Activity No. 6 - Introduction to SQL Server Environment	
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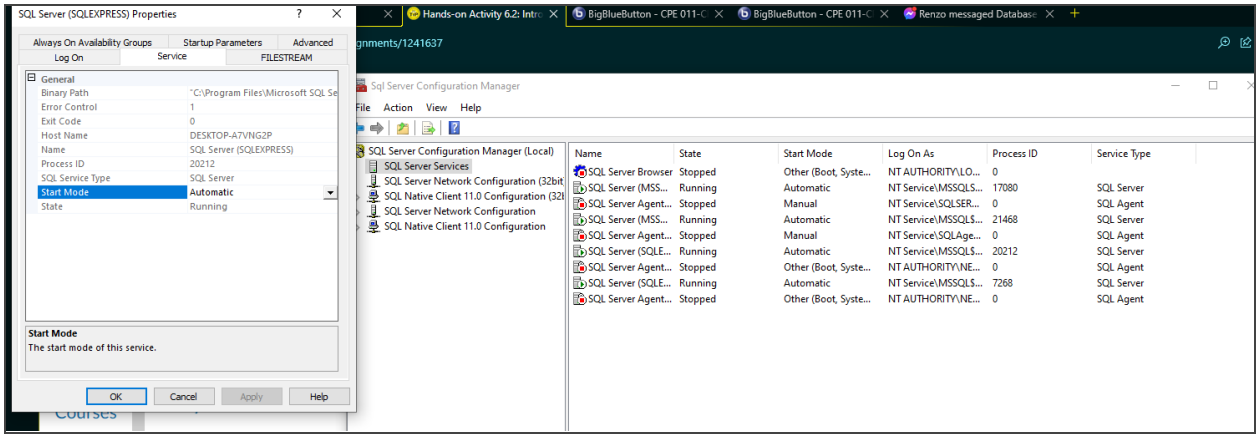
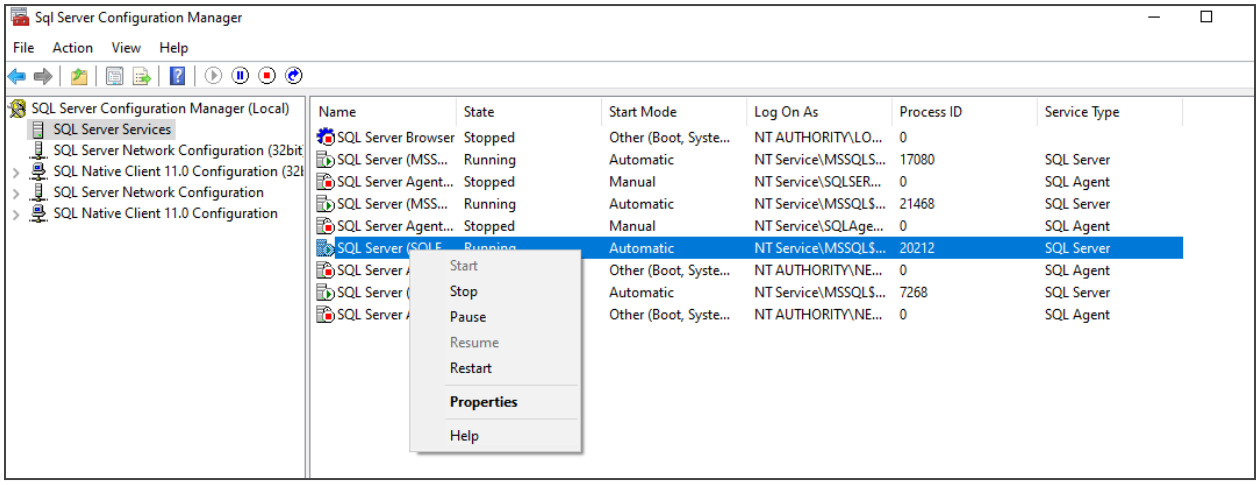
Section: CPE21S3	**Instructor:** Dr. Jonathan Vidal Taylar

Laboratory Procedure

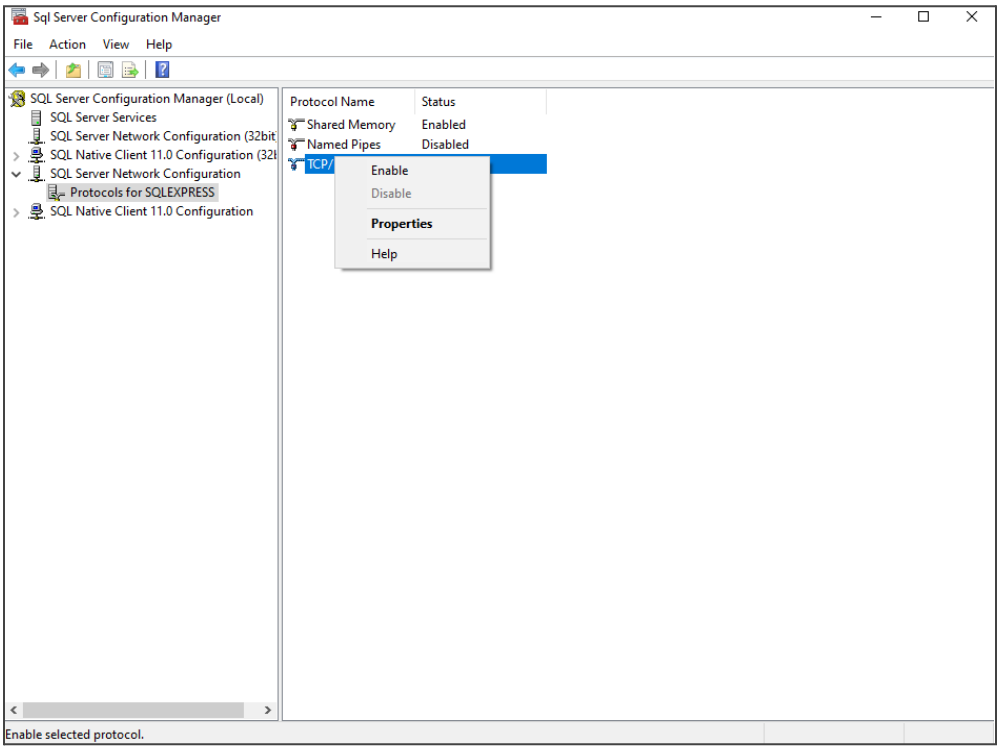
Manage Services using SQL Server Configuration Manager

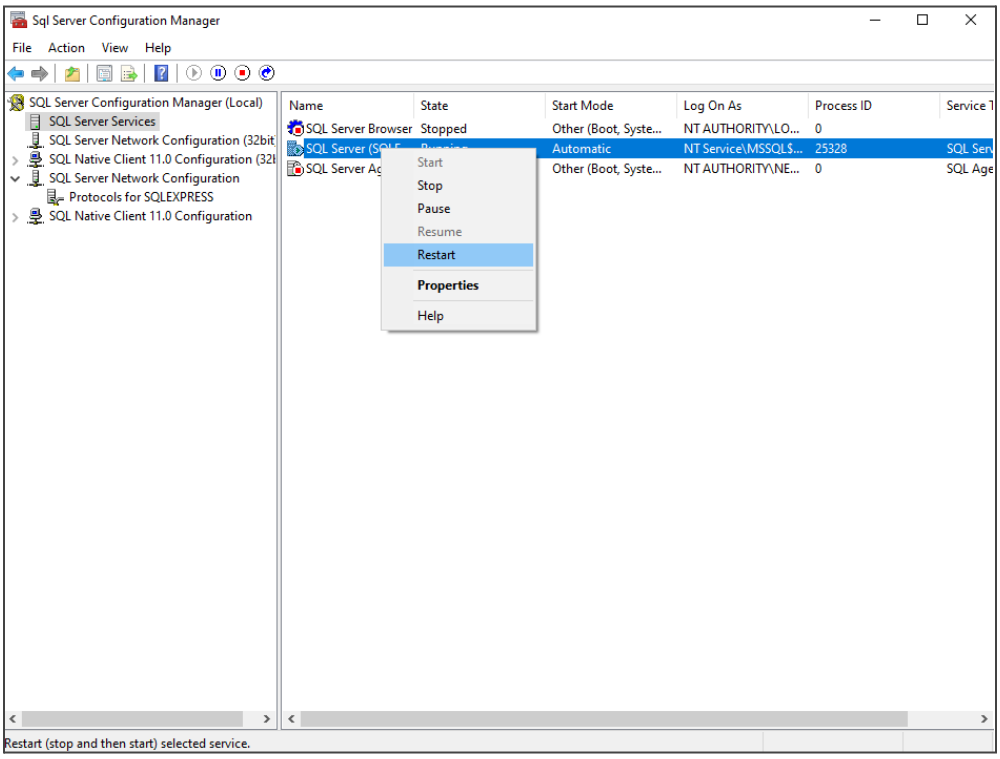


To Start, Stop, Pause or Resume Service

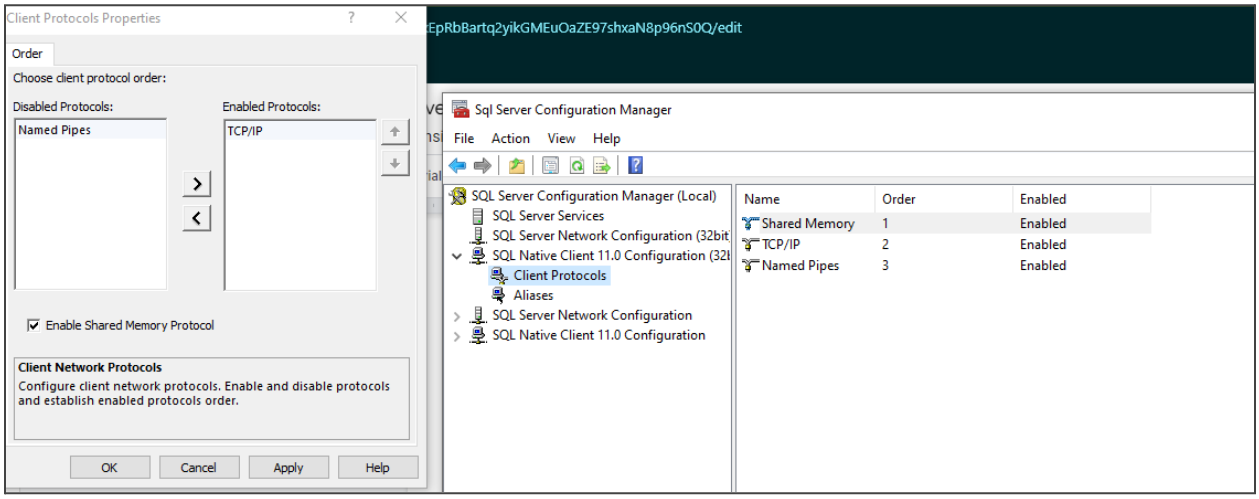


Enable or Disable a Server Network Protocol

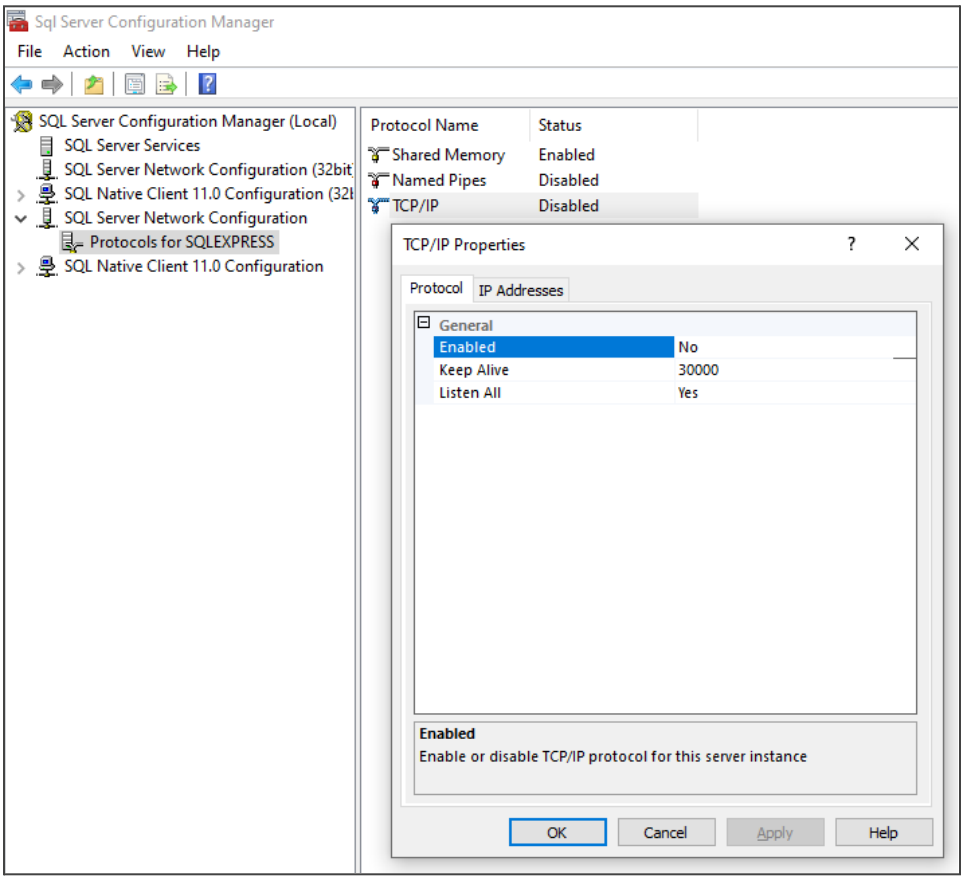


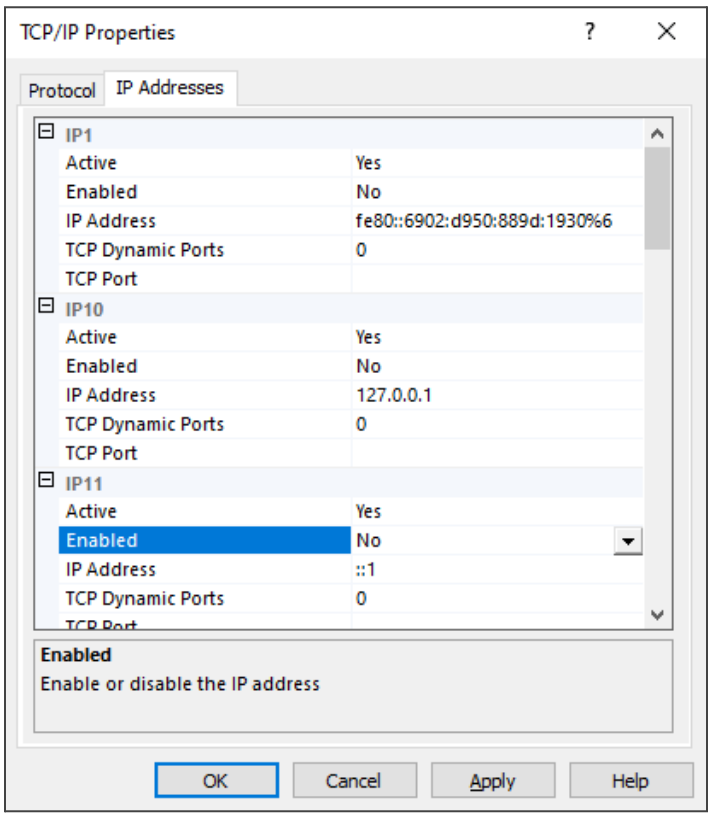


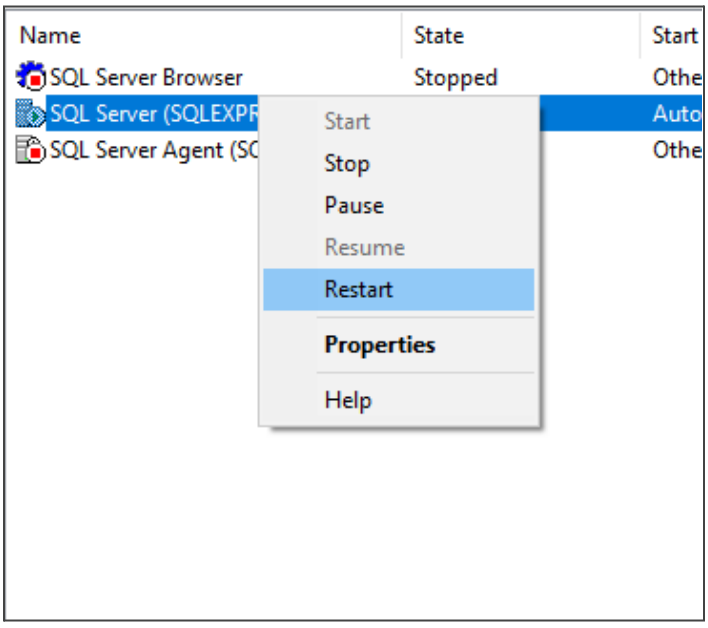
Configure Client Protocols



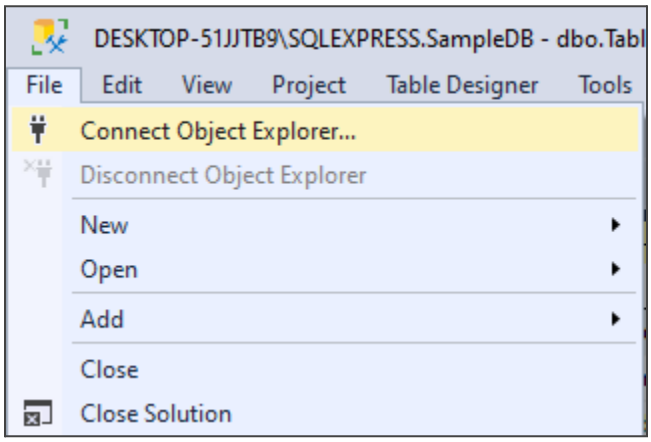
Configure a Server to Listen on a Specific TCP Port

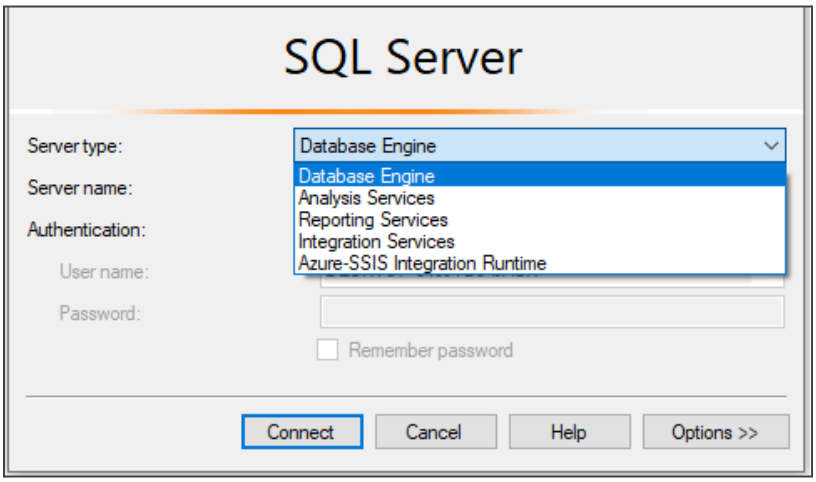


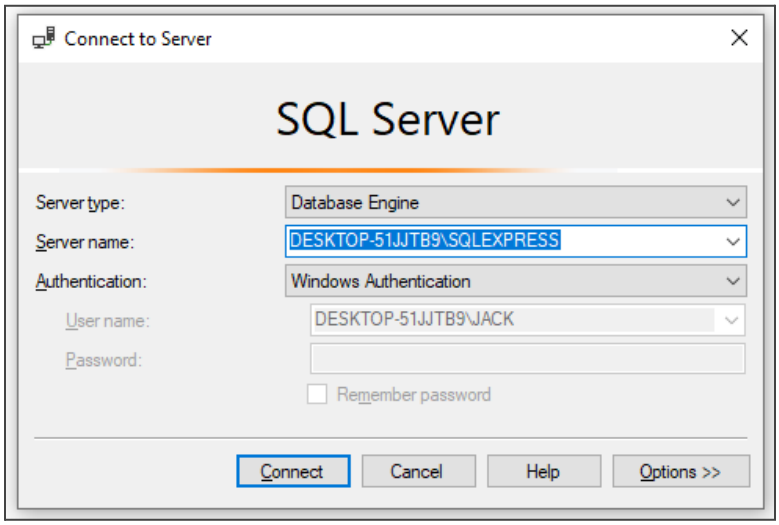

TCP/IP Properties
Protocol
IP Addresses
IP1
Active
Yes
Enabled
No
IP Address
fe80::6902:d950:889d:1930%6
TCP Dynamic Ports
0
TCP Port
IP10
Active
Yes
Enabled
No
IP Address
127.0.0.1
TCP Dynamic Ports
0
TCP Port
IP11
Active
Yes
Enabled
No
IP Address
::1
TCP Dynamic Ports
0
Enabled
Enable or disable the IP address
OK
Cancel
Apply
Help


Name
State
Start
SQL Server Browser
Stopped
Othe
SQL Server (SQLEXPR
Auto
SQL Server Agent (SC
Othe
Start
Stop
Pause
Resume
Restart
Properties
Help

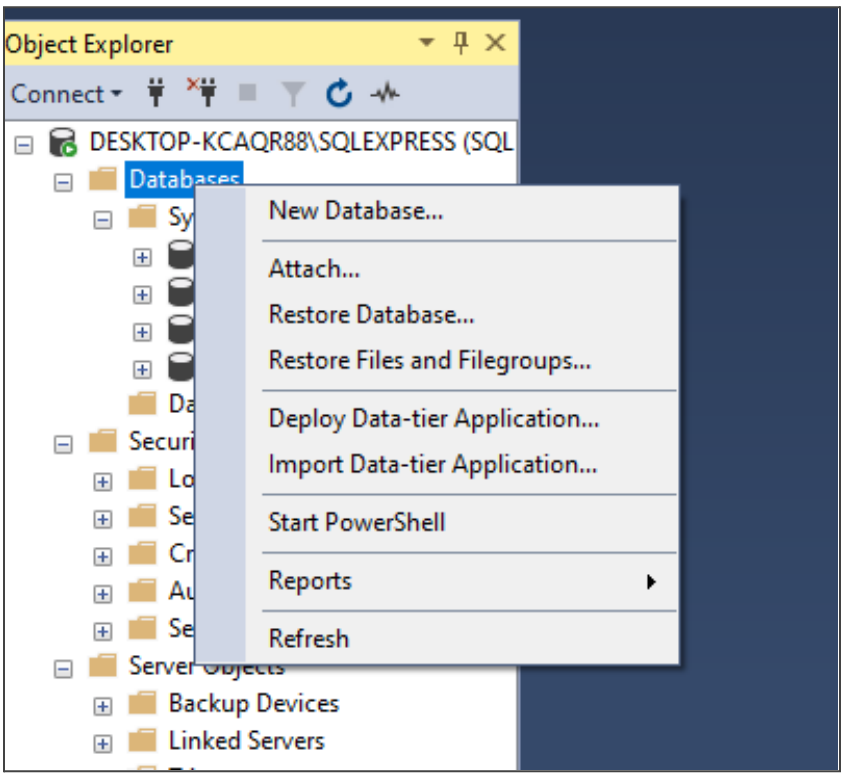
Connect to the Database Engine using SQL Server Management Studio

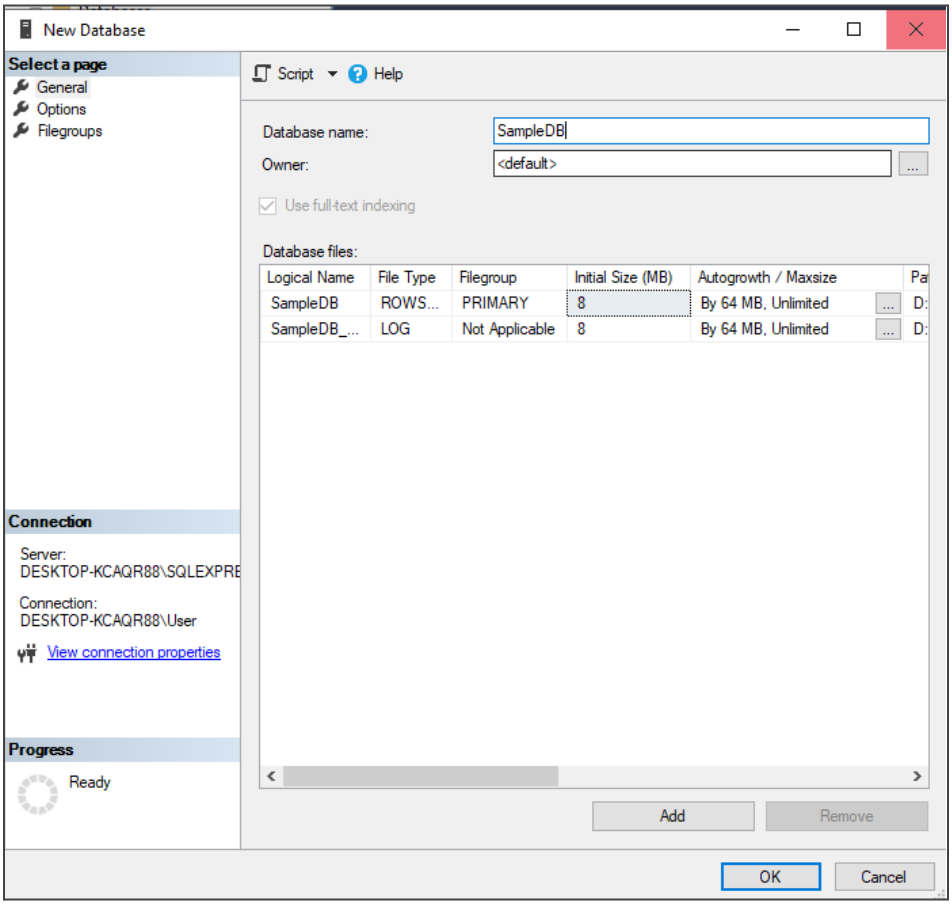


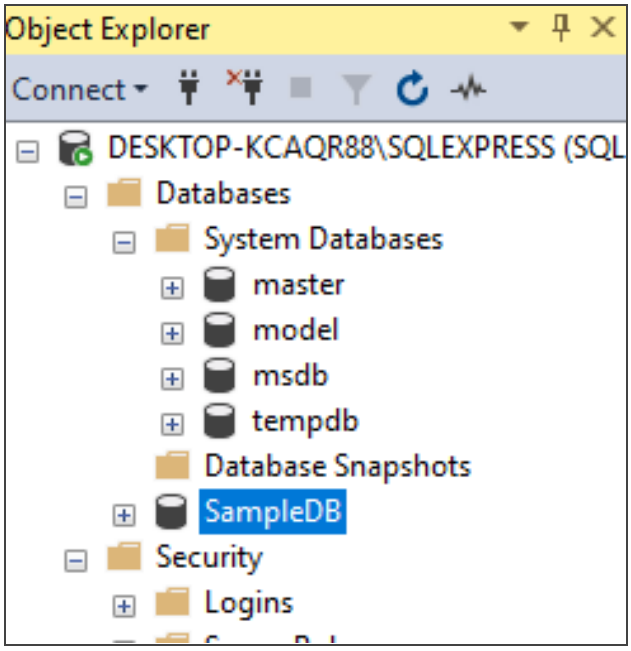


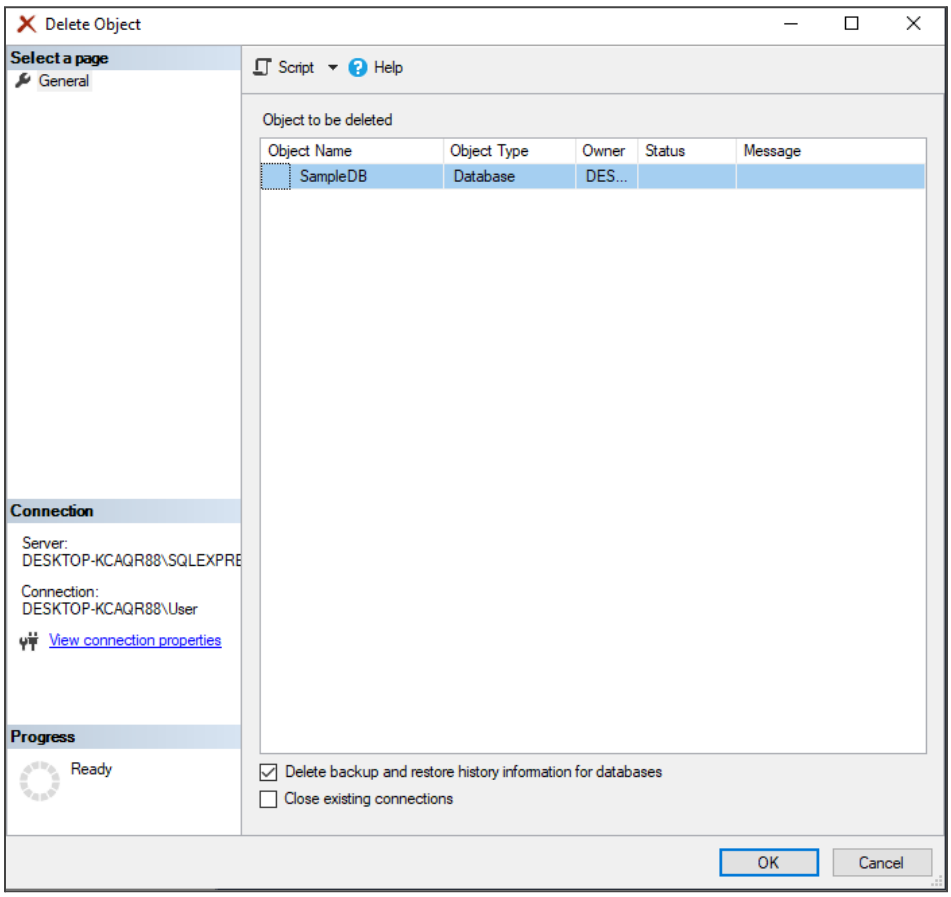


Create Database using SQL Server Management Studio

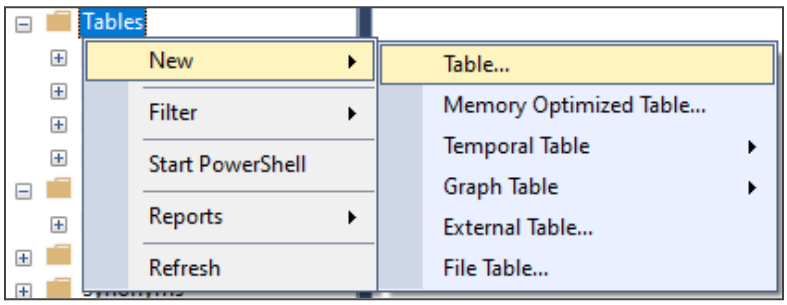


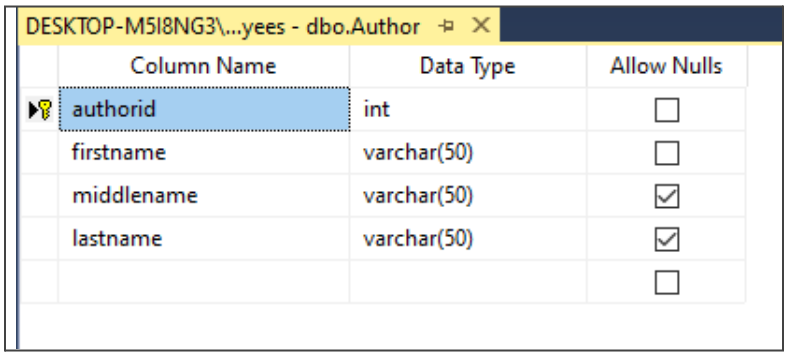


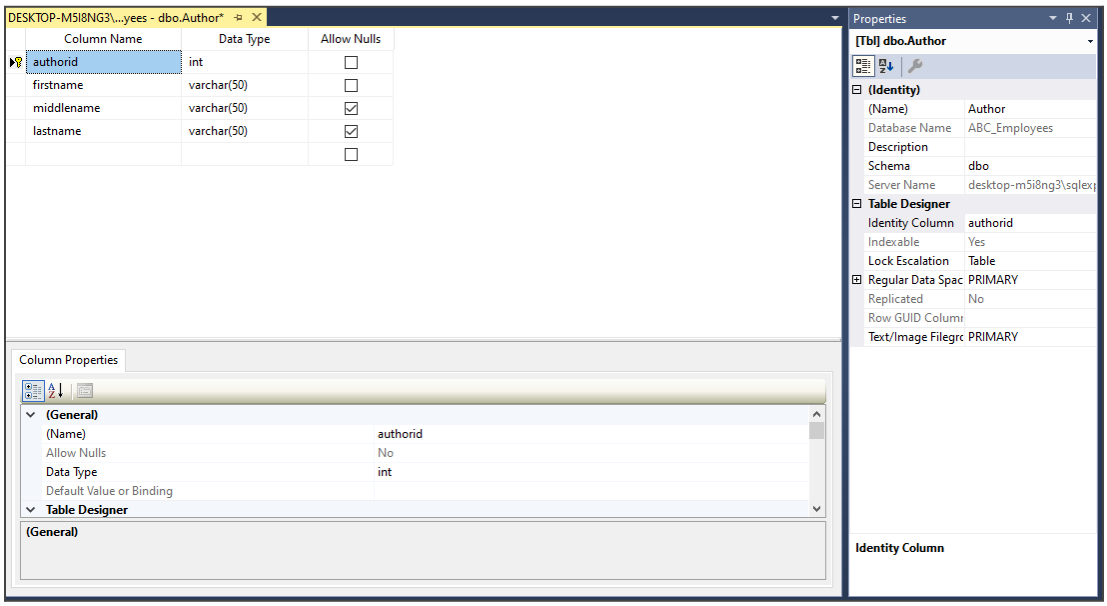

Object Explorer
Connect
DESKTOP-KCAQR88\SQLEXPRESS (SQL
Databases
System Databases
master
model
msdb
tempdb
Database Snapshots
SampleDB
Security
Logins

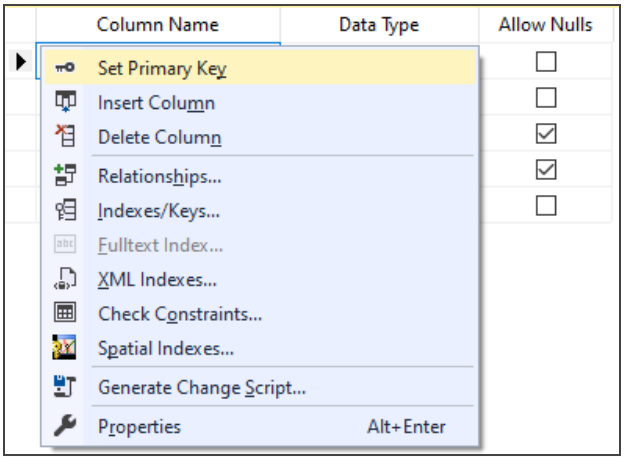

Delete Object
Select a page
General
Script
Help
Object to be deleted
Object Name
Object Type
Owner
Status
Message
SampleDB
Database
DES...
Connection
Server:
DESKTOP-KCAQR88\SQLEXPRE
Connection:
DESKTOP-KCAQR88\User
View connection properties
Progress
Ready
Delete backup and restore history information for databases
Close existing connections
OK
Cancel

Create Tables using Table Designer

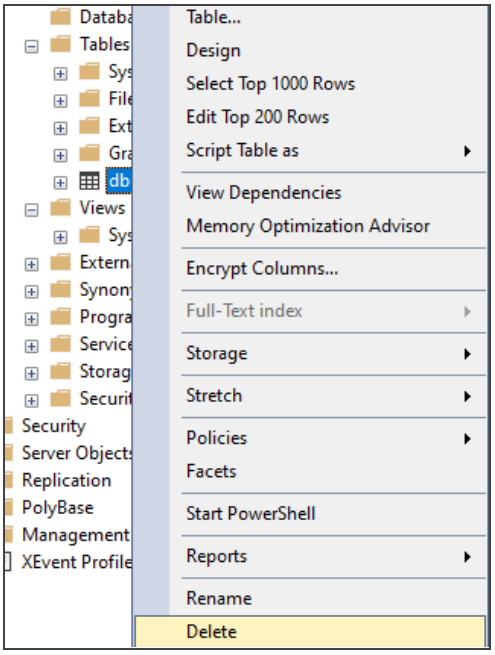


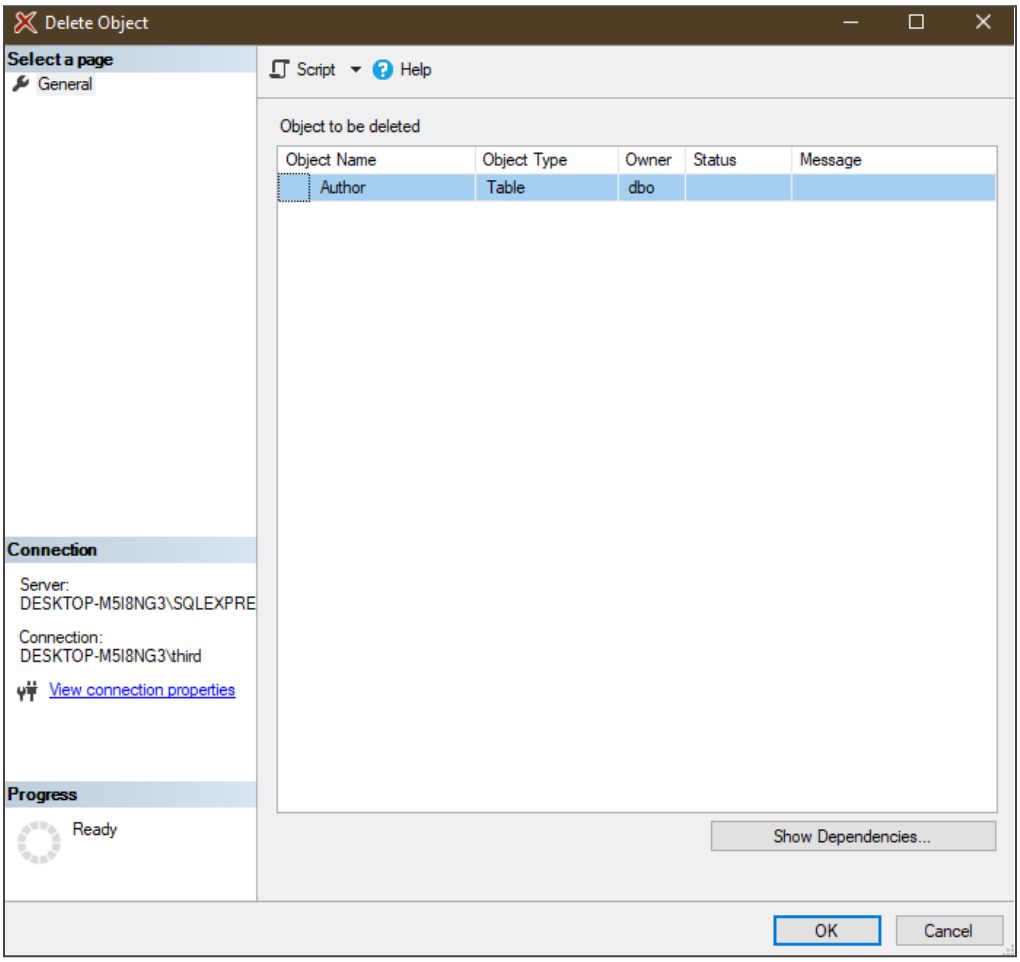




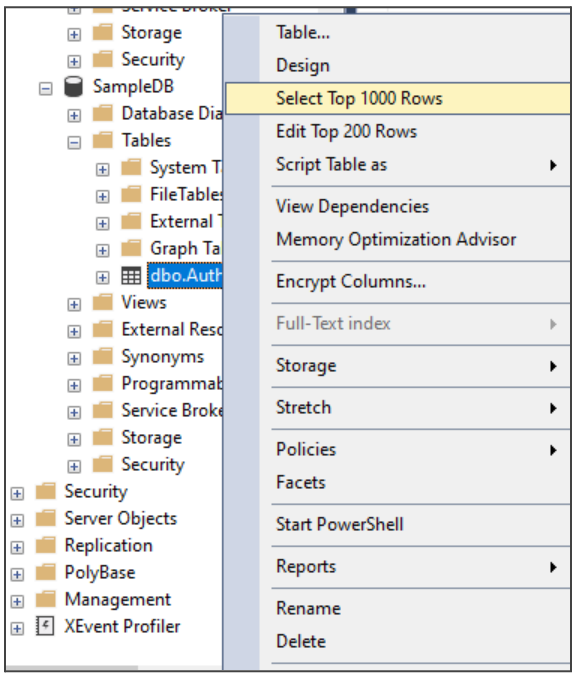


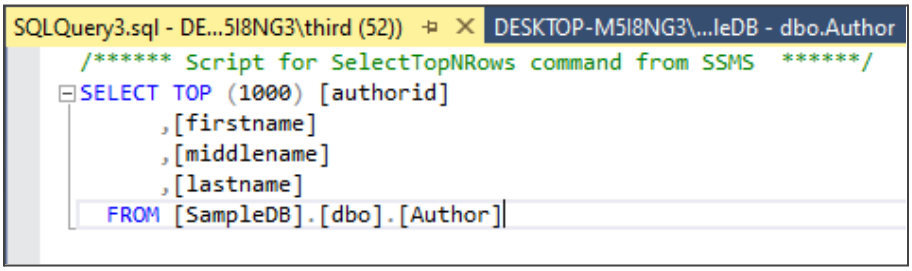
Delete Database using SQL Server Management Studio

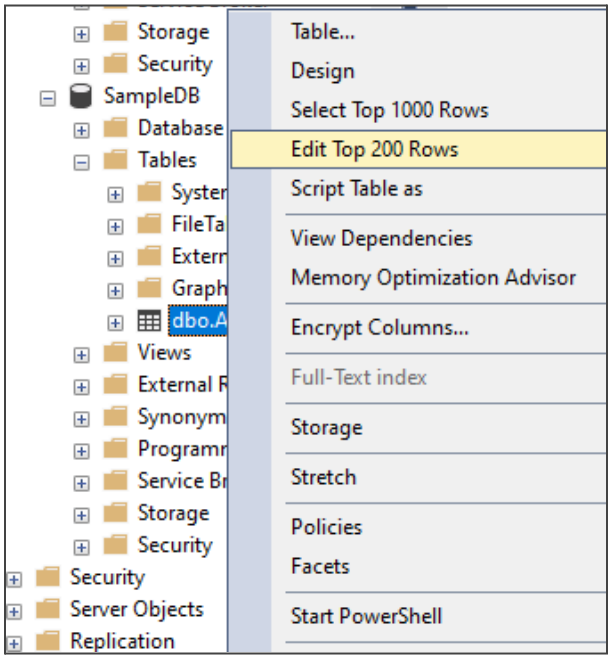


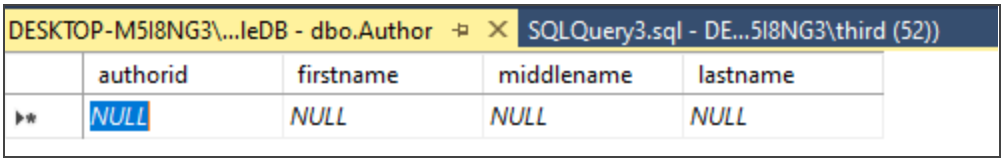


View and Edit Data in a Table using SQL Server Management Studio

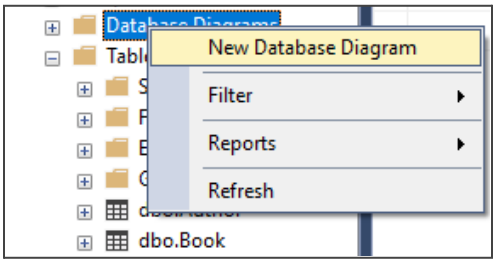


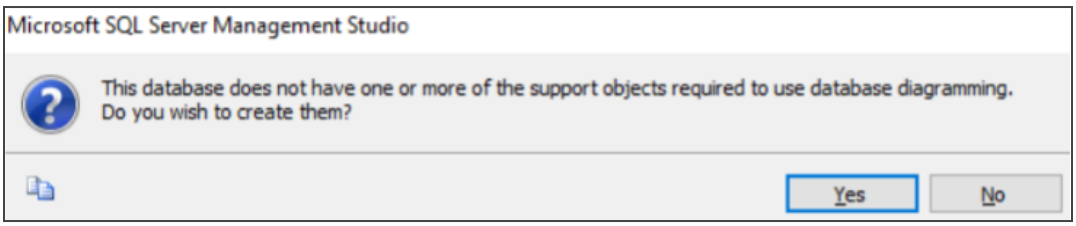


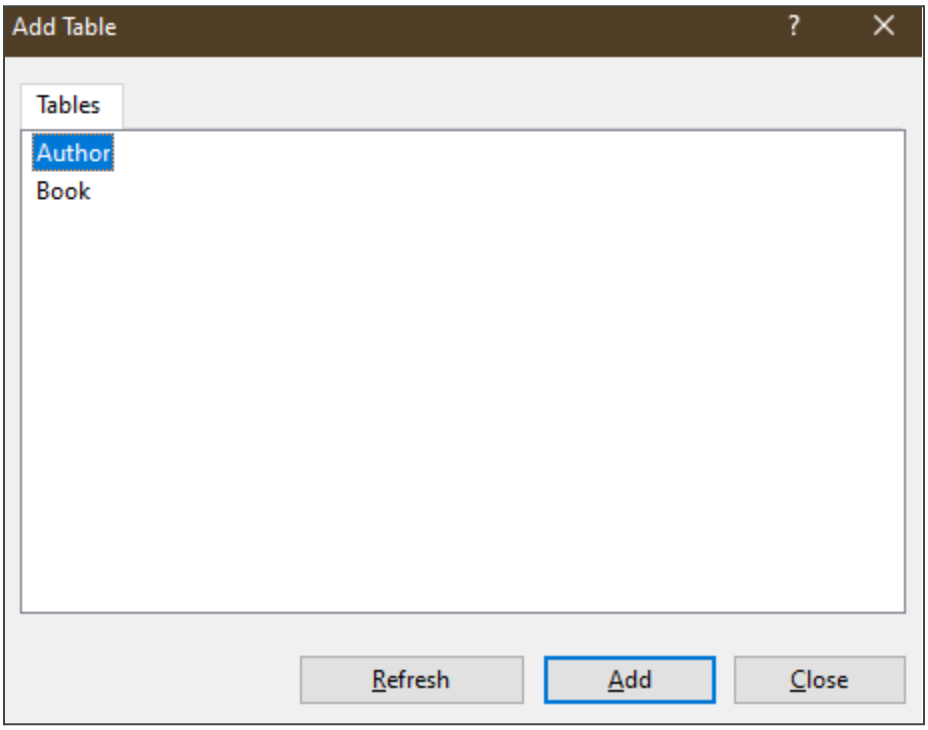


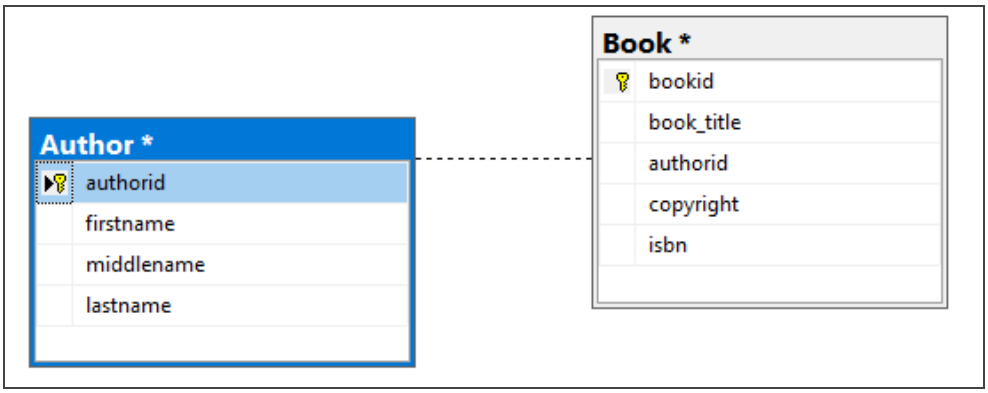


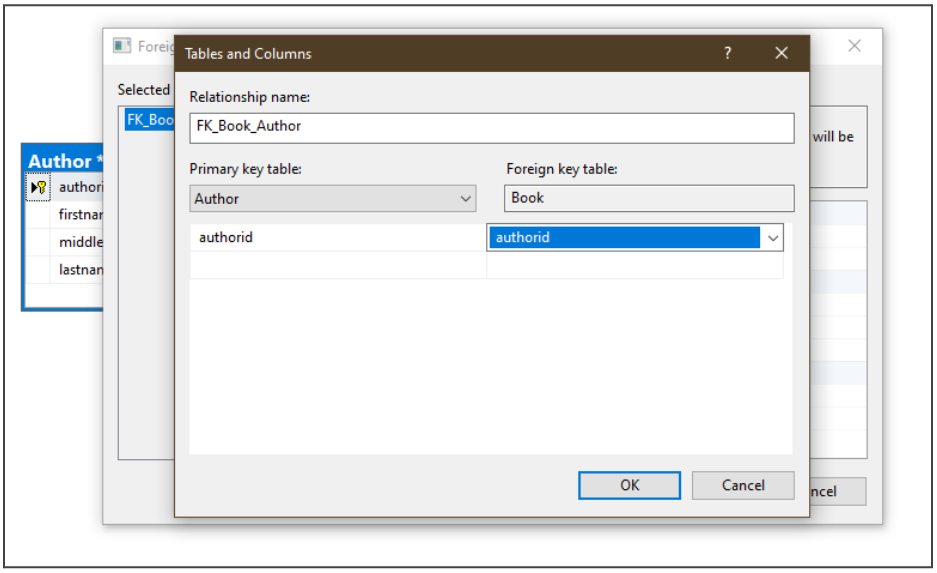
Creating Relationship using Database Diagram with Microsoft SQL Server Management Studio

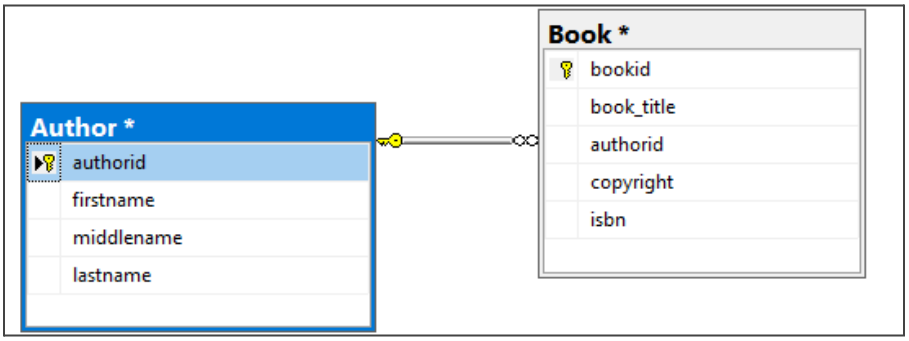






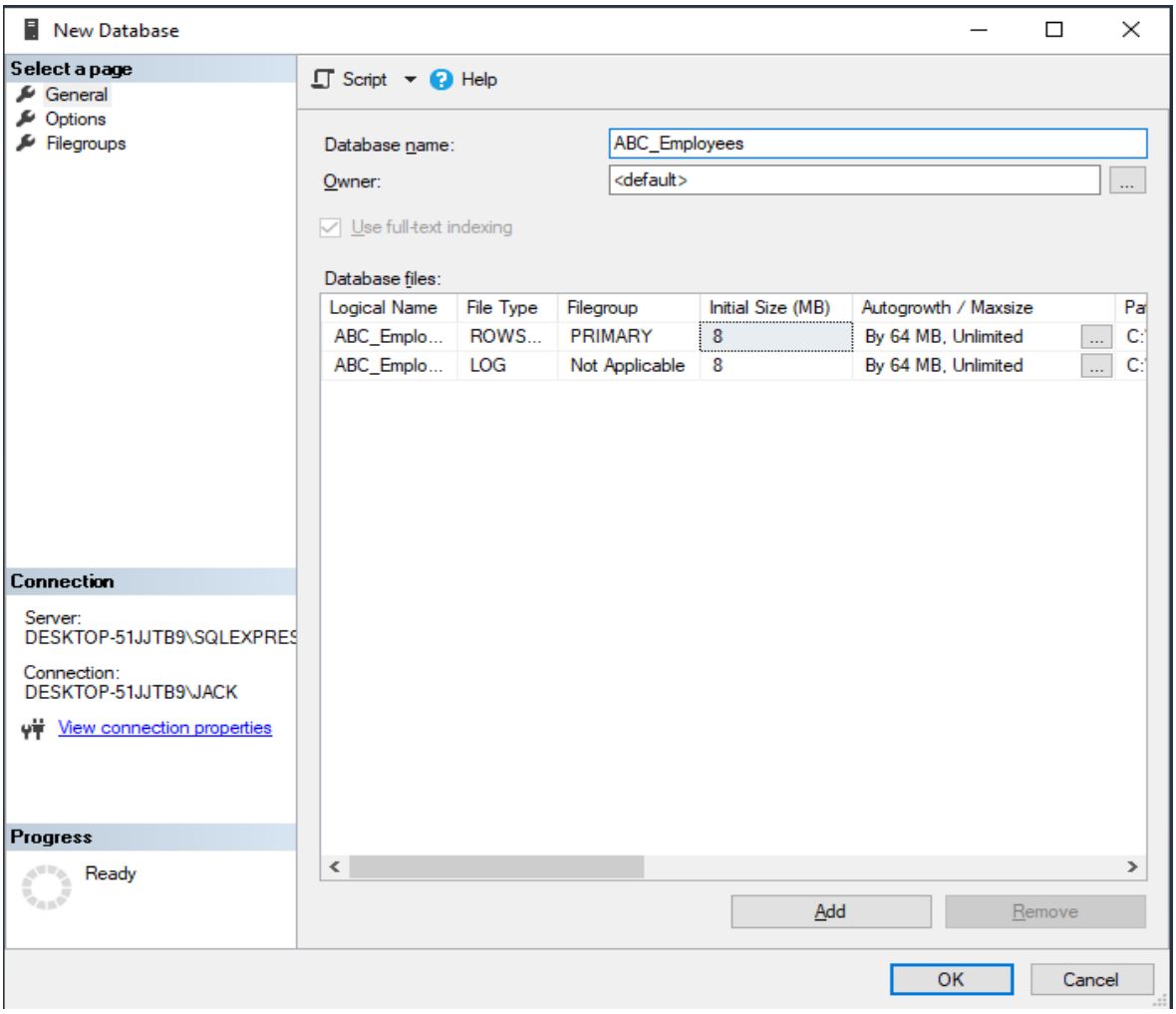

Book *
bookid
book_title
authorid
copyright
isbn
Author *
authorid
firstname
middlename
lastname


Tables and Columns
Relationship name:
FK_Book_Author
Primary key table:
Foreign key table:
Author
Book
authorid
authorid
OK
Cancel


Book *
bookid
book_title
authorid
copyright
isbn
Author *
authorid
firstname
middlename
lastname

Supplementary Activity

1. **Create a database ABC_Employees.**

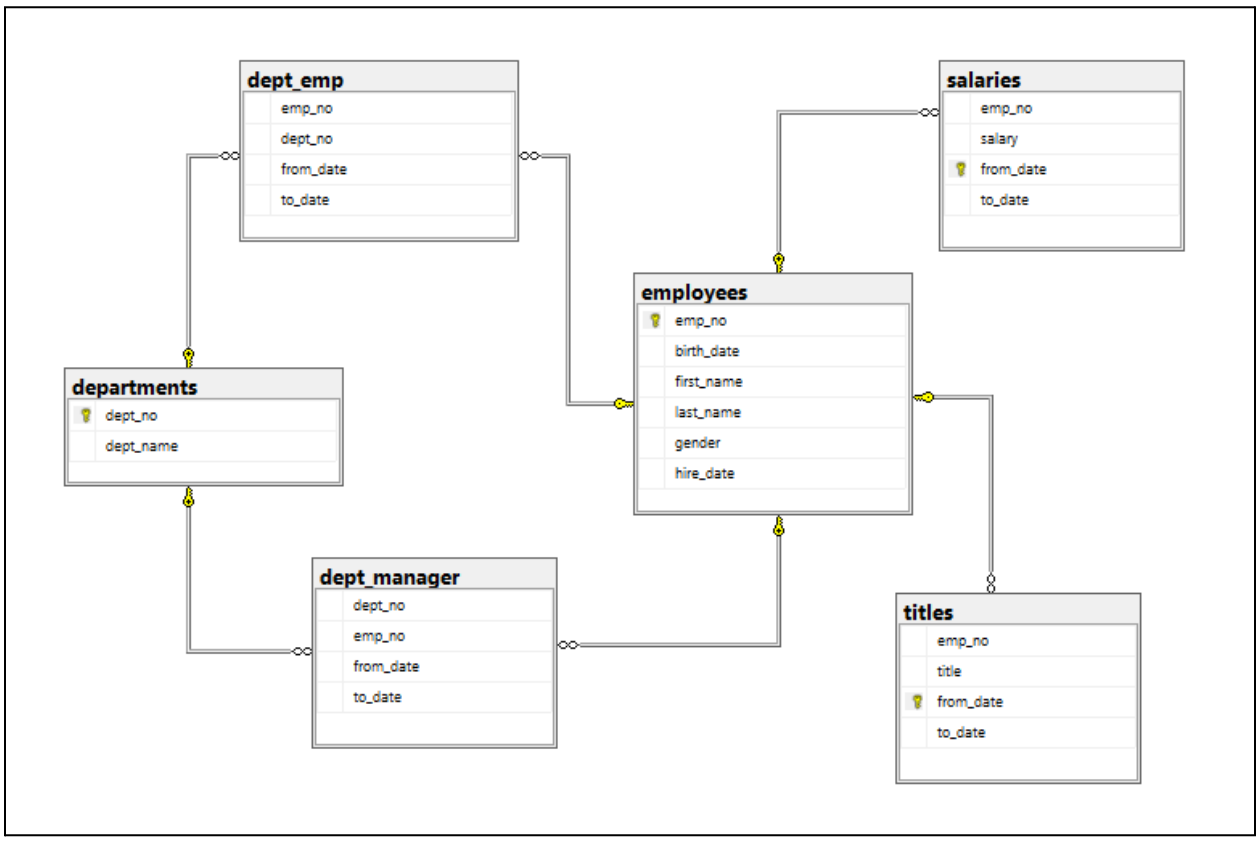


Observation: Creation of ABC_Employees database.

2. **Create the following tables in the ABC_Employees database.**

Observation: Creation of 6 tables under the ABC_Employees database.

3. **Create relationships using the database diagram.**



Observation: There are 6 tables created inside the database named ABC_employees. Each table is related to at least one of the other tables using a primary and foreign keys. As we can observe, the dept_emp, dept_manager, salaries, and titles have foreign keys that are referenced to either departments table or employees table. We can also observe a one to many relationship between the tables that has referenced a primary key. For instance, departments and employees have a one to many relationship.

4. **Insert 10 Employees with their salary, department and their manager.**

Employees Table

DESKTOP-DP133J6\S...s - dbo.employees

	emp_no	birth_date	first_name	last_name	gender	hire_date
	1001	*NULL*	Christian Ed	Efa	M	2022-10-03
	1002	*NULL*	Hans Angelo	Guevarra	M	2022-10-03
	1003	2002-12-08	John Renzo	Mendoza	M	2022-10-03
	1004	*NULL*	Sean Julian	Nicolas	M	2022-10-03
	1005	*NULL*	Armando	Vinluan	M	2022-10-03
	1006	2001-11-11	Daniel	Nereida	M	2022-08-04
	1007	2002-10-01	Julia	Yared	F	2022-09-14
	1008	2002-10-05	Maha	Panfilo	F	2022-10-01
	1009	2001-05-02	Ishmael	Santos	M	2022-09-16
	1010	2003-01-25	Harlee	Ramos	M	2022-08-28
*	*NULL*	*NULL*	*NULL*	*NULL*	*NULL*	*NULL*

Observation: 10 Data inserted in employees table, given that the emp_no is the primary key.

Salaries Table

DESKTOP-DP133J6\S...RelationshipModel | DESKTOP-DP133J6\SQ...ees - dbo.salar

emp_no	salary	from_date	to_date
1001	10000	2022-09-03	2022-10-03
1002	20000	2022-09-04	2022-10-03
1003	15000	2022-09-05	2022-10-03
1004	18000	2022-09-06	2022-10-03
1005	17000	2022-09-07	2022-10-03
1006	19000	2022-09-08	2022-10-07
1007	21000	2022-09-09	2022-10-07
1008	13000	2022-09-10	2022-10-07
1009	8000	2022-09-11	2022-09-29
1010	11000	2022-09-12	2022-10-01
NULL	*NULL*	*NULL*	*NULL*

Observation: Data inserted into the salaries table given that the emp_no is existing on the employees table as it is a foreign key.

Departments Table

DESKTOP-DP133J6\S...- dbo.departments | SQLQuery6.s

dept_no	dept_name
1	Finance
2	Marketing
3	Sales
NULL	*NULL*

Observation: Data inserted into the departments table given that the dept_no is a primary key.

Department Manager Table

SQLQuery7.sql - DE...ryan Mendoza (67))* DESKTOP-DP133J6\...dbo.dept_ma

dept_no	emp_no	from_date	to_date
1	1001	2022-10-01	2022-12-01
2	1002	2022-10-01	2022-12-01
1	1003	2022-10-01	2022-12-01
1	1004	2022-10-01	2022-12-01
2	1005	2022-10-01	2022-12-01
3	1006	2022-10-01	2022-12-01
3	1007	2022-10-01	2022-12-01
2	1008	2022-10-01	2022-12-01
1	1009	2022-10-01	2022-12-01
2	1010	2022-10-01	2022-12-01
NULL	NULL	NULL	NULL

Observation: Data inserted into the dept_manager table given that the dept_no and emp_no is existing on departments and employees table respectively as it is a foreign key.

5. **Select and view the data in the tables of ABC_EmployeesDB database.**

Employees Table

SQLQuery7.sql - DE...ryan Mendoza (67))* DESKTOP-DP133J6\...dbo.dept_mana

```
SELECT * FROM employees
ORDER BY emp_no;
```

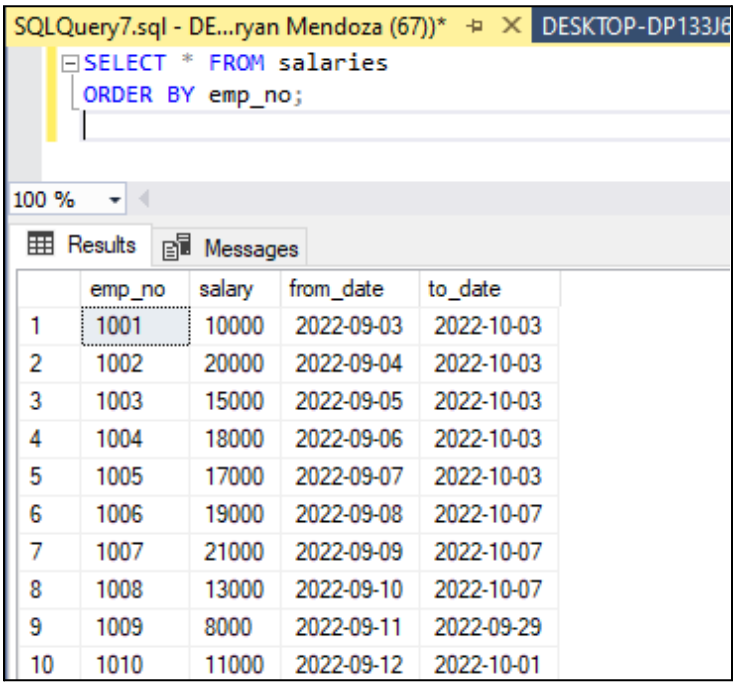
100 %

Results Messages

	emp_no	birth_date	first_name	last_name	gender	hire_date
1	1001	NULL	Christian Ed	Efa	M	2022-10-03
2	1002	NULL	Hans Angelo	Guevarra	M	2022-10-03
3	1003	2002-12-08	John Renzo	Mendoza	M	2022-10-03
4	1004	NULL	Sean Julian	Nicolas	M	2022-10-03
5	1005	NULL	Armando	Vinluan	M	2022-10-03
6	1006	NULL	Daniel	Nereida	M	2022-08-04
7	1007	2002-10-01	Julia	Yared	F	2022-09-14
8	1008	2002-10-05	Maha	Panfilo	F	2022-10-01
9	1009	2001-05-02	Ishmael	Santos	M	2022-09-16
10	1010	2003-01-25	Harlee	Ramos	M	2022-08-28

Observation: Using select all command to query and display the entries under the employees table.

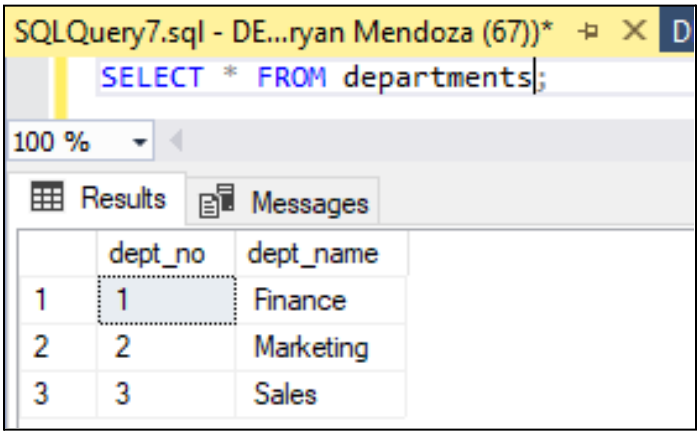
Salaries Table



	emp_no	salary	from_date	to_date
1	1001	10000	2022-09-03	2022-10-03
2	1002	20000	2022-09-04	2022-10-03
3	1003	15000	2022-09-05	2022-10-03
4	1004	18000	2022-09-06	2022-10-03
5	1005	17000	2022-09-07	2022-10-03
6	1006	19000	2022-09-08	2022-10-07
7	1007	21000	2022-09-09	2022-10-07
8	1008	13000	2022-09-10	2022-10-07
9	1009	8000	2022-09-11	2022-09-29
10	1010	11000	2022-09-12	2022-10-01

Observation: Using select all command to query and display the entries under the salaries table.

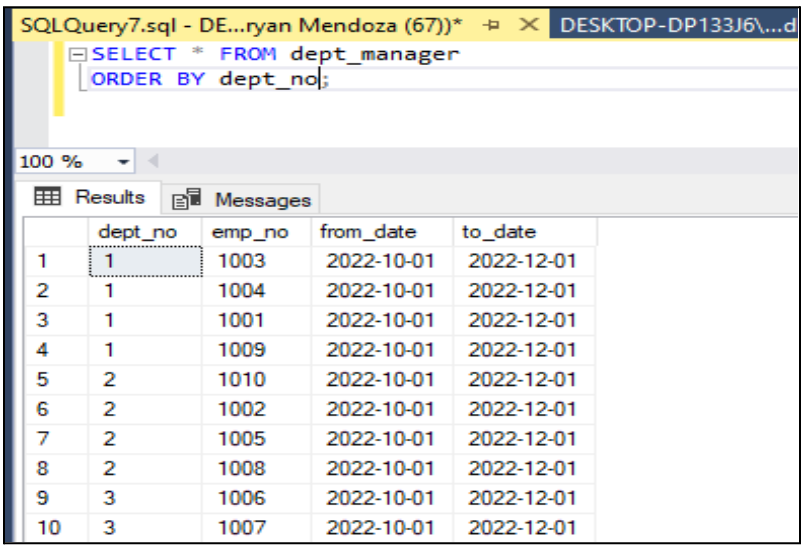
Departments Table



	dept_no	dept_name
1	1	Finance
2	2	Marketing
3	3	Sales

Observation: Using select all command to query and display the entries under the departments table..

Department Manager Table



```
SELECT * FROM dept_manager
ORDER BY dept_no;
```

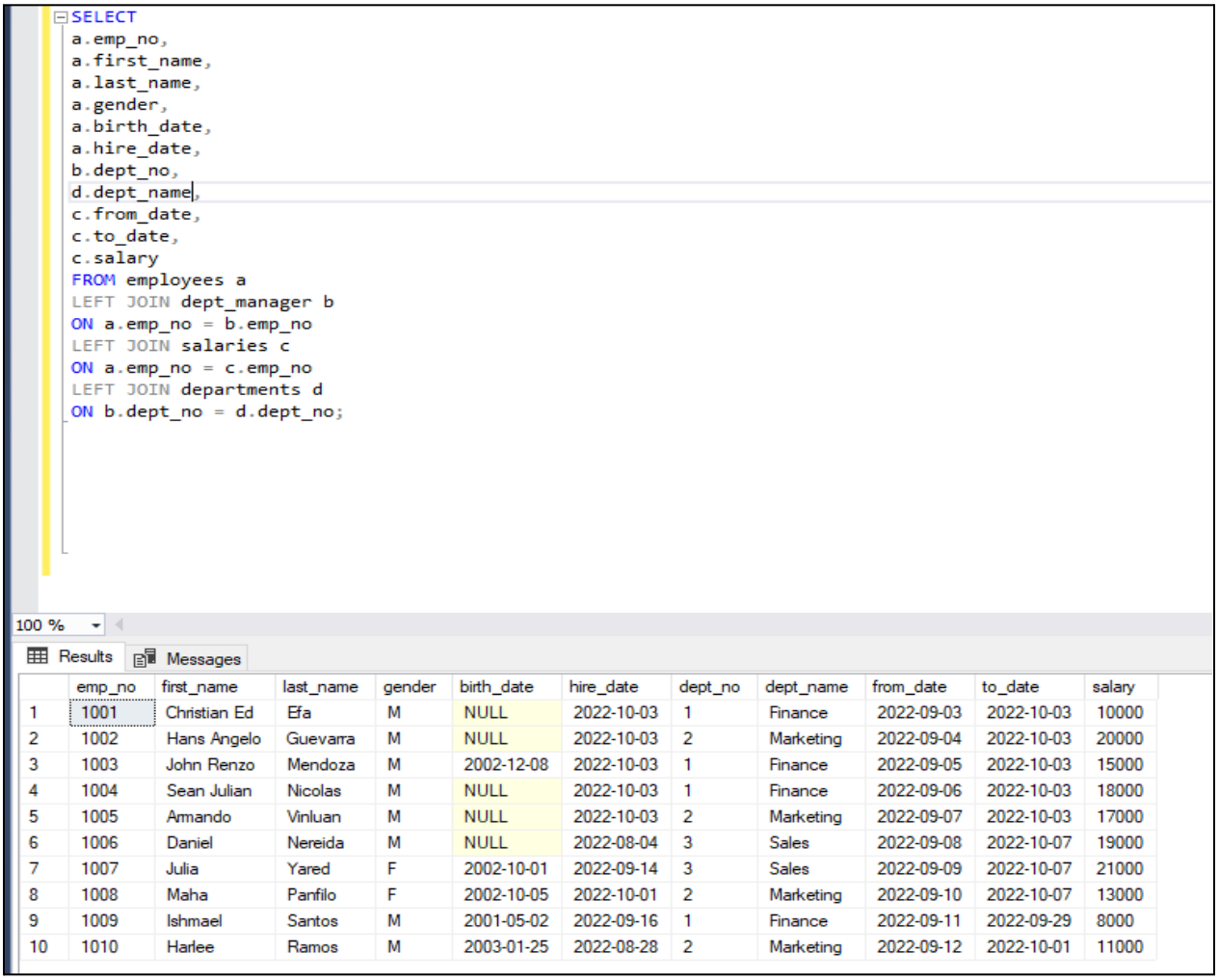
100 %

Results | Messages

	dept_no	emp_no	from_date	to_date
1	1	1003	2022-10-01	2022-12-01
2	1	1004	2022-10-01	2022-12-01
3	1	1001	2022-10-01	2022-12-01
4	1	1009	2022-10-01	2022-12-01
5	2	1010	2022-10-01	2022-12-01
6	2	1002	2022-10-01	2022-12-01
7	2	1005	2022-10-01	2022-12-01
8	2	1008	2022-10-01	2022-12-01
9	3	1006	2022-10-01	2022-12-01
10	3	1007	2022-10-01	2022-12-01

Observation: Using select all command to query and display the entries under the dept_manager table.

Joined Tables



```
SELECT
a.emp_no,
a.first_name,
a.last_name,
a.gender,
a.birth_date,
a.hire_date,
b.dept_no,
d.dept_name,
c.from_date,
c.to_date,
c.salary
FROM employees a
LEFT JOIN dept_manager b
ON a.emp_no = b.emp_no
LEFT JOIN salaries c
ON a.emp_no = c.emp_no
LEFT JOIN departments d
ON b.dept_no = d.dept_no;
```

100 %

Results | Messages

	emp_no	first_name	last_name	gender	birth_date	hire_date	dept_no	dept_name	from_date	to_date	salary
1	1001	Christian Ed	Efa	M	NULL	2022-10-03	1	Finance	2022-09-03	2022-10-03	10000
2	1002	Hans Angelo	Guevarra	M	NULL	2022-10-03	2	Marketing	2022-09-04	2022-10-03	20000
3	1003	John Renzo	Mendoza	M	2002-12-08	2022-10-03	1	Finance	2022-09-05	2022-10-03	15000
4	1004	Sean Julian	Nicolas	M	NULL	2022-10-03	1	Finance	2022-09-06	2022-10-03	18000
5	1005	Armando	Vinluan	M	NULL	2022-10-03	2	Marketing	2022-09-07	2022-10-03	17000
6	1006	Daniel	Nereida	M	NULL	2022-08-04	3	Sales	2022-09-08	2022-10-07	19000
7	1007	Julia	Yared	F	2002-10-01	2022-09-14	3	Sales	2022-09-09	2022-10-07	21000
8	1008	Maha	Panfilo	F	2002-10-05	2022-10-01	2	Marketing	2022-09-10	2022-10-07	13000
9	1009	Ishmael	Santos	M	2001-05-02	2022-09-16	1	Finance	2022-09-11	2022-09-29	8000
10	1010	Harlee	Ramos	M	2003-01-25	2022-08-28	2	Marketing	2022-09-12	2022-10-01	11000

Observation: Using the Left Join command to display the columns under the four tables populated on the previous steps. The four tables joined together are; departments, employees, dept_manager, and salaries tables.

Conclusion

With this activity, our group was able to become acquainted with the SQL Server environment through the use of Microsoft SQL Server Management Studio and SQL Server Configuration Manager. Our group was also able to put previous knowledge into practice by creating databases, tables, and deleting and modifying them.

The procedure on this activity specifically focused on setting up the Microsoft SQL environment in which we can create, use, modify our database as well as our tables within them. The procedure also introduced the different features available in this Microsoft SQL environment. With that, the students were able to be familiarized with the application. Moreover, the different MySQL commands as well as the concepts are also refreshed on this activity. Some concepts such as the relational database model, the select commands, the keys and others.