

Task No: 2 Date:	To configure, monitor, and administer a Data warehouse and perform basic Query operations on the DW. Tools: SQL Server Management Studio (SSMS), Microsoft Azure SQL Pool	
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TASK 2a

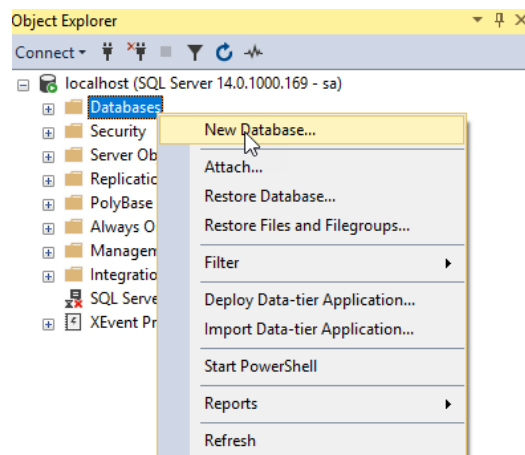
AIM

Create a new database in SQL Server and execute the script to configure and load the sample database.

PROCEDURE:

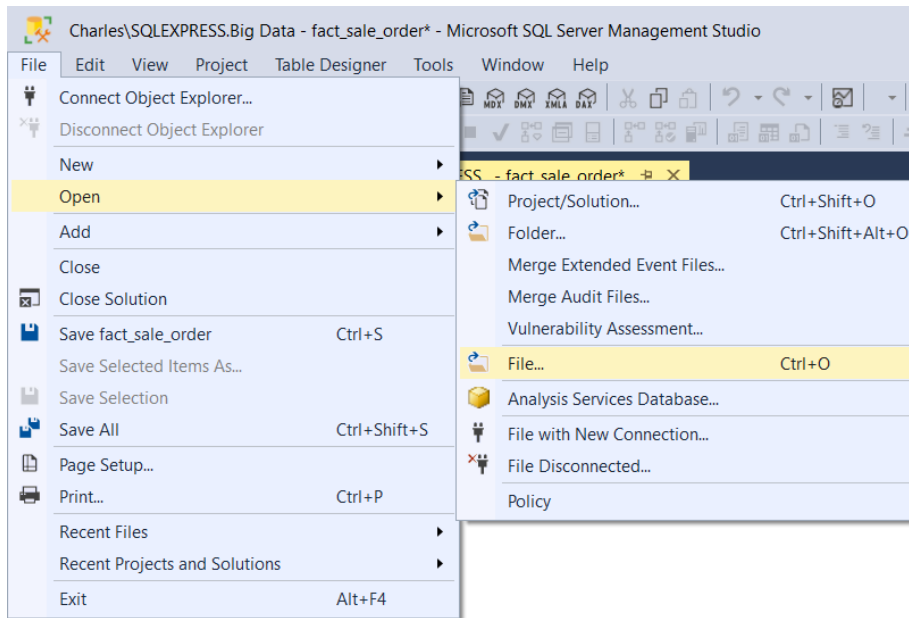
Connect to the SQL Server by choosing the server name, enter the user and password and click the Connect button.

Right-click the Databases node in the Object Explorer and select the New Database... menu item

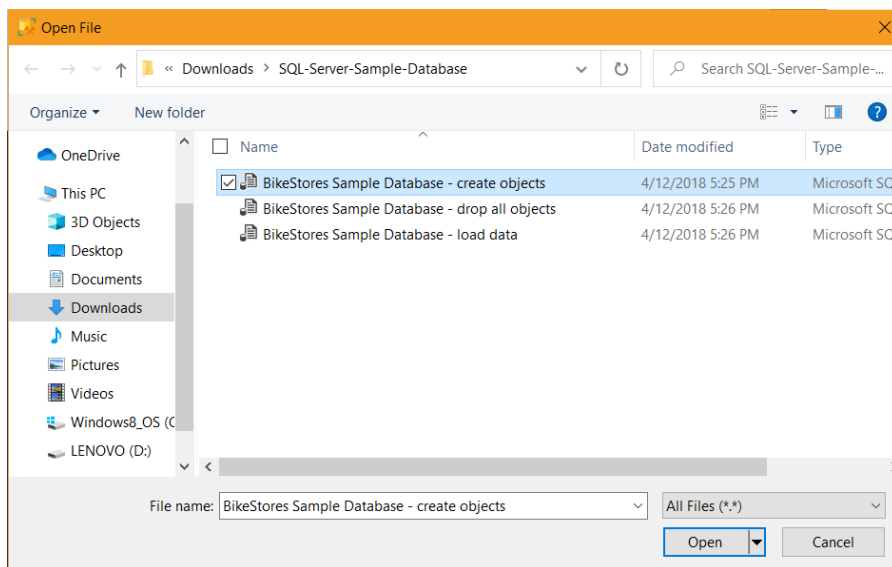


Enter the **Database name** as BikeStores and click the **OK** button to create the new database.

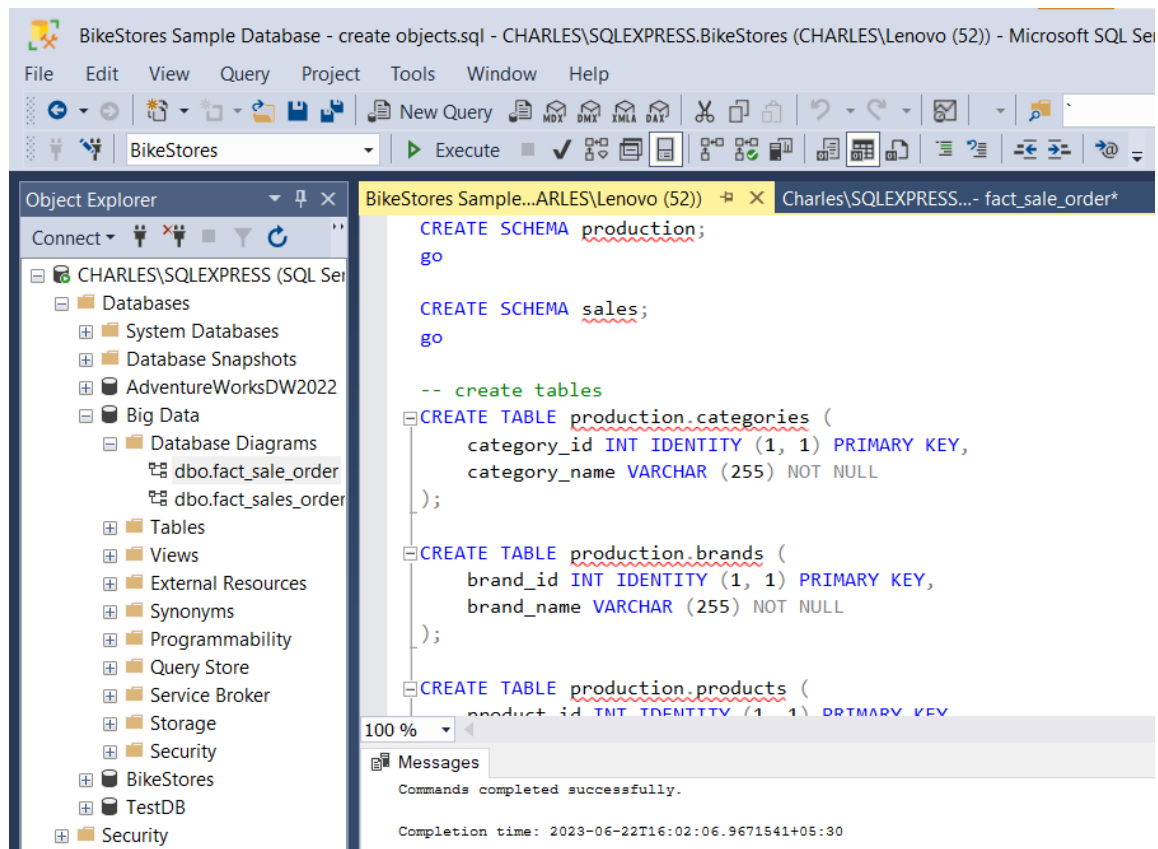
From the File menu, choose Open > File... menu item to open a script file.



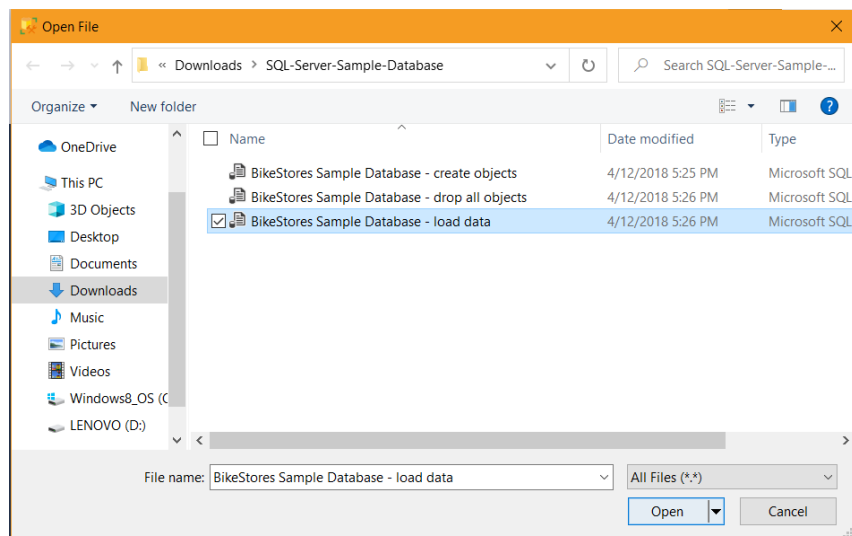
Select the **BikeStores Sample Database – create** objects.sql file and click the Open button



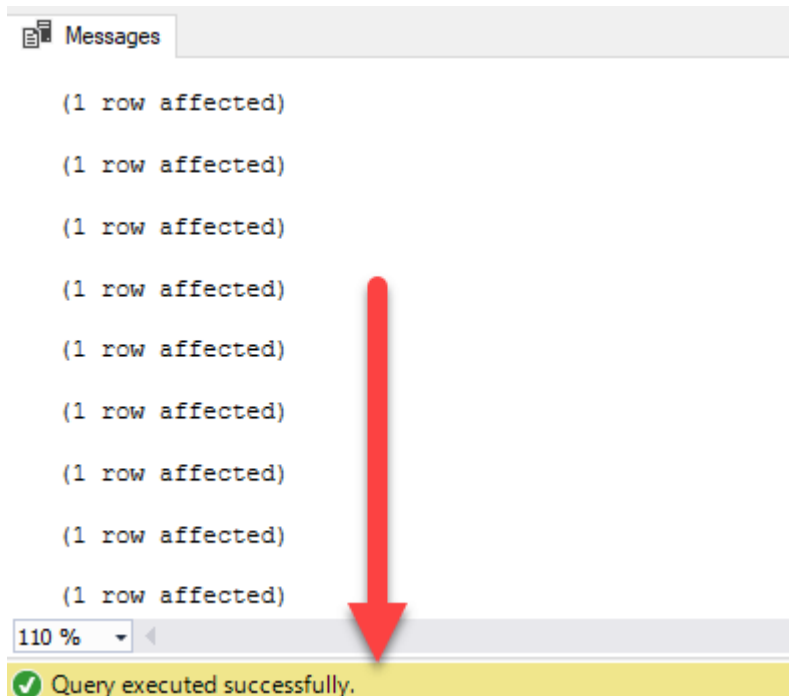
Click the **Execute** button to execute the SQL script



Choose the **BikeStores Sample Database – load data.sql** file and click the Open button.



Click the **Execute** button to load data into the tables.



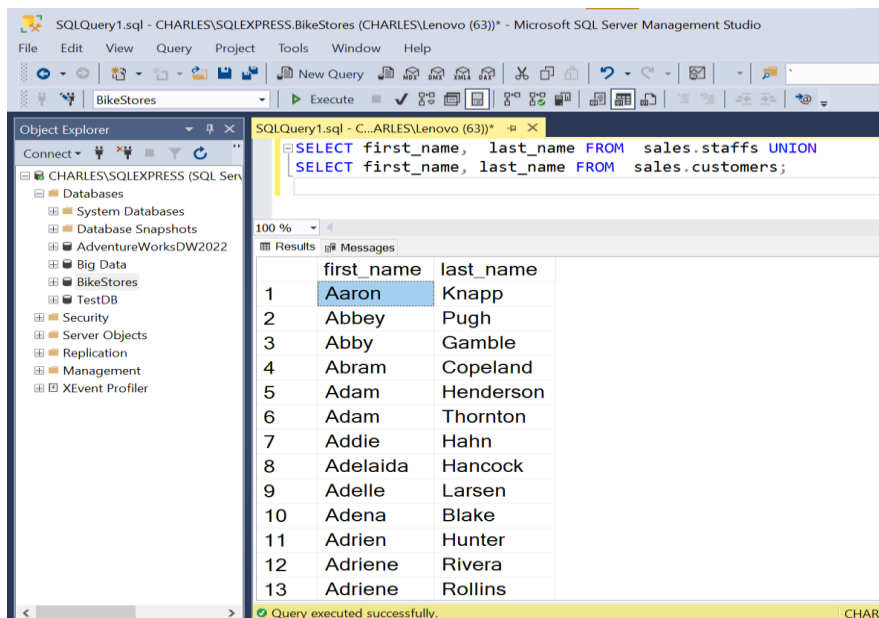
Execute query to display the values from `production.products` table.

QUERY OPERATIONS ON THE DATA WAREHOUSE

UNION OPERATION

`SELECT first_name, last_name FROM sales.staffs UNION`

`SELECT first_name, last_name FROM sales.customers;`



UNION ALL OPERATION

SELECT first_name, last_name FROM sales.staffs UNION ALL

SELECT first_name, last_name FROM sales.customers;

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
SELECT first_name, last_name FROM sales.staffs UNION ALL  
SELECT first_name, last_name FROM sales.customers;
```

The Results pane displays the output of the query, showing a list of staff and customer names. The first column is labeled 'first_name' and the second is 'last_name'. The results are as follows:

	first_name	last_name
1	Fabiola	Jackson
2	Mireya	Copeland
3	Genna	Serrano
4	Virgie	Wiggins
5	Jannette	David
6	Marcelene	Boyer
7	Venita	Daniel
8	Kali	Vargas
9	Layla	Terrell
10	Bernardine	Houston
11	Debra	Burks
12	Kasha	Todd
13	Tameka	Fisher

The status bar at the bottom indicates "Query executed successfully."

INTERSECT OPERATION

SELECT city FROM sales.customers INTERSECT

SELECT city FROM sales.stores ORDER BY city;

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
SELECT city FROM sales.customers INTERSECT  
SELECT city FROM sales.stores ORDER BY city;
```

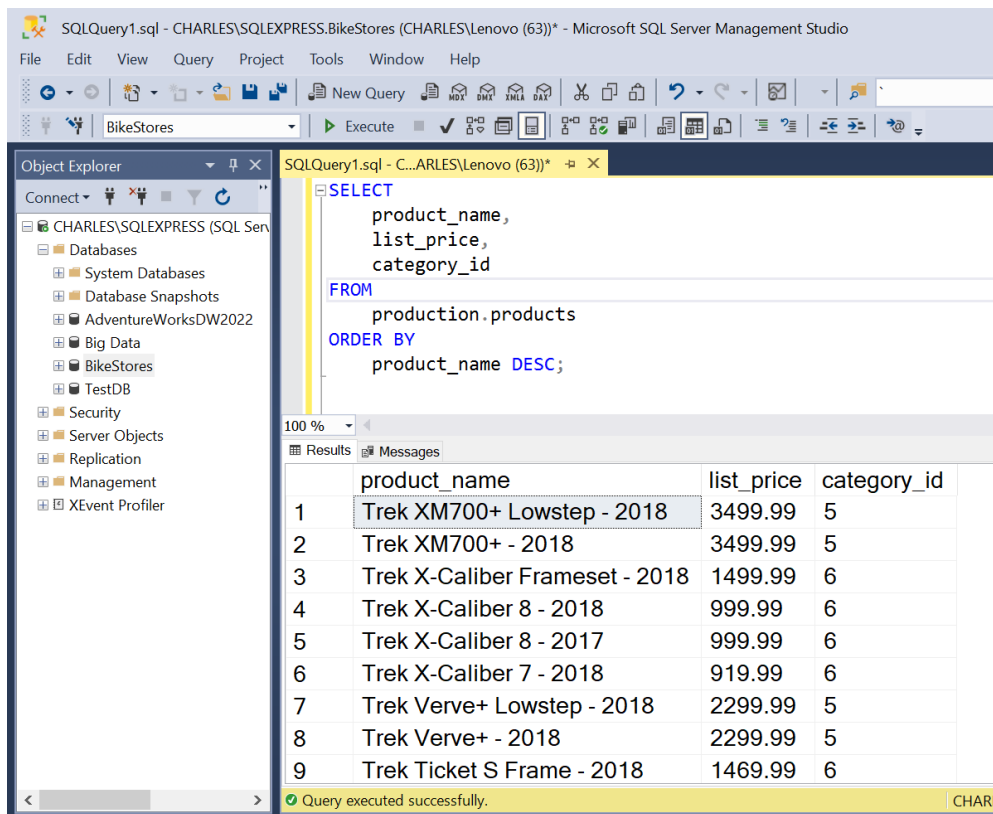
The Results pane displays the output of the query, showing the cities that are common to both sales.customers and sales.stores. The first column is labeled 'city'. The results are as follows:

	city
1	Baldwin
2	Rowlett
3	Santa Cruz

JOIN OPERATION

INNER JOIN

```
SELECT
    product_name,
    list_price,
    category_id
FROM
    production.products
ORDER BY
    product_name DESC;
```



The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the file is 'SQLQuery1.sql - CHARLES\SQLEXPRESS.BikeStores (CHARLES\Lenovo (63))' and the server is 'Microsoft SQL Server Management Studio'. The menu bar includes File, Edit, View, Query, Project, Tools, Window, and Help. The toolbar contains various icons for file operations, query execution, and window management. The Object Explorer on the left shows the server structure, including Databases, System Databases, Database Snapshots, AdventureWorksDW2022, Big Data, BikeStores, TestDB, Security, Server Objects, Replication, Management, and XEvent Profiler. The query editor in the center contains the following SQL code:

```
SELECT
    product_name,
    list_price,
    category_id
FROM
    production.products
ORDER BY
    product_name DESC;
```

The Results pane at the bottom displays the query output as a table with 9 rows and 3 columns: product_name, list_price, and category_id. The status bar at the bottom indicates 'Query executed successfully.' and the user 'CHARL'.

	product_name	list_price	category_id
1	Trek XM700+ Lowstep - 2018	3499.99	5
2	Trek XM700+ - 2018	3499.99	5
3	Trek X-Caliber Frameset - 2018	1499.99	6
4	Trek X-Caliber 8 - 2018	999.99	6
5	Trek X-Caliber 8 - 2017	999.99	6
6	Trek X-Caliber 7 - 2018	919.99	6
7	Trek Verve+ Lowstep - 2018	2299.99	5
8	Trek Verve+ - 2018	2299.99	5
9	Trek Ticket S Frame - 2018	1469.99	6

LEFT JOIN

```
SELECT
    product_name,
    order_id
FROM
    production.products p
LEFT JOIN sales.order_items o ON o.product_id = p.product_id
ORDER BY
    order_id;
```

SQLQuery1.sql - CHARLES\SQLEXPRESS.BikeStores (CHARLES\Lenovo (63)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

- Connect
- CHARLES\SQLEXPRESS (SQL Ser)
- Databases
 - System Databases
 - Database Snapshots
 - AdventureWorksDW2022
 - Big Data
 - BikeStores
 - TestDB
- Security
- Server Objects
- Replication
- Management
- XEvent Profiler

SQLQuery1.sql - C:\ARLES\Lenovo (63))

```
SELECT
    product_name,
    order_id
FROM
    production.products p
LEFT JOIN sales.order_items o ON o.product_id = p.product_id
ORDER BY
    order_id;
```

100 %

Results Messages

	product_name	order_id
1	Electra Savannah 1 (20-inch) - Girl's - 2018	NULL
2	Electra Townie Go! 8i Ladies' - 2018	NULL
3	Trek Checkpoint ALR 5 Women's - 2019	NULL
4	Trek Checkpoint ALR Frameset - 2019	NULL
5	Trek Precaliber 12 Girl's - 2018	NULL
6	Surly Krampus Frameset - 2018	NULL
7	Trek Checkpoint SL 5 Women's - 2019	NULL
8	Trek 820 - 2016	NULL
9	Trek Checkpoint ALR 4 Women's - 2019	NULL

Query executed successfully. CHAR

RESULT:

Thus the basic SQL operation was executed using MS Server Management Studio and SQL Server.

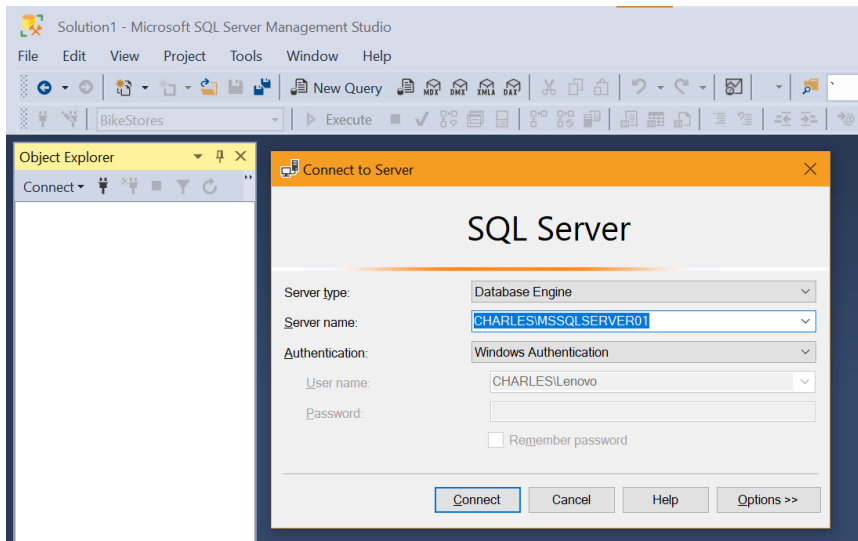
TASK 2b:

AIM

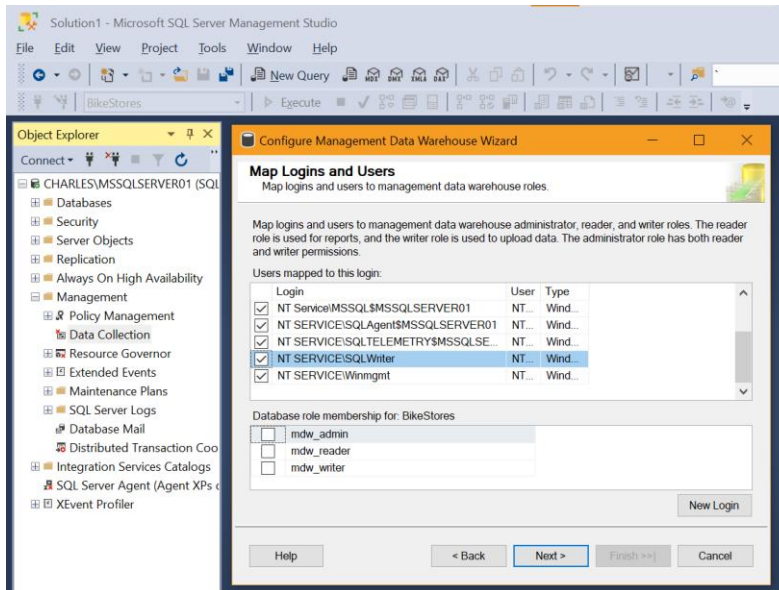
To configure, monitor, and administer a Data warehouse

PROCEDURE

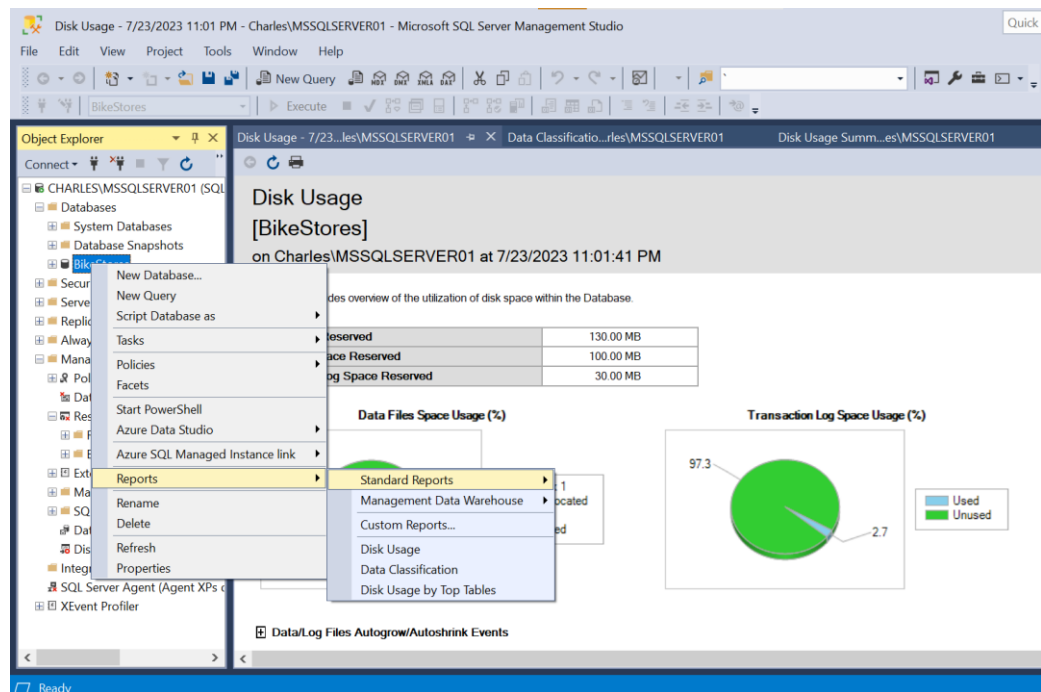
1. Install Microsoft SQL server Management Studio
2. Install MS Sql Server Developer Edition
3. Connect to the SQL Server



4. Choose Management -> Data Collection in the left side navigation bar
5. Right click on the Data collection -> Tasks -> Configure Management Data Warehouse and Configure the data warehouse settings
6. Select Server Name and Database name and click next button
7. Change the settings in map login and users
 - a. User mapped to this login
 - b. Database membership for BikeStores



8. Check the Settings and Click finish button
9. Monitor and generate the various reports for the BikeStores, Right click the Bikestores-> Reports -> Standard Reports and select the reports needed.



Result :

Thus a Data warehouse was configured, monitored, and administered using MS Server Management and SQL Server was completed successfully.