



---

# DATA WAREHOUSE SSIS & STAR SCHEMA

---



Arranged By:

Rajendra Rakha Arya Prabaswara

(1941720080/21)

PROGRAM STUDI D-IV TEKNIK INFORMATIKA

JURUSAN TEKNOLOGI INFORMASI

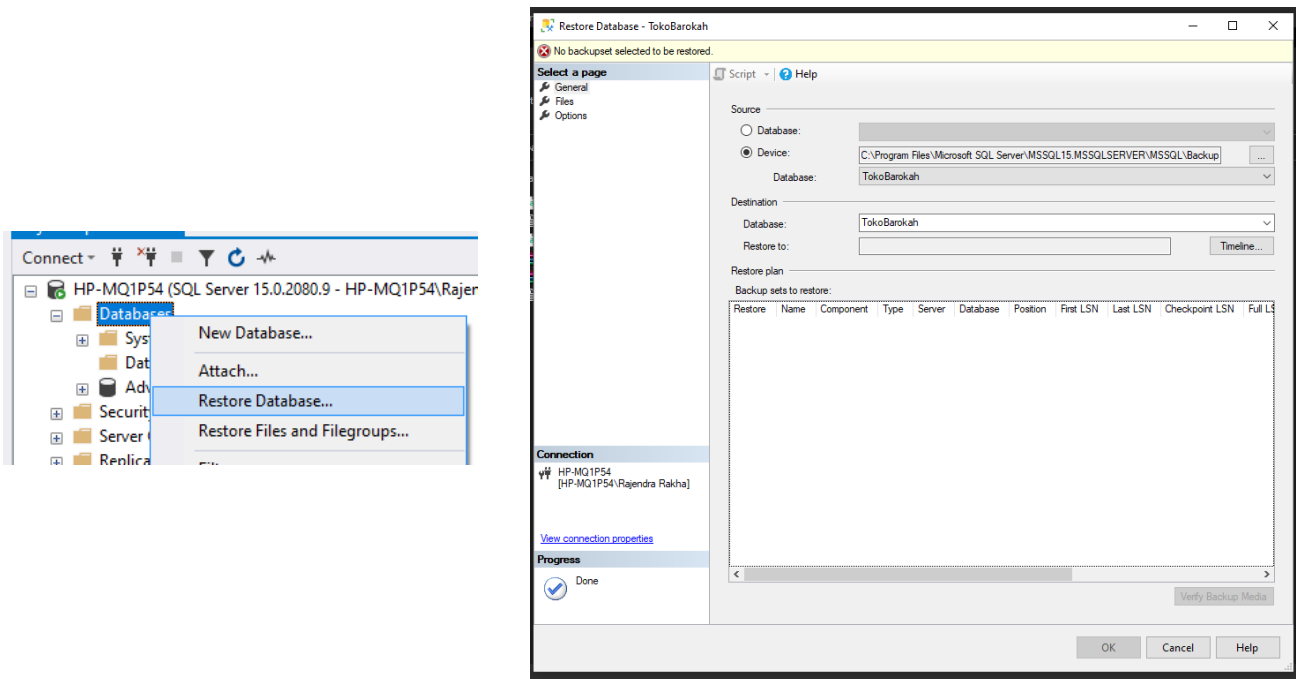
POLITEKNIK NEGERI MALANG



## Practice 1

### (Setting up a Sample Data Source and Data Warehouse Schema)

Extract TokoBarokah.7zip Then restore to Database Server



In the same repository has been provided SQL file named TokoBarokahDW.sql, open and start that file in your Query Editor SSMS window.

```
DROP DATABASE IF EXISTS TokoBarokahDW;
GO

-- Buat database baru sebagai datawarehouse
CREATE DATABASE TokoBarokahDW;
GO

USE TokoBarokahDW;
GO

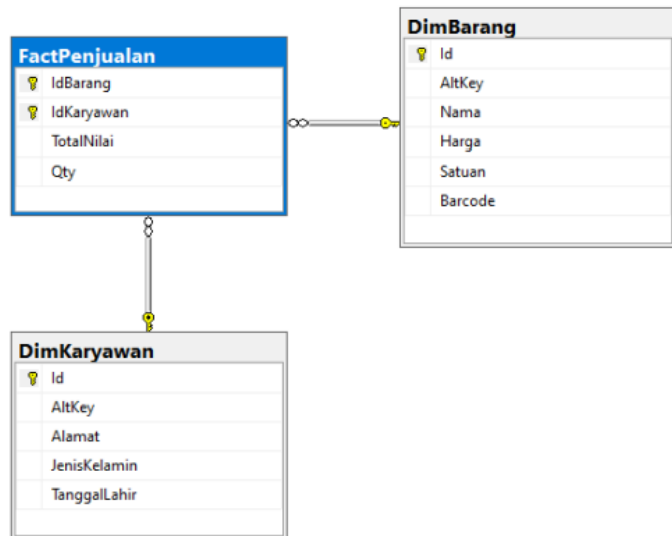
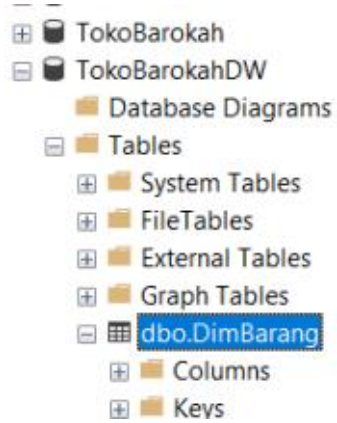
-- Buat tabel dimensi barang
CREATE TABLE DimBarang (
    Id INT PRIMARY KEY IDENTITY,
    AltKey VARCHAR (50),
    Nama VARCHAR (50),
    Harga VARCHAR (50),
    Satuan VARCHAR (50),
    Barcode VARCHAR (50)
);
GO

-- Buat tabel dimensi karyawan
CREATE TABLE DimKaryawan (
    Id INT PRIMARY KEY IDENTITY,
    AltKey VARCHAR (50),
    Alamat VARCHAR (50),
    JenisKelamin CHAR (1),
    Tanggalahir DATE
);
GO

-- Buat tabel fakta penjualan
```



Make sure there is now a database named TokoBarokahDW on your SQL Server. Notice in the database there is 1 fact table and 1 dimension table. In the next part of the practicum, we will Load data from a CSV file into the DimBarang table.

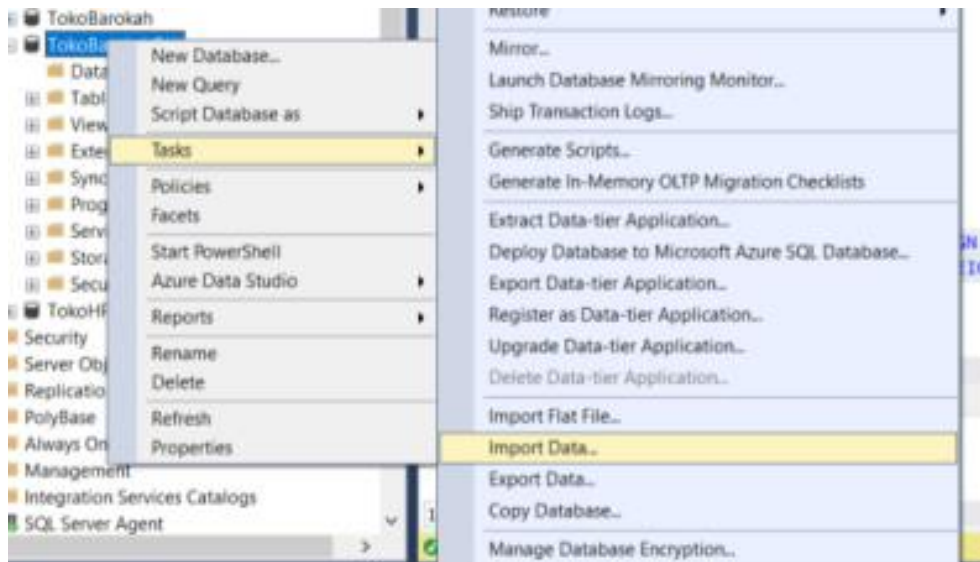




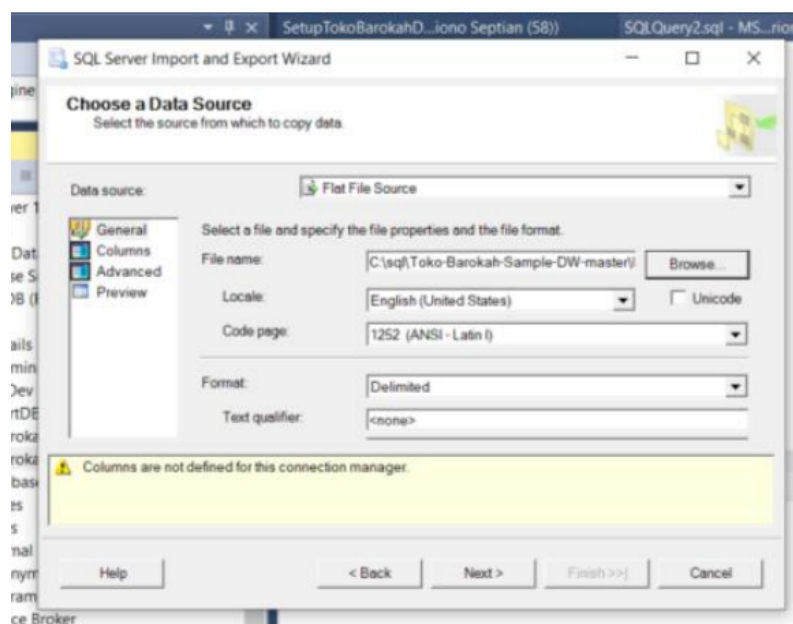
## Praktikum 2

### (Membuat Package SSIS dengan Export/Import Wizard)

To importing data with Export/Import Wizard. Firstly, right click on the database name, then select Tasks and after that Import Data.

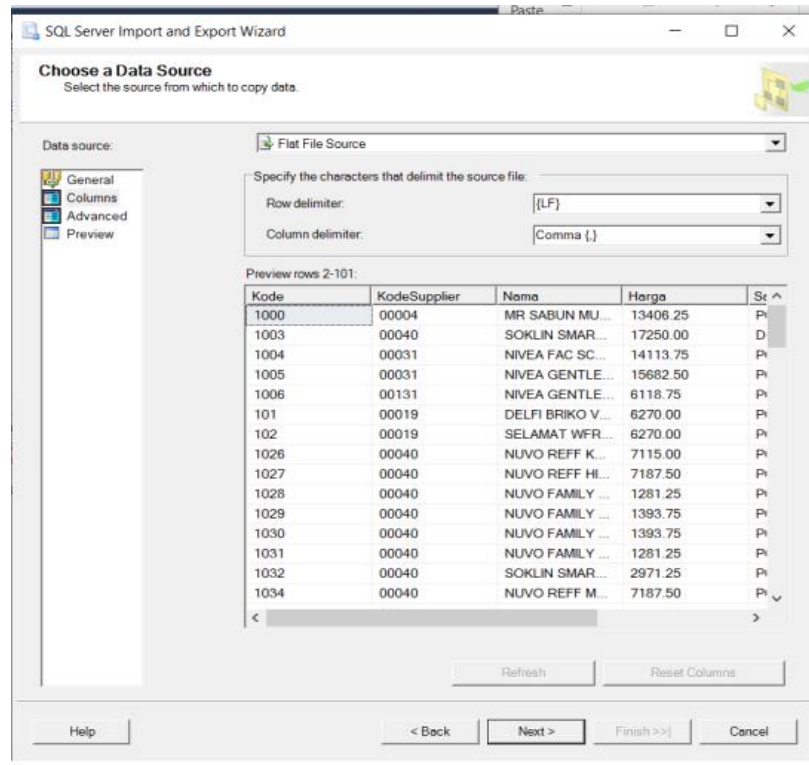


A welcome window will appear, just click next until the Choose a Data Source window appears. In this window make sure in the Data source column: it is Flat File Source because we will be importing data from a CSV file. Click Browse to adjust the location of the CSV file where. Make sure the contents are as shown in the following image, then click Next >.

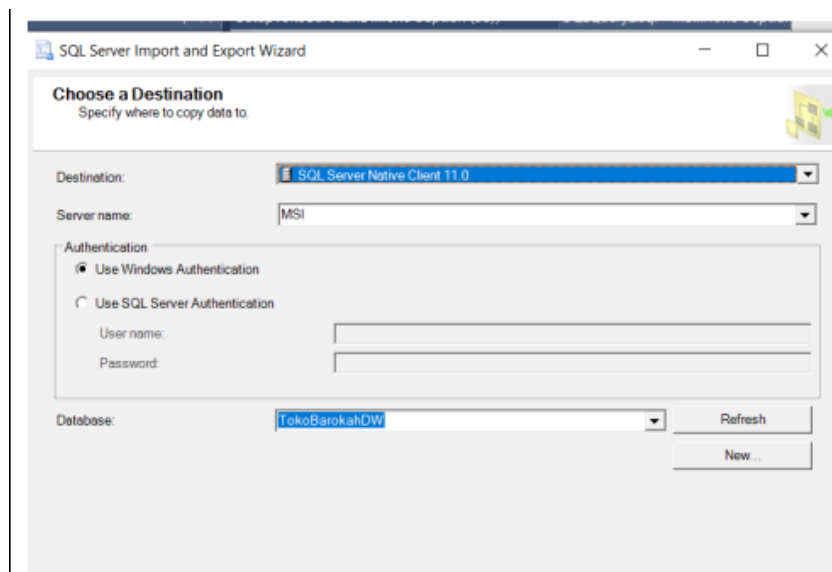




In the screen that appears next, you can make sure that the data in the CSV file to be imported is visible here. If it does not appear, it means that there are settings that are still not correct. If the data is visible here, click Next.

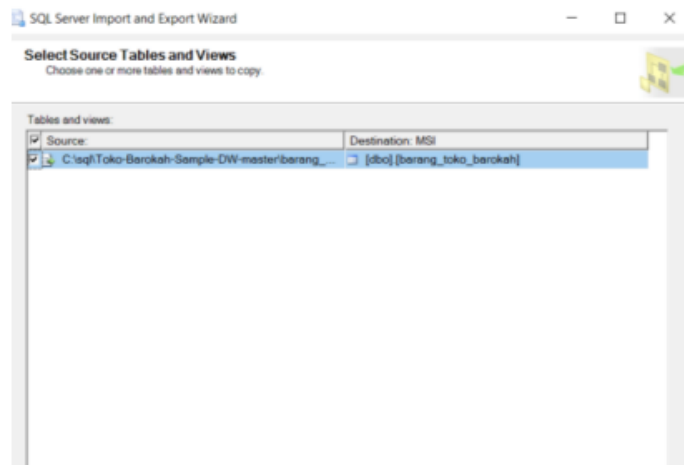


Next, the Choose a Destination dialog window will appear. In the Destination field, enter the correct connection provider, namely SQL Server Native Client 11.0. This Connection Provider is used because the imported data will be written to the SQL Server DBMS. If the data will be loaded into another DBMS, then we can choose the appropriate connection provider. Make sure the selected database is TokoBarokahDW, then click Next.

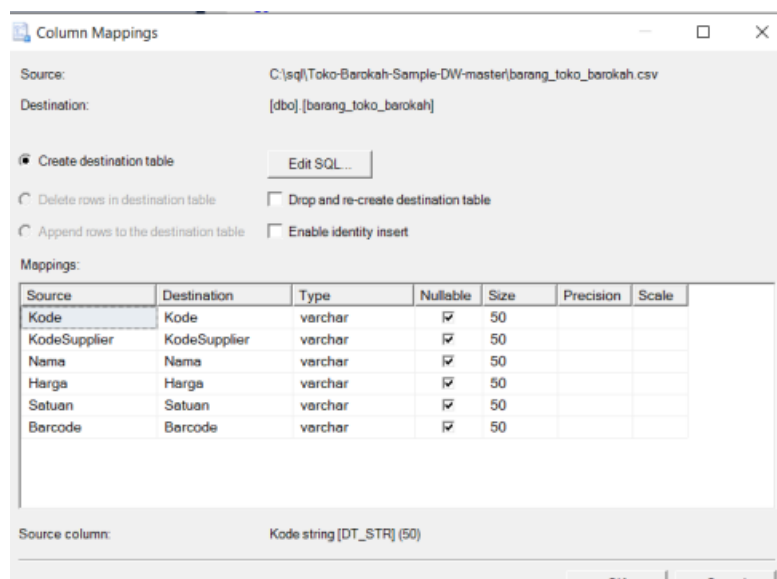




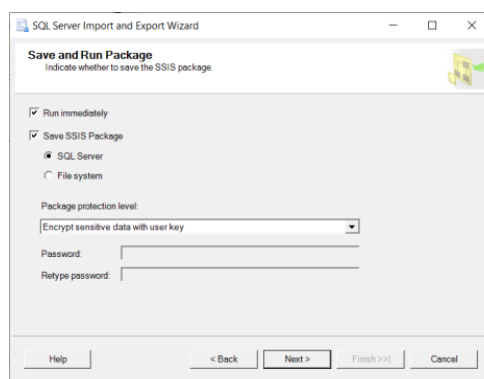
In the next screen that appears, make sure that in the Destination : column, the selected table is [dbo].[DimBarang], then click Edit Mappings.



In the Column Mappings windows, make sure that all data type according to the image below (all varchar). If it is done, click OK. Then in the previous dialog, click Next.

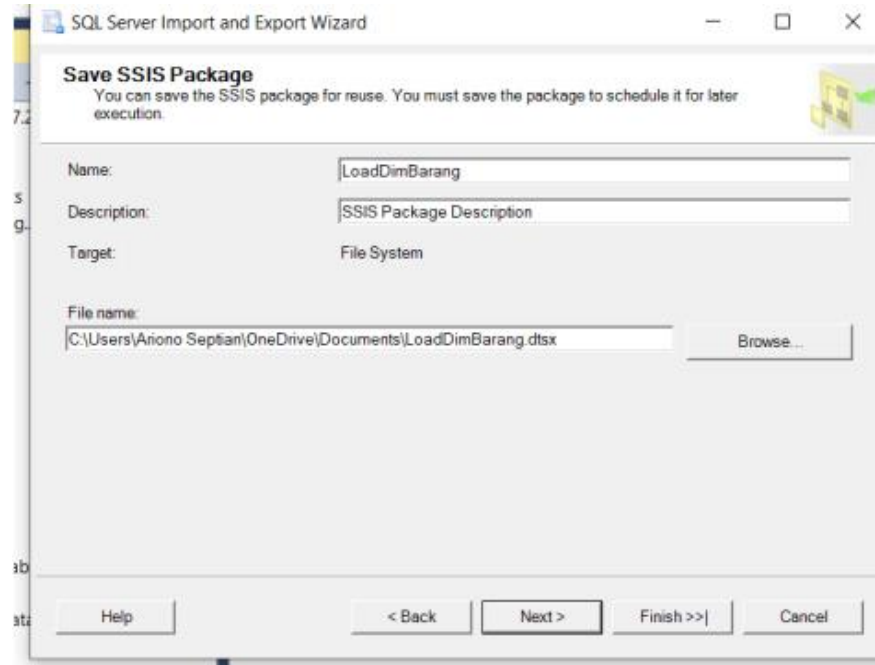


Save and Run Package dialog will appear. In this part, make sure the Save SSIS Package option already checked, also on File System option. Then click Next.

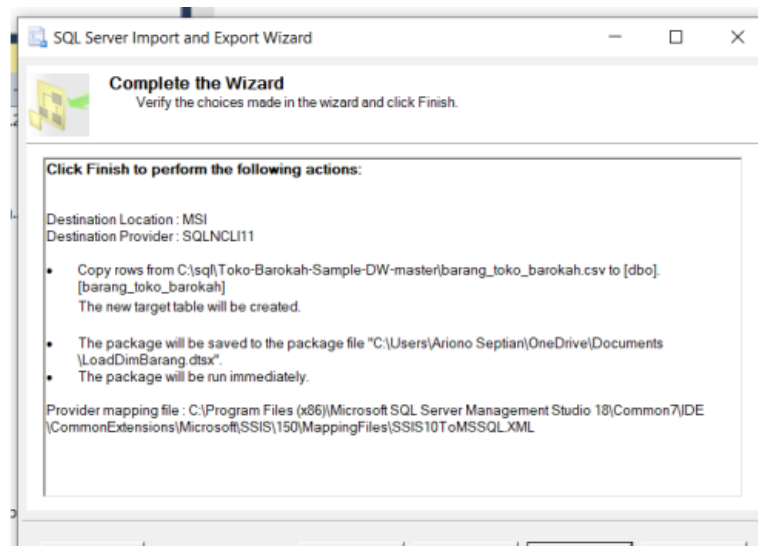




In the next dialog that appears, fill in the package file name with the name LoadDimBarang. Click Browse and save the package in a folder that you can easily remember. Note the file name extension is \*.dtsx, click Next.

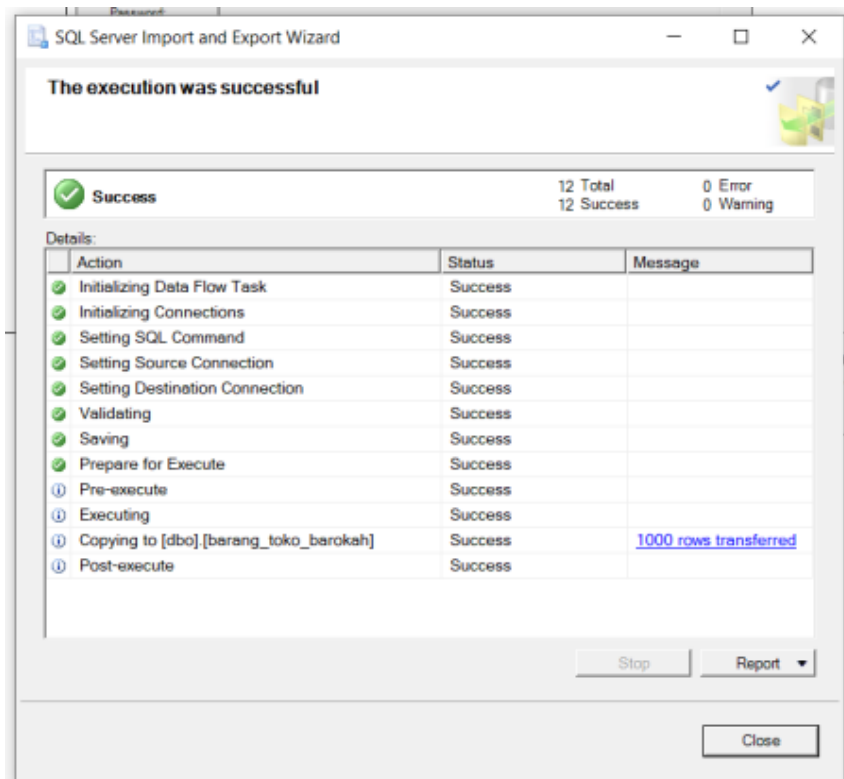


The next dialog appear is the dialog that contain the resume of import process that already done. Make sure your dialog appears as shown in the following image then click Finish.





The import process will run. If the previous steps are carried out correctly, the import process will have the status of Success. Click Close.



Type the following query to display the data in the DimBarang table, if the import is successful, 1000 new rows will appear in the table as shown in the following figure.

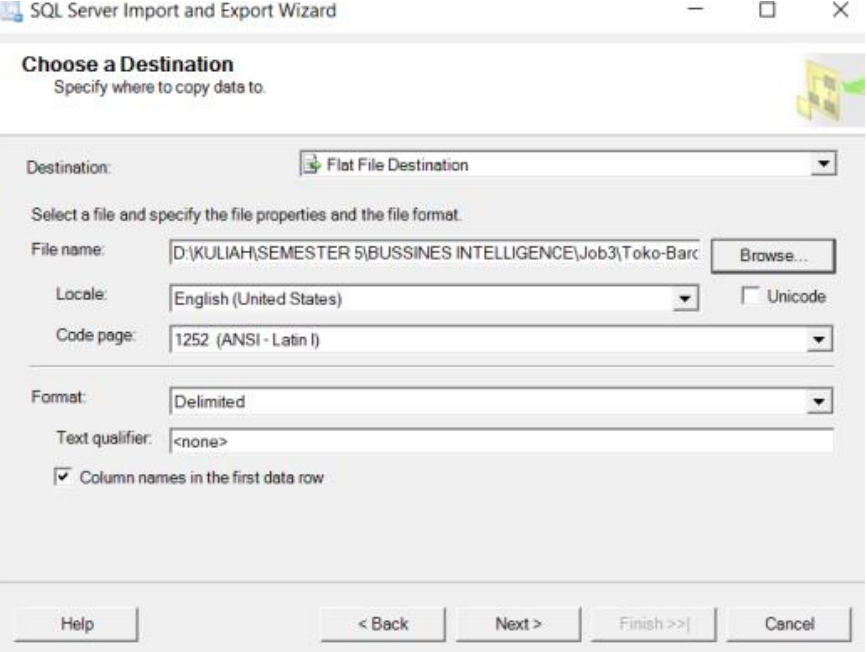
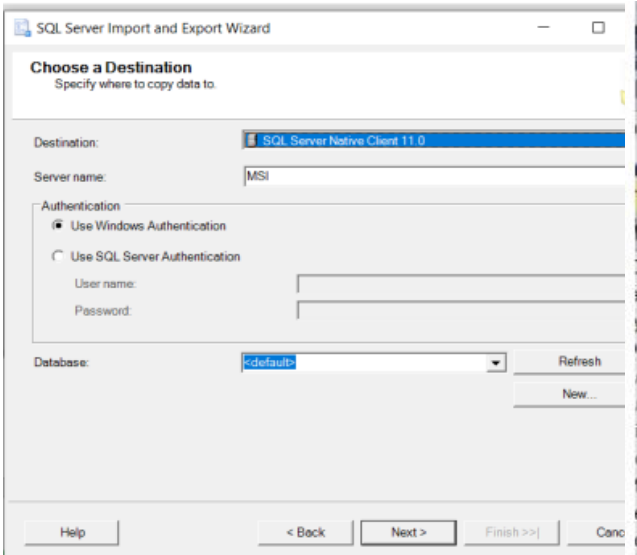
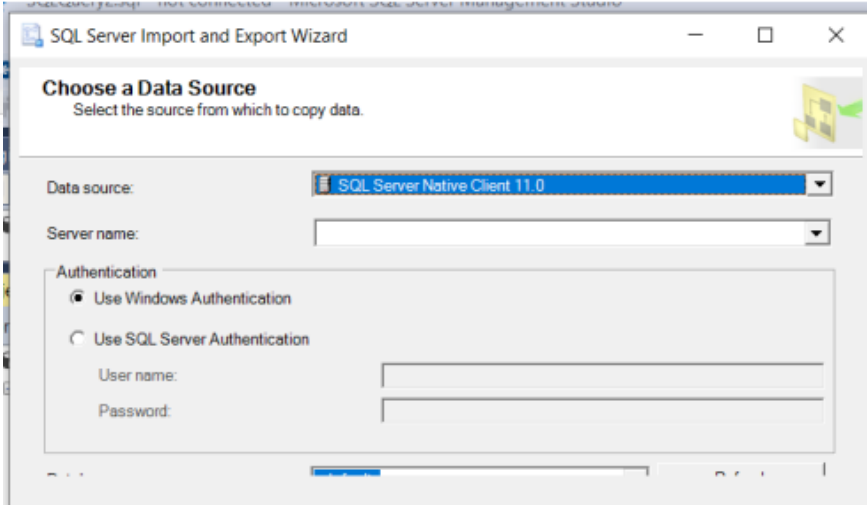
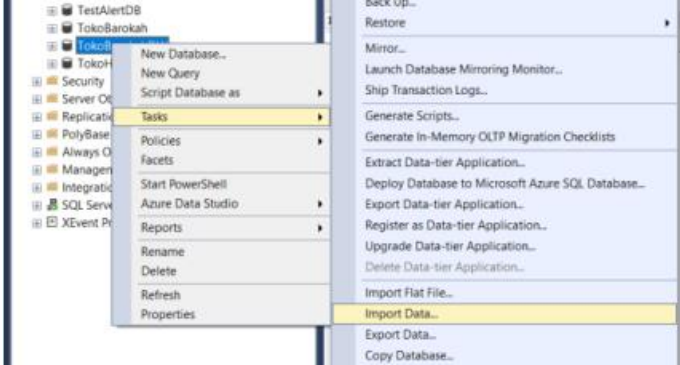






## Practice

Export data from the dbo.Karyawan table in the TokoBarokah database into a CSV file. You can use the T-SQL syntax or the Export/Import Wizard.





SQL Server Import and Export Wizard

Configure Flat File Destination

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

Specify the characters that delimit the destination file:

Row delimiter: {CR}{LF}

Column delimiter: Comma (,)

Edit Mappings... Preview...

Help < Back Next > Finish >> Cancel

Source: SELECT \* FROM [dbo].[Karyawan]

Username	Alamat	JenisKelamin	TanggalLahir
ARIF	Sukun	L	5/29/1984 12:00:00 AM
AYU	Sawojajar	P	6/13/1982 12:00:00 AM
CATUR	Blimbing	L	8/14/1983 12:00:00 AM
DEWI	Kedungkandang	P	12/3/1983 12:00:00 AM
ETIK	Sukun	P	9/23/1984 12:00:00 AM
ONNY	Klojen	L	12/7/1985 12:00:00 AM
PUSPITA	Lowokwaru	P	10/18/1984 12:00:00 AM
RIANTI	Blimbing	P	2/3/1982 12:00:00 AM
RIDO	Klojen	L	4/23/1984 12:00:00 AM
RIZKY	Lowokwaru	L	11/4/1983 12:00:00 AM
SUGIONO	Klojen	L	2/27/1983 12:00:00 AM
WIWIK	Kedungkandang	P	1/15/1983 12:00:00 AM

OK

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 and views

Use this option to copy all the data from the existing tables and 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 operation.

Provide a Source Query

Type the SQL statement that will select data from the source database.

SQL statement:

SELECT \* FROM [dbo].[Karyawan]

Copy message

This SQL statement is valid.

OK

Finish >> Cancel



**Configure Flat File Destination**

Source query: [Query]

Specify the characters that delimit the destination file:

Row delimiter: {CR}{LF}

Column delimiter: Comma (,)

Edit Mappings... Preview...

Help < Back Next > Finish >> Cancel

**SQL Server Import and Export Wizard**

**Complete the Wizard**  
Verify the choices made in the wizard and click Finish.

Click Finish to perform the following actions:

Source Location : MSI  
Source Provider : SQLNCLI11

- Copy rows from [Query] to C:\sql\karyawan.csv  
The new target table will be created.
- The package will not be saved.
- The package will be run immediately.

Provider mapping file : C:\Program Files (x86)\Microsoft SQL Server Management Studio 18\Common7\IDE\Extensions\Microsoft\SSIS\150\MappingFiles\MSSQL To SSIS10.XML

Help < Back Next > Finish Cancel

Name	Date modified	Type	Size
Toko-Barokah-Sample-DW-master	10/7/2021 12:36 PM	File folder	
barang_toko_barokah	8/30/2020 6:44 AM	Microsoft Excel Co...	88 KB
karyawan	10/7/2021 12:47 PM	Microsoft Excel Co...	1 KB
LoadDimBarang	9/14/2020 3:42 PM	Integration Service...	31 KB
Toko-Barokah-Sample-DW-master	10/7/2021 9:01 AM	WinRAR ZIP archive	26,916 KB

**SQL Server Import and Export Wizard**

**Welcome to SQL Server Import and Export**

This wizard helps you to create simple packages that import and export data between many popular data formats including databases, spreadsheets, and text files. The wizard can also create the destination database and the tables into which the data is inserted.

To move or copy databases and their objects from one server instance to another, cancel this wizard and use the Copy Database Wizard instead. The Copy Database Wizard is available in SQL Server Management Studio.

☐ Do not show this starting page again.

Help < Back Next > Finish >> Cancel

**SQL Server Import and Export Wizard**

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

Data source: Flat File Source

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

File name: C:\sql\karyawan.csv Browse...

Locale: English (United States) ☐ 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

Help < Back Next > Finish >> Cancel



SQL Server Import and Export Wizard

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

Data source: Flat File Source

Specify the characters that delimit the source file:

Row delimiter: [CR][LF]

Column delimiter: Comma (,)

view rows 2-13:

ername	Alamat	JenisKelamin	TanggalLahir
3IF	Sukun	L	1984-05-29
7U	Sawojajar	P	1982-06-13
4TUR	Blimbing	L	1983-08-14
3WI	Kedungkandang	P	1983-12-03
7IK	Sukun	P	1984-09-23
4NY	Klojen	L	1985-12-07
JSPITA	Lowokwaru	P	1984-10-18
ANTI	Blimbing	P	1982-02-03
DO	Klojen	L	1984-04-23
ZKY	Lowokwaru	L	1983-11-04
JGIONO	Klojen	L	1983-02-27
IWI	Kedungkandang	P	1983-01-15

Refresh Reset Columns

Help < Back Next > Finish >> Cancel

SQL Server Import and Export Wizard

Choose a Destination  
Specify where to copy data to:

Destination: SQL Server Native Client 11.0

Server name: MSI

Authentication

☒ Use Windows Authentication

☐ Use SQL Server Authentication

User name: Password:

Database: TokoBarokahCW Refresh New...

Help < Back Next > Finish >> Cancel

### Select Source Tables and Views

Choose one or more tables and views to copy.

SQL Server Import and Export Wizard

Select Source Tables and Views  
Choose one or more tables and views to copy.

Tables and views:

Source:	Destination:
D:\ADAM\KULIAH\ISMT 5\Data WAREHO...	DESKTOP-11RRFTS
[dbo].[DimKaryawan]	[dbo].[DimKaryawan]

Help < Back Next > Finish >> Cancel

SQL Server Import and Export Wizard

Select Source Tables and Views  
Choose one or more tables and views to copy.

Tables and views:

Source:	Destination:
C:\sql\karyawan.csv	MSI
[dbo].[karyawan]	[dbo].[karyawan]

Edit Mappings... Preview...

< Back Next > Finish >> Cancel

SQL Server Import and Export Wizard

Save and Run Package  
Indicate whether to save the SSIS package.

☒ Run immediately

☒ Save SSIS Package

☐ SQL Server

☒ File system

Package protection level: Encrypt sensitive data with user key

Password: Retype password:

Help < Back Next > Finish >> Cancel



SQL Server Import and Export Wizard

**Save SSIS Package**  
You can save the SSIS package for reuse. You must save the package to schedule it for later execution.

Name: LoadDimKaryawan

Description: SSIS Package Description

Target: File System

File name:  
C:\Users\Ariono Septani\OneDrive\Documents\LoadDimKaryawan.dtsx

Browse...

Help < Back Next > Finish >> Cancel

The execution was successful

**Success** 12 Total 0 Error  
12 Success 0 Warning

Details

Action	Status	Message
Initializing Data Flow Task	Success	
Initializing Connections	Success	
Setting SQL Command	Success	
Setting Source Connection	Success	
Setting Destination Connection	Success	
Validating	Success	
Saving	Success	
Prepare for Execute	Success	
Pre-execute	Success	
Executing	Success	
Copying to [dbo].[karyawan]	Success	12 rows transferred
Post-execute	Success	

Stop Report Close

SELECT \* FROM DimKaryawan;  
GO

100 %

Results Messages

	Id	AltKey	Alamat	JenisKelamin	TanggalLahir
1	1	1984-05-29	Sukun	L	NULL
2	2	1982-06-13	Sawojajar	P	NULL
3	3	1983-08-14	Blimbing	L	NULL
4	4	1983-12-03	Kedungkandang	P	NULL
5	5	1984-09-23	Sukun	P	NULL
6	6	1985-12-07	Klojen	L	NULL
7	7	1984-10-18	Lowokwaru	P	NULL
8	8	1982-02-03	Blimbing	P	NULL
9	9	1984-04-23	Klojen	L	NULL
10	1..	1983-11-04	Lowokwaru	L	NULL
11	1..	1983-02-27	Klojen	L	NULL
12	1..	1983-01-15	Kedunakandana	P	NULL