

Lab report #3

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GitHub: <https://github.com/sdveronika/DataMola22>

Task 1 - Creating new database for HR department

```
CREATE DATABASE HumanResources;
```

75 %

Messages

Commands completed successfully.

Completion time: 2022-08-28T10:40:27.9323570+03:00

```
CREATE TABLE dbo.EmployeesExternal  
(EmployeeID INT PRIMARY KEY,  
  FirstName NVARCHAR(50) NOT NULL,  
  LastName NVARCHAR(50) NOT NULL,  
  JobTitle NVARCHAR(50) NOT NULL,  
  EmailAddress NVARCHAR(50) NULL,  
  City NVARCHAR(50) NOT NULL,  
  StateProvinceName NVARCHAR(50) NOT NULL,  
  CountryRegionName NVARCHAR(50) NOT NULL);
```

75 %

Messages

Commands completed successfully.

Completion time: 2022-08-28T10:41:26.0253509+03:00

```
CREATE TABLE dbo.EmployeesAW  
(BusinessEntityID INT PRIMARY KEY,  
  FirstName NVARCHAR(50) NOT NULL,  
  LastName NVARCHAR(50) NOT NULL,  
  JobTitle NVARCHAR(50) NULL);
```

75 %

Messages

Commands completed successfully.

Completion time: 2022-08-28T10:41:42.8346055+03:00

```
CREATE TABLE dbo.EmailAddressesAW  
(EmailAddressId INT PRIMARY KEY,  
  BusinessEntityID INT NOT NULL,  
  EmailAddress NVARCHAR(50) NOT NULL);
```

75 %

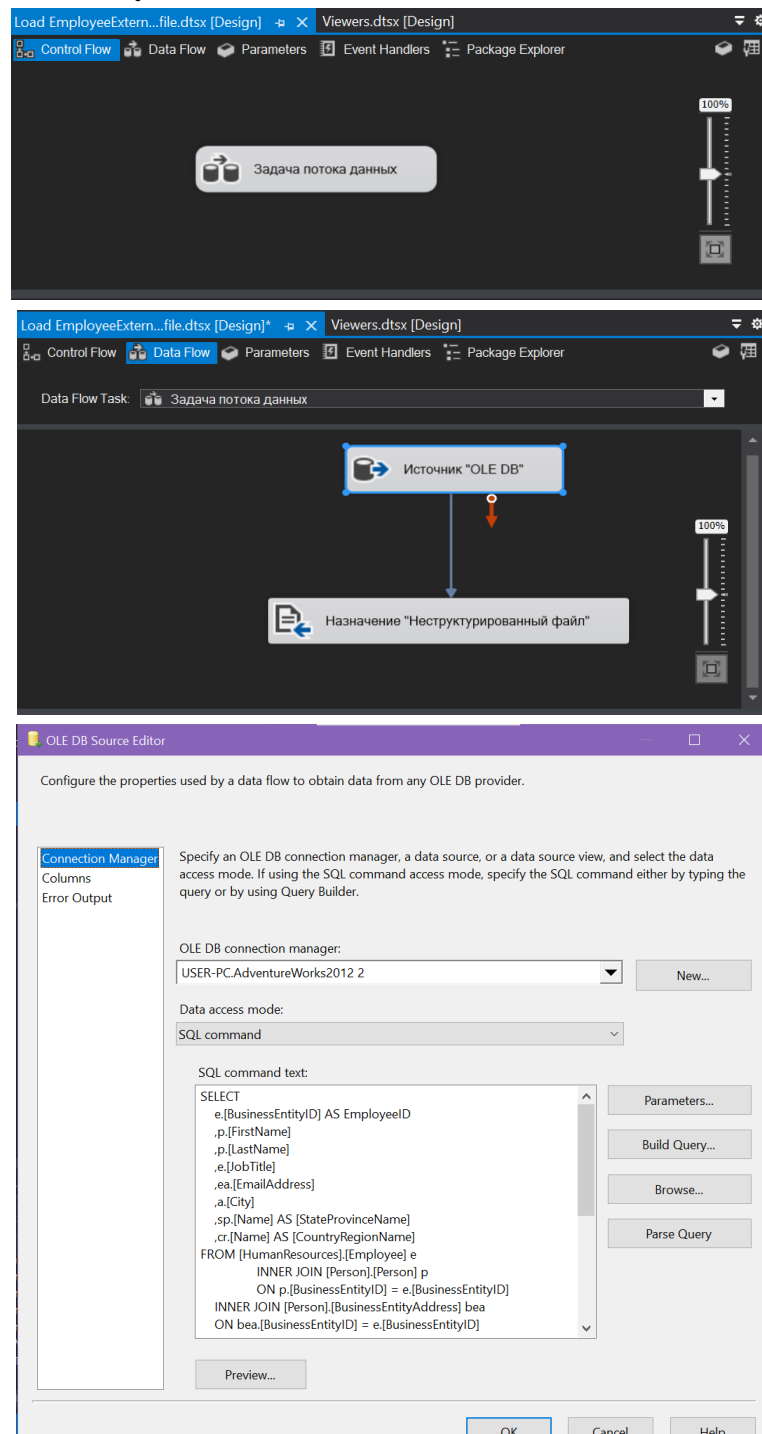
Messages

Commands completed successfully.

Completion time: 2022-08-28T10:42:12.7338037+03:00

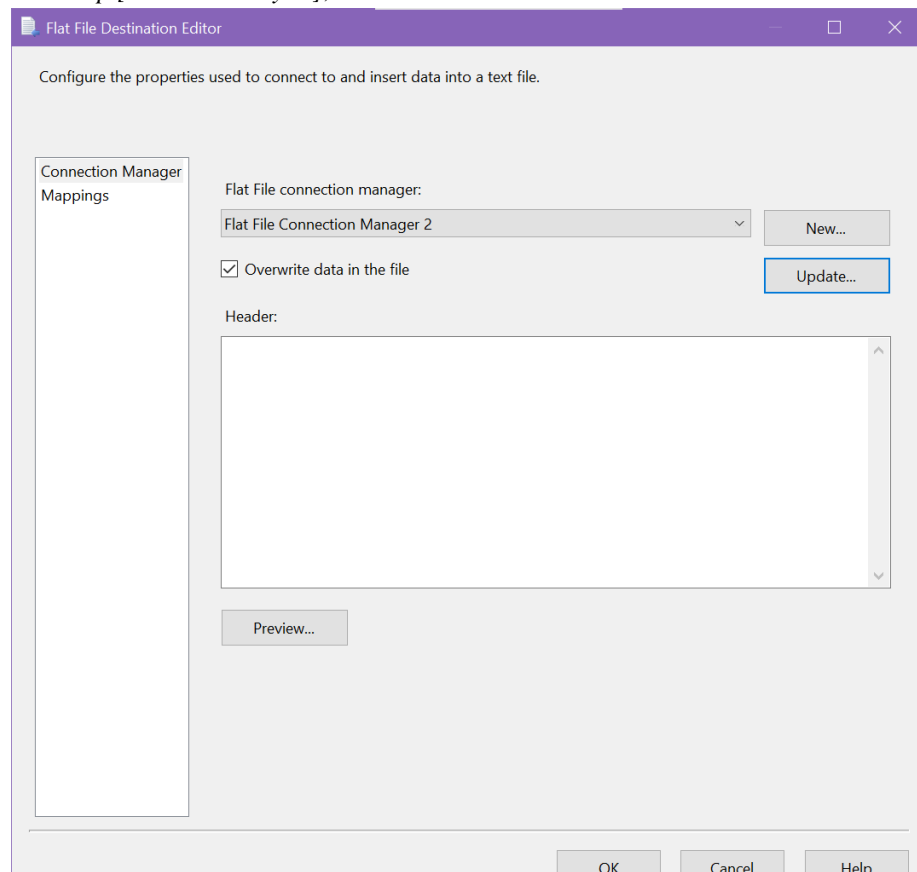
Task 2 - Creating ETL solution to import employees from different sources

Note: To perform the following tasks, we need files that store information for the dbo.HumanResources table. Since no data files were included with the lab, I created a package that loads all the necessary information into a file using tables from the AdventureWorks2012 database. Next, I manually created test files, into which I copied part of the data from the generated file and pasted it into new ones, after deleting the copied information from the original file, since the primary key constraint was imposed on the EmployeeID column in the dbo.HumanResources table. Thus, the necessary list of files was obtained.



Sql command text to select all necessary employee info to load
dbo.HumanResources table:

```
SELECT
    e.[BusinessEntityID] AS EmployeeID
    ,p.[FirstName]
    ,p.[LastName]
    ,e.[JobTitle]
    ,ea.[EmailAddress]
    ,a.[City]
    ,sp.[Name] AS [StateProvinceName]
    ,cr.[Name] AS [CountryRegionName]
FROM [HumanResources].[Employee] e
    INNER JOIN [Person].[Person] p
        ON p.[BusinessEntityID] = e.[BusinessEntityID]
    INNER JOIN [Person].[BusinessEntityAddress] bea
        ON bea.[BusinessEntityID] = e.[BusinessEntityID]
    INNER JOIN [Person].[Address] a
        ON a.[AddressID] = bea.[AddressID]
    INNER JOIN [Person].[StateProvince] sp
        ON sp.[StateProvinceID] = a.[StateProvinceID]
    INNER JOIN [Person].[CountryRegion] cr
        ON cr.[CountryRegionCode] = sp.[CountryRegionCode]
    LEFT OUTER JOIN [Person].[PersonPhone] pp
        ON pp.BusinessEntityID = p.[BusinessEntityID]
    LEFT OUTER JOIN [Person].[PhoneNumberType] pnt
        ON pp.[PhoneNumberTypeID] = pnt.[PhoneNumberTypeID]
    LEFT OUTER JOIN [Person].[EmailAddress] ea
        ON p.[BusinessEntityID] = ea.[BusinessEntityID]
ORDER BY p.[BusinessEntityID];
```



Flat File Connection Manager Editor

Connection manager name:

Description:

General

Columns

Advanced

Preview

Select a file and specify the file properties and the file format.

File name:

Locale: ☒ Unicode

Code page:

Format:

Text qualifier:

Header row delimiter:

Header rows to skip:

☒ Column names in the first data row

Flat File Destination Editor

Configure the properties used to connect to and insert data into a text file.

Connection Manager

Mappings

Available Input

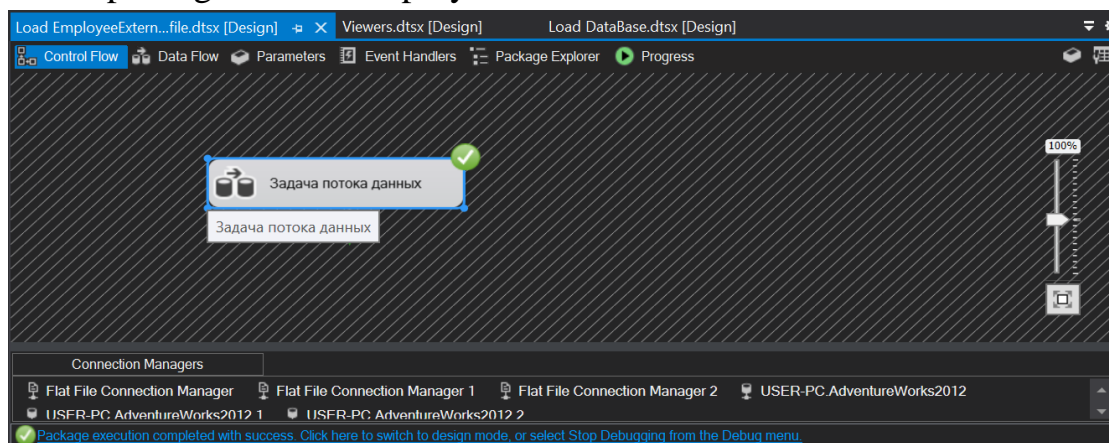
Name
EmployeeID
FirstName
LastName
JobTitle
EmailAddress
City
StateProvinceName
CountryRegionName

Available Destination

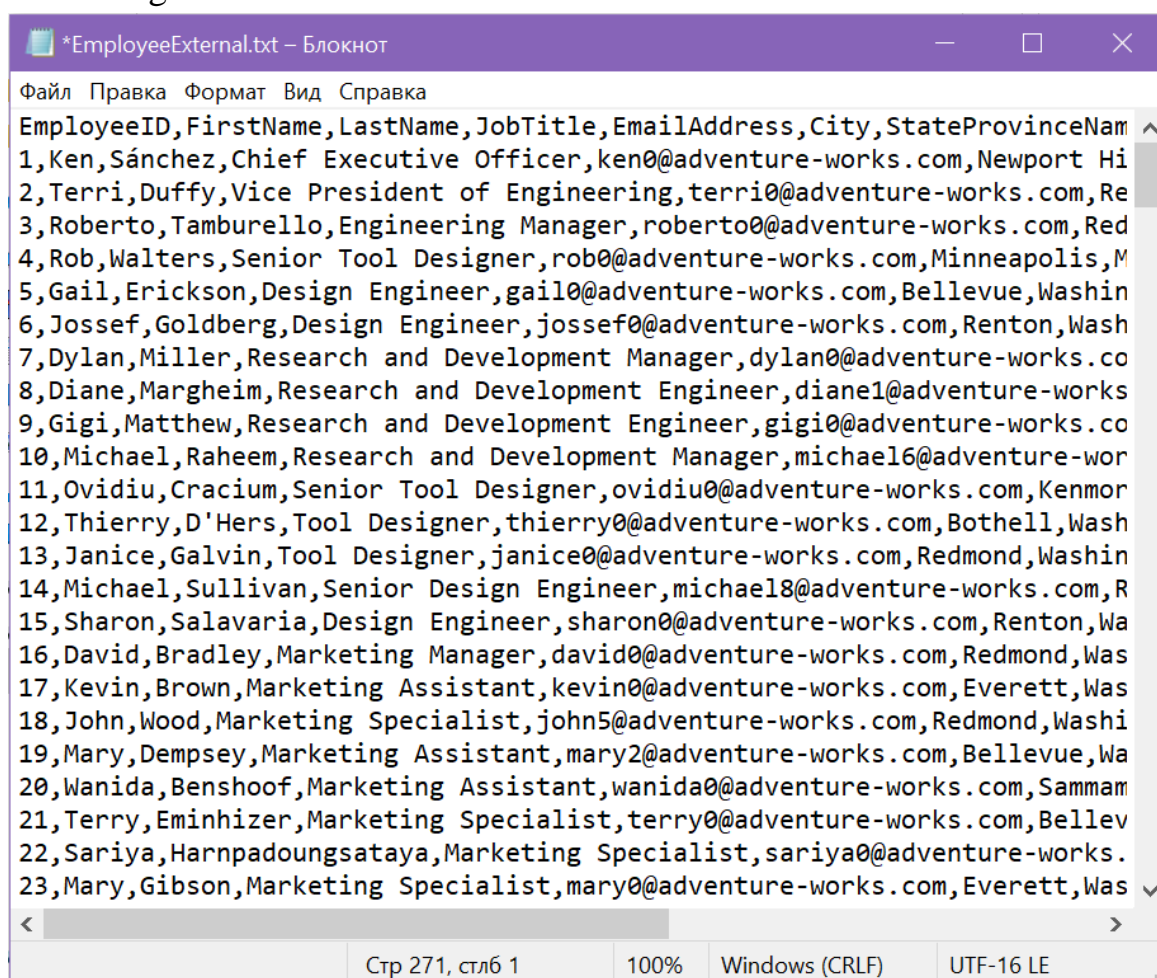
Name
EmployeeID
FirstName
LastName
JobTitle
EmailAddress
City
StateProvinceName
CountryRegionName

Input Column	Destination Column
EmployeeID	EmployeeID
FirstName	FirstName
LastName	LastName
JobTitle	JobTitle
EmailAddress	EmailAddress
City	City
StateProvinceName	StateProvinceName
CountryRegionName	CountryRegionName

Run package to load EmployeeExternal text file:



Package execution result:

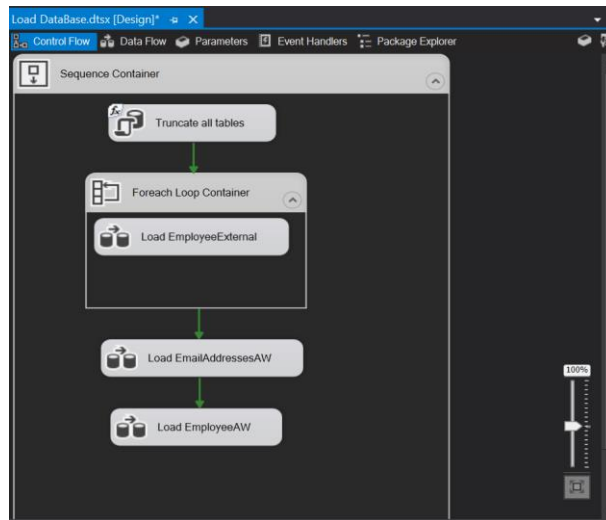


List of manually created files for task 2:

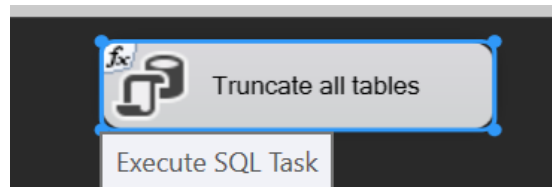
EmployeeExternal.txt	28.08.2022 10:53	Текстовый документ
EmployeeExternal1.txt	27.08.2022 19:32	Текстовый документ

Completing task 2:

Control flow for load tables:



Execute SQL task configuration for truncate all tables before loading data:



Execute SQL Task Editor

Configure the properties required to run SQL statements and stored procedures using the selected connection.

Property	Value
Name	Execute SQL Task
Description	Execute SQL Task
TimeOut	0
CodePage	1251
TypeConversionMode	Allowed
ResultSet	None
ConnectionType	OLE DB
Connection	USER-PC.HumanResources
SQLSourceType	Direct input
SQLStatement	TRUNCATE TABLE dbo.EmployeesExternal;T
IsQueryStoredProcedure	False
BypassPrepare	True

Name: Specifies the name of the task.

Buttons: Browse..., Build Query..., Parse Query, OK, Cancel, Help

Execute SQL Task Editor

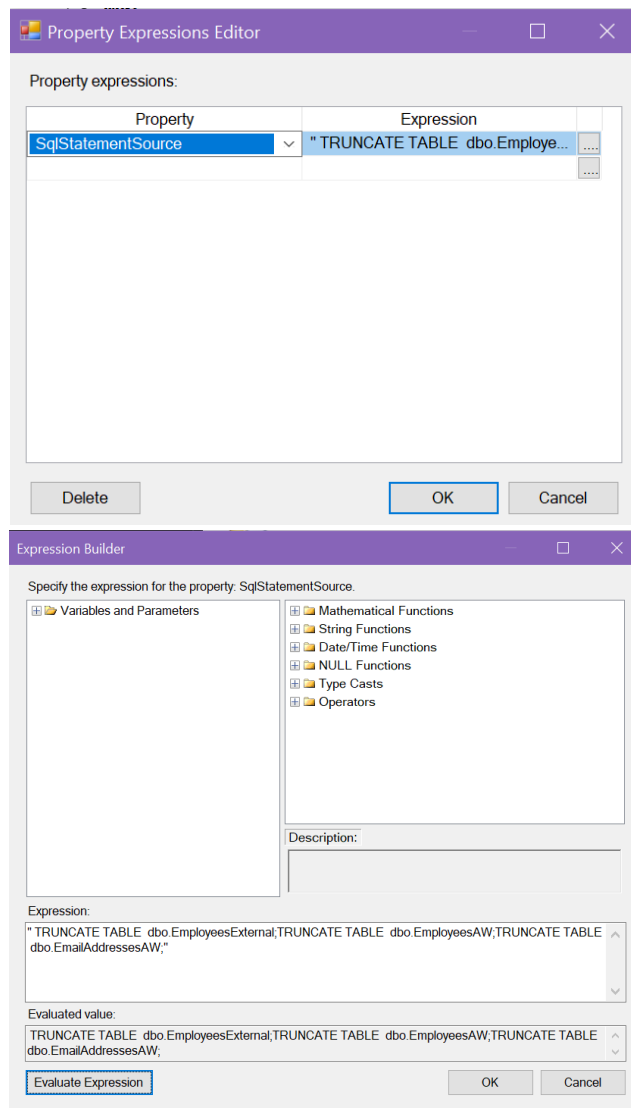
Configure the properties required to run SQL statements and stored procedures using the selected connection.

Misc

Expressions

Expressions: A collection of expressions. The evaluation result of each expression is assigned to a property and replaces the value of the property.

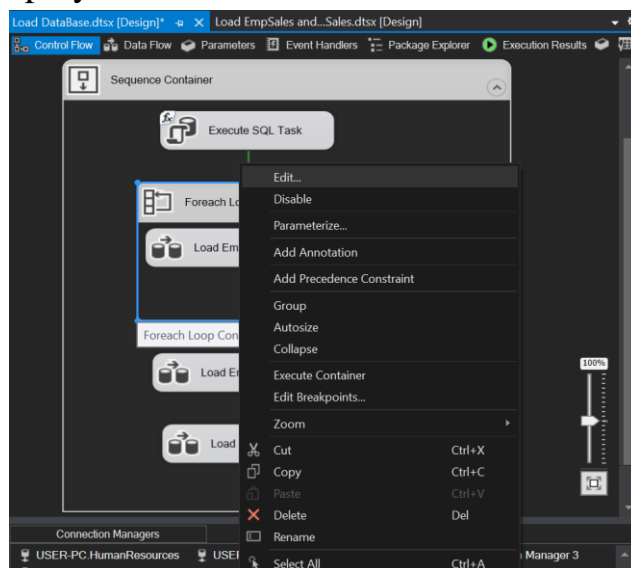
Buttons: OK, Cancel, Help

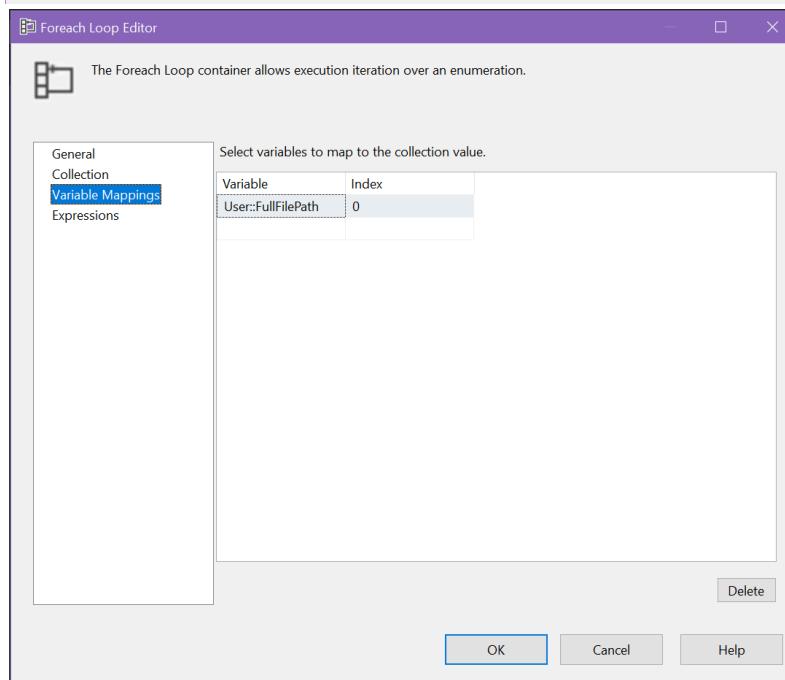
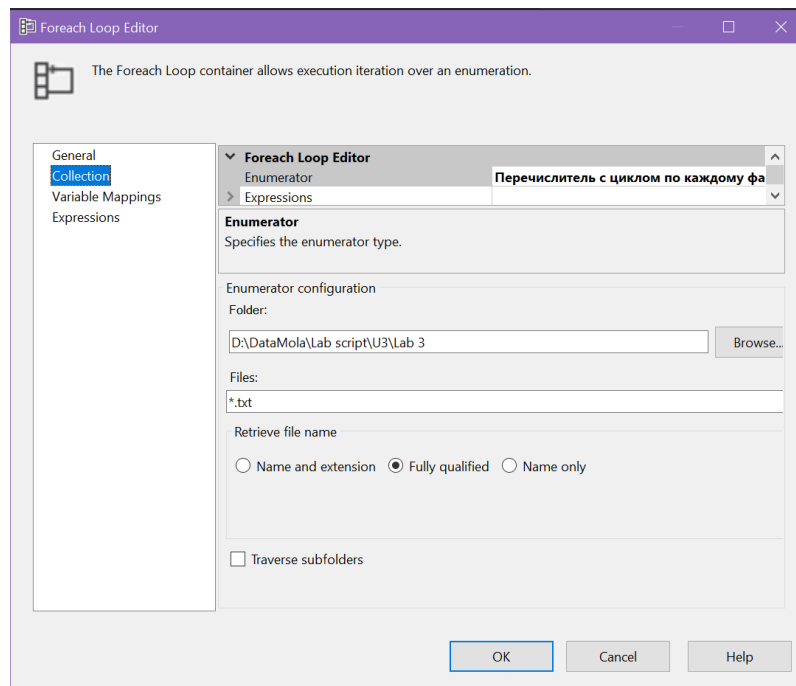


Add FullFilePath variable for using ForEach Loop container:

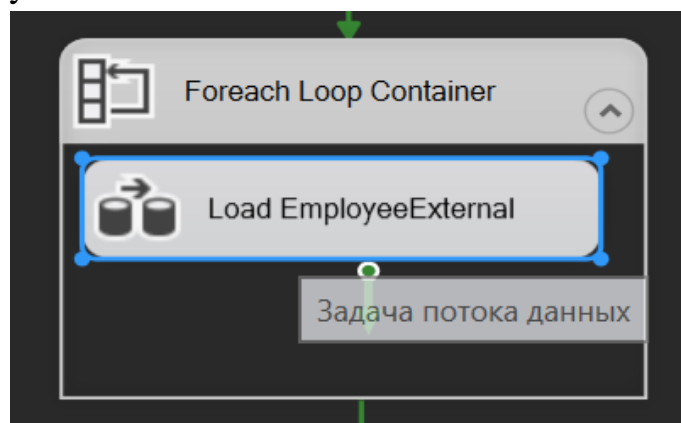


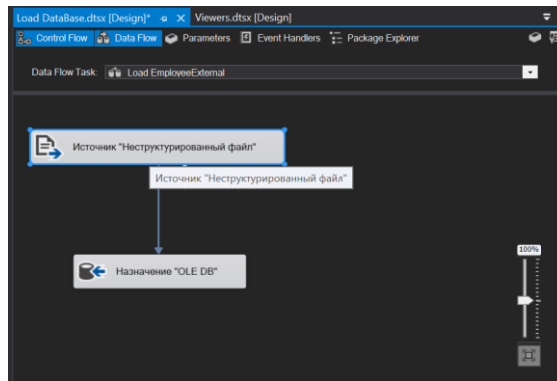
ForEach Loop container configuration to go through all files that store information about employees:





Load EmployeeExternal Data Flow:





FlatFile Source configuration:

The screenshot shows the 'Flat File Source Editor' dialog box. The title bar is 'Flat File Source Editor'. The main text says 'Configure the properties used to connect to and obtain data from a text file.' On the left, there is a 'Connection Manager' tab selected, with sub-tabs for 'Columns' and 'Error Output'. The main area shows 'Flat file connection manager:' with a dropdown menu set to 'Flat File Connection Manager' and a 'New...' button. Below this is a checkbox 'Retain null values from the source as null values in the data flow' which is unchecked. At the bottom left is a 'Preview...' button. At the bottom right are 'OK', 'Cancel', and 'Help' buttons.

The screenshot shows the 'Flat File Connection Manager Editor' dialog box. The title bar is 'Flat File Connection Manager Editor'. It has a 'Connection manager name:' field with 'Flat File Connection Manager' and a 'Description:' field. On the left, there is a 'General' tab selected, with sub-tabs for 'Columns', 'Advanced', and 'Preview'. The main area is titled 'Select a file and specify the file properties and the file format.' It contains several fields: 'File name:' with 'D:\DataMola\Lab script\U3\Lab 3\Employee', a 'Browse...' button, 'Locale:' with 'English (United States)', a 'Unicode' checkbox which is checked, 'Code page:' with '1252 (ANSI - латиница 1)', 'Format:' with 'Delimited', 'Text qualifier:' with '<none>', 'Header row delimiter:' with '(CR)(LF)', 'Header rows to skip:' with '0', and a checked checkbox 'Column names in the first data row'. At the bottom, there is a yellow warning box with a triangle icon and the text 'Columns are not defined for this connection manager.' Below the warning box are 'OK', 'Cancel', and 'Help' buttons.

OLE DB destination configuration:

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager
Mappings
Error Output

Specify an OLE DB connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command either by typing the query or by using Query Builder. For fast-load data access, set the table update options.

OLE DB connection manager:
USER-PC.HumanResources New...

Data access mode:
Table or view

Name of the table or the view:
[dbo].[EmployeesExternal] New...

View Existing

OK Cancel Help

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager
Mappings
Error Output

Available Input Columns:

Name
EmployeeID
FirstName
LastName
JobTitle
EmailAddress
City
StateProvinceName

Available Destination Columns:

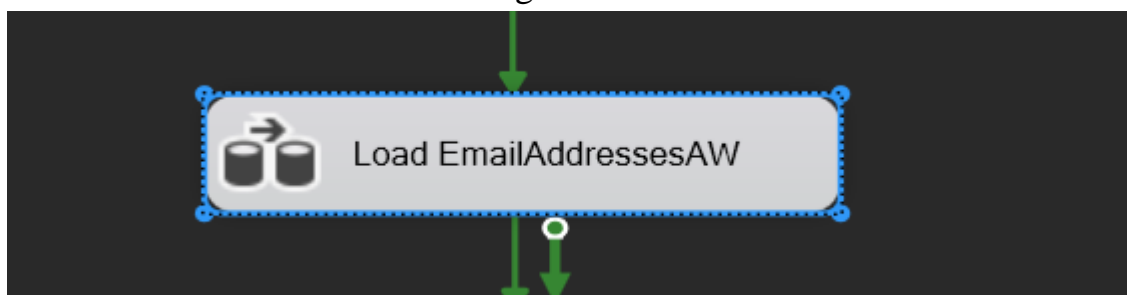
Name
EmployeeID
FirstName
LastName
JobTitle
EmailAddress
City
StateProvinceName

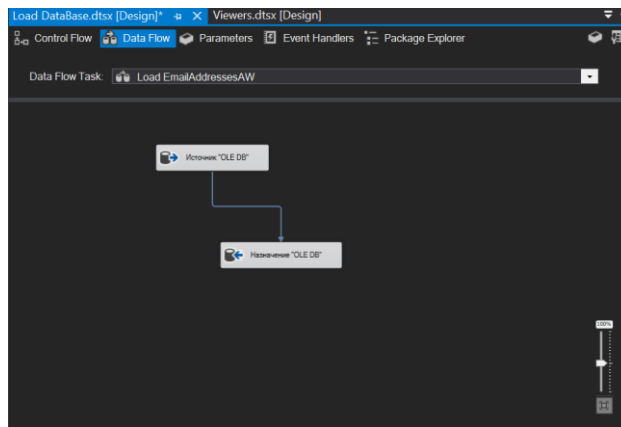
Input Column Mapping:

Input Column	Destination Column
EmployeeID	EmployeeID
FirstName	FirstName
LastName	LastName
JobTitle	JobTitle
EmailAddress	EmailAddress
City	City
StateProvinceName	StateProvinceName
CountryRegionName	CountryRegionName

OK Cancel Help

Load EmailAddressesAW configuration:





OLE DB source configuration:

OLE DB Source Editor

Configure the properties used by a data flow to obtain data from any OLE DB provider.

Connection Manager
Columns
Error Output

Specify an OLE DB connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command either by typing the query or by using Query Builder.

OLE DB connection manager:
USER-PC:AdventureWorks2012

Data access mode:
SQL command

SQL command text:
select [EmailAddressID], p.[BusinessEntityID], [EmailAddress]
from [Person].[EmailAddress] e
inner join [Person].[Person] p
on e.[BusinessEntityID] = p.BusinessEntityID;

Parameters...
Build Query...
Browse...
Parse Query

Preview...

OK Cancel Help

OLE DB destination configuration:

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager
Mappings
Error Output

Specify an OLE DB connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command either by typing the query or by using Query Builder. For fast-load data access, set the table update options.

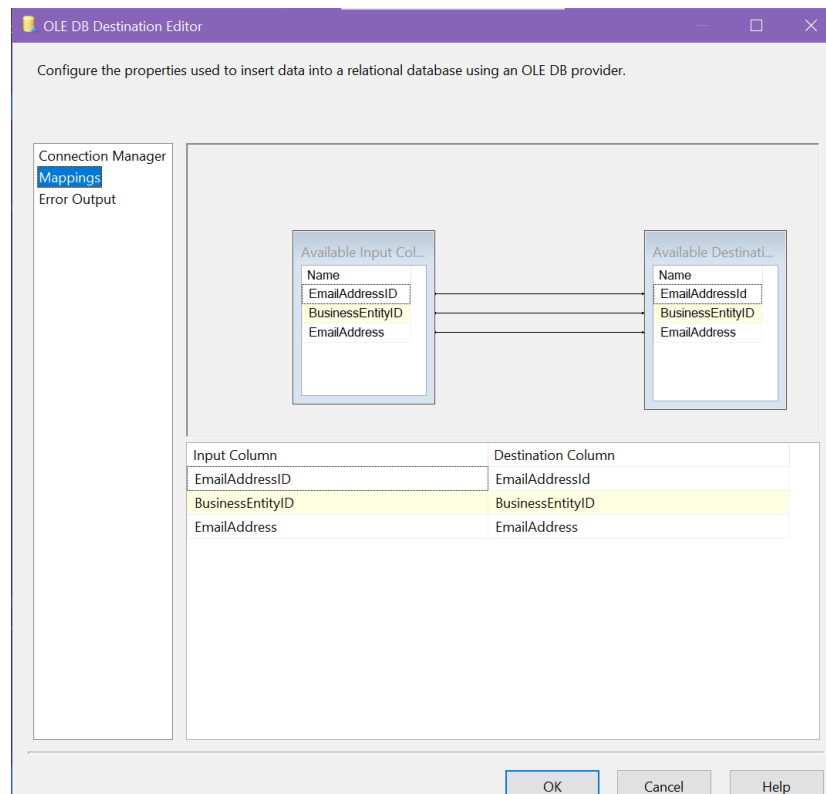
OLE DB connection manager:
USER-PC:HumanResources

Data access mode:
Table or view

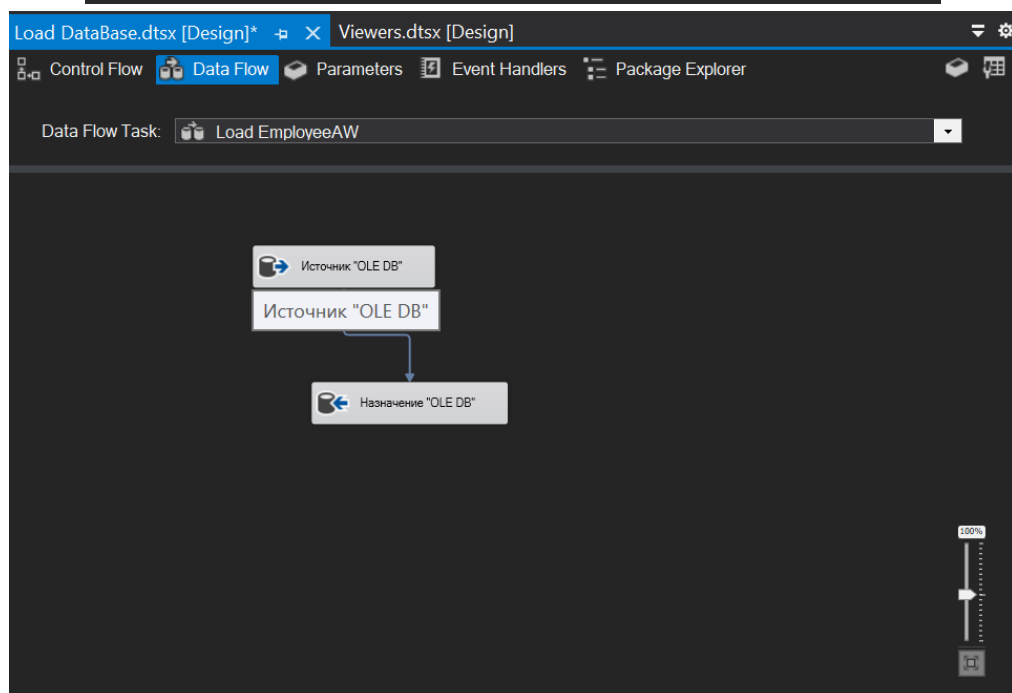
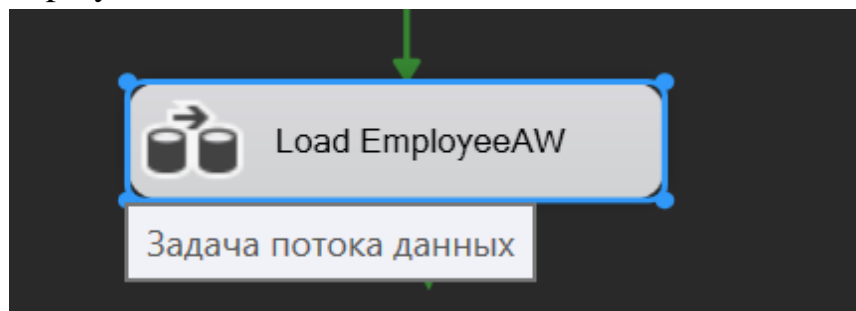
Name of the table or the view:
[dbo].[EmailAddressesAW]

View Existing

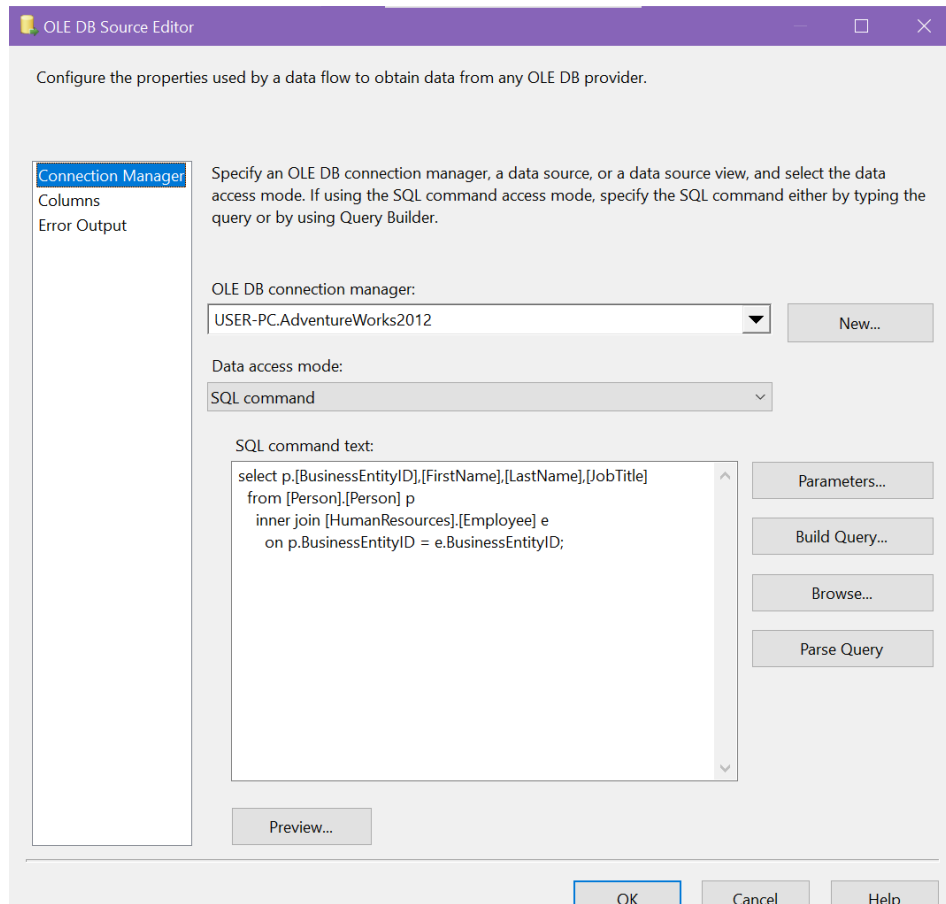
OK Cancel Help



Load EmployeeAW data flow:



OLE DB source configuration:



OLE DB Source Editor

Configure the properties used by a data flow to obtain data from any OLE DB provider.

Connection Manager
Columns
Error Output

Specify an OLE DB connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command either by typing the query or by using Query Builder.

OLE DB connection manager:
USER-PC.AdventureWorks2012 New...

Data access mode:
SQL command

SQL command text:

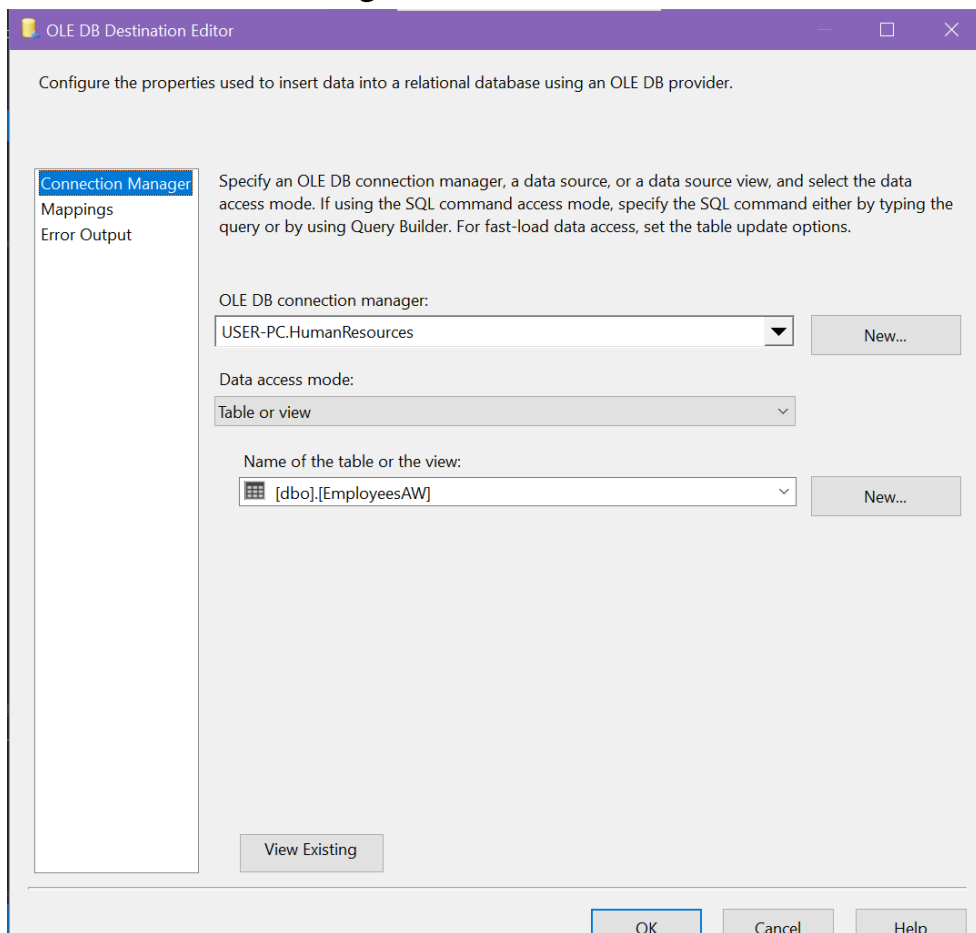
```
select p.[BusinessEntityID],[FirstName],[LastName],[JobTitle]
from [Person].[Person] p
inner join [HumanResources].[Employee] e
on p.BusinessEntityID = e.BusinessEntityID;
```

Parameters...
Build Query...
Browse...
Parse Query

Preview...

OK Cancel Help

OLE DB destination configuration:



OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager
Mappings
Error Output

Specify an OLE DB connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command either by typing the query or by using Query Builder. For fast-load data access, set the table update options.

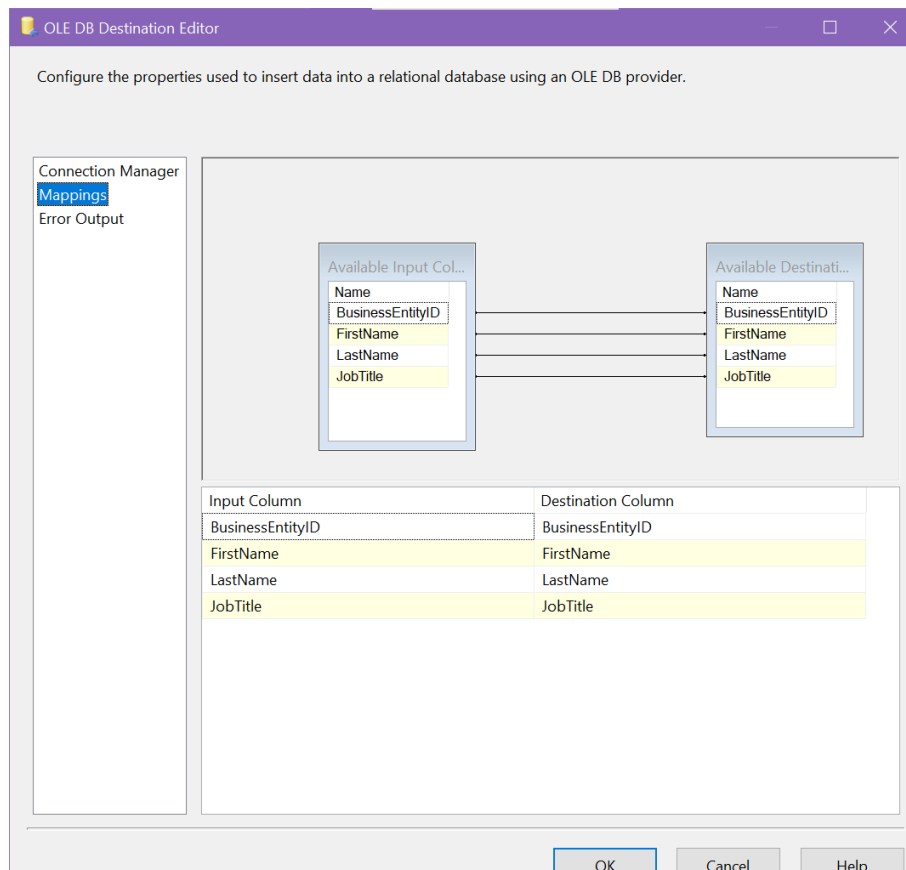
OLE DB connection manager:
USER-PC.HumanResources New...

Data access mode:
Table or view

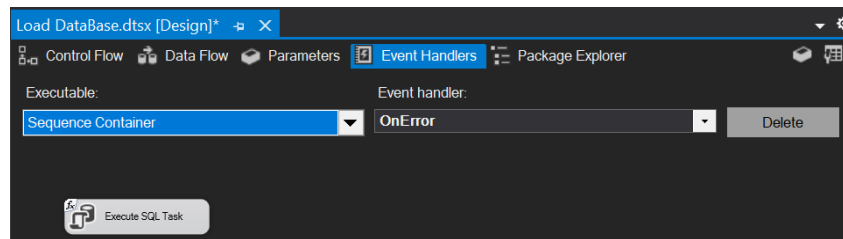
Name of the table or the view:
db [dbo].[EmployeesAW] New...

View Existing

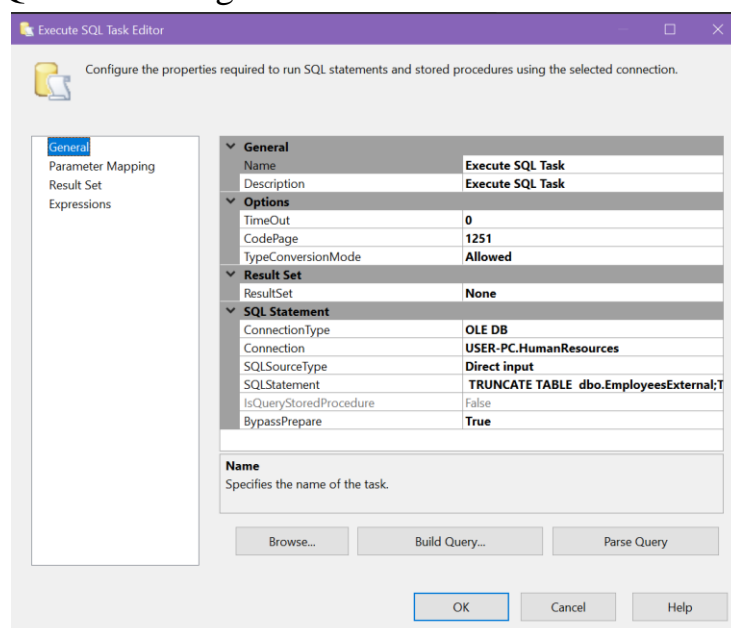
OK Cancel Help



Clearing all tables that have managed to load in case of an error during code execution:



Execute SQL Task configuration:



Execute SQL Task Editor

Configure the properties required to run SQL statements and stored procedures using the selected connection.

General
Parameter Mapping
Result Set
Expressions

Misc
Expressions

Expressions
A collection of expressions. The evaluation result of each expression is assigned to a property and replaces the value of the property.

OK Cancel Help

Property Expressions Editor

Property expressions:

Property	Expression
SqlStatementSource	" TRUNCATE TABLE dbo.Employee...

Delete OK Cancel

Expression Builder

Specify the expression for the property: SqlStatementSource.

Variables and Parameters

Mathematical Functions
String Functions
Date/Time Functions
NULL Functions
Type Casts
Operators

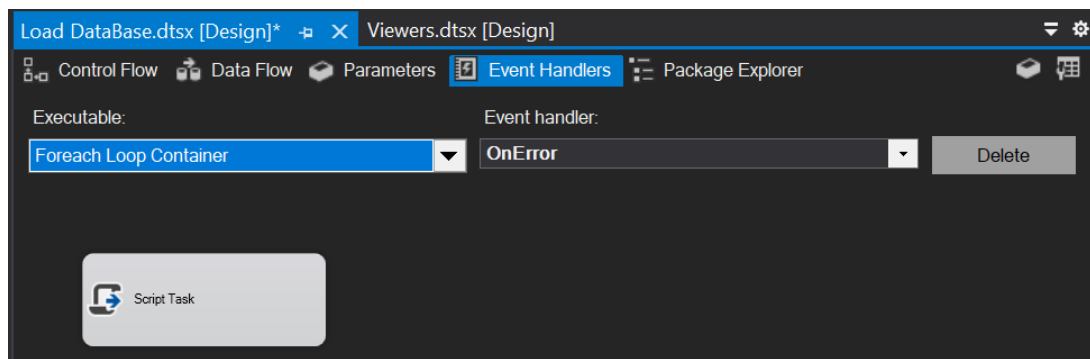
Description:

Expression:
" TRUNCATE TABLE dbo.EmployeesExternal;TRUNCATE TABLE dbo.EmployeesAW;TRUNCATE TABLE
dbo.EmailAddressesAW;"

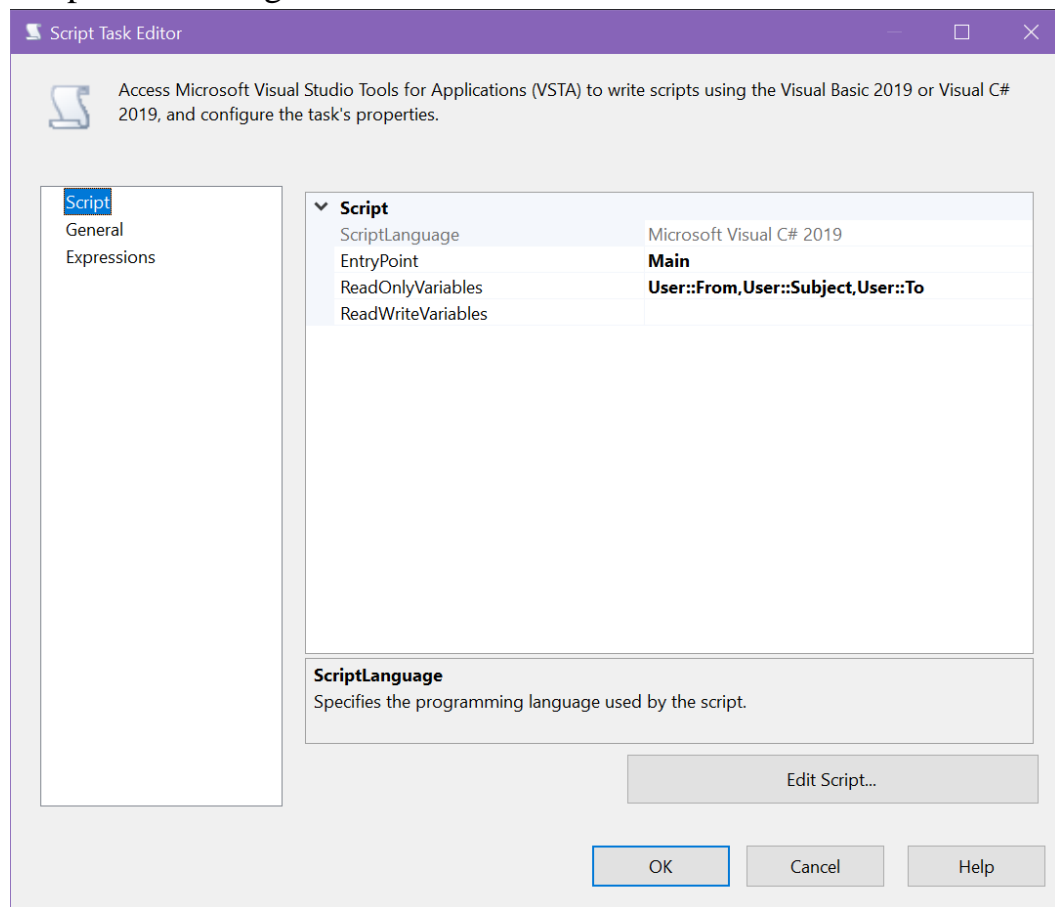
Evaluated value:
TRUNCATE TABLE dbo.EmployeesExternal;TRUNCATE TABLE dbo.EmployeesAW;TRUNCATE TABLE
dbo.EmailAddressesAW;

Evaluate Expression OK Cancel

Sending an email in case of an error while loading the EmployeeExternal table:



Script Task configuration:



```
#region Namespaces
using System;
using System.Data;
using Microsoft.SqlServer.Dts.Runtime;
using System.Windows.Forms;
using System.Net;
using System.Net.Mail;
#endregion
```



```

public void Main()
{
    String SendMailFrom = Dts.Variables["From"].Value.ToString();
    String SendMailTo = Dts.Variables["To"].Value.ToString();
    String SendMailSubject = Dts.Variables["Subject"].Value.ToString();
    String SendMailBody = "Error loading employees";

    try
    {
        MailMessage email = new MailMessage();
        SmtpClient SmtpServer = new SmtpClient("smtp.gmail.com");
        // START
        email.From = new MailAddress(SendMailFrom);
        email.To.Add(SendMailTo);
        email.Subject = SendMailSubject;
        email.Body = SendMailBody;
        //END

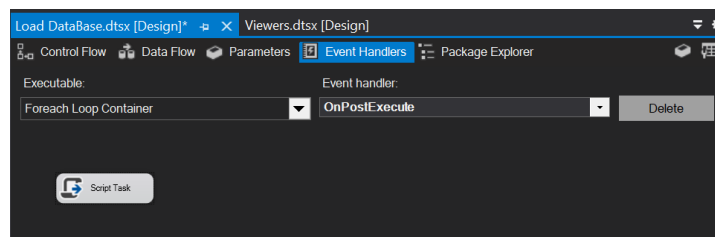
        SmtpServer.Port = 587;
        SmtpServer.Credentials = new System.Net.NetworkCredential(Ser
        SmtpServer.EnableSsl = true;

        SmtpServer.Send(email);
        MessageBox.Show("Email was Successfully Sent ");
    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.ToString());
    }
}

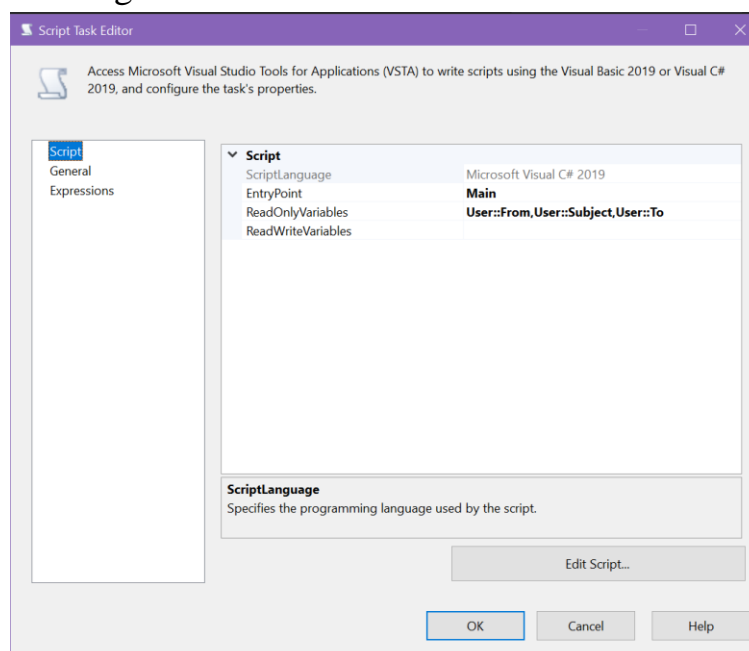
catch (Exception ex)
{
    MessageBox.Show(ex.ToString());
}
Dts.TaskResult = (int)ScriptResults.Success;
}

```

Sending an email in case of successful upload of the EmployeeExternal table:



Script Task configuration:



```
#region Namespaces
using System;
using System.Data;
using Microsoft.SqlServer.Dts.Runtime;
using System.Windows.Forms;
using System.Net;
using System.Net.Mail;
#endregion
```

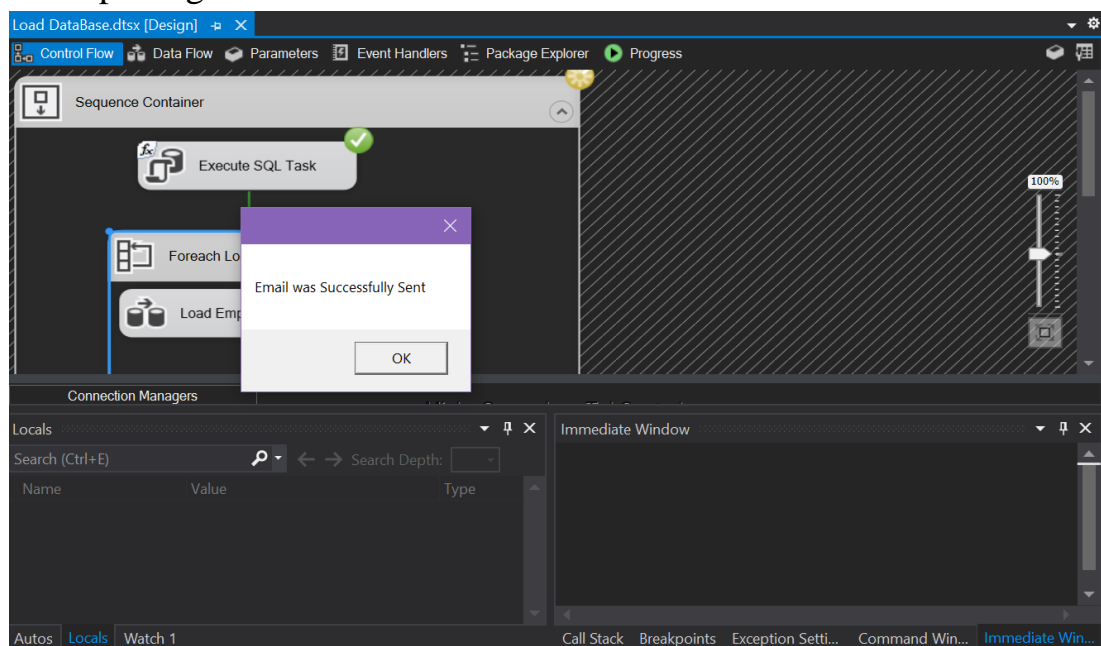
```
public void Main()
{
    String SendMailFrom = Dts.Variables["From"].Value.ToString();
    String SendMailTo = Dts.Variables["To"].Value.ToString();
    String SendMailSubject = Dts.Variables["Subject"].Value.ToString();
    String SendMailBody = "Employees have been imported successfully";

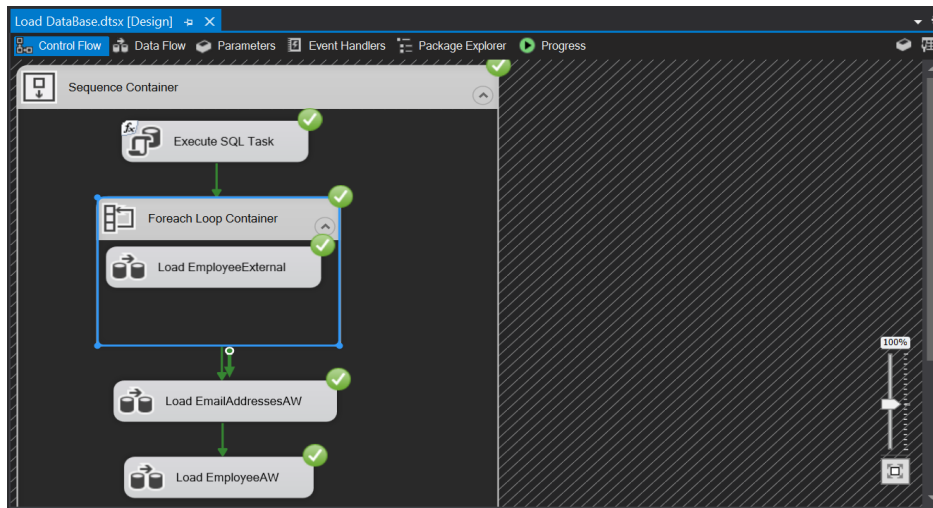
    try
    {
        MailMessage email = new MailMessage();
        SmtpClient SmtpServer = new SmtpClient("smtp.gmail.com");
        // START
        email.From = new MailAddress(SendMailFrom);
        email.To.Add(SendMailTo);
        email.Subject = SendMailSubject;
        email.Body = SendMailBody;
        //END

        SmtpServer.Port = 587;
        SmtpServer.Credentials = new System.Net.NetworkCredential(SendMailFrom, SendMailPassword);
        SmtpServer.EnableSsl = true;

        SmtpServer.Send(email);
        MessageBox.Show("Email was Successfully Sent ");
    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.ToString());
    }
    Dts.TaskResult = (int)ScriptResults.Success;
}
```

Run package:





Result of email send:

Несортированные
Промоакции
Соцсети

Employee Message - Employees have been imported successfully
11:16

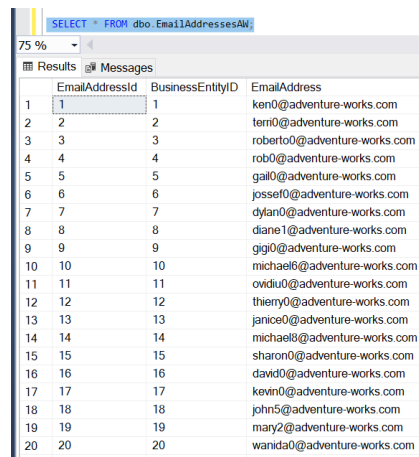
Select from dbo.EmployeeExternal:

SELECT * FROM dbo.EmployeeExternal								
EmployeeID	FirstName	LastName	JobTitle	EmailAddress	City	StateProvinceName	CountryRegionName	
1	Ken	Sánchez	Chief Executive Officer	ken0@adventure-works.com	Newport Hills	Washington	United States	
2	Terri	Duffy	Vice President of Engineering	terri0@adventure-works.com	Redmond	Washington	United States	
3	Roberto	Tambur...	Engineering Manager	roberto0@adventure-work...	Minneapolis	Minnesota	United States	
4	Rob	Walters	Senior Tool Designer	rob0@adventure-works.com	Bellevue	Washington	United States	
5	Gail	Erickson	Design Engineer	gail0@adventure-works.com	Kenmore	Washington	United States	
6	Jossef	Goldberg	Design Engineer	jossef0@adventure-works...	Everett	Washington	United States	
7	Dylan	Miller	Research and Development...	dylan0@adventure-works.c...	Bellevue	Washington	United States	
8	Diane	Margheim	Research and Development...	diane1@adventure-works...	San Franci...	California	United States	
9	Gigi	Matthew	Research and Development...	gigi0@adventure-works.com	Kenmore	Washington	United States	
10	Michael	Raheem	Research and Development...	michael6@adventure-work...	Bothell	Washington	United States	
11	Ovidiu	Cracium	Senior Tool Designer	ovidiu0@adventure-works...	Redmond	Washington	United States	
12	Thierry	D'Hers	Tool Designer	thierry0@adventure-works...	Redmond	Washington	United States	
13	Janice	Galvin	Tool Designer	janice0@adventure-works...	Redmond	Washington	United States	
14	Michael	Sullivan	Senior Design Engineer	michael8@adventure-work...	Redmond	Washington	United States	
15	Sharon	Salavaria	Design Engineer	sharon0@adventure-works...	Redmond	Washington	United States	
16	David	Bradley	Marketing Manager	david0@adventure-works.c...	Everett	Washington	United States	
17	Kevin	Brown	Marketing Assistant	kevin0@adventure-works.c...	Redmond	Washington	United States	
18	John	Wood	Marketing Specialist	john5@adventure-works.c...	Bellevue	Washington	United States	
19	Mary	Dempsey	Marketing Assistant	mary2@adventure-works.c...	Bellevue	Washington	United States	
20	Wanida	Benshoof	Marketing Assistant	wanida0@adventure-works...	Sammamish	Washington	United States	

Select from dbo.EmployeesAW:

SELECT * FROM dbo.EmployeesAW;				
	BusinessEntityID	FirstName	LastName	JobTitle
1	1	Ken	Sánchez	Chief Executive Officer
2	2	Terri	Duffy	Vice President of Engineering
3	3	Roberto	Tamburello	Engineering Manager
4	4	Rob	Walters	Senior Tool Designer
5	5	Gail	Erickson	Design Engineer
6	6	Jossef	Goldberg	Design Engineer
7	7	Dylan	Miller	Research and Development Manager
8	8	Diane	Margheim	Research and Development Engineer
9	9	Gigi	Matthew	Research and Development Engineer
10	10	Michael	Raheem	Research and Development Manager
11	11	Ovidiu	Cracium	Senior Tool Designer
12	12	Thierry	D'Hers	Tool Designer
13	13	Janice	Galvin	Tool Designer
14	14	Michael	Sullivan	Senior Design Engineer
15	15	Sharon	Salavaria	Design Engineer
16	16	David	Bradley	Marketing Manager
17	17	Kevin	Brown	Marketing Assistant
18	18	John	Wood	Marketing Specialist
19	19	Mary	Dempsey	Marketing Assistant
20	20	Wanida	Benshoof	Marketing Assistant

Select from dbp.EmailAddressesAW:

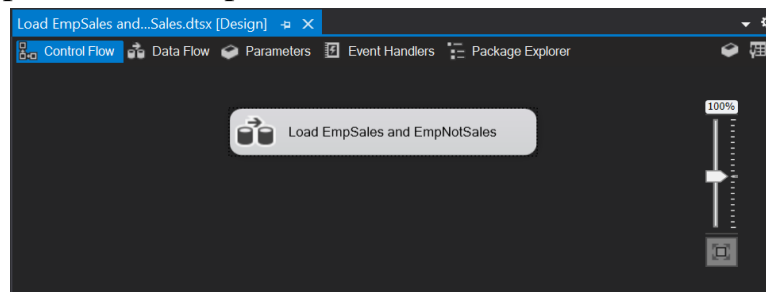


75 %

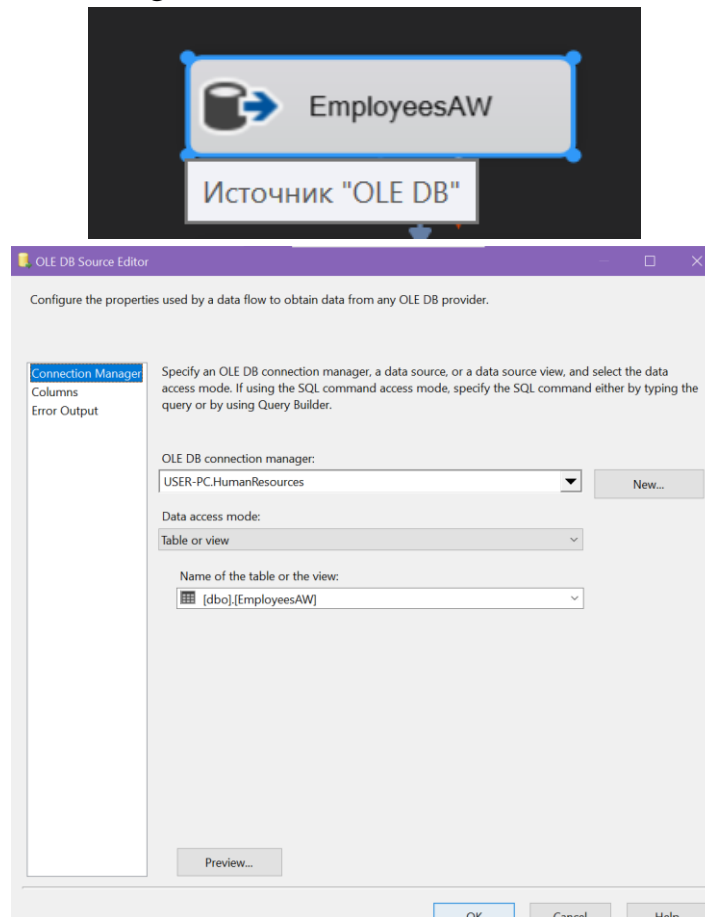
	EmailAddressId	BusinessEntityID	EmailAddress
1	1	1	ken0@adventure-works.com
2	2	2	terri0@adventure-works.com
3	3	3	roberto0@adventure-works.com
4	4	4	rob0@adventure-works.com
5	5	5	gal0@adventure-works.com
6	6	6	josef0@adventure-works.com
7	7	7	dylan0@adventure-works.com
8	8	8	diane1@adventure-works.com
9	9	9	gigi0@adventure-works.com
10	10	10	michael6@adventure-works.com
11	11	11	ovidiu0@adventure-works.com
12	12	12	thierry0@adventure-works.com
13	13	13	janios0@adventure-works.com
14	14	14	michael8@adventure-works.com
15	15	15	sharon0@adventure-works.com
16	16	16	david0@adventure-works.com
17	17	17	kevin0@adventure-works.com
18	18	18	john5@adventure-works.com
19	19	19	mary2@adventure-works.com
20	20	20	wanida0@adventure-works.com

Task 3 - Creating ETL solution to export the data from HumanResourcesdb

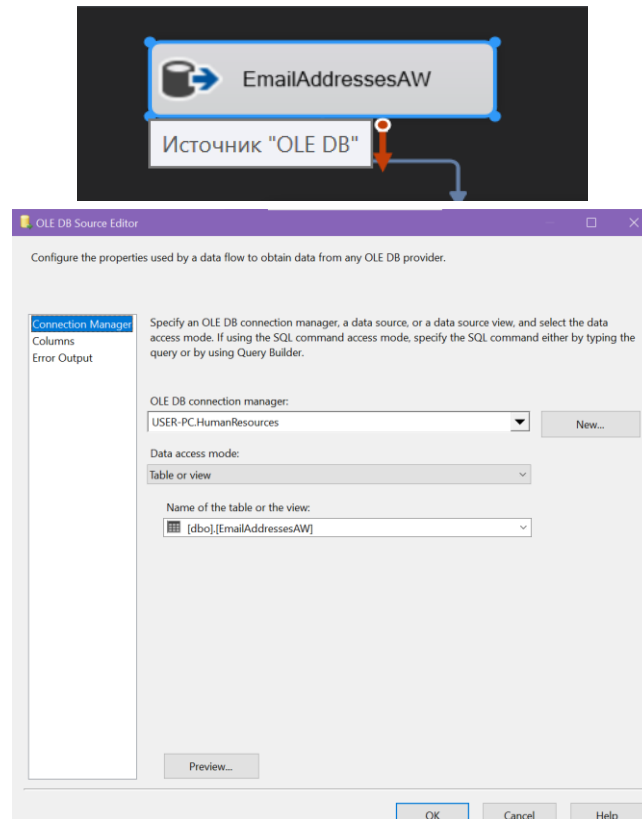
Load EmpSales and EmpNotSales data flow:



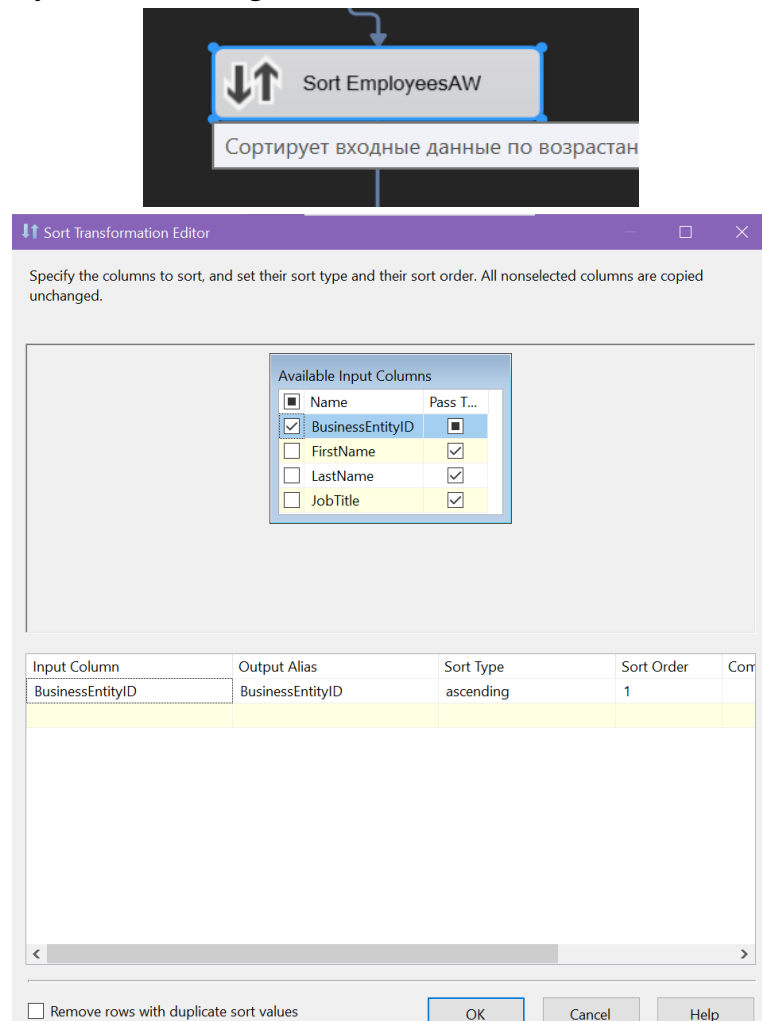
EmployeesAW configuration:



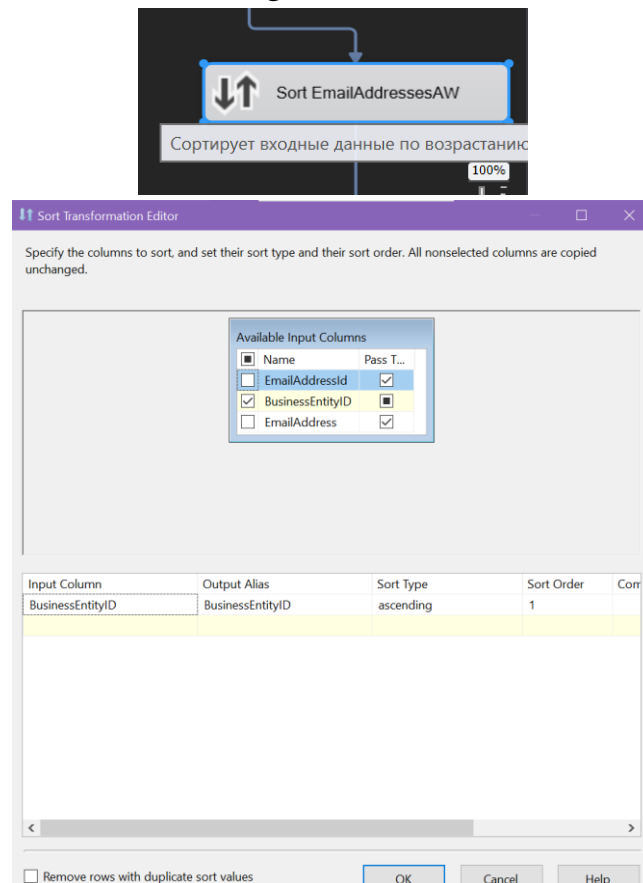
EmailAddressesAW configuration:



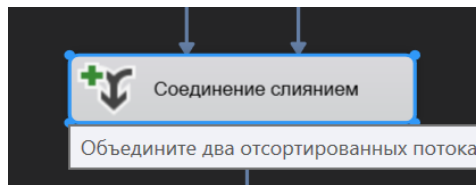
Sort EmployeesAW configuration:



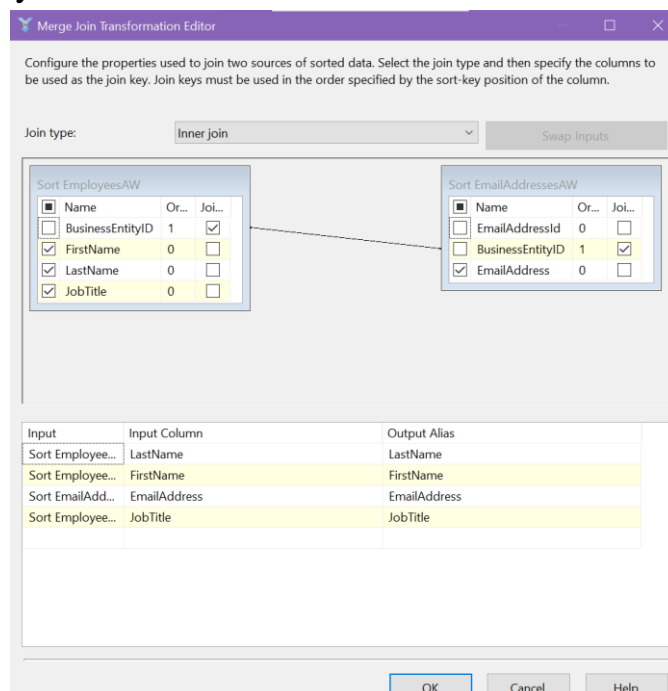
Sort EmailAddressesAW configuration:



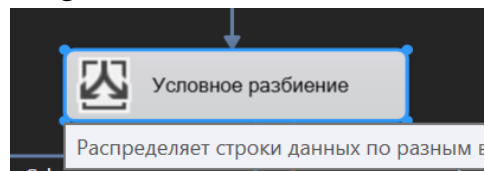
Merge Join configuration:



Add necessary columns:



Conditional Split configuration:



Conditional Split Transformation Editor

Specify the conditions used to direct input rows to specific outputs. If an input row matches no condition, the row is directed to a default output.

Variables and Parameters
Columns

Mathematical Functions
String Functions
Date/Time Functions
NULL Functions
Type Casts
Operators

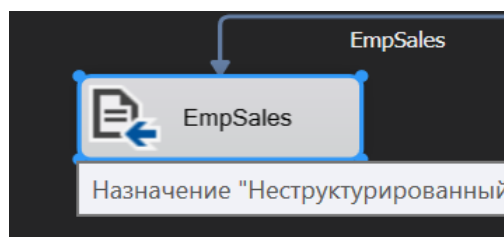
Description:

Order	Output Name	Condition
1	EmpSales	JobTitle == "Sales Representative"
2	EmpNotSales	JobTitle != "Sales Representative"

Default output name: Выход по умолчанию условного разбиения

Configure Error Output... OK Cancel Help

EmpSales configuration:



Flat File Destination Editor

Configure the properties used to connect to and insert data into a text file.

Connection Manager
Mappings

Flat File connection manager:
Flat File Connection Manager New...

☒ Overwrite data in the file Update...

Header:

Preview...

OK Cancel Help

Flat File Connection Manager Editor

Connection manager name: Flat File Connection Manager

Description:

General Columns Advanced Preview

Select a file and specify the file properties and the file format.

File name: D:\DataMola\Lab script\U3\Lab 3\EmpSale Browse...

Locale: English (United States) [X] Unicode

Code page: 1252 (ANSI - латиница 1)

Format: Delimited

Text qualifier: <none>

Header row delimiter: {CR}{LF}

Header rows to skip: 0

[X] Column names in the first data row

OK Cancel Help

Delete JobTitle column from result set:

Flat File Connection Manager Editor

Connection manager name: Flat File Connection Manager

Description:

General Columns Advanced Preview

Configure the properties of each column.

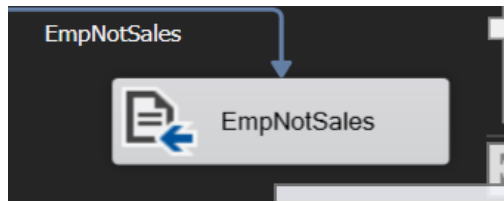
Name	EmailAddress
ColumnDelimiter	{CR}{LF}
ColumnType	Delimited
InputColumnWid	0
DataPrecision	0
DataScale	0
DataType	строка в Юникоде [DT]
OutputColumnW	50
TextQualified	True

Name

New [v] Delete Suggest Types...

OK Cancel Help

EmpNotSales confiduration:



Flat File Destination Editor

Configure the properties used to connect to and insert data into a text file.

Connection Manager
Mappings

Flat File connection manager:
Flat File Connection Manager 1 New...

☒ Overwrite data in the file Update...

Header:

Preview...

OK Cancel Help

Flat File Connection Manager Editor

Connection manager name: Flat File Connection Manager 1

Description:

General
Columns
Advanced
Preview

Select a file and specify the file properties and the file format.

File name: D:\DataMola\Lab script\U3\Lab 3\EmpSale Browse...

Locale: English (United States) Unicode

Code page: 1252 (ANSI - латиница 1)

Format: Delimited

Text qualifier: <none>

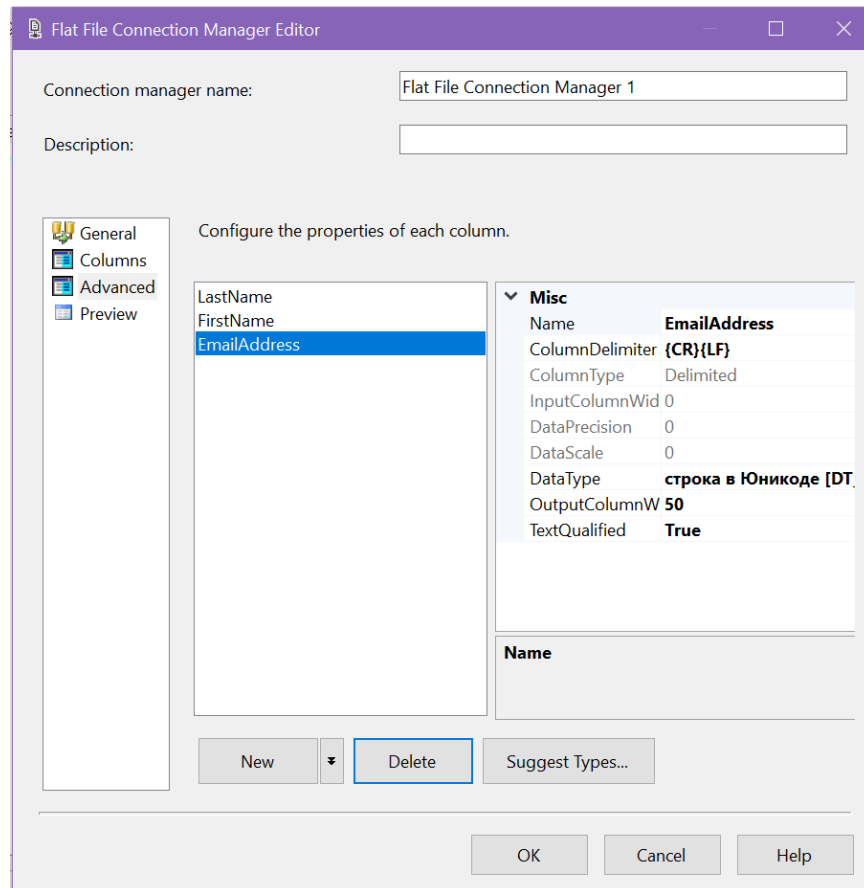
Header row delimiter: [CR][LF]

Header rows to skip: 0

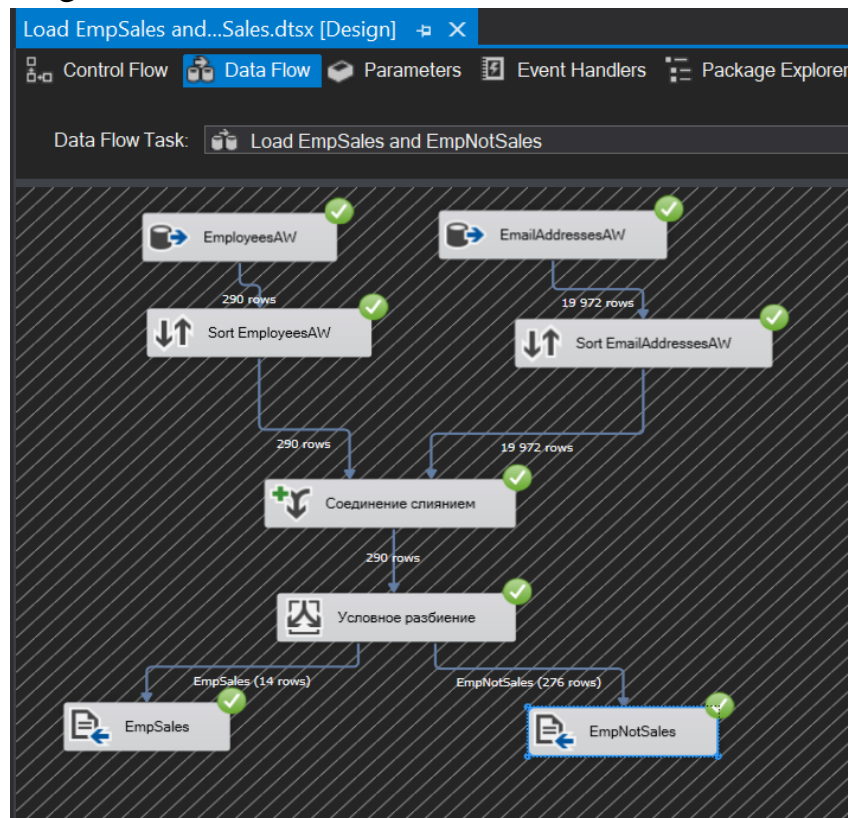
☒ Column names in the first data row

OK Cancel Help



Delete JobTitle column from result set:



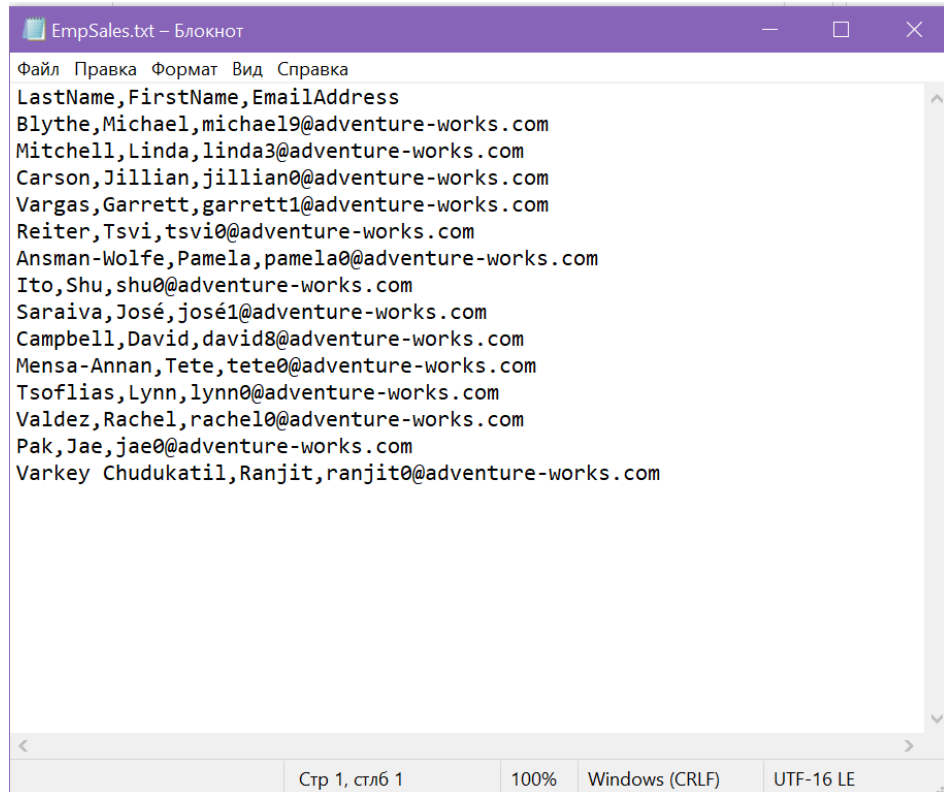
Run package:



Set of files:

 EmpNotSales.txt	28.08.2022 11:35	Текстовый документ
 EmpSales.txt	28.08.2022 11:35	Текстовый документ

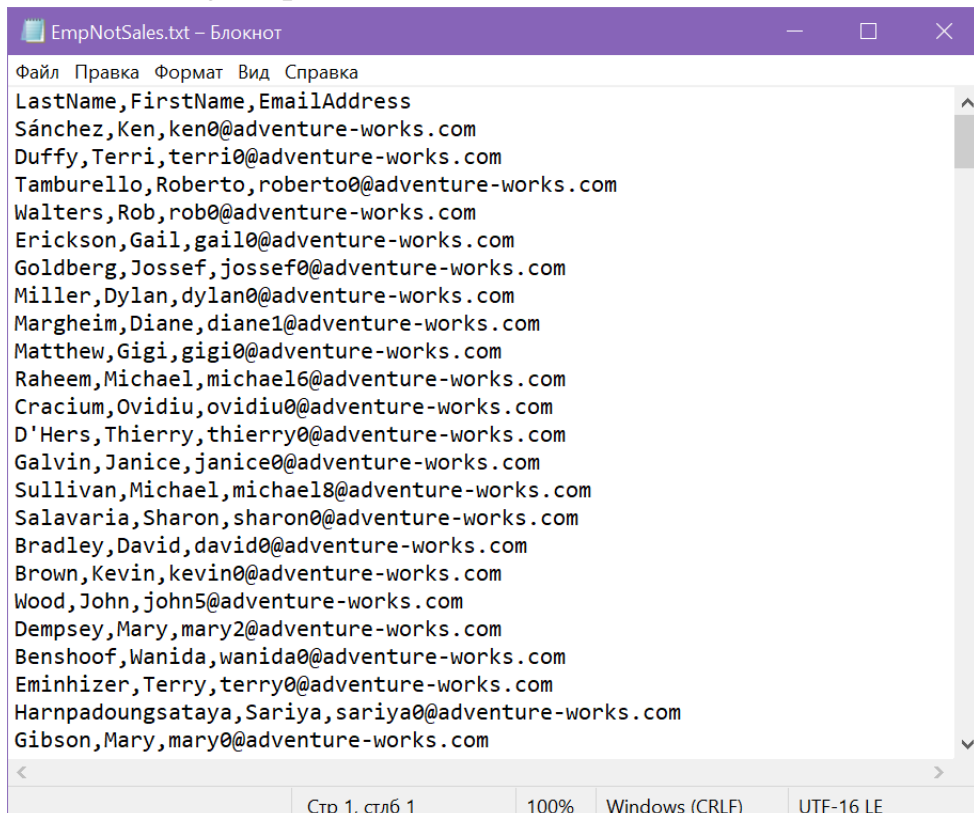
Result of loading EmpSales file:



```
EmpSales.txt – Блокнот
Файл Правка Формат Вид Справка
LastName,FirstName,EmailAddress
Blythe,Michael,michael9@adventure-works.com
Mitchell,Linda,linda3@adventure-works.com
Carson,Jillian,jillian0@adventure-works.com
Vargas,Garrett,garrett1@adventure-works.com
Reiter,Tsvi,tsvi0@adventure-works.com
Ansman-Wolfe,Pamela,pamela0@adventure-works.com
Ito,Shu,shu0@adventure-works.com
Saraiva,José,josé1@adventure-works.com
Campbell,David,david8@adventure-works.com
Mensa-Annan,Tete,tete0@adventure-works.com
Tsoflias,Lynn,lynn0@adventure-works.com
Valdez,Rachel,rachel0@adventure-works.com
Pak,Jae,jae0@adventure-works.com
Varkey Chudukatil,Ranjit,ranjit0@adventure-works.com

Стр 1, стлб 1    100%    Windows (CRLF)    UTF-16 LE
```

Result of loading EmpNotSales file:



```
EmpNotSales.txt – Блокнот
Файл Правка Формат Вид Справка
LastName,FirstName,EmailAddress
Sánchez,Ken,ken0@adventure-works.com
Duffy,Terri,terri0@adventure-works.com
Tamburello,Roberto,roberto0@adventure-works.com
Walters,Rob,rob0@adventure-works.com
Erickson,Gail,gail0@adventure-works.com
Goldberg,Jossef,jossef0@adventure-works.com
Miller,Dylan,dylan0@adventure-works.com
Margheim,Diane,diane1@adventure-works.com
Matthew,Gigi,gigi0@adventure-works.com
Raheem,Michael,michael6@adventure-works.com
Cracium,Ovidiu,ovidiu0@adventure-works.com
D'Hers,Thierry,thierry0@adventure-works.com
Galvin,Janice,janice0@adventure-works.com
Sullivan,Michael,michael8@adventure-works.com
Salavaria,Sharon,sharon0@adventure-works.com
Bradley,David,david0@adventure-works.com
Brown,Kevin,kevin0@adventure-works.com
Wood,John,john5@adventure-works.com
Dempsey,Mary,mary2@adventure-works.com
Benshoof,Wanida,wanida0@adventure-works.com
Eminhizer,Terry,terry0@adventure-works.com
Harnpadoungsataya,Sariya,sariya0@adventure-works.com
Gibson,Mary,mary0@adventure-works.com

Стр 1, стлб 1    100%    Windows (CRLF)    UTF-16 LE
```

Task 4 – Using Data Viewers

SSIS supports several types of data viewers. The one most commonly used is the grid data viewer, which displays the data in tabular format. However, you can also create data viewers that display histograms, scatter plot charts, or column charts.

For an example of how the viewer works, I'm using a package that loads data from HumanResources database tables into the EmpSales and EmpNotSales files.

I will create a view between Merge Join and Conditional Split to see what data is obtained after Merge Join:

The screenshot displays the SQL Server Data Tools interface. On the left, a Data Viewer window titled 'Выход соединения слиянием Data Viewer at Load EmpSales and EmpNotSales' shows a table of employee data. The table has four columns: LastName, FirstName, EmailAddress, and JobTitle. The data is sorted by JobTitle. Below the table, it indicates 'Attached Total rows: 0, buffers: 0' and 'Rows displayed = 290'. On the right, the SSIS flow diagram is visible, showing a 'Sort EmpSalesAndEmpNotSales' task followed by a 'Соединение слиянием' (Merge Join) task. The flow diagram also shows a 'Условное разделение' (Conditional Split) task branching into 'EmpSales' and 'EmpNotSales' paths. The flow diagram includes row counts: 290 rows for the Merge Join task and 19,972 rows for the Conditional Split task.

LastName	FirstName	EmailAddress	JobTitle
Sánchez	Ken	ken0@adventure-works.com	Chief Executive Officer
Duffy	Terri	terri0@adventure-works.com	Vice President of Engineering
Tamburello	Roberto	roberto0@adventure-works.com	Engineering Manager
Walters	Rob	rob0@adventure-works.com	Senior Tool Designer
Erickson	Gail	gail0@adventure-works.com	Design Engineer
Goldberg	Josief	Josief0@adventure-works.com	Design Engineer
Miller	Dylan	dylan0@adventure-works.com	Research and Development ...
Margheim	Diane	diane1@adventure-works.com	Research and Development ...
Matthew	Gigi	gigi0@adventure-works.com	Research and Development ...
Raheem	Michael	michael6@adventure-works.com	Research and Development ...
Cradium	Ovidiu	ovidiu0@adventure-works.com	Senior Tool Designer
D'Hers	Thierry	thierry0@adventure-works.com	Tool Designer
Galvin	Janice	janice0@adventure-works.com	Tool Designer
Sullivan	Michael	michael8@adventure-works.com	Senior Design Engineer
Salavaria	Sharon	sharon0@adventure-works.com	Design Engineer
Bradley	David	david0@adventure-works.com	Marketing Manager
Brown	Kevin	kevin0@adventure-works.com	Marketing Assistant
Wood	John	john5@adventure-works.com	Marketing Specialist
Dempsey	Mary	mary2@adventure-works.com	Marketing Assistant