action],
48         [SourceID]
49     )
50     SELECT
51         'UPDATE',
52         [I].[CountryRegionCode]
53     FROM [INSERTED] AS [I];
54 END
55 GO
```

The Messages pane at the bottom shows that the commands completed successfully. The status bar at the bottom indicates that the query was executed successfully.

C:

Microsoft SQL Server Management Studio interface showing a query window with SQL code and a message pane.

Object Explorer:

- LT-BY-AKOSYUK (SQL Server 14.0.1000.169 - AM\akosyuk)
 - Databases
 - System Databases
 - Database Snapshots
 - AdventureWorks2012
 - Database Diagrams
 - Tables
 - Views
 - System Views
 - HumanResources.vEmployee
 - HumanResources.vEmployeeDepartment
 - HumanResources.vEmployeeDepartmentHistory
 - HumanResources.vJobCandidate
 - HumanResources.vJobCandidateEducation
 - HumanResources.vJobCandidateEmployment
 - Person.CountryRegion_View**
 - Person.vAdditionalContactInfo
 - Person.vStateProvinceCountryRegion
 - Production.vProductAndDescription
 - Production.vProductModelCatalogDescription
 - Production.vProductModelInstructions
 - Purchasing.vVendorWithAddresses
 - Purchasing.vVendorWithContacts
 - Sales.vIndividualCustomer
 - Sales.vPersonDemographics
 - Sales.vSalesPerson
 - Sales.vSalesPersonSalesByFiscalYears
 - Sales.vStoreWithAddresses
 - Sales.vStoreWithContacts
 - Sales.vStoreWithDemographics
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security

Query Window (V8.1.sql - LT-BY-A-2 (AM\akosyuk (51))):

```
55 CREATE TRIGGER [TR_CountryRegion_AD] ON [Person].[CountryRegion]
56 AFTER DELETE
57 AS
58 BEGIN
59     INSERT INTO [ALEXEY_KOSYUK].[Person].[CountryRegionHst]
60     (
61         [Action],
62         [SourceID]
63     )
64     SELECT
65         'DELETE',
66         [D].[CountryRegionCode]
67     FROM [DELETED] AS [D];
68 END
69 GO
70
71 -- c
72 CREATE VIEW [Person].[CountryRegion_View]
73 WITH ENCRYPTION
74 AS
75     SELECT * FROM [Person].[CountryRegion];
76 GO
77
```

Messages:

Commands completed successfully.
Completion time: 2019-11-03T00:51:57.9712718+03:00

100 % Query executed successfully. LT-BY-AKOSYUK (14.0 RTM) | AM\akosyuk (51) | AdventureWorks2012 | 00:00:00 | 0 rows

d:

Microsoft SQL Server Management Studio interface showing the Results pane with a table of data.

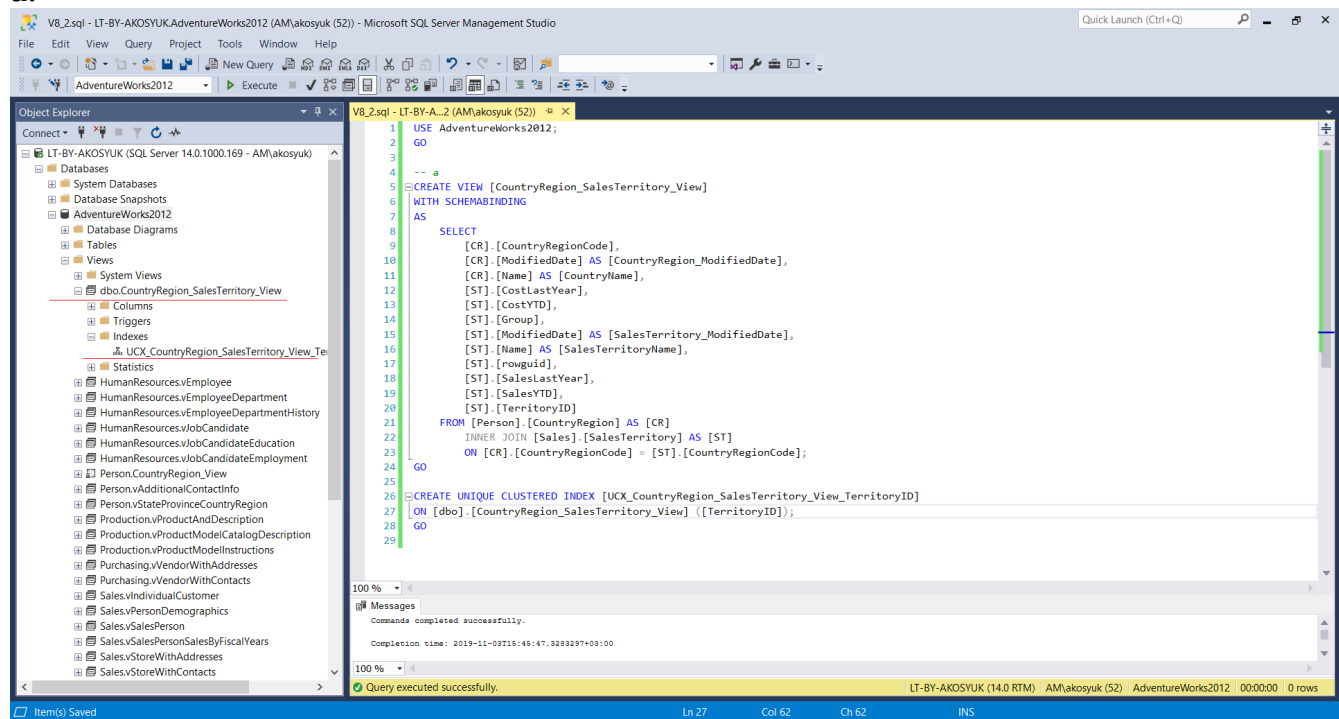
Results:

ID	Action	ModifiedDate	SourceID	UserName
1	INSERT	2019-11-03 00:59:00.267	NV	dbo
2	UPDATE	2019-11-03 01:10:07.947	NV	dbo
3	DELETE	2019-11-03 01:10:12.443	NV	dbo

100 % Query executed successfully. LT-BY-AKOSYUK (14.0 RTM) | AM\akosyuk (55) | ALEXEY_KOSYUK | 00:00:00 | 3 rows

2. Second subtask:

a:



```
1 USE AdventureWorks2012;
2 GO
3
4 -- a
5 CREATE VIEW [CountryRegion_SalesTerritory_View]
6 WITH SCHEMABINDING
7 AS
8     SELECT
9         [CR].[CountryRegionCode],
10        [CR].[ModifiedDate] AS [CountryRegion_ModifiedDate],
11        [CR].[Name] AS [CountryName],
12        [ST].[CostLastYear],
13        [ST].[CostYTD],
14        [ST].[Group],
15        [ST].[ModifiedDate] AS [SalesTerritory_ModifiedDate],
16        [ST].[Name] AS [SalesTerritoryName],
17        [ST].[rowguid],
18        [ST].[SalesLastYear],
19        [ST].[SalesYTD],
20        [ST].[TerritoryID]
21 FROM [Person].[CountryRegion] AS [CR]
22 INNER JOIN [Sales].[SalesTerritory] AS [ST]
23 ON [CR].[CountryRegionCode] = [ST].[CountryRegionCode];
24 GO
25
26 CREATE UNIQUE CLUSTERED INDEX [UCX_CountryRegion_SalesTerritory_View_TerritoryID]
27 ON [dbo].[CountryRegion_SalesTerritory_View] ([TerritoryID]);
28 GO
29
```

Messages

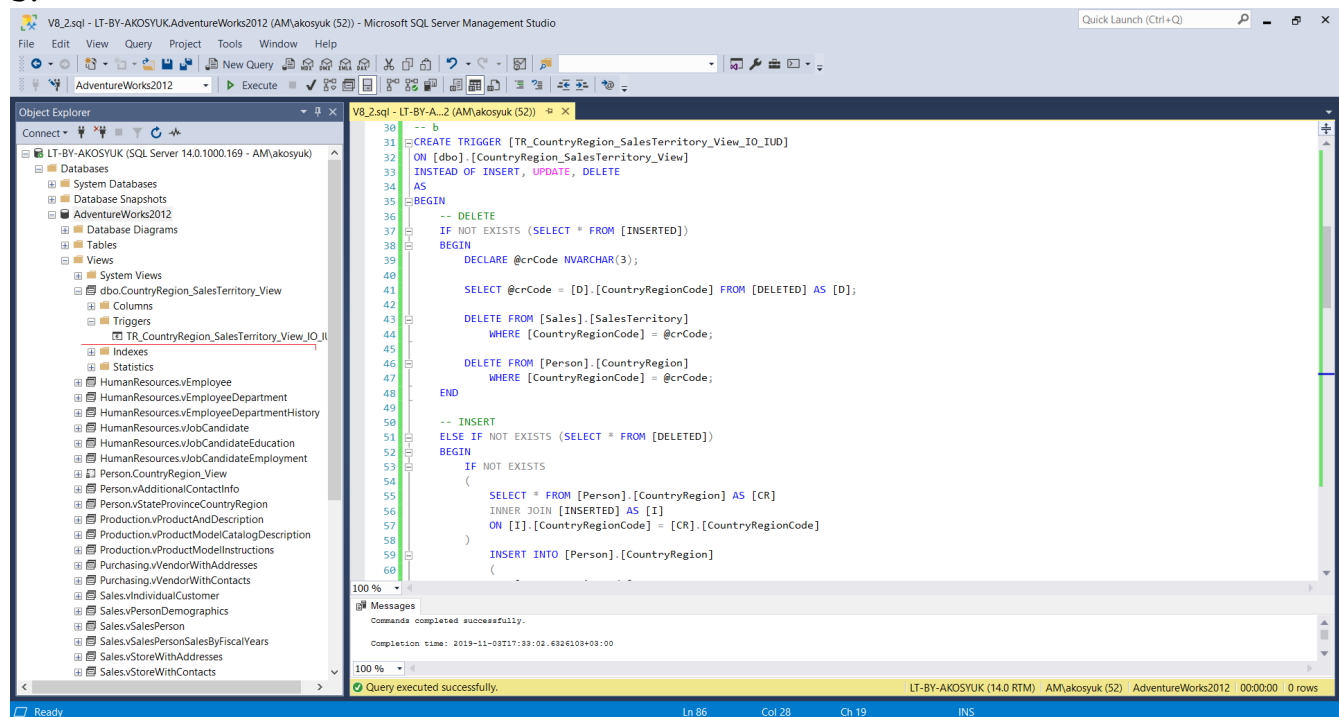
Commands completed successfully.

Completion time: 2019-11-09T18:45:47.8283297+03:00

Query executed successfully.

LT-BY-AKOSYUK (14.0 RTM) AM\akosyuk (52) AdventureWorks2012 00:00:00 0 rows

b:



```
30 -- b
31 CREATE TRIGGER [TR_CountryRegion_SalesTerritory_View_IO_IUD]
32 ON [dbo].[CountryRegion_SalesTerritory_View]
33 INSTEAD OF INSERT, UPDATE, DELETE
34 AS
35 BEGIN
36     -- DELETE
37     IF NOT EXISTS (SELECT * FROM [INSERTED])
38     BEGIN
39         DECLARE @crCode NVARCHAR(3);
40
41         SELECT @crCode = [D].[CountryRegionCode] FROM [DELETED] AS [D];
42
43         DELETE FROM [Sales].[SalesTerritory]
44         WHERE [CountryRegionCode] = @crCode;
45
46         DELETE FROM [Person].[CountryRegion]
47         WHERE [CountryRegionCode] = @crCode;
48     END
49
50     -- INSERT
51     ELSE IF NOT EXISTS (SELECT * FROM [DELETED])
52     BEGIN
53         IF NOT EXISTS
54         (
55             SELECT * FROM [Person].[CountryRegion] AS [CR]
56             INNER JOIN [INSERTED] AS [I]
57             ON [I].[CountryRegionCode] = [CR].[CountryRegionCode]
58         )
59         INSERT INTO [Person].[CountryRegion]
60         (

```

Messages

Commands completed successfully.

Completion time: 2019-11-09T17:33:02.6926108+03:00

Query executed successfully.

LT-BY-AKOSYUK (14.0 RTM) AM\akosyuk (52) AdventureWorks2012 00:00:00 0 rows

C:

Results Messages

	CountryRegionCode	CountryRegion_ModifiedDate	CountryName	CostLastYear	CostYTD	Group	SalesTerritory_ModifiedDate	SalesTerritoryName	rowguid	SalesLastYear	SalesYTD
1	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Northwest	43689A10-E30B-497F-B0DE-11DE20267FF7	3298694.49...	7887186.7882
2	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Northeast	00FB7309-96CC-49E2-8363-0A1BA72486F2	3607148.93...	2402176.8476
3	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Central	DF6E7FD8-1A8D-468C-B103-ED8ADD8452...	3205014.07...	3072175.118
4	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Southwest	DC3E9EA0-7950-4431-9428-99DBCBC33865	5366575.70...	10510853.872
5	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Southeast	6DC4165A-5E4C-42D2-809D-4344E0AC75E7	3925071.43...	2538667.2515
6	CA	2002-06-01 00:00:00.000	Canada	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Canada	06B4AF8A-1639-476E-9266-110461D66800	5693988.86	6771829.1376
7	FR	2002-06-01 00:00:00.000	France	0.00	0.00	Europe	2002-06-01 00:00:00.000	France	BF806804-9B4C-4B07-9D19-706F2E689552	2396539.76...	4772398.3076
8	DE	2002-06-01 00:00:00.000	Germany	0.00	0.00	Europe	2002-06-01 00:00:00.000	Germany	6D2450DB-8159-414F-A917-E73EE91C38A9	1307949.79...	3805202.3476
9	AU	2002-06-01 00:00:00.000	Australia	0.00	0.00	Pacific	2002-06-01 00:00:00.000	Australia	602E612E-DFE9-41D9-B894-27E489747885	2278548.97...	5977814.9154
10	GB	2002-06-01 00:00:00.000	United Kingdo...	0.00	0.00	Europe	2002-06-01 00:00:00.000	United Kingdom	05FC7E1F-2DEA-414E-9ECD-09D150516FB5	1635823.39...	5012905.3656
11	NV	2019-11-03 17:45:07.290	NEVARK	25.00	50.00	USA	2019-11-03 17:45:07.290	NEVARK	A1013498-3AD5-4A11-9FEB-DC891A5DA7D0	300.00	100.00

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Query executed successfully. LT-BY-AKOSYUK (14.0 RTM) AM\akosyuk (54) AdventureWorks2012 00:00:00 11 rows

Results Messages

	CountryRegionCode	CountryRegion_ModifiedDate	CountryName	CostLastYear	CostYTD	Group	SalesTerritory_ModifiedDate	SalesTerritoryName	rowguid	SalesLastYear	SalesYTD
1	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Northwest	43689A10-E30B-497F-B0DE-11DE20267FF7	3298694.49...	7887186.7882
2	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Northeast	00FB7309-96CC-49E2-8363-0A1BA72486F2	3607148.93...	2402176.8476
3	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Central	DF6E7FD8-1A8D-468C-B103-ED8ADD8452...	3205014.07...	3072175.118
4	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Southwest	DC3E9EA0-7950-4431-9428-99DBCBC33865	5366575.70...	10510853.872
5	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Southeast	6DC4165A-5E4C-42D2-809D-4344E0AC75E7	3925071.43...	2538667.2515
6	CA	2002-06-01 00:00:00.000	Canada	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Canada	06B4AF8A-1639-476E-9266-110461D66800	5693988.86	6771829.1376
7	FR	2002-06-01 00:00:00.000	France	0.00	0.00	Europe	2002-06-01 00:00:00.000	France	BF806804-9B4C-4B07-9D19-706F2E689552	2396539.76...	4772398.3076
8	DE	2002-06-01 00:00:00.000	Germany	0.00	0.00	Europe	2002-06-01 00:00:00.000	Germany	6D2450DB-8159-414F-A917-E73EE91C38A9	1307949.79...	3805202.3476
9	AU	2002-06-01 00:00:00.000	Australia	0.00	0.00	Pacific	2002-06-01 00:00:00.000	Australia	602E612E-DFE9-41D9-B894-27E489747885	2278548.97...	5977814.9154
10	GB	2002-06-01 00:00:00.000	United Kingdo...	0.00	0.00	Europe	2002-06-01 00:00:00.000	United Kingdom	05FC7E1F-2DEA-414E-9ECD-09D150516FB5	1635823.39...	5012905.3656
11	NV	2019-11-03 17:45:07.290	NeVArk	25.00	50.00	Usa	2019-11-03 17:45:07.290	NEVARK	A1013498-3AD5-4A11-9FEB-DC891A5DA7D0	20.00	100.00

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Query executed successfully. LT-BY-AKOSYUK (14.0 RTM) AM\akosyuk (54) AdventureWorks2012 00:00:00 11 rows

Results Messages

	CountryRegionCode	CountryRegion_ModifiedDate	CountryName	CostLastYear	CostYTD	Group	SalesTerritory_ModifiedDate	SalesTerritoryName	rowguid	SalesLastYear	SalesYTD
1	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Northwest	43689A10-E30B-497F-B0DE-11DE20267FF7	3298694.49...	7887186.7882
2	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Northeast	00FB7309-96CC-49E2-8363-0A1BA72486F2	3607148.93...	2402176.8476
3	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Central	DF6E7FD8-1A8D-468C-B103-ED8ADD8452...	3205014.07...	3072175.118
4	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Southwest	DC3E9EA0-7950-4431-9428-99DBCBC33865	5366575.70...	10510853.872
5	US	2002-06-01 00:00:00.000	United States	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Southeast	6DC4165A-5E4C-42D2-809D-4344E0AC75E7	3925071.43...	2538667.2515
6	CA	2002-06-01 00:00:00.000	Canada	0.00	0.00	North Ameri...	2002-06-01 00:00:00.000	Canada	06B4AF8A-1639-476E-9266-110461D66800	5693988.86	6771829.1376
7	FR	2002-06-01 00:00:00.000	France	0.00	0.00	Europe	2002-06-01 00:00:00.000	France	BF806804-9B4C-4B07-9D19-706F2E689552	2396539.76...	4772398.3076
8	DE	2002-06-01 00:00:00.000	Germany	0.00	0.00	Europe	2002-06-01 00:00:00.000	Germany	6D2450DB-8159-414F-A917-E73EE91C38A9	1307949.79...	3805202.3476
9	AU	2002-06-01 00:00:00.000	Australia	0.00	0.00	Pacific	2002-06-01 00:00:00.000	Australia	602E612E-DFE9-41D9-B894-27E489747885	2278548.97...	5977814.9154
10	GB	2002-06-01 00:00:00.000	United Kingdo...	0.00	0.00	Europe	2002-06-01 00:00:00.000	United Kingdom	05FC7E1F-2DEA-414E-9ECD-09D150516FB5	1635823.39...	5012905.3656

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Query executed successfully. LT-BY-AKOSYUK (14.0 RTM) AM\akosyuk (54) AdventureWorks2012 00:00:00 10 rows