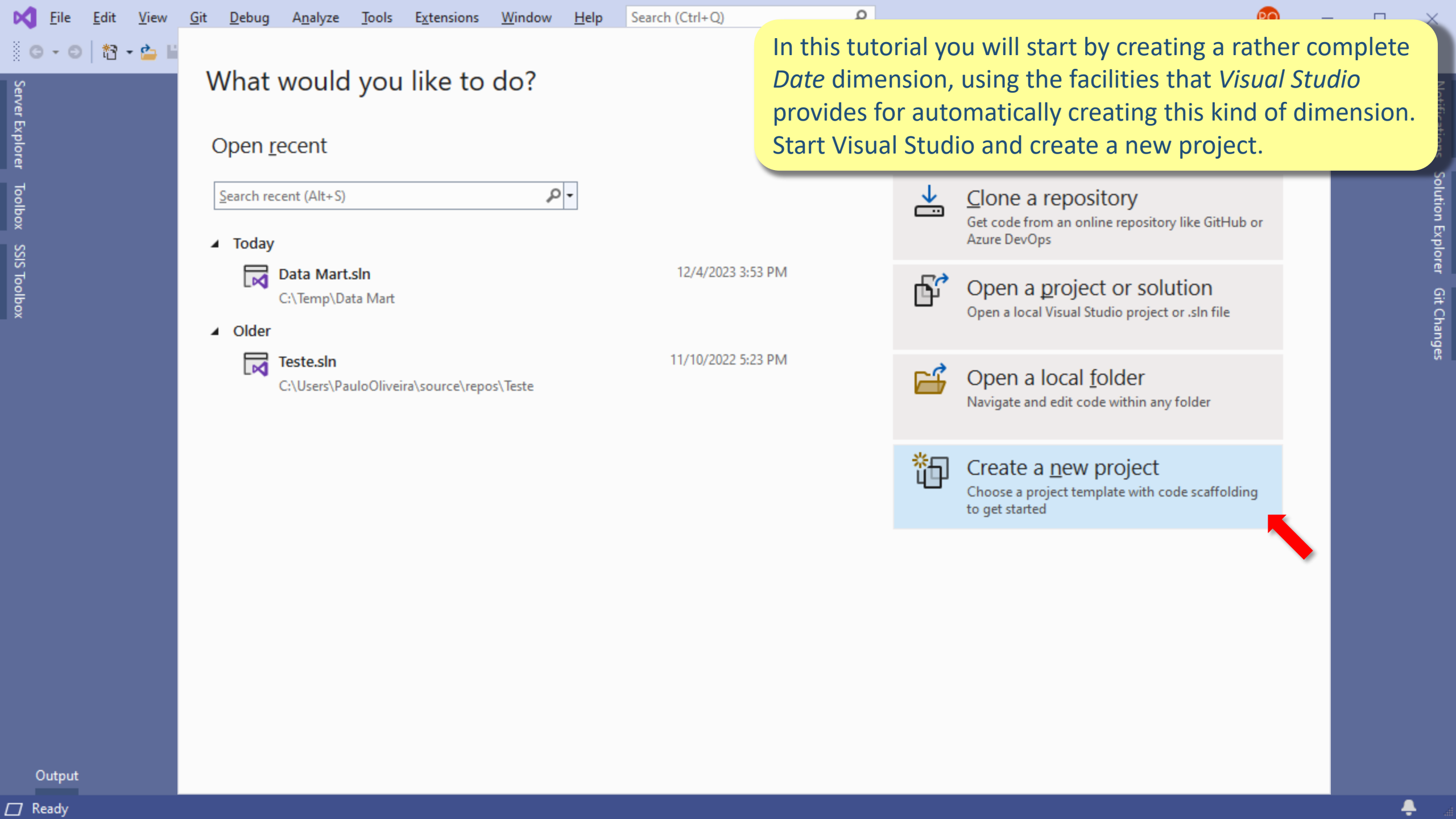


# **BDAMD**

## **EXERCISE 3 TUTORIAL**

Paulo Oliveira  
DEI-ISEP



## What would you like to do?

### Open recent

Search recent (Alt+S)

#### Today



Data Mart.sln

C:\Temp\Data Mart

12/4/2023 3:53 PM

#### Older



Teste.sln

C:\Users\PauloOliveira\source\repos\Teste

11/10/2022 5:23 PM



### Clone a repository

Get code from an online repository like GitHub or Azure DevOps



### Open a project or solution

Open a local Visual Studio project or .sln file



### Open a local folder

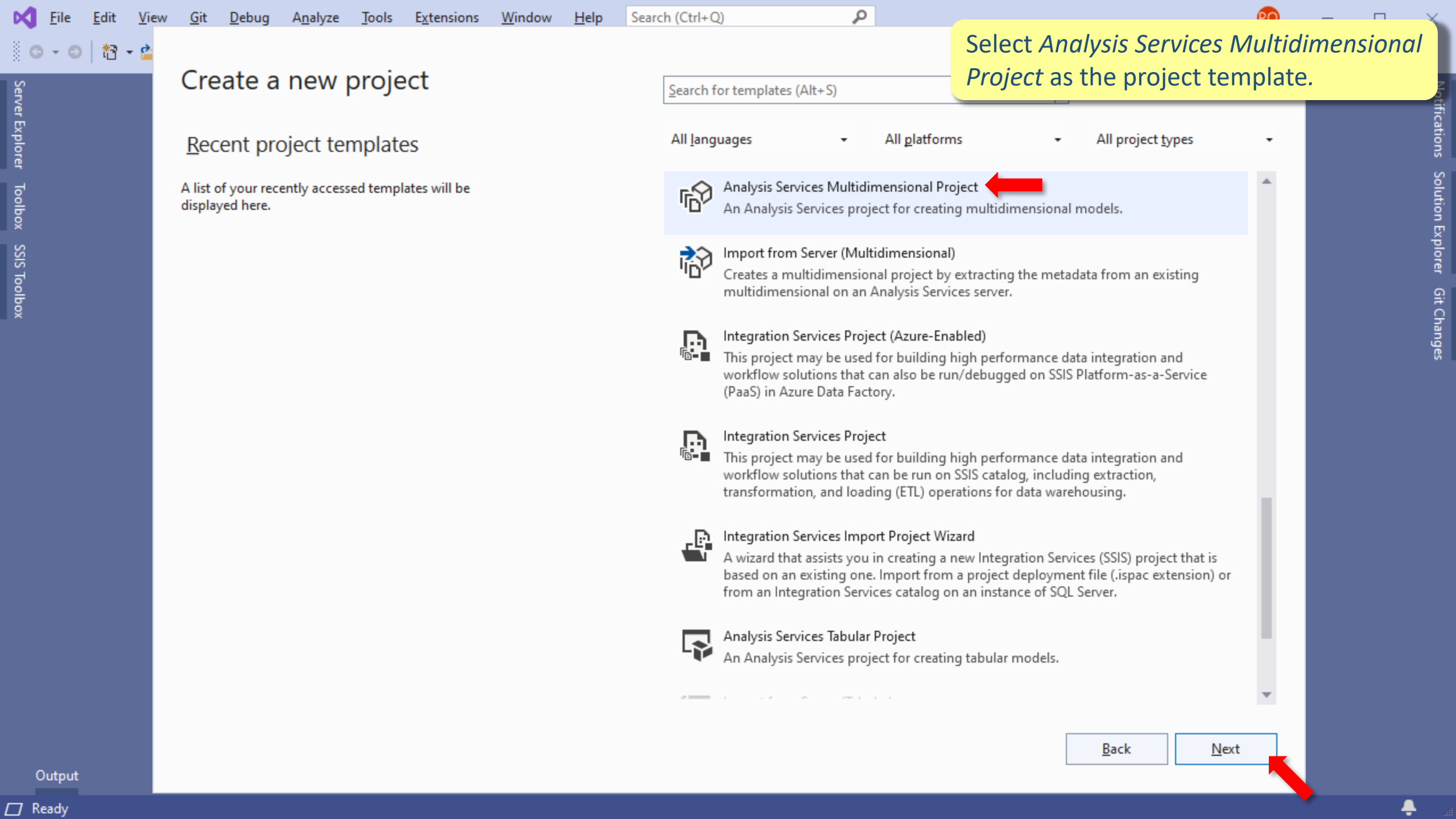
Navigate and edit code within any folder



### Create a new project

Choose a project template with code scaffolding to get started

In this tutorial you will start by creating a rather complete *Date* dimension, using the facilities that *Visual Studio* provides for automatically creating this kind of dimension. Start Visual Studio and create a new project.



# Create a new project

## Recent project templates

A list of your recently accessed templates will be displayed here.

Search for templates (Alt+S)

All languages

All platforms

All project types



Analysis Services Multidimensional Project

An Analysis Services project for creating multidimensional models.



Import from Server (Multidimensional)

Creates a multidimensional project by extracting the metadata from an existing multidimensional on an Analysis Services server.



Integration Services Project (Azure-Enabled)

This project may be used for building high performance data integration and workflow solutions that can also be run/debugged on SSIS Platform-as-a-Service (PaaS) in Azure Data Factory.



Integration Services Project

This project may be used for building high performance data integration and workflow solutions that can be run on SSIS catalog, including extraction, transformation, and loading (ETL) operations for data warehousing.



Integration Services Import Project Wizard

A wizard that assists you in creating a new Integration Services (SSIS) project that is based on an existing one. Import from a project deployment file (.ispac extension) or from an Integration Services catalog on an instance of SQL Server.



Analysis Services Tabular Project

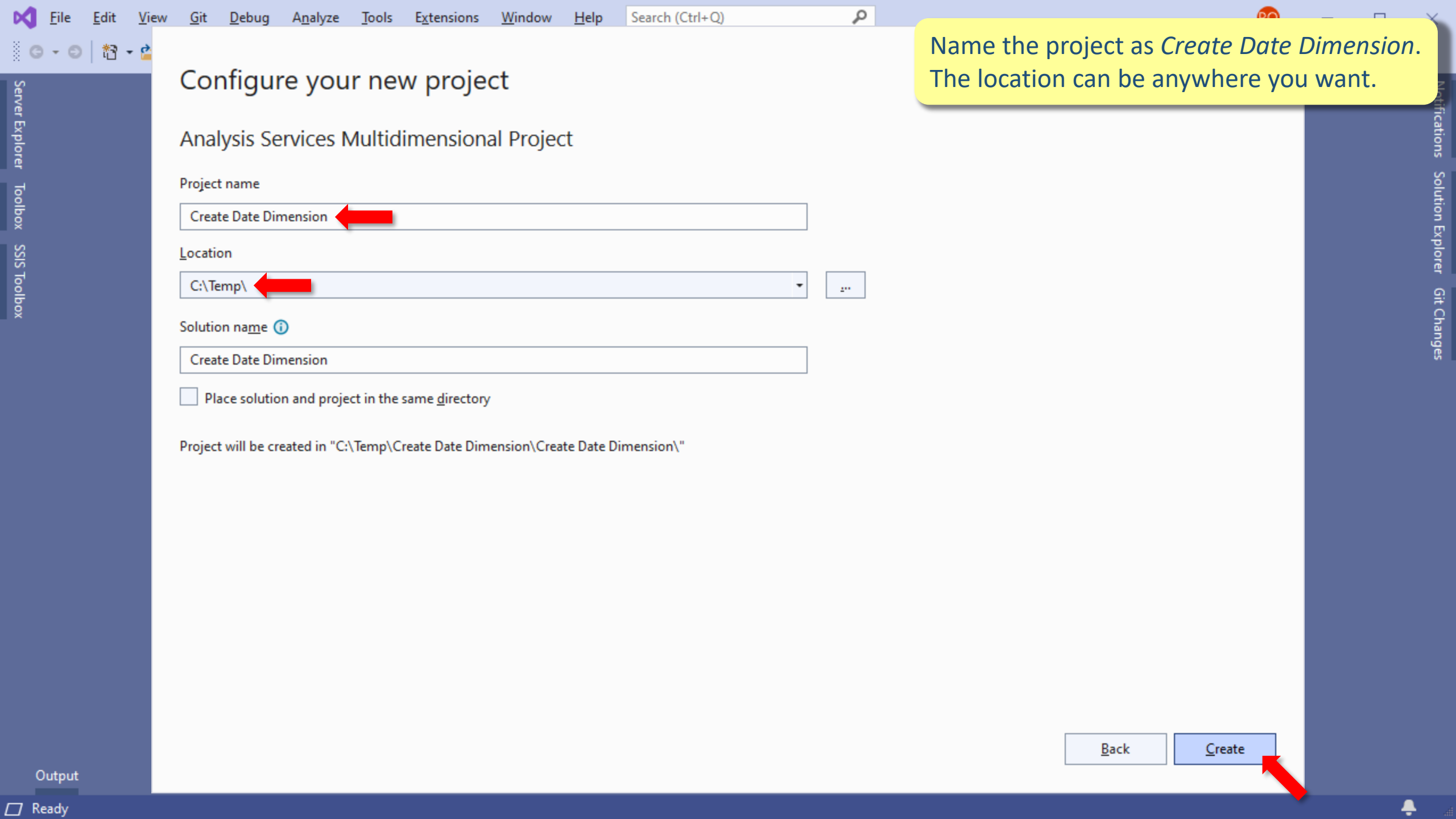
An Analysis Services project for creating tabular models.

Back

Next

Output

Ready



# Configure your new project

## Analysis Services Multidimensional Project

Project name

Create Date Dimension

Location

C:\Temp\

Solution name

Create Date Dimension

☐ Place solution and project in the same directory

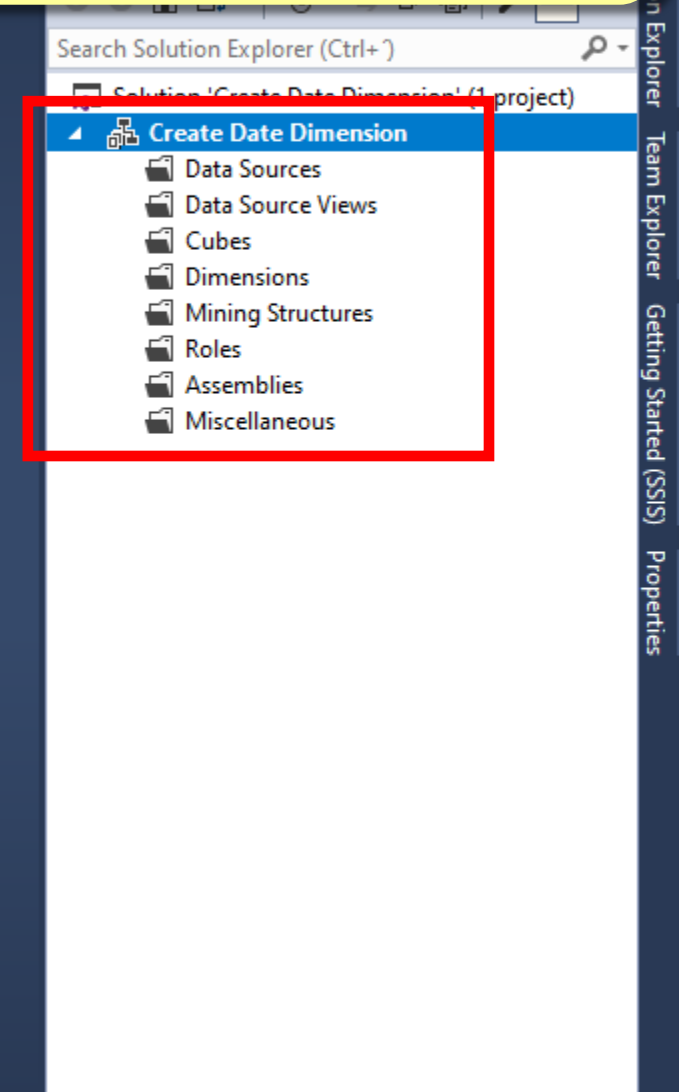
Project will be created in "C:\Temp\Create Date Dimension\Create Date Dimension\"

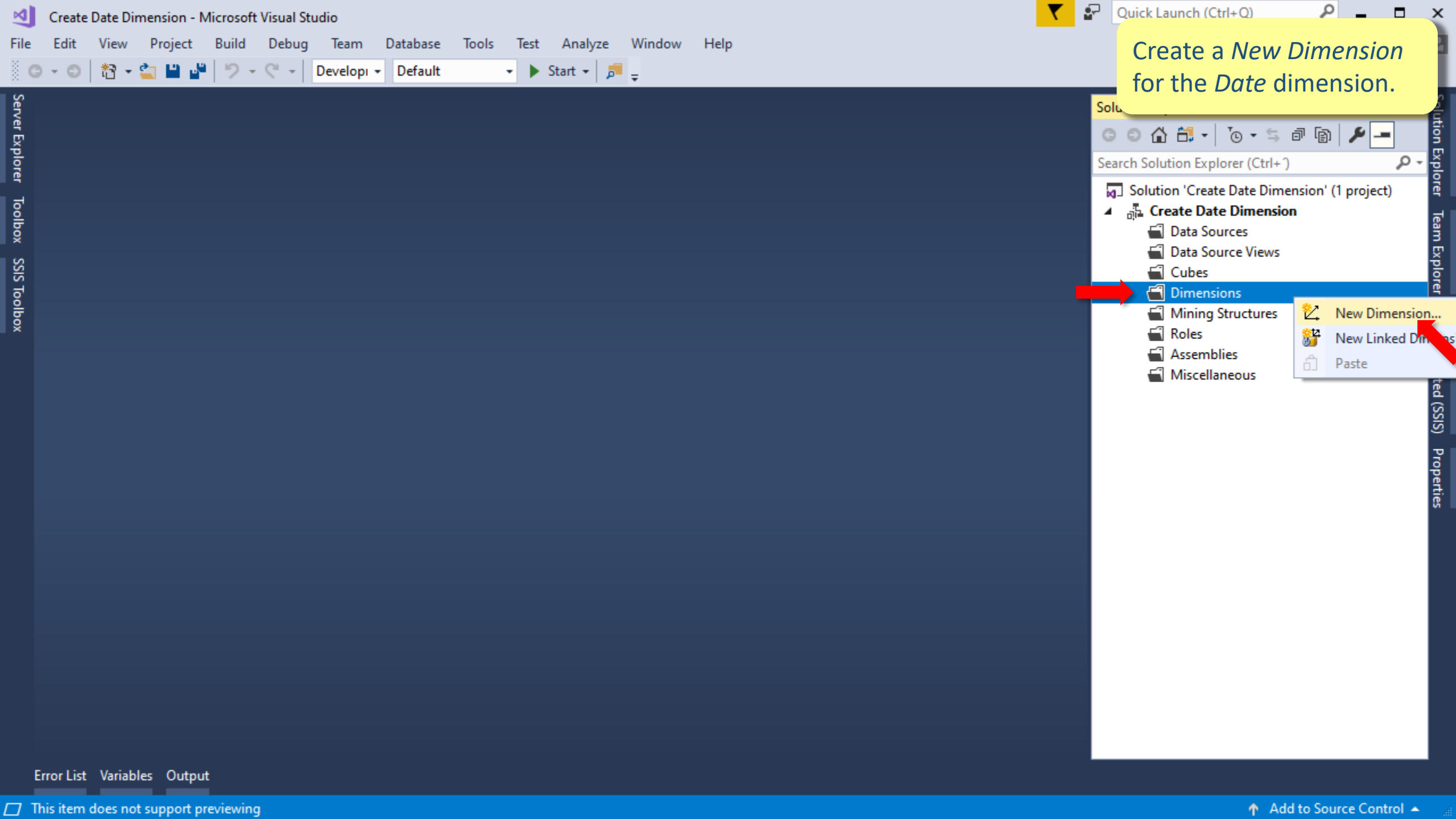
Back

Create

Name the project as *Create Date Dimension*.  
The location can be anywhere you want.

A *Multidimensional Analysis Services* project has a different structure from an *Integration Services* Project.





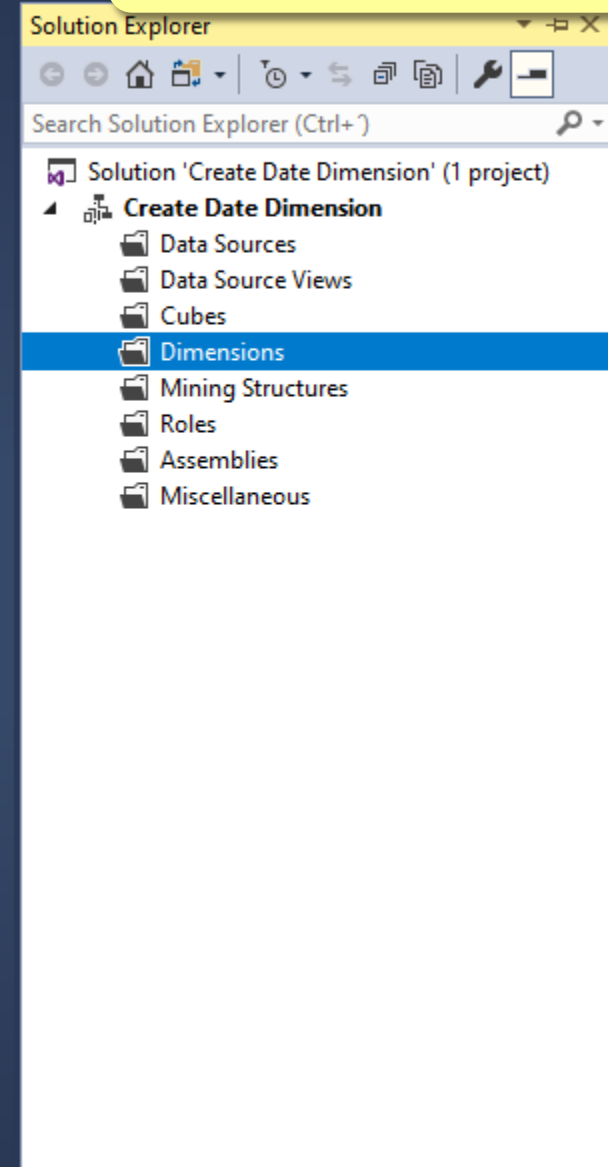
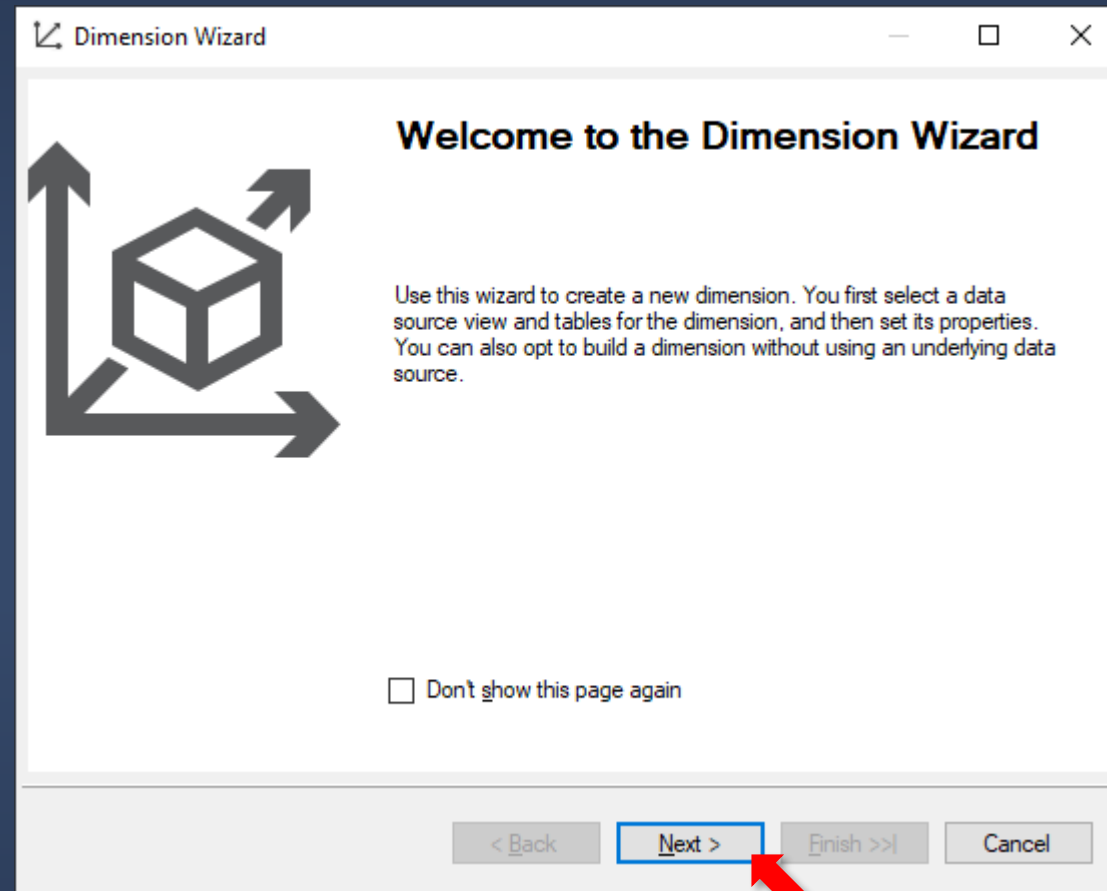
Create a *New Dimension* for the *Date* dimension.

Solution Explorer (Ctrl+)

- Solution 'Create Date Dimension' (1 project)
  - Create Date Dimension
    - Data Sources
    - Data Source Views
    - Cubes
    - Dimensions
    - Mining Structures
    - Roles
    - Assemblies
    - Miscellaneous

New Dimension...  
New Linked Dimension...  
Paste

A wizard helps to create the new dimension.



**Dimension Wizard**

**Select Creation Method**  
You can base the dimension on an existing table or generate a new table as the source.

How would you like to create the dimension?

☐ Use an existing table

☒ Generate a time table in the data source

☐ Generate a time table on the server

☐ Generate a non-time table in the data source

Template:

(None)

Description:

Create a new time dimension table in the underlying data source. The dimension will contain data for the date range, attributes, and calendars you specify. You must have permission to create objects in the underlying data source.

< Back Next > Finish >> Cancel

The new *Date* dimension is going to be created as a table in a specific data source.

Search Solution Explorer (Ctrl+ )

Solution 'Create Date Dimension' (1 project)

Create Date Dimension

Data Sources

Data Source Views

Cubes

Dimensions

Mining Structures

Roles

Assemblies

Miscellaneous



Select the start and end periods of the *Date* dimension, the day that represents the first day of the week and the time periods to be considered. Select all the time periods in order to create the most complete Date dimension. You are creating a *Date* dimension that covers the period from January 1<sup>st</sup> of 2000 to December 31<sup>st</sup> of 2040.

Dimension Wizard

**Define Time Periods**  
Select the time periods to use when generating the hierarchies.

First calendar day: Saturday , January 1, 2000

Last calendar day: Monday , December 31, 2040

First day of the week: Sunday

Time periods:

- ☒ Year
- ☒ Half Year
- ☒ Quarter
- ☒ Trimester
- ☒ Month
- ☒ Ten Days
- ☒ Week

Language for time member names: English (United States)

< Back Next > Finish >>| Cancel

Data Source Views

Cubes

**Dimensions**

Mining Structures

Roles

Assemblies

Miscellaneous

**Dimension Wizard**

Select the calendars for which you want to create hierarchies.

☒ **Regular calendar** ←

☐ **Fiscal calendar**  
Start day and month: 1 January  
Fiscal calendar naming convention: Calendar year name + 1

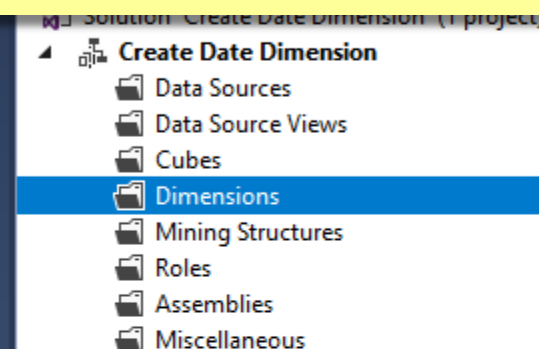
☐ **Reporting (or marketing) calendar**  
Start week and month: 1 January  
Week by month pattern: Week 445

☐ **Manufacturing calendar**  
Start week and month: 1 January  
Quarter with extra periods: 4

☒ **ISO 8601 calendar** ←

< Back Next > Finish >> Cancel

Select regular calendar (fiscal, reporting and manufacturing calendars would also be possible and generate additional date attributes) and include extra ISO 8601 calendar attributes for the *Date* dimension.



Name the new *Date* dimension as *DimDate* and select the option to generate its schema.

Dimension Wizard

**Completing the Wizard**  
Type a name for the new dimension, verify the dimension structure, and then click Finish to save the dimension.

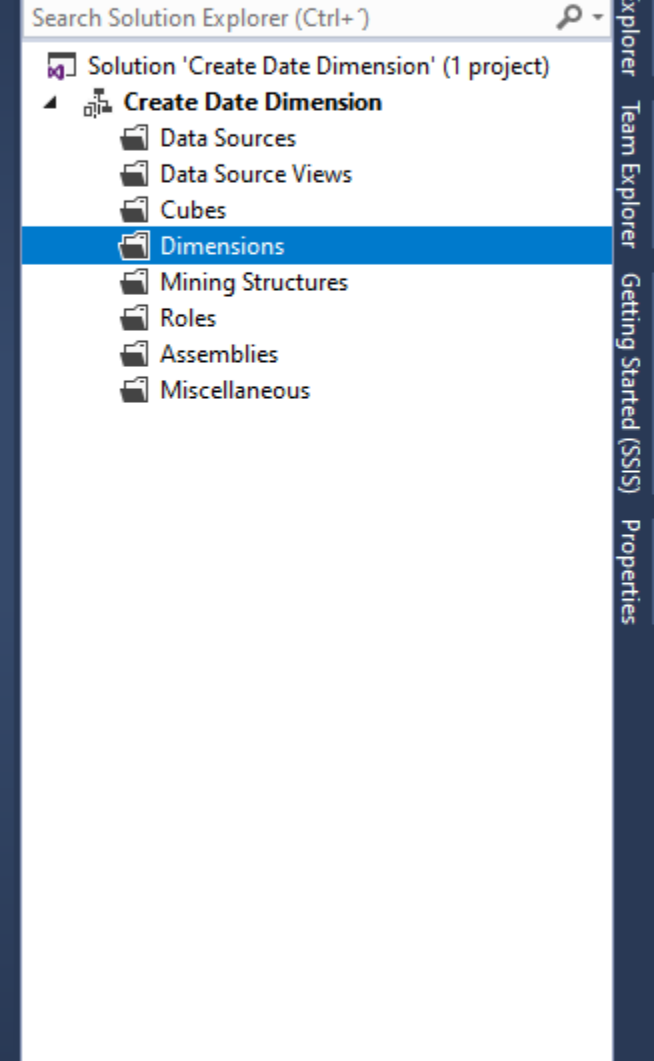
Name:  
DimDate

Preview:

- DimDate
  - Attributes
    - Date
    - Year
    - Half Year
    - Quarter
    - Trimester
    - Month

☒ Generate schema now

< Back Next > Finish Cancel



Microsoft Visual Studio

File Edit View Project Build Debug Team Database Tools Test Analyze Window Help

Develop Default Start

DimDate.dim [Design]

Dimension Structure Attribute Relationships Translations Browser

Hierarchies

Year - Half Year - Quarter - Month - Ten Days - Date

Year

Half Year

Quarter

Month

Ten Days

Date

<new level>

ISO 8601 Year - ISO 8601 Week - ISO 8601 Day

ISO 8601 Year

ISO 8601 Week

ISO 8601 Day

<new level>

Attributes

	Name	Usage
	Date	Key
	Day Of Half Year	Regular
	Day Of Month	Regular
	Day Of Quarter	Regular

Schema Generation Wizard

Welcome to the Schema Generation Wizard

Use this wizard to generate a relational schema based on cube and dimension definitions. You can use this method when building a data warehouse top down, first designing the cubes and dimensions without an underlying relational data source, and then generating the necessary schema for the data source.

☐ Don't show this page again

< Back

Next >

Finish >>

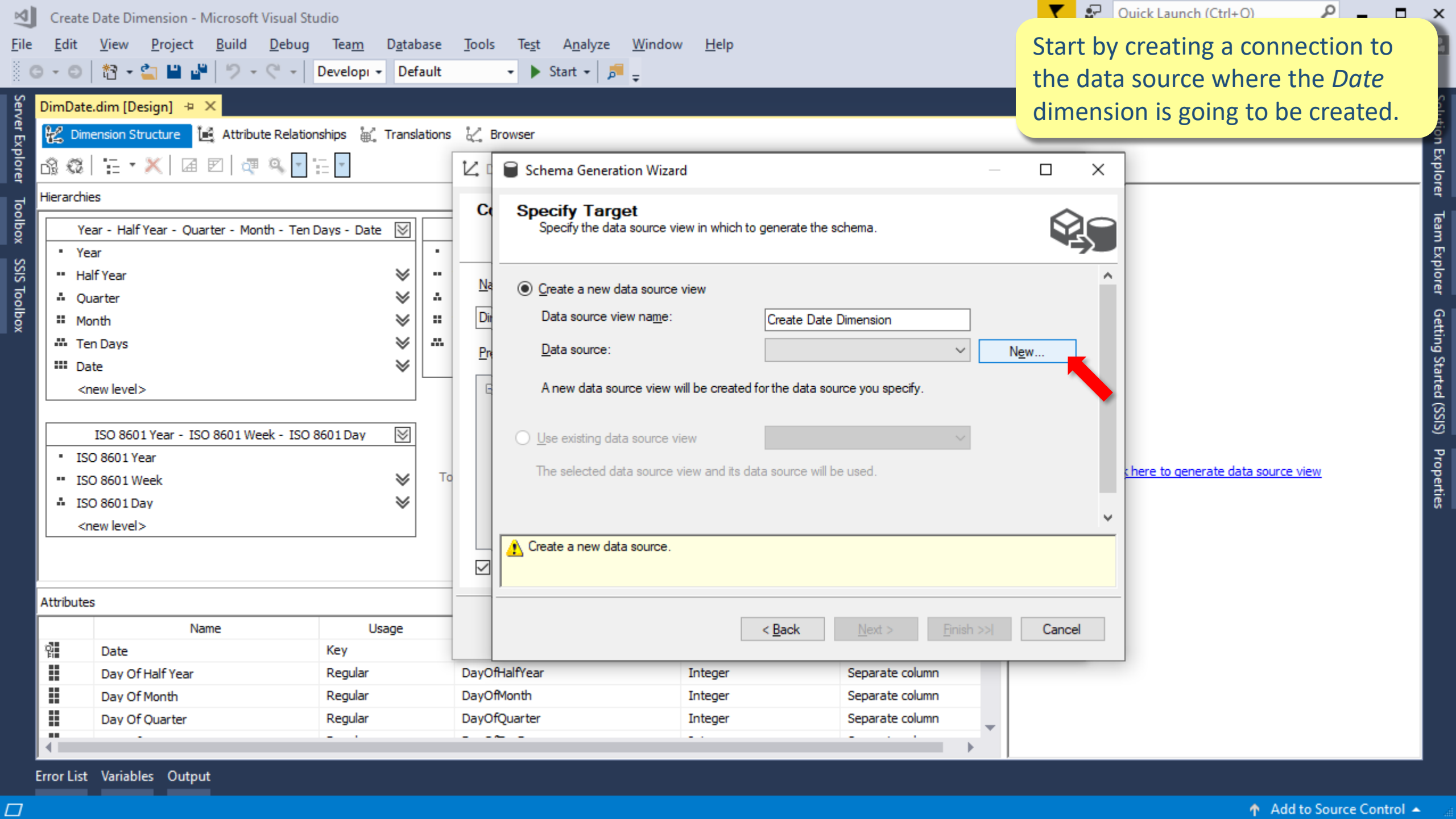
Cancel

Another wizards helps to create the *Date* dimension schema.

[Click here to generate data source view](#)

Error List Variables Output

Add to Source Control



Start by creating a connection to the data source where the *Date* dimension is going to be created.

**Specify Target**

Specify the data source view in which to generate the schema.

☒ Create a new data source view

Data source view name:

Data source:

A new data source view will be created for the data source you specify.

☐ Use existing data source view

The selected data source view and its data source will be used.

 Create a new data source.





< Back

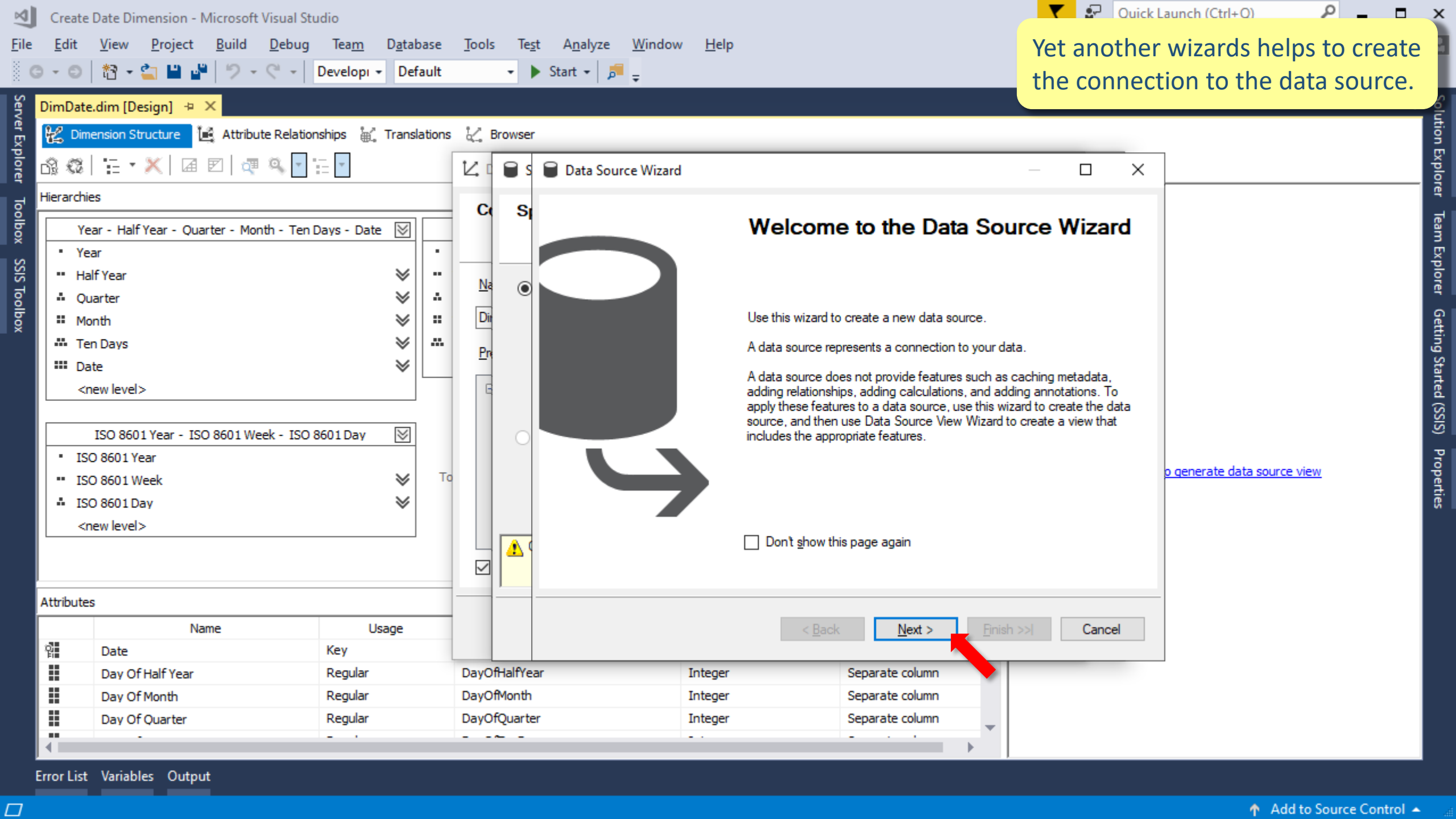
Next >

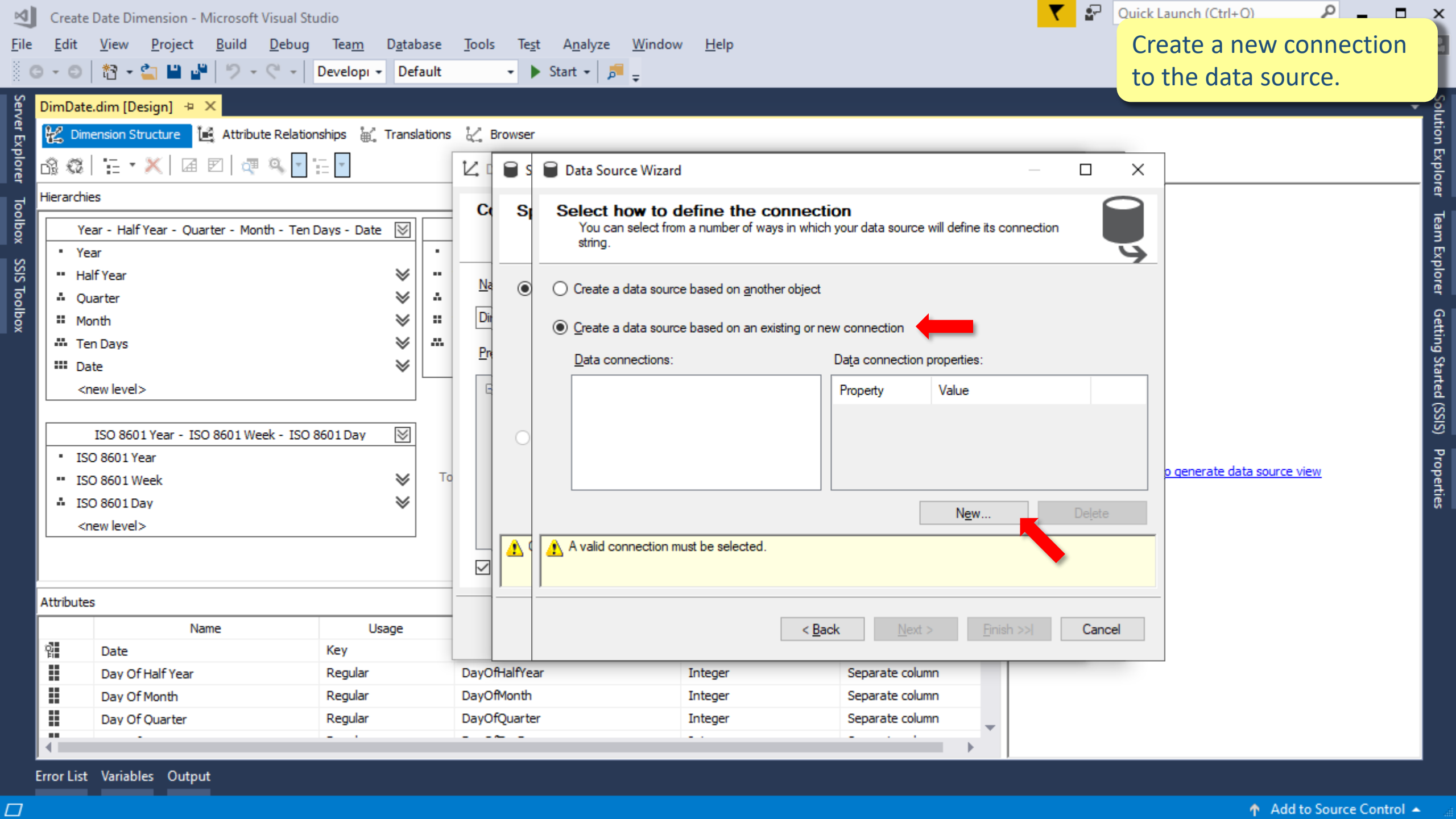
Finish >>

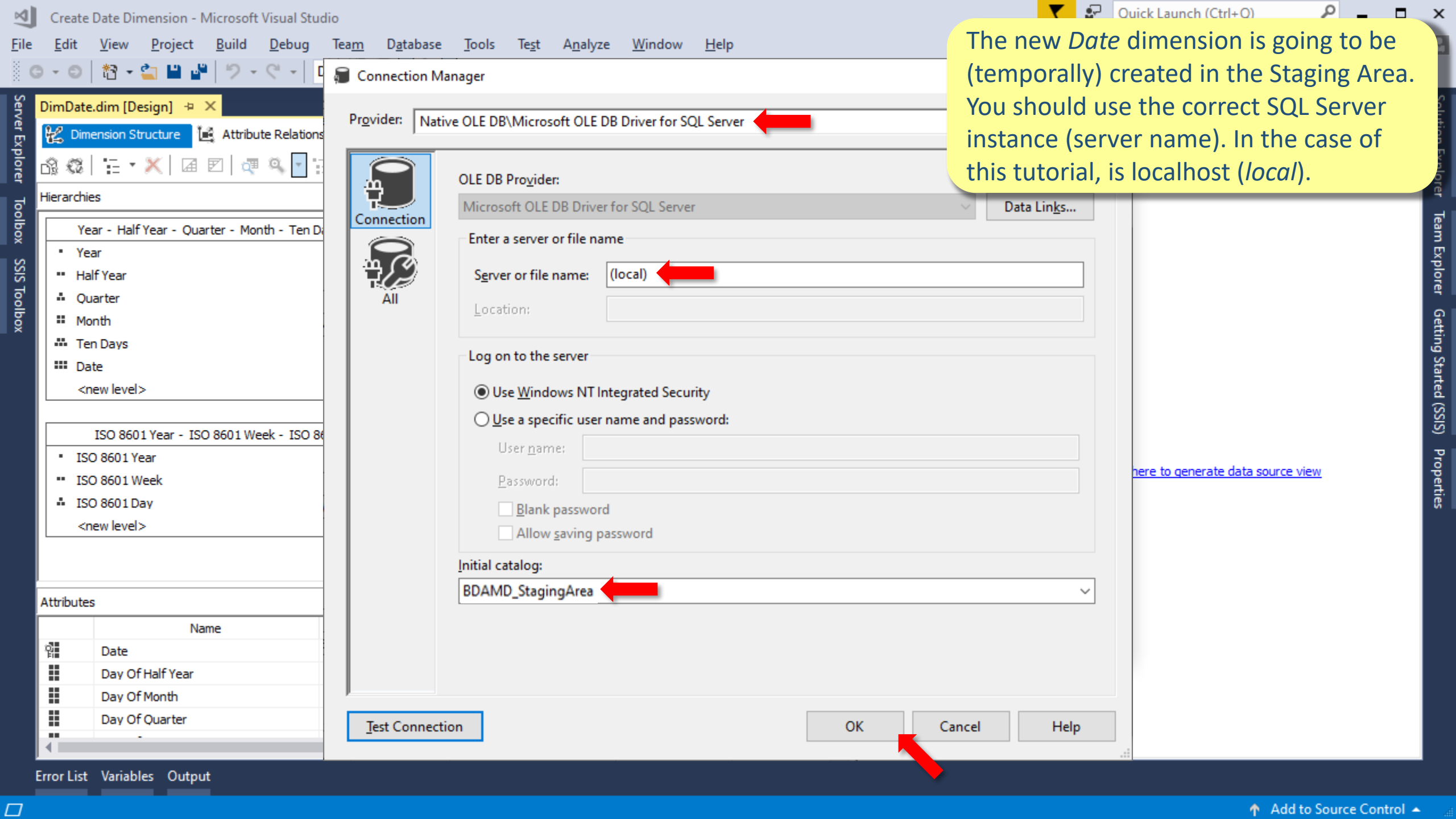
Cancel

**Attributes**

	Name	Usage			
	Date	Key			
	Day Of Half Year	Regular	DayOfHalfYear	Integer	Separate column
	Day Of Month	Regular	DayOfMonth	Integer	Separate column
	Day Of Quarter	Regular	DayOfQuarter	Integer	Separate column









Microsoft Visual Studio

File Edit View Project Build Debug Team Database Tools Test Analyze Window Help

Develop Default Start

DimDate.dim [Design]

Dimension Structure Attribute Relationships Translations Browser

Hierarchies

Year - Half Year - Quarter - Month - Ten Days - Date

Year

Half Year

Quarter

Month

Ten Days

Date

<new level>

ISO 8601 Year - ISO 8601 Week - ISO 8601 Day

ISO 8601 Year

ISO 8601 Week

ISO 8601 Day

<new level>

Attributes

	Name	Key
	Date	Key
	Day Of Half Year	Regular
	Day Of Month	Regular
	Day Of Quarter	Regular

Server Explorer

Toolbox

SSIS Toolbox

Solution Explorer

Team Explorer

Getting Started (SSIS)

Properties

Quick Launch (Ctrl+Q)

Sign in

Select how to define the connection

You can select from a number of ways in which your data source will define its connection

☐ Create a data source based on another object

☒ Create a data source based on an existing or new connection

Data connections:

(local).BDAMD\_StagingArea

Data connection properties:

Property	Value
Data Source	(local)
Initial Catalog	BDAMD_StagingArea
Integrated Se...	SSPI
Provider	SQLOLEDB.1

New...

Delete

< Back

Next >

Finish >>|

Cancel

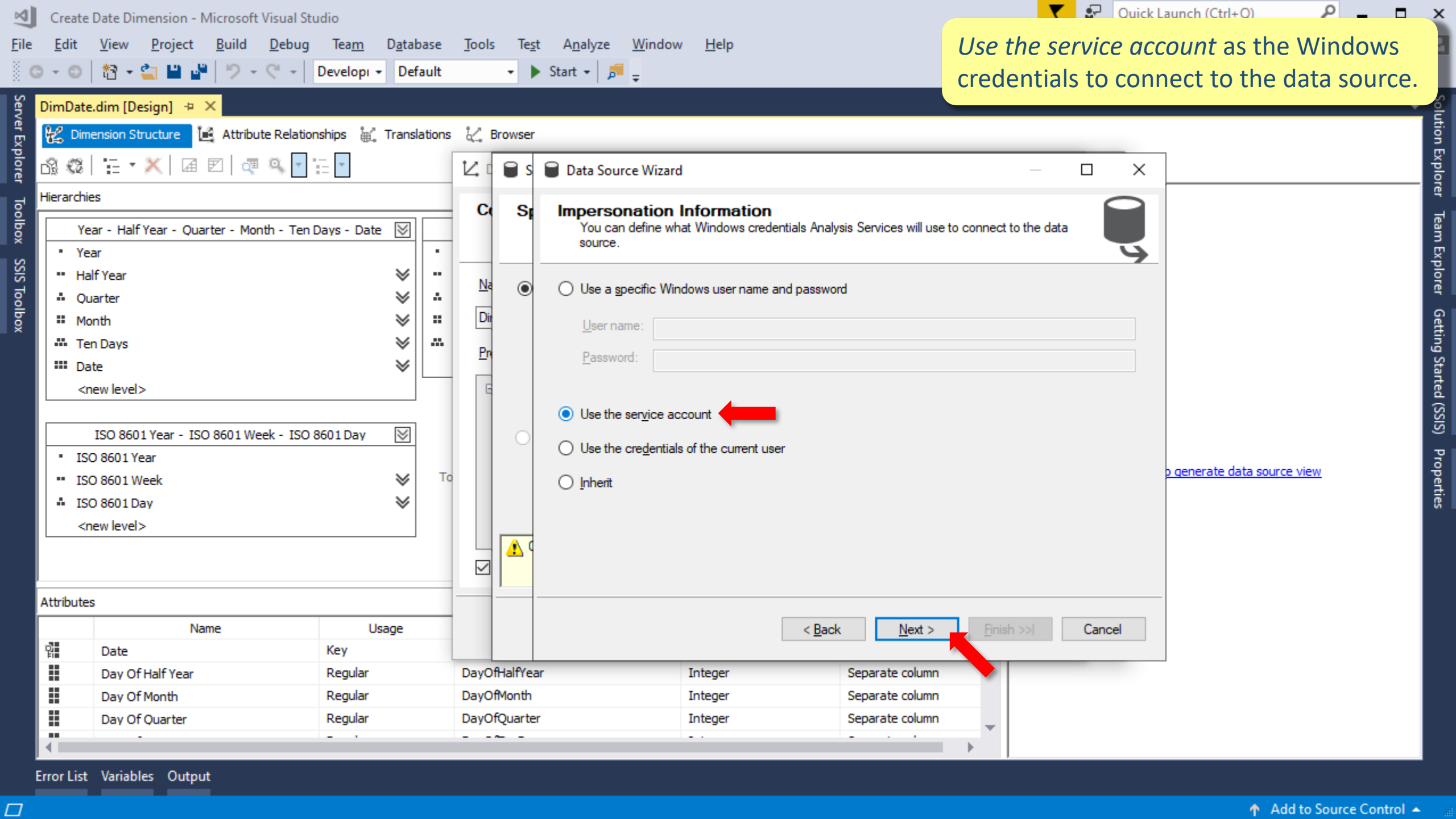
here to generate data source view

Error List

Variables

Output

Add to Source Control





Create Date Dimension - Microsoft Visual Studio

FileEditViewProjectBuildDebugTeamDatabaseToolsTestAnalyzeWindowHelp

Developi

Default

Start

DimDate.dim [Design]

Dimension Structure

Attribute Relationships

Translations

Browser

Hierarchies

Year - Half Year - Quarter - Month - Ten Days - Date

Year

Half Year

Quarter

Month

Ten Days

Date

<new level>

ISO 8601 Year - ISO 8601 Week - ISO 8601 Day

ISO 8601 Year

ISO 8601 Week

ISO 8601 Day

<new level>

Attributes

	Name	Usage
	Date	Key
	Day Of Half Year	Regular
	Day Of Month	Regular
	Day Of Quarter	Regular

Schema Generation Wizard

Specify Target

Specify the data source view in which to generate the schema.

☒ Create a new data source view

Data source view name:

Create Date Dimension

Data source:

BDAMD Staging Area

A new data source view will be created for the data source you specify.

☐ Use existing data source view

The selected data source view and its data source will be used.

< Back

Next >

Finish >>

Cancel

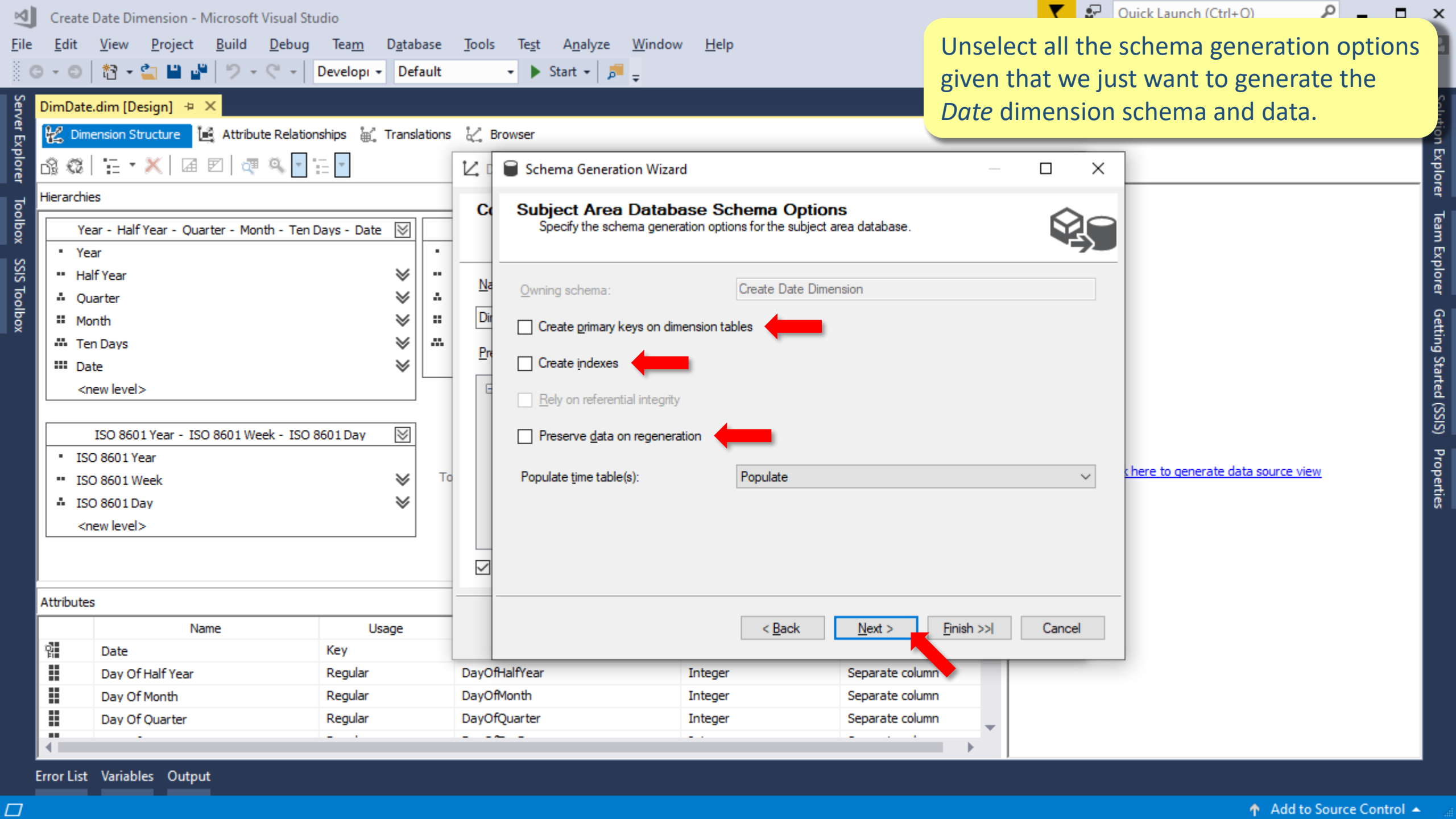
here to generate data source view

Error List

Variables

Output

Add to Source Control



Unselect all the schema generation options given that we just want to generate the *Date* dimension schema and data.

### Subject Area Database Schema Options

Specify the schema generation options for the subject area database.

Owning schema:

Create Date Dimension

☐ Create primary keys on dimension tables

☐ Create indexes

☐ Rely on referential integrity

☐ Preserve data on regeneration

Populate time table(s):

Populate

< Back

Next >

Finish >>|

Cancel

#### Attributes

	Name	Usage			
	Date	Key			
	Day Of Half Year	Regular	DayOfHalfYear	Integer	Separate column
	Day Of Month	Regular	DayOfMonth	Integer	Separate column
	Day Of Quarter	Regular	DayOfQuarter	Integer	Separate column

Microsoft Visual Studio

File Edit View Project Build Debug Team Database Tools Test Analyze Window Help

DimDate.dim [Design]

Dimension Structure Attribute Relationships Translations Browser

Hierarchies

Year - Half Year - Quarter - Month - Ten Days - Date

Year

Half Year

Quarter

Month

Ten Days

Date

<new level>

ISO 8601 Year - ISO 8601 Week - ISO 8601 Day

ISO 8601 Year

ISO 8601 Week

ISO 8601 Day

<new level>

Attributes

	Name	Usage
	Date	Key
	Day Of Half Year	Regular
	Day Of Month	Regular
	Day Of Quarter	Regular

Schema Generation Wizard

Specify Naming Conventions

Specify the naming conventions you want to use in the new schema.

Option	Value
Separator	Underscore
Primary key column prefix	PK
Foreign key column prefix	FK
Attribute name suffix	Name
Custom rollup suffix	CustomRollup
Custom rollup properties suffix	CustomRollupProperties
Unary operator suffix	UnaryOperator
Skipped levels suffix	SkippedLevels
Value column suffix	Value

< Back

Next >

Finish >>

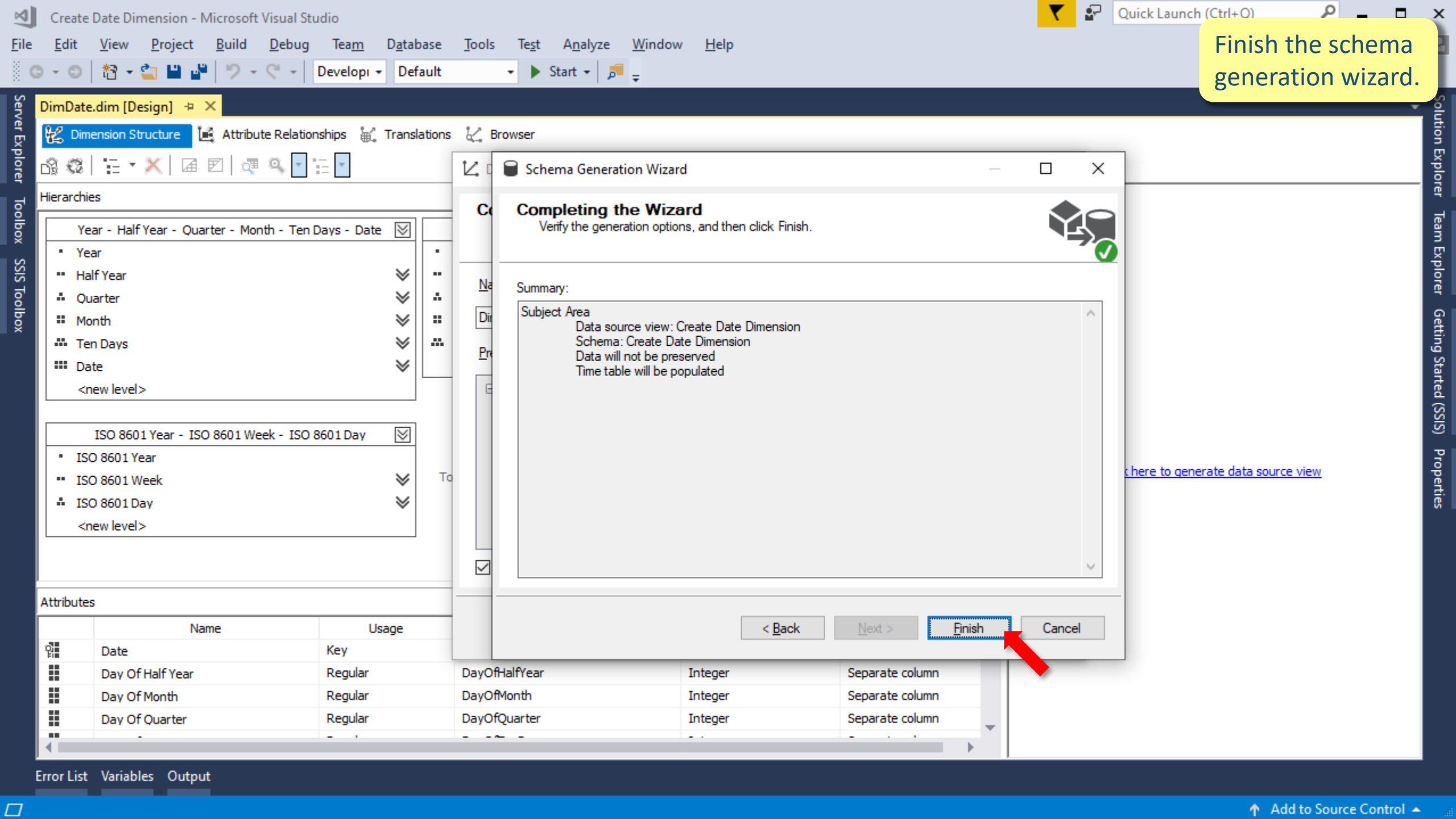
Cancel

here to generate data source view

Accept all the defaults for the naming of the Date dimension attributes.

Error List Variables Output

Add to Source Control



Finish the schema  
generation wizard.

DimDate.dim [Design]

Dimension Structure Attribute Relationships Translations Browser

Hierarchies

Year - Half Year - Quarter - Month - Ten Days - Date

- Year
- Half Year
- Quarter
- Month
- Ten Days
- Date

&lt;new level&gt;

ISO 8601 Year - ISO 8601 Week - ISO 8601 Day

- ISO 8601 Year
- ISO 8601 Week
- ISO 8601 Day

&lt;new level&gt;

Attributes

	Name	Usage
	Date	Key
	Day Of Half Year	Regular
	Day Of Month	Regular
	Day Of Quarter	Regular

Schema Generation Wizard

## Completing the Wizard

Verify the generation options, and then click Finish.

Summary:

Subject Area

Data source view: Create Date Dimension  
Schema: Create Date Dimension  
Data will not be preserved  
Time table will be populated

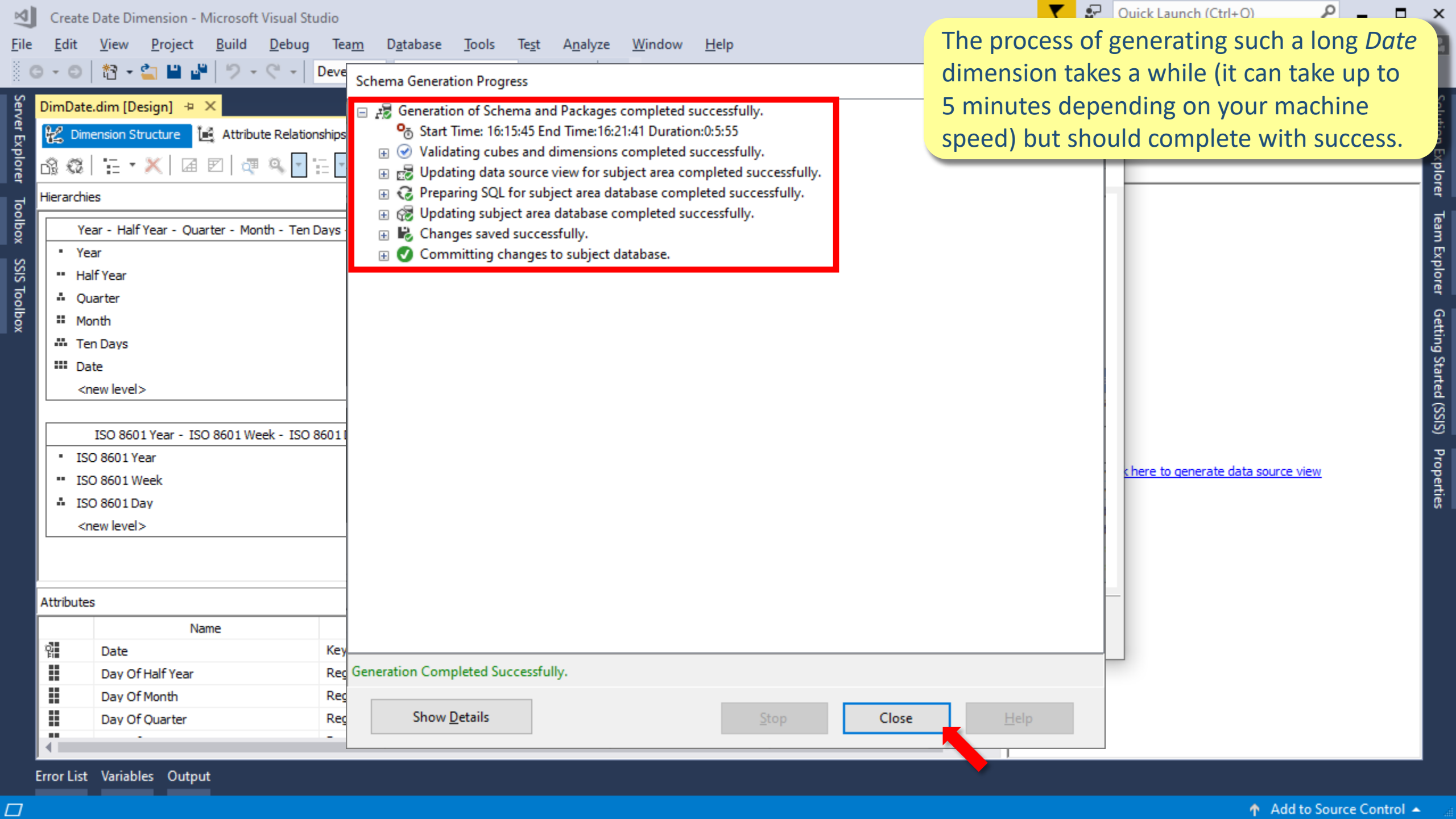
&lt; Back

Next &gt;

Finish

Cancel

[Click here to generate data source view](#)



### Schema Generation Progress

- Generation of Schema and Packages completed successfully.  
Start Time: 16:15:45 End Time:16:21:41 Duration:0:5:55
- Validating cubes and dimensions completed successfully.
- Updating data source view for subject area completed successfully.
- Preparing SQL for subject area database completed successfully.
- Updating subject area database completed successfully.
- Changes saved successfully.
- Committing changes to subject database.

The process of generating such a long *Date* dimension takes a while (it can take up to 5 minutes depending on your machine speed) but should complete with success.

Generation Completed Successfully.

Show Details

Stop

Close

Help

[Click here to generate data source view](#)

Error List Variables Output

Add to Source Control



DimDate.dim [Design]\*

Dimension Structure Attribute Relationships Translations Browser



## Hierarchies

Year - Half Year - Quarter - Month - Ten Days - Date	Year - Trimester - Month - Ten Days - Date	Year - Week - Date
▪ Year	▪ Year	▪ Year
▪ Half Year	▪ Trimester	▪ Week
▪ Quarter	▪ Month	▪ Date
▪ Month	▪ Ten Days	<new level>
▪ Ten Days	▪ Date	
▪ Date	<new level>	
<new level>		

ISO 8601 Year - ISO 8601 Week - ISO 8601 Day
▪ ISO 8601 Year
▪ ISO 8601 Week
▪ ISO 8601 Day
<new level>

To create a new hierarchy, drag an attribute here.

## Attributes

	Name	Usage	Type	Key Column	Name Column
▪	Date	Key	Days	Date	Separate column
▪	Day Of Half Year	Regular	DayOfHalfYear	Integer	Separate column
▪	Day Of Month	Regular	DayOfMonth	Integer	Separate column
▪	Day Of Quarter	Regular	DayOfQuarter	Integer	Separate column

## Data Source View

DimDate
PK_Date
Date_Name
Year
Year_Name
Half_Year
Half_Year_Name
Quarter
Quarter_Name
Trimester
Trimester_Name

- New
- Open
- Start Page
- Add to Source Control
- Add
- Close
- Close Solution**
- Save Selected Items Ctrl+S
- Save DimDate.dim As...
- Save All Ctrl+Shift+S
- Source Control
- Page Setup...
- Print... Ctrl+P
- Account Settings...
- Recent Files
- Recent Projects and Solutions
- Exit Alt+F4

Translations Browser

Year - Trimester - Month - Ten Days - Date

- Year
- Trimester
- Month
- Ten Days
- Date
- <new level>

Year - Week - Date

- Year
- Week
- Date
- <new level>

To create a new hierarchy, drag an attribute here.

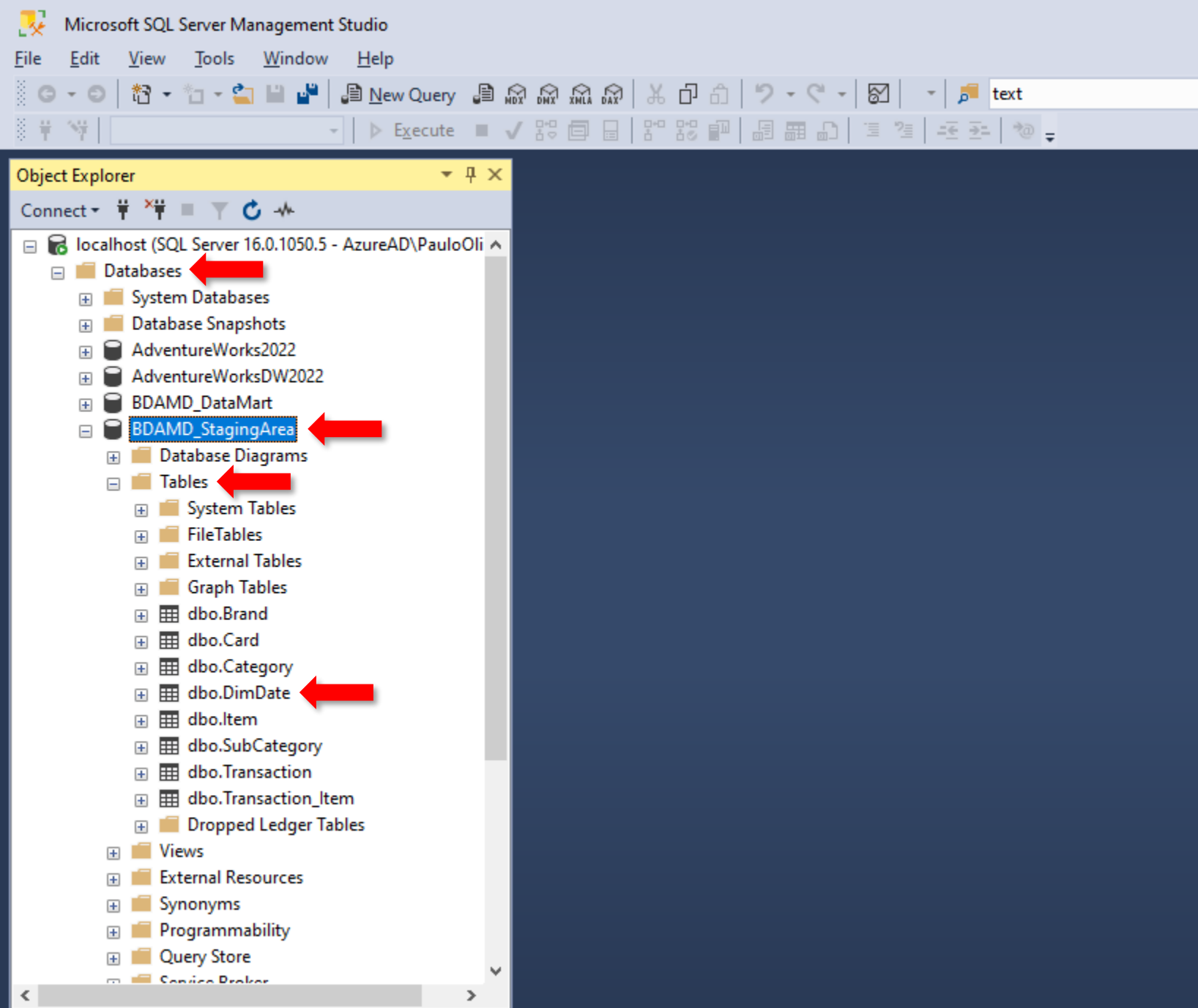
<new level>

Data Source View

DimDate	
PK_Date	
Date_Name	
Year	
Year_Name	
Half_Year	
Half_Year_Name	
Quarter	
Quarter_Name	
Trimester	
Trimester_Name	

Attributes

	Name	Usage	Type	Key Column	Name Column
	Date	Key	Days	Date	Separate column
	Day Of Half Year	Regular	DayOfHalfYear	Integer	Separate column
	Day Of Month	Regular	DayOfMonth	Integer	Separate column
	Day Of Quarter	Regular	DayOfQuarter	Integer	Separate column



Start *SQL Server Management Studio* and connect to the database engine. Expand *Databases* and *BDAMD\_StagingArea*. You should now see the newly created *Date* dimension, named as *DimDate*.

## Object Explorer

Connect 

localhost (SQL Server 16.0.1050.5 - AzureAD\PauloOli)

- Databases
  - System Databases
  - Database Snapshots
  - AdventureWorks2022
  - AdventureWorksDW2022
  - BDAMD\_DataMart
  - BDAMD\_StagingArea
    - Database Diagrams
    - Tables
      - System Tables
      - FileTables
      - External Tables
      - Graph Tables
      - dbo.Brand
      - dbo.Card
      - dbo.Category
      - dbo.DimDate**
      - dbo.Item
      - dbo.SubCategory
      - dbo.Transaction
      - dbo.Transaction
      - Dropped Ledger
  - Views
  - External Resources
  - Synonyms
  - Programmability
  - Query Store
  - Service Broker

- New Table...
- Design
- Select Top 1000 Rows
- Edit Top 200 Rows
- Script Table as
- View Dependencies
- Memory Optimization Advisor
- Encrypt Columns...
- Full-Text index
- Storage

Right-click *DimDate* to select the top 1000 rows and see its data.

File Edit View Query Project Tools Window Help



*DimDate* attributes and data are now visible.

Object Explorer

Connect

localhost (SQL Server 16.0.1050.5 - Azur

Databases

System Databases

Database Snapshots

AdventureWorks2022

AdventureWorksDW2022

BDAMD\_DataMart

BDAMD\_StagingArea

Database Diagrams

Tables

System Tables

FileTables

External Tables

Graph Tables

dbo.Brand

dbo.Card

dbo.Category

dbo.DimDate

dbo.Item

dbo.SubCategory

dbo.Transaction

dbo.Transaction\_Item

Dropped Ledger Tables

Views

External Resources

Synonyms

Programmability

Query Store

Service Broker

SQLQuery1.sql - loc... \PauloOliveira (57))

SELECT TOP (1000) [PK\_Date]

```
    , [Date_Name]
    , [Year]
    , [Year_Name]
    , [Half_Year]
    , [Half_Year_Name]
    , [Quarter]
    , [Quarter_Name]
    , [Trimester]
    , [Trimester_Name]
    , [Month]
    , [Month_Name]
    , [Ten_Days]
    , [Ten_Days_Name]
    , [Week]
    , [Week_Name]
    , [Day_Of_Year]
```

100 %

Results Messages

	PK_Date	Date_Name	Year	Year_Name	Half_Year	Half_Year_Name	Quarter	Quarter
1	2000-01-01 00:00:00.000	Saturday, January 01 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
2	2000-01-02 00:00:00.000	Sunday, January 02 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
3	2000-01-03 00:00:00.000	Monday, January 03 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
4	2000-01-04 00:00:00.000	Tuesday, January 04 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
5	2000-01-05 00:00:00.000	Wednesday, January 05 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
6	2000-01-06 00:00:00.000	Thursday, January 06 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
7	2000-01-07 00:00:00.000	Friday, January 07 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
8	2000-01-08 00:00:00.000	Saturday, January 08 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
9	2000-01-09 00:00:00.000	Sunday, January 09 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter
10	2000-01-10 00:00:00.000	Monday, January 10 2000	2000-01-01 00:00:00.000	Calendar 2000	2000-01-01 00:00:00.000	Semester 1, 2000	2000-01-01 00:00:00.000	Quarter

Query executed successfully.

localhost (16.0 RTM) | AzureAD\PauloOliveira ... | BDAMD\_StagingArea | 00:00:02 | 1,000 rows

File Edit View Query Project Tools Window Help



You can horizontally scroll to see all the DimDate's attributes and their data.

Object Explorer

Connect

localhost (SQL Server 16.0.1050.5 - Azur

- Databases
  - System Databases
  - Database Snapshots
  - AdventureWorks2022
  - AdventureWorksDW2022
  - BDAMD\_DataMart
  - BDAMD\_StagingArea
    - Database Diagrams
    - Tables
      - System Tables
      - FileTables
      - External Tables
      - Graph Tables
      - dbo.Brand
      - dbo.Card
      - dbo.Category
      - dbo.DimDate
      - dbo.Item
      - dbo.SubCategory
      - dbo.Transaction
      - dbo.Transaction\_Item
      - Dropped Ledger Tables
    - Views
    - External Resources
    - Synonyms
    - Programmability
    - Query Store
    - Service Broker

SQLQuery1.sql - loc... \PauloOliveira (57))

```
SELECT TOP (1000) [PK_Date]
, [Date_Name]
, [Year]
, [Year_Name]
, [Half_Year]
, [Half_Year_Name]
, [Quarter]
, [Quarter_Name]
, [Trimester]
, [Trimester_Name]
, [Month]
, [Month_Name]
, [Ten_Days]
, [Ten_Days_Name]
, [Week]
, [Week_Name]
, [Day_Of_Year]
```

100 %

Results Messages

	ISO_8601_Day_Of_Year	ISO_8601_Day_Of_Year_Name	ISO_8601_Day_Of_Week	ISO_8601_Day_Of_Week_Name	ISO_8601_Week_Of_Year	ISO_8601_Week_Of_Year_Name
1	63	Day 363	6	Day 6	52	Week 52
2	64	Day 364	7	Day 7	52	Week 52
3		Day 1	1	Day 1	1	Week 1
4		Day 2	2	Day 2	1	Week 1
5		Day 3	3	Day 3	1	Week 1
6		Day 4	4	Day 4	1	Week 1
7		Day 5	5	Day 5	1	Week 1
8		Day 6	6	Day 6	1	Week 1
9		Day 7	7	Day 7	1	Week 1
10		Day 8	1	Day 1	2	Week 2

Query executed successfully.

localhost (16.0 RTM) | AzureAD\PauloOliveira ... | BDAMD\_StagingArea | 00:00:02 | 1,000 rows

Start Page - Microsoft Visual Studio

File Edit View Project Debug Team Tools Test Analyze Window Help

Start Page

# Get Started

Build your first app in 5 minutes!

Maximize your productivity with these tips and tricks for Visual Studio




Take advantage of the newest technologies to deploy beautiful, low-cost and reliable websites

Develop modern, fully-native, Android and iOS apps

Produce more, fix faster and deliver updates seamlessly

## Recent


This week


-  **Data Mart.sln**  
D:\Temp\ARPAD\Data Mart
-  **Create Date Dimension 2.sln**  
D:\Temp\ARPAD\Create Date Dimension 2
-  **Create CSV Date Dimension.sln**  
D:\Temp\ARPAD\Create CSV Date Dimension

Error List Variables Output

Ready

The *Date* dimension could have been created directly in our *Data Mart* database (instead of the Staging Area). However, the *Date* dimension defined for our *Data Mart* project has different needs. It uses much less attributes and some of them are not present in the dimension just generated (as you'll see next). From this *Date* dimension we will create a CSV file and complete this file with the attributes that are still missing for our *Date* dimension. In the future, you can use this CSV file in any Data Warehouse/Mart project to load the *Date* dimension table.


 Open Project / Solution


 Open Folder


## New project

Search project templates

Recent project templates:

 Analysis Services M... Analysis Services

 Integration Serv... Business Intelligence

 Analysis Services M... Analysis Services

[Create new project...](#)

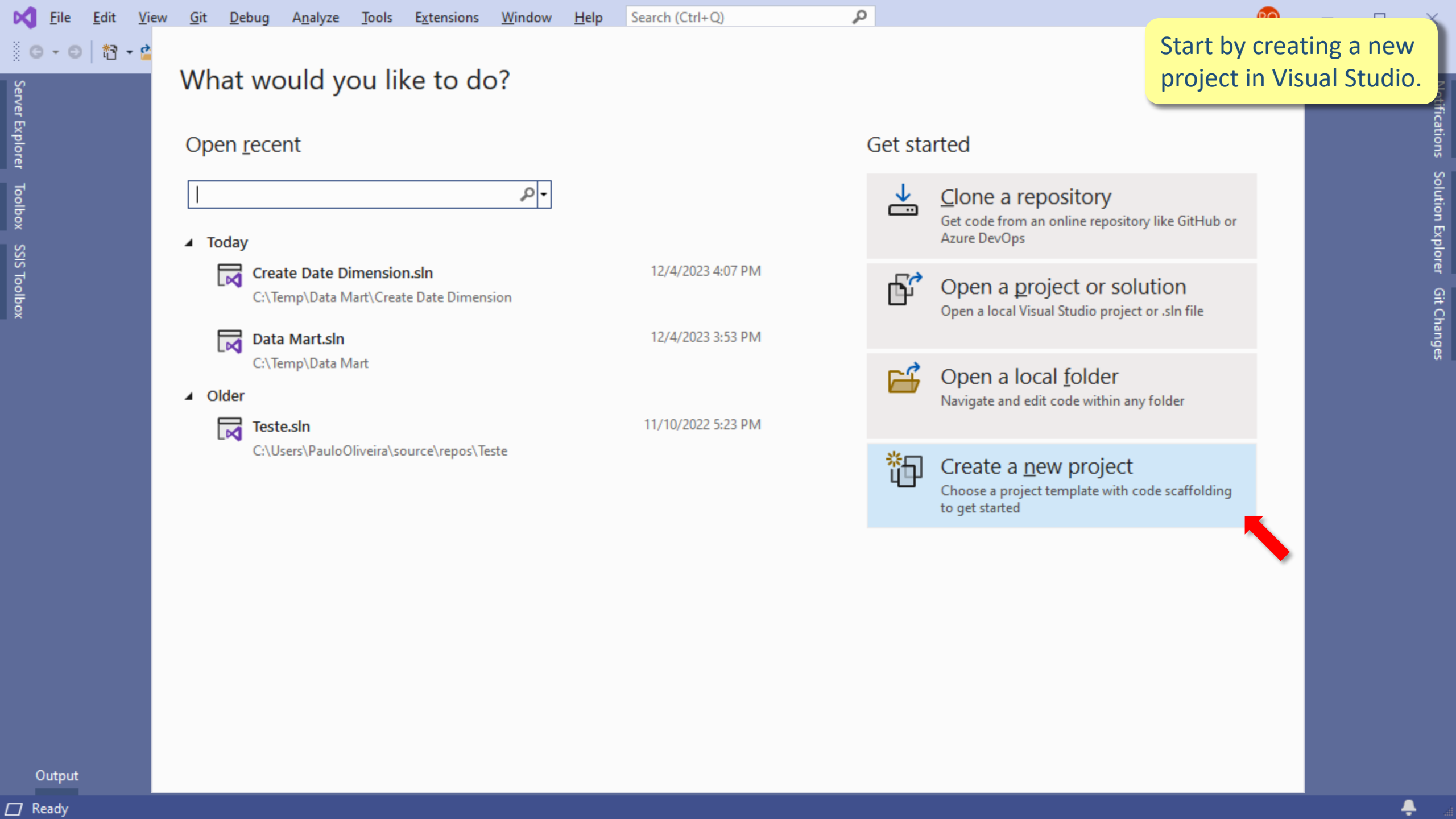
Visual Studio team is proud to announce the release of Visual Studio 2019 v16.8 and v16.9 Preview 1. These releases have several notable f...  
**NEW** 12 de novembro de 2020

**Announcing the Release of the Git Experience in Visual Studio**  
We're excited to announce that our new Git tooling is now the default source control experience in Visual Studio 2019, beginning wit...  
**NEW** 12 de novembro de 2020

**Announcing .NET 5.0**  
We're excited to release .NET 5.0 today and for you to start using it. It's a major release — including C# 9 and F# 5 — with a broad set of n...  
**NEW** 12 de novembro de 2020

**Announcing ASP.NET Core in .NET 5**

[More news...](#)



Start by creating a new project in Visual Studio.

# What would you like to do?

## Open recent





### Today

- Create Date Dimension.sln 12/4/2023 4:07 PM  
C:\Temp\Data Mart\Create Date Dimension
- Data Mart.sln 12/4/2023 3:53 PM  
C:\Temp\Data Mart

### Older

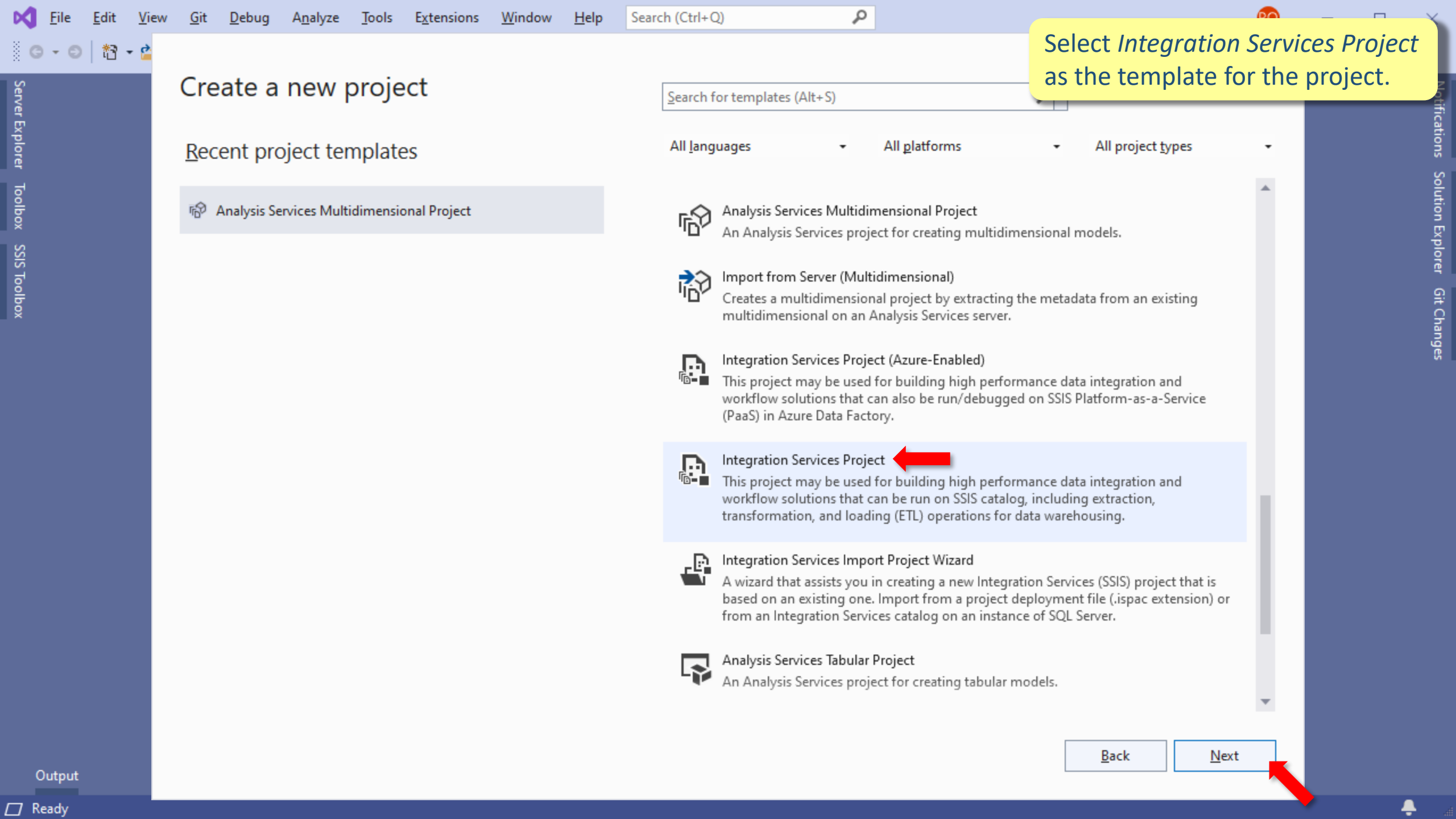
- Teste.sln 11/10/2022 5:23 PM  
C:\Users\PauloOliveira\source\repos\Teste

## Get started

-  **Clone a repository**  
Get code from an online repository like GitHub or Azure DevOps
-  **Open a project or solution**  
Open a local Visual Studio project or .sln file
-  **Open a local folder**  
Navigate and edit code within any folder
-  **Create a new project**  
Choose a project template with code scaffolding to get started








# Create a new project

## Recent project templates

 Analysis Services Multidimensional Project

Search for templates (Alt+S)

All languages

All platforms

All project types



**Analysis Services Multidimensional Project**  
An Analysis Services project for creating multidimensional models.



**Import from Server (Multidimensional)**  
Creates a multidimensional project by extracting the metadata from an existing multidimensional on an Analysis Services server.



**Integration Services Project (Azure-Enabled)**  
This project may be used for building high performance data integration and workflow solutions that can also be run/debugged on SSIS Platform-as-a-Service (PaaS) in Azure Data Factory.



**Integration Services Project** ←  
This project may be used for building high performance data integration and workflow solutions that can be run on SSIS catalog, including extraction, transformation, and loading (ETL) operations for data warehousing.



**Integration Services Import Project Wizard**  
A wizard that assists you in creating a new Integration Services (SSIS) project that is based on an existing one. Import from a project deployment file (.ispac extension) or from an Integration Services catalog on an instance of SQL Server.

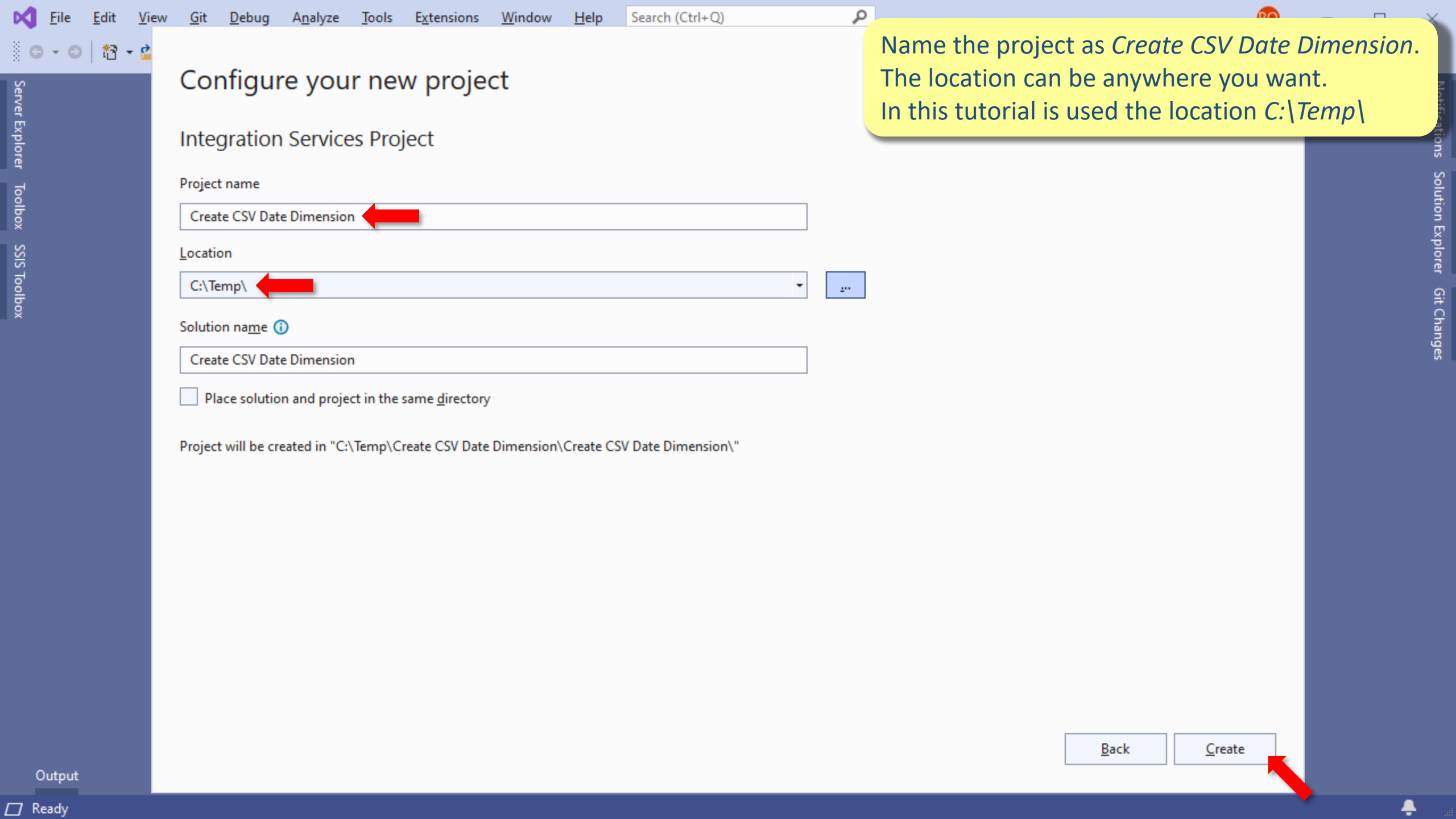


**Analysis Services Tabular Project**  
An Analysis Services project for creating tabular models.

Back

Next →

Select *Integration Services Project* as the template for the project.



Configure your new project

Integration Services Project

Project name

Create CSV Date Dimension

Location

C:\Temp\



Solution name ⓘ

Create CSV Date Dimension

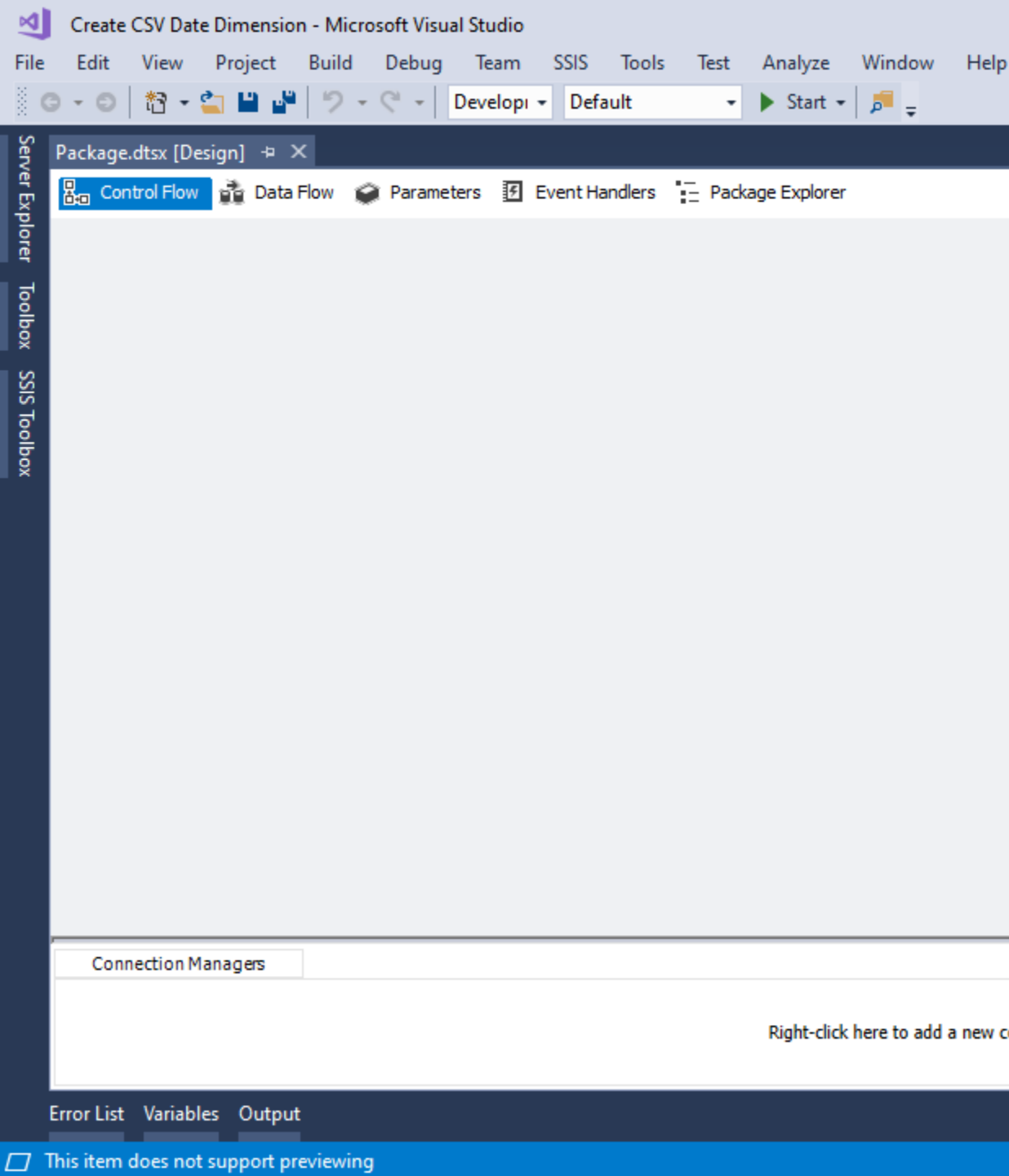
☐ Place solution and project in the same directory

Project will be created in "C:\Temp\Create CSV Date Dimension\Create CSV Date Dimension\"

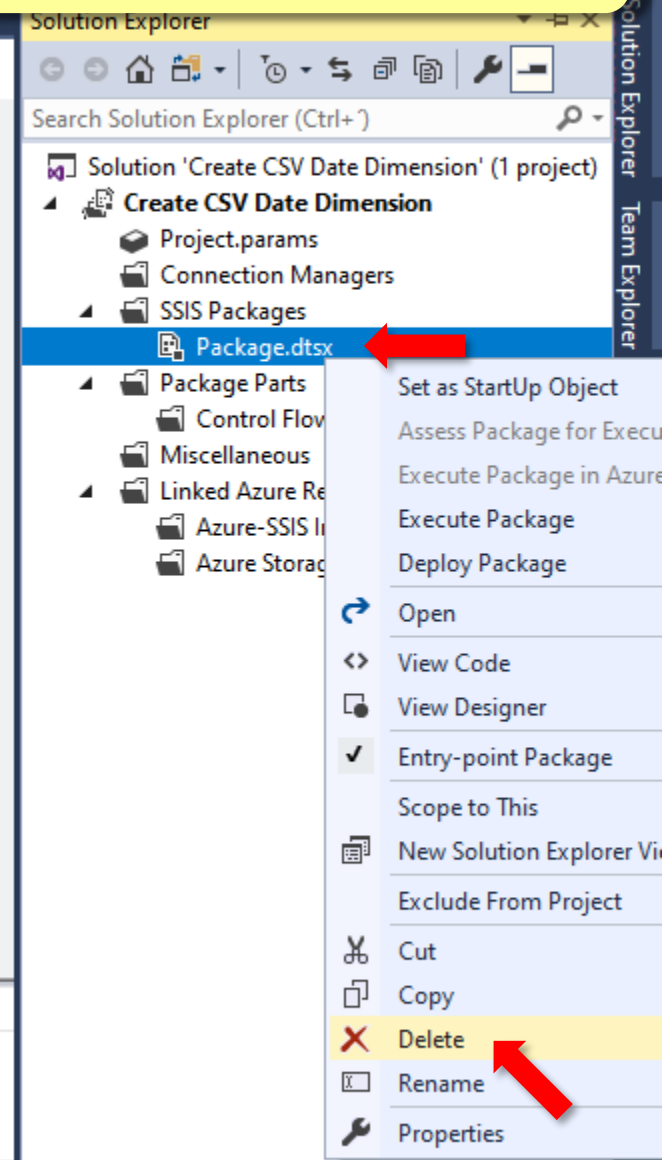
Back

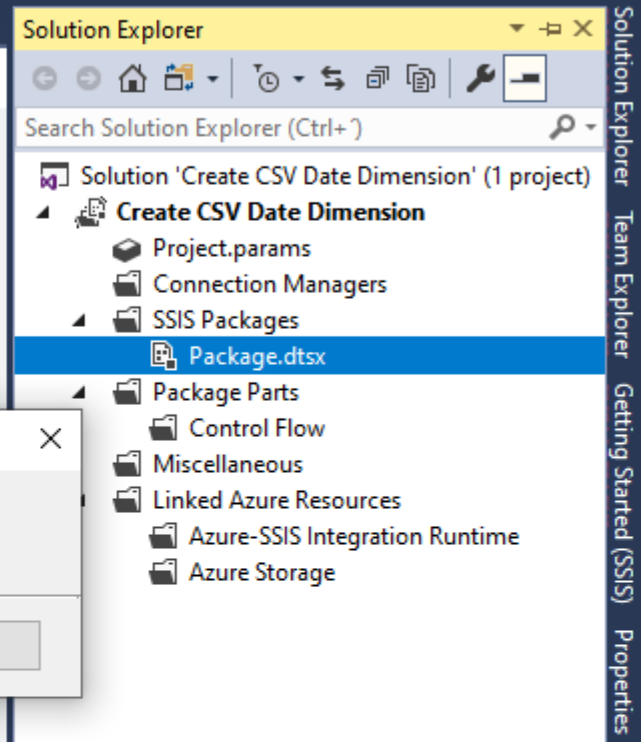
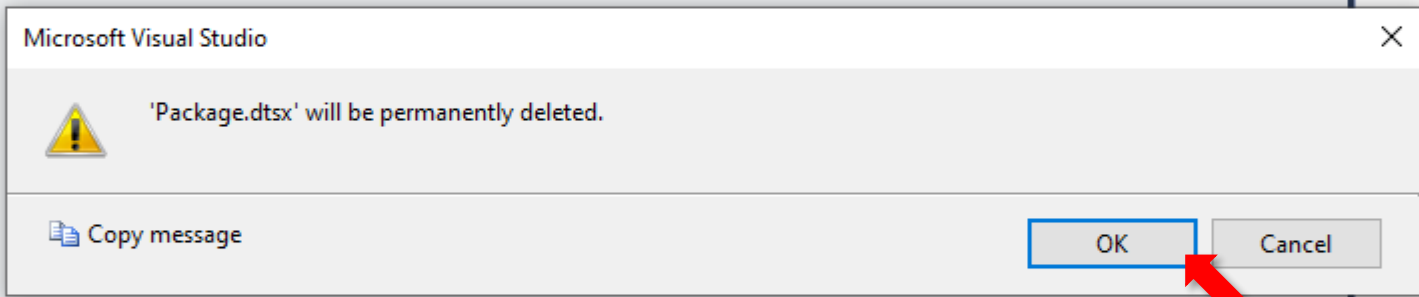
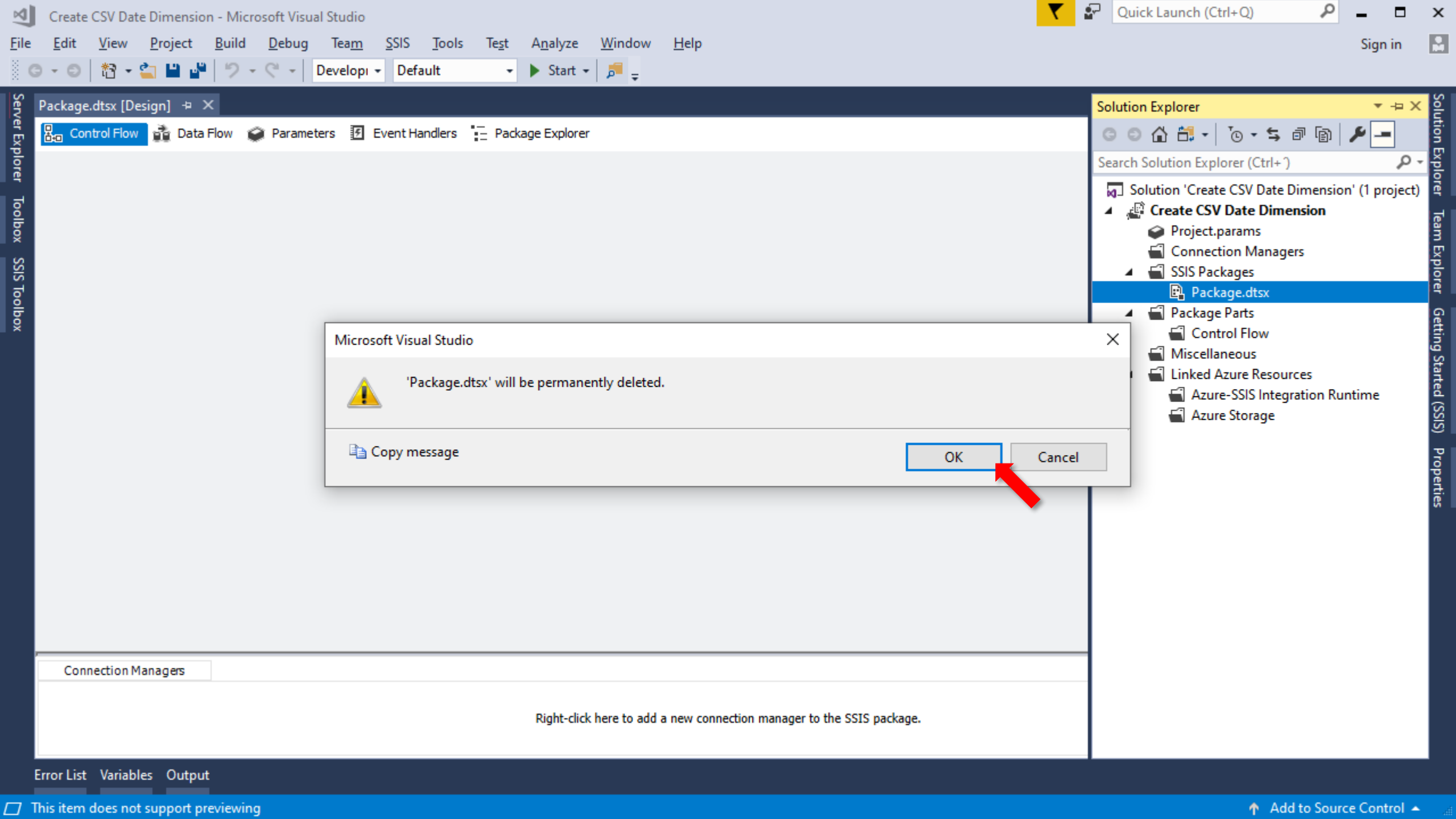
Create

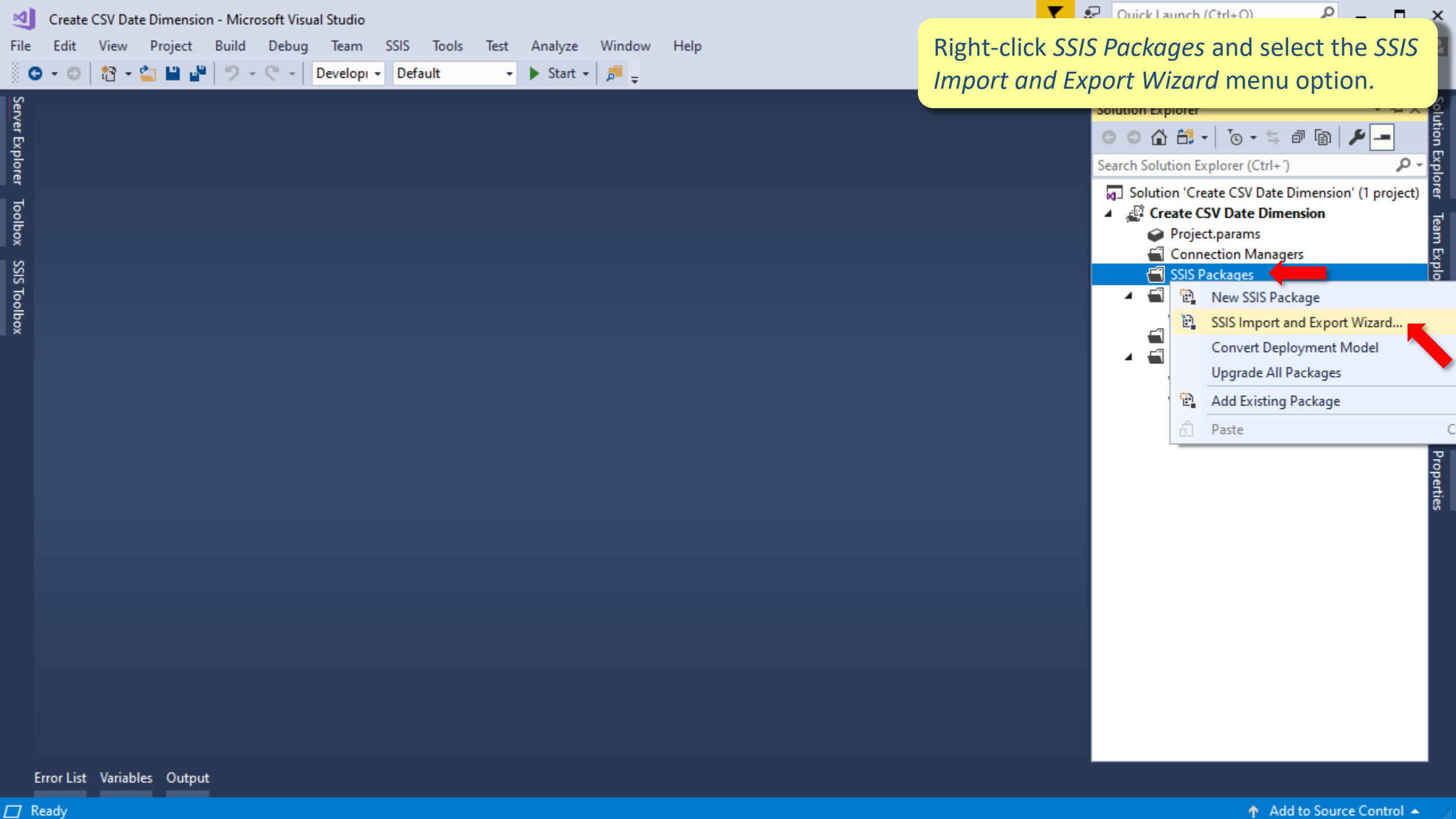
Name the project as *Create CSV Date Dimension*.  
The location can be anywhere you want.  
In this tutorial is used the location *C:\Temp\*



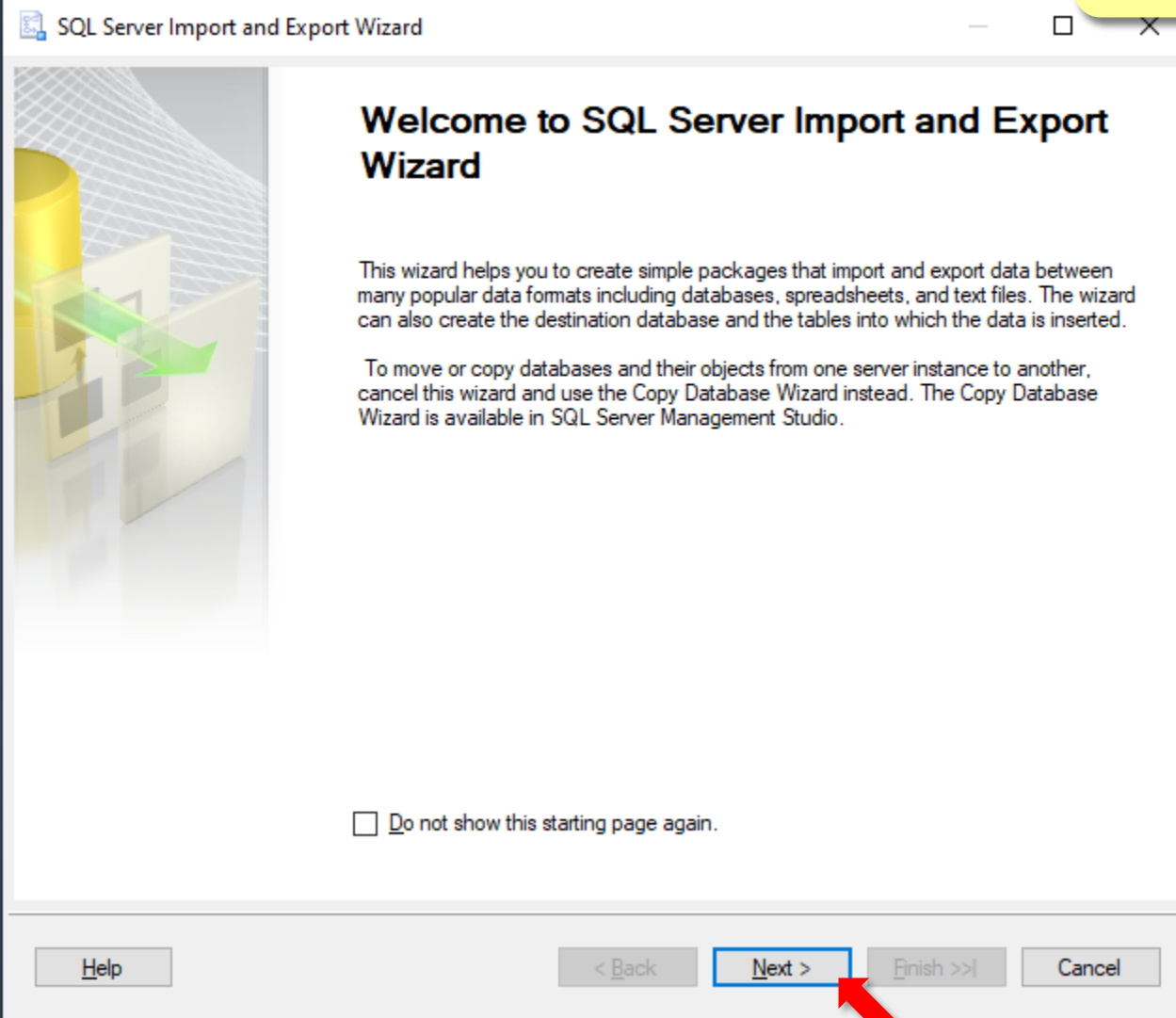
Delete the default package *Package.dtsx* given that it won't be used.







Right-click *SSIS Packages* and select the *SSIS Import and Export Wizard* menu option.



A wizards helps to create a *SQL Server Import and Export* package.

Search Solution Explorer (Ctrl+ )

Solution 'Create CSV Date Dimension' (1 project)

Create CSV Date Dimension

Project.params

Connection Managers

SSIS Packages

Package Parts

Control Flow

Miscellaneous

Linked Azure Resources

Azure-SSIS Integration Runtime

Azure Storage

SQL Server Import and Export Wizard

**Choose a Data Source**  
Select the source from which to copy data.

Data source: Microsoft OLE DB Provider for SQL Server

Server name: (local)

Authentication

☒ Use Windows Authentication

☐ Use SQL Server Authentication

User name:

Password:

Database: BDAMD\_StagingArea Refresh

Help < Back Next > Finish >> Cancel

Define the data source from which you want to import the data (i.e., where the *DimDate* is stored). You need to use the correct SQL Server instance (server name).

Solution 'Create CSV Date Dimension' (1 project)

Create CSV Date Dimension

Project.params

Connection Managers

SSIS Packages

Package Parts

Control Flow

Miscellaneous

Linked Azure Resources

Azure-SSIS Integration Runtime

Azure Storage

SQL Server Import and Export Wizard

**Choose a Destination**  
Specify where to copy data to.

Destination: Flat File Destination

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

File name:  Browse...


Locale: Portuguese (Portugal) ☐ Unicode

Code page: 1252 (ANSI - Latin I)

Format: Delimited

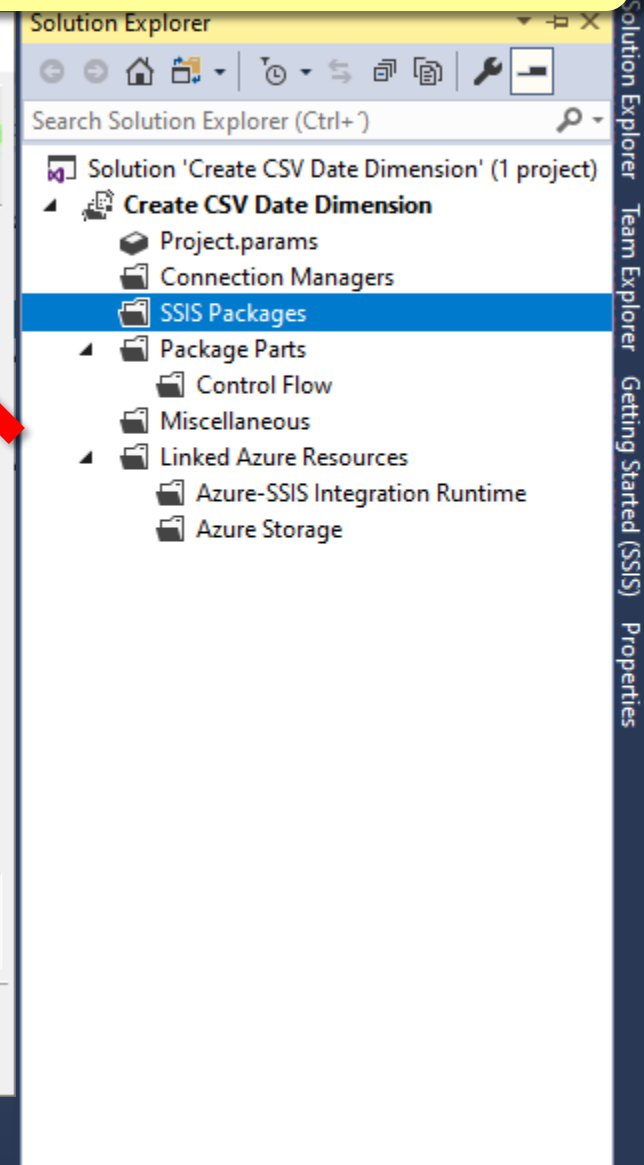
Text qualifier: <none>

☒ Column names in the first data row

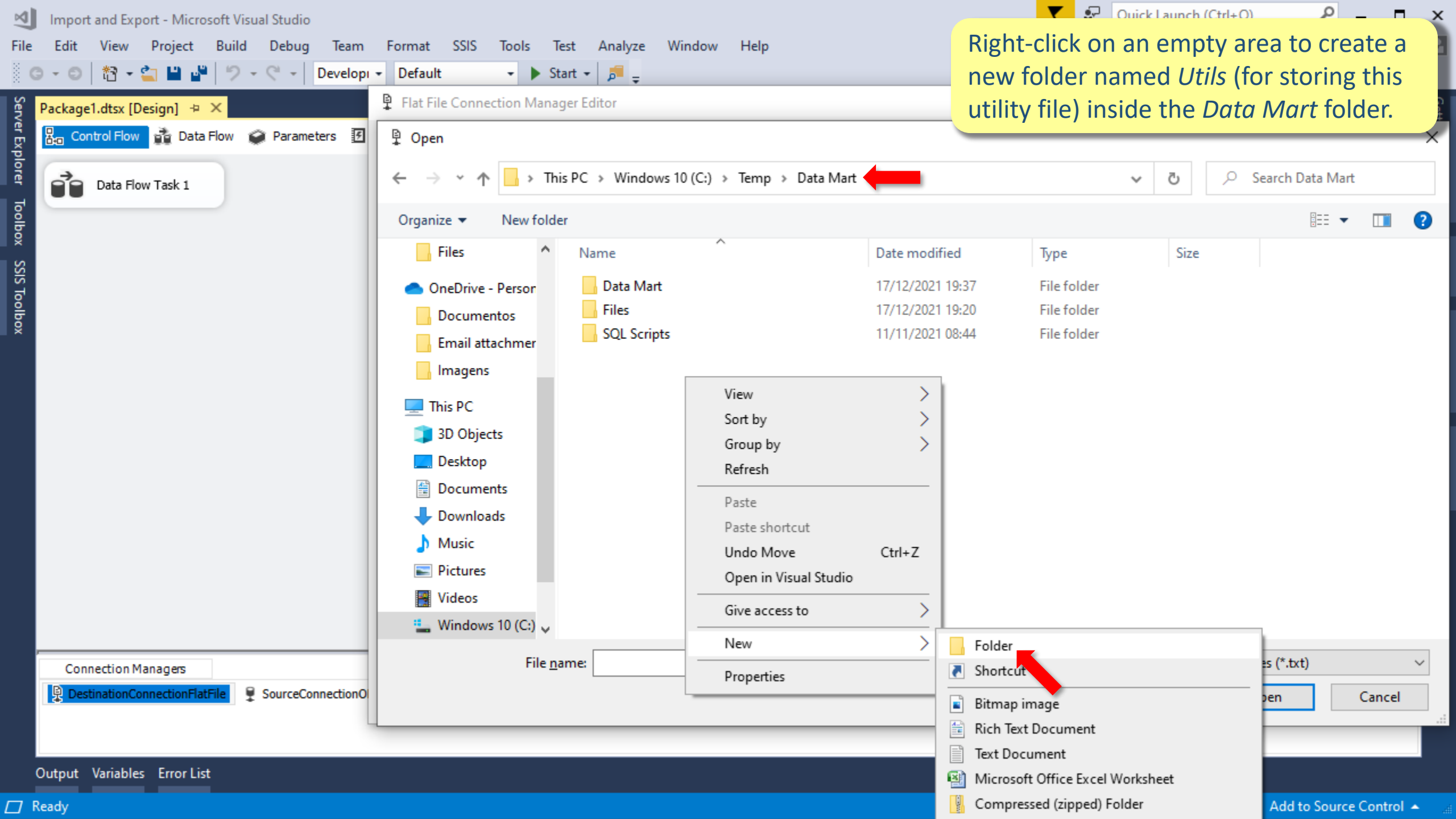
 A valid file name must be selected.

Help < Back Next > Finish >> Cancel

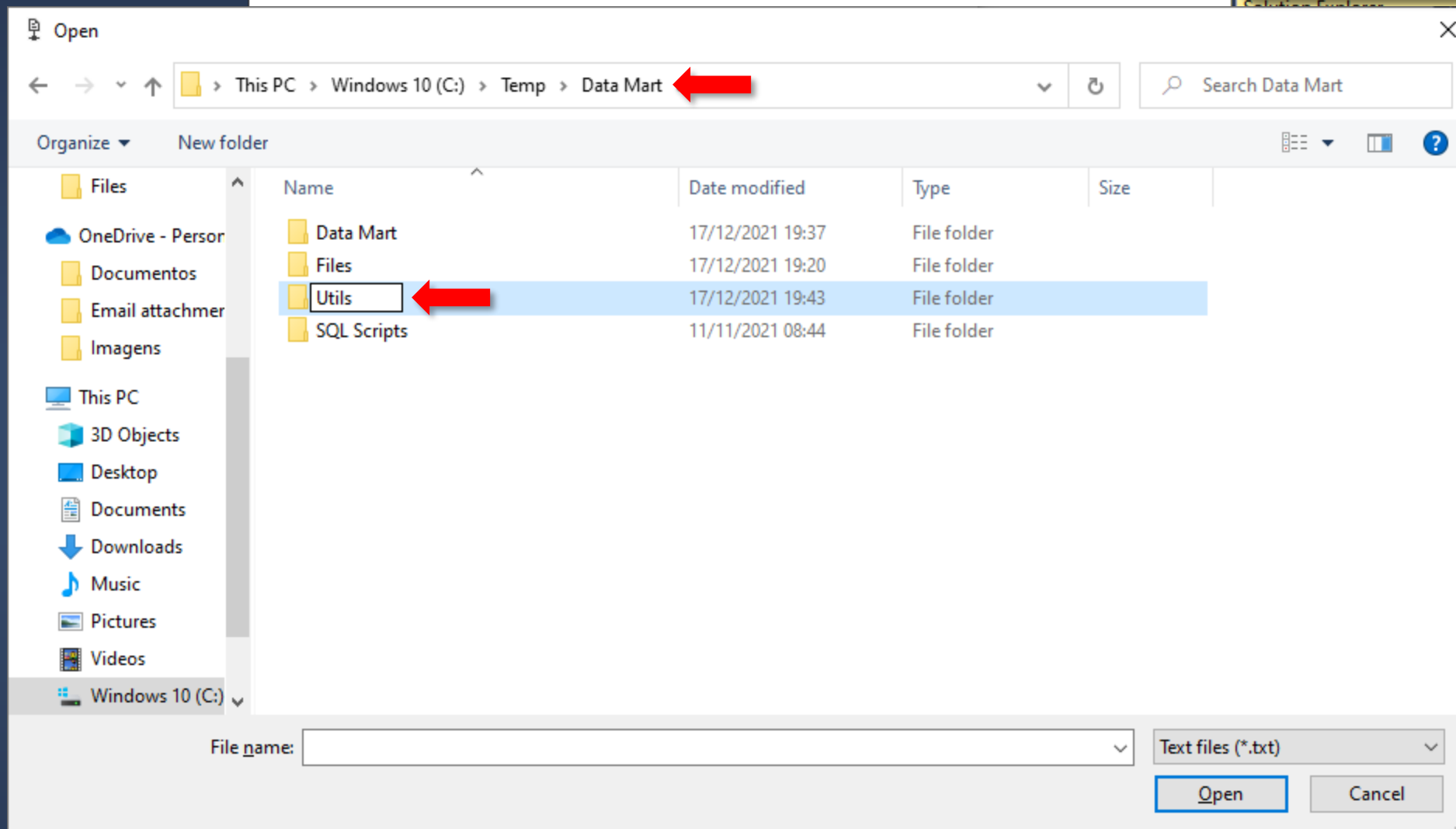
Define the destination as a (CSV) flat file and browse for the location to store it.

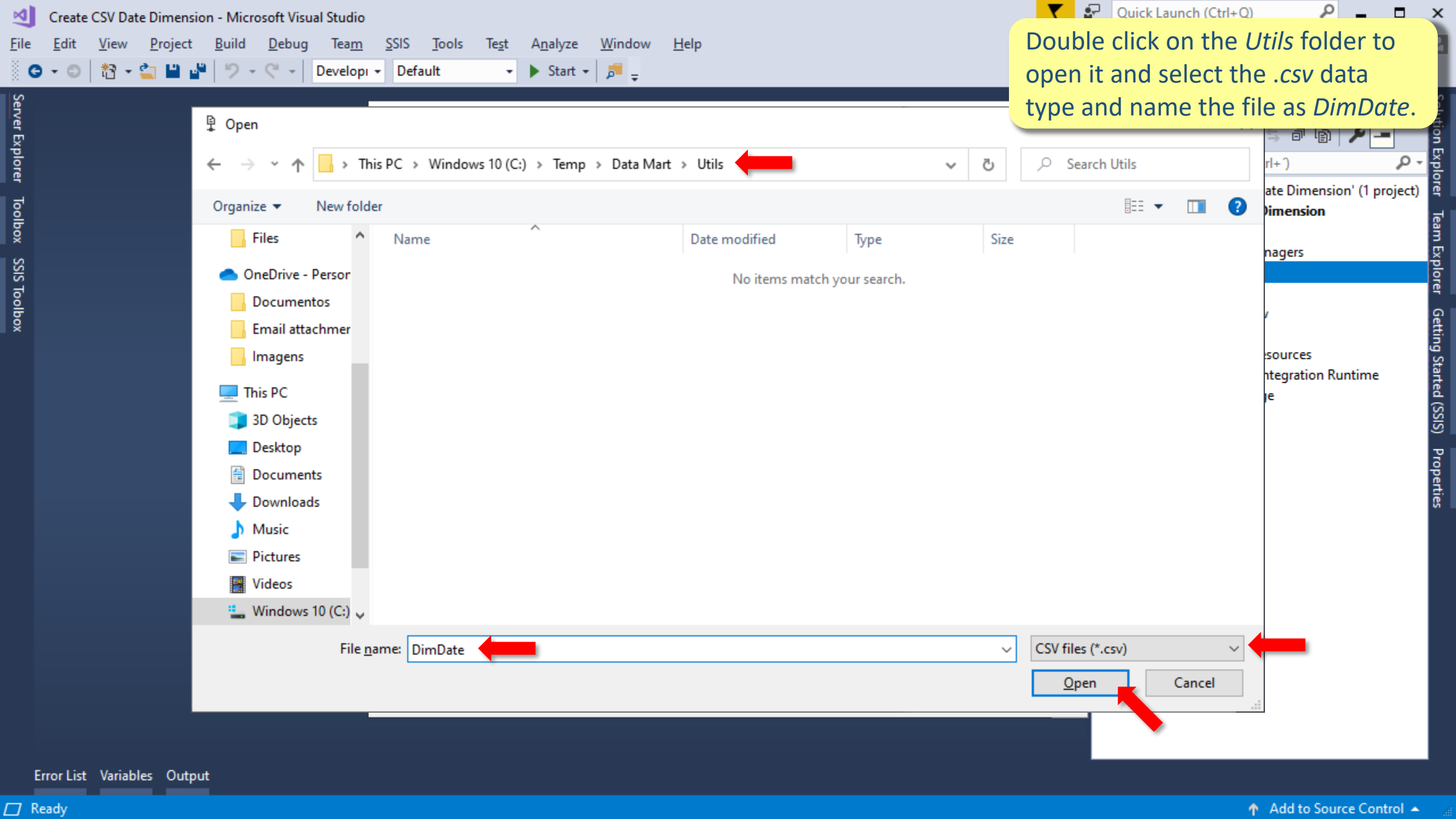






*Utils* folder is created inside the *Data Mart* folder.





Double click on the *Utils* folder to open it and select the .csv data type and name the file as *DimDate*.

Open

← → ↑ > This PC > Windows 10 (C:) > Temp > Data Mart > **Utils**

Search Utils

Organize New folder

Name	Date modified	Type	Size
No items match your search.			

File name: **DimDate** CSV files (\*.csv)

Open Cancel

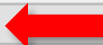
SQL Server Import and Export Wizard

**Choose a Destination**  
Specify where to copy data to.

Destination: Flat File Destination

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


File name: C:\Temp\Data Mart\Utils\DimDate.csv Browse...

Locale: Portuguese (Portugal)  ☐ Unicode

Code page: 1252 (ANSI - Latin I)

Format: Delimited

Text qualifier: <none>

☒ Column names in the first data row 

Help < Back Next > Finish >> Cancel

Check if the locale is  
*Portuguese (Portugal)*.

Solution Explorer

Search Solution Explorer (Ctrl+ )

Solution 'Create CSV Date Dimension' (1 project)

- Create CSV Date Dimension
  - Project.params
  - Connection Managers
  - SSIS Packages
  - Package Parts
    - Control Flow
    - Miscellaneous
  - Linked Azure Resources
    - Azure-SSIS Integration Runtime
    - Azure Storage

SQL Server Import and Export Wizard

**Specify Table Copy or Query**  
Specify whether to copy one or more tables and views or to copy the results of a query from the data source.

☒ **Copy data from one or more tables or views**  
Use this option to copy all the data from the existing tables or views in the source database.

☐ **Write a query to specify the data to transfer**  
Use this option to write an SQL query to manipulate or to restrict the source data for the copy operation.

Help < Back Next > Finish >> Cancel

Select the option to copy the data from one table (i.e., from *DimDate* table)

Search Solution Explorer (Ctrl+ )

Solution 'Create CSV Date Dimension' (1 project)

Create CSV Date Dimension

Project.params

Connection Managers

SSIS Packages

Package Parts

Control Flow

Miscellaneous

Linked Azure Resources

Azure-SSIS Integration Runtime

Azure Storage

SQL Server Import and Export Wizard

### Configure Flat File Destination

Source table or view: [dbo].[DimDate]

Specify the characters that delimit the destination file:

Row delimiter: {CR}{LF}

Column delimiter: Semicolon (;)

Edit Mappings... Preview...

Help < Back Next > Finish >> Cancel

Select *DimDate* as the source table and the semicolon as the column/attribute delimiter in the destination CSV file.

Search Solution Explorer (Ctrl+)

Solution 'Create CSV Date Dimension' (1 project)

Create CSV Date Dimension

Project.params

Connection Managers

SSIS Packages

Package Parts

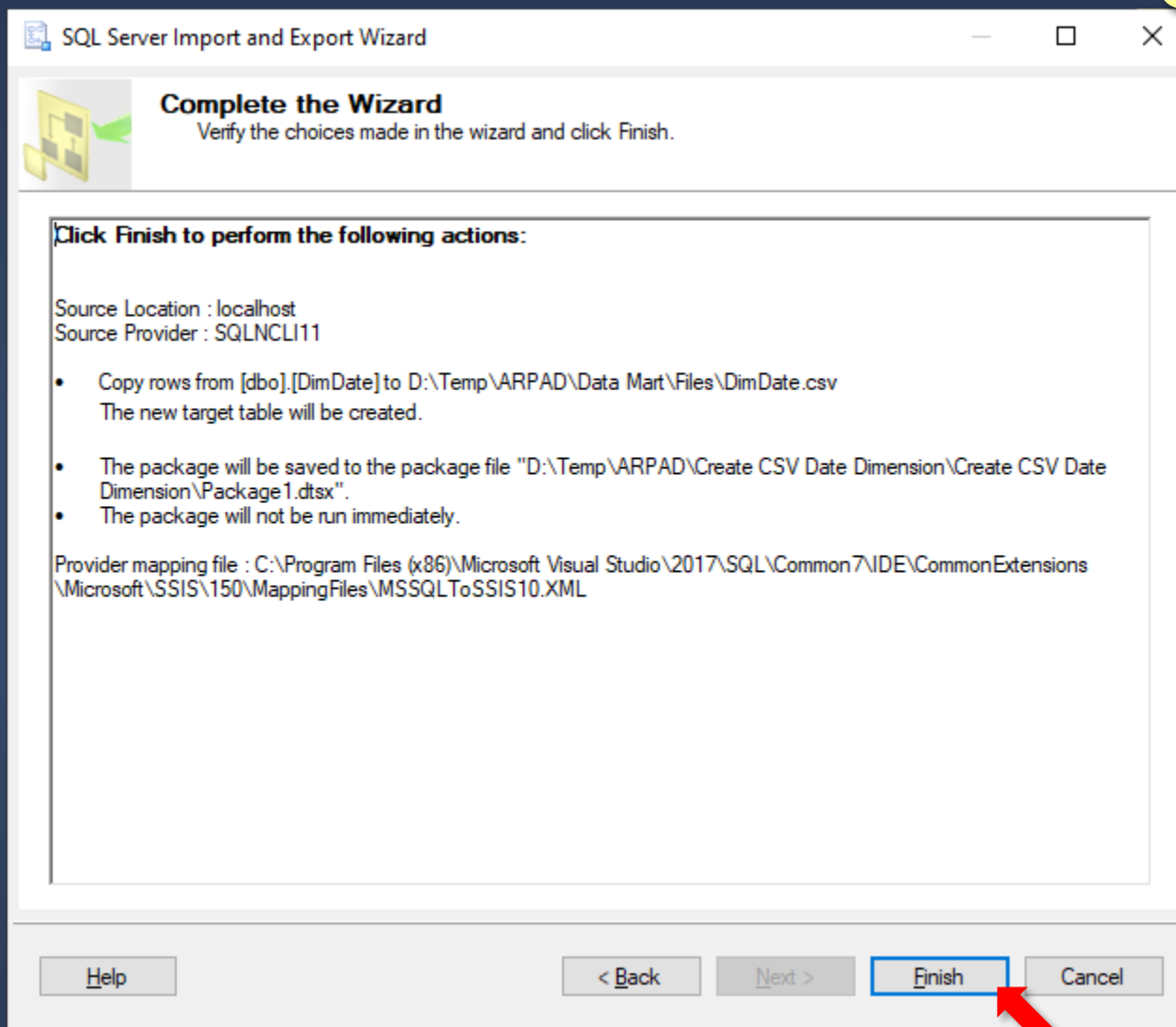
Control Flow

Miscellaneous

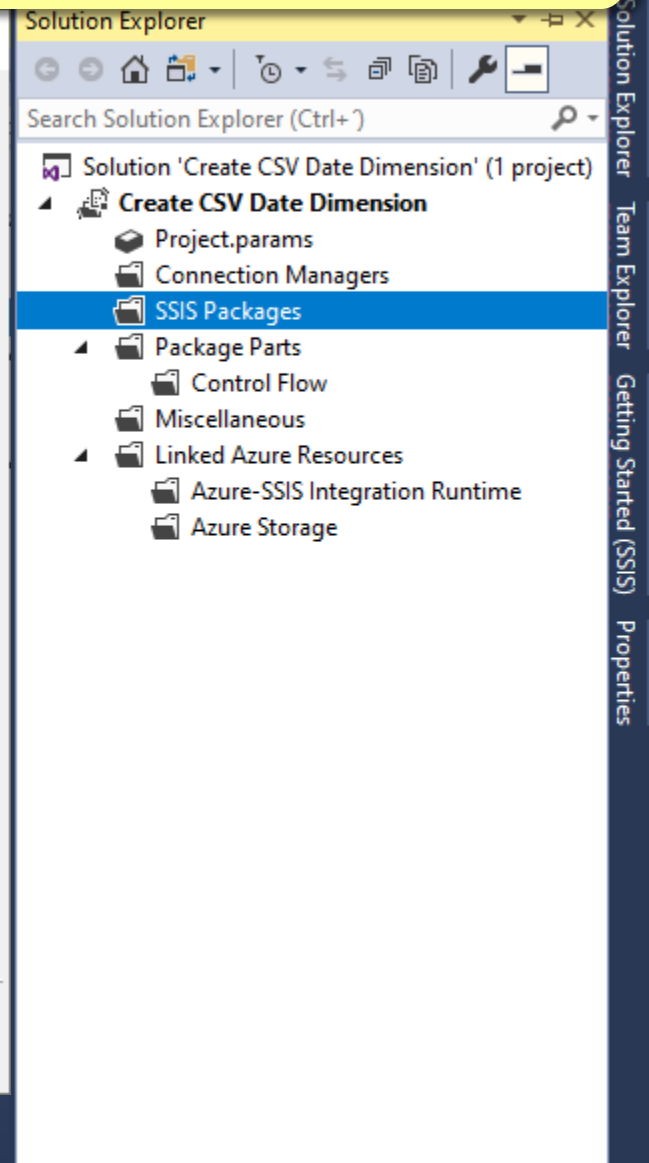
Linked Azure Resources

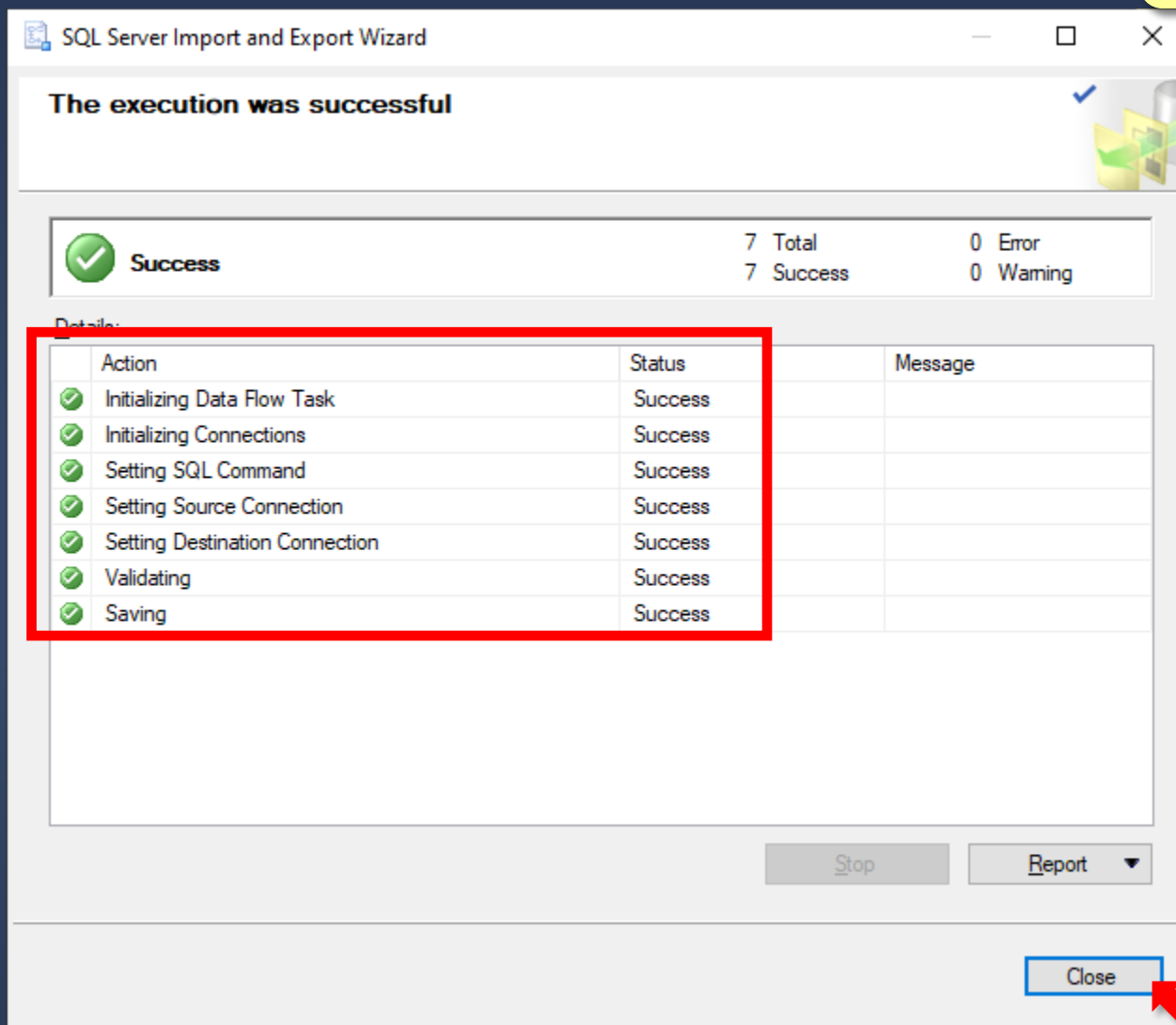
Azure-SSIS Integration Runtime

Azure Storage

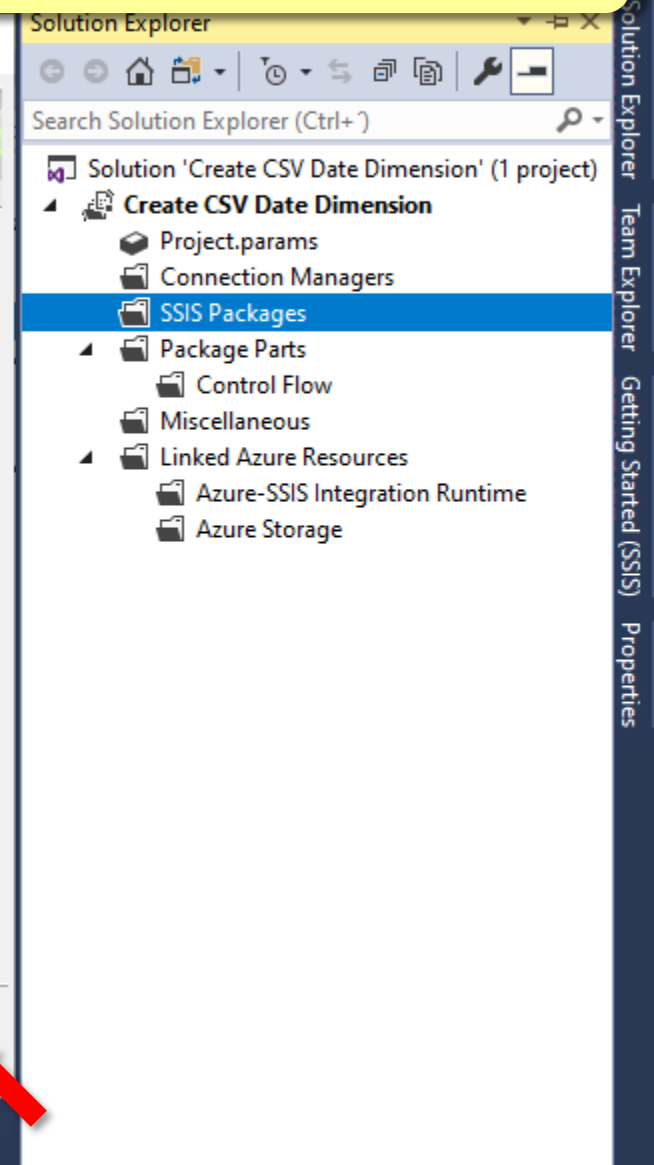


Finish the wizard to create the import and export package.





The creation of the import and export package should succeed.





*Control flow presents just a single Data Flow Task.*

Package1.dtsx [Design]

Control Flow Parameters Event Handlers Package Explorer

Data Flow Task 1

Connection Managers

DestinationConnectionFlatFile SourceConnectionOLEDB

Error List Variables Output

Create CSV Date Dimension - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Test Analyze Window Help

Package1.dtsx [Design] X

Control Flow Data Flow Parameters Event Handlers Package Explorer

Data Flow Task: Data Flow Task 1

Source - DimDate

Destination - DimDate\_csv

Connection Managers

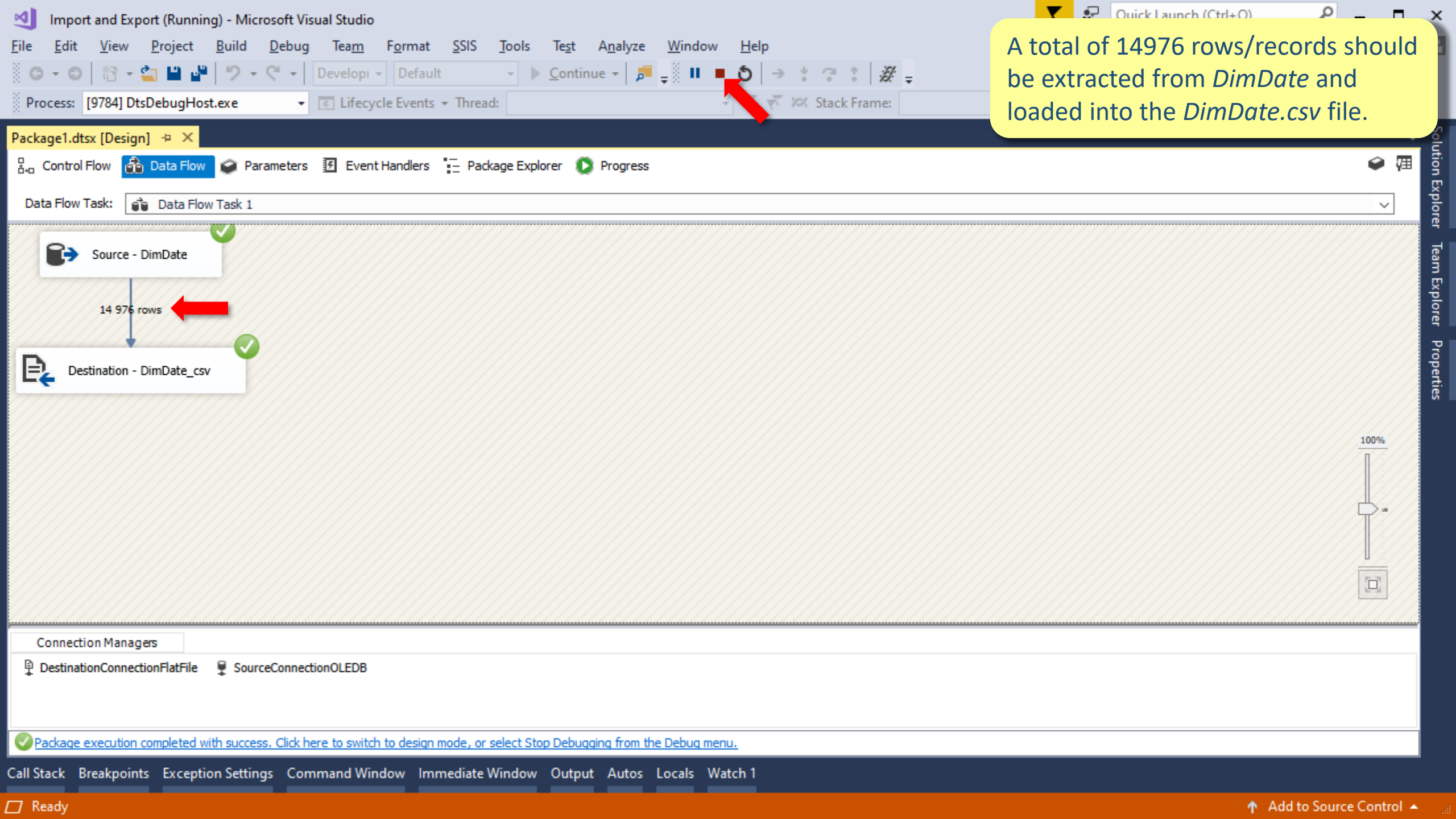
DestinationConnectionFlatFile SourceConnectionOLEDB

Error List Variables Output

Ready

Add to Source Control

*Data Flow Task* presents two components, one for extracting the data from *DimDate* table and the other for storing it in a CSV file. Execute the package to perform the operation.

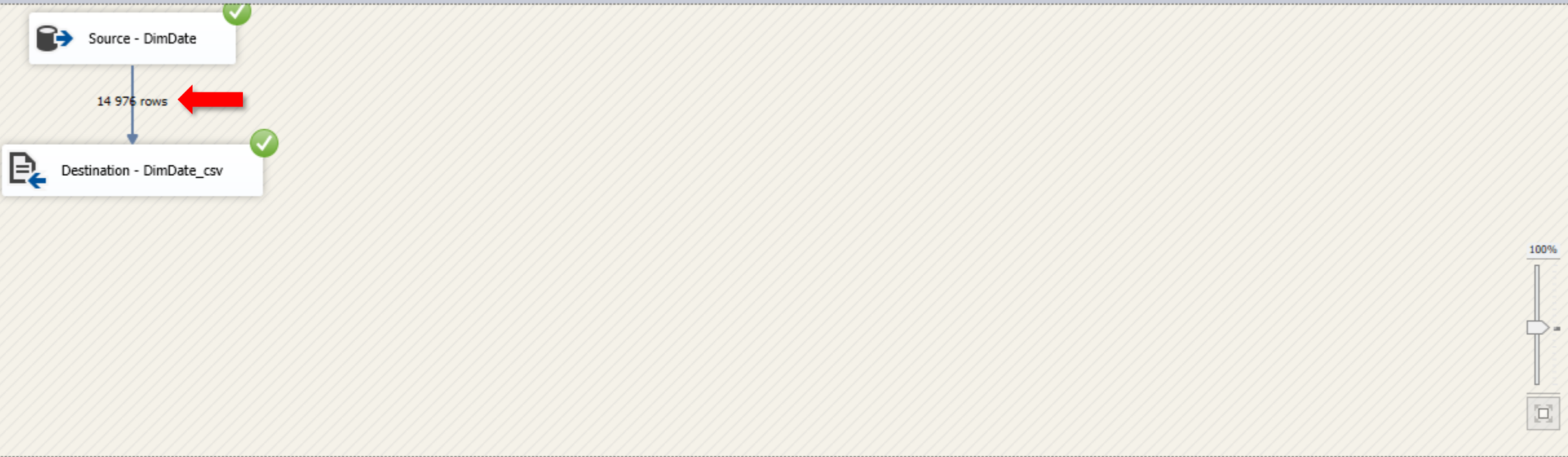


A total of 14976 rows/records should be extracted from *DimDate* and loaded into the *DimDate.csv* file.

Package1.dtsx [Design]

Control Flow Data Flow Parameters Event Handlers Package Explorer Progress

Data Flow Task: Data Flow Task 1

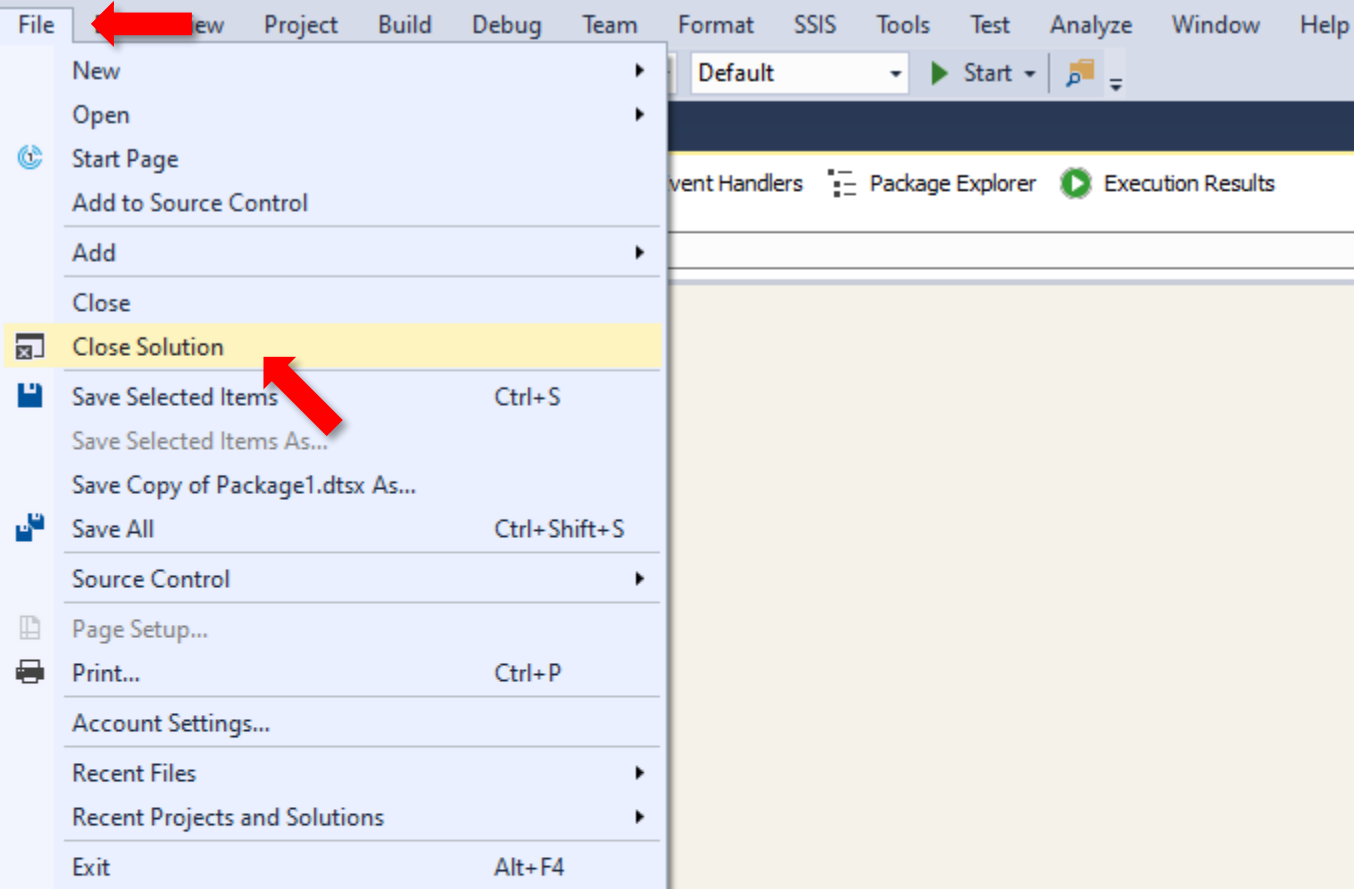


Connection Managers

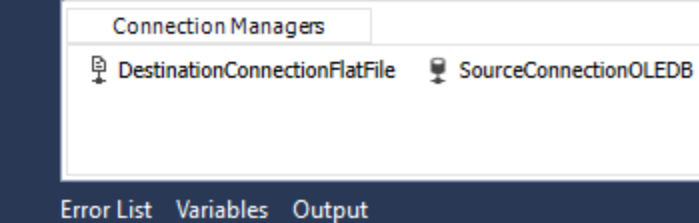
DestinationConnectionFlatFile SourceConnectionOLEDB

Package execution completed with success. Click here to switch to design mode, or select Stop Debugging from the Debug menu.

Call Stack Breakpoints Exception Settings Command Window Immediate Window Output Autos Locals Watch 1



Close the *Integration Services Project*.  
(save the changes if necessary).





Home Insert Page Layout Formulas Data Review View Team

Cut Copy Paste Format Painter Clipboard

Calibri 11 A A Font

Wrap Text Merge & Center Alignment

General Number

Open the DimDate.csv file in Excel (or any other spreadsheet program). Although the *Date* dimension is rather complete, a few attributes for our *Data Mart DimDate* dimension are still missing.

A1	PK_Date																			
1	PK_Date	Date_Nam	Year	Year_Nam	Half_Year	Half_Year_Nam	Quarter	Quarter_Nam	Trimester	Trimester_Nam	Month	Month_Nam	Ten_Days	Ten_Days_Nam	Week	Week_Nam	Day_Of_Year	Day_Of_Year_Nam	Day_Of_Week	Day_Of_Week_Nam
2	#####	Saturday,	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 1, 2	1	Day 1	1	Day
3	#####	Sunday, Ja	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	2	Day 2	2	Day
4	#####	Monday, J	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	3	Day 3	3	Day
5	#####	Tuesday, J	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	4	Day 4	4	Day
6	#####	Wednesday	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	5	Day 5	5	Day
7	#####	Thursday,	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	6	Day 6	6	Day
8	#####	Friday, Ja	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	7	Day 7	7	Day
9	#####	Saturday,	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	8	Day 8	8	Day
10	#####	Sunday, Ja	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 3, 2	9	Day 9	9	Day
11	#####	Monday, J	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 3, 2	10	Day 10	10	Day
12	#####	Tuesday, J	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	11	Day 11	11	Day
13	#####	Wednesday	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	12	Day 12	12	Day
14	#####	Thursday,	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	13	Day 13	13	Day
15	#####	Friday, Ja	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	14	Day 14	14	Day
16	#####	Saturday,	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	15	Day 15	15	Day
17	#####	Sunday, Ja	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	16	Day 16	16	Day
18	#####	Monday, J	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	17	Day 17	17	Day
19	#####	Tuesday, J	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	18	Day 18	18	Day
20	#####	Wednesday	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	19	Day 19	19	Day
21	#####	Thursday,	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	20	Day 20	20	Day
22	#####	Friday, Ja	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	3rd Ten Da	#####	Week 4, 2	21	Day 21	21	Day
23	#####	Saturday,	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	3rd Ten Da	#####	Week 4, 2	22	Day 22	22	Day
24	#####	Sunday, Ja	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	3rd Ten Da	#####	Week 5, 2	23	Day 23	23	Day
25	#####	Monday, J	#####	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	3rd Ten Da	#####	Week 5, 2	24	Day 24	24	Day







Home Insert Page Layout Formulas Data Review View Team

Clipboard: Paste, Cut, Copy, Format Painter

Font: Calibri, 11, Bold, Italic, Underline, Text Color, Background Color

Alignment: Wrap Text, Merge & Center

Number: General, Percentage, Decimal, Fraction

Styles: Conditional Formatting, Format as Table, Cell Styles

Cells: Insert, Delete, Format

Editing: Clear, Sort & Filter, Find & Select

You can horizontally scroll to see all the *DimDate.csv* attributes and data.

A1				PK_Date																
	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	
1	Quarter_C	Quarter_C	Quarter_C	Trimester	Trimester	Half_Year	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601_We	
2	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	
3	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	
4	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	
5	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	
6	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesda	3	Day 3	3	Day 3	1	Week 1	
7	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	
8	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Jar	5	Day 5	5	Day 5	1	Week 1	
9	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	
10	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	
11	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	
12	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	
13	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesda	10	Day 10	3	Day 3	2	Week 2	
14	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	
15	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Jar	12	Day 12	5	Day 5	2	Week 2	
16	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	
17	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	
18	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	
19	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	
20	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesda	17	Day 17	3	Day 3	3	Week 3	
21	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	
22	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Jar	19	Day 19	5	Day 5	3	Week 3	
23	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	
24	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	
25	Quarter 1	1	Quarter 1	1	Trimester	1	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	



Although a *Year* attribute exists it is not in the proper year format (i.e., yyyy).

C1																		
Year																		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	PK_Date	Date_Nam	Year	Year_Nam	Half_Year	Half_Year	Quarter	Quarter_N	Trimester	Trimester	Month	Month_N	Ten_Days	Ten_Days	Week	Week_Na	Day_Of_Y	Day_Of
2	01/01/2000 00:00	Saturday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 1, 2	1	Day 1
3	02/01/2000 00:00	Sunday, Ja	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	2	Day 2
4	03/01/2000 00:00	Monday, 1	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	3	Day 3
5	04/01/2000 00:00	Tuesday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	4	Day 4
6	05/01/2000 00:00	Wednesd	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	5	Day 5
7	06/01/2000 00:00	Thursday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	6	Day 6
8	07/01/2000 00:00	Friday, Ja	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	7	Day 7
9	08/01/2000 00:00	Saturday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 2, 2	8	Day 8
10	09/01/2000 00:00	Sunday, Ja	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 3, 2	9	Day 9
11	10/01/2000 00:00	Monday, 1	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	1st Ten Da	#####	Week 3, 2	10	Day 10
12	11/01/2000 00:00	Tuesday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	11	Day 11
13	12/01/2000 00:00	Wednesd	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	12	Day 12
14	13/01/2000 00:00	Thursday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	13	Day 13
15	14/01/2000 00:00	Friday, Ja	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	14	Day 14
16	15/01/2000 00:00	Saturday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 3, 2	15	Day 15
17	16/01/2000 00:00	Sunday, Ja	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	16	Day 16
18	17/01/2000 00:00	Monday, 1	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	17	Day 17
19	18/01/2000 00:00	Tuesday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	18	Day 18
20	19/01/2000 00:00	Wednesd	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	19	Day 19
21	20/01/2000 00:00	Thursday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	2nd Ten D	#####	Week 4, 2	20	Day 20
22	21/01/2000 00:00	Friday, Ja	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	3rd Ten Da	#####	Week 4, 2	21	Day 21
23	22/01/2000 00:00	Saturday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	3rd Ten Da	#####	Week 4, 2	22	Day 22
24	23/01/2000 00:00	Sunday, Ja	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	3rd Ten Da	#####	Week 5, 2	23	Day 23
25	24/01/2000 00:00	Monday,	01/01/2000 00:00	Calendar	#####	Semester	#####	Quarter 1,	#####	Trimester	#####	January 20	#####	3rd Ten Da	#####	Week 5, 2	24	Day 24





Home Insert Page Layout Formulas Data Review View Team

Cut Copy Paste Format Painter Clipboard

Font: 11, A, A, B, I, U, Merge & Center

Alignment: Wrap Text, Merge & Center

Number: General, %, .0, .00, .000

Create a new column at the end of the existing columns (BS column), label it *Year (yyyy)* and introduce the following formula: *YEAR(C2)* (or *ANO(C2)* if Excel version is Portuguese).

SUM	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV
	1	Trimester	Half_Year	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)			
	2	Trimester	1	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	=YEAR(C2)		
	3	Trimester	1	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52			
	4	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1			
	5	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1			
	6	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesda	3	Day 3	3	Day 3	1	Week 1			
	7	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1			
	8	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Ja	5	Day 5	5	Day 5	1	Week 1			
	9	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1			
	10	Trimester	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1			
	11	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2			
	12	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2			
	13	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesda	10	Day 10	3	Day 3	2	Week 2			
	14	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2			
	15	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Ja	12	Day 12	5	Day 5	2	Week 2			
	16	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2			
	17	Trimester	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2			
	18	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3			
	19	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3			
	20	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesda	17	Day 17	3	Day 3	3	Week 3			
	21	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3			
	22	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Ja	19	Day 19	5	Day 5	3	Week 3			
	23	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3			
	24	Trimester	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3			
	25	Trimester	1	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4			





The formula is automatically copied to the other cells.

Home Insert Page Layout Formulas Data Review View Team

Clipboard: Cut, Copy, Paste, Format Painter

Font: Calibri, 11, Bold, Italic, Underline, Text Color, Background Color

Alignment: Wrap Text, Merge & Center

Number: General, Percentage, Decimals

Styles: Conditional Formatting, Format as Table, Cell Styles

Cells: Insert, Delete, Format

Editing: Clear, Sort & Filter, Find & Select

	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV
BS2																=YEAR(C2)			
1	Trimester	Half_Year	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)			
2	Trimester		1 Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363		6	Day 6	52	Week 52	2000		
3	Trimester		1 Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364		7	Day 7	52	Week 5	2000		
4	Trimester		1 Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1		1	Day 1	1	Week 1	2000		
5	Trimester		1 Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2		2	Day 2	1	Week 1	2000		
6	Trimester		1 Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesda	3	Day 3		3	Day 3	1	Week 1	2000		
7	Trimester		1 Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4		4	Day 4	1	Week 1	2000		
8	Trimester		1 Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Jar	5	Day 5		5	Day 5	1	Week 1	2000		
9	Trimester		1 Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6		6	Day 6	1	Week 1	2000		
10	Trimester		1 Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7		7	Day 7	1	Week 1	2000		
11	Trimester		1 Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8		1	Day 1	2	Week 2	2000		
12	Trimester		1 Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9		2	Day 2	2	Week 2	2000		
13	Trimester		1 Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesda	10	Day 10		3	Day 3	2	Week 2	2000		
14	Trimester		1 Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11		4	Day 4	2	Week 2	2000		
15	Trimester		1 Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Jar	12	Day 12		5	Day 5	2	Week 2	2000		
16	Trimester		1 Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13		6	Day 6	2	Week 2	2000		
17	Trimester		1 Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14		7	Day 7	2	Week 2	2000		
18	Trimester		1 Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15		1	Day 1	3	Week 3	2000		
19	Trimester		1 Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16		2	Day 2	3	Week 3	2000		
20	Trimester		1 Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesda	17	Day 17		3	Day 3	3	Week 3	2000		
21	Trimester		1 Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18		4	Day 4	3	Week 3	2000		
22	Trimester		1 Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Jar	19	Day 19		5	Day 5	3	Week 3	2000		
23	Trimester		1 Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20		6	Day 6	3	Week 3	2000		
24	Trimester		1 Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21		7	Day 7	3	Week 3	2000		
25	Trimester		1 Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22		1	Day 1	4	Week 4	2000		





Create a new column at the end of the existing columns (BT column), name it *MonthName* and introduce the following formula:

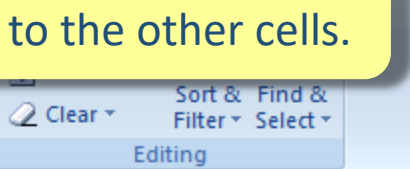
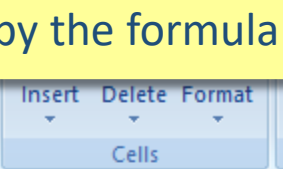
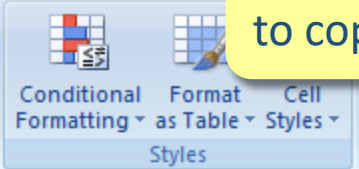
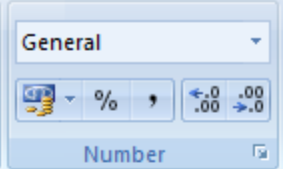
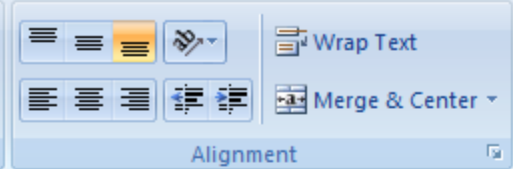
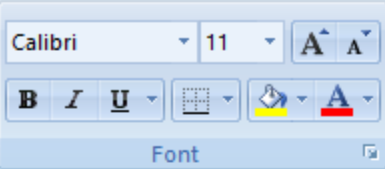
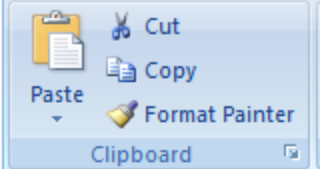
$LEFT(L2;SEARCH(" ";L2)-1)$

The formula extracts the left characters until the space position minus 1 (or *ESQUERDA(L2;LOCALIZAR(" ";L2)-1)* if Excel version is Portuguese).

	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	Year (yyyy)	MonthName
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000		=LEFT(L2;SEARCH(" ";L2) - 1)
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000		
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000		
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000		
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesda	3	Day 3	3	Day 3	1	Week 1	2000		
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000		
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Jar	5	Day 5	5	Day 5	1	Week 1	2000		
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000		
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000		
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000		
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000		
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesda	10	Day 10	3	Day 3	2	Week 2	2000		
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000		
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Jar	12	Day 12	5	Day 5	2	Week 2	2000		
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000		
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000		
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000		
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000		
20	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesda	17	Day 17	3	Day 3	3	Week 3	2000		
21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000		
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Jar	19	Day 19	5	Day 5	3	Week 3	2000		
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000		
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000		
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000		



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Double click the right end cell corner to copy the formula to the other cells.

BT2		=LEFT(L2;SEARCH(" ";L2) - 1)																	
	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName				
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000	January				
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000					
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000					
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000					
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesda	3	Day 3	3	Day 3	1	Week 1	2000					
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000					
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Jar	5	Day 5	5	Day 5	1	Week 1	2000					
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000					
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000					
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000					
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000					
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesda	10	Day 10	3	Day 3	2	Week 2	2000					
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000					
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Jar	12	Day 12	5	Day 5	2	Week 2	2000					
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000					
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000					
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000					
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000					
20	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesda	17	Day 17	3	Day 3	3	Week 3	2000					
21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000					
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Jar	19	Day 19	5	Day 5	3	Week 3	2000					
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000					
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000					
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000					

The formula is automatically copied to the other cells.

BT2																			
=LEFT(L2;SEARCH(" ";L2) - 1)																			
	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName				
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000	January				
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January				
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January				
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January				
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesday,	3	Day 3	3	Day 3	1	Week 1	2000	January				
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000	January				
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Ja	5	Day 5	5	Day 5	1	Week 1	2000	January				
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000	January				
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000	January				
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000	January				
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000	January				
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesday,	10	Day 10	3	Day 3	2	Week 2	2000	January				
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January				
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Ja	12	Day 12	5	Day 5	2	Week 2	2000	January				
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January				
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January				
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January				
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January				
20	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesday,	17	Day 17	3	Day 3	3	Week 3	2000	January				
21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January				
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Ja	19	Day 19	5	Day 5	3	Week 3	2000	January				
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January				
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January				
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January				

An attribute just containing the day of the week (i.e., without the date) is also missing. Create a new column at the end of the existing columns (BU column) labeled as *DayOfWeek* and introduce *Saturday* in the first cell followed by *Sunday* in the second cell. Automatically all the remaining values appear, and you need just to accept them by an *Enter*.

BU3																	Sunday
	BE	BF	BG	BH	BI	BJ											DayOfWeek
1	Half_Year	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName	Saturday
2	1	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	53	Day 363	6	Day 6	52	Week 52	2000	January	Sunday
3	1	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January	
4	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January	Monday
5	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January	Tuesday
6	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesday,	3	Day 3	3	Day 3	1	Week 1	2000	January	Wednesday
7	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000	January	Thursday
8	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Ja	5	Day 5	5	Day 5	1	Week 1	2000	January	Friday
9	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000	January	Saturday
10	1	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000	January	Sunday
11	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000	January	Monday
12	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000	January	Tuesday
13	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesday,	10	Day 10	3	Day 3	2	Week 2	2000	January	Wednesday
14	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January	Thursday
15	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Ja	12	Day 12	5	Day 5	2	Week 2	2000	January	Friday
16	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January	Saturday
17	1	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January	Sunday
18	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January	Monday
19	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January	Tuesday
20	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesday,	17	Day 17	3	Day 3	3	Week 3	2000	January	Wednesday
21	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January	Thursday
22	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Ja	19	Day 19	5	Day 5	3	Week 3	2000	January	Friday
23	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January	Saturday
24	1	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January	Sunday
25	1	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January	Monday





Ready



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Calibri 11 Font

Wrap Text Merge & Center Alignment

General Number

An attribute for the *Weekend* is also missing. Create a new column at the end of the existing columns (BV column) labeled as *Weekend* and introduce the values *Yes* for *Saturday* and *Sunday* in the first two rows.

	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName	DayOfWeek	Weekend		
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000	January	Saturday	Yes		
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January	Sunday	Yes		
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January	Monday			
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January	Tuesday			
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesday	3	Day 3	3	Day 3	1	Week 1	2000	January	Wednesday			
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000	January	Thursday			
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Ja	5	Day 5	5	Day 5	1	Week 1	2000	January	Friday			
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000	January	Saturday			
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000	January	Sunday			
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000	January	Monday			
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000	January	Tuesday			
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesday	10	Day 10	3	Day 3	2	Week 2	2000	January	Wednesday			
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January	Thursday			
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Ja	12	Day 12	5	Day 5	2	Week 2	2000	January	Friday			
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January	Saturday			
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January	Sunday			
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January	Monday			
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January	Tuesday			
20	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesday	17	Day 17	3	Day 3	3	Week 3	2000	January	Wednesday			
21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January	Thursday			
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Ja	19	Day 19	5	Day 5	3	Week 3	2000	January	Friday			
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January	Saturday			
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January	Sunday			
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January	Monday			



Introduce No in the next row  
given that is a Monday.

	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName	DayOfWeek	Weekend		
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000	January	Saturday	Yes		
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January	Sunday	Yes		
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January	Monday	No		
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January	Tuesday			
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesda	3	Day 3	3	Day 3	1	Week 1	2000	January	Wednesday			
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000	January	Thursday			
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Ja	5	Day 5	5	Day 5	1	Week 1	2000	January	Friday			
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000	January	Saturday			
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000	January	Sunday			
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000	January	Monday			
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000	January	Tuesday			
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesda	10	Day 10	3	Day 3	2	Week 2	2000	January	Wednesday			
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January	Thursday			
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Ja	12	Day 12	5	Day 5	2	Week 2	2000	January	Friday			
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January	Saturday			
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January	Sunday			
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January	Monday			
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January	Tuesday			
20	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesda	17	Day 17	3	Day 3	3	Week 3	2000	January	Wednesday			
21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January	Thursday			
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Ja	19	Day 19	5	Day 5	3	Week 3	2000	January	Friday			
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January	Saturday			
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January	Sunday			
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January	Monday			

Drag/copy the value (i.e., *No*) for the next four cells (until Friday).

	BV4		No																
	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	ISO_8601_	Year (yyyy)	MonthName	DayOfWeek	Weekend		
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000	January	Saturday	Yes		
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January	Sunday	Yes		
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January	Monday	No		
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January	Tuesday			
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesday	3	Day 3	3	Day 3	1	Week 1	2000	January	Wednesday			
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000	January	Thursday			
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Ja	5	Day 5	5	Day 5	1	Week 1	2000	January	Friday			
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000	January	Saturday			
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000	January	Sunday			
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000	January	Monday			
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000	January	Tuesday			
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesday	10	Day 10	3	Day 3	2	Week 2	2000	January	Wednesday			
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January	Thursday			
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Ja	12	Day 12	5	Day 5	2	Week 2	2000	January	Friday			
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January	Saturday			
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January	Sunday			
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January	Monday			
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January	Tuesday			
20	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesday	17	Day 17	3	Day 3	3	Week 3	2000	January	Wednesday			
21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January	Thursday			
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Ja	19	Day 19	5	Day 5	3	Week 3	2000	January	Friday			
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January	Saturday			
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January	Sunday			
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January	Monday			



Home Insert Page Layout Formulas Data Review View Team

Clipboard: Cut, Copy, Paste, Format Painter

Font: Calibri, 11, Bold, Italic, Underline, Text Color, Background Color

Alignment: Wrap Text, Merge & Center

Number: General, Percentage, Decimal, Fraction

Styles: Conditional Formatting, Format as Table, Cell Styles

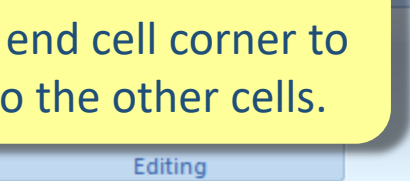
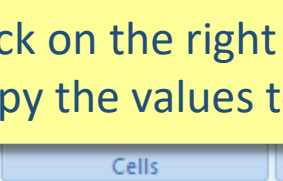
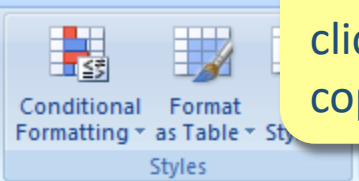
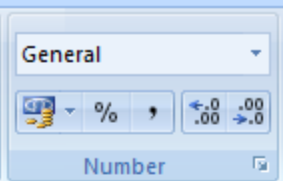
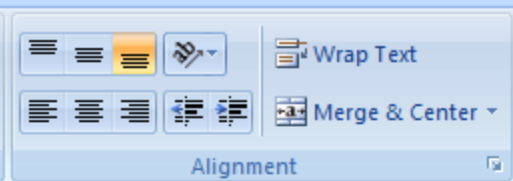
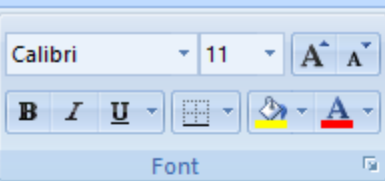
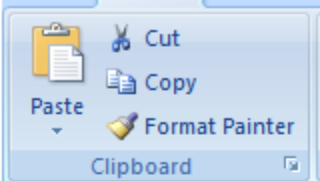
Cells: Insert, Delete, Format

Editing: AutoSum, Fill, Clear, Sort & Filter, Find & Select

BV4																			
	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName	DayOfWeek	Weekend		
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000	January	Saturday	Yes		
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January	Sunday	Yes		
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January	Monday	No		
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January	Tuesday	No		
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesday,	3	Day 3	3	Day 3	1	Week 1	2000	January	Wednesday	No		
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000	January	Thursday	No		
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Jar	5	Day 5	5	Day 5	1	Week 1	2000	January	Friday	No		
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000	January	Saturday			
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000	January	Sunday			
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000	January	Monday			
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000	January	Tuesday			
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesday,	10	Day 10	3	Day 3	2	Week 2	2000	January	Wednesday			
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January	Thursday			
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Jar	12	Day 12	5	Day 5	2	Week 2	2000	January	Friday			
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January	Saturday			
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January	Sunday			
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January	Monday			
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January	Tuesday			
20	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesday,	17	Day 17	3	Day 3	3	Week 3	2000	January	Wednesday			
21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January	Thursday			
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Jar	19	Day 19	5	Day 5	3	Week 3	2000	January	Friday			
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January	Saturday			
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January	Sunday			
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January	Monday			



Home Insert Page Layout Formulas Data Review View Team



Select all the values and double click on the right end cell corner to copy the values to the other cells.

BV2																			
	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName	DayOfWeek	Weekend		
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000	January	Saturday	Yes		
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January	Sunday	Yes		
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January	Monday	No		
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January	Tuesday	No		
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesday,	3	Day 3	3	Day 3	1	Week 1	2000	January	Wednesday	No		
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000	January	Thursday	No		
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Jar	5	Day 5	5	Day 5	1	Week 1	2000	January	Friday	No		
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000	January	Saturday			
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000	January	Sunday			
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000	January	Monday			
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000	January	Tuesday			
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesday,	10	Day 10	3	Day 3	2	Week 2	2000	January	Wednesday			
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January	Thursday			
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Jar	12	Day 12	5	Day 5	2	Week 2	2000	January	Friday			
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January	Saturday			
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January	Sunday			
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January	Monday			
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January	Tuesday			
20	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesday,	17	Day 17	3	Day 3	3	Week 3	2000	January	Wednesday			
21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January	Thursday			
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Jar	19	Day 19	5	Day 5	3	Week 3	2000	January	Friday			
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January	Saturday			
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January	Sunday			
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January	Monday			





The sequence is automatically copied to the other cells.

	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName	DayOfWeek	Weekend		
2	Semester	#####	ISO8601 C	#####	Week 52,	#####	Saturday,	363	Day 363	6	Day 6	52	Week 52	2000	January	Saturday	Yes		
3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January	Sunday	Yes		
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January	Monday	No		
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January	Tuesday	No		
6	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Wednesda	3	Day 3	3	Day 3	1	Week 1	2000	January	Wednesday	No		
7	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Thursday,	4	Day 4	4	Day 4	1	Week 1	2000	January	Thursday	No		
8	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Friday, Ja	5	Day 5	5	Day 5	1	Week 1	2000	January	Friday	No		
9	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Saturday,	6	Day 6	6	Day 6	1	Week 1	2000	January	Saturday	Yes		
10	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Sunday, Ja	7	Day 7	7	Day 7	1	Week 1	2000	January	Sunday	Yes		
11	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Monday, J	8	Day 8	1	Day 1	2	Week 2	2000	January	Monday	No		
12	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Tuesday, J	9	Day 9	2	Day 2	2	Week 2	2000	January	Tuesday	No		
13	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesda	10	Day 10	3	Day 3	2	Week 2	2000	January	Wednesday	No		
14	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January	Thursday	No		
15	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Ja	12	Day 12	5	Day 5	2	Week 2	2000	January	Friday	No		
16	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January	Saturday	Yes		
17	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January	Sunday	Yes		
18	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January	Monday	No		
19	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January	Tuesday	No		
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21	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January	Thursday	No		
22	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Ja	19	Day 19	5	Day 5	3	Week 3	2000	January	Friday	No		
23	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January	Saturday	Yes		
24	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January	Sunday	Yes		
25	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January	Monday	No		

Save the DimDate.csv file.



Confirm the save as a CSV file.

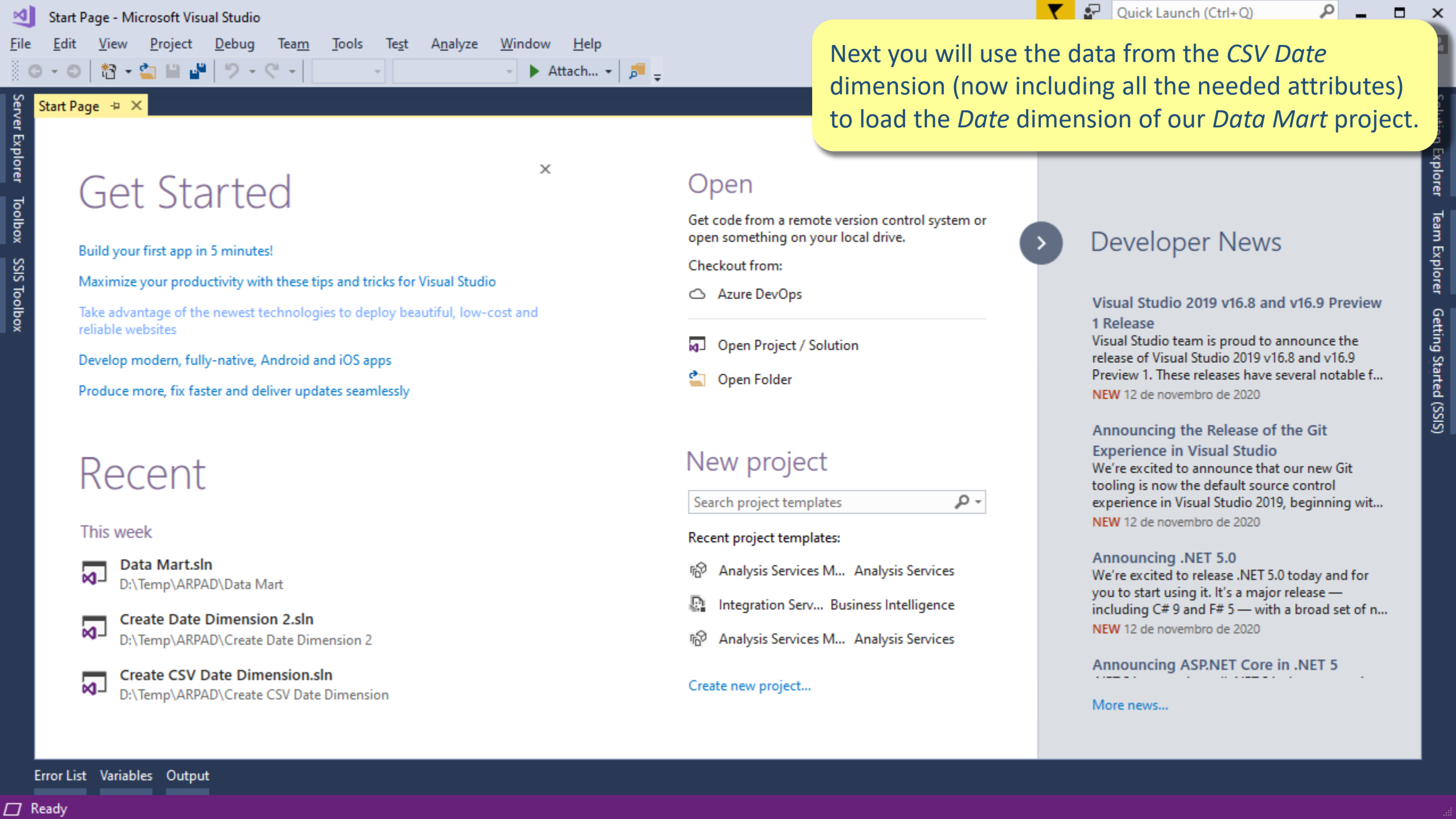
Microsoft Office Excel

DimDate.csv may contain features that are not compatible with CSV (Comma delimited). Do you want to keep the workbook in this format?

- To keep this format, which leaves out any incompatible features, click Yes.
- To preserve the features, click No. Then save a copy in the latest Excel format.
- To see what might be lost, click Help.

Yes No Help

	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX
1	Half_Year	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	ISO_8601	Year (yyyy)	MonthName	DayOfWeek	Weekend		
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3	Semester	#####	ISO8601 C	#####	Week 52,	#####	Sunday, Ja	364	Day 364	7	Day 7	52	Week 52	2000	January	Sunday	Yes		
4	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Monday, J	1	Day 1	1	Day 1	1	Week 1	2000	January	Monday	No		
5	Semester	#####	ISO8601 C	#####	Week 1, 2	#####	Tuesday, J	2	Day 2	2	Day 2	1	Week 1	2000	January	Tuesday	No		
6	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Wednesday,	10	Day 10	3	Day 3	2	Week 2	2000	January	Wednesday	No		
7	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Thursday,	11	Day 11	4	Day 4	2	Week 2	2000	January	Thursday	No		
8	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Friday, Jan	12	Day 12	5	Day 5	2	Week 2	2000	January	Friday	No		
9	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Saturday,	13	Day 13	6	Day 6	2	Week 2	2000	January	Saturday	Yes		
10	Semester	#####	ISO8601 C	#####	Week 2, 2	#####	Sunday, Ja	14	Day 14	7	Day 7	2	Week 2	2000	January	Sunday	Yes		
11	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Monday, J	15	Day 15	1	Day 1	3	Week 3	2000	January	Monday	No		
12	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Tuesday, J	16	Day 16	2	Day 2	3	Week 3	2000	January	Tuesday	No		
13	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Wednesday,	17	Day 17	3	Day 3	3	Week 3	2000	January	Wednesday	No		
14	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Thursday,	18	Day 18	4	Day 4	3	Week 3	2000	January	Thursday	No		
15	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Friday, Jan	19	Day 19	5	Day 5	3	Week 3	2000	January	Friday	No		
16	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Saturday,	20	Day 20	6	Day 6	3	Week 3	2000	January	Saturday	Yes		
17	Semester	#####	ISO8601 C	#####	Week 3, 2	#####	Sunday, Ja	21	Day 21	7	Day 7	3	Week 3	2000	January	Sunday	Yes		
18	Semester	#####	ISO8601 C	#####	Week 4, 2	#####	Monday, J	22	Day 22	1	Day 1	4	Week 4	2000	January	Monday	No		



Next you will use the data from the *CSV Date* dimension (now including all the needed attributes) to load the *Date* dimension of our *Data Mart* project.

# Get Started

- Build your first app in 5 minutes!
- Maximize your productivity with these tips and tricks for Visual Studio
- Take advantage of the newest technologies to deploy beautiful, low-cost and reliable websites
- Develop modern, fully-native, Android and iOS apps
- Produce more, fix faster and deliver updates seamlessly

# Recent

- This week
- Data Mart.sln**  
D:\Temp\ARPAD\Data Mart
  - Create Date Dimension 2.sln**  
D:\Temp\ARPAD\Create Date Dimension 2
  - Create CSV Date Dimension.sln**  
D:\Temp\ARPAD\Create CSV Date Dimension

# Open

- Get code from a remote version control system or open something on your local drive.
- Checkout from:
- Azure DevOps
  - Open Project / Solution
  - Open Folder

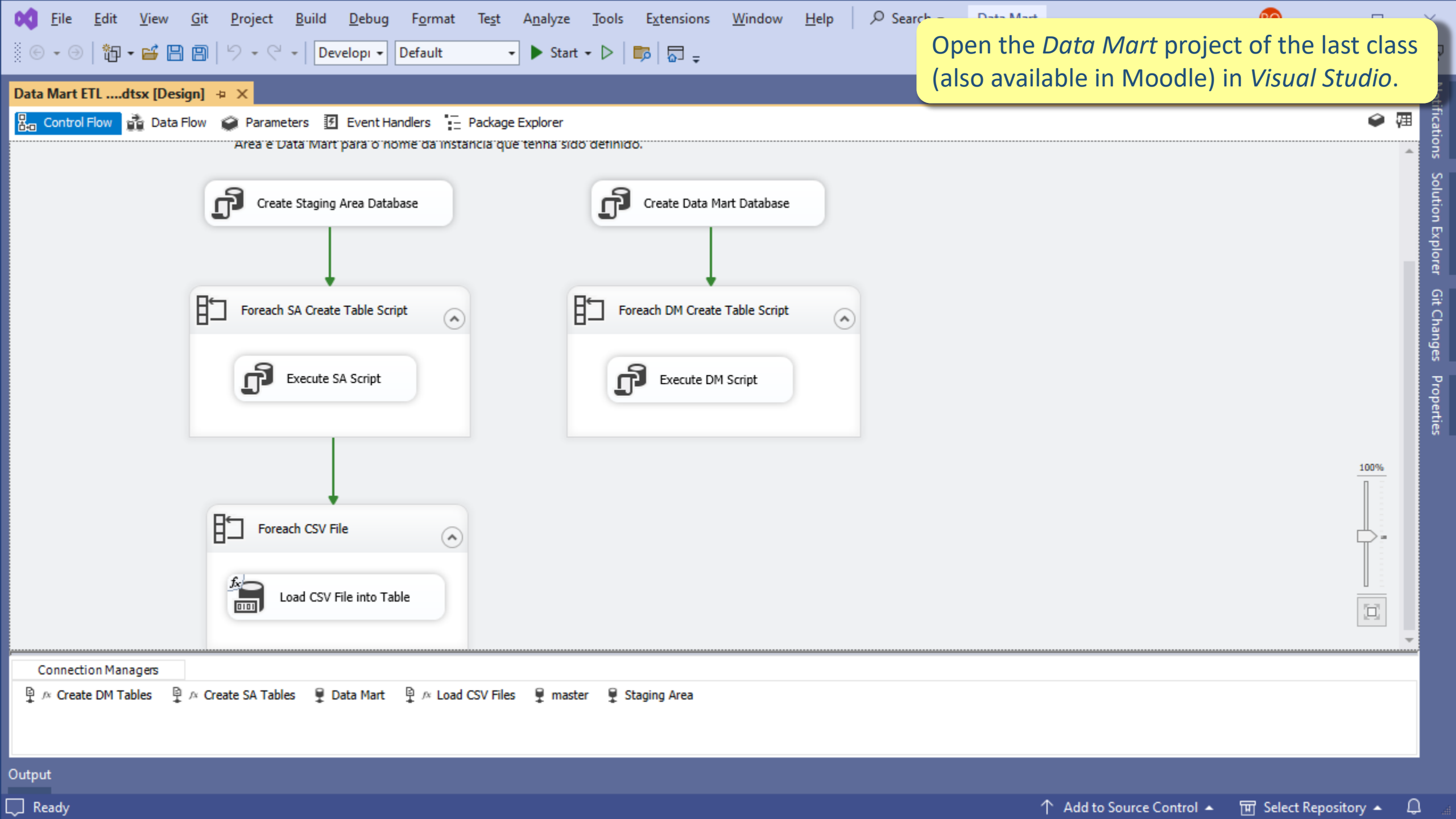
# New project

- 
- Recent project templates:
- Analysis Services M... Analysis Services
  - Integration Serv... Business Intelligence
  - Analysis Services M... Analysis Services
- [Create new project...](#)

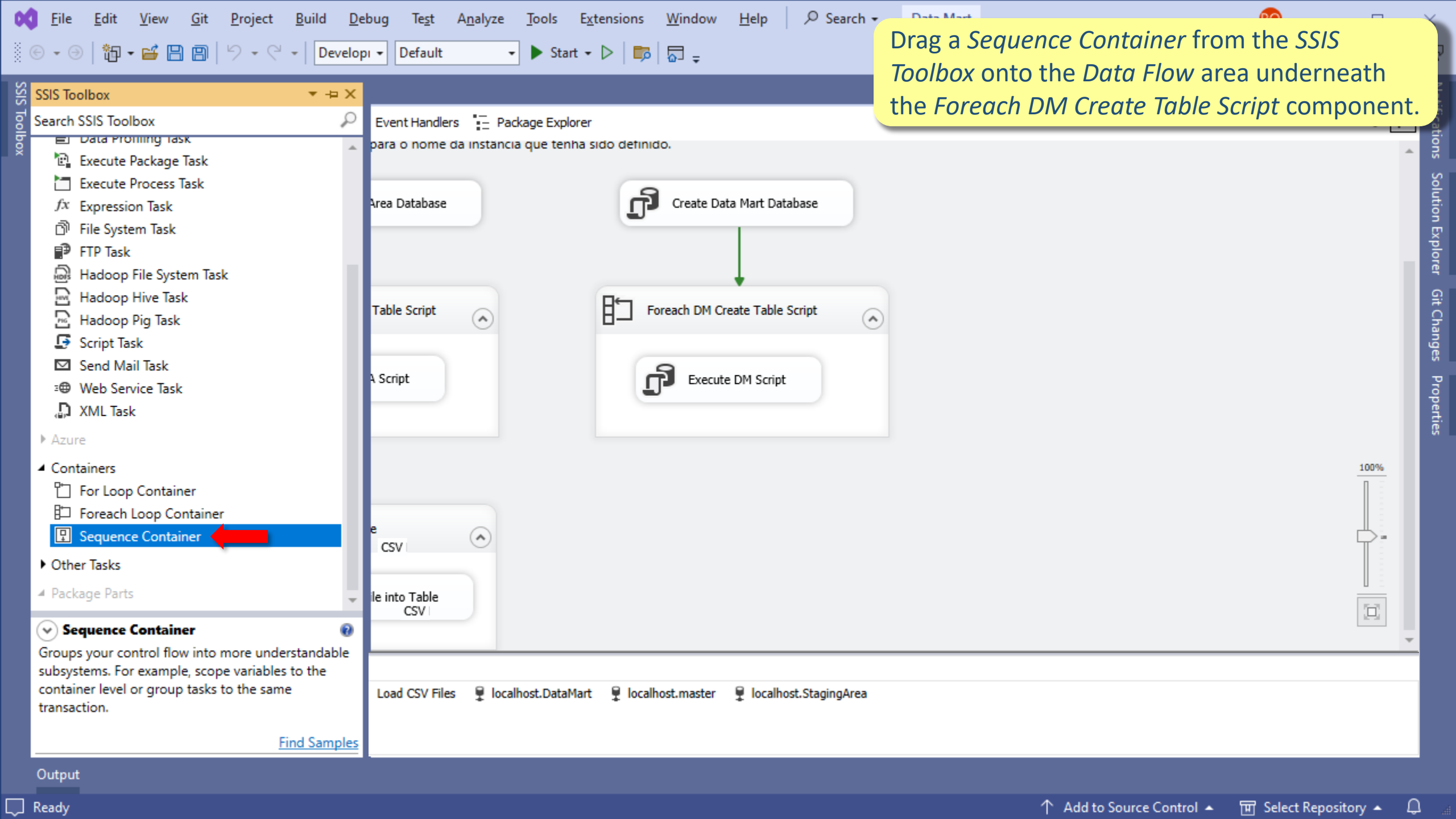
# Developer News

- Visual Studio 2019 v16.8 and v16.9 Preview 1 Release**  
Visual Studio team is proud to announce the release of Visual Studio 2019 v16.8 and v16.9 Preview 1. These releases have several notable f...  
**NEW** 12 de novembro de 2020
- Announcing the Release of the Git Experience in Visual Studio**  
We're excited to announce that our new Git tooling is now the default source control experience in Visual Studio 2019, beginning wit...  
**NEW** 12 de novembro de 2020
- Announcing .NET 5.0**  
We're excited to release .NET 5.0 today and for you to start using it. It's a major release — including C# 9 and F# 5 — with a broad set of n...  
**NEW** 12 de novembro de 2020
- Announcing ASP.NET Core in .NET 5**  
[More news...](#)

Open the *Data Mart* project of the last class (also available in Moodle) in *Visual Studio*.



Drag a *Sequence Container* from the *SSIS Toolbox* onto the *Data Flow* area underneath the *Foreach DM Create Table Script* component.

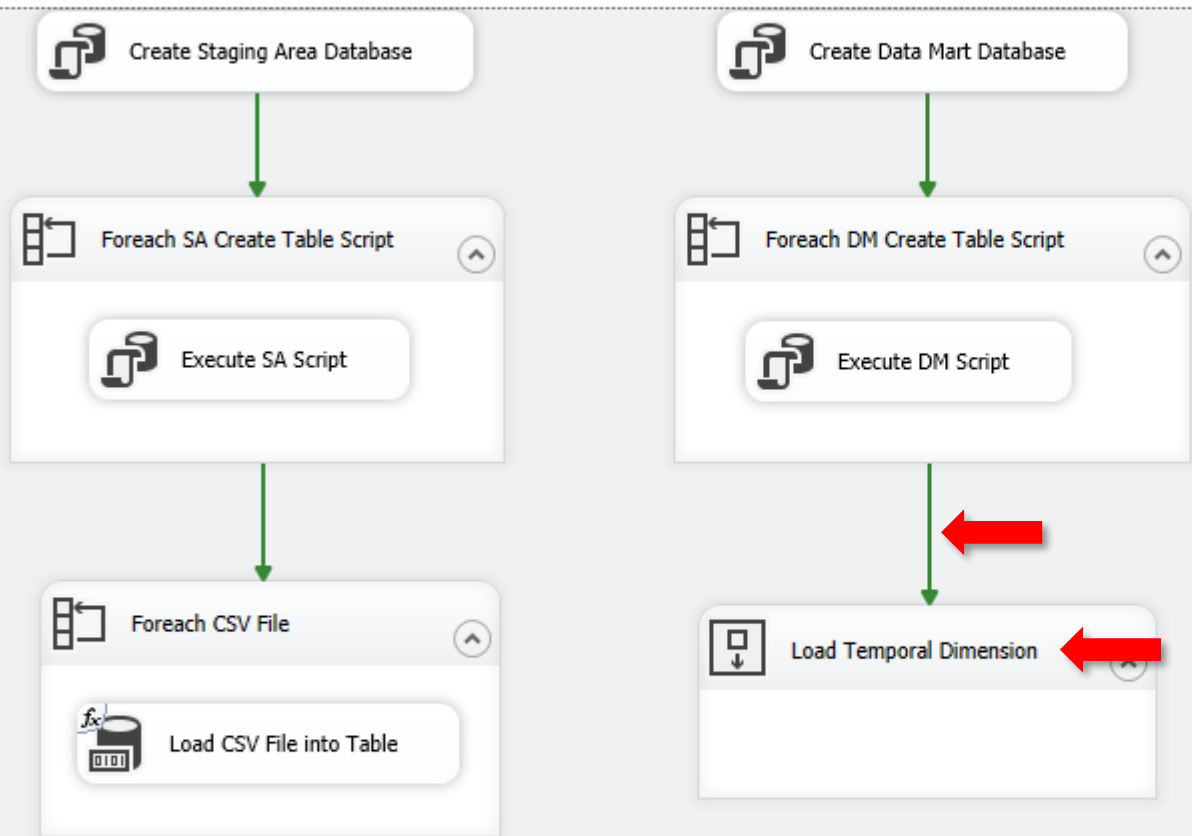


Label the *Sequence Container* as *Load Temporal Dimension* and connect the *Foreach DM Create Table Script* to it.

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters Event Handlers Package Explorer



Connection Managers

Create DM Tables Create SA Tables Data Mart Load CSV Files master Staging Area

Output

Drag a *Data Flow Task* from the *SSIS Toolbox* into the *Load Temporal Dimension* component.

SSIS Toolbox

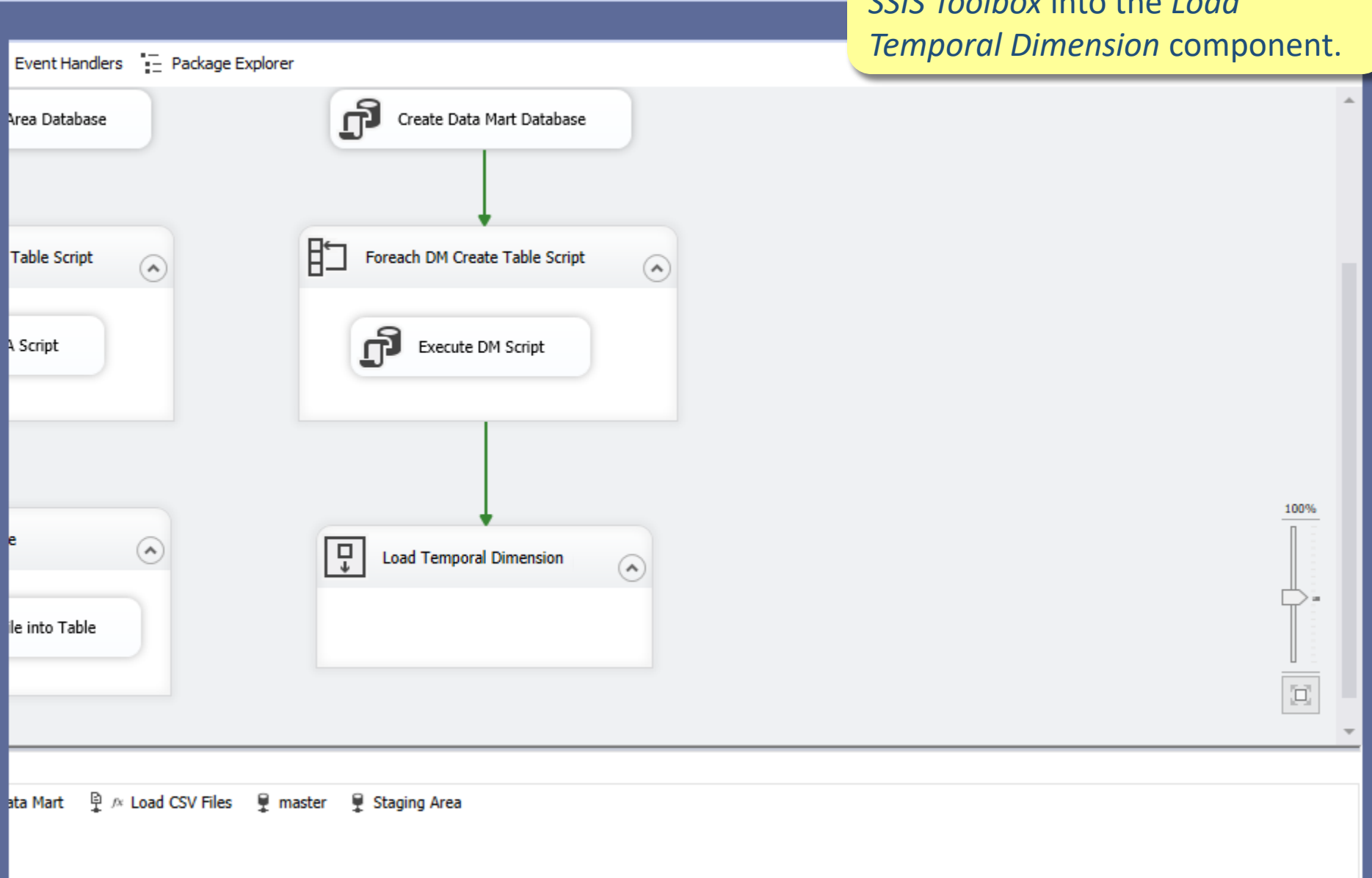
Search SSIS Toolbox

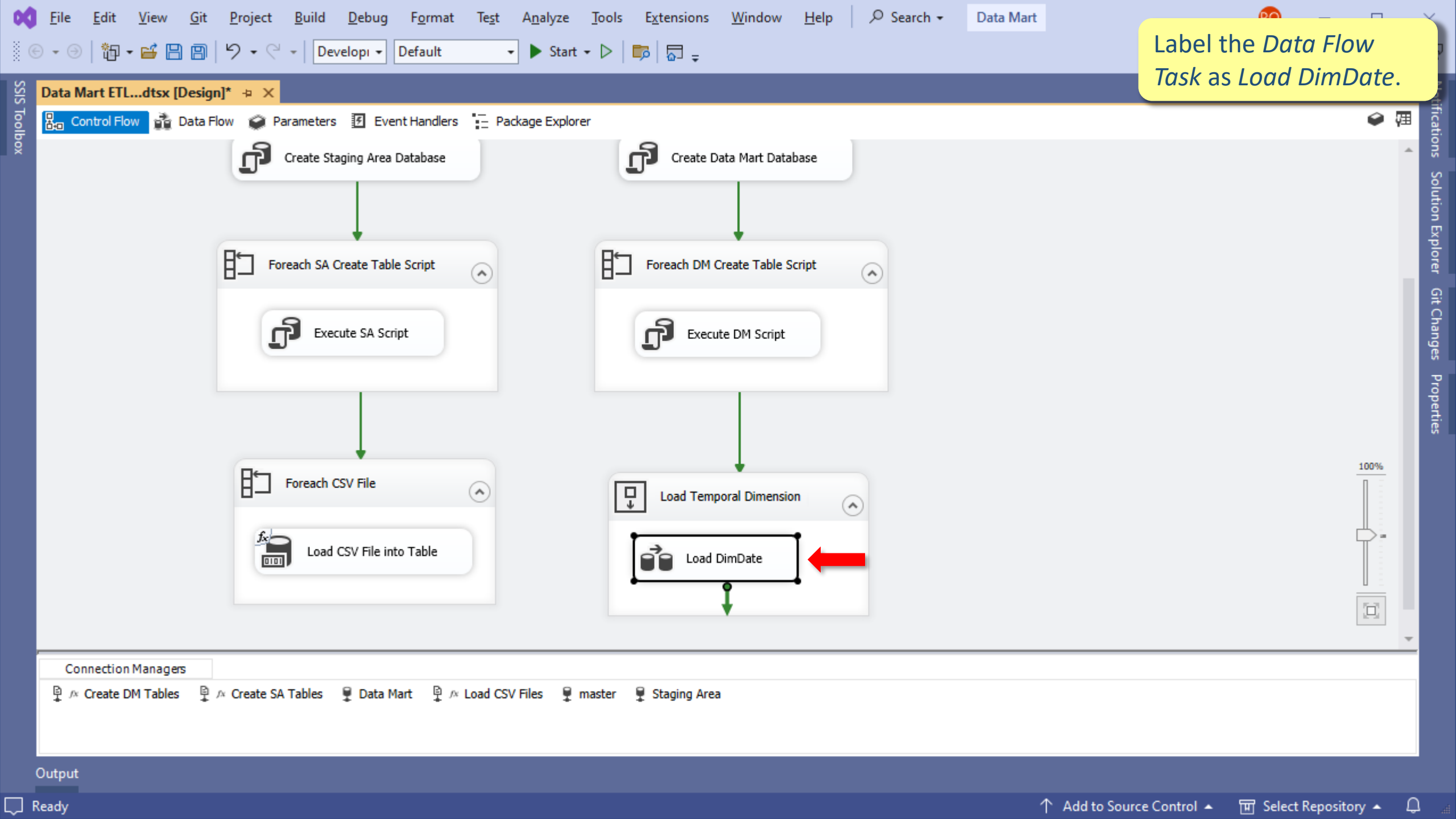
- Favorites
  - Data Flow Task**
  - Execute SQL Task
- Common
  - Analysis Services Processing Task
  - Bulk Insert Task
  - Data Profiling Task
  - Execute Package Task
  - Execute Process Task
  - Expression Task
  - File System Task
  - FTP Task
  - Hadoop File System Task
  - Hadoop Hive Task
  - Hadoop Pig Task
  - Script Task
  - Send Mail Task
  - Web Service Task
  - XML Task
- Azure

**Data Flow Task**

Moves data between sources and destinations while transforming and cleaning. Data can be moved between tables and files while efficiently processing the data in memory with transformations. This is an...

[Find Samples](#)

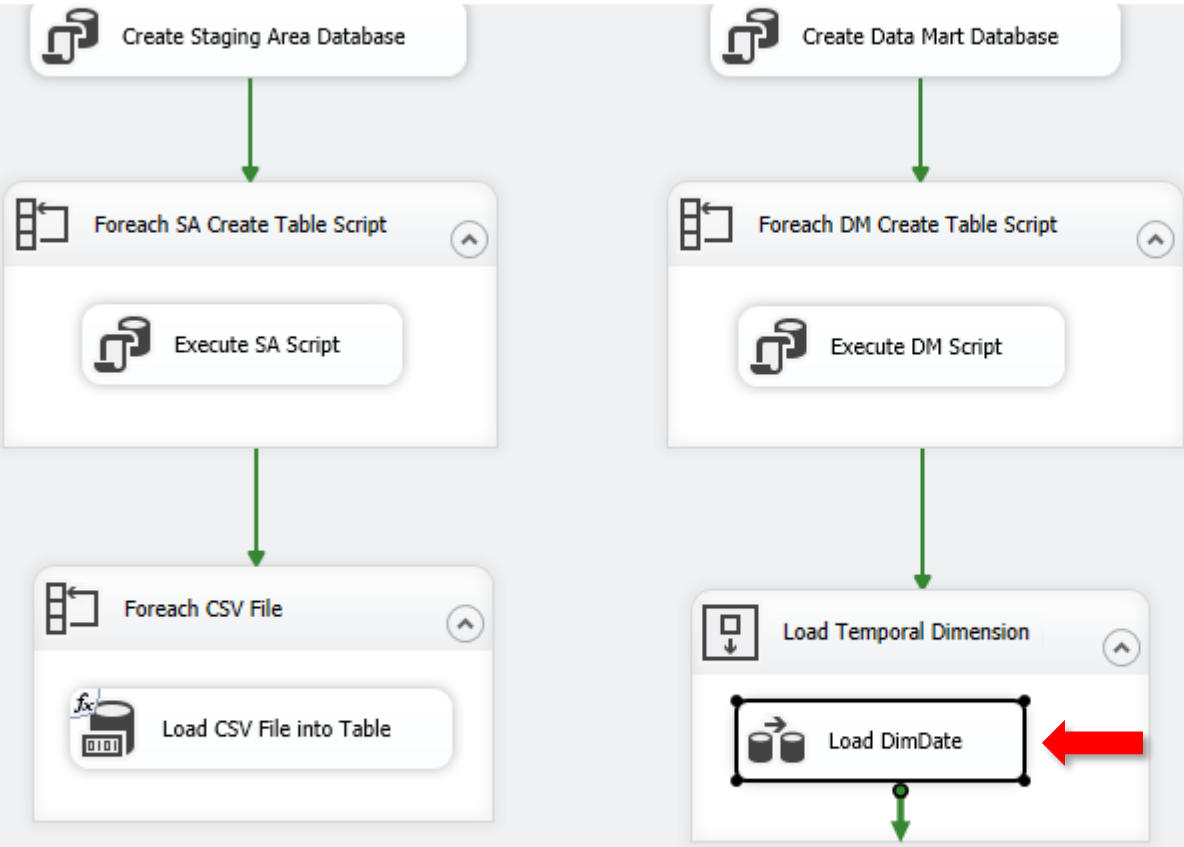




Label the *Data Flow Task* as *Load DimDate*.

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters Event Handlers Package Explorer

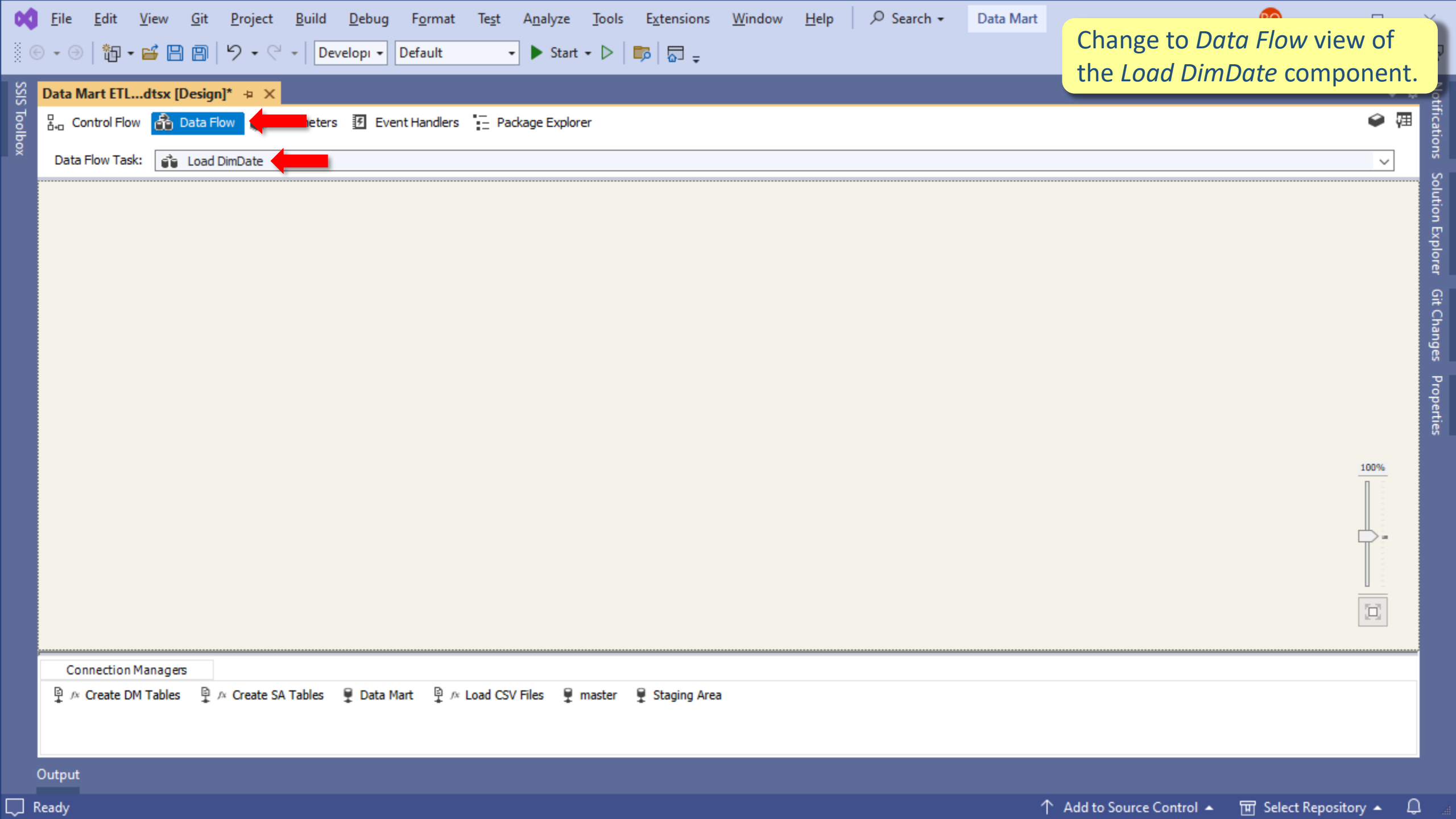


Connection Managers

Create DM Tables Create SA Tables Data Mart Load CSV Files master Staging Area

Output

Ready



Change to *Data Flow* view of the *Load DimDate* component.



Drag a *Flat File Source* from the *SSIS Toolbox* onto the *Data Flow* area.

SSIS Toolbox

Search SSIS Toolbox

- DQS Cleansing
- Export Column
- Fuzzy Grouping
- Fuzzy Lookup
- Import Column
- Percentage Sampling
- Pivot
- Row Sampling
- Term Extraction
- Term Lookup
- Unpivot
- Other Sources
  - ADO NET Source
  - CDC Source
  - Excel Source
  - Flat File Source**
  - OLE DB Source
  - Raw File Source
  - XML Source
- Other Destinations

**Flat File Source**

Reads a text file. Specify fixed widths for data columns or use delimiters to identify columns and rows. Use both techniques for files having a mixed format.

[Find Samples](#)

Event Handlers Package Explorer

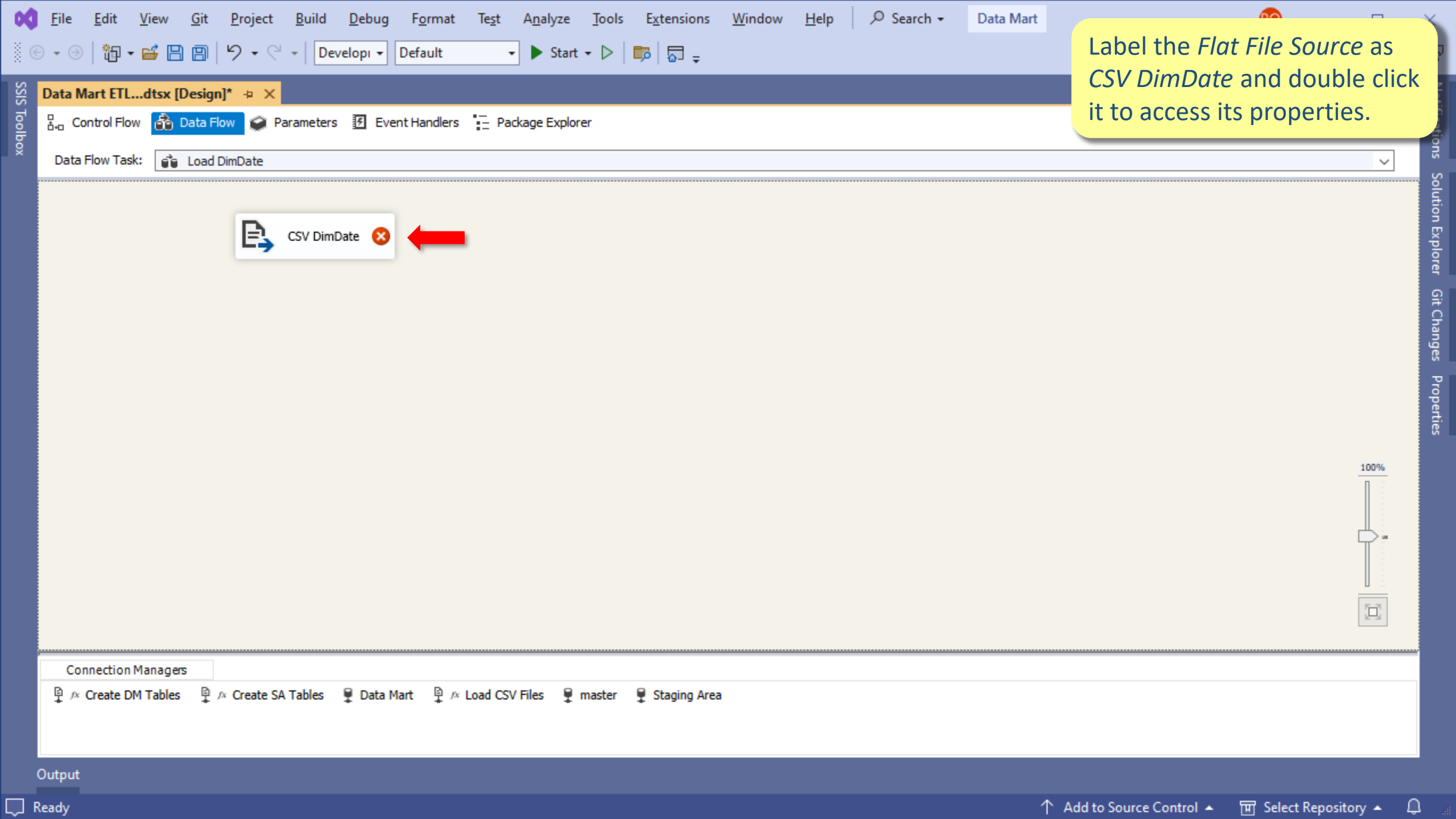
100%

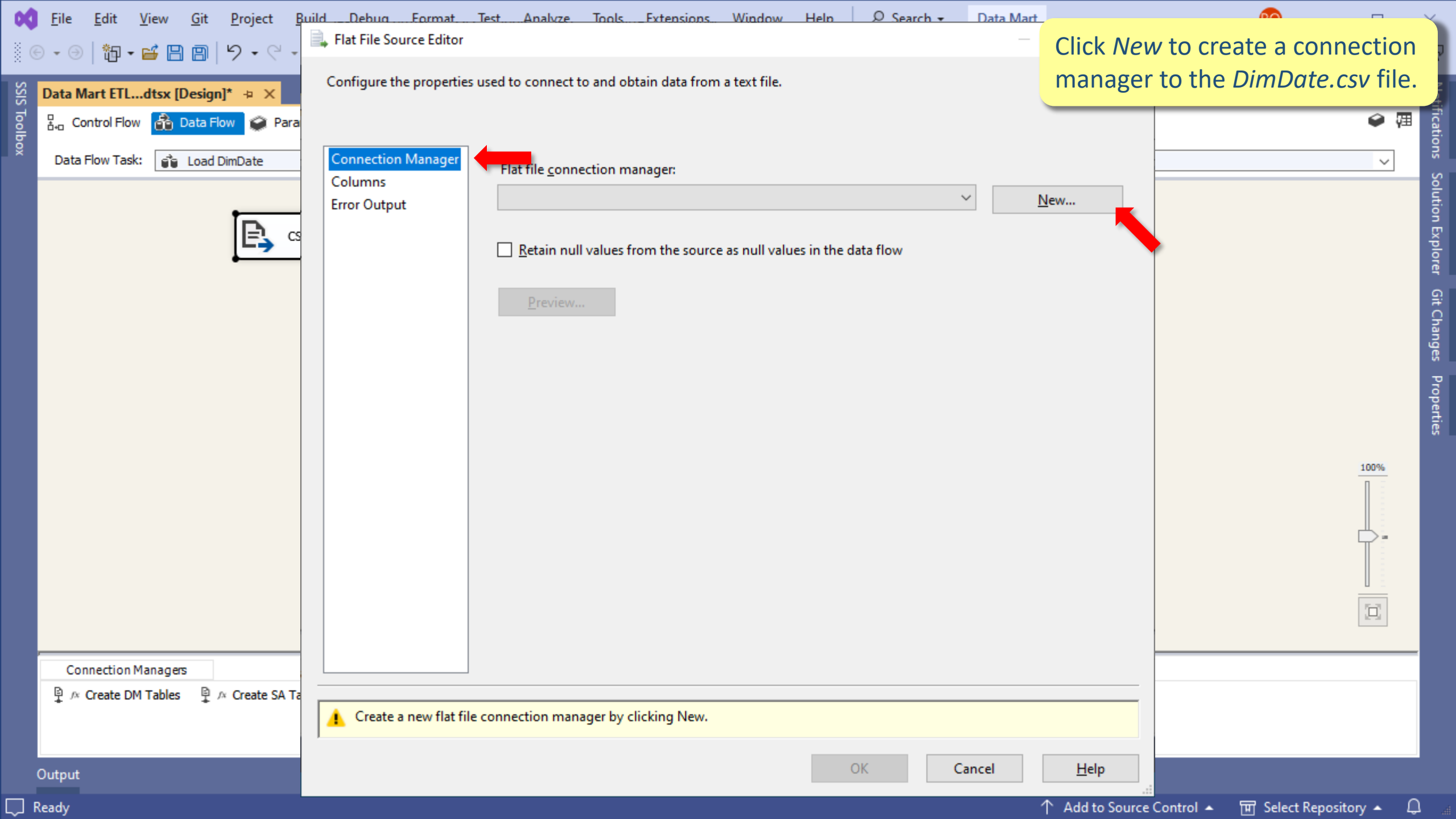
Data Mart Load CSV Files master Staging Area

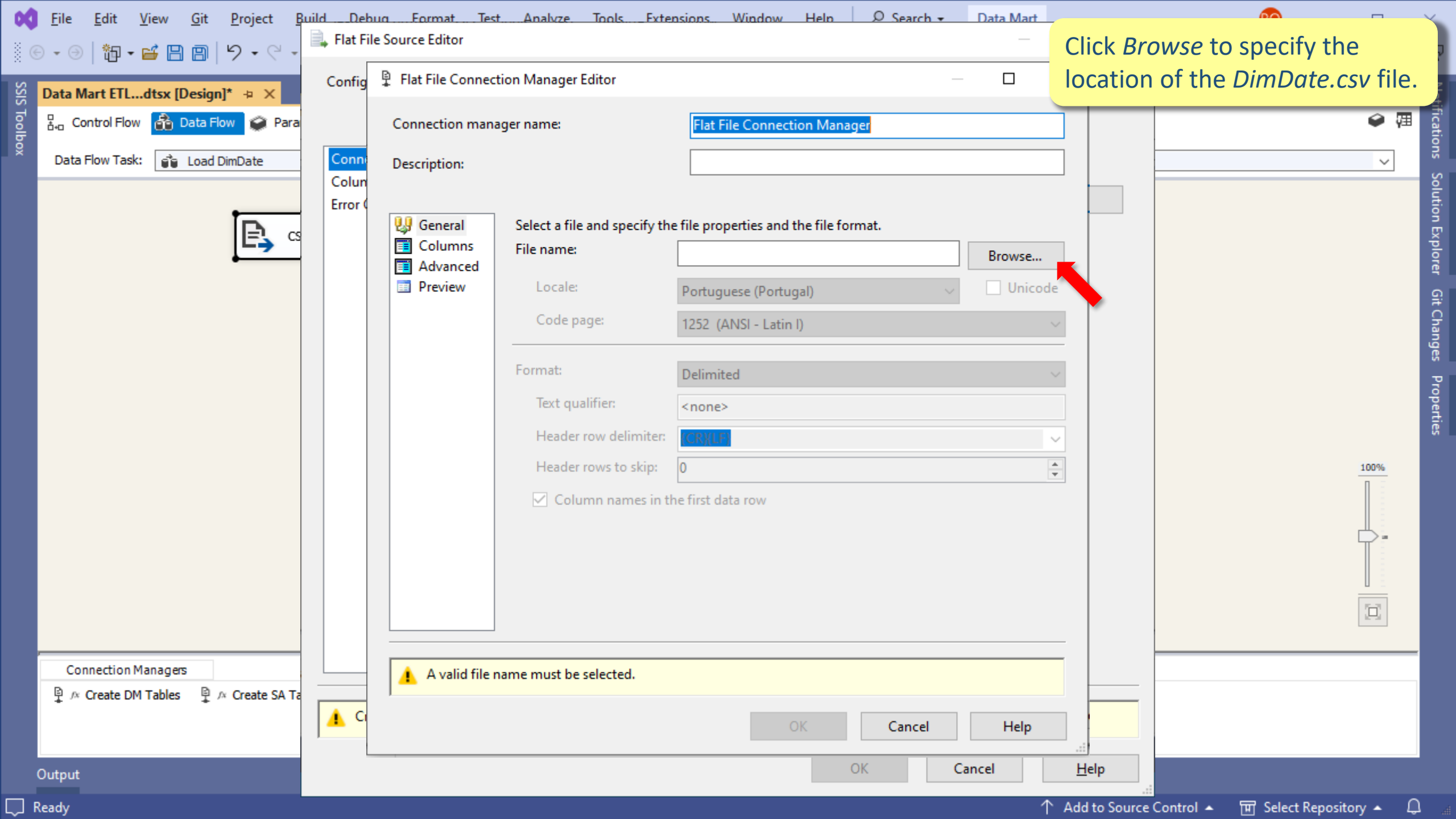
Output

Ready

Add to Source Control Select Repository







Click *Browse* to specify the location of the *DimDate.csv* file.

- General
- Columns
- Advanced
- Preview

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

File name:  Browse...

Locale: Portuguese (Portugal) ☐ Unicode

Code page: 1252 (ANSI - Latin I)

Format: Delimited

Text qualifier: <none>

Header row delimiter: CR/LF

Header rows to skip: 0

☒ Column names in the first data row

A valid file name must be selected.

OK Cancel Help

OK Cancel Help

Select the *DimDate.csv* file in the *Utils* folder.

Flat File Source Editor

Configure the properties used to connect to and obtain data from a text file.

Open

Path: This PC > Windows 10 (C:) > Temp > Data Mart > **Utils**

Search Utils

Organize New folder

Name	Date modified	Type	Size
<b>DimDate.csv</b>	12/4/2023 5:13 PM	CSV File	9,819 KB

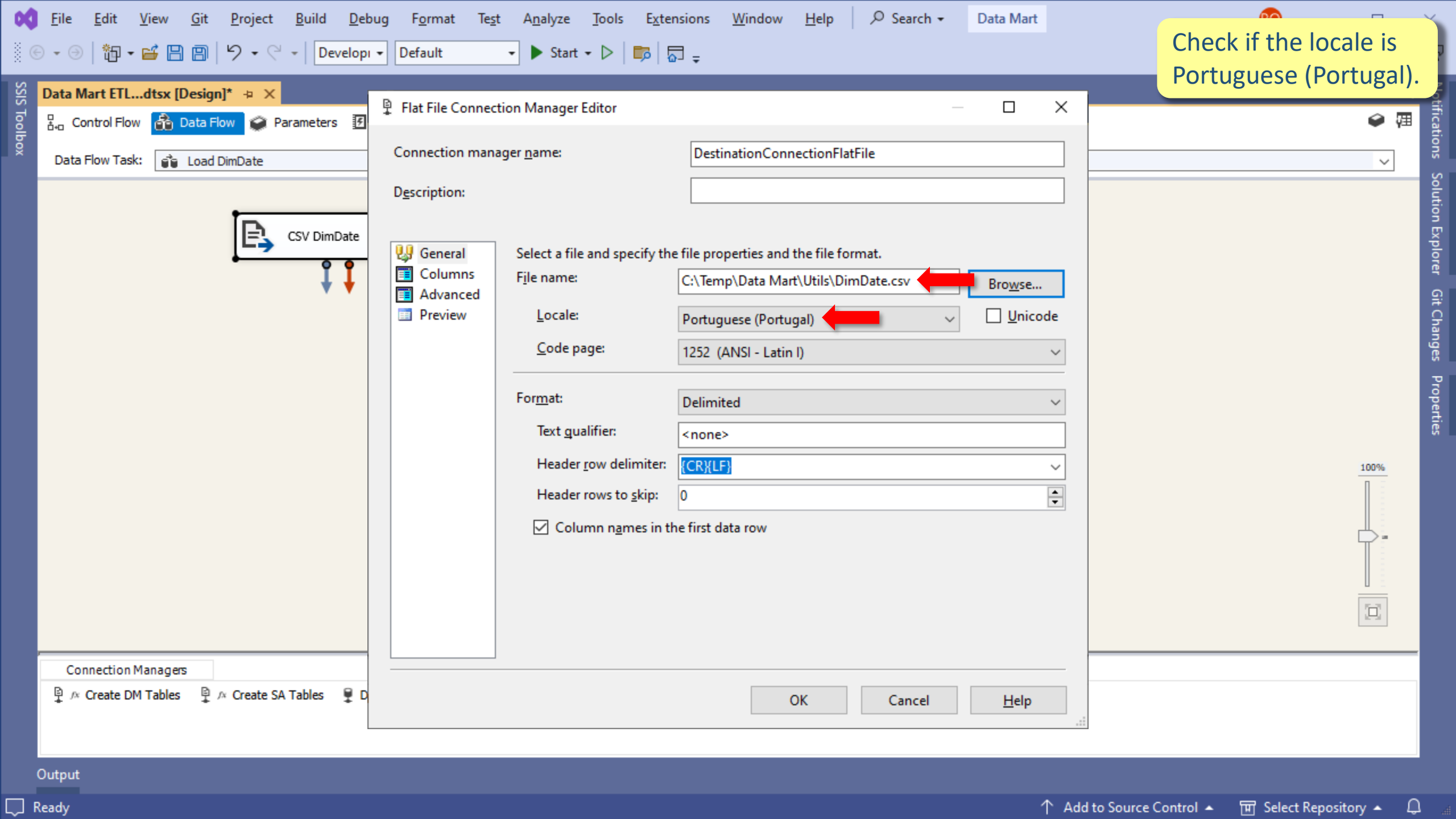
File name: DimDate.csv

File type: CSV files (\*.csv)

Open Cancel

⚠ Create a new flat file connection manager by clicking New.

OK Cancel Help



Check if the locale is Portuguese (Portugal).

In the *Columns* tab (on the left side), select *Semicolon (;)* as the column delimiter if needed.

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters

Data Flow Task: Load DimDate

CSV DimDate

Connection Managers

Create DM Tables Create SA Tables

Flat File Connection Manager Editor

Connection manager name: Flat File Connection Manager

Description:

Specify the characters that delimit the source file:

Row delimiter: {CR}{LF}

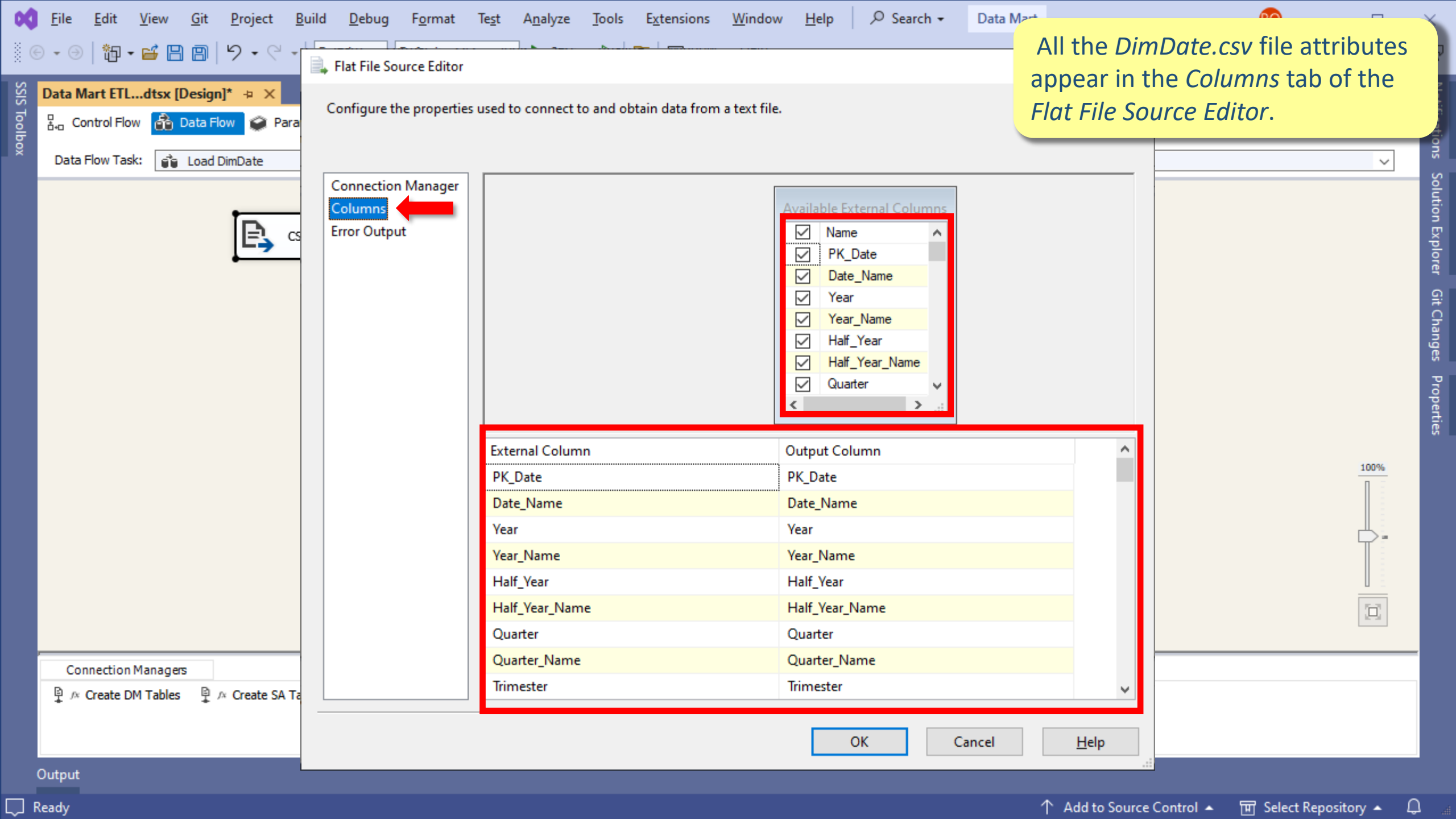
Column delimiter: Semicolon {;} ←

Preview rows 2-101:

PK_Date	Date_Name	Year	Year_Name	Ha
01/01/2000 00:00	Saturday, Januar...	01/01/2000 00:00	Calendar 2000	01
02/01/2000 00:00	Sunday, January ...	01/01/2000 00:00	Calendar 2000	01
03/01/2000 00:00	Monday, January ...	01/01/2000 00:00	Calendar 2000	01
04/01/2000 00:00	Tuesday, January...	01/01/2000 00:00	Calendar 2000	01
05/01/2000 00:00	Wednesday, Janu...	01/01/2000 00:00	Calendar 2000	01
06/01/2000 00:00	Thursday, Januar...	01/01/2000 00:00	Calendar 2000	01
07/01/2000 00:00	Friday, January 0...	01/01/2000 00:00	Calendar 2000	01

Refresh Reset Columns

OK Cancel Help



All the *DimDate.csv* file attributes appear in the *Columns* tab of the *Flat File Source Editor*.

## Flat File Source Editor

Configure the properties used to connect to and obtain data from a text file.

Connection Manager

Columns

Error Output

### Available External Columns

- ☒ Name
- ☒ PK\_Date
- ☒ Date\_Name
- ☒ Year
- ☒ Year\_Name
- ☒ Half\_Year
- ☒ Half\_Year\_Name
- ☒ Quarter

External Column	Output Column
PK_Date	PK_Date
Date_Name	Date_Name
Year	Year
Year_Name	Year_Name
Half_Year	Half_Year
Half_Year_Name	Half_Year_Name
Quarter	Quarter
Quarter_Name	Quarter_Name
Trimester	Trimester

OK

Cancel

Help

Output

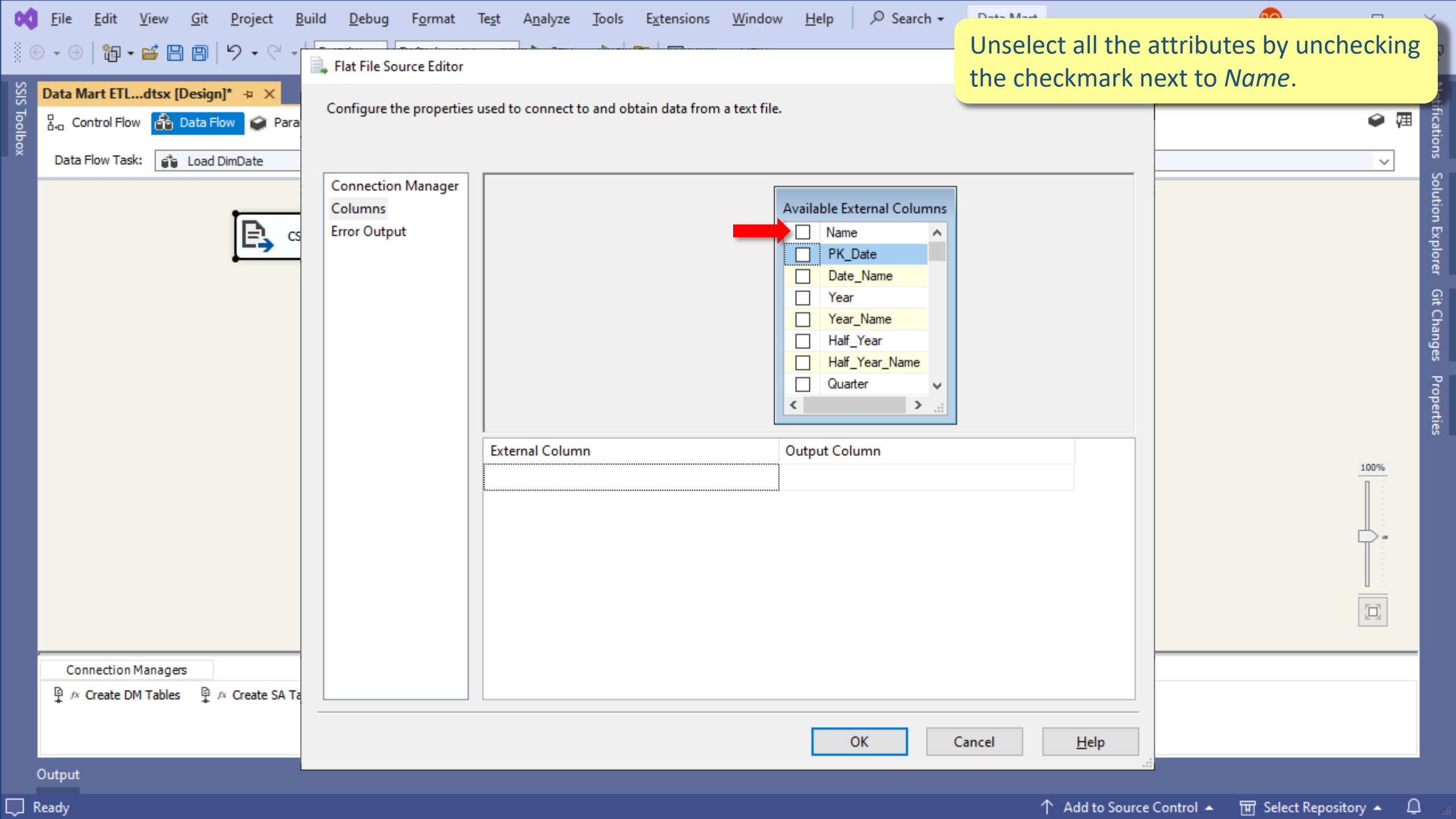
Ready

↑ Add to Source Control

☰ Select Repository







Unselect all the attributes by unchecking the checkmark next to *Name*.

Available External Columns

<input type="checkbox"/>	Name
<input type="checkbox"/>	PK_Date
<input type="checkbox"/>	Date_Name
<input type="checkbox"/>	Year
<input type="checkbox"/>	Year_Name
<input type="checkbox"/>	Half_Year
<input type="checkbox"/>	Half_Year_Name
<input type="checkbox"/>	Quarter

External Column	Output Column

OK Cancel Help

File Edit View Git Project

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters

Data Flow Task: Load DimDate

Connection Managers

Create DM Tables Create SA Tables

Output

Ready

Configure the properties used to connect to and obtain data from a text file.

Connection Manager

Columns

Error Output

Available External

- ☒ Name
- ☐ ISO\_8601\_Day
- ☐ ISO\_8601\_Week\_Of\_Year
- ☐ ISO\_8601\_Week\_Of\_Year\_N...
- ☒ Year (yyyy)
- ☒ MonthName
- ☒ DayOfWeek
- ☒ Weekend

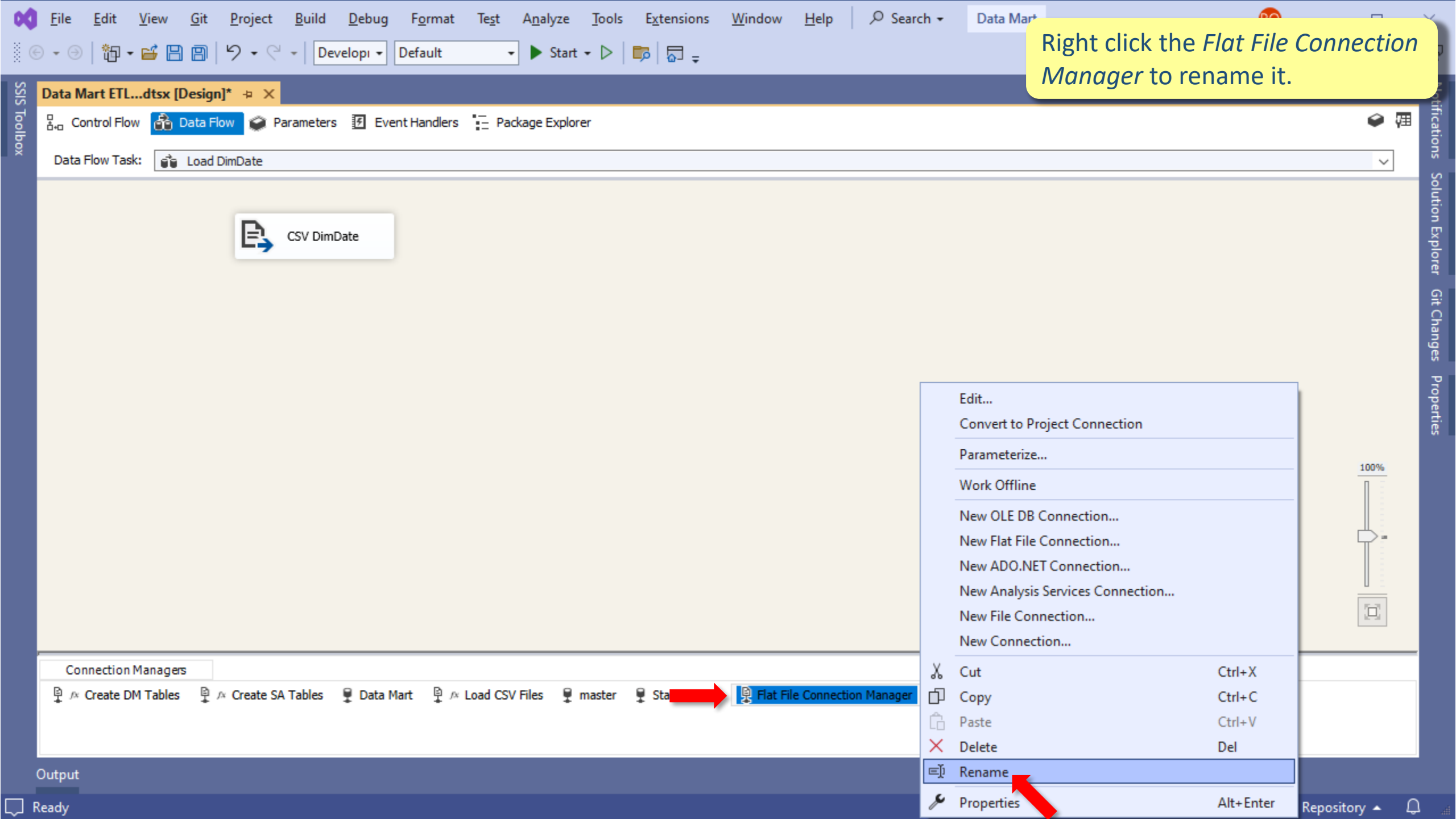
External Column	Output Column
PK_Date	PK_Date
Day_Of_Year	Day_Of_Year
Day_Of_Month	Day_Of_Month
Day_Of_Week	Day_Of_Week
Week_Of_Year	Week_Of_Year
Month_Of_Year	Month_Of_Year
Quarter_Of_Year	Quarter_Of_Year
Half_Year_Of_Year	Half_Year_Of_Year
Year (yyyy)	Year (yyyy)
MonthName	MonthName
DayOfWeek	DayOfWeek
Weekend	Weekend

OK

Cancel

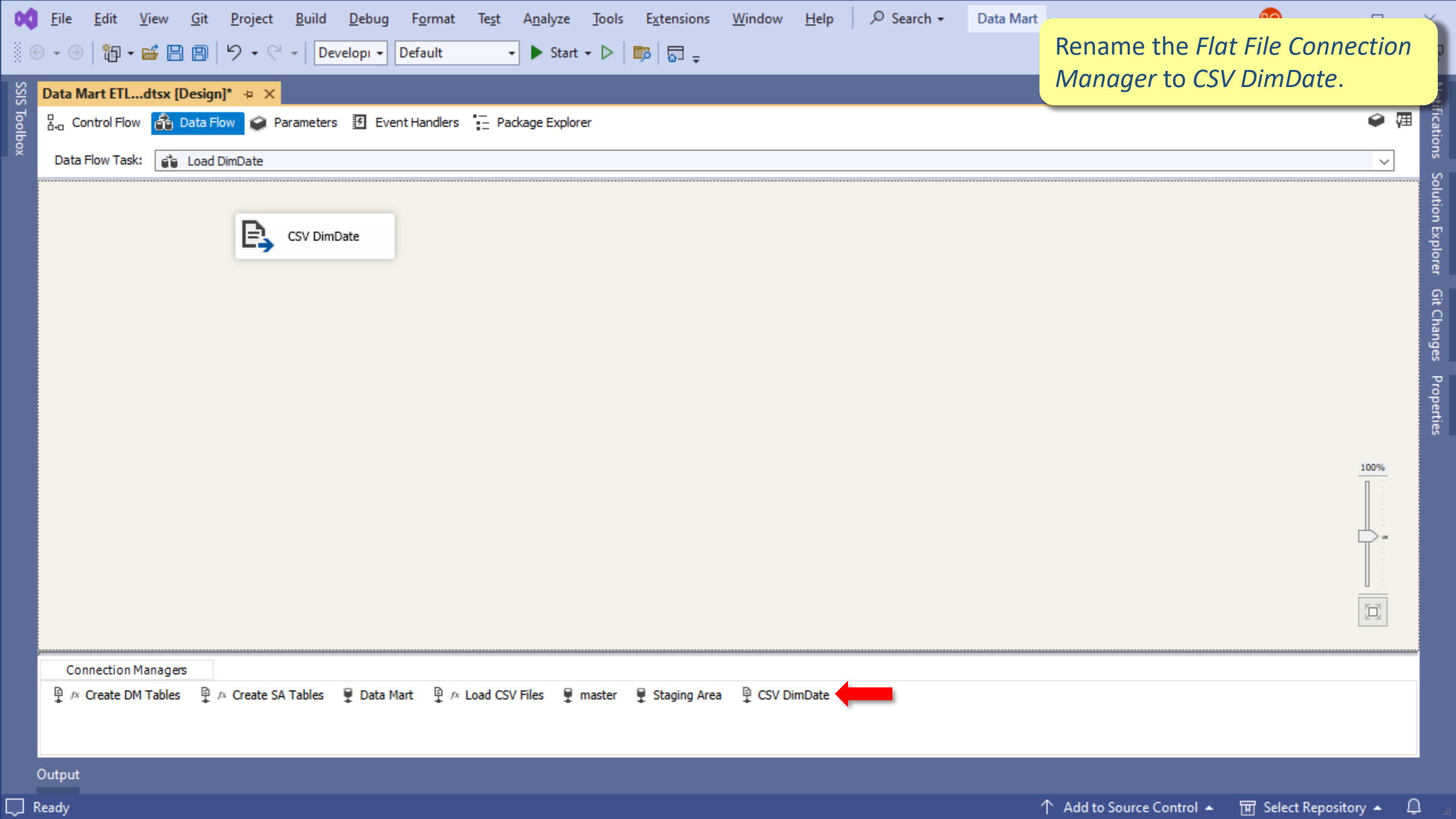
Help

Select the attributes according to the bottom of the figure, by checking the names of the intended attributes at the top of the figure. We are selecting just the *DimDate* attributes needed for the *Data Mart* example.



Right click the *Flat File Connection Manager* to rename it.

- Edit...
- Convert to Project Connection
- Parameterize...
- Work Offline
- New OLE DB Connection...
- New Flat File Connection...
- New ADO.NET Connection...
- New Analysis Services Connection...
- New File Connection...
- New Connection...
- Cut Ctrl+X
- Copy Ctrl+C
- Paste Ctrl+V
- Delete Del
- Rename**
- Properties Alt+Enter



Rename the *Flat File Connection Manager* to *CSV DimDate*.

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters Event Handlers Package Explorer

Data Flow Task: Load DimDate

CSV DimDate

Connection Managers

Create DM Tables Create SA Tables Data Mart Load CSV Files master Staging Area CSV DimDate

Output

Ready

Add to Source Control Select Repository

Drag an *OLE DB Destination* from the *SSIS Toolbox* onto the *Data Flow* area.

SSIS Toolbox

Search SSIS Toolbox

- Term Lookup
- Unpivot
- Other Sources
  - ADO NET Source
  - CDC Source
  - Excel Source
  - Flat File Source
  - OLE DB Source
  - Raw File Source
  - XML Source
- Other Destinations
  - ADO NET Destination
  - DataReader Destination
  - Excel Destination
  - Flat File Destination
  - OLE DB Destination**
  - Raw File Destination
  - Recordset Destination
  - SQL Server Compact Destination
  - SQL Server Destination

**OLE DB Destination**

Loads data into an OLE DB-compliant relational database, such as SQL Server. Many types of databases are OLE DB-compliant. With minor reconfiguration, this destination can be used...

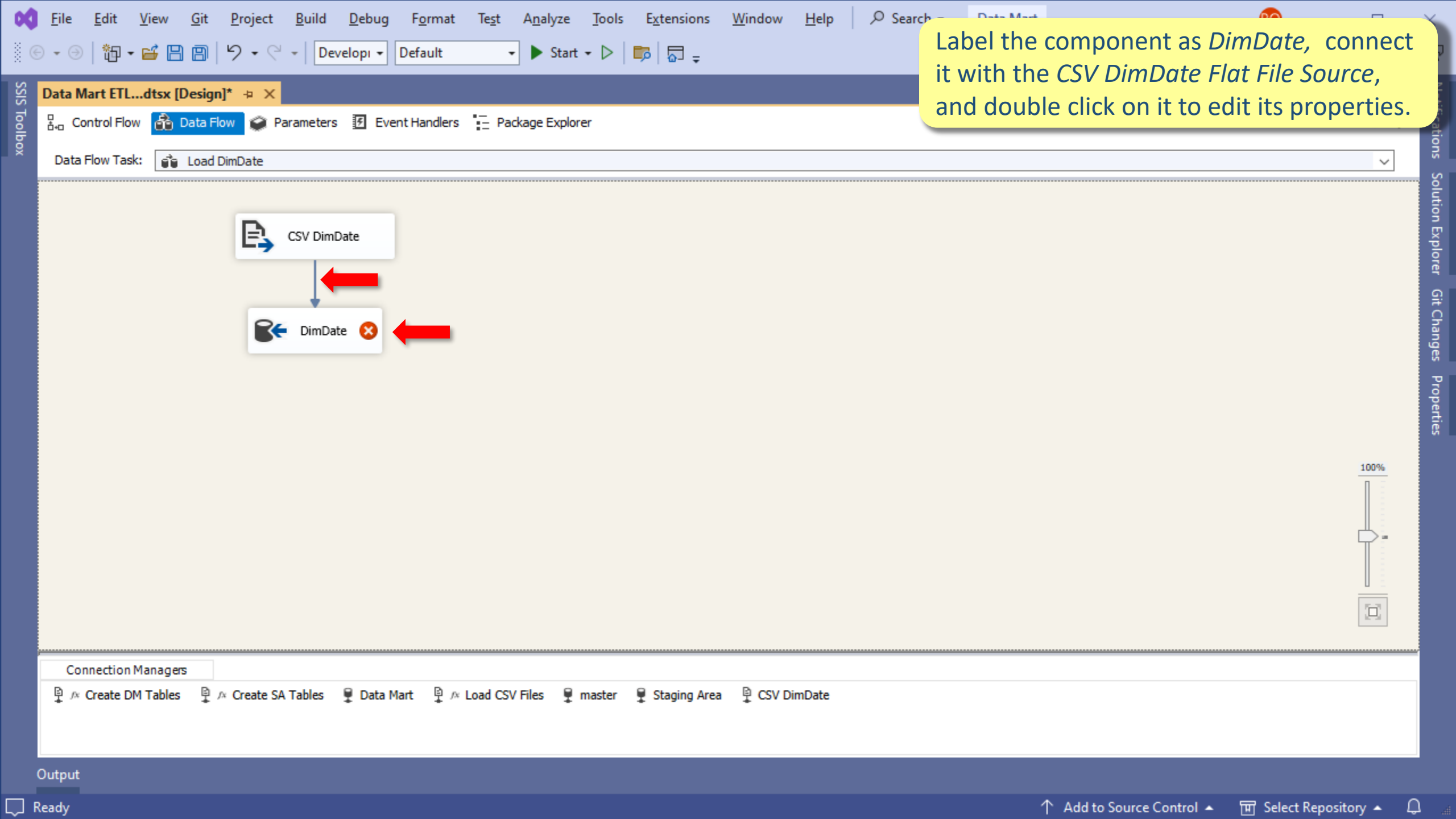
[Find Samples](#)

Event Handlers Package Explorer



Data Mart Load CSV Files master Staging Area CSV DimDate

Output



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

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:

Data Mart

New...

Data access mode:

Table or view - fast load

Name of the table or the view:

[dbo].[DimDate]

New...

☐ Keep identity☒ Table lock☐ Keep nulls☒ Check constraints

Rows per batch:

Maximum insert commit size:

2147483647

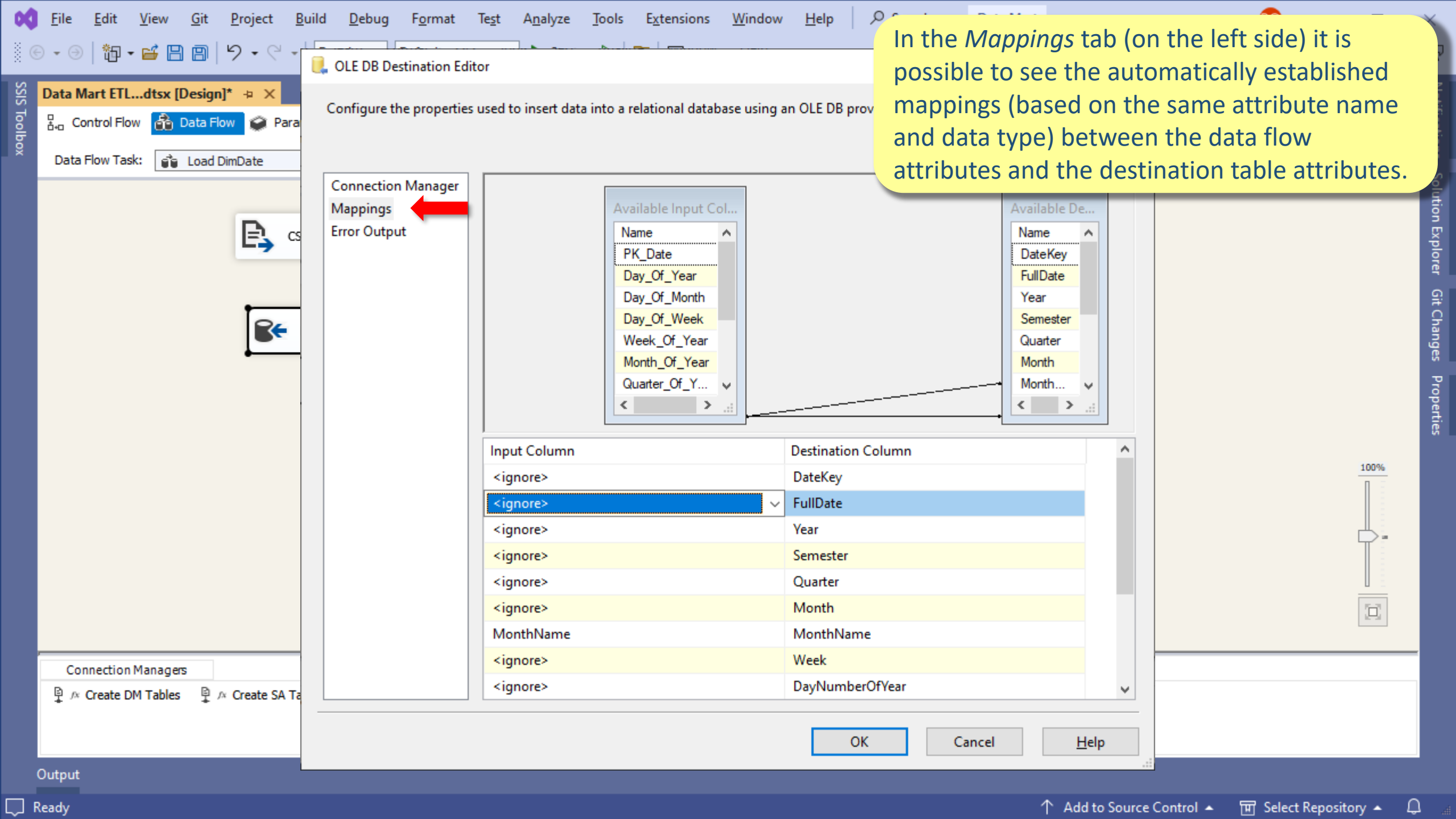
View Existing

 Map the columns on the Mappings page.

OK

Cancel

[Help](#)





File Edit View Git Project

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters

Data Flow Task: Load DimDate

Connection Managers

Create DM Tables Create SA Tables

Output

Ready

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  
PK\_Date  
Day\_Of\_Year  
Day\_Of\_Month  
Day\_Of\_Week  
Week\_Of\_Year  
Month\_Of\_Year  
Quarter\_Of\_Y...

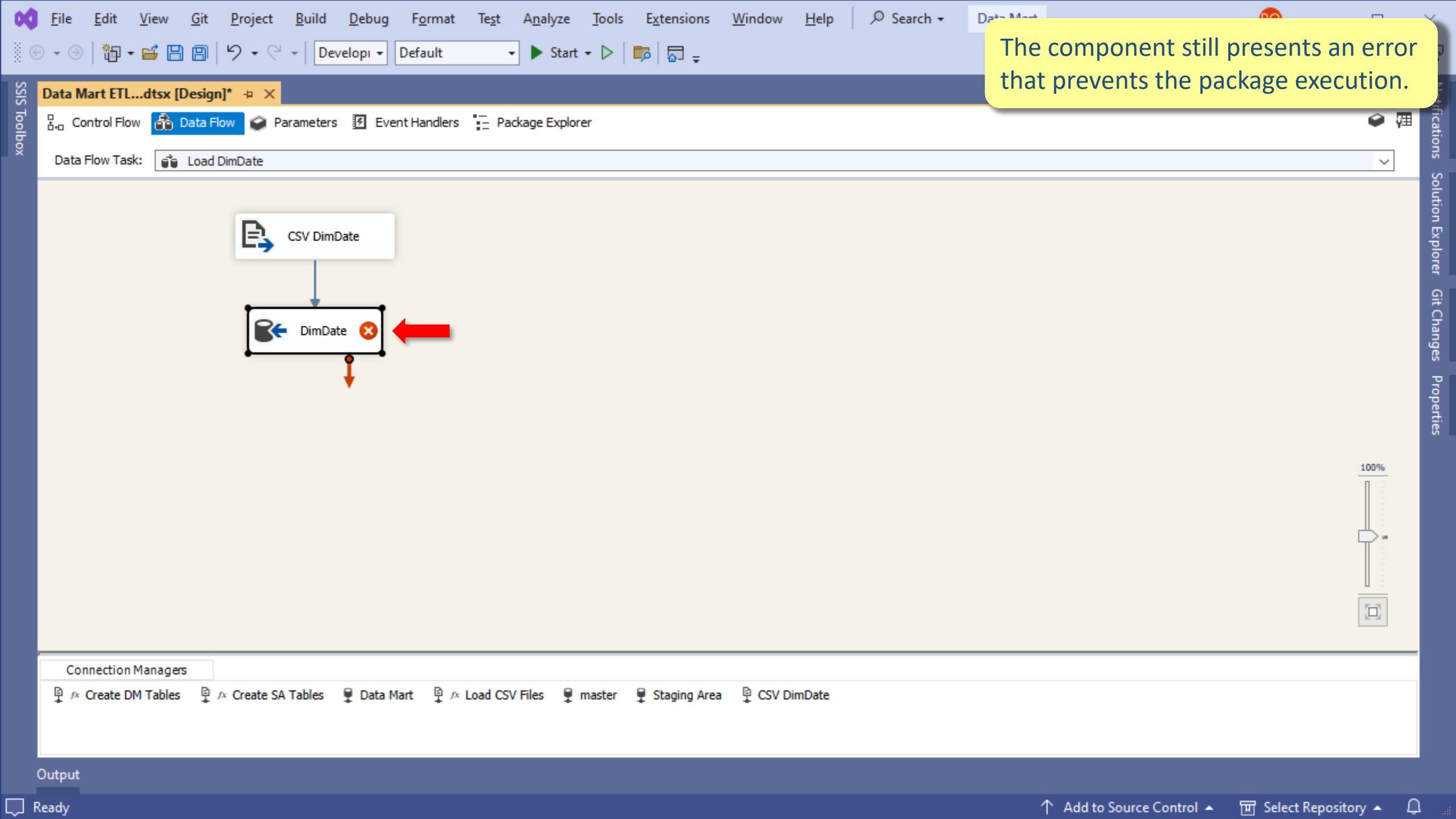
Available Destination Columns

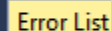
Name  
DateKey  
FullDate  
Year  
Semester  
Quarter  
Month  
Month...

Input Column	Destination Column
<ignore>	DateKey
PK_Date	FullDate
Year (yyyy)	Year
Half_Year_Of_Year	Semester
Quarter_Of_Year	Quarter
Month_Of_Year	Month
MonthName	MonthName
Week_Of_Year	Week
Day_Of_Year	DayNumberOfYear
Day_Of_Month	DayNumberOfMonth
Day_Of_Week	DayNumberOfWeek
DayOfWeek	DayOfWeek
Weekend	Weekend

Establish the mappings between the CSV DimDate attributes and the DimDate table attributes according to the image.

OK Cancel Help





Entire Solution

6 Errors

**! 0 Warnings**

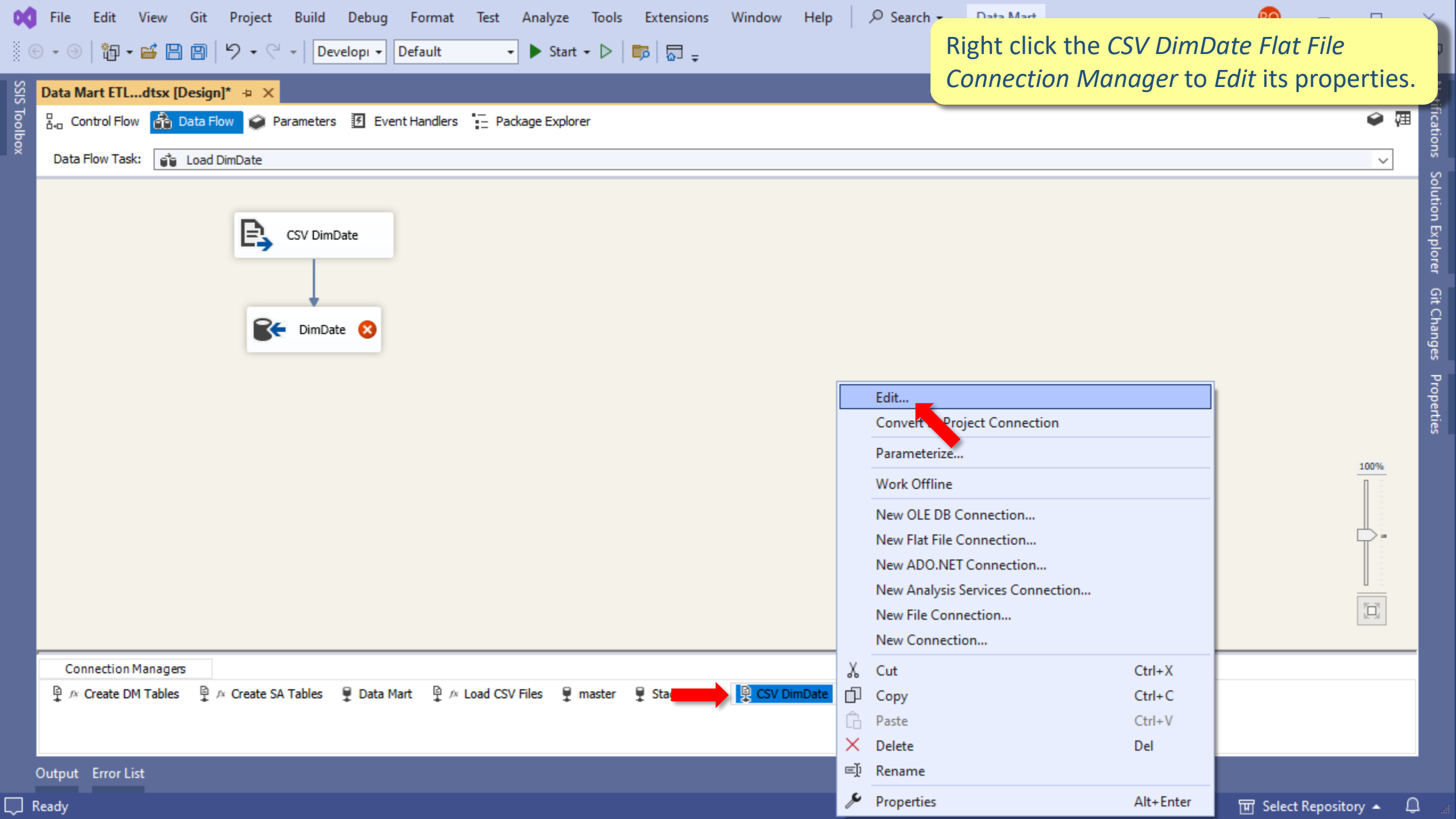
 0 Messages

 Build + IntelliSense

## Search Error List

Description	Project	File	Line
Validation error. Load DimDate DimDate [342]: Column "MonthName" cannot convert between unicode and non-unicode string data types.		Package.dtsx	0
Validation error. Load DimDate DimDate [342]: Column "Weekend" cannot convert between unicode and non-unicode string data types.		Package.dtsx	0
Validation error. Load DimDate: Load DimDate: Column "MonthName" cannot convert between unicode and non-unicode string data types.		Package.dtsx	0
Validation error. Load DimDate: Load DimDate: Column "DayOfWeek" cannot convert between unicode and non-unicode string data types.		Package.dtsx	0
Validation error. Load DimDate: Load DimDate: Column "Weekend" cannot convert between unicode and non-unicode string data types.		Package.dtsx	0
Validation error. Load DimDate DimDate [342]: Column "DayOfWeek" cannot convert between unicode and non-unicode string data types.		Package.dtsx	0

Right click the *CSV DimDate Flat File Connection Manager* to Edit its properties.



In the *Advanced* tab (on the left side) change the *MonthName* data type to *Unicode string*.

Flat File Connection Manager Editor

Connection manager name: CSV DimDate

Description:

Configure the properties of each column.

General Columns **Advanced** Preview

Full\_Year\_Of\_Year  
Half\_Year\_Of\_Year\_Name  
ISO\_8601\_Year  
ISO\_8601\_Year\_Name  
ISO\_8601\_Week  
ISO\_8601\_Week\_Name  
ISO\_8601\_Day  
ISO\_8601\_Day\_Name  
ISO\_8601\_Day\_Of\_Year  
ISO\_8601\_Day\_Of\_Year\_Name  
ISO\_8601\_Day\_Of\_Week  
ISO\_8601\_Day\_Of\_Week\_Name  
ISO\_8601\_Week\_Of\_Year  
ISO\_8601\_Week\_Of\_Year\_Name  
Year (yyyy)  
**MonthName**  
DayOfWeek  
Weekend

New Delete Suggest Types...

**Misc**

Name	MonthName
ColumnDelimiter	Semicolon (;)
ColumnType	Delimited
InputColumnWidth	0
DataPrecision	0
DataScale	0
<b>DataType</b>	<b>Unicode string [DT_WSTR]</b>
OutputColumnWidth	50
TextQualified	True

DataType

OK Cancel Help

In the *Advanced* tab (on the left side) change the *DayOfWeek* data type to *Unicode string*.

Flat File Connection Manager Editor

Connection manager name: CSV DimDate

Description:

Configure the properties of each column.

General Columns **Advanced** Preview

- Full\_Year\_Of\_Year
- Half\_Year\_Of\_Year\_Name
- ISO\_8601\_Year
- ISO\_8601\_Year\_Name
- ISO\_8601\_Week
- ISO\_8601\_Week\_Name
- ISO\_8601\_Day
- ISO\_8601\_Day\_Name
- ISO\_8601\_Day\_Of\_Year
- ISO\_8601\_Day\_Of\_Year\_Name
- ISO\_8601\_Day\_Of\_Week
- ISO\_8601\_Day\_Of\_Week\_Name
- ISO\_8601\_Week\_Of\_Year
- ISO\_8601\_Week\_Of\_Year\_Name
- Year (yyyy)
- MonthName
- DayOfWeek**
- Weekend

New Delete Suggest Types...

**Misc**

Name	DayOfWeek
ColumnDelimiter	Semicolon (;)
ColumnType	Delimited
InputColumnWidth	0
DataPrecision	0
DataScale	0
<b>DataType</b>	<b>Unicode string [DT_WSTR]</b>
OutputColumnWidth	50
TextQualified	True

DataType

OK Cancel Help

Connection Managers

Create DM Tables Create SA Tables

Output Error List

In the *Advanced* tab (on the left side) change the *Weekend* data type to *Unicode string*. Actually, you could have performed these changes in a single step by first selecting the three attributes and then changing their *DataType* property to *Unicode String*.

Flat File Connection Manager Editor

Connection manager name: CSV DimDate

Description:

Configure the properties of each column.

General Columns **Advanced** Preview

- Year\_Of\_Year
- Half\_Year\_Of\_Year\_Name
- ISO\_8601\_Year
- ISO\_8601\_Year\_Name
- ISO\_8601\_Week
- ISO\_8601\_Week\_Name
- ISO\_8601\_Day
- ISO\_8601\_Day\_Name
- ISO\_8601\_Day\_Of\_Year
- ISO\_8601\_Day\_Of\_Year\_Name
- ISO\_8601\_Day\_Of\_Week
- ISO\_8601\_Day\_Of\_Week\_Name
- ISO\_8601\_Week\_Of\_Year
- ISO\_8601\_Week\_Of\_Year\_Name
- Year (yyyy)
- MonthName
- DayOfWeek
- Weekend**

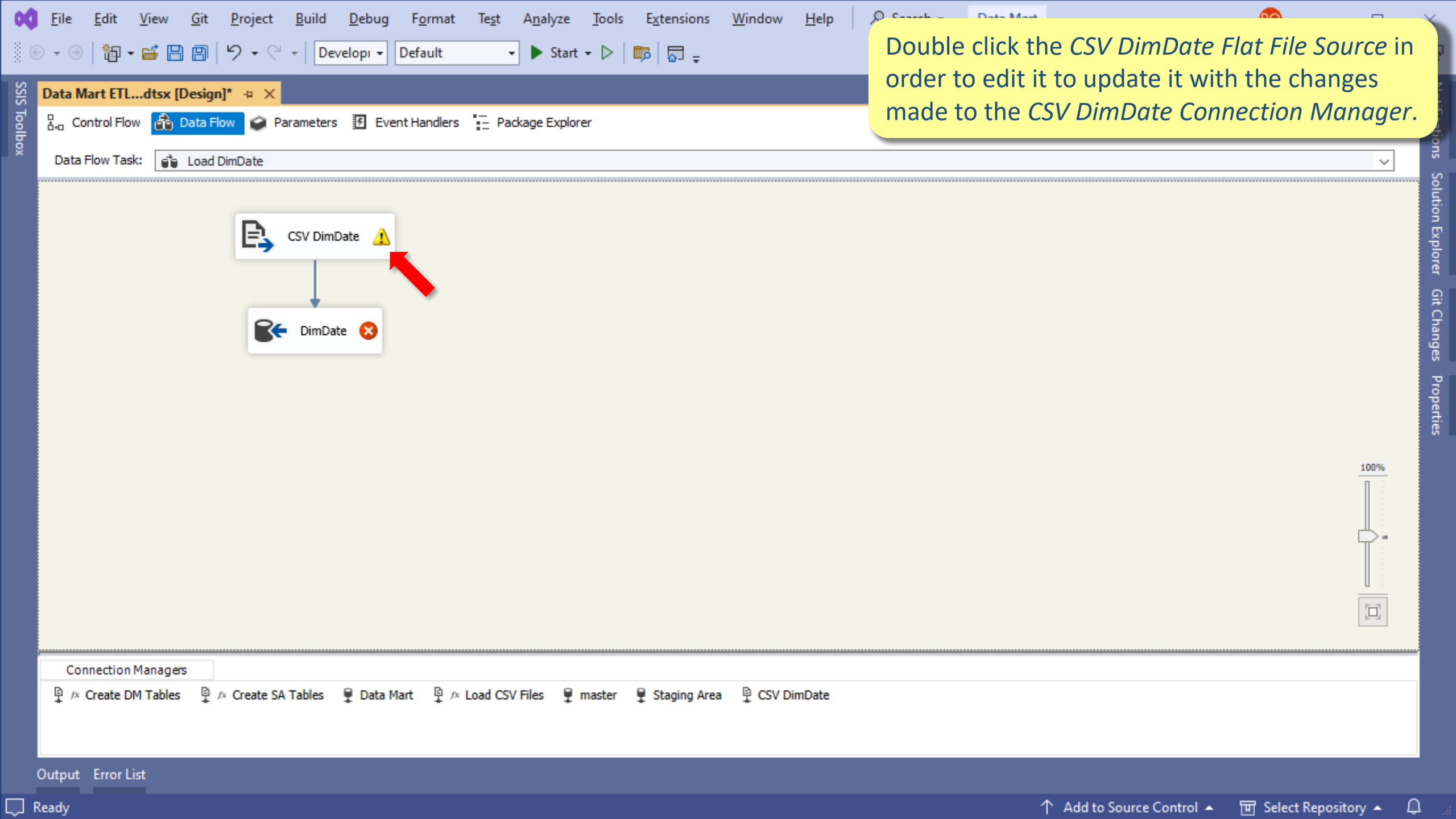
New Delete Suggest Types...

**Misc**

Name	Weekend
ColumnDelimiter	{CR}{LF}
ColumnType	Delimited
InputColumnWidth	0
DataPrecision	0
DataScale	0
<b>DataType</b>	<b>Unicode string [DT_WSTR]</b>
OutputColumnWidth	50
TextQualified	True

DataType

OK Cancel Help



Double click the *CSV DimDate Flat File Source* in order to edit it to update it with the changes made to the *CSV DimDate Connection Manager*.

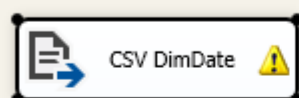


Confirm the update of the component metadata.

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters Event Handlers Package Explorer

Data Flow Task: Load DimDate



Microsoft Visual Studio



The metadata of the following output columns does not match the metadata of the external columns with which the output columns are associated:

Output "Flat File Source Output": "MonthName", "DayOfWeek", "Weekend"

Do you want to replace the metadata of the output columns with the metadata of the external columns?

Copy message

Yes

No

Connection Managers

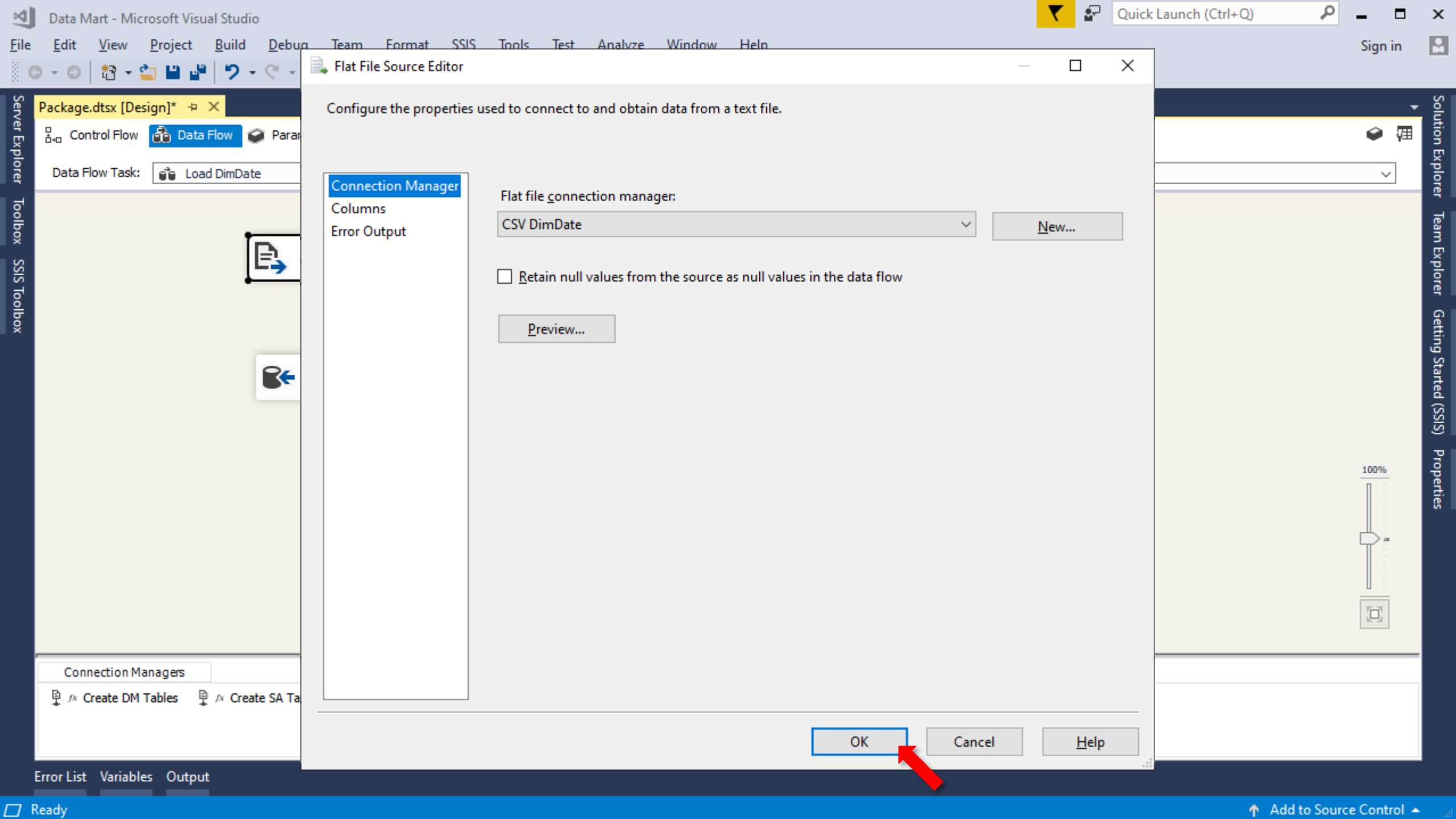
Create DM Tables Create SA Tables Data Mart Load CSV Files master Staging Area CSV DimDate

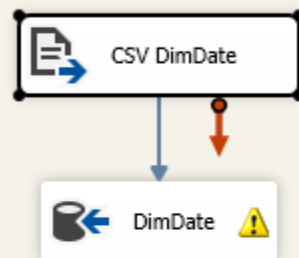
Output Error List

Ready

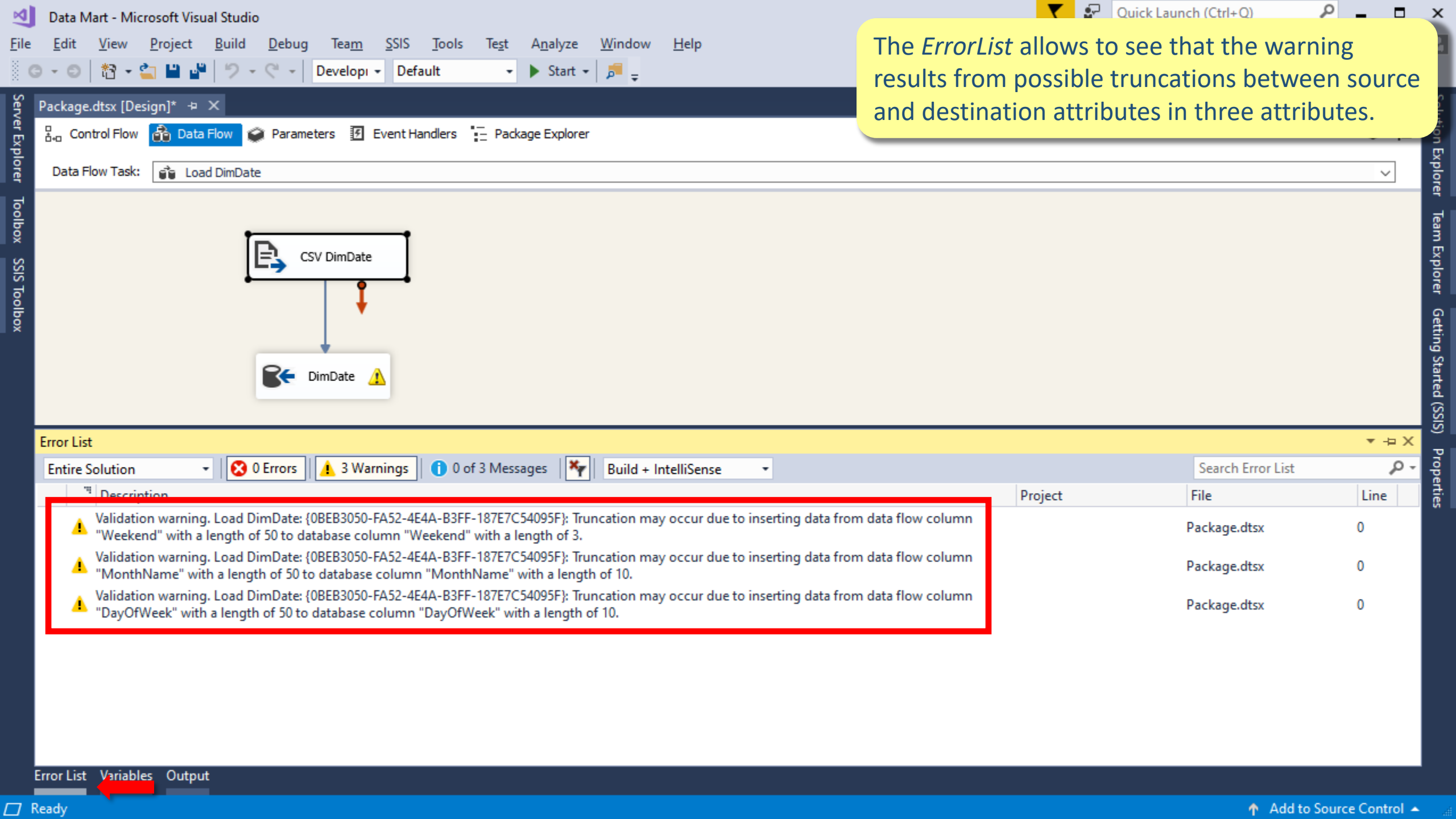
Add to Source Control

Select Repository





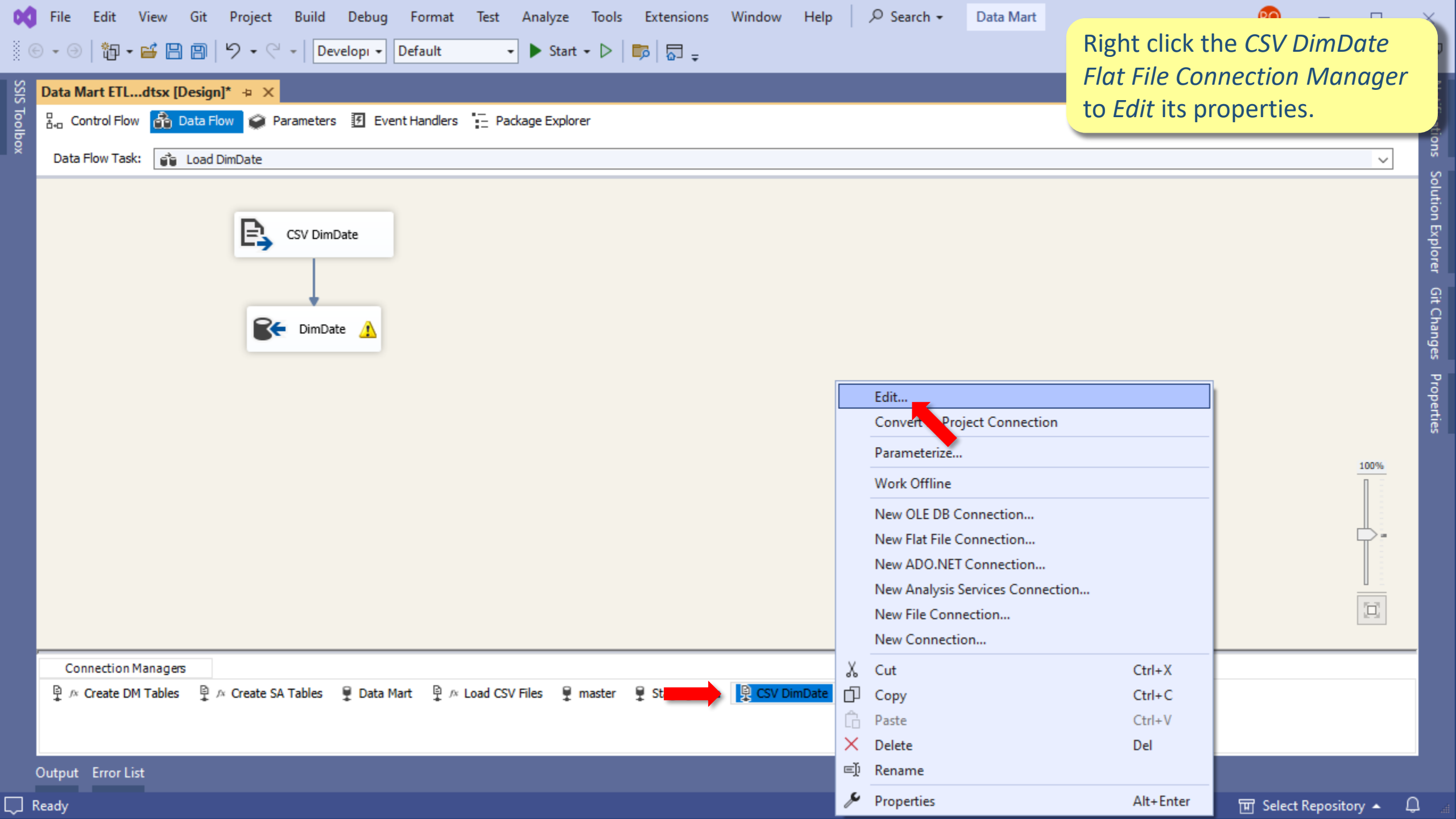
The component still presents a warning. Although a warning does not prevent package execution, it should be investigated and corrected.



The *ErrorList* allows to see that the warning results from possible truncations between source and destination attributes in three attributes.

Error List

Entire Solution	0 Errors	3 Warnings	0 of 3 Messages	Build + IntelliSense	Search Error List
Description	Project	File	Line		
Validation warning. Load DimDate: {0BEB3050-FA52-4E4A-B3FF-187E7C54095F}: Truncation may occur due to inserting data from data flow column "Weekend" with a length of 50 to database column "Weekend" with a length of 3.		Package.dtsx	0		
Validation warning. Load DimDate: {0BEB3050-FA52-4E4A-B3FF-187E7C54095F}: Truncation may occur due to inserting data from data flow column "MonthName" with a length of 50 to database column "MonthName" with a length of 10.		Package.dtsx	0		
Validation warning. Load DimDate: {0BEB3050-FA52-4E4A-B3FF-187E7C54095F}: Truncation may occur due to inserting data from data flow column "DayOfWeek" with a length of 50 to database column "DayOfWeek" with a length of 10.		Package.dtsx	0		



Right click the *CSV DimDate Flat File Connection Manager* to *Edit* its properties.

- Edit...
- Convert to Project Connection
- Parameterize...
- Work Offline
- New OLE DB Connection...
- New Flat File Connection...
- New ADO.NET Connection...
- New Analysis Services Connection...
- New File Connection...
- New Connection...
- Cut Ctrl+X
- Copy Ctrl+C
- Paste Ctrl+V
- Delete Del
- Rename
- Properties Alt+Enter

In the *Advanced* tab (on the left side) change the *OutputColumnWidth* of the *MonthName* to 10.

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters

Data Flow Task: Load DimDate

CSV DimDate

DimDate

Connection Managers

Create DM Tables Create SA Tables

Flat File Connection Manager Editor

Connection manager name: CSV DimDate

Description:

Configure the properties of each column.

General Columns **Advanced** Preview

Full\_Year\_Of\_Year  
Half\_Year\_Of\_Year\_Name  
ISO\_8601\_Year  
ISO\_8601\_Year\_Name  
ISO\_8601\_Week  
ISO\_8601\_Week\_Name  
ISO\_8601\_Day  
ISO\_8601\_Day\_Name  
ISO\_8601\_Day\_Of\_Year  
ISO\_8601\_Day\_Of\_Year\_Name  
ISO\_8601\_Day\_Of\_Week  
ISO\_8601\_Day\_Of\_Week\_Name  
ISO\_8601\_Week\_Of\_Year  
ISO\_8601\_Week\_Of\_Year\_Name  
Year (yyyy)  
**MonthName**  
DayOfWeek  
Weekend

New Delete Suggest Types...

**Misc**

Name	MonthName
ColumnDelimiter	Semicolon (;)
ColumnType	Delimited
InputColumnWidth	0
DataPrecision	0
DataScale	0
DataType	Unicode string [DT_WSTR]
<b>OutputColumnWidth</b>	<b>10</b>
TextQualified	True

**OutputColumnWidth**  
The width of this column in the data flow, given in single characters. Composite charact...

OK Cancel Help

100%

In the *Advanced* tab (on the left side) change the *OutputColumnWidth* of the *DayOfWeek* to 10.

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters

Data Flow Task: Load DimDate

CSV DimDate

DimDate

Connection Managers

Create DM Tables Create SA Tables

Flat File Connection Manager Editor

Connection manager name: CSV DimDate

Description:

Configure the properties of each column.

General Columns Advanced Preview

Full\_Year\_Of\_Year  
Half\_Year\_Of\_Year\_Name  
ISO\_8601\_Year  
ISO\_8601\_Year\_Name  
ISO\_8601\_Week  
ISO\_8601\_Week\_Name  
ISO\_8601\_Day  
ISO\_8601\_Day\_Name  
ISO\_8601\_Day\_Of\_Year  
ISO\_8601\_Day\_Of\_Year\_Name  
ISO\_8601\_Day\_Of\_Week  
ISO\_8601\_Day\_Of\_Week\_Name  
ISO\_8601\_Week\_Of\_Year  
ISO\_8601\_Week\_Of\_Year\_Name  
Year (yyyy)  
MonthName  
DayOfWeek  
Weekend

New Delete Suggest Types...

Misc

Name	DayOfWeek
ColumnDelimiter	Semicolon (;)
ColumnType	Delimited
InputColumnWidth	0
DataPrecision	0
DataScale	0
DataType	Unicode string [DT_WSTR]
OutputColumnWidth	10
TextQualified	True

OutputColumnWidth

The width of this column in the data flow, given in single characters. Composite charact...

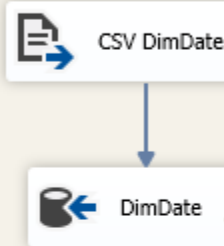
OK Cancel Help

In the *Advanced* tab (on the left side) change the *OutputColumnWidth* of the *Weekend* to 3.

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters

Data Flow Task: Load DimDate



Connection Managers

Create DM Tables Create SA Tables

Output Error List

Flat File Connection Manager Editor

Connection manager name: CSV DimDate

Description:

Configure the properties of each column.

General Columns **Advanced** Preview

Full\_Year\_Of\_Year  
Half\_Year\_Of\_Year\_Name  
ISO\_8601\_Year  
ISO\_8601\_Year\_Name  
ISO\_8601\_Week  
ISO\_8601\_Week\_Name  
ISO\_8601\_Day  
ISO\_8601\_Day\_Name  
ISO\_8601\_Day\_Of\_Year  
ISO\_8601\_Day\_Of\_Year\_Name  
ISO\_8601\_Day\_Of\_Week  
ISO\_8601\_Day\_Of\_Week\_Name  
ISO\_8601\_Week\_Of\_Year  
ISO\_8601\_Week\_Of\_Year\_Name  
Year (yyyy)  
MonthName  
DayOfWeek  
**Weekend**

New Delete Suggest Types...

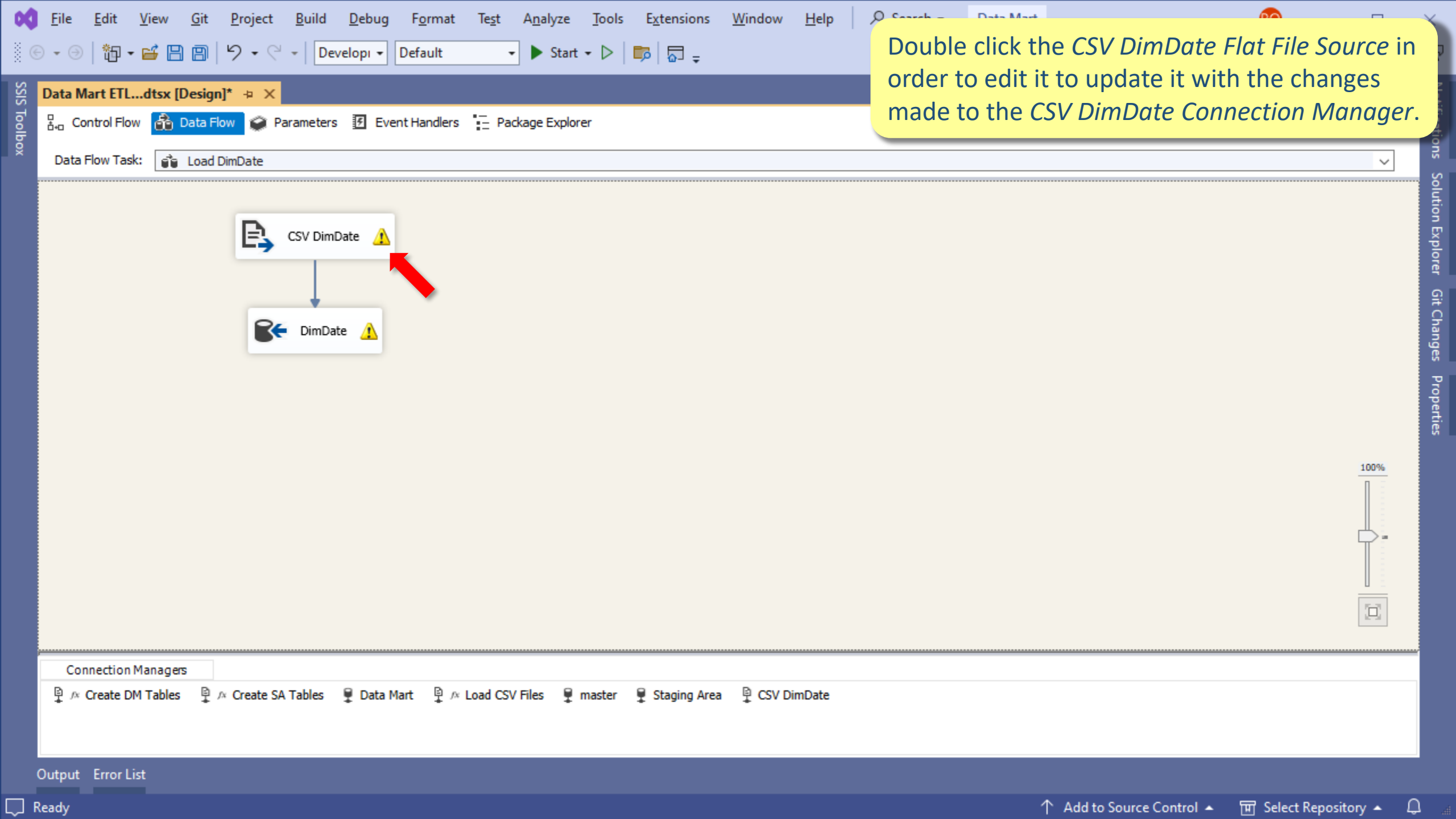
**Misc**

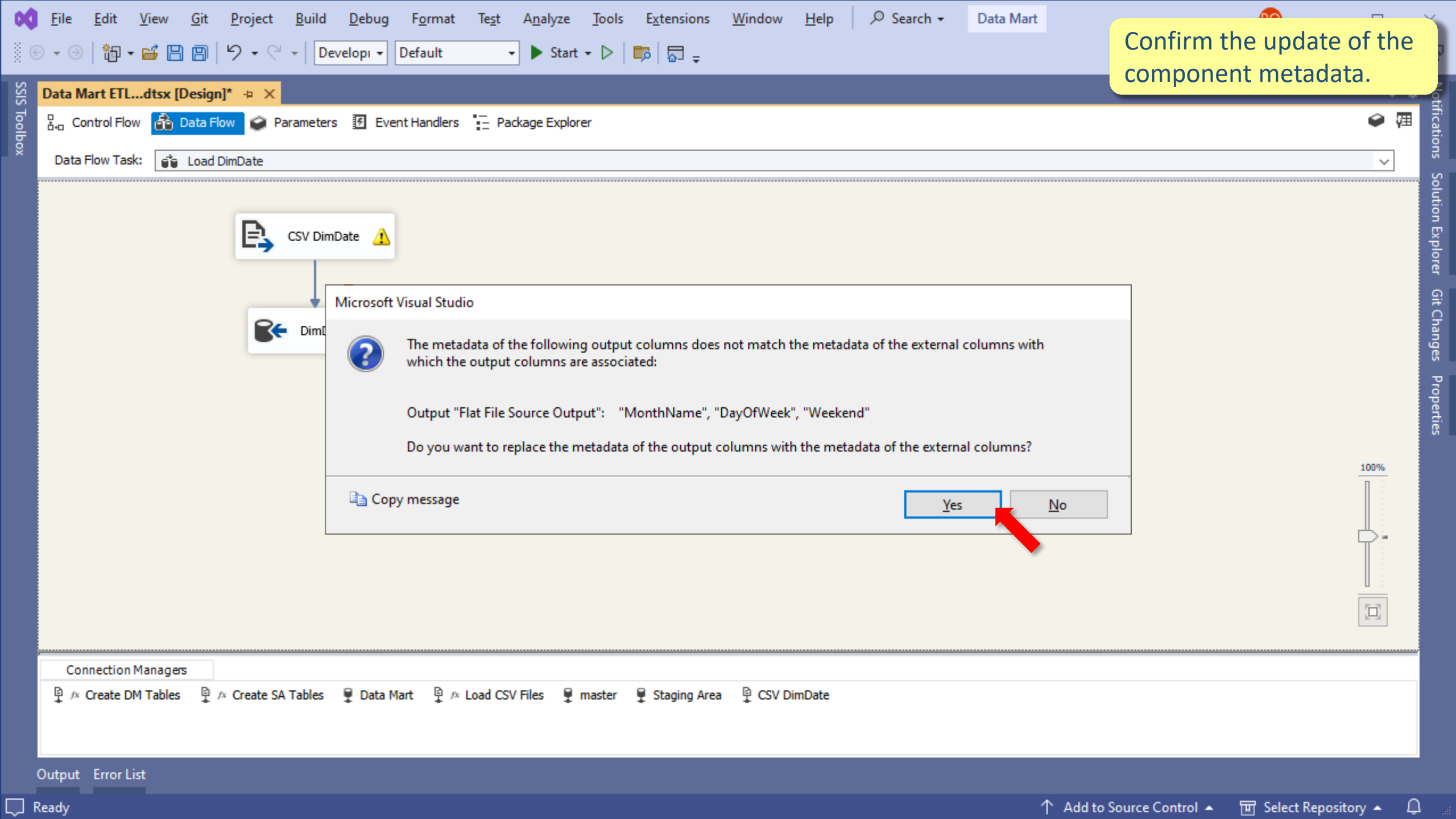
Name	Weekend
ColumnDelimiter	{CR}{LF}
ColumnType	Delimited
InputColumnWidth	0
DataPrecision	0
DataScale	0
DataType	Unicode string [DT_WSTR]
OutputColumnWidth	3
TextQualified	True

**OutputColumnWidth**  
The width of this column in the data flow, given in single characters. Composite charact...

OK Cancel Help







Confirm the update of the component metadata.

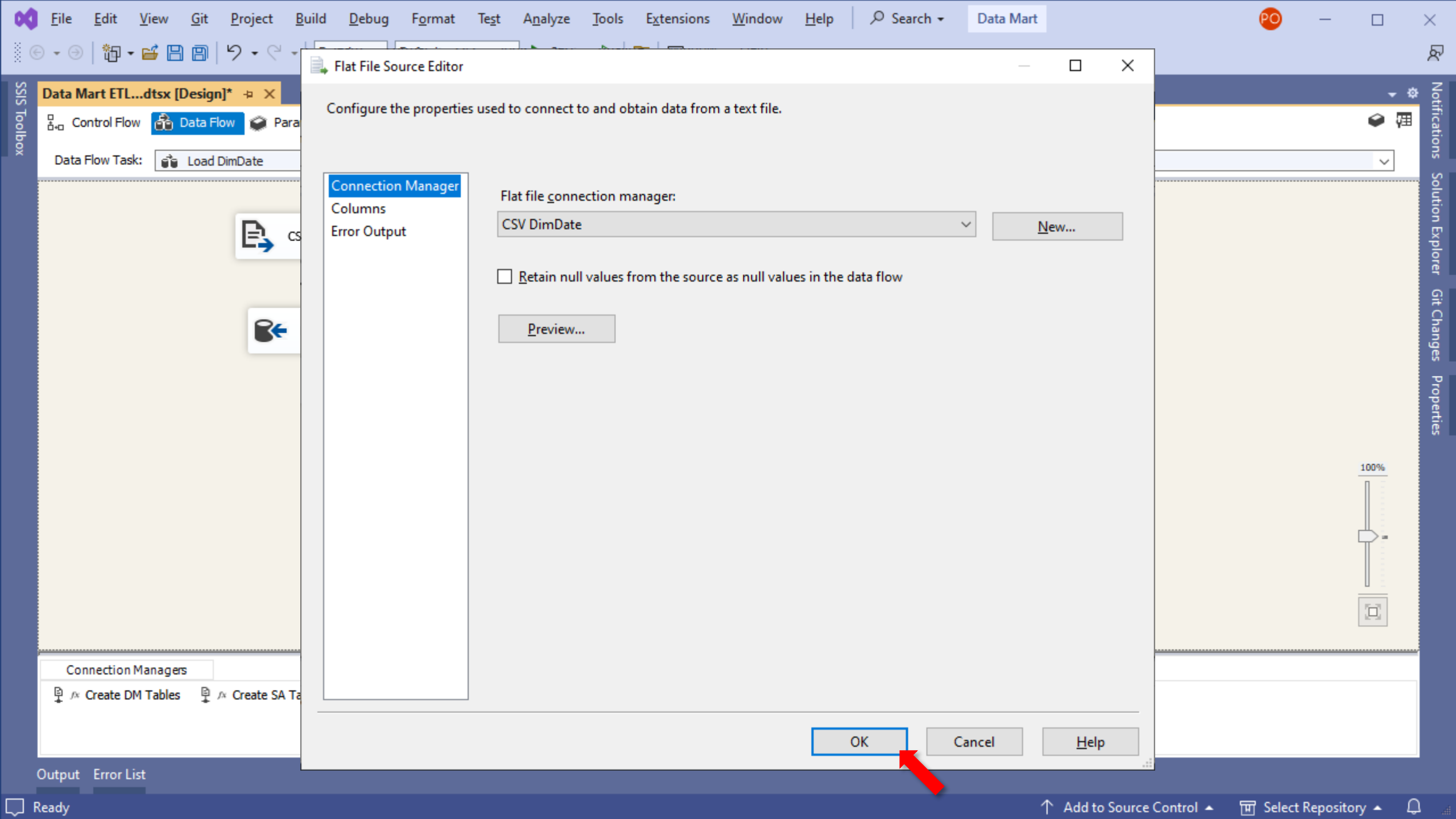
Microsoft Visual Studio

The metadata of the following output columns does not match the metadata of the external columns with which the output columns are associated:

Output "Flat File Source Output": "MonthName", "DayOfWeek", "Weekend"

Do you want to replace the metadata of the output columns with the metadata of the external columns?

Copy message



FileEditViewGitProjectBuildDebugFormatTestAnalyzeToolsExtensionsWindowHelp

SearchData Mart

PO

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control FlowData FlowParametersEvent HandlersPackage Explorer

Data Flow Task: Load DimDate

CSV DimDate

DimDate

Connection Managers

Create DM TablesCreate SA TablesData MartLoad CSV FilesmasterStaging AreaCSV DimDate

OutputError List

Ready

NotificationsSolution ExplorerGit ChangesProperties

PO

100%

FileEditViewGitProjectBuildDebugFormatTestAnalyzeToolsExtensionsWindowHelp

Search

Data Mart

Go to the *Control Flow* area.

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control Flow

Flow

Parameters

Event Handlers

Package Explorer

Create Staging Area Database

Create Data Mart Database

Foreach SA Create Table Script

Execute SA Script

Foreach DM Create Table Script

Execute DM Script

Foreach CSV File

Load CSV File into Table

Load Temporal Dimension

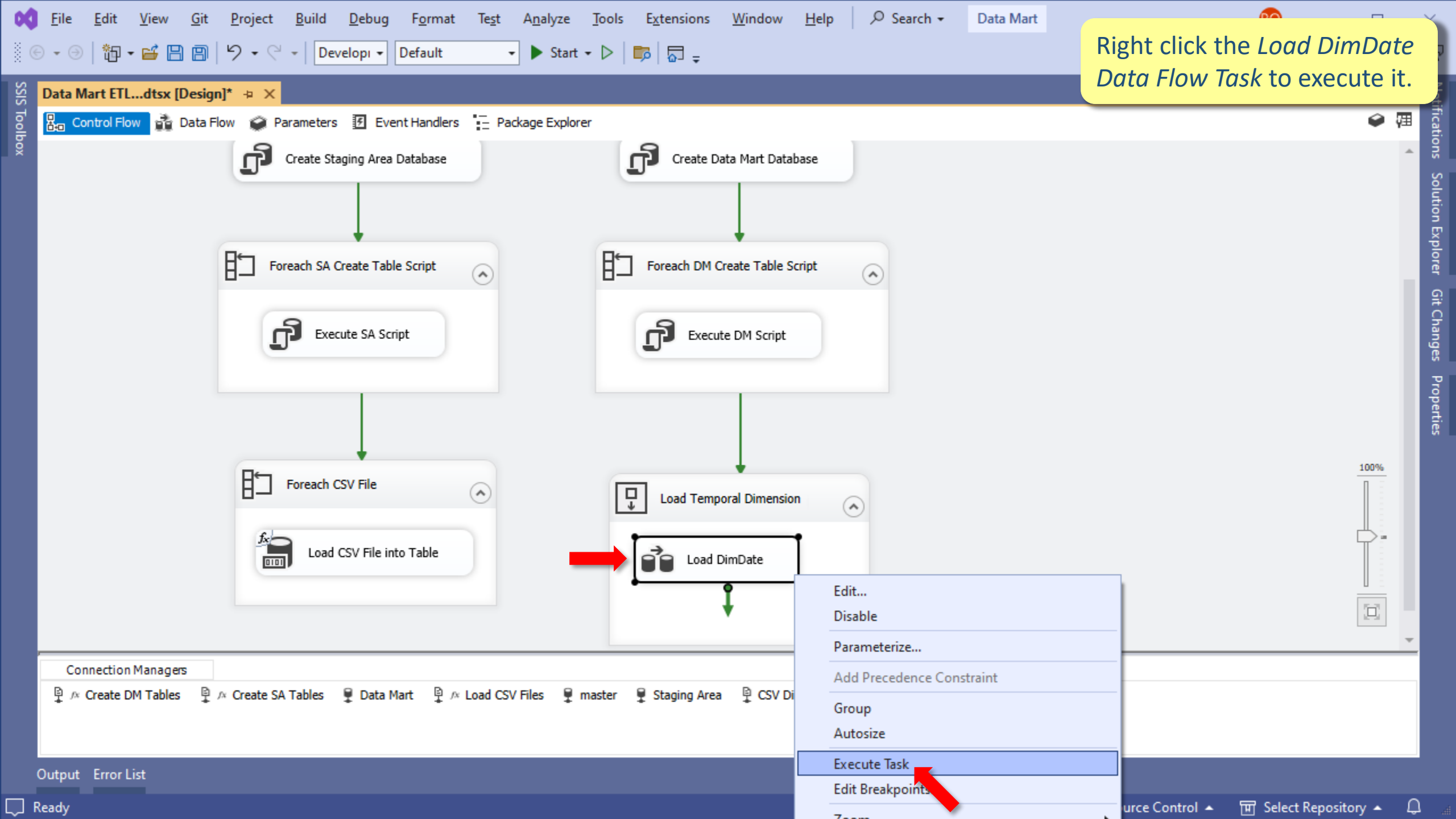
Load DimDate

Connection Managers

Create DM TablesCreate SA TablesData MartLoad CSV FilesmasterStaging AreaCSV DimDate

OutputError List

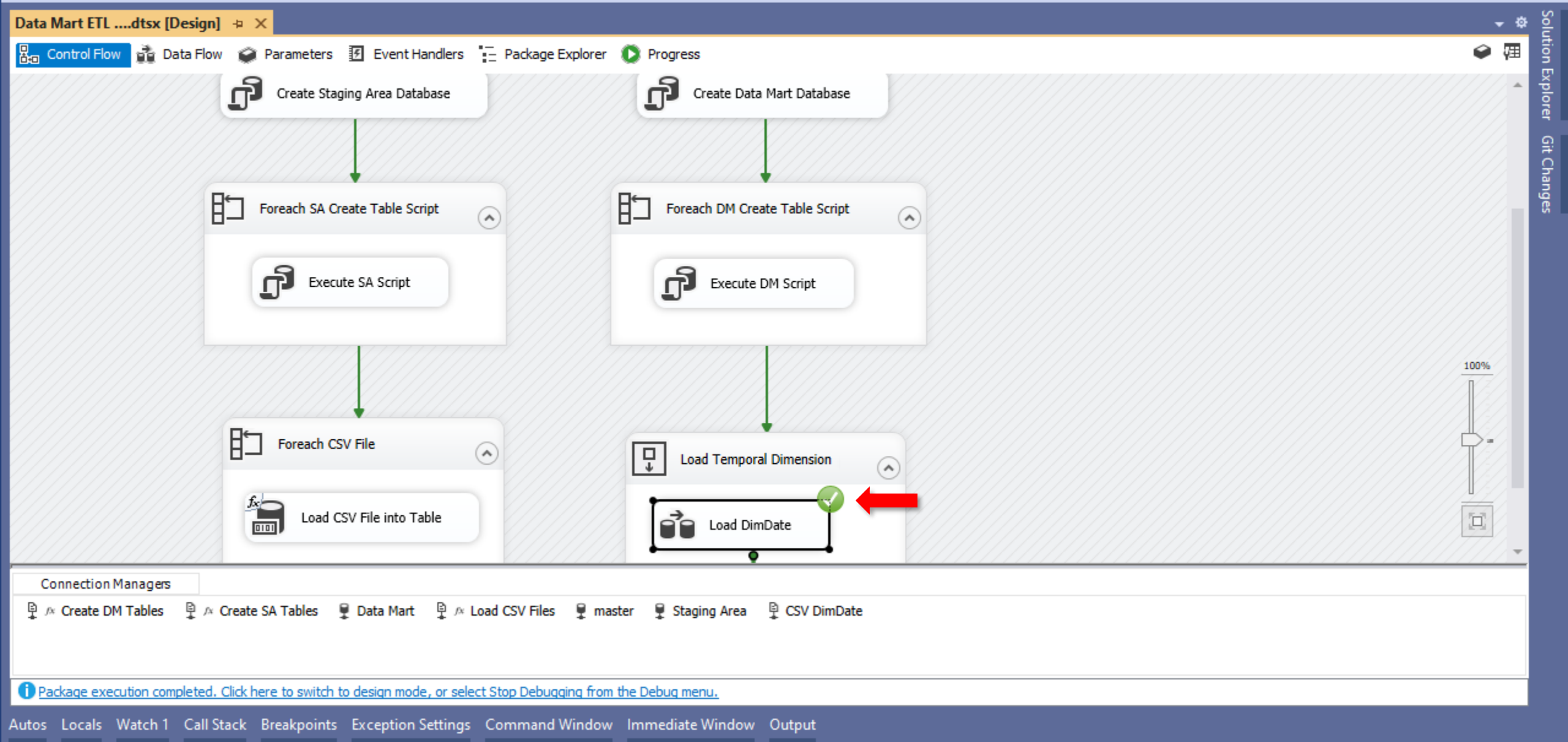
Ready



Right click the *Load DimDate Data Flow Task* to execute it.

- Edit...
- Disable
- Parameterize...
- Add Precedence Constraint
- Group
- Autosize
- Execute Task
- Edit Breakpoints
- Zoom

Load DimDate component execution should succeed.



Change to the *Data Flow Task* view in order to see that 14976 rows/records were load into the *DimDate* table.

File Edit View Git Project Build Debug Format Test Analyze Tools Extensions Window Help Search

Process: [10224] DtsDebugHost.exe Lifecycle Events Thread: Stack Frame:

Data Mart ETL ....dtsx [Design]

Control Flow Data Flow Parameters Event Handlers Package Explorer Progress

Data Flow Task: Load DimDate

CSV DimDate

14,976 rows

DimDate

Connection Managers

Create DM Tables Create SA Tables Data Mart Load CSV Files master Staging Area CSV DimDate

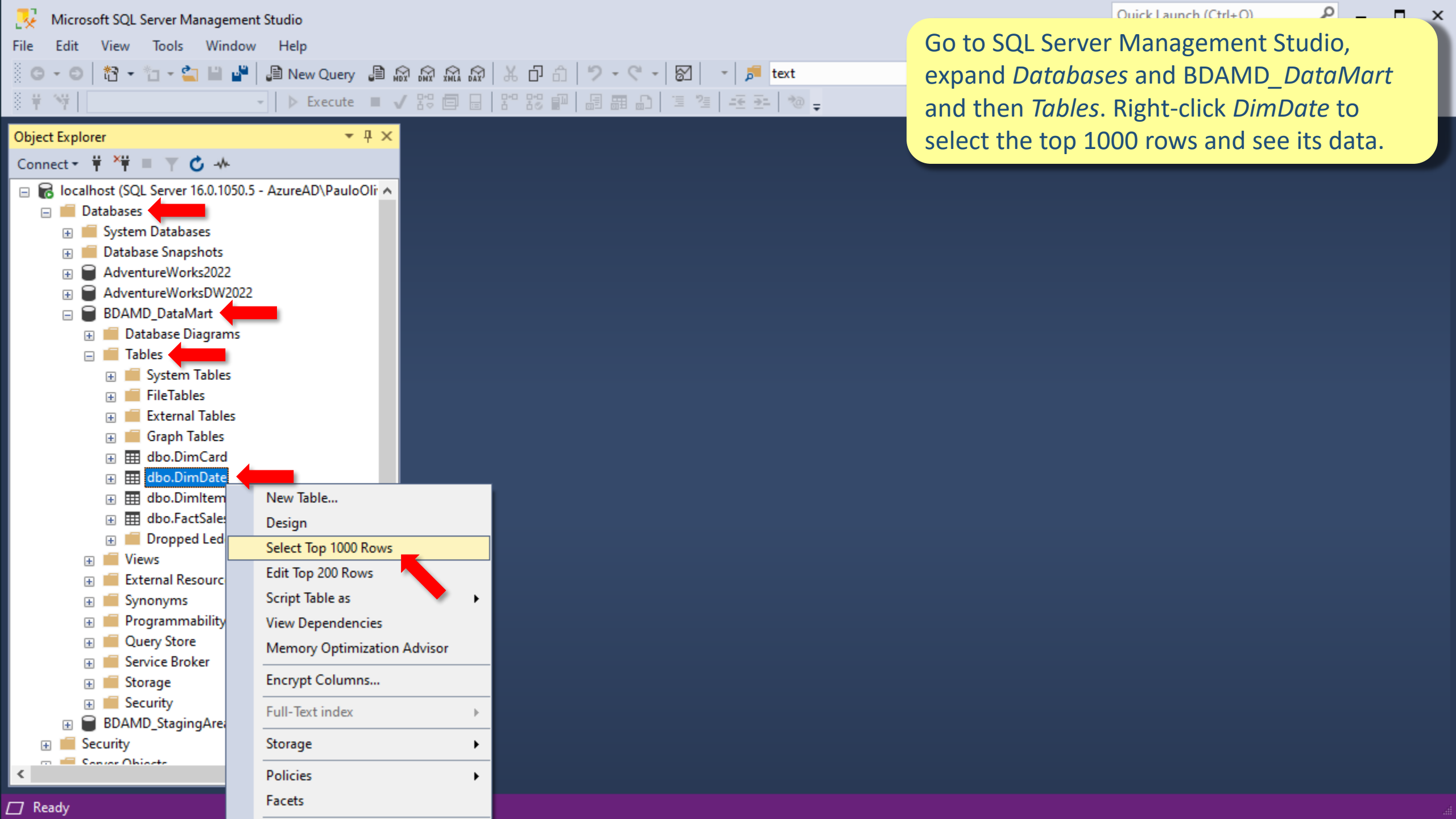
Package execution completed. Click here to switch to design mode, or select Stop Debugging from the Debug menu.

Autos Locals Watch 1 Call Stack Breakpoints Exception Settings Command Window Immediate Window Output

Ready

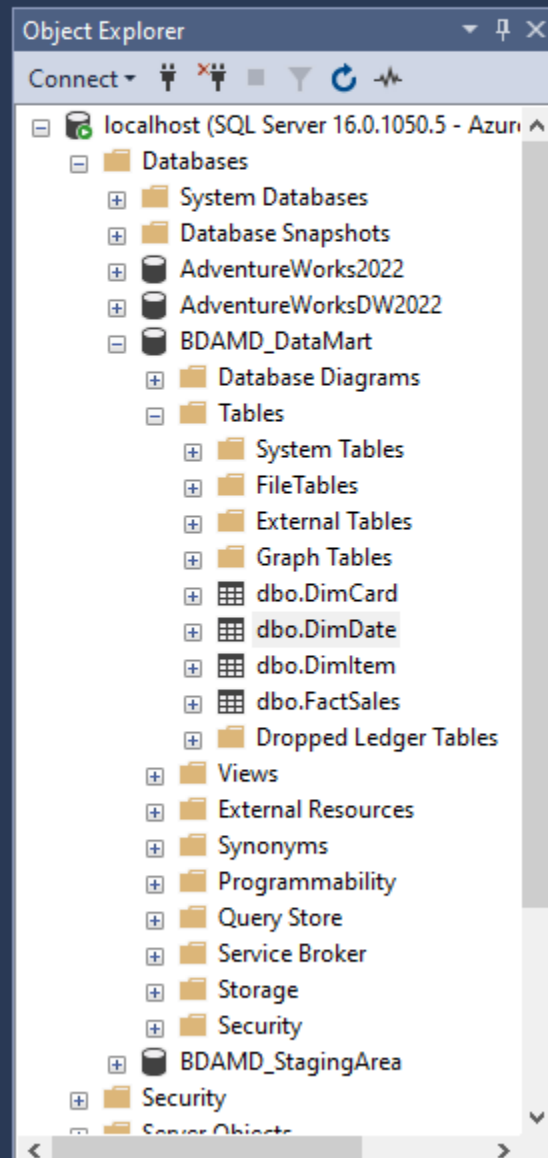
Add to Source Control Select Repository





Go to SQL Server Management Studio, expand *Databases* and *BDAMD\_DataMart* and then *Tables*. Right-click *DimDate* to select the top 1000 rows and see its data.

File Edit View Query Project Tools Window Help



SQLQuery3.sql - loc... \PauloOliveira (57))

```
SELECT TOP (1000) [DateKey]
, [FullDate]
, [Year]
, [Semester]
, [Quarter]
, [Month]
, [MonthName]
, [Week]
, [DayNumberOfYear]
, [DayNumberOfMonth]
, [DayNumberOfWeek]
, [DayOfWeek]
, [Weekend]
FROM [BDAMD_DataMart].[dbo].[DimDate]
```

100 %

Results Messages

	DateKey	FullDate	Year	Semester	Quarter	Month	MonthName	Week	DayNumberOfYear	DayNumberOfMonth	DayNumberOfWeek	DayOfWeek	Weekend
1	1	2000-01-01 00:00:00.000	2000	1	1	1	January	1	1	1	7	Saturday	Y
2	2	2000-02-01 00:00:00.000	2000	1	1	1	January	2	2	2	1	Sunday	Y
3	3	2000-03-01 00:00:00.000	2000	1	1	1	January	2	3	3	2	Monday	N
4	4	2000-04-01 00:00:00.000	2000	1	1	1	January	2	4	4	3	Tuesday	N
5	5	2000-05-01 00:00:00.000	2000	1	1	1	January	2	5	5	4	Wednesday	N
6	6	2000-06-01 00:00:00.000	2000	1	1	1	January	2	6	6	5	Thursday	N
7	7	2000-07-01 00:00:00.000	2000	1	1	1	January	2	7	7	6	Friday	N
8	8	2000-08-01 00:00:00.000	2000	1	1	1	January	2	8	8	7	Saturday	Y
9	9	2000-09-01 00:00:00.000	2000	1	1	1	January	3	9	9	1	Sunday	Y
10	10	2000-10-01 00:00:00.000	2000	1	1	1	January	3	10	10	2	Monday	N

Query executed successfully.

localhost (16.0 RTM) | AzureAD\PauloOliveira ... | BDAMD\_DataMart | 00:00:00 | 1,000 rows

*DimDate* attributes and data of the Data Mart project are now visible. *January 1<sup>st</sup> of 2000* is actually the first record loaded into *DimDate* table.

File Edit View Query Project Tools Window Help



Change the previous SQL query in order to see all the rows/records and execute it.

Object Explorer

Connect

localhost (SQL Server 16.0.1050.5 - AzureAD\PauloOliveira (57))\*

- Databases
  - System Databases
  - Database Snapshots
  - AdventureWorks2022
  - AdventureWorksDW2022
  - BDAMD\_DataMart
    - Database Diagrams
    - Tables
      - System Tables
      - FileTables
      - External Tables
      - Graph Tables
      - dbo.DimCard
      - dbo.DimDate
      - dbo.DimItem
      - dbo.FactSales
      - Dropped Ledger Tables
    - Views
    - External Resources
    - Synonyms
    - Programmability
    - Query Store
    - Service Broker
    - Storage
    - Security
  - BDAMD\_StagingArea
  - Security
  - Server Objects

SQLQuery3.sql - localhost\PauloOliveira (57)\*

```
SELECT *  
FROM [BDAMD_DataMart].[dbo].[DimDate]
```

100 %

Results Messages

	DateKey	FullDate	Year	Semester	Quarter	Month	MonthName	Week	DayNumberOfYear	DayNumberOfMonth	DayNumberOfWeek	DayOfWeek	Weekday
1	1	2000-01-01 00:00:00.000	2000	1	1	1	January	1	1	1	7	Saturday	Y
2	2	2000-02-01 00:00:00.000	2000	1	1	1	January	2	2	2	1	Sunday	Y
3	3	2000-03-01 00:00:00.000	2000	1	1	1	January	2	3	3	2	Monday	M
4	4	2000-04-01 00:00:00.000	2000	1	1	1	January	2	4	4	3	Tuesday	M
5	5	2000-05-01 00:00:00.000	2000	1	1	1	January	2	5	5	4	Wednesday	M
6	6	2000-06-01 00:00:00.000	2000	1	1	1	January	2	6	6	5	Thursday	M
7	7	2000-07-01 00:00:00.000	2000	1	1	1	January	2	7	7	6	Friday	M
8	8	2000-08-01 00:00:00.000	2000	1	1	1	January	2	8	8	7	Saturday	Y
9	9	2000-09-01 00:00:00.000	2000	1	1	1	January	3	9	9	1	Sunday	Y
10	10	2000-10-01 00:00:00.000	2000	1	1	1	January	3	10	10	2	Monday	M

Query executed successfully.

localhost (16.0 RTM) | AzureAD\PauloOliveira ... | BDAMD\_DataMart | 00:00:00 | 1,000 rows

File Edit View Query Project Tools Window Help

text

Object Explorer

Connect    

localhost (SQL Server 16.0.1050.5 - Azur

- Databases
  - System Databases
  - Database Snapshots
  - AdventureWorks2022
  - AdventureWorksDW2022
  - BDAMD\_DataMart
    - Database Diagrams
    - Tables
      - System Tables
      - FileTables
      - External Tables
      - Graph Tables
      - dbo.DimCard
      - dbo.DimDate
      - dbo.DimItem
      - dbo.FactSales
      - Dropped Ledger Tables
  - Views
  - External Resources
  - Synonyms
  - Programmability
  - Query Store
  - Service Broker
  - Storage
  - Security
- BDAMD\_StagingArea
- Security
- Server Objects

SQLQuery3.sql - loc...\PauloOliveira (57))\*

```
SELECT *  
FROM [BDAMD_DataMart].[dbo].[DimDate]
```

100 %

Results Messages

	DateKey	FullDate	Year	Semester	Quarter	Month	MonthName	Week	DayNumberOfYear	DayNumberOfMonth	DayNumberOfWeek	DayOfWeek	W
1	1	2000-01-01 00:00:00.000	2000	1	1	1	January	1	1	1	7	Saturday	Y
2	2	2000-02-01 00:00:00.000	2000	1	1	1	January	2	2	2	1	Sunday	Y
3	3	2000-03-01 00:00:00.000	2000	1	1	1	January	2	3	3	2	Monday	M
4	4	2000-04-01 00:00:00.000	2000	1	1	1	January	2	4	4	3	Tuesday	M
5	5	2000-05-01 00:00:00.000	2000	1	1	1	January	2	5	5	4	Wednesday	M
6	6	2000-06-01 00:00:00.000	2000	1	1	1	January	2	6	6	5	Thursday	M
7	7	2000-07-01 00:00:00.000	2000	1	1	1	January	2	7	7	6	Friday	M
8	8	2000-08-01 00:00:00.000	2000	1	1	1	January	2	8	8	7	Saturday	Y
9	9	2000-09-01 00:00:00.000	2000	1	1	1	January	3	9	9	1	Sunday	Y
10	10	2000-10-01 00:00:00.000	2000	1	1	1	January	3	10	10	2	Monday	M

Query executed successfully.

localhost (16.0 RTM) | AzureAD\PauloOliveira ... | BDAMD\_DataMart | 00:00:01 | 14,976 rows

14976 rows/records were actually loaded into the *DimDate* table, being December 31<sup>st</sup> of 2040 the last record.

**SSIS Toolbox**

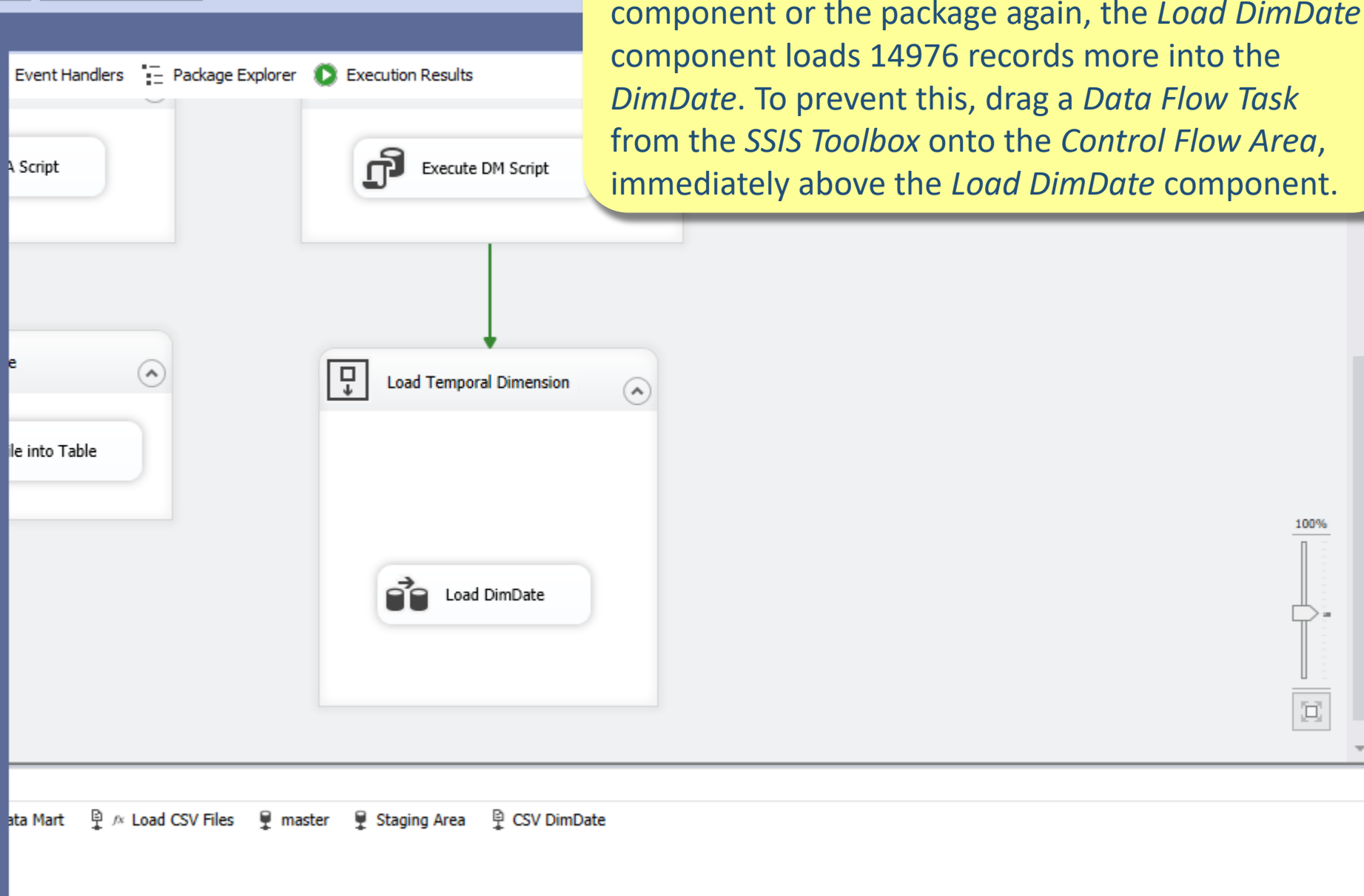
Search SSIS Toolbox

- Favorites**
  - Data Flow Task**
  - Execute SQL Task
- Common**
  - Analysis Services Processing Task
  - Bulk Insert Task
  - Data Profiling Task
  - Execute Package Task
  - Execute Process Task
  - Expression Task
  - File System Task
  - FTP Task
  - Hadoop File System Task
  - Hadoop Hive Task
  - Hadoop Pig Task
  - Script Task
  - Send Mail Task
  - Web Service Task
  - XML Task
- Azure**

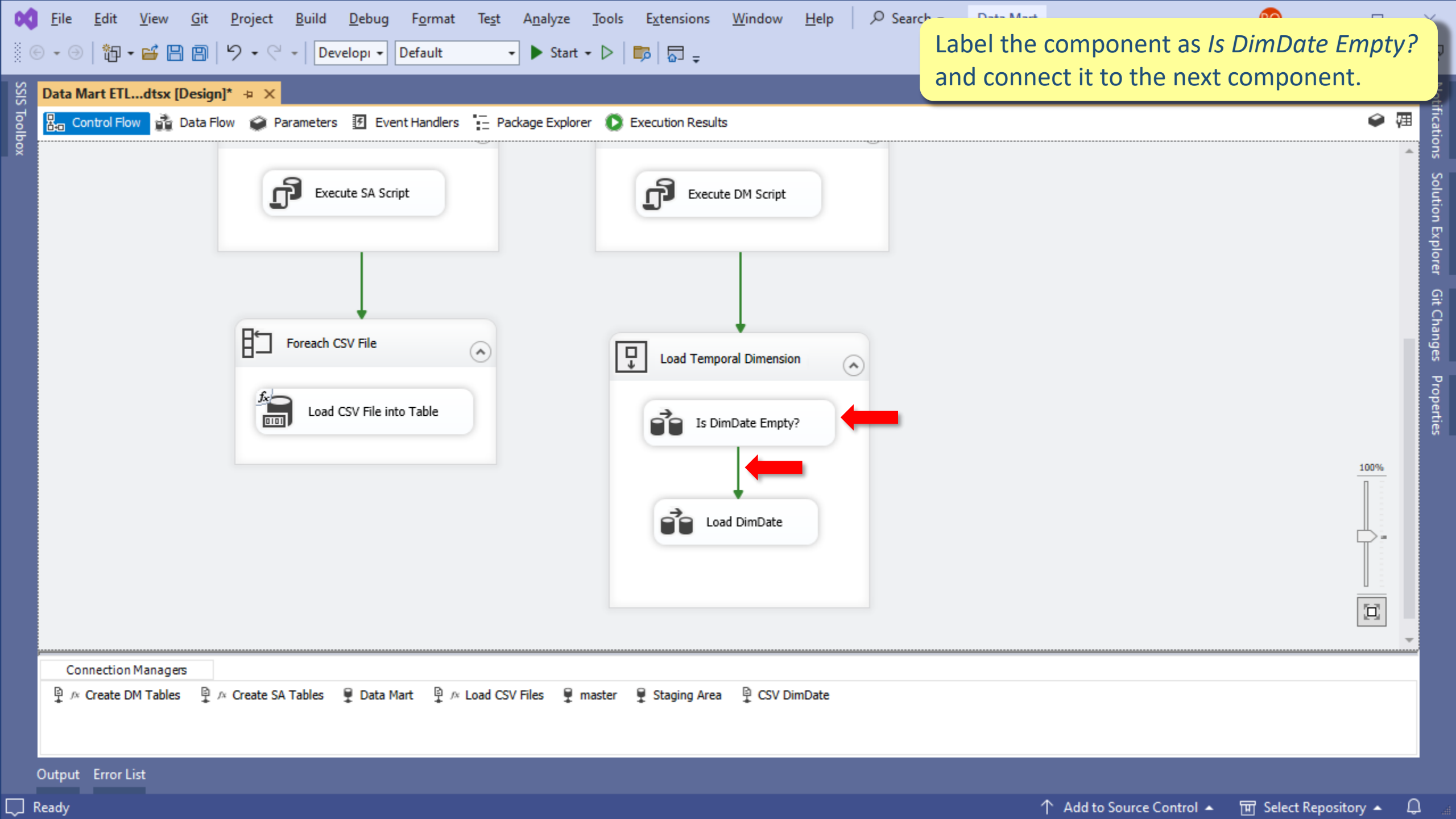
**Data Flow Task**

Moves data between sources and destinations while transforming and cleaning. Data can be moved between tables and files while efficiently processing the data in memory with transformations. This is an...

[Find Samples](#)



However, if you return to Visual Studio and run the component or the package again, the *Load DimDate* component loads 14976 records more into the *DimDate*. To prevent this, drag a *Data Flow Task* from the *SSIS Toolbox* onto the *Control Flow Area*, immediately above the *Load DimDate* component.





Drag an *OLE DB Source* from the *SSIS Toolbox* onto the *Control Flow* area.

SSIS Toolbox

Search SSIS Toolbox

- Term Lookup
- Unpivot
- Other Sources
  - ADO NET Source
  - CDC Source
  - Excel Source
  - Flat File Source
  - OLE DB Source**
  - Raw File Source
  - XML Source
- Other Destinations
  - ADO NET Destination
  - DataReader Destination
  - Excel Destination
  - Flat File Destination
  - OLE DB Destination
  - Raw File Destination
  - Recordset Destination
  - SQL Server Compact Destination
  - SQL Server Destination

**OLE DB Source**

Extracts data from an OLE DB-compliant relational database. Extract from a database table or view, or use a SQL command. For example, extract data from tables in Microsoft Office Access or SQL Server...

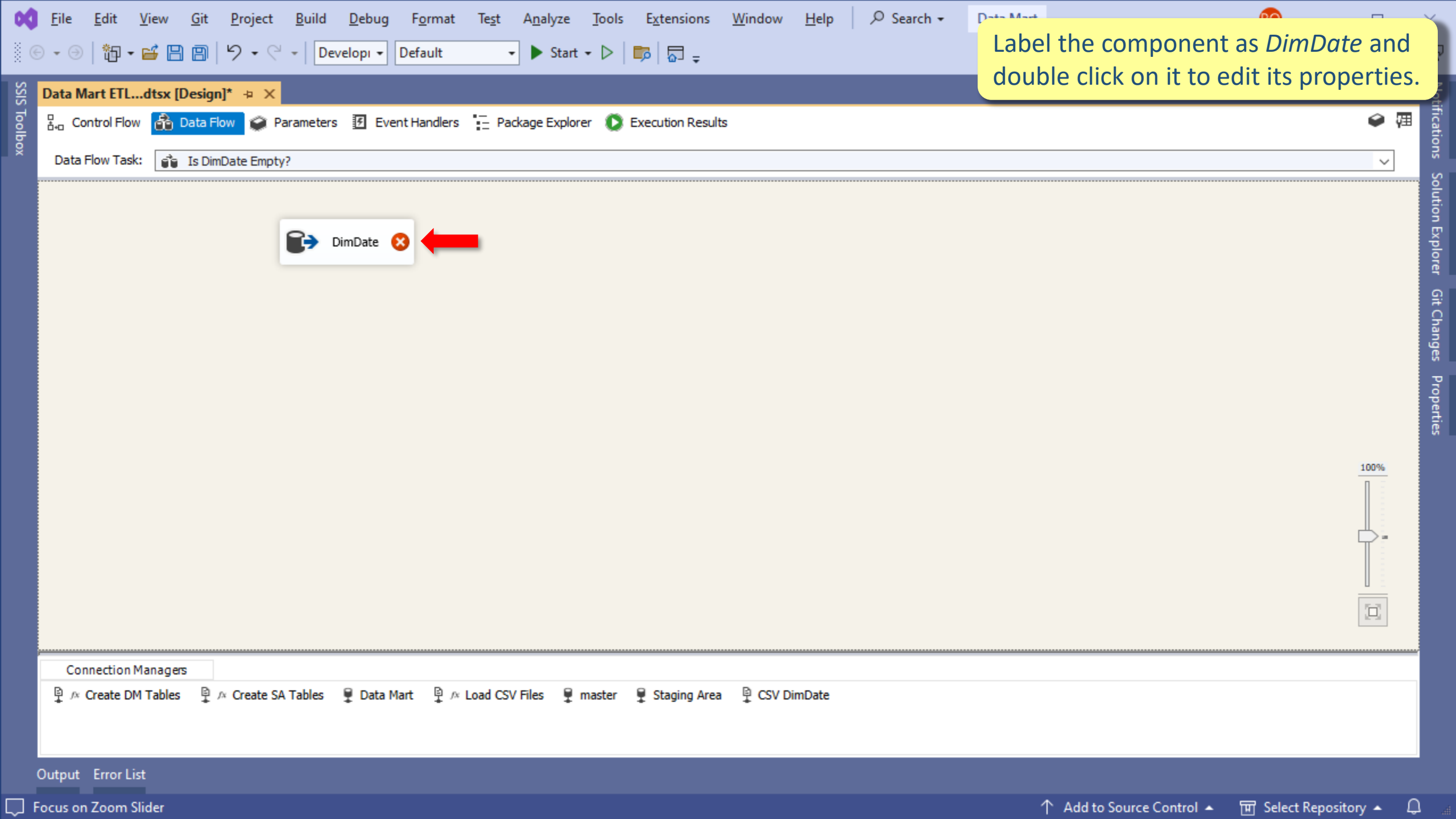
[Find Samples](#)

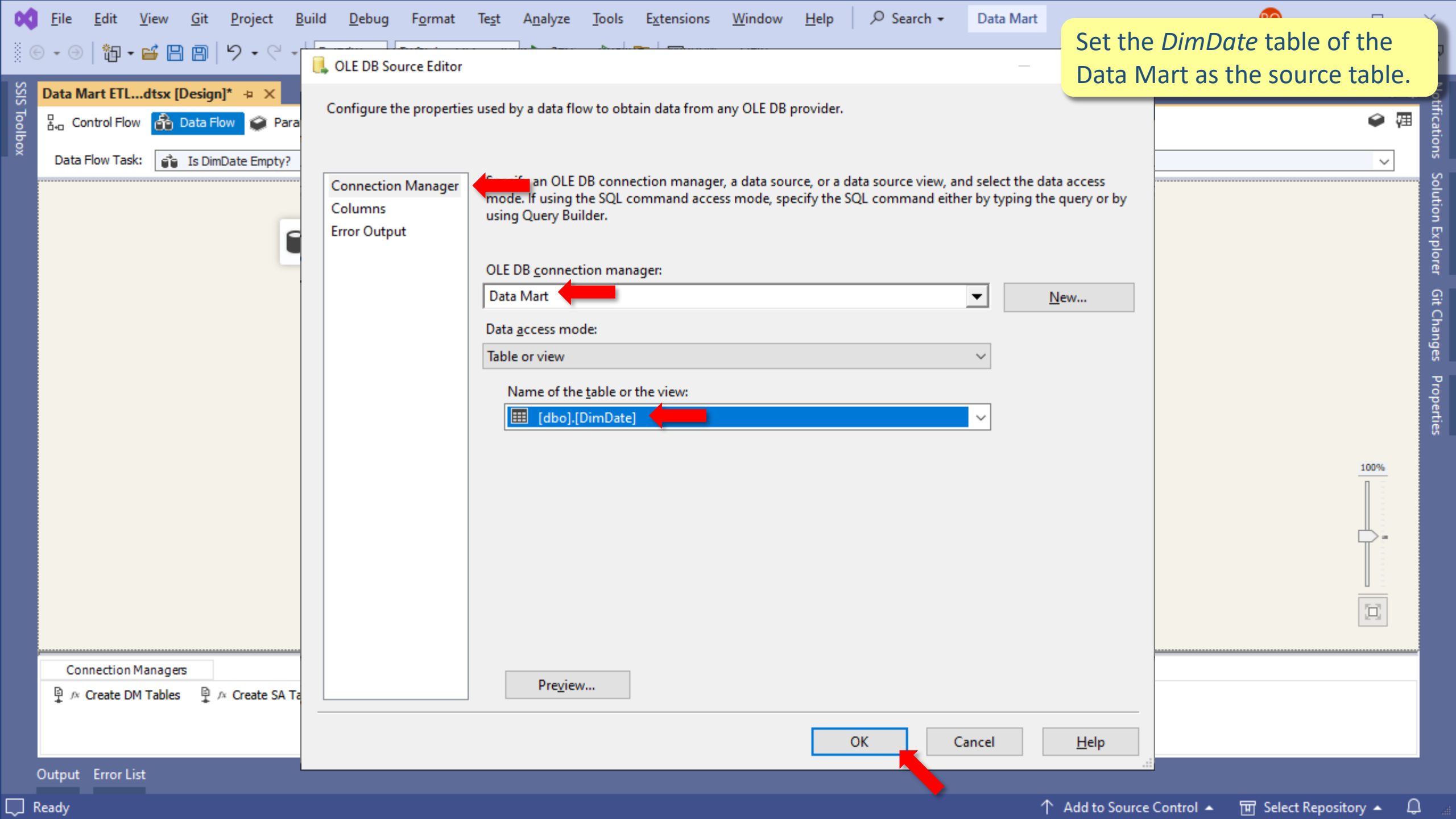
Event Handlers Package Explorer Execution Results

100%

Data Mart Load CSV Files master Staging Area CSV DimDate







Set the *DimDate* table of the Data Mart as the source table.

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:

Data Mart

New...

Data access mode:

Table or view

Name of the table or the view:

[dbo].[DimDate]

Preview...

OK

Cancel

Help

Connection Managers

Create DM Tables

Create SA Tables

Output Error List

Ready

Add to Source Control

Select Repository

FileEditViewGitProjectBuildDebugFormatTestAnalyzeToolsExtensionsWindowHelp

SearchData Mart

SSIS Toolbox

Data Mart ETL...dtsx [Design]\*

Control FlowData FlowParametersEvent HandlersPackage ExplorerExecution Results

Data Flow Task: Is DimDate Empty?

DimDate

Connection Managers

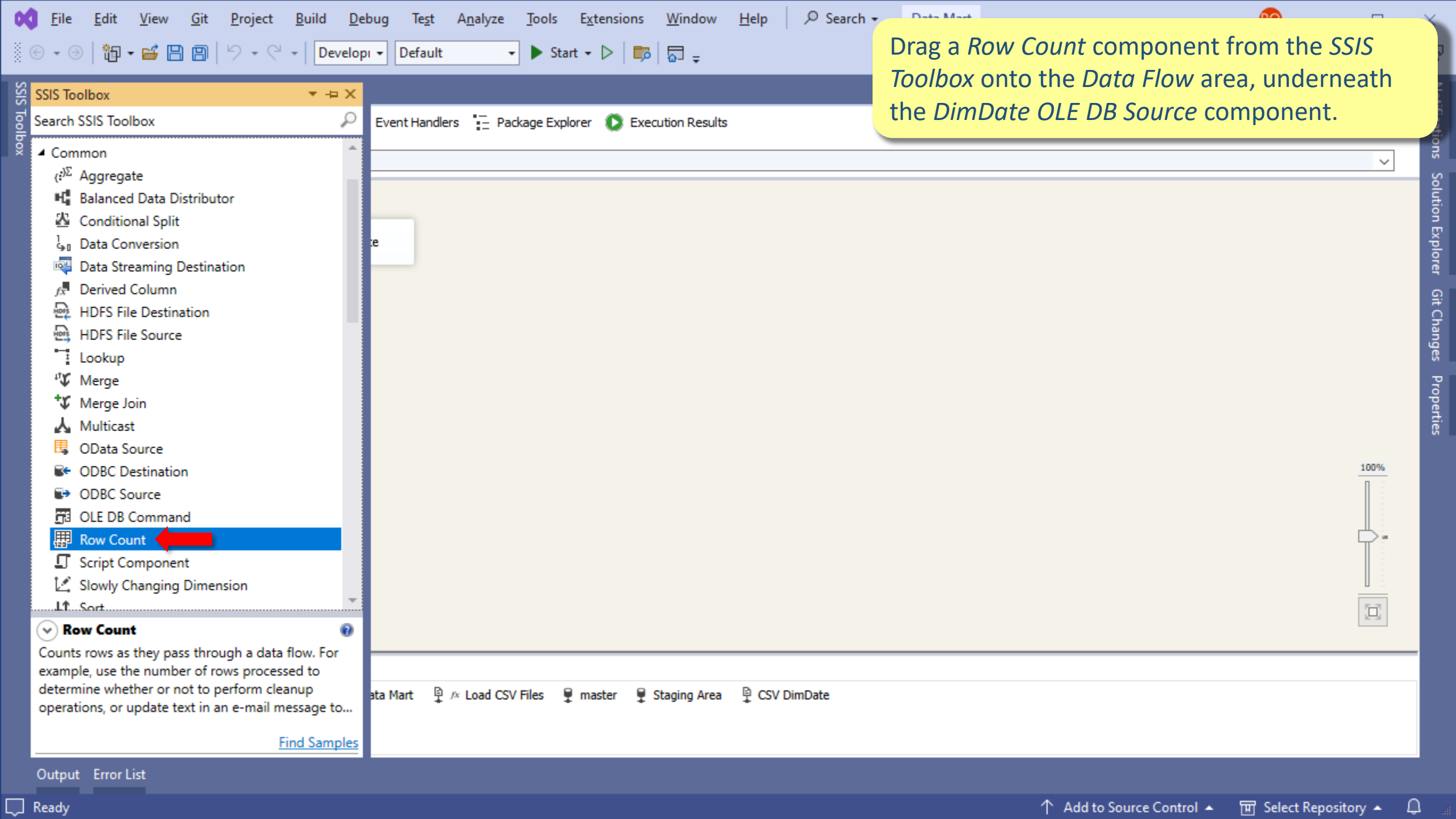
Create DM TablesCreate SA TablesData MartLoad CSV FilesmasterStaging AreaCSV DimDate

OutputError List

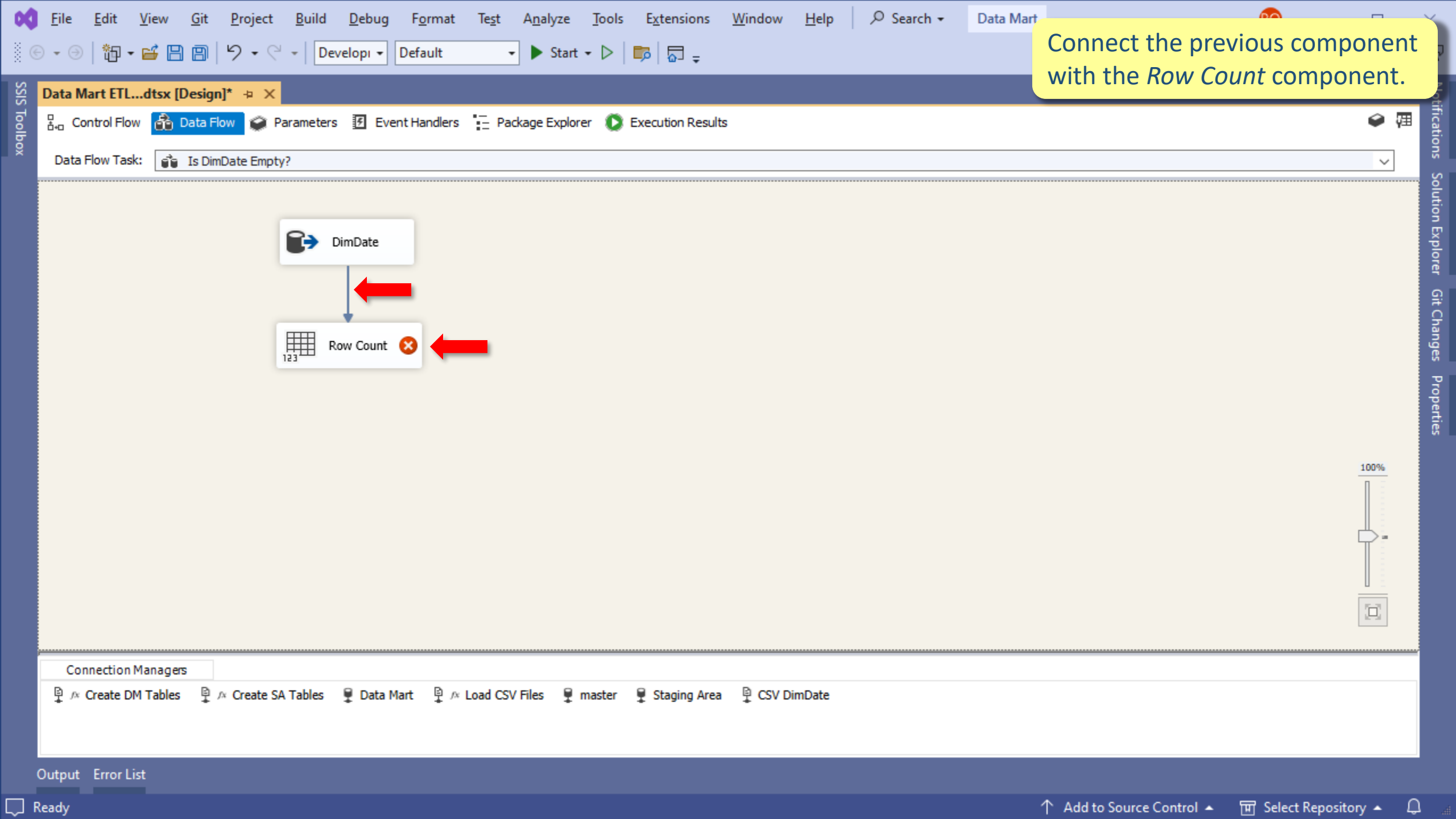
Ready

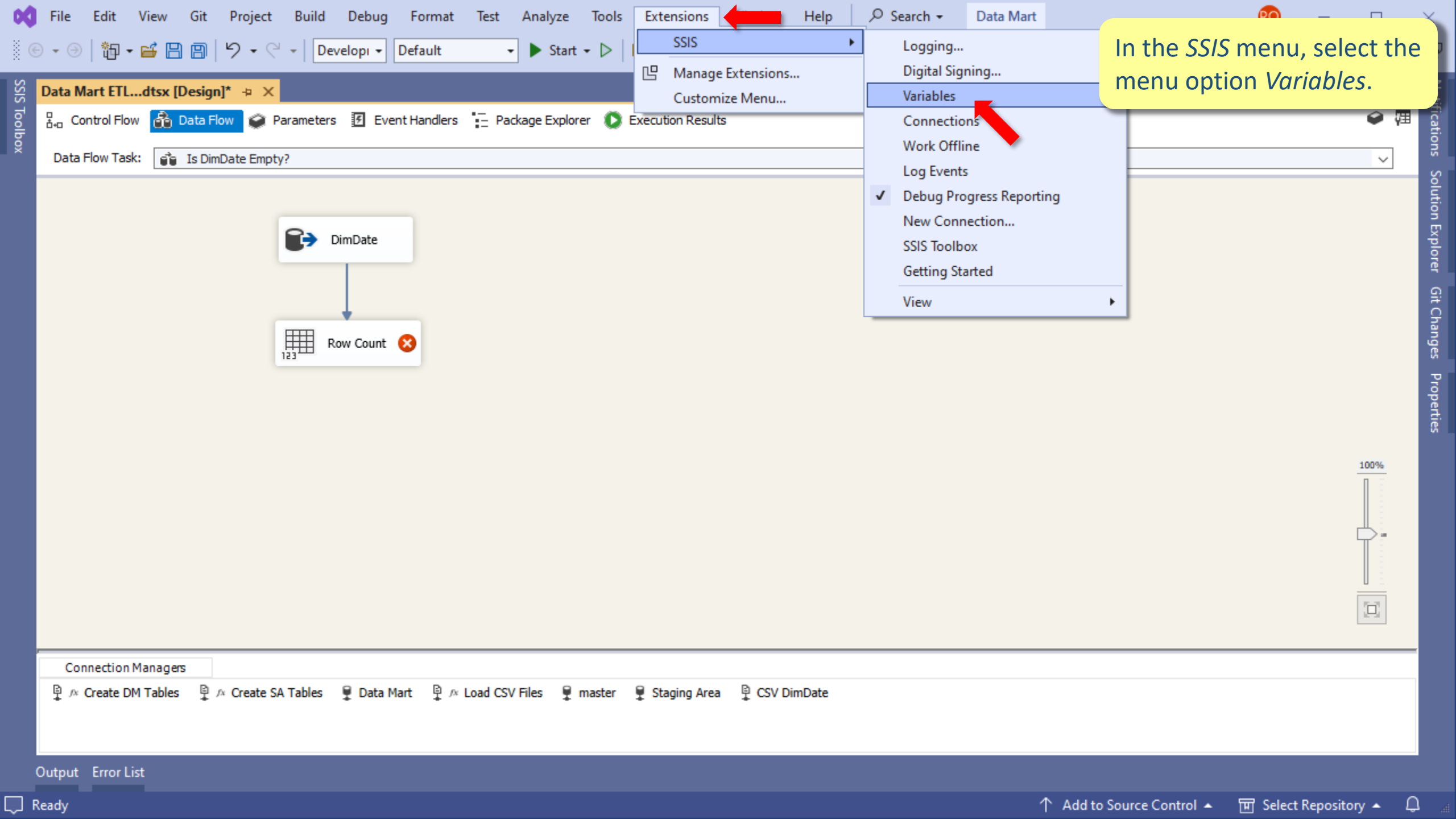
NotificationsSolution ExplorerGit ChangesProperties

100%

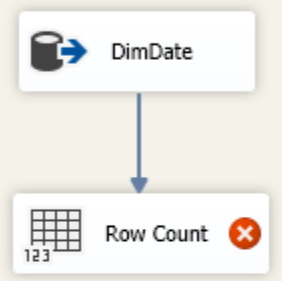


Drag a *Row Count* component from the *SSIS Toolbox* onto the *Data Flow* area, underneath the *DimDate OLE DB Source* component.





In the SSIS menu, select the menu option *Variables*.



Name	Scope	Data type	Value	Expression
CSVFilename	Data Mart ETL ...	String		...
DMScriptFilename	Data Mart ETL ...	String		...
SAScriptFilename	Data Mart ETL ...	String		...

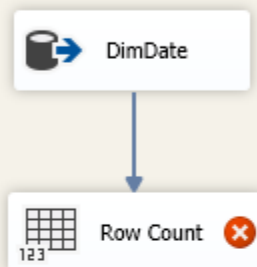
Create a new variable by clicking in the top left icon of the *Variables* panel (as shown in the figure).

Create the integer  
*DimDateNrOfRecords* variable.

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters Event Handlers Package Explorer Execution Results

Data Flow Task: Is DimDate Empty?



Connection Managers

Create DM Tables Create SA Tables Data Mart Load CSV Files master Staging Area CSV DimDate

Variables



Name	Scope	Data type	Value	Expression
CSVFilename	Data Mart ETL ...	String		
DMScriptFilename	Data Mart ETL ...	String		
SAScriptFilename	Data Mart ETL ...	String		
DimDateNrOfRecords	Data Mart ETL ...	Int32	0	

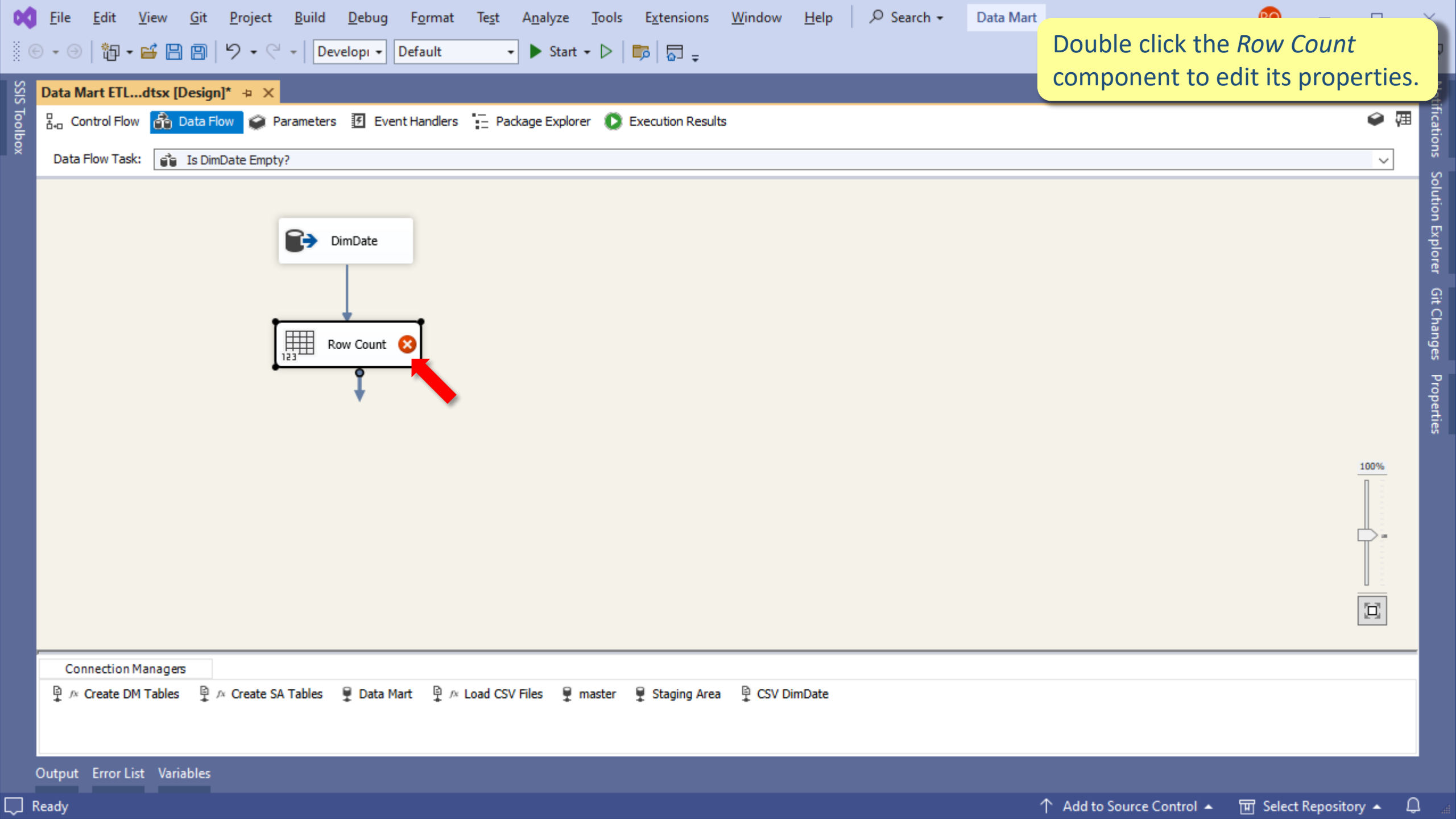
Output Error List

Ready

Add to Source Control

Select Repository



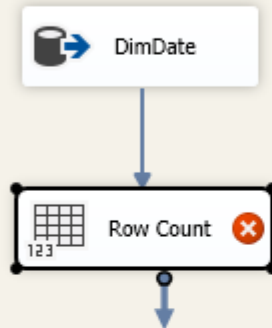


Select the variable *DimDateNrOfRecords* to store the *DimDate* records count.

Data Mart ETL...dtsx [Design]\*

Control Flow Data Flow Parameters Event Handlers Package Explorer Execution Results

Data Flow Task: Is DimDate Empty?



Row Count

Variable: User::DimDateNrOfRecords

OK Cancel

Connection Managers

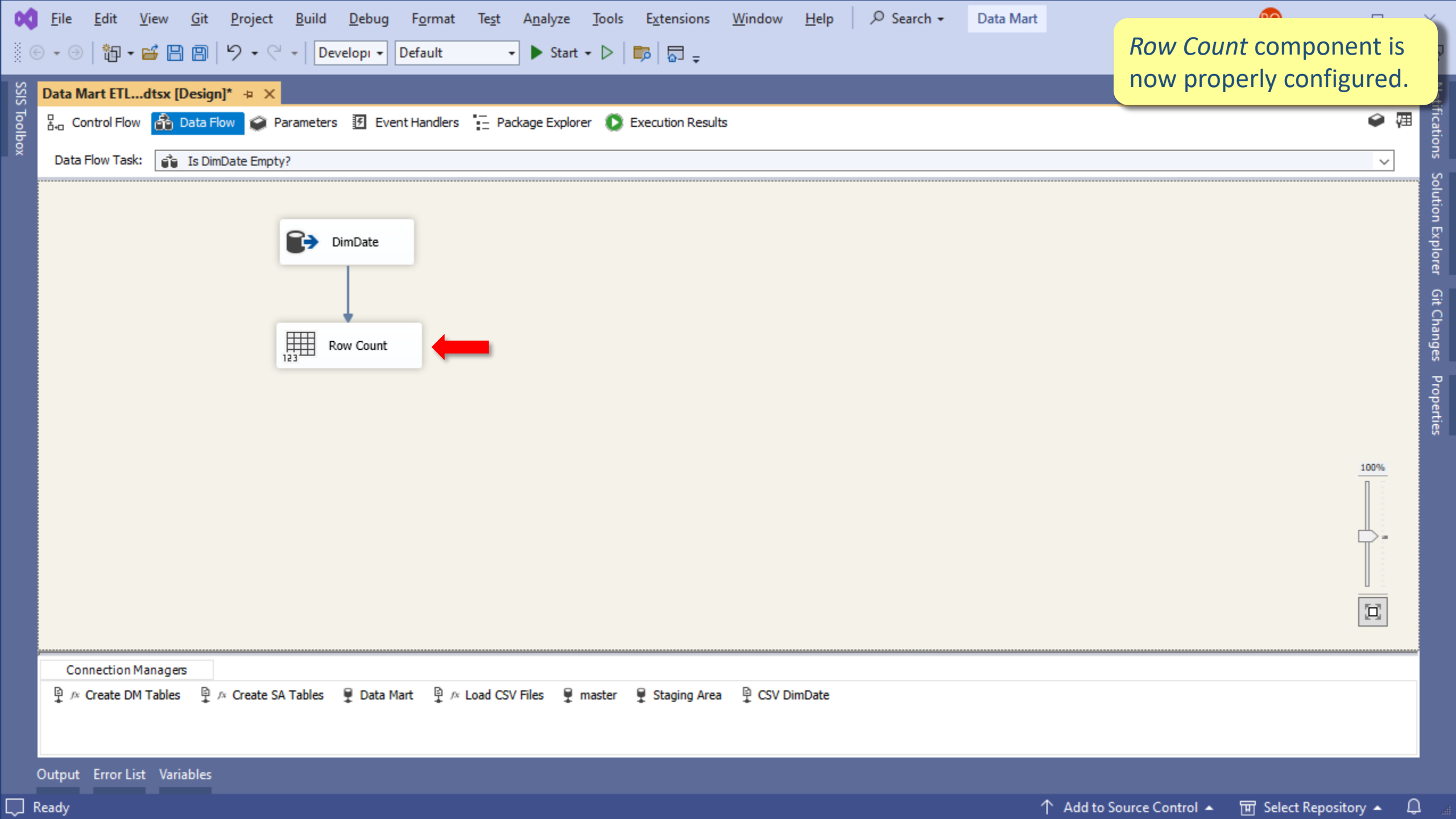
Create DM Tables Create SA Tables Data Mart Load CSV Files master Staging Area CSV DimDate

Output Error List Variables

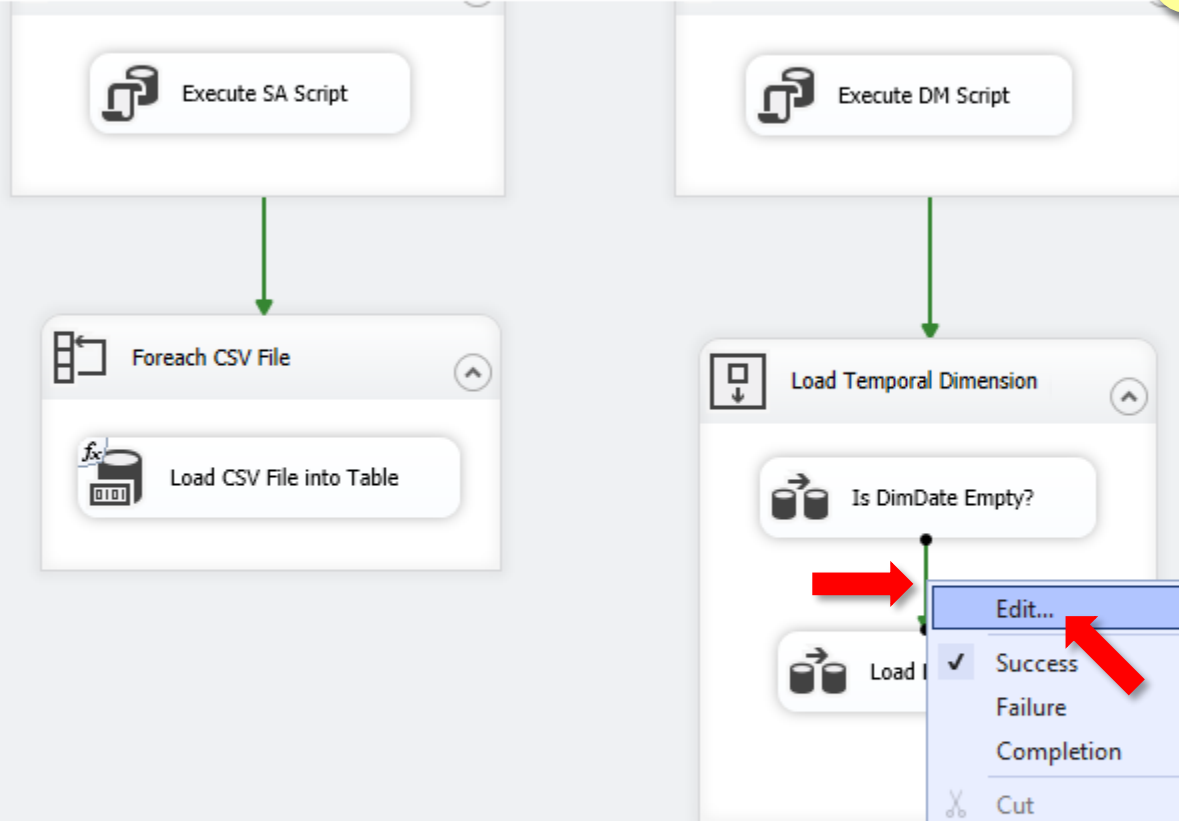
Ready

Add to Source Control

Select Repository



Row Count component is now properly configured.



Context menu for the 'Load' task:

- Edit...
- Success
- Failure
- Completion
- Cut (Ctrl+X)
- Copy (Ctrl+C)
- Paste (Ctrl+V)
- Delete (Del)
- Properties (Alt+Enter)

Go back to the *Control Flow* area, right click the flow between the *IsDimDate Empty?* and *Load DimDate* components to edit its properties.

Change the *Evaluation Operation* to *Expression* and edit the *Expression*.

Precedence Constraint Editor

A precedence constraint defines the workflow between two executables. The precedence constraint can be based on a combination of the execution results and the evaluation of expressions.

Constraint options

Evaluation operation: Expression

Value: Success

Expression:  ... Test

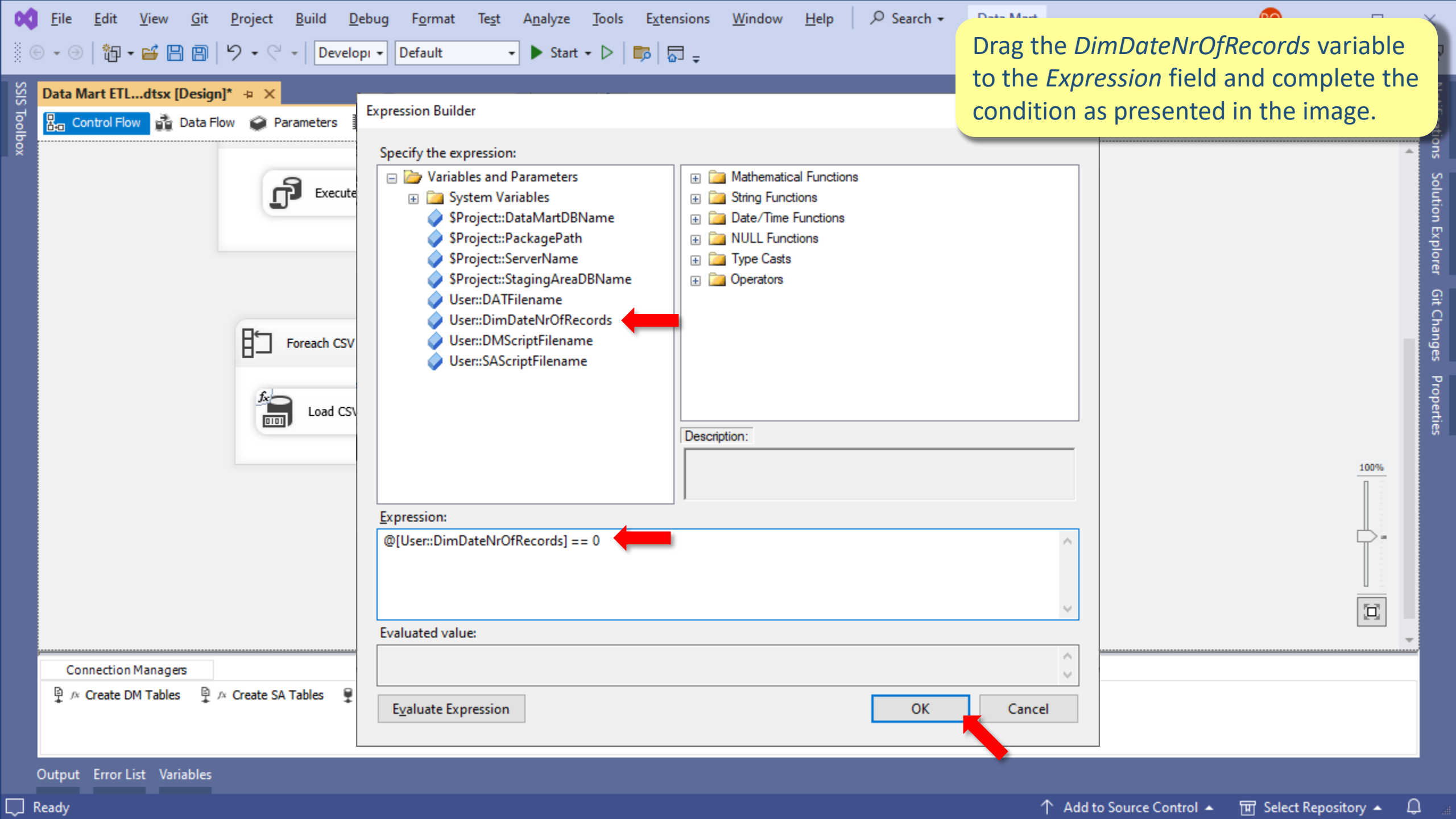
Multiple constraints

If the constrained task has multiple constraints, you can choose how the constraints interoperate to control the execution of the constrained task.

☒ Logical AND. All constraints must evaluate to True

☐ Logical OR. One constraint must evaluate to True

OK Cancel Help



Drag the *DimDateNrOfRecords* variable to the *Expression* field and complete the condition as presented in the image.

### Expression Builder

Specify the expression:

- Variables and Parameters
  - System Variables
    - \$Project::DataMartDBName
    - \$Project::PackagePath
    - \$Project::ServerName
    - \$Project::StagingAreaDBName
    - User::DATFilename
    - User::DimDateNrOfRecords
    - User::DMScriptFilename
    - User::SAScriptFilename

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

Description:

Expression:

@[User::DimDateNrOfRecords] == 0

Evaluated value:

Evaluate Expression

OK

Cancel

Connection Managers

Create DM Tables

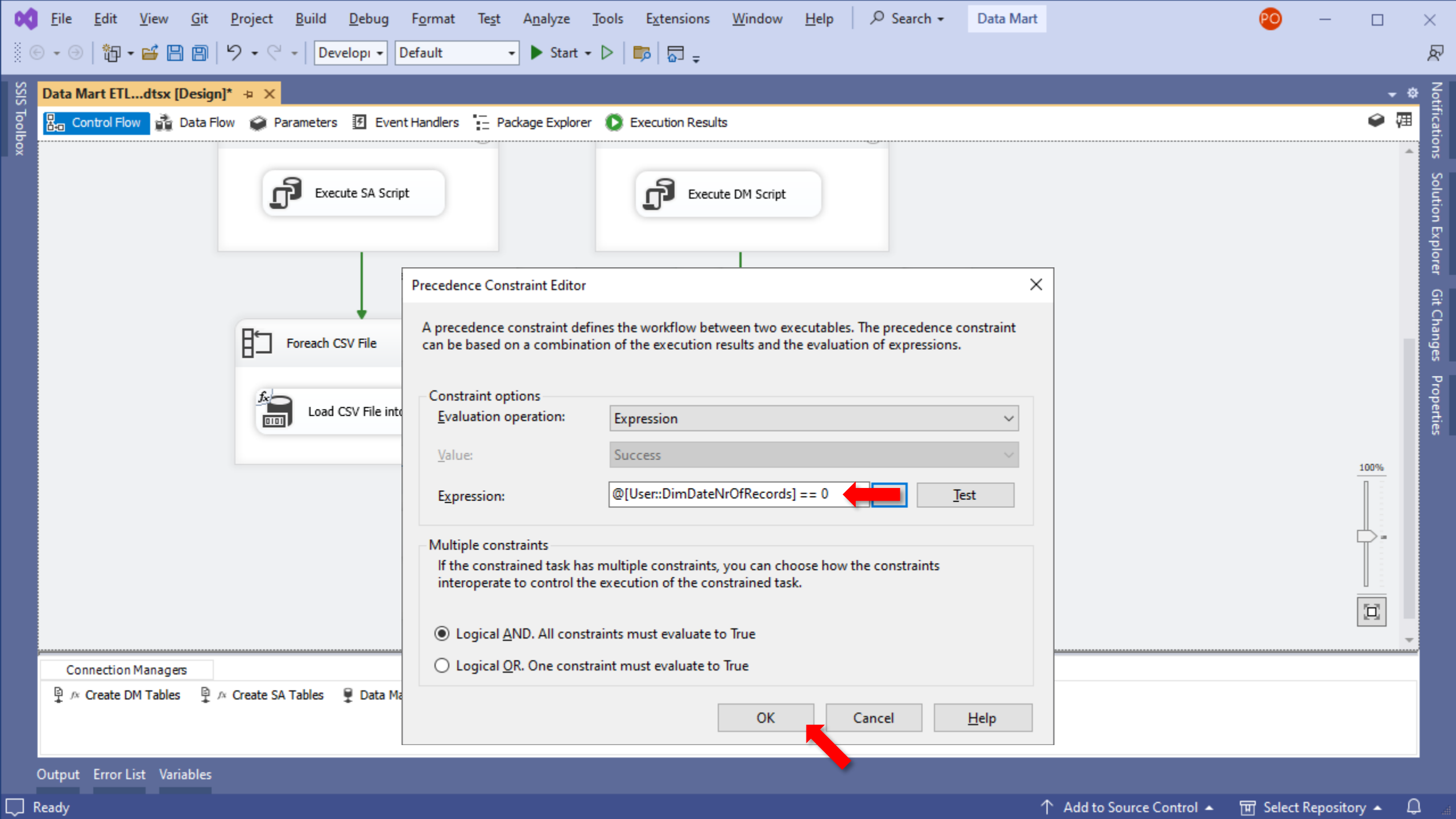
Create SA Tables

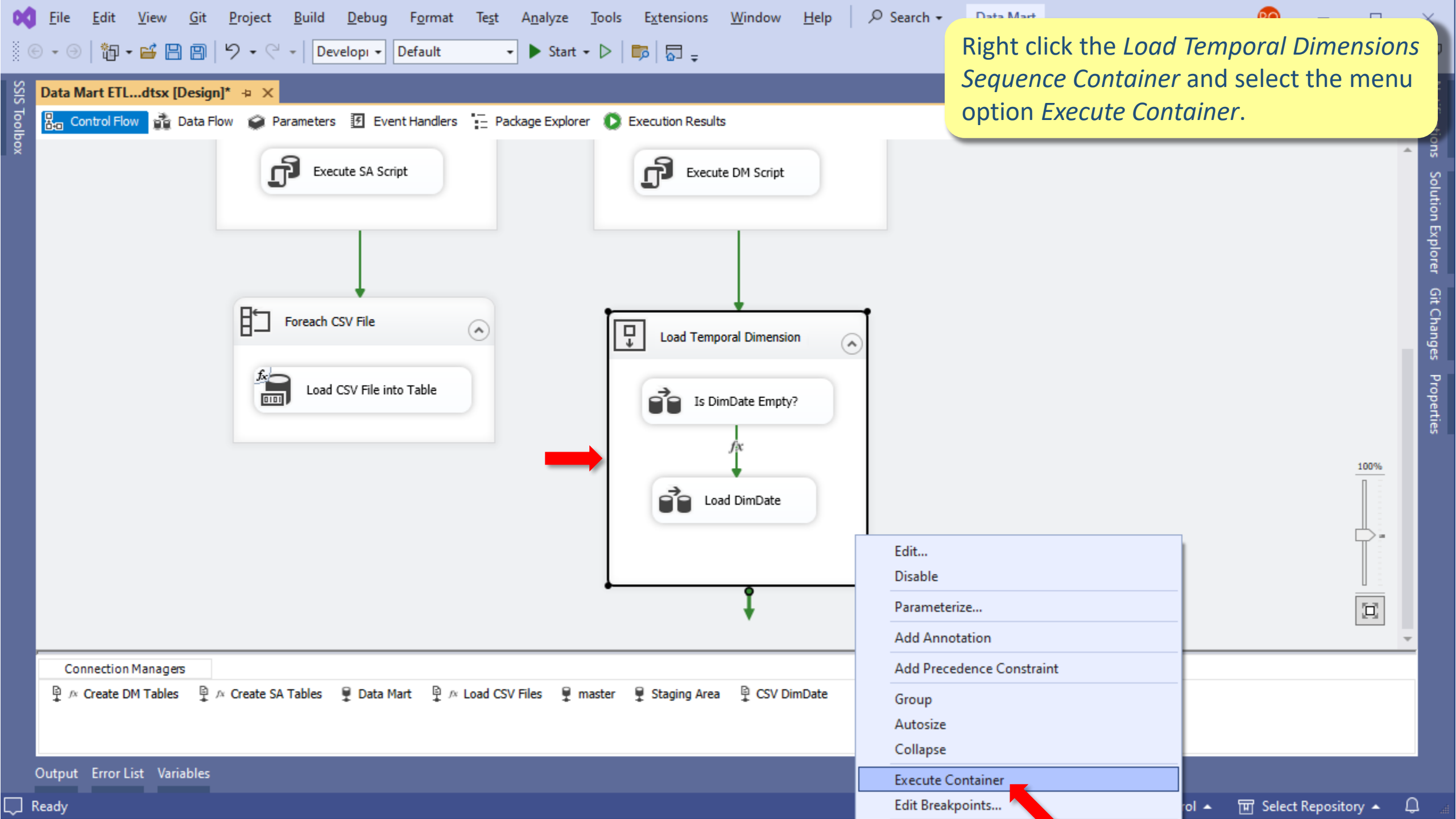
Output Error List Variables

Ready

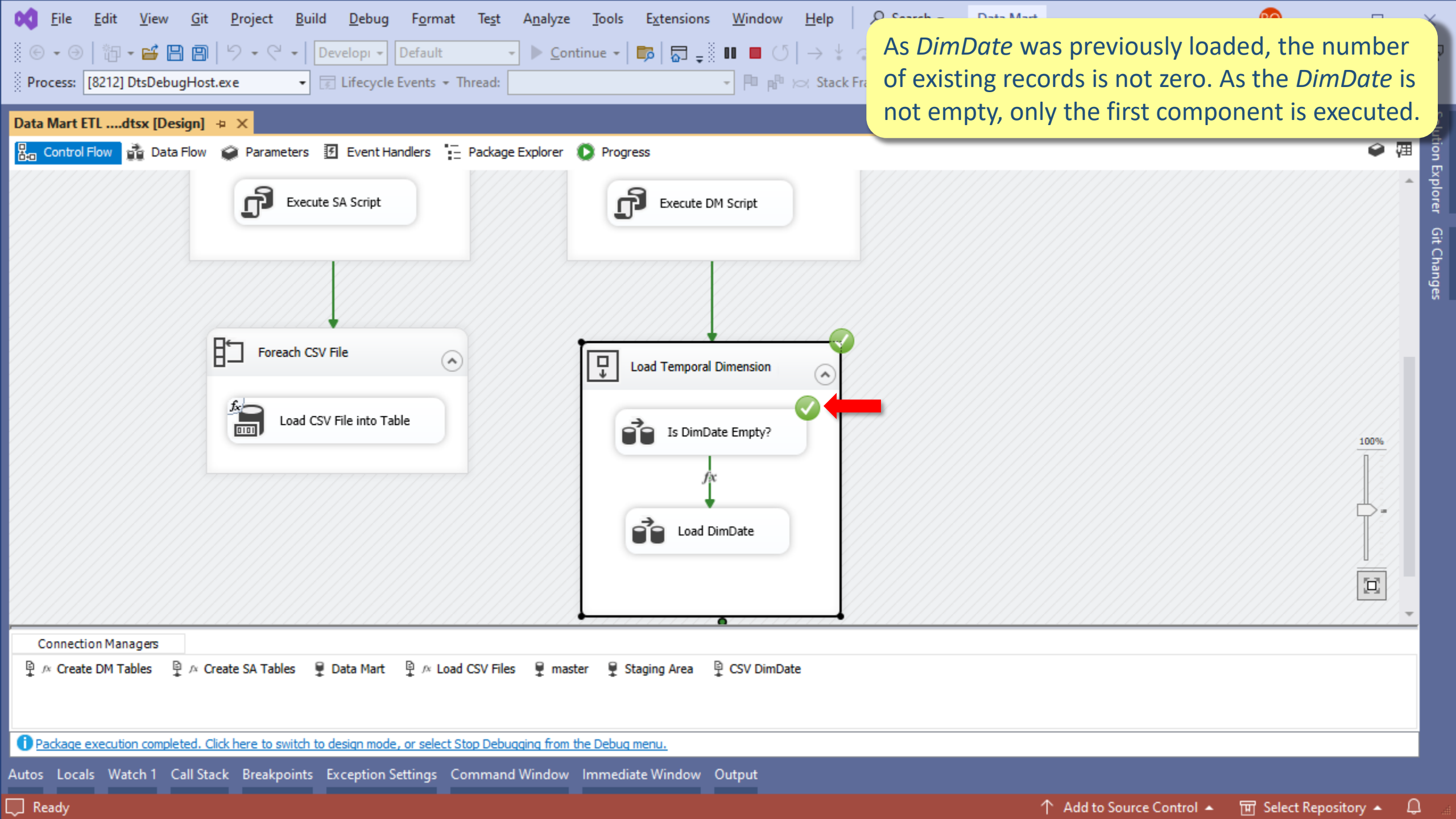
Add to Source Control

Select Repository









As *DimDate* was previously loaded, the number of existing records is not zero. As the *DimDate* is not empty, only the first component is executed.

Data Mart ETL ....dtsx [Design]

Control Flow Data Flow Parameters Event Handlers Package Explorer Progress

Execute SA Script

Execute DM Script

Foreach CSV File  
Load CSV File into Table

Load Temporal Dimension  
Is DimDate Empty?  
Load DimDate

Connection Managers

Create DM Tables Create SA Tables Data Mart Load CSV Files master Staging Area CSV DimDate

Package execution completed. Click here to switch to design mode, or select Stop Debugging from the Debug menu.

Autos Locals Watch 1 Call Stack Breakpoints Exception Settings Command Window Immediate Window Output

