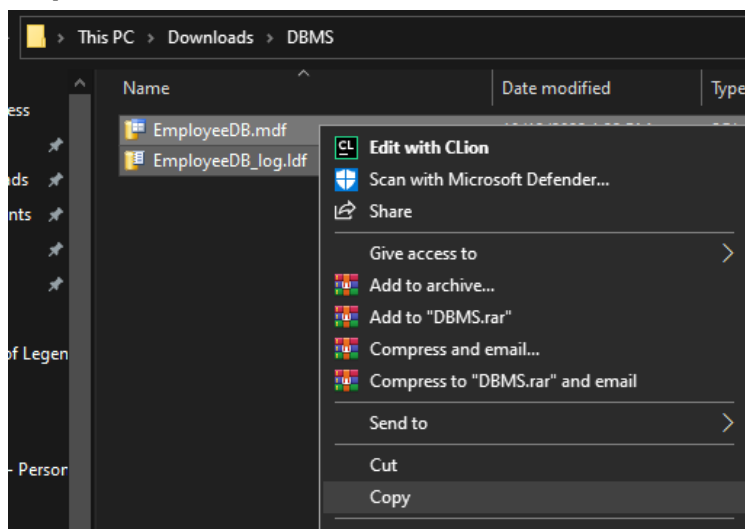


Activity No. 7.2 - Administering Databases	
Name: Efa, Christian Guevarra, Hans Angelo Mendoza, John Renzo Nicolas, Sean Julian Vinluan, Armando	Date: 10/12/22
Section: CPE21S3	Instructor: Dr. Jonathan Vidal Taylar

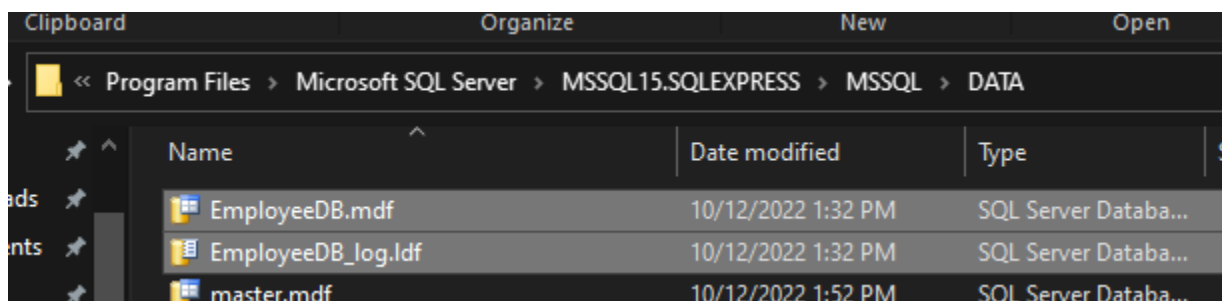
Database Output

A. Attach Database

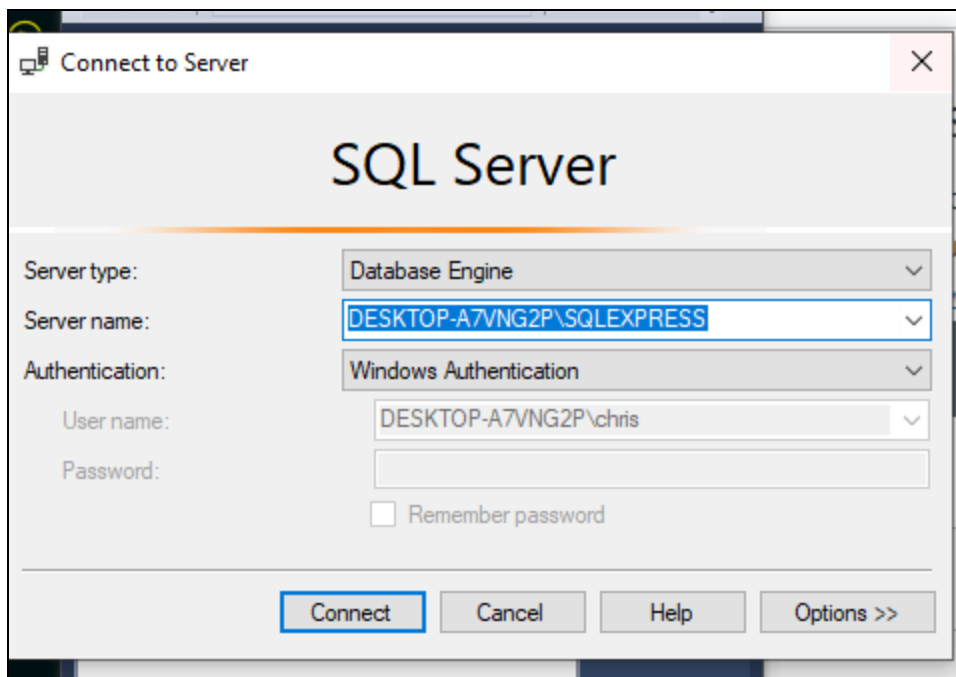
Step 1. Select the file EMPLOYEEDB.mdf and EMPLOYEEDB_log from the source folder.



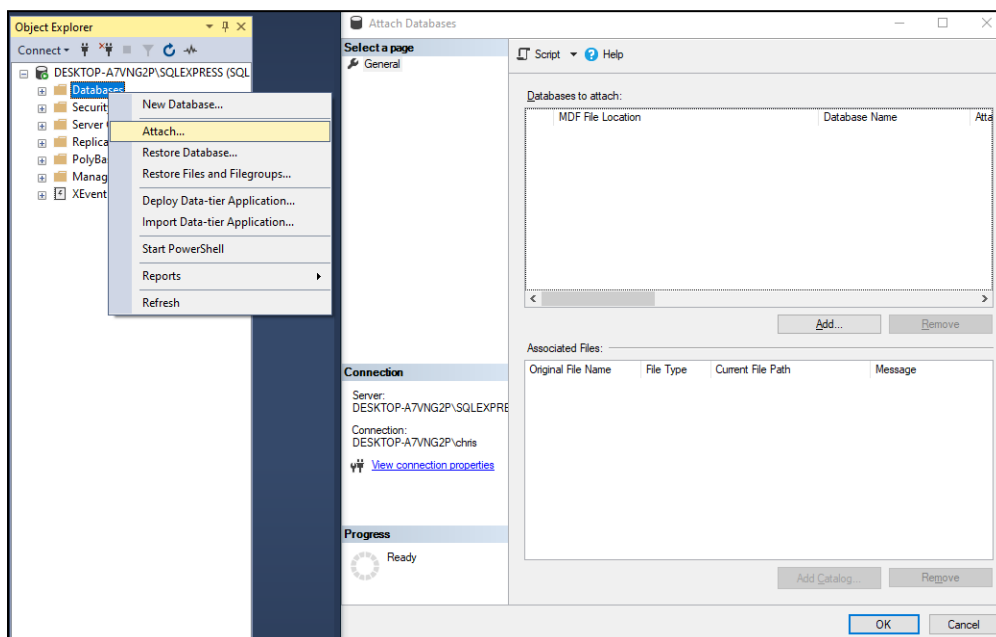
Step 2. Copy and paste the two files to C:\Program Files (x86)\Microsoft SQLServer\MSSQL.1\MSSQL\Data



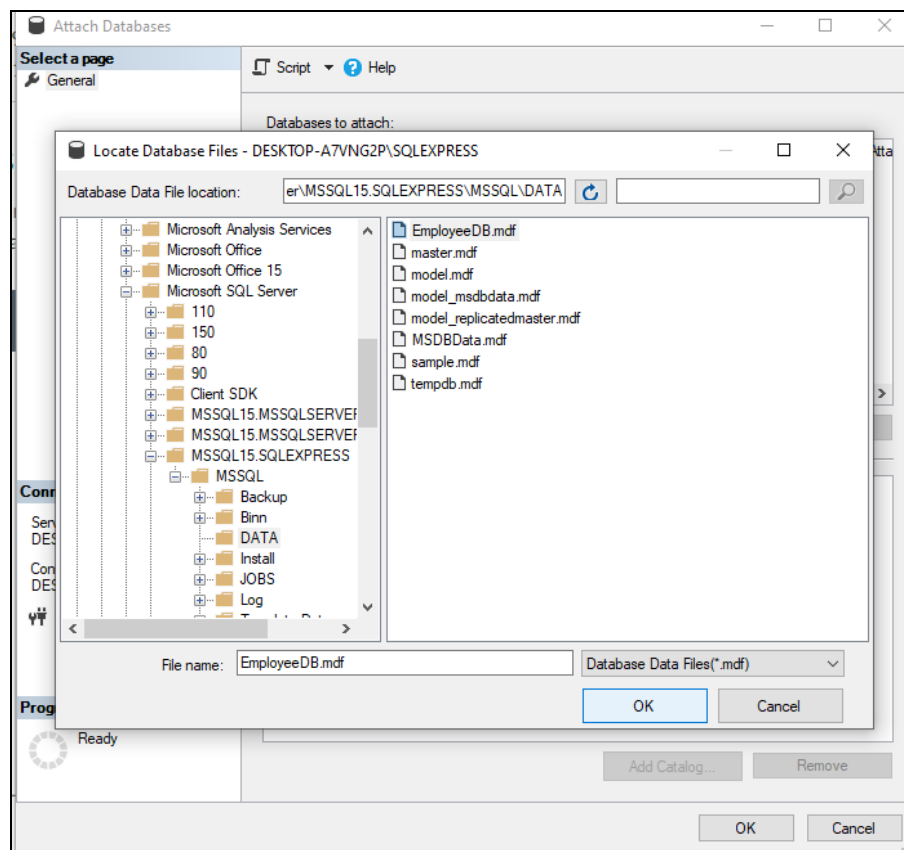
Step 3. Connect to the SQL Server database engine. Choose Databases.



Step 4. Right-click the Databases and then choose Attach. The Attach Database window appears.

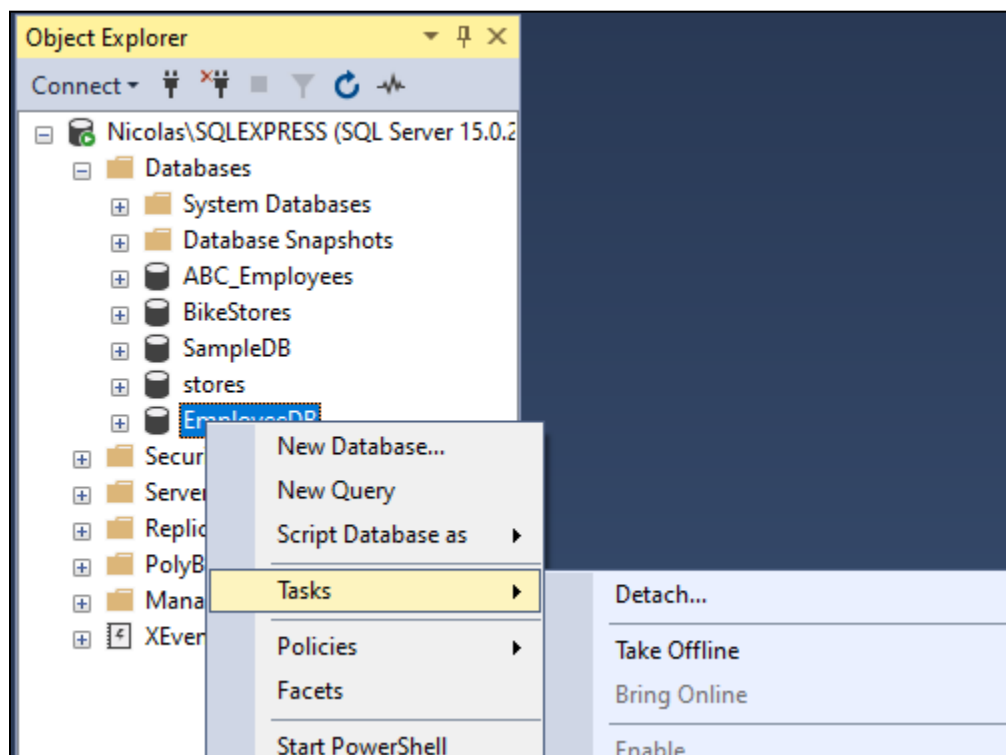


Step 5. Click the Add button. The window will display the available databases of the SQL Server that can be found in C:\Program Files (x86)\Microsoft SQL Server\MSSQL.1\MSSQL\Data. Data. Select theEMPLOYEEDB.mdf. Click OK.

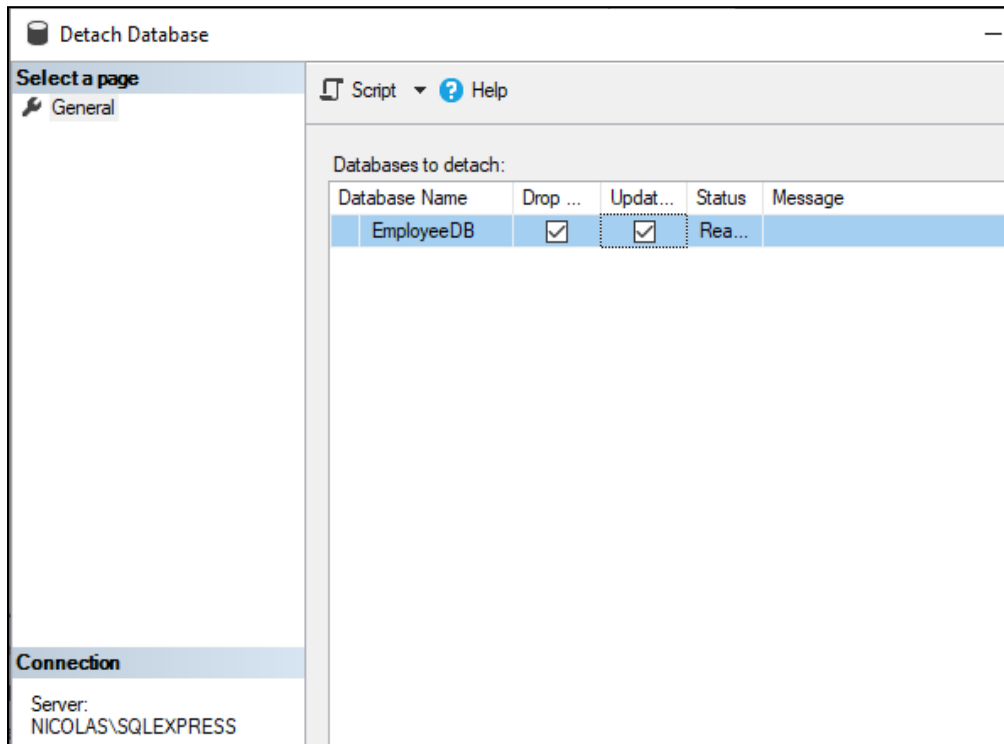


B. Detach Database

Step 1. In SQL Server Management Studio, connect to an instance of the SQL Server Database Engine. Expand Databases, select the name of the user database you want to detach.

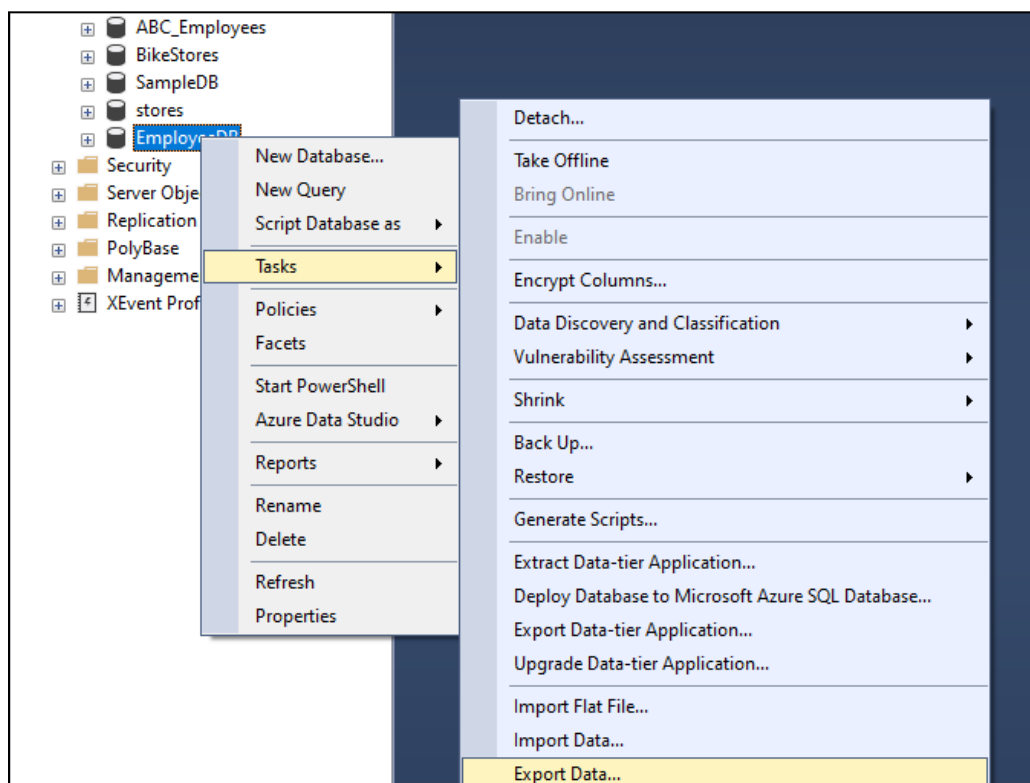


Step 2. Right-click the database name, point to Tasks, and then click Detach. The Detach Database dialog box appears. Check the boxes Drop Connections, Update Statistics and Keep Full-Text Catalogs. Click OK



C. Export Data

A. Export Employee table of EmployeeDB to Employee.xls (excel file).



SQL Server Import and Export Wizard

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

Data source: SQL Server Native Client 11.0

Server name: Nicolas\SQLEXPRESS

Authentication

☒ Use Windows Authentication

☐ Use SQL Server Authentication

User name:

Password:

Database: EmployeeDB Refresh

Help < Back Next > Finish >> Cancel

SQL Server Import and Export Wizard

Choose a Destination
Specify where to copy data to.

Destination: Microsoft Excel

Excel connection settings

Excel file path:
C:\Program Files\Microsoft SQL Server\MSSQL15.SQLEXPRESS\MSSQL\DATA\EmployeeDB.xls Browse...

Excel version:
Microsoft Excel 97-2003

☒ First row has column names

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: Nicolas\SQLEXPRESS	Destination: C:\Program Files\Microsoft SQL Server\...
<input type="checkbox"/> [dbo].[tbl_department]	
<input checked="" type="checkbox"/> [dbo].[tbl_Employee]	'tbl_Employee'
<input type="checkbox"/> [dbo].[tbl_EmployeeDetails]	

Edit Mappings... Preview...

Help < Back Next > Finish >> Cancel

SQL Server Import and Export Wizard

Review Data Type Mapping

Select a table to review how its data types map to those in the destination and how it handles conversion issues.

Table:

Source	Destination
<input checked="" type="checkbox"/> [dbo].[tbl_Employee]	'tbl_Employee'

Data type mapping:

Source Column	Source Type	Destination Col...	Destination Type	Convert	On Error	On Trunc
<input checked="" type="checkbox"/> employeeId	int	employeeId	Long			
<input checked="" type="checkbox"/> empName	nvarchar	empName	LongText	<input checked="" type="checkbox"/>	Use Global	Use Glob
<input checked="" type="checkbox"/> age	int	age	Long			
<input checked="" type="checkbox"/> department_id	int	department_id	Long			

To view conversion details, double-click the row that contains the column source type to be converted.

On Error (global)

On Truncation (global)

Help < 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

The execution was successful

 **Success** 11 Total 0 Error
11 Success 0 Warning

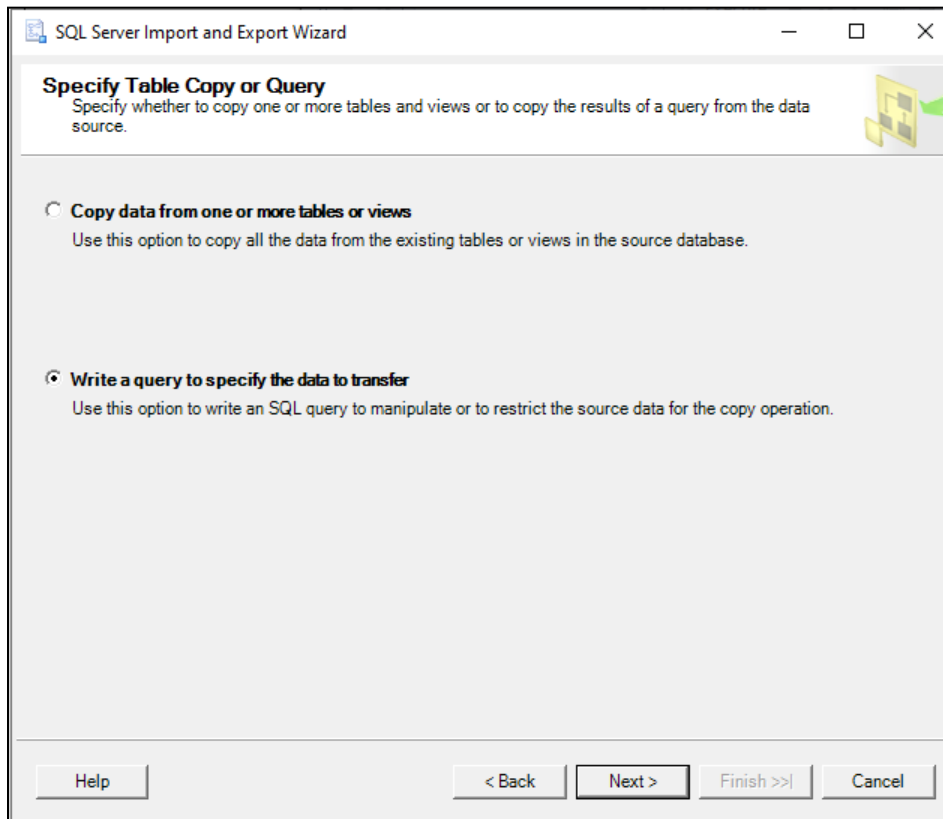
Details:

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	
 Prepare for Execute	Success	
 Pre-execute	Success	
 Executing	Success	
 Copying to 'tbl_Employee'	Success	10 rows transferred
 Post-execute	Success	

Filter Stop Report

Close

- B. Export the employees list of east region to EmployeeEast worksheet of Employee excel file.



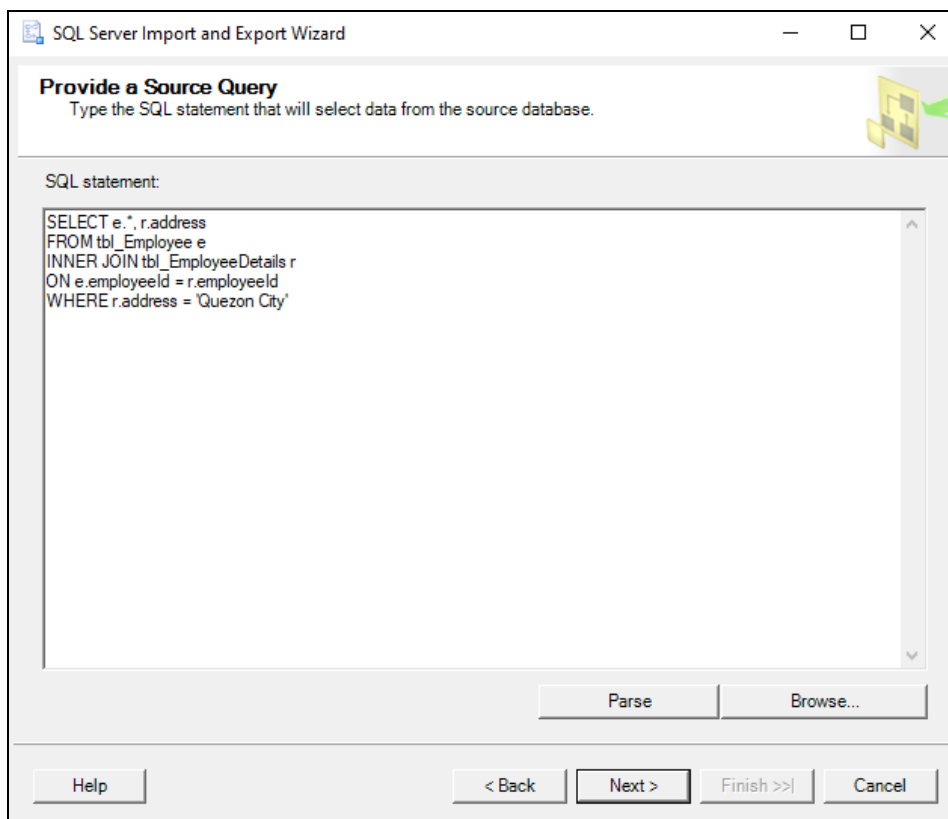
The screenshot shows the 'Specify Table Copy or Query' step of the SQL Server Import and Export Wizard. The window title is 'SQL Server Import and Export Wizard'. The main heading is 'Specify Table Copy or Query' with a subtitle 'Specify whether to copy one or more tables and views or to copy the results of a query from the data source.' There are two radio button options: 'Copy data from one or more tables or views' (unselected) and 'Write a query to specify the data to transfer' (selected). Below the second option is a description: 'Use this option to write an SQL query to manipulate or to restrict the source data for the copy operation.' At the bottom, there are five buttons: 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.

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



The screenshot shows the 'Provide a Source Query' step of the SQL Server Import and Export Wizard. The window title is 'SQL Server Import and Export Wizard'. The main heading is 'Provide a Source Query' with a subtitle 'Type the SQL statement that will select data from the source database.' There is a text area labeled 'SQL statement:' containing the following SQL query: 'SELECT e.*, r.address FROM tbl_Employee e INNER JOIN tbl_EmployeeDetails r ON e.employeeId = r.employeeId WHERE r.address = 'Quezon City''. Below the text area are two buttons: 'Parse' and 'Browse...'. At the bottom, there are five buttons: 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.

Provide a Source Query
Type the SQL statement that will select data from the source database.

SQL statement:

```
SELECT e.*, r.address
FROM tbl_Employee e
INNER JOIN tbl_EmployeeDetails r
ON e.employeeId = r.employeeId
WHERE r.address = 'Quezon City'
```

Parse Browse...

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:
<input checked="" type="checkbox"/> [Query]	'EmployeeQuezon'

SQL Server Import and Export Wizard

Review Data Type Mapping

Select a table to review how its data types map to those in the destination and how it handles conversion issues.

Table:

Source	Destination
<input checked="" type="checkbox"/> [Query]	'EmployeeQuezon'

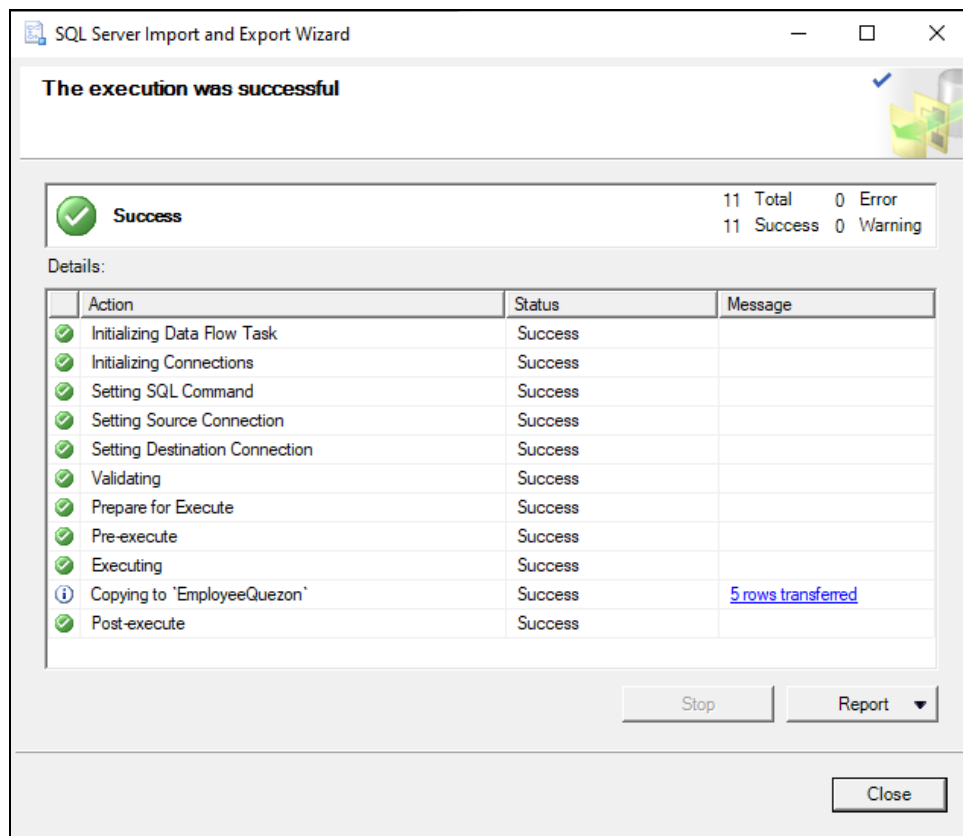
Data type mapping:

	Source Column	Source Type	Destination Col...	Destination Type	Convert	On Error	On Trunc
<input checked="" type="checkbox"/>	employeeid	int	employeeid	Long			
<input checked="" type="checkbox"/>	empName	nvarchar	empName	LongText	<input checked="" type="checkbox"/>	Use Global	Use Glob
<input checked="" type="checkbox"/>	age	int	age	Long			
<input checked="" type="checkbox"/>	department_id	int	department_id	Long			

To view conversion details, double-click the row that contains the column source type to be converted.

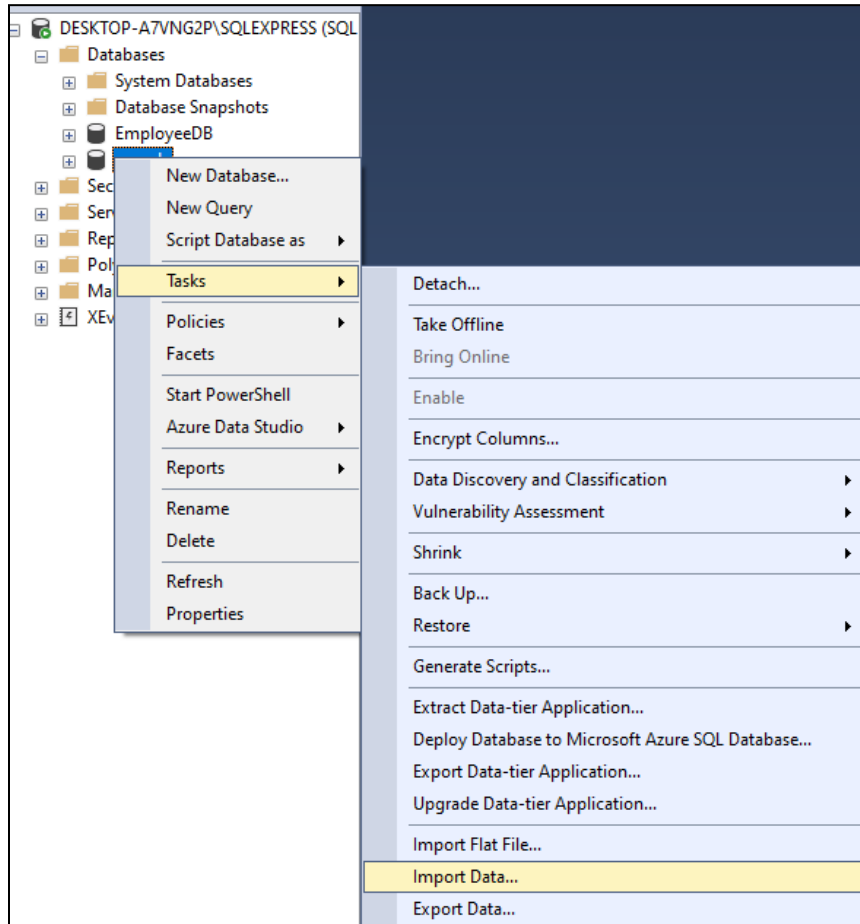
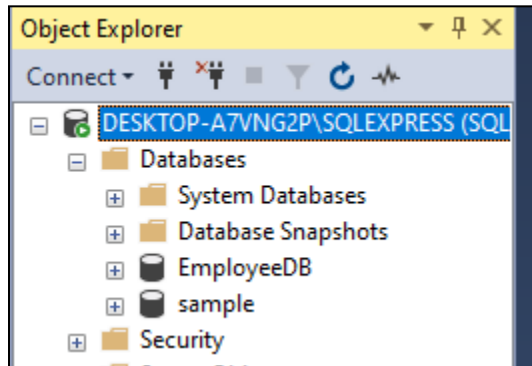
On Error (global)

On Truncation (global)



	A	B	C	D	E	F
1	employeeId	empName	age	department_id	salary	address
2	3	Michelle Short	25	3	₱24,000.00	Quezon City
3	5	Luke Alsop	25	2	₱28,000.00	Quezon City
4	6	Nathan Johnston	26	3	₱24,000.00	Quezon City
5	8	Carol Quinn	25	2	₱28,000.00	Quezon City
6	9	Emily White	25	1	₱32,000.00	Quezon City
7						
8						

D. Import Data



SQL Server Import and Export Wizard

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

Data source: Microsoft Excel

Excel connection settings

Excel file path:
 Browse...

Excel version:
Microsoft Excel 97-2003

☒ First row has column names

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: DESKTOP-A7VNG2P\SQLEXPRESS

Authentication

☒ Use Windows Authentication

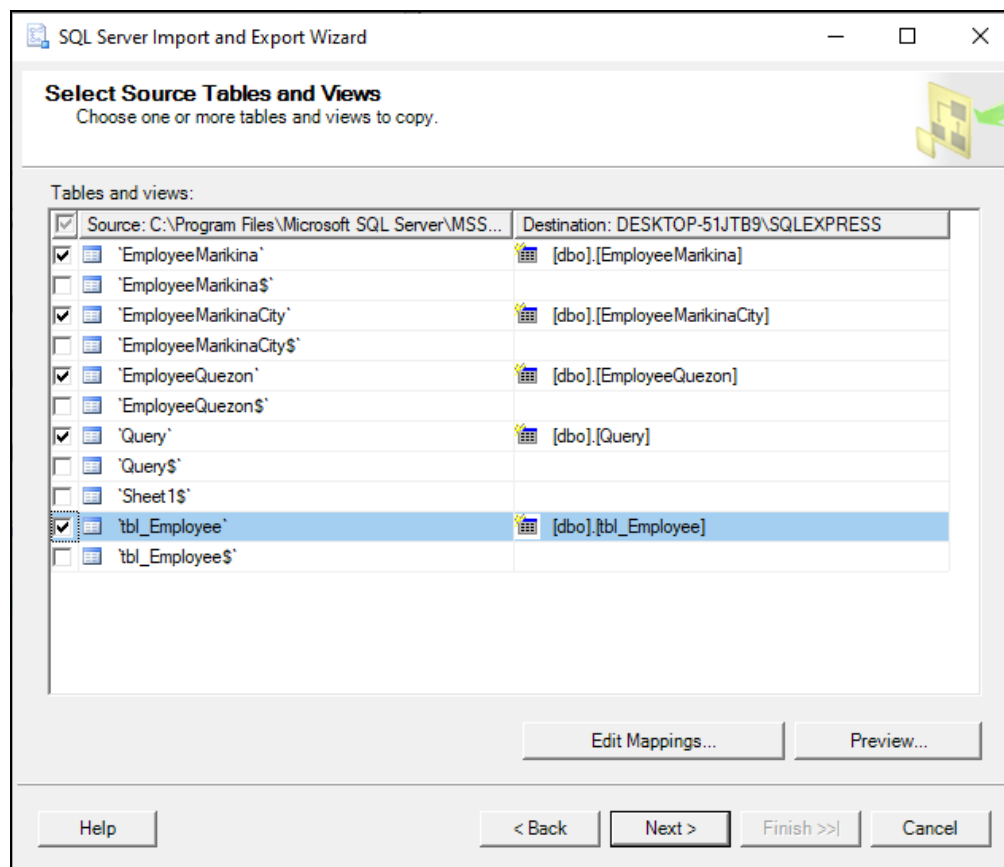
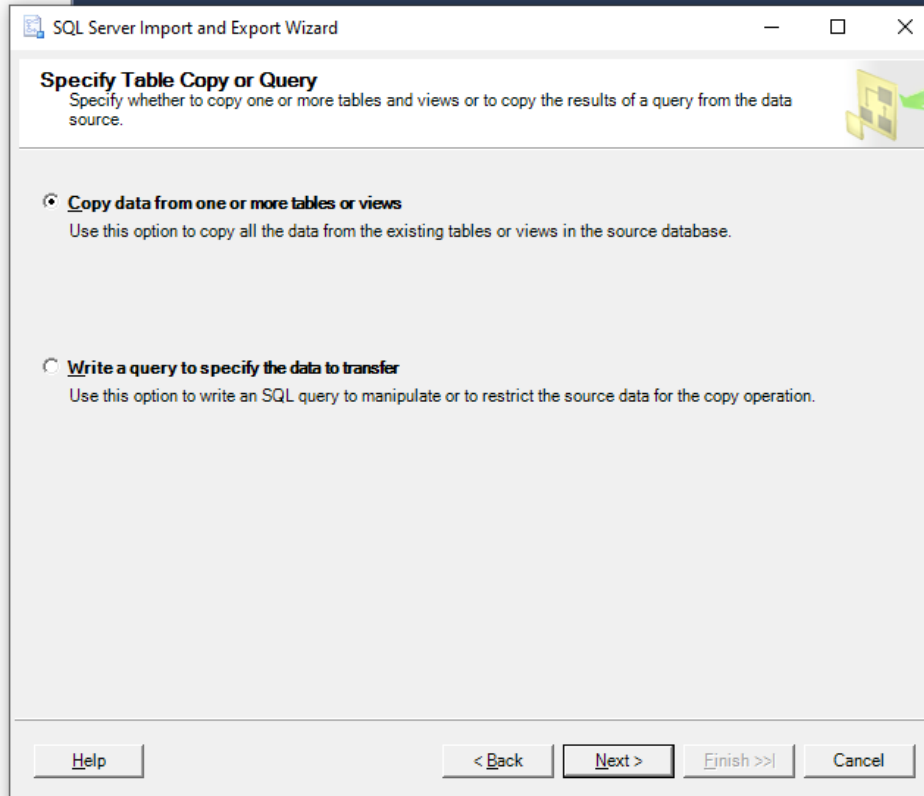
☐ Use SQL Server Authentication

User name:

Password:

Database: ClassicModels Refresh

Help < 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

Complete the Wizard

Verify the choices made in the wizard and click Finish.

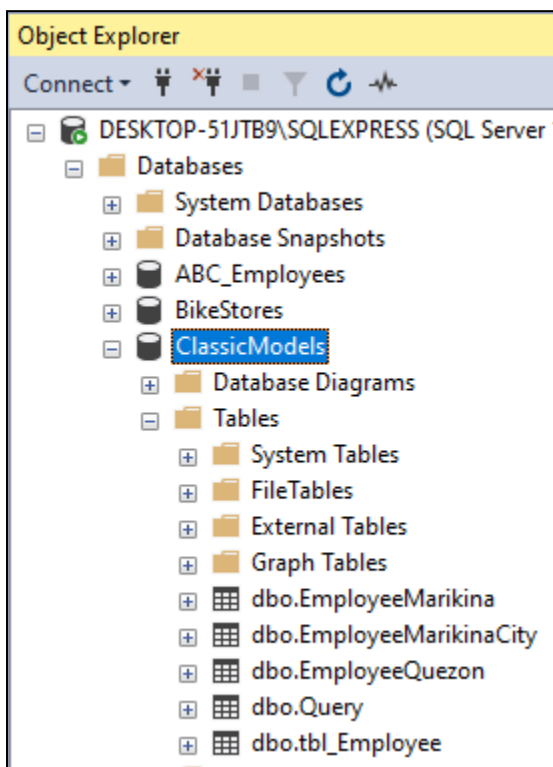
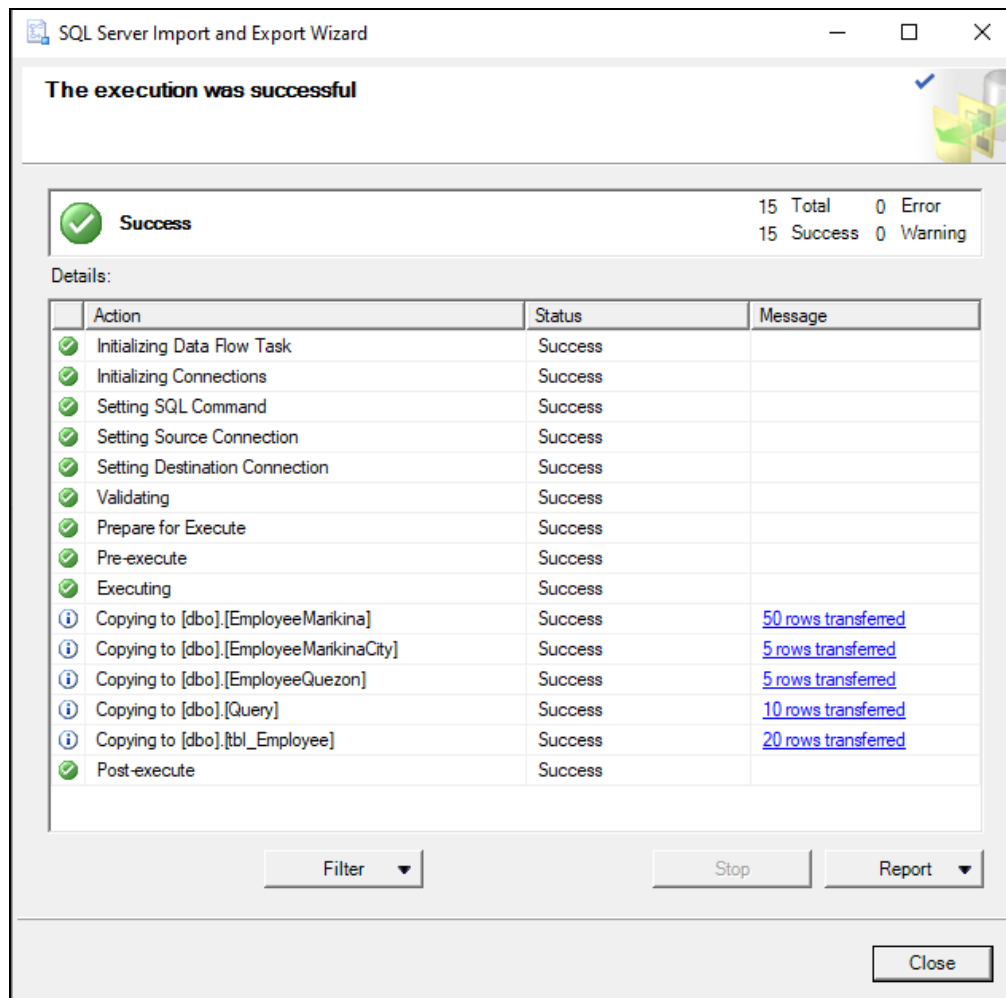
Click Finish to perform the following actions:

Source Location : C:\Program Files\Microsoft SQL Server\MSSQL15.SQLEXPRESS\MSSQL\DATA\EmployeeDB.xls
Source Provider : Microsoft.Jet.OLEDB.4.0
Destination Location : DESKTOP-51JTB9\SQLEXPRESS
Destination Provider : SQLNCLI11

- Copy rows from 'EmployeeMarkina' to [dbo].[EmployeeMarkina]
The new target table will be created.
- Copy rows from 'EmployeeMarkinaCity' to [dbo].[EmployeeMarkinaCity]
The new target table will be created.
- Copy rows from 'EmployeeQuezon' to [dbo].[EmployeeQuezon]
The new target table will be created.
- Copy rows from 'Query' to [dbo].[Query]
The new target table will be created.
- Copy rows from 'tbl_Employee' to [dbo].[tbl_Employee]
The new target table will be created.
- The package will not be saved.
- The package will be run immediately.

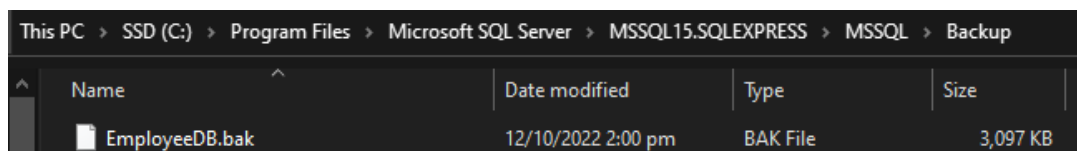
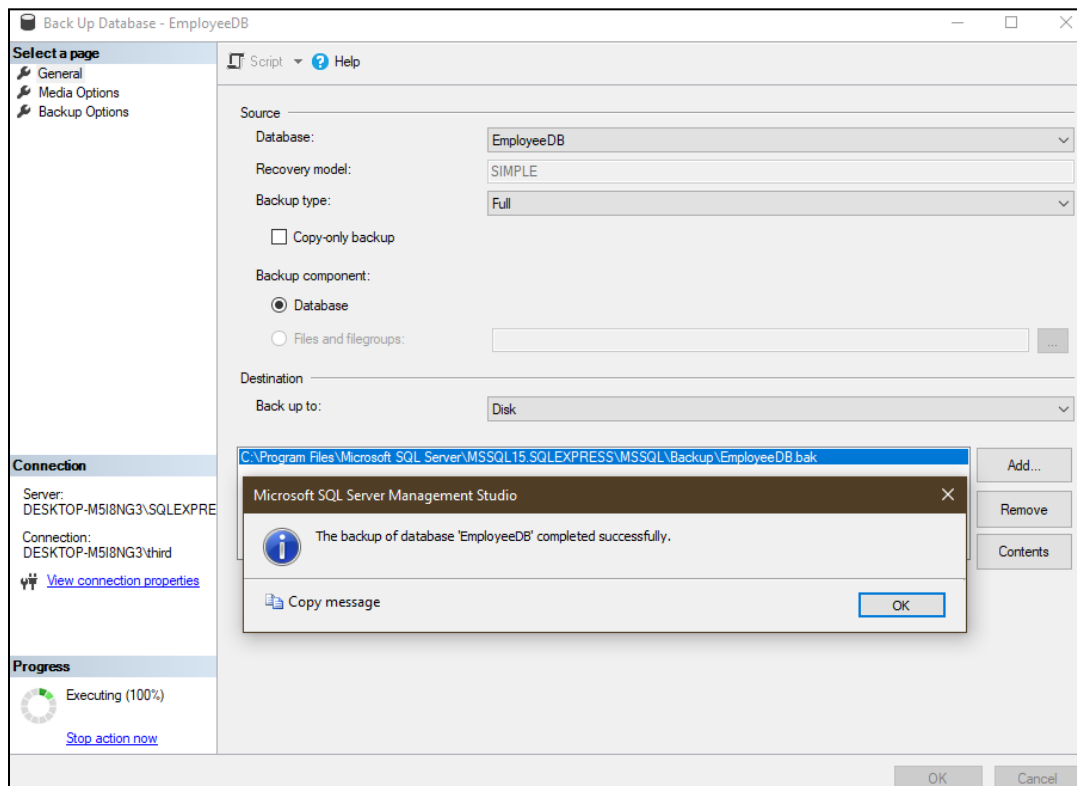
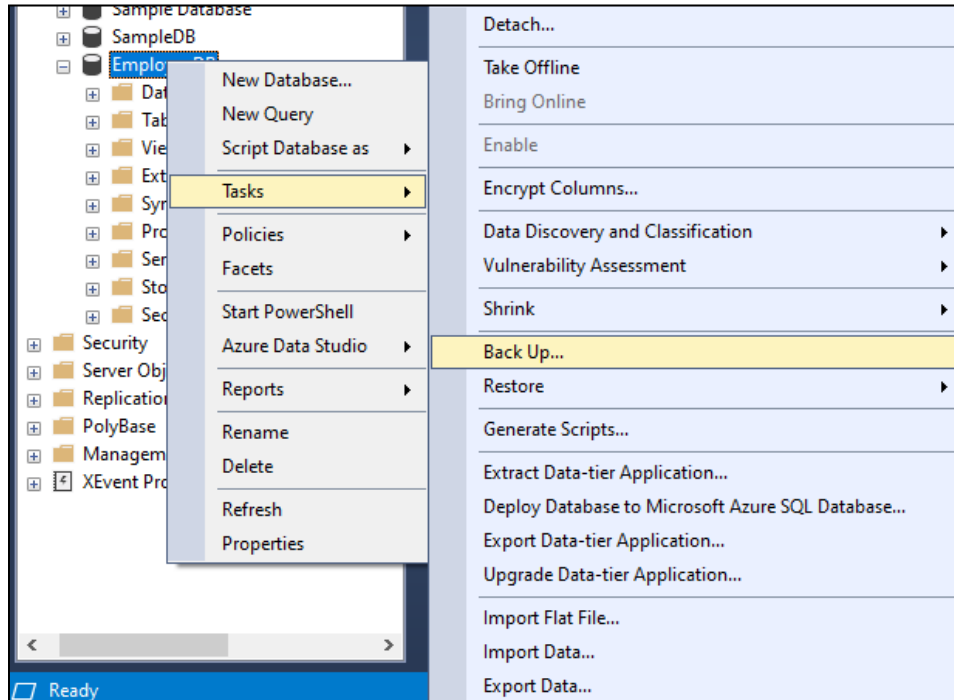
Provider mapping file : C:\Program Files (x86)\Microsoft SQL Server Management Studio 18\Common7\IDE\Extensions\Microsoft\SSIS\150\MappingFiles\JetToMSSql9.xml

Help < Back Next > Finish Cancel

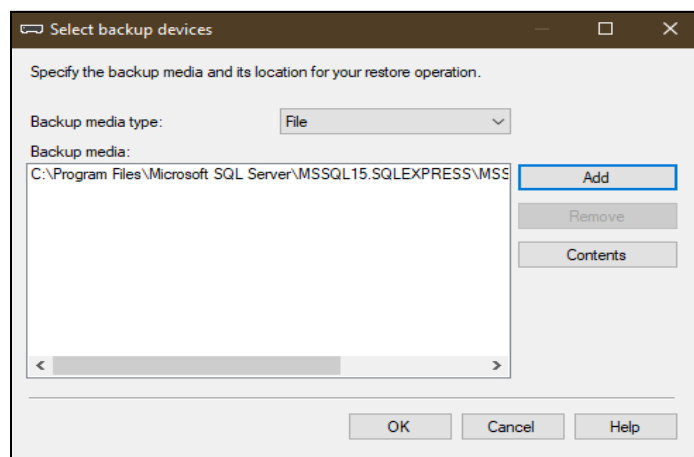
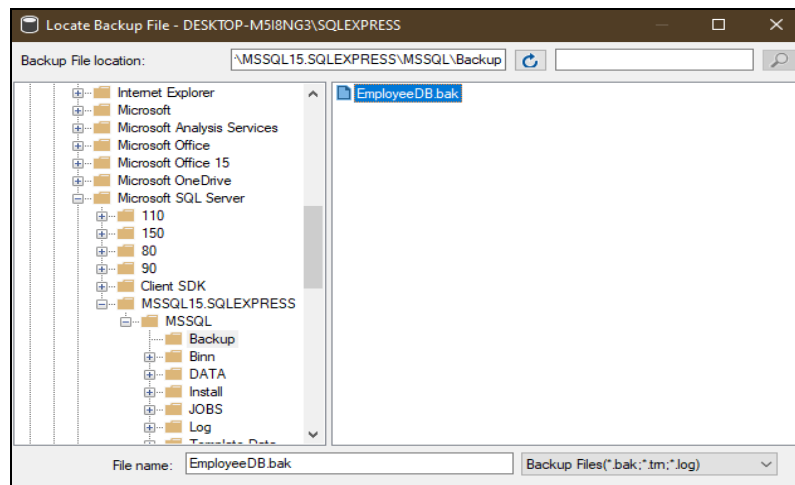
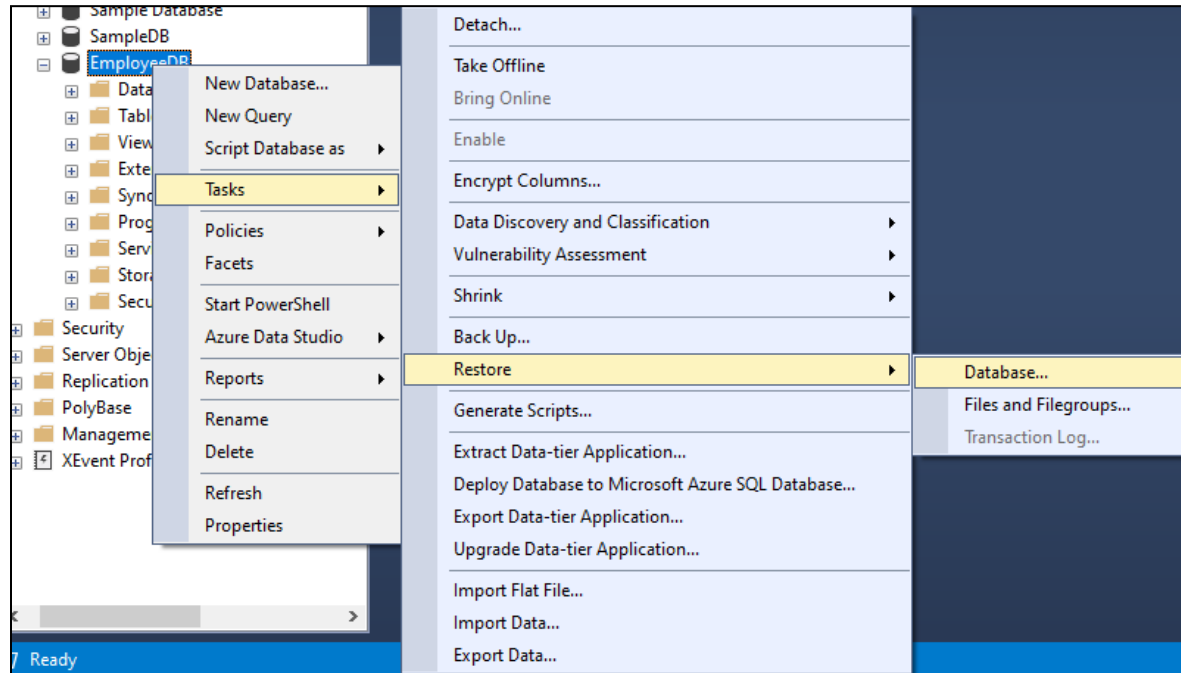


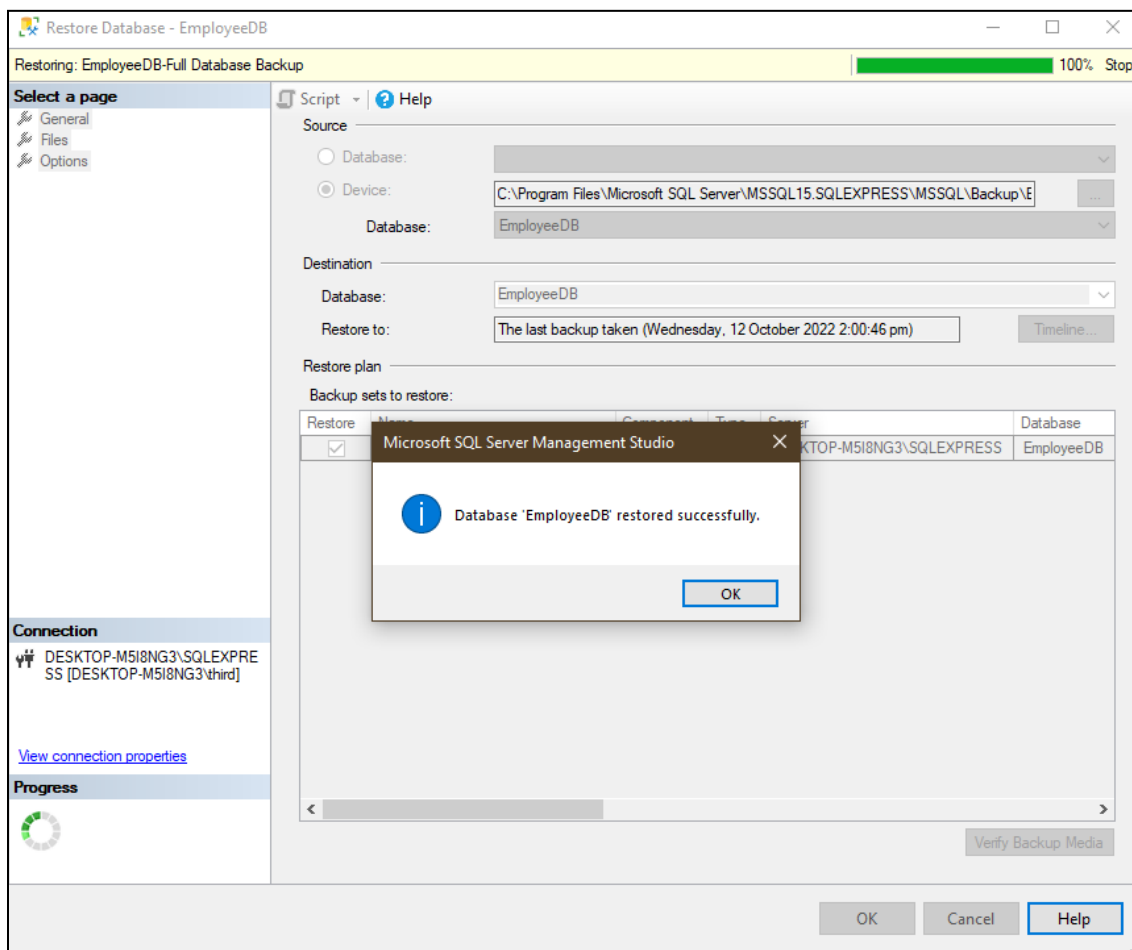
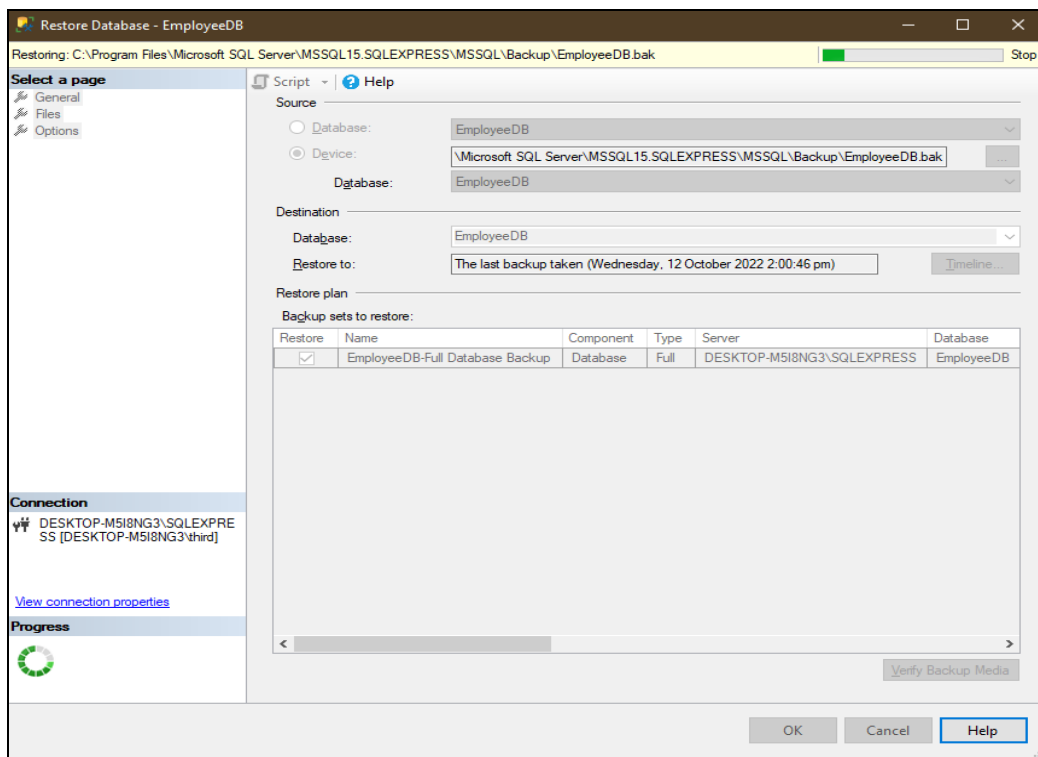
E. Backup Database

To Back up a Database using Full Backup



To Restore a Database using Full Backup





Supplementary Activity

1. Create Employees_ABC database using the given structure. Change the data type according to the data type of SQL server.

Query Used to create the Tables within the Database

```
USE Employees_ABC;

CREATE TABLE departments(
    dept_no CHAR(4) PRIMARY KEY,
    dept_name VARCHAR(40) NOT NULL
);

CREATE TABLE employees(
    emp_no INT PRIMARY KEY,
    birth_date DATE NOT NULL,
    first_name VARCHAR(14) NOT NULL,
    last_name VARCHAR(16) NOT NULL,
    gender CHAR(1) NOT NULL,
    hire_date DATE NOT NULL
);


CREATE TABLE dept_emp(
    emp_no INT NOT NULL,
    dept_no CHAR(4) NOT NULL,
    from_date DATE NOT NULL,
    to_date DATE NOT NULL,
    FOREIGN KEY (emp_no)
    REFERENCES employees(emp_no),
    FOREIGN KEY (dept_no)
    REFERENCES departments(dept_no)
);

CREATE TABLE dept_manager(
    dept_no CHAR(4) NOT NULL,
    emp_no INT NOT NULL,
    from_date DATE NOT NULL,
    to_date DATE NOT NULL,
    FOREIGN KEY (emp_no)
    REFERENCES employees(emp_no),
    FOREIGN KEY (dept_no)
    REFERENCES departments(dept_no)
);

CREATE TABLE titles(
    emp_no INT NOT NULL,
    title VARCHAR(50) PRIMARY KEY,
    from_date DATE NOT NULL,
    to_date DATE
    FOREIGN KEY (emp_no)
    REFERENCES employees(emp_no)
);

CREATE TABLE salaries(
    emp_no INT NOT NULL,
    salary VARCHAR(50) NOT NULL,
    from_date DATE NOT NULL,
    to_date DATE NOT NULL,
    FOREIGN KEY (emp_no)
    REFERENCES employees(emp_no)
);
```

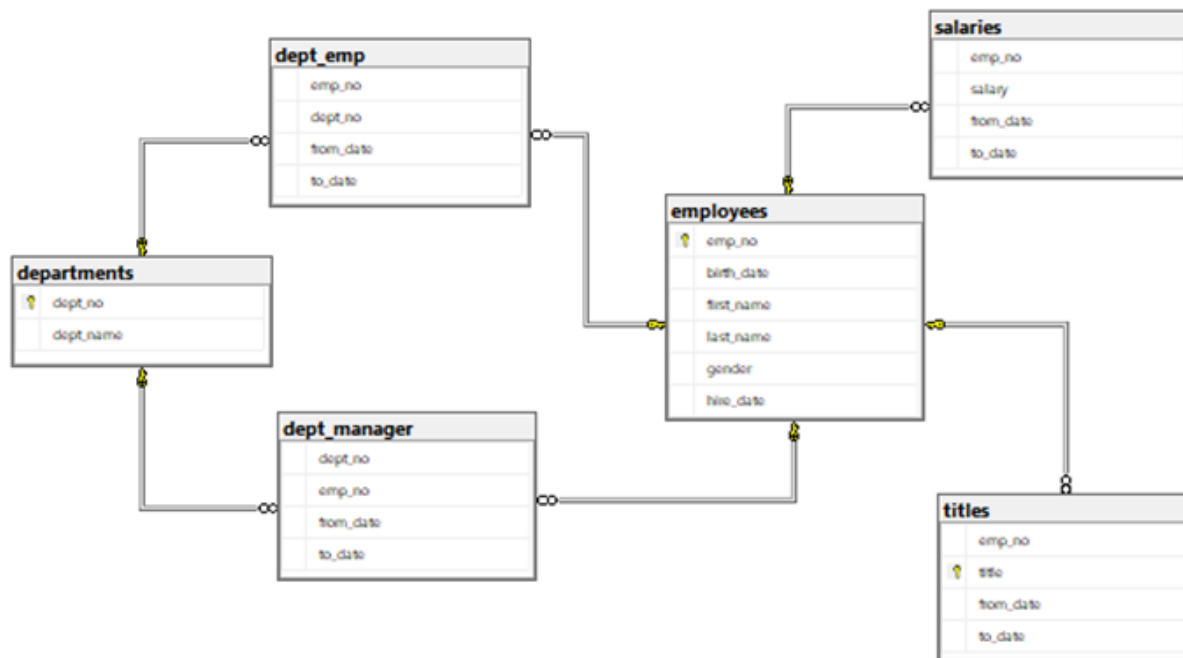
75 %

 Messages

Commands completed successfully.

Completion time: 2022-10-12T14:53:44.8246884+08:00

Database Diagram created on the Microsoft SQL Studio

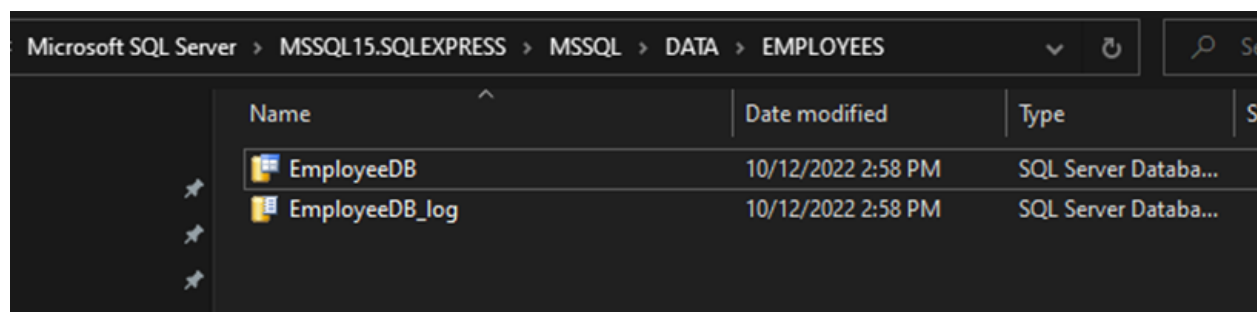


Observations:

Using a query, we created tables wherein they have relationships towards each other. The departments and employees table has primary keys initialized to them which are `dept_no` and `emp_no` respectively. The other tables; `dept_emp`, `dept_manager`, `salaries`, and `titles` have foreign keys which are referenced from either departments or employees tables.

Looking at the database diagram, we can see the relationship between each table and which tables have the primary keys as well as the kind of relationship they have. In this case, mostly one to many relationships.

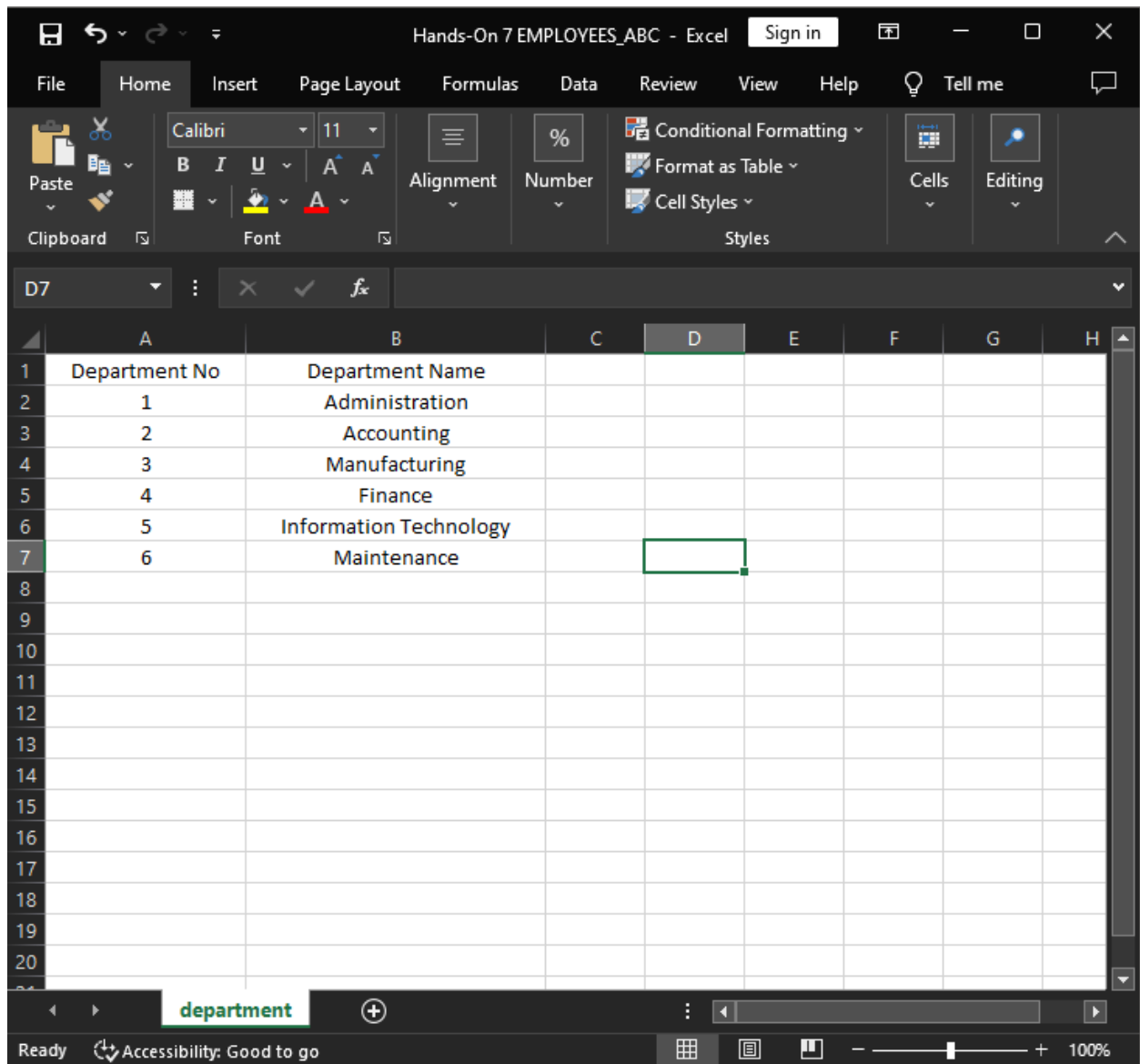
2. Create a copy of Employees_ABC database and save the mdf and log files to EMPLOYEES folder.



Observation:

Creation of a copy of EmployeeDB created from step 1.

3. Create an excel file named as EMPLOYEES_ABC. Create a department worksheet.



Observation:

Using an excel file, we manually created a table containing the same row and column values from the hands on file.

4. Import the department worksheet to the department table of Employees_ABC database.

Import Process

The screenshot shows the 'Choose a Data Source' step of the SQL Server Import and Export Wizard. The 'Data source' dropdown is set to 'Microsoft Excel'. Under 'Excel connection settings', the 'Excel file path' is 'D:\2nd Year College\2. Database Management System\Activity\Hands-On 7 EMPLOYEES_ABC.x', and the 'Excel version' is 'Microsoft Excel 97-2003'. The checkbox 'First row has column names' is checked. Navigation buttons at the bottom include '< Back', 'Next >', 'Finish >>', and 'Cancel'.

SQL Server Import and Export Wizard

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

Data source: Microsoft Excel

Excel connection settings

Excel file path:
D:\2nd Year College\2. Database Management System\Activity\Hands-On 7 EMPLOYEES_ABC.x Browse...

Excel version:
Microsoft Excel 97-2003

☒ First row has column names

Help < Back Next > Finish >> Cancel

The screenshot shows the 'Select Source Tables and Views' step of the SQL Server Import and Export Wizard. A table lists the source and destination for the import. The source is 'D:\2nd Year College\2. Database Management System\Activity\Hands-On 7 EMPLOYEES_ABC.x' and the destination is 'DESKTOP-DP133J6\SQLEXPRESS'. The table 'department\$' is selected from the source and mapped to '[dbo].[departments]' in the destination. Navigation buttons at the bottom include '< Back', 'Next >', 'Finish >>', and '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
<input checked="" type="checkbox"/> Source: D:\2nd Year College\2. Database Management System\Activity\Hands-On 7 EMPLOYEES_ABC.x	Destination: DESKTOP-DP133J6\SQLEXPRESS
<input checked="" type="checkbox"/> department\$	[dbo].[departments]

Edit Mappings... Preview...

Help < Back Next > Finish >> Cancel

Column Mappings

Source: `department\$`

Destination: [dbo].[departments]

☐ Create destination table Edit SQL...

☐ Delete rows in destination table ☐ Drop and re-create destination table

☒ Append rows to the destination table ☐ Enable identity insert

Mappings:


Source	Destination	Type	Nullable	Size	Precision	Scale
Department No	dept_no	char	<input type="checkbox"/>	4		
Department Name	dept_name	varchar	<input type="checkbox"/>	40		

Source column: Department No Double (15)

OK Cancel

SQL Server Import and Export Wizard

The execution was successful

 **Success**
11 Total 0 Error
11 Success 0 Warning

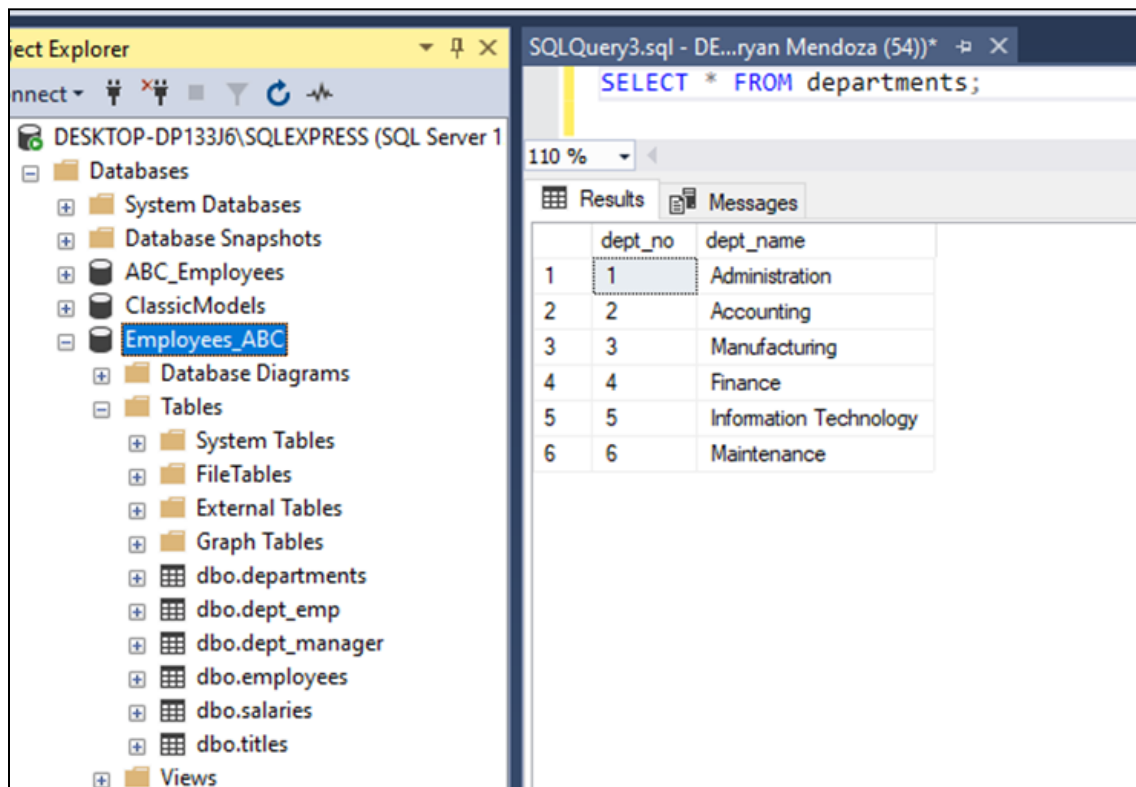
Details:

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	
✓ Prepare for Execute	Success	
✓ Pre-execute	Success	
✓ Executing	Success	
ⓘ Copying to [dbo].[departments]	Success	6 rows transferred
✓ Post-execute	Success	

Filter Stop Report

Close

Checking on Microsoft SQL Studio, using a Query if the Importation of Values is Success



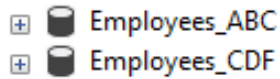
Observation:

On this step, we import the values or data from the excel file created on step 3. The data are imported into Employees_ABC which is a new database created upon the importation of data. As we can see on the second image, the data from the excel file (worksheet department) is imported into the departments table. We can also see in the column mappings, that the data from the excel file would be added or appended to the departments table in the database Employees_ABC.

After importing, we check if the database Employees_ABC has the same values on its departments table compared with the values on the excel file. By using a query, we can see that the values are successfully imported to the departments table.

5. Export the department table to Employees_CDF database.

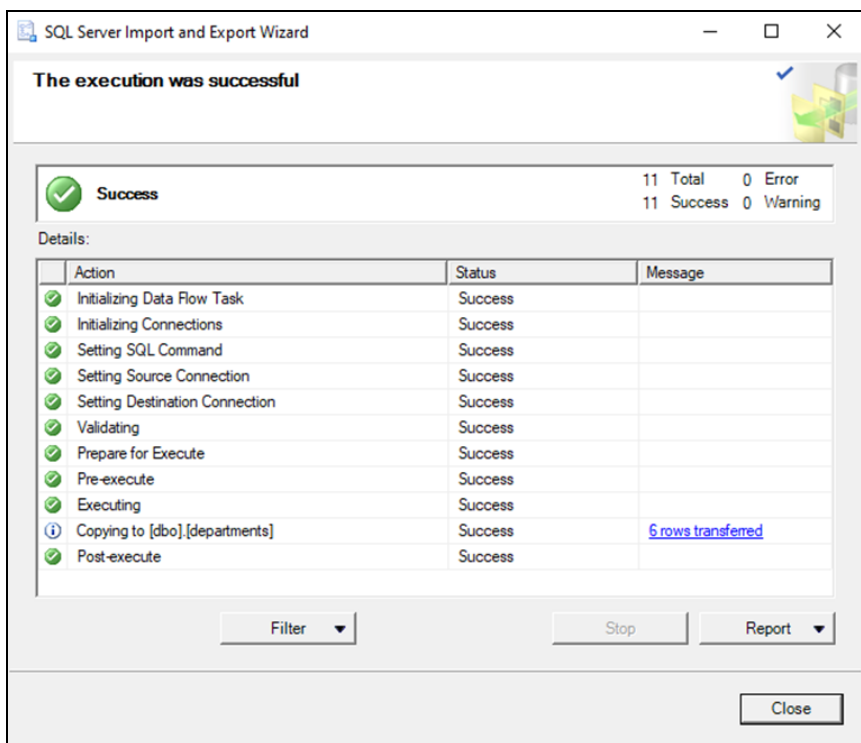
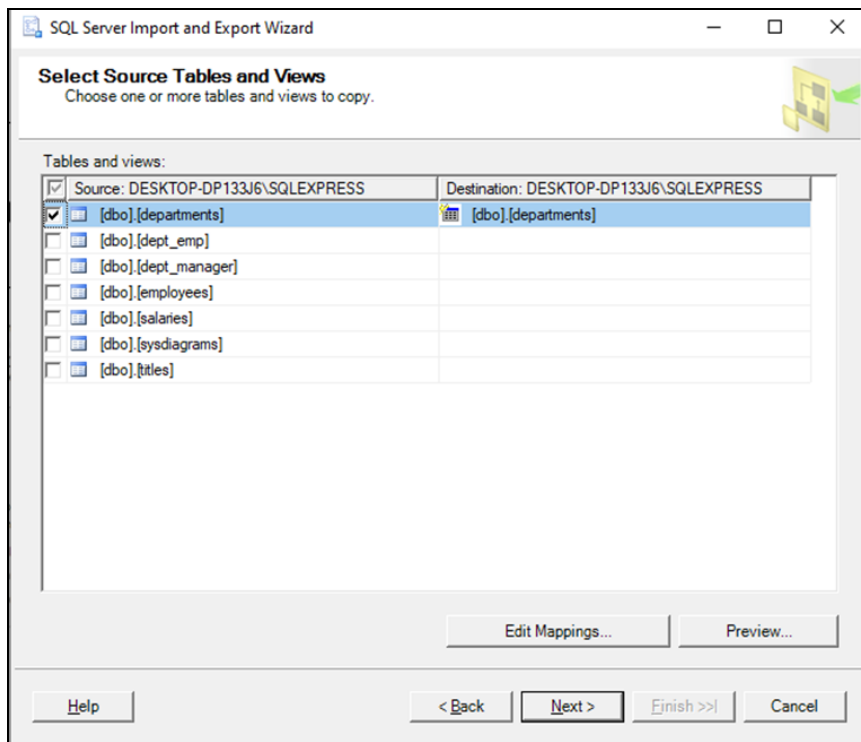
Creation of Employees_CDF database



Exporting department table from Employees_ABC database to Employees_CDF database

The 'SQL Server Import and Export Wizard' window, 'Choose a Data Source' step. The title bar says 'SQL Server Import and Export Wizard'. The subtitle is 'Choose a Data Source' with the instruction 'Select the source from which to copy data.' The 'Data source:' dropdown is set to 'SQL Server Native Client 11.0'. The 'Server name:' dropdown is set to 'DESKTOP-DP133J6\SQLEXPRESS'. Under the 'Authentication' section, 'Use Windows Authentication' is selected. Below it are empty text boxes for 'User name:' and 'Password:'. The 'Database:' dropdown is set to 'Employees_ABC', with a 'Refresh' button to its right. At the bottom are buttons for 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.

The 'SQL Server Import and Export Wizard' window, 'Choose a Destination' step. The title bar says 'SQL Server Import and Export Wizard'. The subtitle is 'Choose a Destination' with the instruction 'Specify where to copy data to.' The 'Destination:' dropdown is set to 'SQL Server Native Client 11.0'. The 'Server name:' dropdown is set to 'DESKTOP-DP133J6\SQLEXPRESS'. Under the 'Authentication' section, 'Use Windows Authentication' is selected. Below it are empty text boxes for 'User name:' and 'Password:'. The 'Database:' dropdown is set to 'Employees_CDF', with 'Refresh' and 'New...' buttons to its right. At the bottom are buttons for 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.



Checking if the department table values from Employees_ABC are successfully transferred or imported to the Employees_CDF database.

The screenshot displays the Microsoft SQL Studio interface. On the left, the Object Explorer shows the database structure for 'DESKTOP-DP133J6\SQLEXPRESS (SQL Server 1)'. The 'Employees_CDF' database is selected, showing its tables, including 'dbo.departments'. On the right, the SQL query window shows the following query:

```
USE Employees_CDF;  
SELECT * FROM departments;
```

The Results pane shows the output of the query, displaying a table with 6 rows of department data:

	dept_no	dept_name
1	1	Administration
2	2	Accounting
3	3	Manufacturing
4	4	Finance
5	5	Information Technology
6	6	Maintenance

Observation:

On this step, we performed an export of the data from the departments table of database Employees_ABC into the database Employees_CDF. Since the database Employees_CDF is currently empty, the export and import will automatically make the table for it. By following the procedure, we can see that only the departments table of Employees_ABC is exported and imported to the Employees_CDF.

By using a query on the Microsoft SQL Studio, we can prove that the data is successfully imported to the database Employees_CDF.

6. Insert twenty (10 F and 10 M) employees information to the employees table of Employees_ABC database.

Inserting entries using a query

The screenshot displays the SQL Server Enterprise Manager interface on the left and a SQL Query window on the right. The Enterprise Manager shows the database structure for 'Employees_ABC', including tables like 'employees' and 'salaries'. The SQL Query window contains an SQL script that uses the 'Employees_ABC' database and inserts 20 rows into the 'employees' table. The query is as follows:

```
USE Employees_ABC;

INSERT INTO employees
VALUES
(1001, '2002-01-01', 'Christian', 'Efa', 'M', '2022-10-12'),
(1002, '2002-01-02', 'Hans Angelo', 'Guevarra', 'M', '2022-10-12'),
(1003, '2002-01-03', 'John Renzo', 'Mendoza', 'M', '2022-10-12'),
(1004, '2002-01-04', 'Sean', 'Nicolas', 'M', '2022-10-12'),
(1005, '2002-01-05', 'Thirty', 'Vinluan', 'M', '2022-10-12'),
(1006, '2002-01-06', 'Bobot', 'Marquez', 'M', '2022-10-12'),
(1007, '2002-01-07', 'Andeng', 'Batongbakal', 'F', '2022-10-12'),
(1008, '2002-01-08', 'Nina', 'Santos', 'F', '2022-10-12'),
(1009, '2002-01-09', 'John Mark', 'Reyes', 'M', '2022-10-12'),
(1010, '2002-01-10', 'Natasha', 'Cruz', 'F', '2022-10-12'),
(1011, '2002-01-11', 'Jenny', 'Rogers', 'F', '2022-10-12'),
(1012, '2002-01-12', 'Abby', 'Lacson', 'F', '2022-10-12'),
(1013, '2002-01-13', 'Juan', 'Dela Cruz', 'M', '2022-10-12'),
(1014, '2002-01-14', 'Eunice', 'Dela Rosa', 'F', '2022-10-12'),
(1015, '2002-01-15', 'Iris', 'Del Mundo', 'F', '2022-10-12'),
(1016, '2002-01-16', 'Anna', 'Tatlonghari', 'F', '2022-10-12'),
(1017, '2002-01-17', 'Christine', 'Medina', 'F', '2022-10-12'),
(1018, '2002-01-18', 'Angela', 'Marquez', 'F', '2022-10-12'),
(1019, '2002-01-19', 'Raphael', 'Cruz', 'M', '2022-10-12'),
(1020, '2002-01-20', 'Nathaniel', 'Cruz', 'M', '2022-10-12');
```

The Messages pane at the bottom indicates that 20 rows were affected and provides the completion time: 2022-10-12T15:57:07.1632265+08:00.

Checking if the query successfully inserted entries

The screenshot displays the SQL Server Enterprise Explorer on the left, showing the database structure for 'Employees_ABC'. The 'Tables' folder is expanded, showing 'dbo.employees' with columns: emp_no (PK, int, not null), birth_date (date, not null), first_name (varchar(14), not null), last_name (varchar(16), not null), gender (char(1), not null), and hire_date (date, not null). The 'Columns' folder is also expanded, showing the same columns. The 'Keys' folder is expanded, showing 'dbo.employees' with a primary key constraint on 'emp_no'. The 'Indexes' folder is expanded, showing 'dbo.employees' with a primary key index on 'emp_no'. The 'Statistics' folder is expanded, showing 'dbo.employees' with a primary key statistic on 'emp_no'. The 'Views' folder is expanded, showing 'dbo.employees' with a primary key view on 'emp_no'. The 'External Resources' folder is expanded, showing 'dbo.employees' with a primary key external resource on 'emp_no'. The 'Synonyms' folder is expanded, showing 'dbo.employees' with a primary key synonym on 'emp_no'. The 'Programmability' folder is expanded, showing 'dbo.employees' with a primary key programmability on 'emp_no'. The 'Service Broker' folder is expanded, showing 'dbo.employees' with a primary key service broker on 'emp_no'. The 'Storage' folder is expanded, showing 'dbo.employees' with a primary key storage on 'emp_no'. The 'Security' folder is expanded, showing 'dbo.employees' with a primary key security on 'emp_no'. The 'Employees_ABC' folder is expanded, showing 'dbo.employees' with a primary key employees_ABC on 'emp_no'. The 'MySQLSampleDB' folder is expanded, showing 'dbo.employees' with a primary key MySQLSampleDB on 'emp_no'. The 'Sales' folder is expanded, showing 'dbo.employees' with a primary key Sales on 'emp_no'. The 'SampleDatabase' folder is expanded, showing 'dbo.employees' with a primary key SampleDatabase on 'emp_no'. The 'Security' folder is expanded, showing 'dbo.employees' with a primary key Security on 'emp_no'. The SQL Query window on the right shows a query that inserts 20 rows into the 'employees' table, alternating between male and female employees. The query is:

```
INSERT INTO employees (emp_no, birth_date, first_name, last_name, gender, hire_date) VALUES (1008, '2002-01-08', 'Nina', 'Santos', 'F', '2022-10-12'), (1009, '2002-01-09', 'John Mark', 'Reyes', 'M', '2022-10-12'), (1010, '2002-01-10', 'Natasha', 'Cruz', 'F', '2022-10-12'), (1011, '2002-01-11', 'Jenny', 'Rogers', 'F', '2022-10-12'), (1012, '2002-01-12', 'Abby', 'Lacson', 'F', '2022-10-12'), (1013, '2002-01-13', 'Juan', 'Dela Cruz', 'M', '2022-10-12'), (1014, '2002-01-14', 'Eunice', 'Dela Rosa', 'F', '2022-10-12'), (1015, '2002-01-15', 'Iris', 'Del Mundo', 'F', '2022-10-12'), (1016, '2002-01-16', 'Anna', 'Tatlonghari', 'F', '2022-10-12'), (1017, '2002-01-17', 'Christine', 'Medina', 'F', '2022-10-12'), (1018, '2002-01-18', 'Angela', 'Marquez', 'F', '2022-10-12'), (1019, '2002-01-19', 'Raphael', 'Cruz', 'M', '2022-10-12'), (1020, '2002-01-20', 'Nathaniel', 'Cruz', 'M', '2022-10-12'), (1001, '2002-01-01', 'Christian', 'Efa', 'M', '2022-10-12'), (1002, '2002-01-02', 'Hans Angelo', 'Guevarra', 'M', '2022-10-12'), (1003, '2002-01-03', 'John Renzo', 'Mendoza', 'M', '2022-10-12'), (1004, '2002-01-04', 'Sean', 'Nicolás', 'M', '2022-10-12'), (1005, '2002-01-05', 'Thirly', 'Vinluan', 'M', '2022-10-12'), (1006, '2002-01-06', 'Bobot', 'Marquez', 'M', '2022-10-12');
```

 Below the query, the 'Results' tab shows a table with 20 rows and 7 columns: emp_no, birth_date, first_name, last_name, gender, hire_date. The first 10 rows are female employees (gender 'F') and the next 10 rows are male employees (gender 'M').

emp_no	birth_date	first_name	last_name	gender	hire_date
1010	2002-01-10	Natasha	Cruz	F	2022-10-12
1011	2002-01-11	Jenny	Rogers	F	2022-10-12
1012	2002-01-12	Abby	Lacson	F	2022-10-12
1014	2002-01-14	Eunice	Dela Rosa	F	2022-10-12
1015	2002-01-15	Iris	Del Mundo	F	2022-10-12
1016	2002-01-16	Anna	Tatlonghari	F	2022-10-12
1017	2002-01-17	Christine	Medina	F	2022-10-12
1018	2002-01-18	Angela	Marquez	F	2022-10-12
1007	2002-01-07	Andeng	Batongbakal	F	2022-10-12
1008	2002-01-08	Nina	Santos	F	2022-10-12
1009	2002-01-09	John Mark	Reyes	M	2022-10-12
1019	2002-01-19	Raphael	Cruz	M	2022-10-12
1020	2002-01-20	Nathaniel	Cruz	M	2022-10-12
1013	2002-01-13	Juan	Dela Cruz	M	2022-10-12
1001	2002-01-01	Christian	Efa	M	2022-10-12
1002	2002-01-02	Hans Angelo	Guevarra	M	2022-10-12
1003	2002-01-03	John Renzo	Mendoza	M	2022-10-12
1004	2002-01-04	Sean	Nicolás	M	2022-10-12
1005	2002-01-05	Thirly	Vinluan	M	2022-10-12
1006	2002-01-06	Bobot	Marquez	M	2022-10-12

Observation:

On this step, we inserted values on the employees table of the database Employees_ABC. We used a query in order to insert values such that there are 10 female employees and 10 male employees. By using another query to display the entries, we can say that the insertion using the query is successful.

7. Export only 10 female employees information to employee_female worksheet of EMPLOYEES_ABC excel file.

Exporting Process

The screenshot shows the 'Choose a Data Source' step of the SQL Server Import and Export Wizard. The window title is 'SQL Server Import and Export Wizard'. The subtitle is 'Choose a Data Source' with the instruction 'Select the source from which to copy data.' The 'Data source' dropdown is set to 'SQL Server Native Client 11.0'. The 'Server name' dropdown is set to 'DESKTOP-DP133J6\SQLEXPRESS'. Under the 'Authentication' section, 'Use Windows Authentication' is selected. The 'Database' dropdown is set to 'Employees_ABC', and there is a 'Refresh' button next to it. At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.

The screenshot shows the 'Choose a Destination' step of the SQL Server Import and Export Wizard. The window title is 'SQL Server Import and Export Wizard'. The subtitle is 'Choose a Destination' with the instruction 'Specify where to copy data to.' The 'Destination' dropdown is set to 'Microsoft Excel'. Under the 'Excel connection settings' section, the 'Excel file path' is 'D:\2nd Year College\2. Database Management System\Activity\Hands-On 7 EMPLOYEES_ABC.x', with a 'Browse...' button next to it. The 'Excel version' dropdown is set to 'Microsoft Excel 97-2003'. The checkbox 'First row has column names' is checked. At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.

SQL Server Import and Export Wizard

Provide a Source Query
Type the SQL statement that will select data from the source database.

SQL statement:

```
SELECT * FROM employees  
WHERE gender = 'F'  
ORDER BY emp_no DESC  
OFFSET 0 ROWS  
FETCH NEXT 10 ROWS ONLY;
```

Parse Browse...

Help < Back Next > Finish >> Cancel

SQL Server Import and Export Wizard

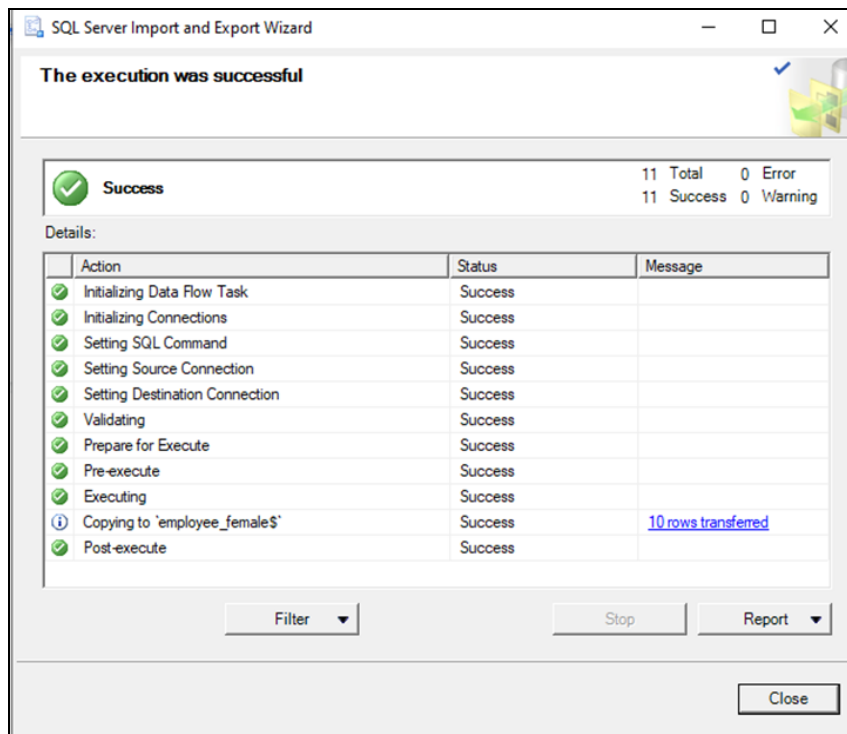
Select Source Tables and Views
Choose one or more tables and views to copy.

Tables and views:

<input checked="" type="checkbox"/> Source:	Destination: D:\2nd Year College\2. Database Mana...
<input checked="" type="checkbox"/> [Query]	'employee_female\$'

Edit Mappings... Preview...

Help < Back Next > Finish >> Cancel



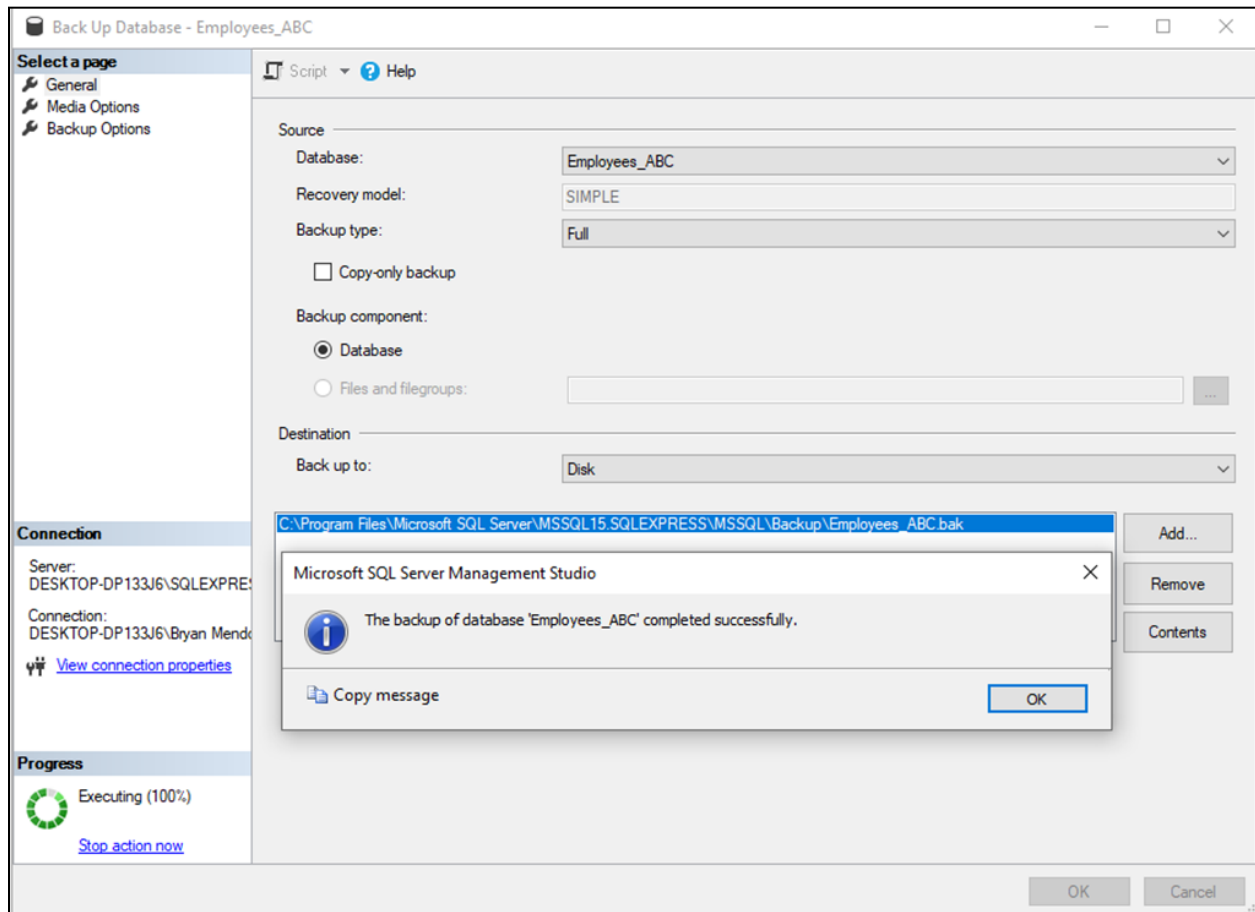
On the Excel File,

	A	B	C	D	E	F	G
1	emp_no	birth_date	first_name	last_name	gender	hire_date	
2	1018	2002-01-1	Angela	Marquez	F	2022-10-12	
3	1017	2002-01-1	Christine	Medina	F	2022-10-12	
4	1016	2002-01-1	Anna	Tatlongha	F	2022-10-12	
5	1015	2002-01-1	Iris	Del Mund	F	2022-10-12	
6	1014	2002-01-1	Eunice	Dela Rosa	F	2022-10-12	
7	1012	2002-01-1	Abby	Lacson	F	2022-10-12	
8	1011	2002-01-1	Jenny	Rogers	F	2022-10-12	
9	1010	2002-01-1	Natasha	Cruz	F	2022-10-12	
10	1008	2002-01-0	Nina	Santos	F	2022-10-12	
11	1007	2002-01-0	Andeng	Batongbal	F	2022-10-12	
12							
13							
14							

Observation:

On this step, we exported a specific data from the employees table in database Employees_ABC to an excel file. By selecting the proper source and destination, as well as the proper query to be used so that the exported file would be only limited to the specified values (which are 10 Female Employees). After exporting, we check the excel file destination if it is successful, and as we can observe, the data is exported successfully.

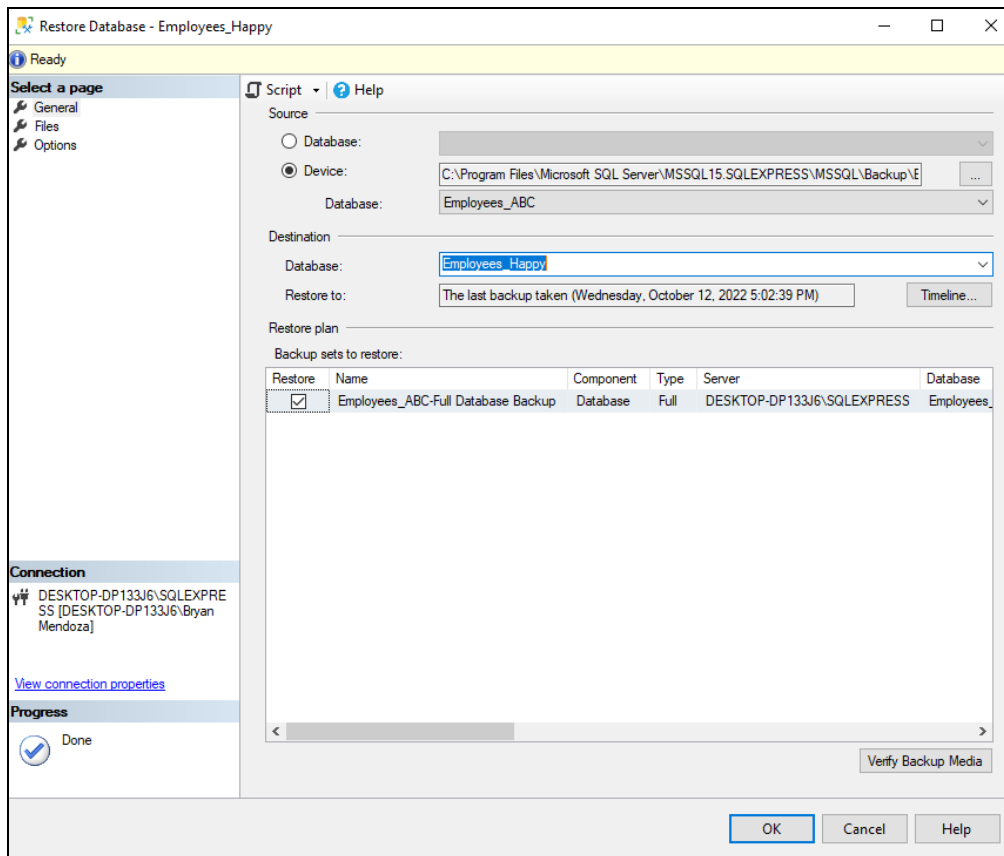
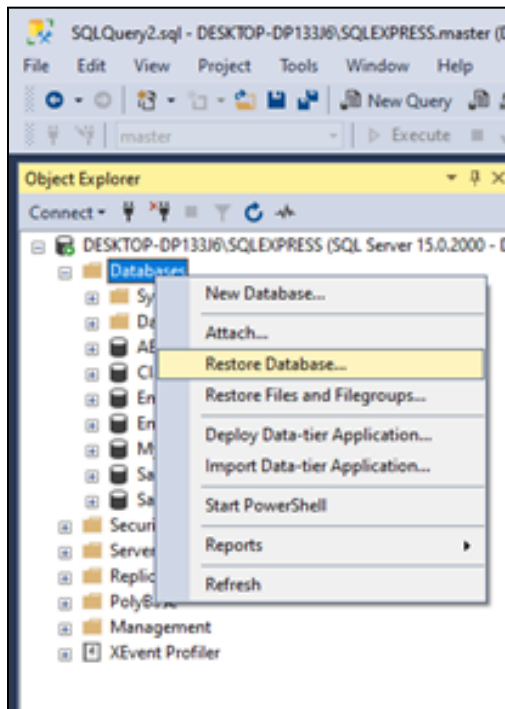
8. Create a full backup of Employees_ABC database. Choose your own backup name.

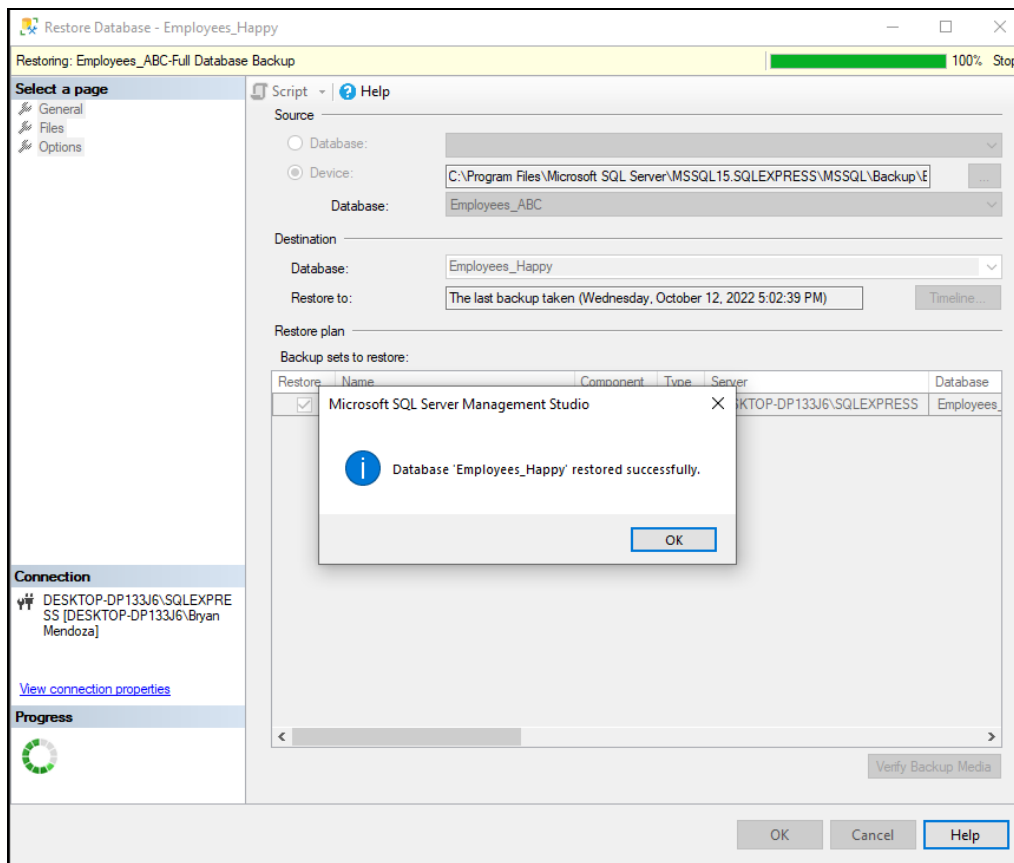


Observation:

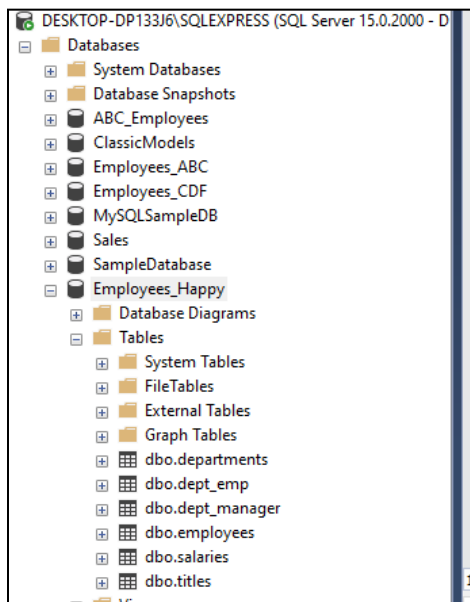
On this step, we back-up the data on the Employees_ABC by performing the similar steps introduced from the procedure. By following the steps, we are able to back-up the data and store it in the back-up folder in our Microsoft SQL studio as a .bak file. This back-up file can be used as restore points when we need to load our old data.

9. Create a database Employees_Happy. Restore Employees_Happy database using the full backup created on step 8.





Proof that the tables or the data under the back-up file of Employees_ABC was restored in a new database named Employees_Happy



Observation:

On this last step, we restore the back-up file of database Employees_ABC to a new database which we named as Employees_Happy. After restoring the data, we checked the Employees_Happy, on the Microsoft SQL Studio if the data has been restored. And as we can see, the tables present on the Employees_ABC from the back-up are present on the Employees_Happy.

Conclusion

In this laboratory activity, the students were introduced to the attachment of databases created outside the Microsoft SQL studio server, as well as to detachment of databases in our server. The activity also introduced concepts pertaining to the import and export of data from the database to an excel file, from excel file to the database, or from database to another database. Lastly, the activity also introduced back-up and restoring of data which are both helpful when keeping our data in the database safe wherein it would act like a savepoint.

Regular system backups must be carried out by database administrators to ensure that no data is lost in the event of a power outage or other disaster. Additionally, you'll strive to make sure that the data being recorded is accurate, error-free, and always accessible.

Honor Pledge

"I accept responsibility for my role in ensuring the integrity of the work submitted by the group in which I participated."