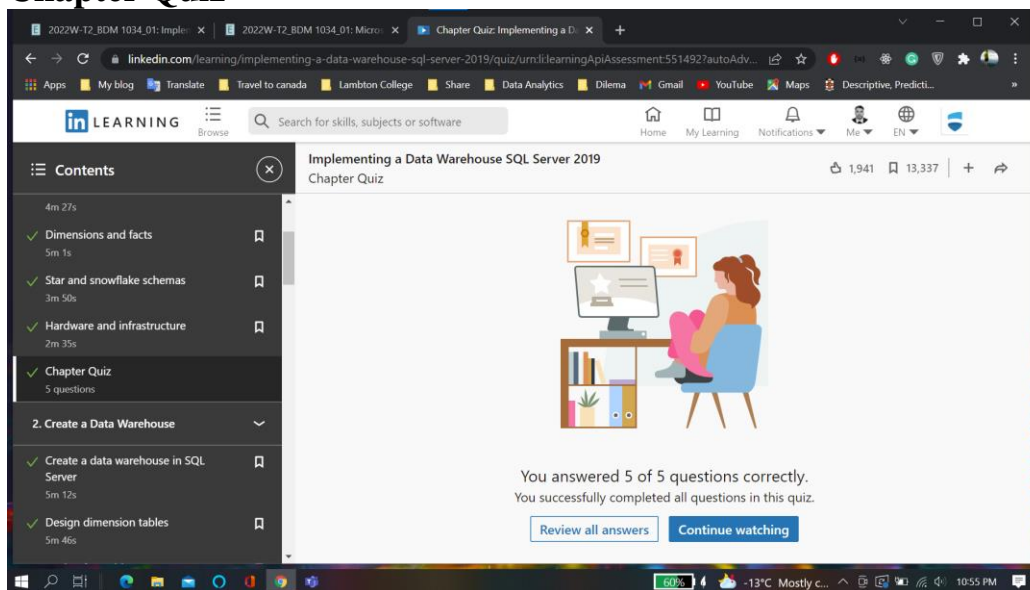


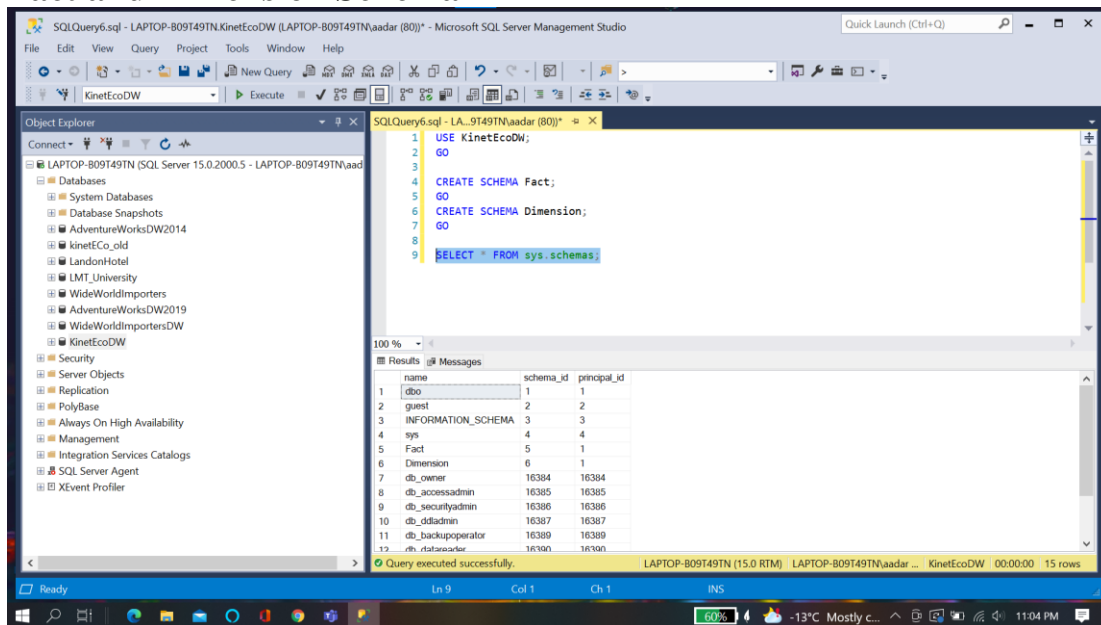
BDM 1034 - Application Design for Big Data
Lab4 Asynchronous
Submitted by: Aadarsha Chapagain
Student ID:C0825975
Submitted to: Prof. Teresa Zhu

Here I have attached the certificate I achieved from LinkedIn learning for Course
“**Implementing a Data Warehouse SQL Server 2019**” along with the
Screenshot of score I achieved

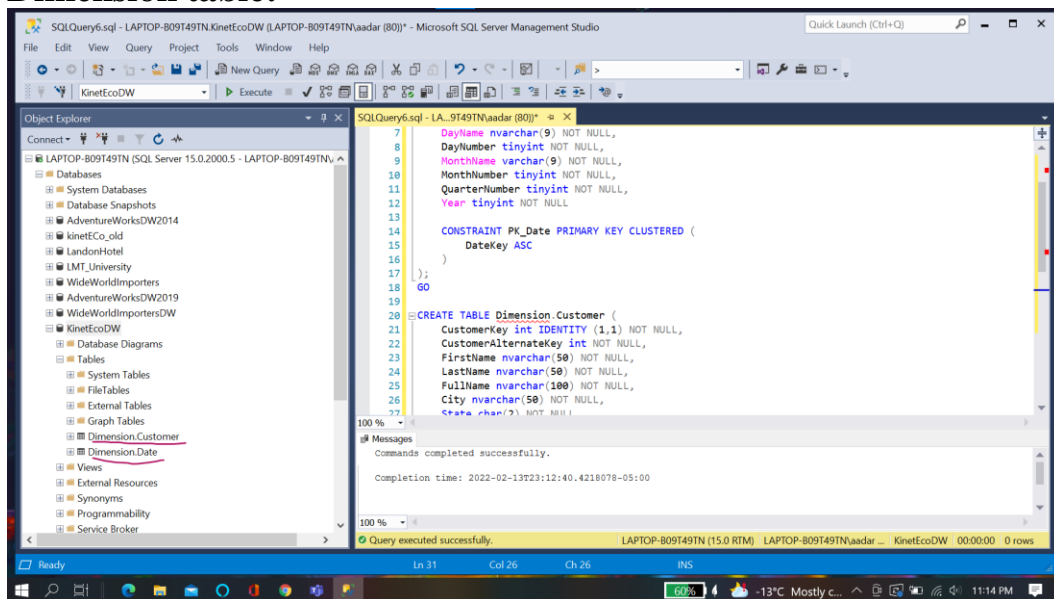
Chapter 1: Data ware house Foundations
Chapter Quiz



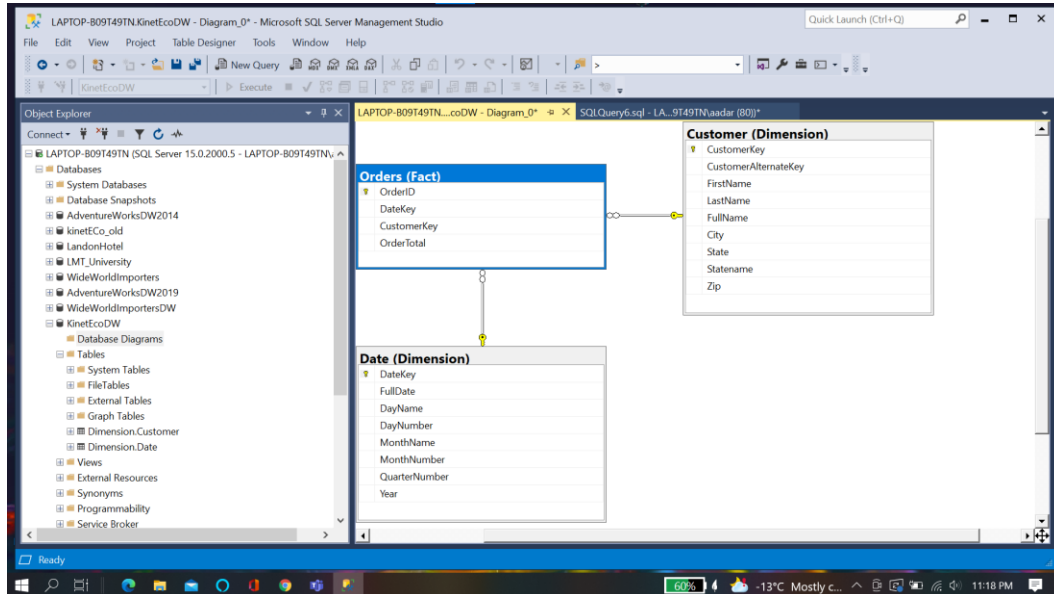
Chapter 2: Create a Dataware house SQL Fact and Dimension Schema



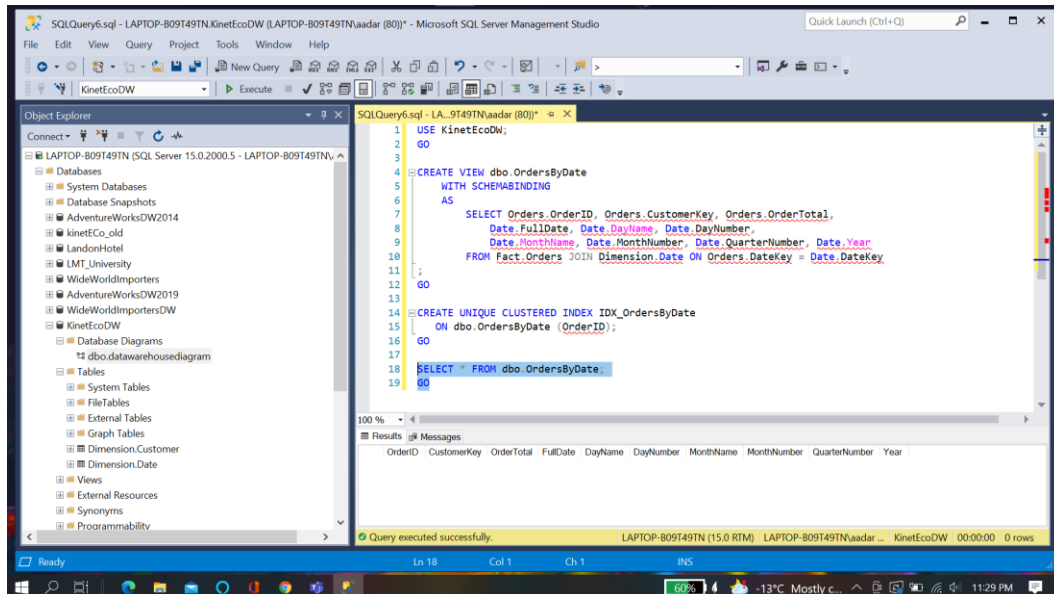
Dimension table:



Fact table:



Indexed views:



Chapter quiz:

The screenshot shows a web browser window displaying a LinkedIn Learning page. The page title is "Implementing a Data Warehouse SQL Server 2019 Chapter Quiz". The left sidebar shows a list of topics with a "Chapter Quiz" section highlighted. The main content area shows a congratulatory message: "You answered 4 of 4 questions correctly. You successfully completed all questions in this quiz." Below the message are two buttons: "Review all answers" and "Continue watching".

2022W-T2_BDM 1034_01: Imple... x 2022W-T2_BDM 1034_01: Micro... x Chapter Quiz: Implementing a D... x

linkedin.com/learning/implementing-a-data-warehouse-sql-server-2019/quiz/um:learningApiAssessment:551493?autoAdv...

Apps My blog Translate Travel to canada Lambton College Share Data Analytics Dilema Gmail YouTube Maps Descriptive, Predict...

in LEARNING Search for skills, subjects or software Home My Learning Notifications Me EN

Contents

- 5m 12s
- ✓ Design dimension tables 5m 46s
- ✓ Design fact tables 3m 33s
- ✓ Create an indexed view 3m 28s
- ✓ Chapter Quiz 4 questions

3. Columnstore Indexes

- ✓ Advantages of columnstore indexes 3m 45s
- ✓ Memory-optimized columnstore table 3m 26s
- ✓ Rebuild columnstore indexes

Implementing a Data Warehouse SQL Server 2019 Chapter Quiz 1,941 13,337

You answered 4 of 4 questions correctly. You successfully completed all questions in this quiz.

Review all answers Continue watching

60% 13°C Mostly c... 11:32 PM

Chapter 3: Columnstore Indexes

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The left pane shows the "Object Explorer" with the "Indexes" folder expanded under the "FactOrders" table. The right pane shows the SQL query editor with the following code:

```
1 USE KinetEcoDW;
2 GO
3
4 CREATE COLUMNSTORE INDEX IX_CS_FactOrders
5 ON Fact.Orders (OrderID, DateKey, CustomerKey, OrderTotal);
6 GO
```

The bottom pane shows the "Messages" window with the following text:

```
Commands completed successfully.
Completion time: 2022-02-13T23:38:25.8024738-05:00
```

The status bar at the bottom indicates "Query executed successfully." and "0 rows".

SQLQuery6.sql - LAPTOP-B09T49TN.KinetEcoDW (LAPTOP-B09T49TN\vaadar (80)) - Microsoft SQL Server Enterprise Manager

File Edit View Project Tools Window Help

Object Explorer

- Database Diagrams
- Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - Dimension.Customer
 - Dimension.Date
 - Fact.Orders
 - Columns
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - IX_CS_FactOrders (Non-Clustered, Columnstore)
 - PK_Orders (Clustered)
 - Statistics
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security

SQLQuery6.sql - LA...9T49TN\vaadar (80) x

```
1 USE KinetEcoDW;
2 GO
3
4 CREATE COLUMNSTORE INDEX IX_CS_FactOrders
5 ON Fact.Orders (OrderID, DateKey, CustomerKey, OrderTotal);
6 GO
```

100 %

Messages

```
Commands completed successfully.
Completion time: 2022-02-13T23:38:25.8024738-05:00
```

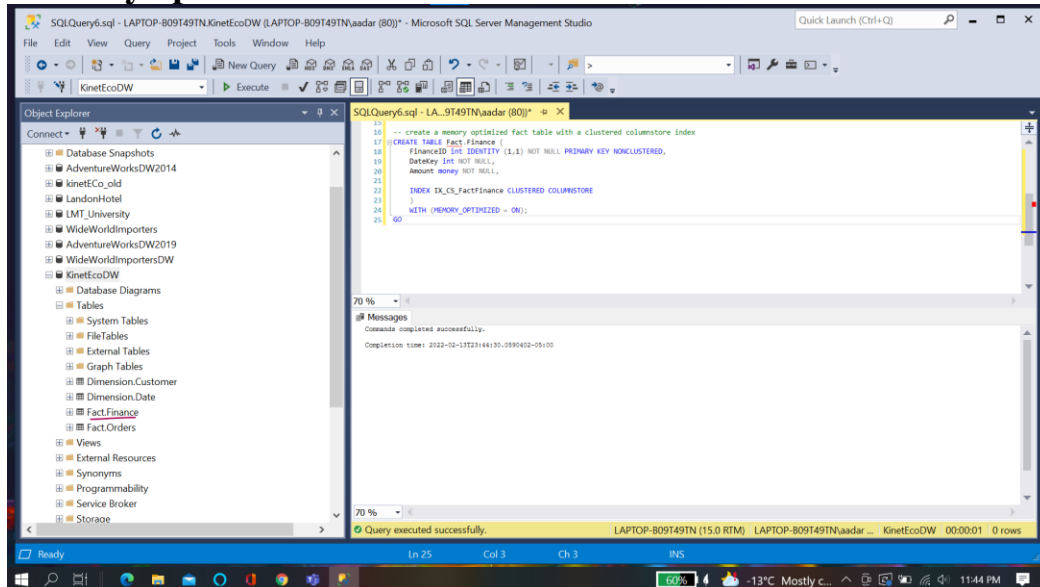
100 %

Query executed successfully. LAPTOP-B09T49TN (15.0 RTM) LAPTOP-B09T49TN\vaadar ... KinetEcoDW 00:00:00 0 rows

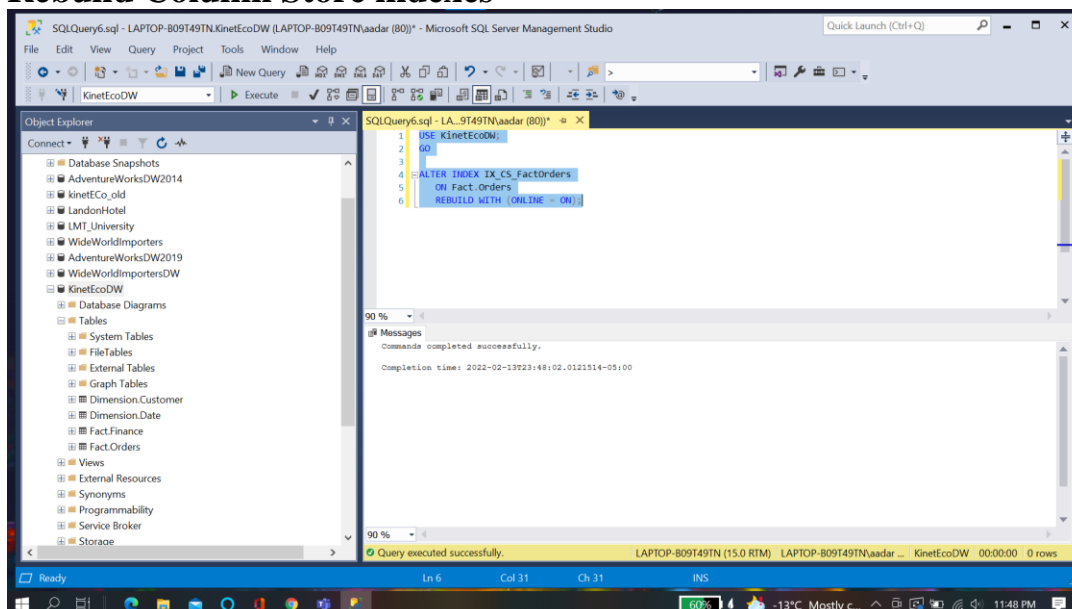
Ready

60% 13°C Mostly c... 11:39 PM

Memory optimized columnstore table



Rebuild Column Store indexes



Chapter quiz:

The screenshot shows a web browser window with the LinkedIn Learning interface. The page title is "Implementing a Data Warehouse SQL Server 2019 Chapter Quiz". The left sidebar contains a "Contents" list with the following items:

- 3. Columnstore Indexes
 - Advantages of columnstore indexes (3m 45s)
 - Memory-optimized columnstore table (3m 26s)
 - Rebuild columnstore indexes (3m 3s)
 - Chapter Quiz (4 questions)
- 4. Implement an Azure SQL Data Warehouse
 - Hosting a data warehouse in the cloud (3m 4s)
 - Create an Azure SQL Data Warehouse project

The main content area displays an illustration of a person sitting at a desk with a computer. Below the illustration, the text reads: "You answered 4 of 4 questions correctly. You successfully completed all questions in this quiz." At the bottom of the main area are two buttons: "Review all answers" and "Continue watching". The browser's address bar shows the URL: <https://www.linkedin.com/learning/implementing-a-data-warehouse-sql-server-2019/quiz/urn:li:learningApiAssessment:551494?autoAdv...>

Chapter 4 : Implementing an Azure SQL Data Warehouse Chapter Quiz:

The screenshot shows a web browser window with the LinkedIn Learning interface. The page title is "Implementing a Data Warehouse SQL Server 2019 Chapter Quiz". The left sidebar contains a "Contents" list with the following items:

- The Data Warehouse Migration Utility (4m 13s)
- Migrate a data warehouse to Azure (3m 30s)
- Pause and remove an Azure data warehouse (1m 46s)
- Chapter Quiz (6 questions)
- 5. Extract, Transform, and Load (ETL)
 - What is ETL and SQL Server Integration Services (SSIS)? (2m 56s)
 - Understand data flow (3m 12s)

The main content area displays an illustration of a person sitting at a desk with a computer. Below the illustration, the text reads: "You answered 6 of 6 questions correctly. You successfully completed all questions in this quiz." At the bottom of the main area are two buttons: "Review all answers" and "Continue watching". The browser's address bar shows the URL: <https://www.linkedin.com/learning/implementing-a-data-warehouse-sql-server-2019/quiz/urn:li:learningApiAssessment:549629?autoAdv...>

Chapter 5: Extract Transform and Load

Chapter quiz:

The screenshot shows a web browser window displaying a LinkedIn Learning page. The page title is "Implementing a Data Warehouse SQL Server 2019 Chapter Quiz". The left sidebar shows a list of chapters, with "Chapter Quiz" selected. The main content area shows a congratulatory message: "You answered 3 of 3 questions correctly. You successfully completed all questions in this quiz." Below the message are two buttons: "Review all answers" and "Continue watching".

Contents:

- What is ETL and SQL Server Integration Services (SSIS)? 2m 56s
- Understand data flow 3m 12s
- Establish control flow 1m 54s
- Chapter Quiz 3 questions
- 6. Enforce Data Quality
 - SQL Server Data Quality Services (DQS) 3m 59s
 - Cleanse data with DQS 6m 48s

Implementing a Data Warehouse SQL Server 2019 Chapter Quiz

You answered 3 of 3 questions correctly.
You successfully completed all questions in this quiz.

[Review all answers](#) [Continue watching](#)

Chapter 6: Enforce Data Quality

SQL Server Data Quality Services(DQS)

The screenshot shows the SQL Server 2019 Setup window. The "Complete" tab is selected, indicating that the installation of Data Quality Services (DQS) has been successful. The "Global Rules" section on the left lists various features, with "Data Quality Services" and "Data Quality Client" both marked as "Succeeded". The "Details" section shows "Install successful." and provides the location of the summary log file.

SQL Server 2019 Setup

Complete

Your SQL Server 2019 installation completed successfully with product updates.

Global Rules

- Microsoft Update
- Product Updates
- Install Setup Files
- Install Rules
- Installation Type
- Feature Selection
- Feature Rules
- Feature Configuration Rules
- Ready to Install
- Installation Progress
- Complete**

Information about the Setup operation or possible next steps:

Feature	Status
Data Quality Services	Succeeded
Data Quality Client	Succeeded

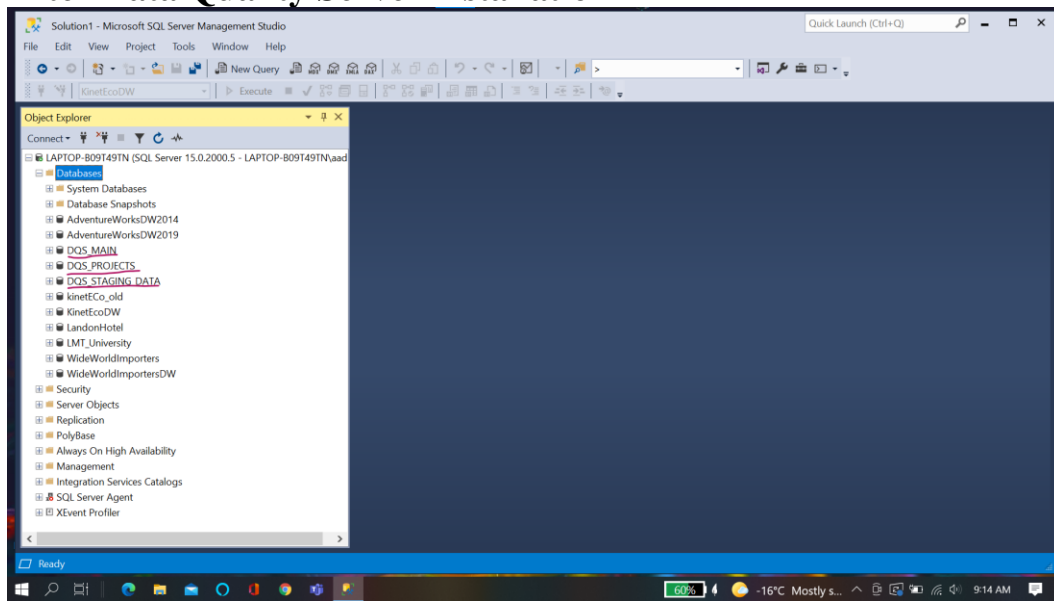
Details:

Install successful.

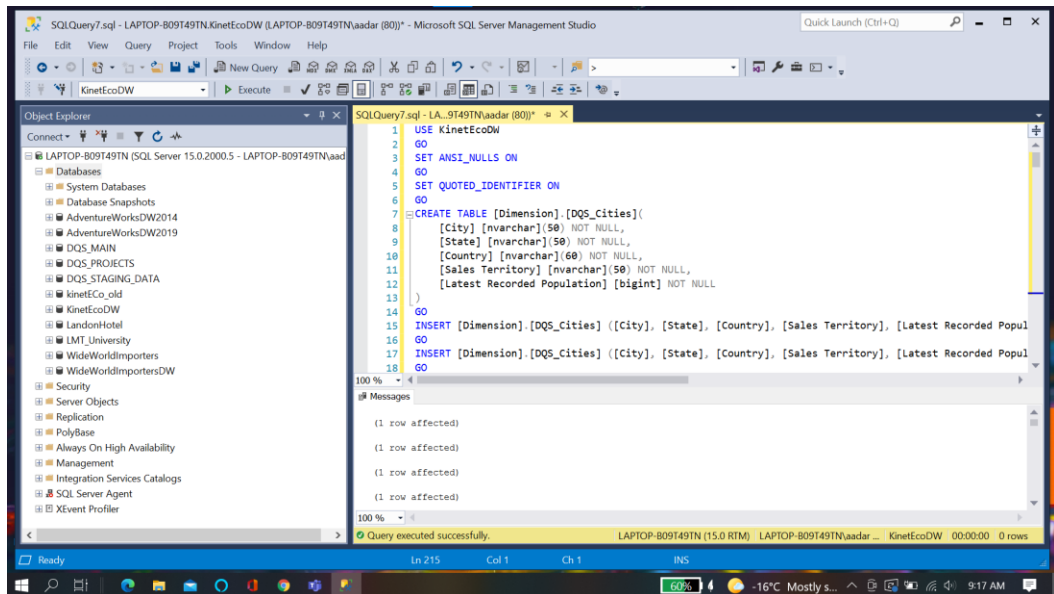
Summary log file has been saved to the following location:
C:\Program Files\Microsoft SQL Server\150\Setup Bootstrap\Log\20220214_090315\Summary_LAPTOP-8091497N_20220214_090315.txt

[Close](#)

After Data Quality Server installation



Insert Data into DW



Data Cleaning

SQL Server Data Quality Services

Hello, LAPTOP-809T49TN\vaadar (localhost) | Sign Out

Data Quality Project

Map > Cleanse > Manage and View results > Export

Knowledge Base: DQS Data Data Quality Project: DQS_KinetEco_Cities Activity: Cleansing

Perform interactive data cleansing

Domain No. of values

US - State 34

US - State

Suggested (0) New (0) Invalid (0) **Corrected (4)** Correct (30)

Search Value:

Value	# Records	Correct to	Confidence	Reason	Approve	Reject
North Carolin	1	North Carolina	84%	DQS cleansing	<input checked="" type="radio"/>	<input type="radio"/>
Massachusetts[E]	1	Massachusetts	79%	DQS cleansing	<input checked="" type="radio"/>	<input type="radio"/>
California	1	California	100%	Modified by user	<input checked="" type="radio"/>	<input type="radio"/>
Phoenix	1	Phoenix	100%	Modified by user	<input checked="" type="radio"/>	<input type="radio"/>

Records containing the value:

Correct to	Confidence	Reason	Approve	Reject	State	City	Count
------------	------------	--------	---------	--------	-------	------	-------

Cancel Close < Back Next > Finish

Cleaned Data:

SQLQuery8.sql - LAPTOP-809T49TN\KinetEcoDW (LAPTOP-809T49TN\vaadar (105)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Connect+ KinetEcoDW Execute [Icons]

Object Explorer

- DQS_MAIN
- DQS_PROJECTS
- DQS_STAGING_DATA
- KinetEco_old
- KinetEcoDW
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - dbo.CleanedCities
 - Dimension.Customer
 - Dimension.Date
 - Dimension.DQS_Cities
 - Fact.Finance
 - Fact.Orders
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
 - LandOnHotel

SQLQuery8.sql - LA...T49TN\vaadar (105) X

```
1 /***** Script for SelectTopNRows command from SSMS *****/
2
3 SELECT TOP (1000) [City_Output]
4      ,[State_Source]
5      ,[State_Output]
6      ,[State_Reason]
7      ,[State_Confidence]
8      ,[State_Status]
9      ,[Country_Output]
10     ,[Sales_Territory_Output]
11     ,[Latest_Recorded_Population_Output]
12     ,[Record_Status]
FROM [KinetEcoDW].[dbo].[CleanedCities]
```

100 % Results Messages

	City_Output	State_Source	State_Output	State_Reason	State_Confidence	State_Status	Country_Output	Sales_Territory_Output	Latest_Recorded
5	Phoenix	Arizona	Arizona	Domain value		Correct	United States	Southwest	1445632
6	SanAntonio	Texas	Texas	Domain value		Correct	United States	Southwest	1327407
7	Dallas	Texas	Texas	Domain value		Correct	United States	Southwest	1197816
8	Jacksonville	Florida	Florida	Domain value		Correct	United States	Southeast	821784
9	San Francisco	California	California	Domain value		Correct	United States	Far West	805235
10	Columbus	Ohio	Ohio	Domain value		Correct	United States	Great Lakes	787033
11	Charlotte	North Carolin	North Carolina	DQS cleansing	0.8387097	Corrected	United States	Southeast	731424
12	El Paso	Texas	Texas	Domain value		Correct	United States	Southwest	649121
13	Baltimore	Maryland	Maryland	Domain value		Correct	United States	Mideast	620961
14	Seattle	Washington	Washington	Domain value		Correct	United States	Far West	608860
15	Minneapolis	Tennessee	Tennessee	Domain value		Correct	United States	Southwest	601722

Query executed successfully. LAPTOP-809T49TN (15.0 RTM) LAPTOP-809T49TN\vaadar ... KinetEcoDW 00:00:00 100 rows

Ready ln 1 Col 1 Ch 1 INS

Custom Knowledge Base:

SQL Server Data Quality Services

Hello, LAPTOP-B09T49TN\aadar (localhost) | Sign Out

Knowledge Base Management

Map Discover Manage Domain Values

Manage discovered domain values, review discovery results and modify as needed

Domain New Values

SupplierName 16

SupplierName

Find: Filter: All Values ☐ Show Only New

Statistics (All Values 16) Correct: 13 Errors: 2 Invalid: 1

Value	Frequency	Type	Correct to
A Datum Corporation	2	✓	
Consolidated Messenger	3	✓	
Contoso, Ltd.	2	✓	
Contoso	0	✗	Contoso, Ltd.
Contoso Limited	0	✗	Contoso, Ltd.
Fabrikam, Inc.	2	✓	
Graphic Design Institute	2	✓	
Humongous Insurance	2	✓	
Litware, Inc.	2	✓	
Lucerne Publishing	2	✓	

Cancel Close Back Next Finish

Chapter quiz:


2022W-T2_BDM 1034_01: Impl... Chapter Quiz: Implementing a D... 2022W-T2_BDM 1034_01: Micro... ROUGH COPY@2022 - Google D...

linkedin.com/learning/implementing-a-data-warehouse-sql-server-2019/quiz/um... Search for skills, subjects or software

Home My Learning Notifications Me EN

Implementing a Data Warehouse SQL Server 2019 Chapter Quiz

1,942 13,338



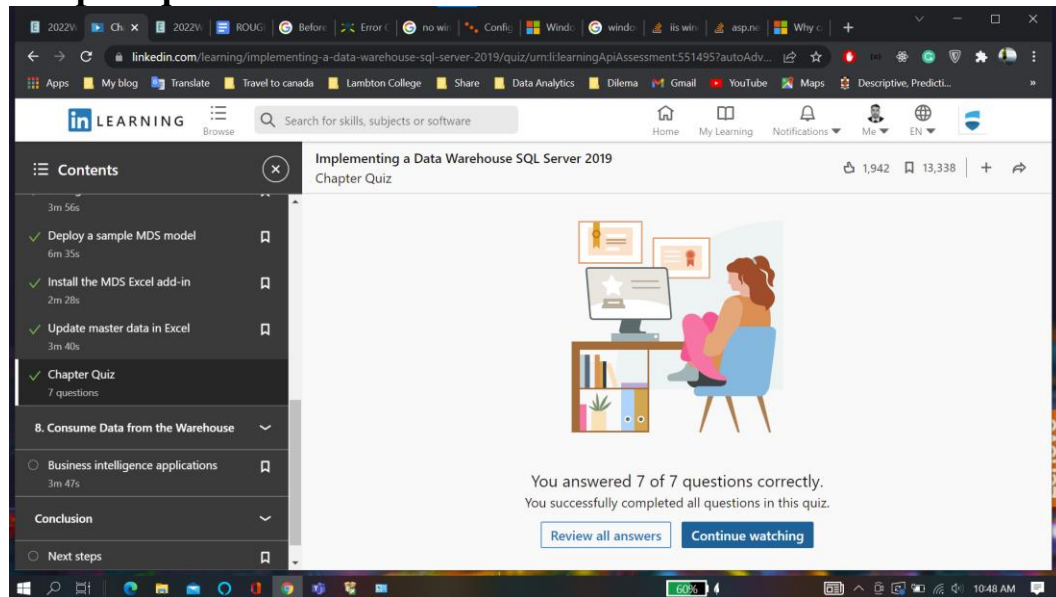
You answered 3 of 3 questions correctly.
You successfully completed all questions in this quiz.

Review all answers Continue watching

- SQL Server Data Quality Services (DQS) 3m 59s
- Cleanse data with DQS 6m 48s
- Create a custom knowledge base 6m 46s
- Chapter Quiz 3 questions
- 7. Master Data Services
 - Introduction to Master Data Services (MDS) 1m 58s
 - Install MDS and IIS 4m 31s

Chapter 7: Master Data services

Chapter quiz:



Course Completion:

