Nimish Birla

Batch-2

Emp ID- 655069

Power BI Hands-on Assessment

Scenario: Sales Performance Analysis with Power BI In this scenario, let's imagine you work for a retail company, and you've been tasked with analyzing the sales performance of your products and stores using Power BI. You have multiple data sources and tables to work with, and your goal is to provide actionable insights to improve sales strategies.

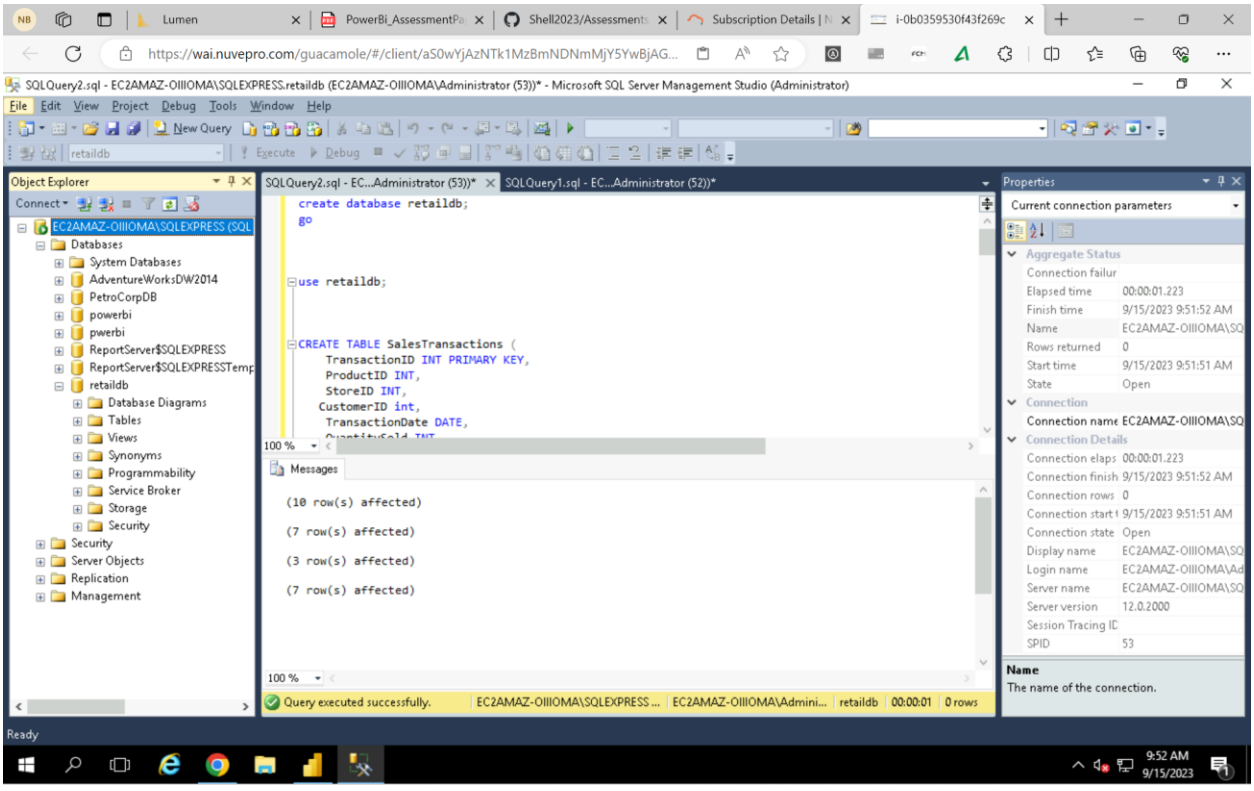
Data Sources:

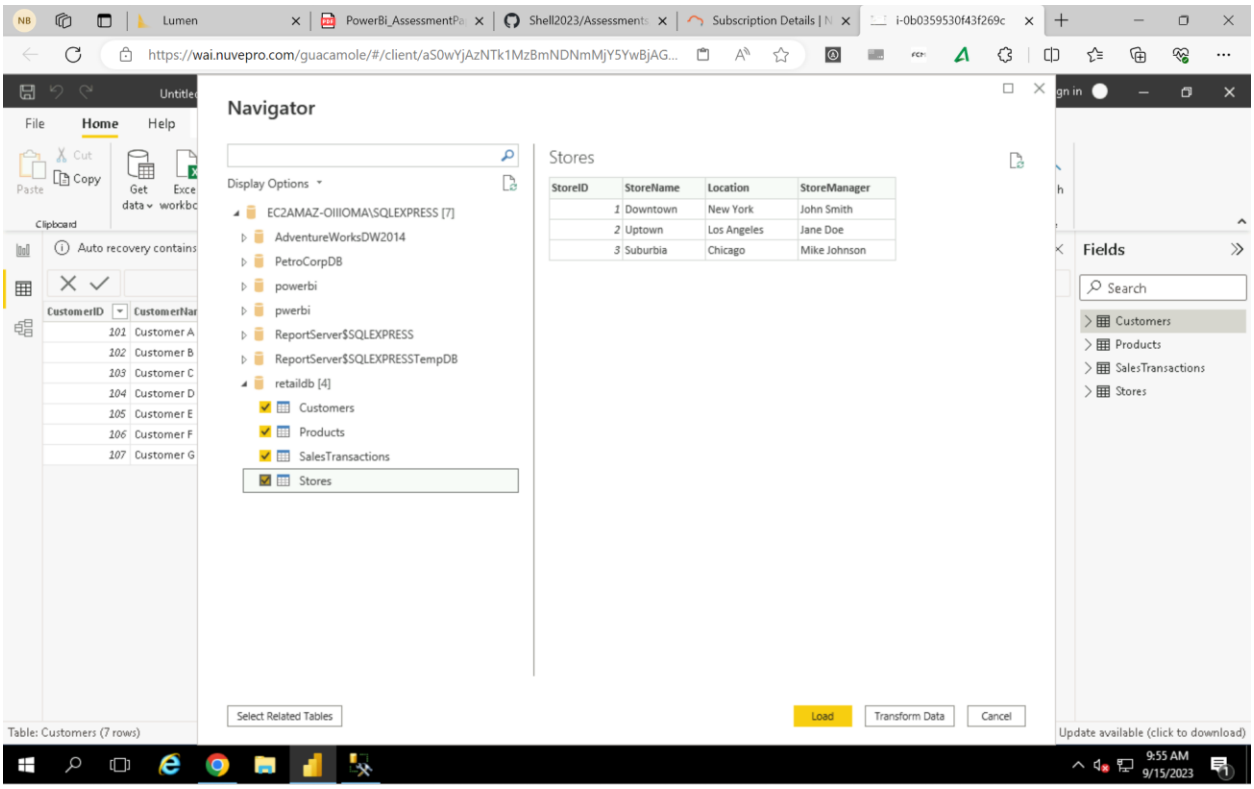
• Sales Transactions Data: Contains information about each sale, including product ID, store ID, date, quantity sold, and revenue generated.

• Product Data: Includes details about each product, such as product ID, name, category, and price.

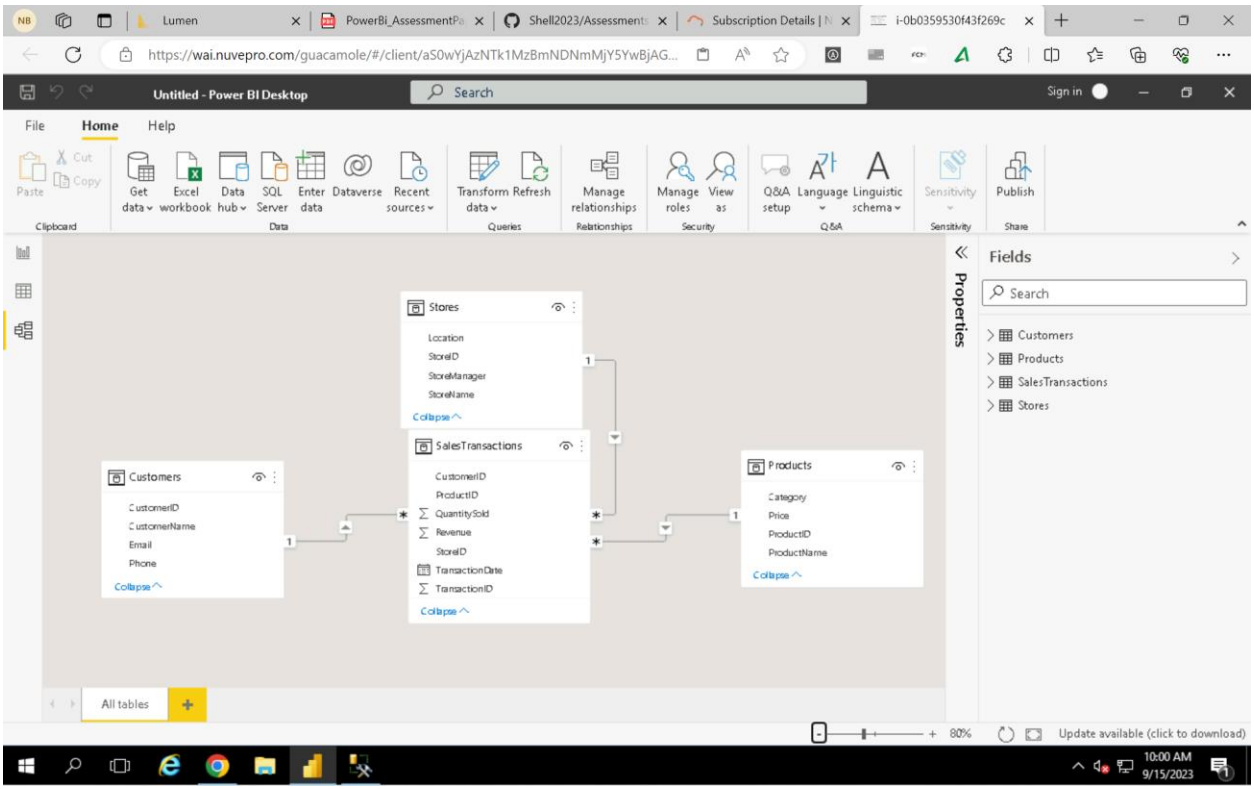
• Store Data: Provides information about the stores, including store ID, location, and store manager.

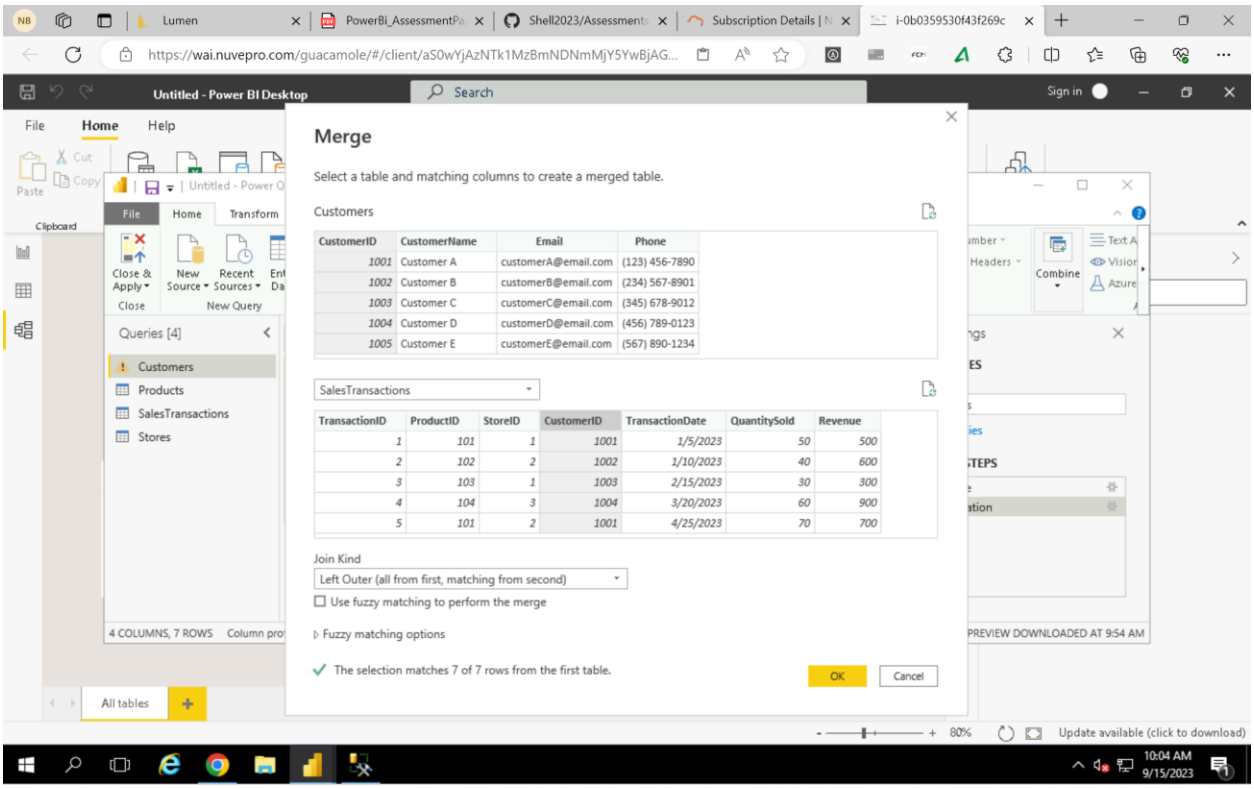
Requirement 1: Data Loading

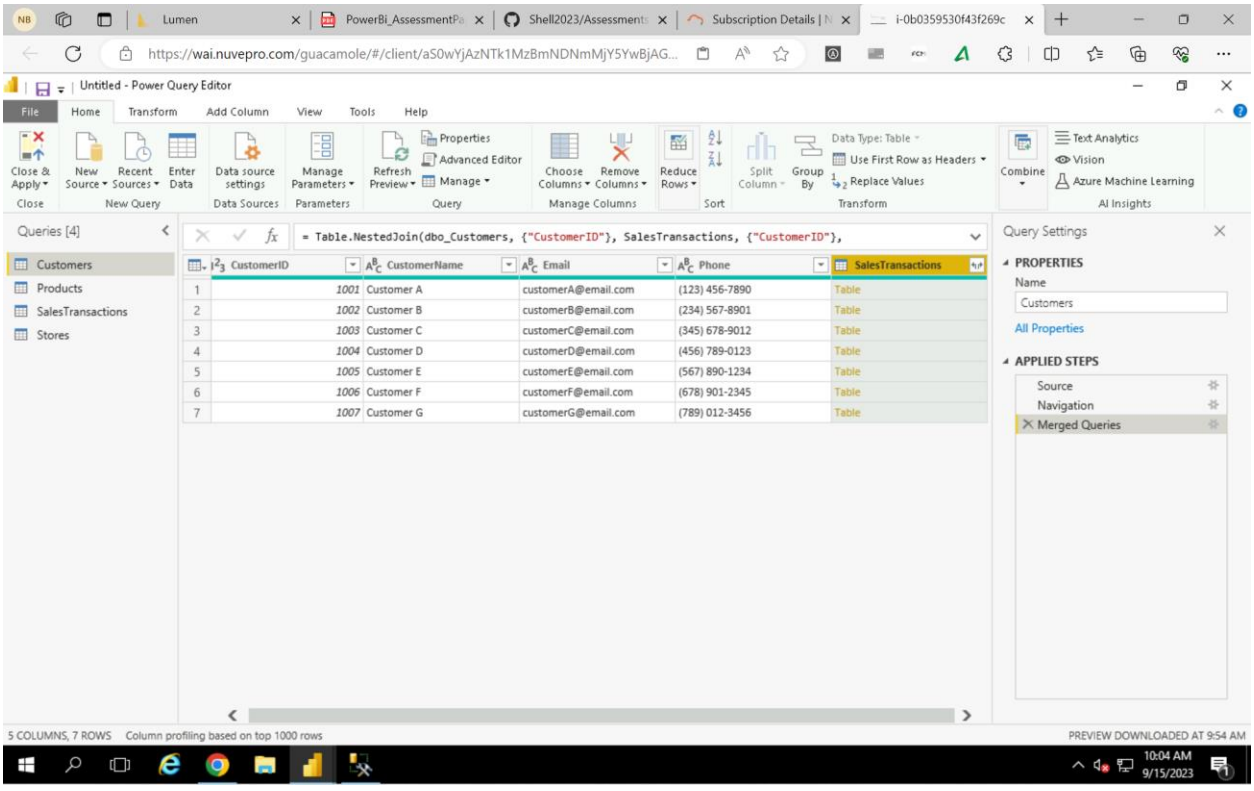


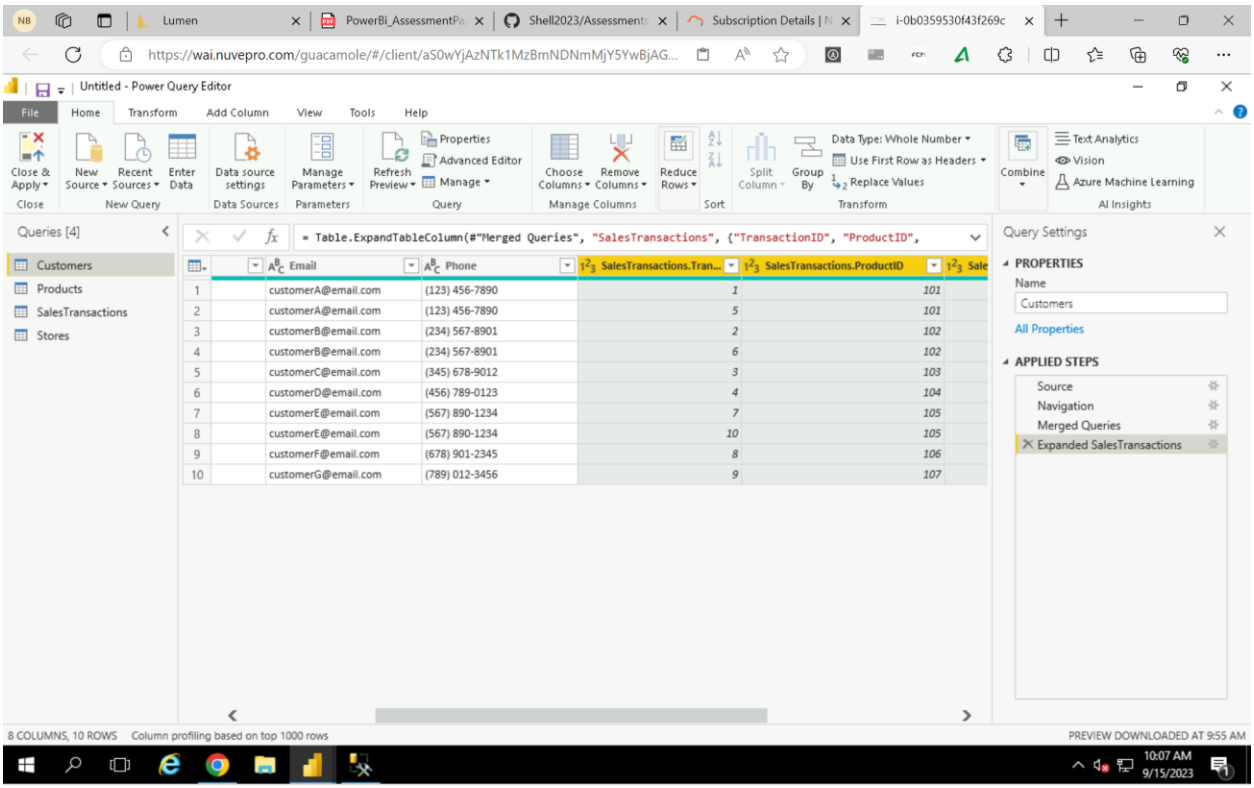


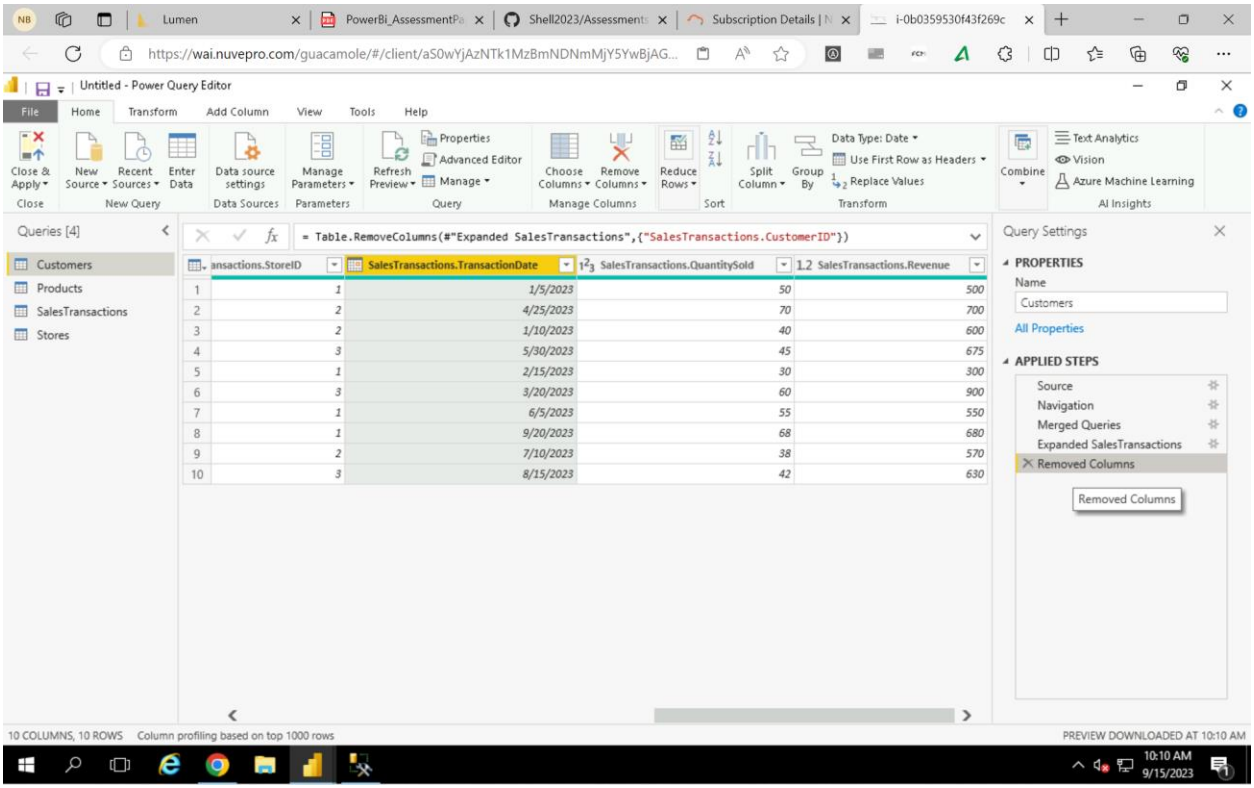
Requirement 2: Data Transformation

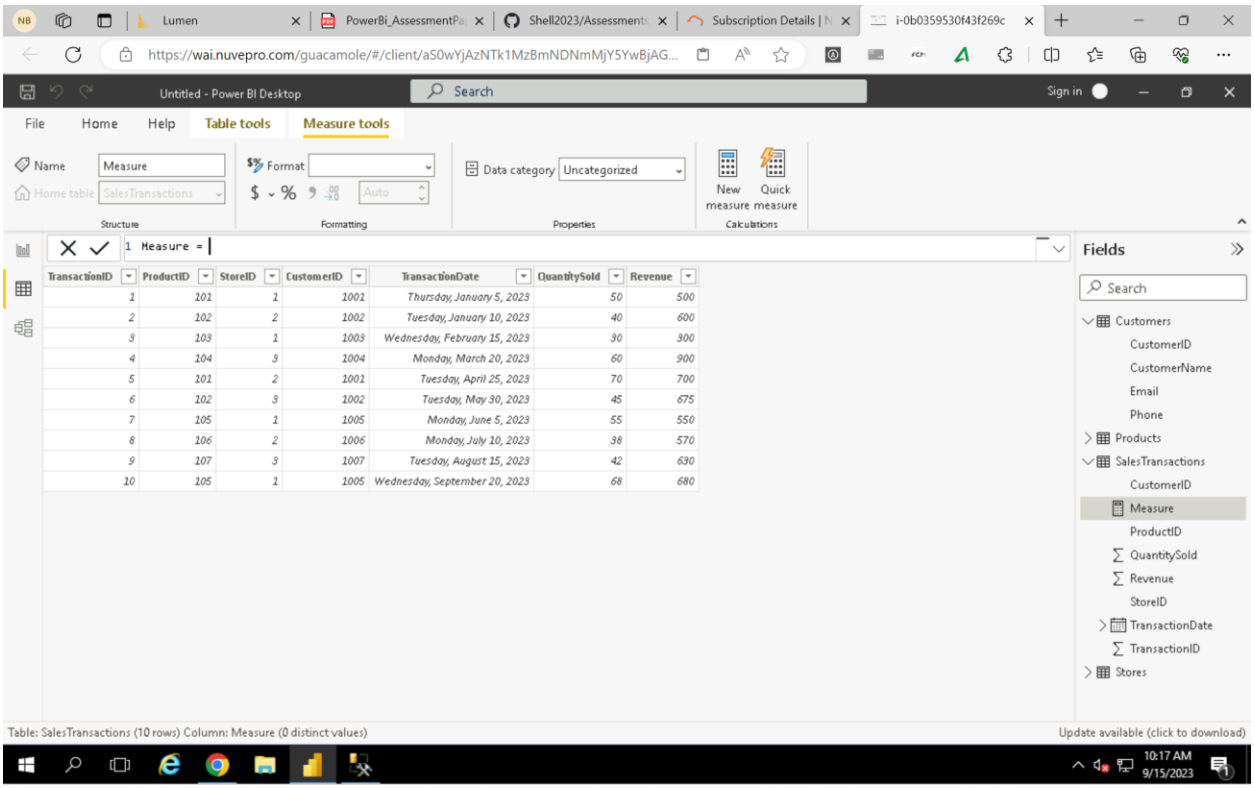


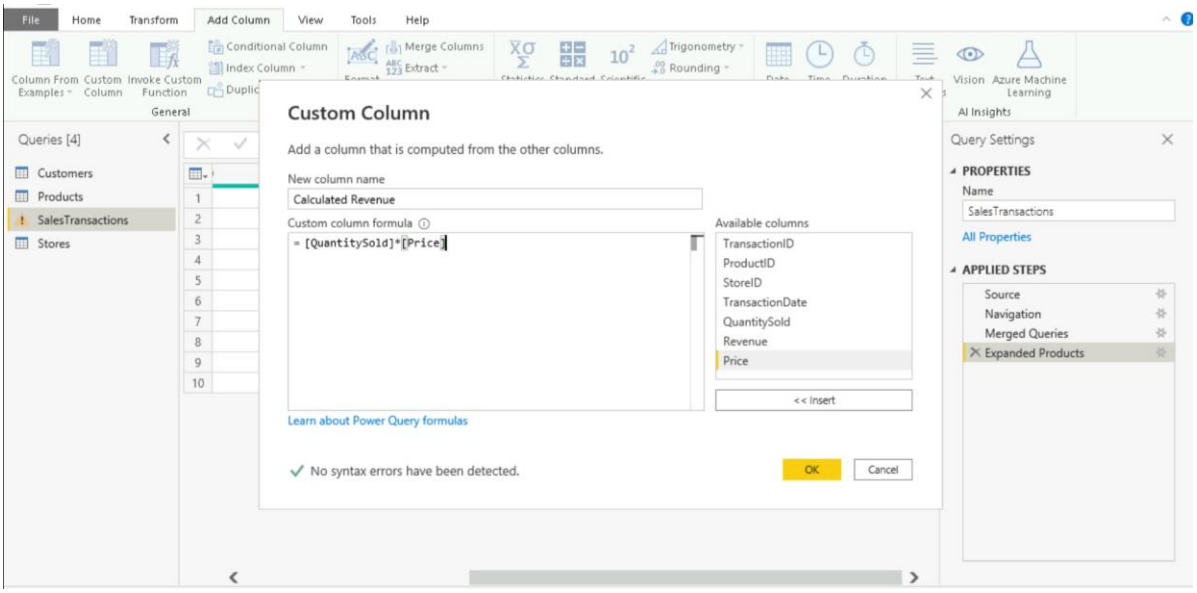

Untitled - Power BI Desktop
Merge
Select a table and matching columns to create a merged table.
Customers
CustomerID | CustomerName | Email | Phone
1001 | Customer A | customerA@email.com | (123) 456-7890
1002 | Customer B | customerB@email.com | (234) 567-8901
1003 | Customer C | customerC@email.com | (345) 678-9012
1004 | Customer D | customerD@email.com | (456) 789-0123
1005 | Customer E | customerE@email.com | (567) 890-1234
SalesTransactions
TransactionID | ProductID | StoreID | CustomerID | TransactionDate | QuantitySold | Revenue
1 | 101 | 1 | 1001 | 1/5/2023 | 50 | 500
2 | 102 | 2 | 1002 | 1/10/2023 | 40 | 600
3 | 103 | 1 | 1003 | 2/15/2023 | 30 | 300
4 | 104 | 3 | 1004 | 3/20/2023 | 60 | 900
5 | 101 | 2 | 1001 | 4/25/2023 | 70 | 700
Join Kind
Left Outer (all from first, matching from second)
Use fuzzy matching to perform the merge
Fuzzy matching options
The selection matches 7 of 7 rows from the first table.
OK
Cancel
Queries [4]
Customers
Products
SalesTransactions
Stores
4 COLUMNS, 7 ROWS
All tables

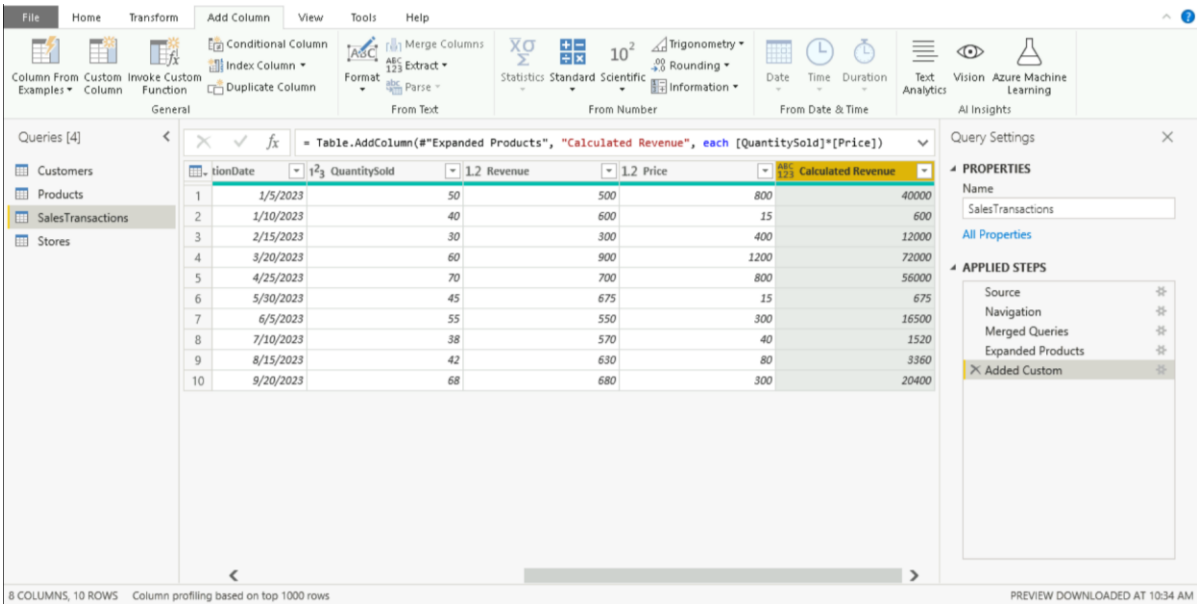

Untitled - Power Query Editor
= Table.NestedJoin(dbo_Customers, {"CustomerID"}, SalesTransactions, {"CustomerID"},
CustomerID | CustomerName | Email | Phone | SalesTransactions
1 | 1001 | Customer A | customerA@email.com | (123) 456-7890 | Table
2 | 1002 | Customer B | customerB@email.com | (234) 567-8901 | Table
3 | 1003 | Customer C | customerC@email.com | (345) 678-9012 | Table
4 | 1004 | Customer D | customerD@email.com | (456) 789-0123 | Table
5 | 1005 | Customer E | customerE@email.com | (567) 890-1234 | Table
6 | 1006 | Customer F | customerF@email.com | (678) 901-2345 | Table
7 | 1007 | Customer G | customerG@email.com | (789) 012-3456 | Table
Queries [4]
Customers
Products
SalesTransactions
Stores
Query Settings
PROPERTIES
Name
Customers
All Properties
APPLIED STEPS
Source
Navigation
Merged Queries
5 COLUMNS, 7 ROWS
Column profiling based on top 1000 rows
PREVIEW DOWNLOADED AT 9:54 AM


Untitled - Power Query Editor
= Table.ExpandTableColumn(#"Merged Queries", "SalesTransactions", {"TransactionID", "ProductID",
Queries [4]
Customers
Products
SalesTransactions
Stores
Email
Phone
SalesTransactions.Tran...
SalesTransactions.ProductID
1 customerA@email.com (123) 456-7890 1 101
2 customerA@email.com (123) 456-7890 5 101
3 customerB@email.com (234) 567-8901 2 102
4 customerB@email.com (234) 567-8901 6 102
5 customerC@email.com (345) 678-9012 3 103
6 customerD@email.com (456) 789-0123 4 104
7 customerE@email.com (567) 890-1234 7 105
8 customerE@email.com (567) 890-1234 10 105
9 customerF@email.com (678) 901-2345 8 106
10 customerG@email.com (789) 012-3456 9 107
Query Settings
PROPERTIES
Name
Customers
All Properties
APPLIED STEPS
Source
Navigation
Merged Queries
Expanded SalesTransactions
8 COLUMNS, 10 ROWS
Column profiling based on top 1000 rows
PREVIEW DOWNLOADED AT 9:55 AM
10:07 AM
9/15/2023

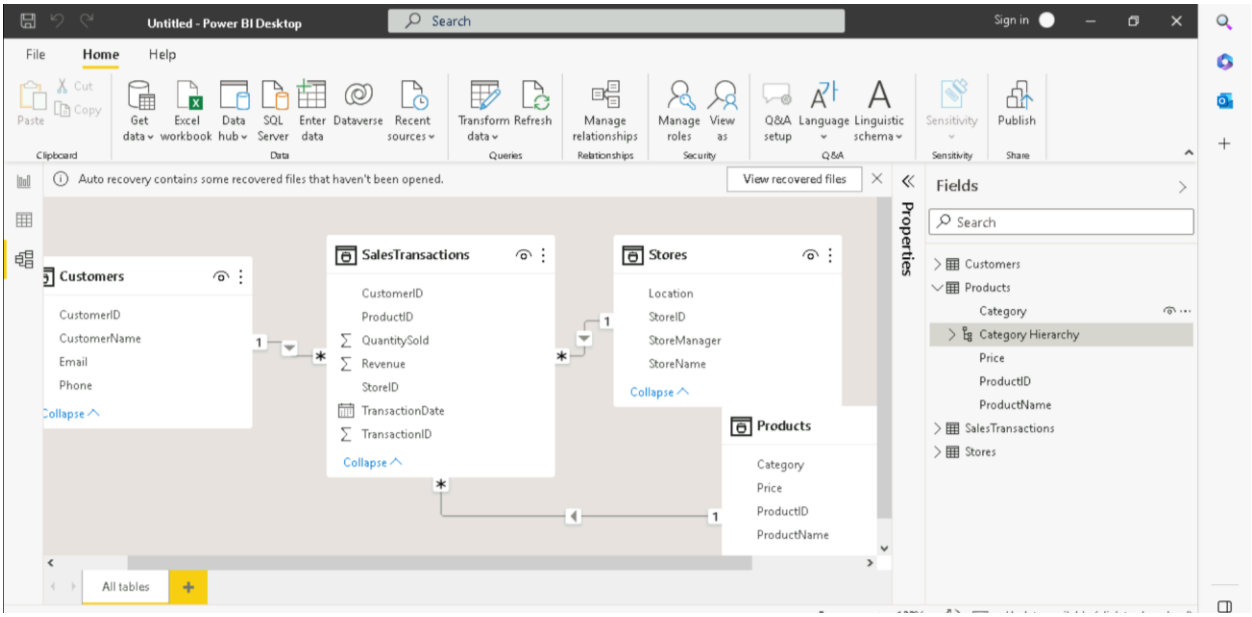

Untitled - Power Query Editor
= Table.RemoveColumns(#"Expanded SalesTransactions",{"SalesTransactions.CustomerID"})
Queries [4]
Customers
Products
SalesTransactions
Stores
ansactions.StoreID
SalesTransactions.TransactionDate
SalesTransactions.QuantitySold
SalesTransactions.Revenue
1 1 1/5/2023 50 500
2 2 4/25/2023 70 700
3 2 1/10/2023 40 600
4 3 5/30/2023 45 675
5 1 2/15/2023 30 300
6 3 3/20/2023 60 900
7 1 6/5/2023 55 550
8 1 9/20/2023 68 680
9 2 7/10/2023 38 570
10 3 8/15/2023 42 630
Query Settings
PROPERTIES
Name
Customers
All Properties
APPLIED STEPS
Source
Navigation
Merged Queries
Expanded SalesTransactions
Removed Columns
Removed Columns
10 COLUMNS, 10 ROWS
Column profiling based on top 1000 rows
PREVIEW DOWNLOADED AT 10:10 AM
10:10 AM
9/15/2023

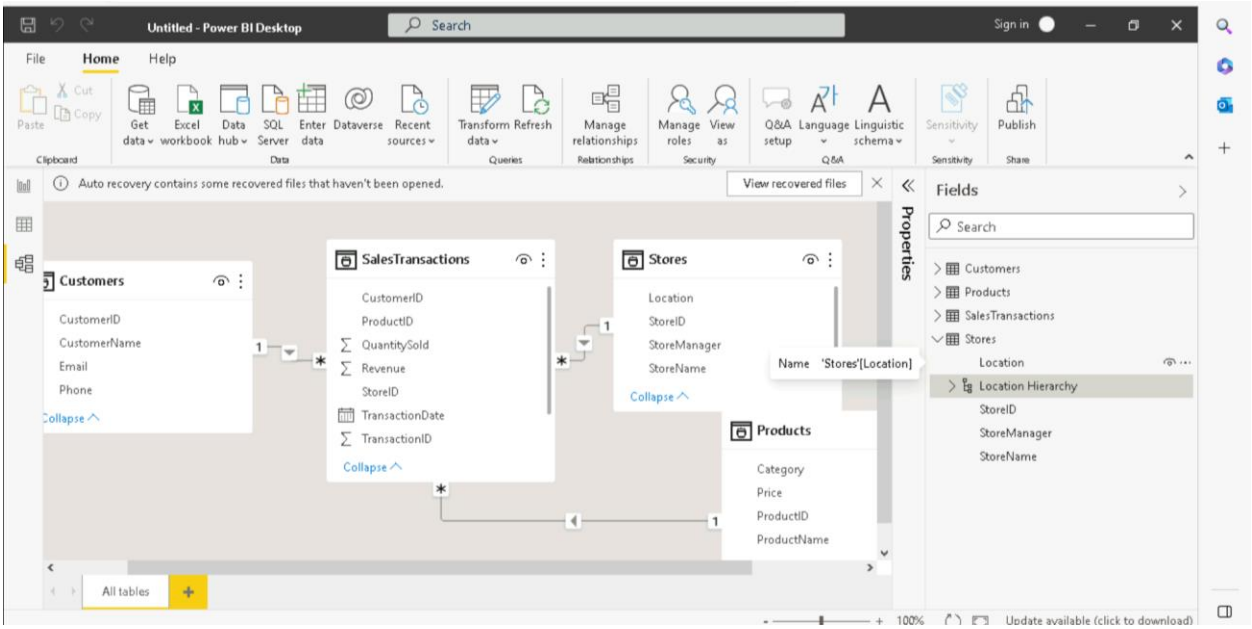

Lumen
PowerBi_AssessmentPa
Shell2023/Assessments
Subscription Details | N
i-0b0359530f43f269c
https://wai.nuvepro.com/guacamole/#/client/aS0wYjAzNTk1MzBmNDNmMjY5YwBjAG...
Untitled - Power BI Desktop
Search
Sign in
File
Home
Help
Table tools
Measure tools
Name
Measure
Home table
SalesTransactions
Structure
Format
Auto
Formatting
Data category
Uncategorized
Properties
New measure
Quick measure
Calculations
1 Measure =
TransactionID
ProductID
StoreID
CustomerID
TransactionDate
QuantitySold
Revenue
1 101 1 1001 Thursday, January 5, 2023 50 500
2 102 2 1002 Tuesday, January 10, 2023 40 600
3 103 1 1003 Wednesday, February 15, 2023 30 300
4 104 3 1004 Monday, March 20, 2023 60 900
5 101 2 1001 Tuesday, April 25, 2023 70 700
6 102 3 1002 Tuesday, May 30, 2023 45 675
7 105 1 1005 Monday, June 5, 2023 55 550
8 106 2 1006 Monday, July 10, 2023 38 570
9 107 3 1007 Tuesday, August 15, 2023 42 630
10 105 1 1005 Wednesday, September 20, 2023 68 680
Fields
Search
Customers
CustomerID
CustomerName
Email
Phone
Products
SalesTransactions
CustomerID
Measure
ProductID
QuantitySold
Revenue
StoreID
TransactionDate
TransactionID
Stores
Table: SalesTransactions (10 rows) Column: Measure (0 distinct values)
Update available (click to download)
10:17 AM
9/15/2023


File
Home
Transform
Add Column
View
Tools
Help
Column From Examples
Custom Column
Invoke Custom Function
Conditional Column
Index Column
Merge Columns
Extract
Trigonometry
Rounding
General
Vision
Azure Machine Learning
AI Insights
Queries [4]
Customers
Products
SalesTransactions
Stores
Custom Column
Add a column that is computed from the other columns.
New column name
Calculated Revenue
Custom column formula
= [QuantitySold]*[Price]
Available columns
TransactionID
ProductID
StoreID
TransactionDate
QuantitySold
Revenue
Price
<< Insert
Learn about Power Query formulas
No syntax errors have been detected.
OK
Cancel
Query Settings
PROPERTIES
Name
SalesTransactions
All Properties
APPLIED STEPS
Source
Navigation
Merged Queries
Expanded Products

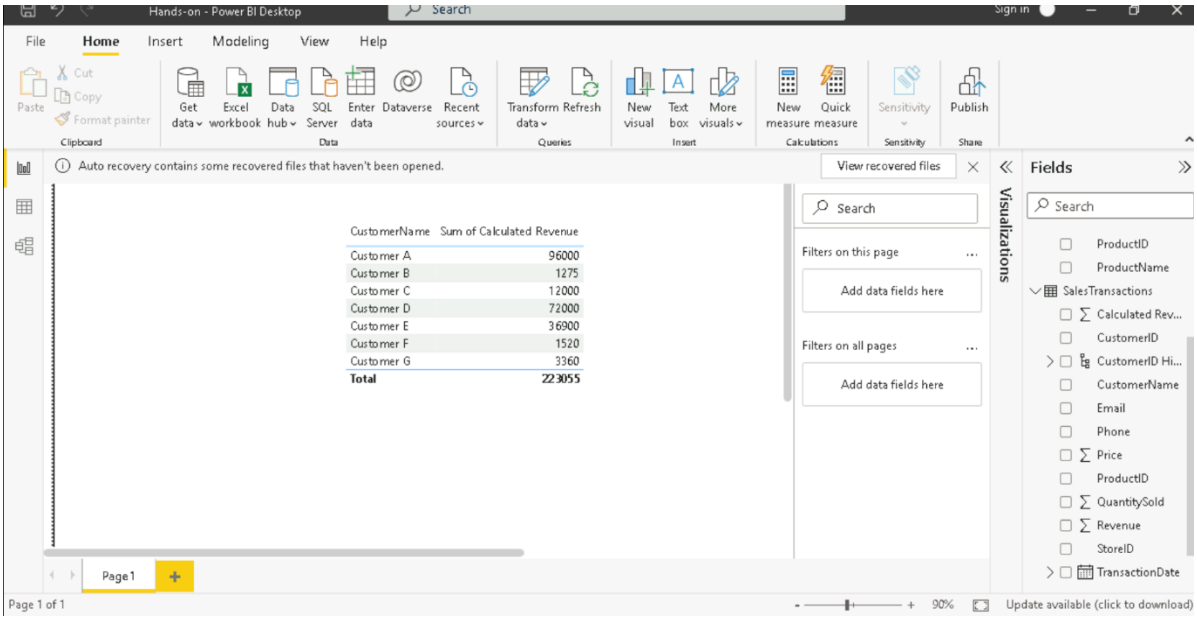


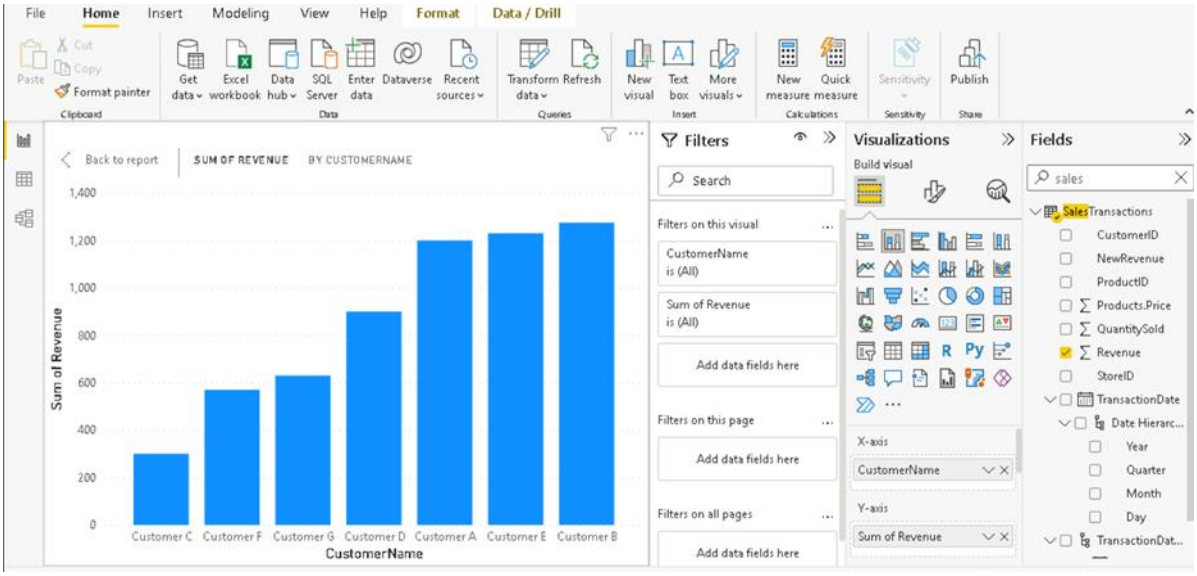
Requirement 3: Data Modelling

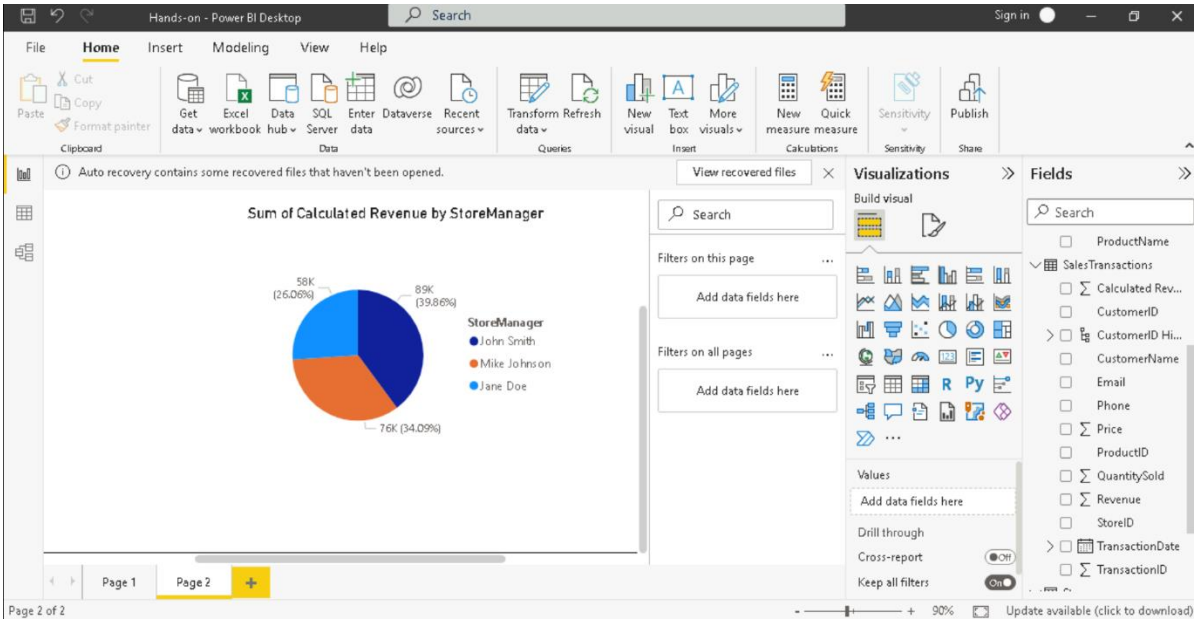


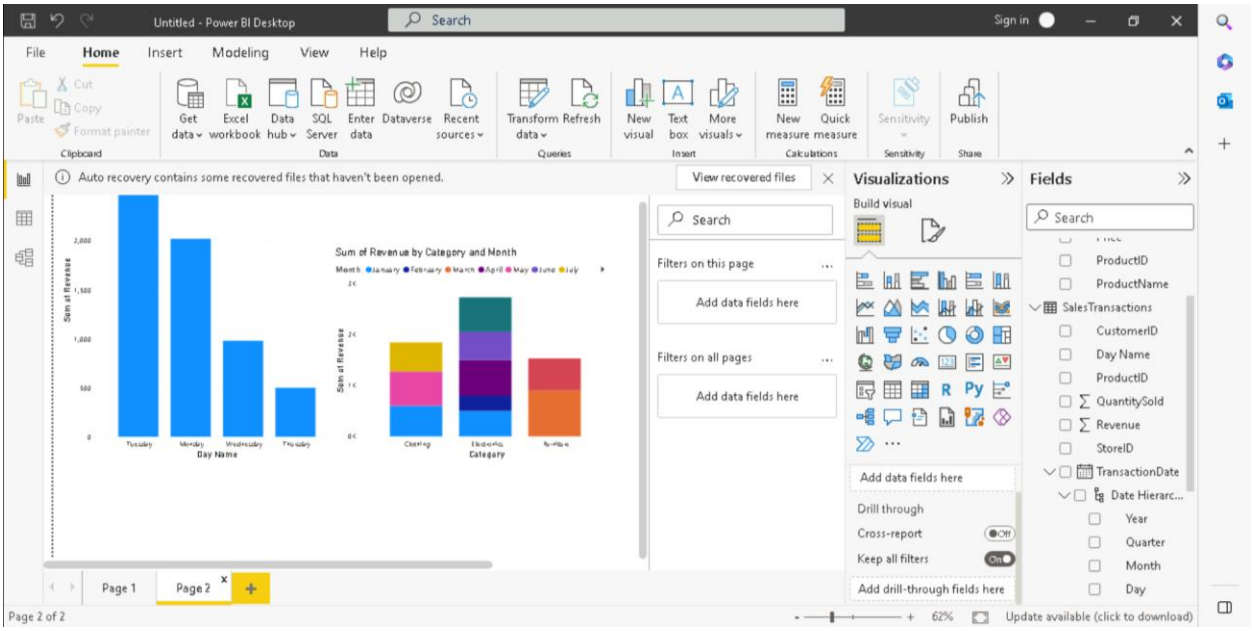


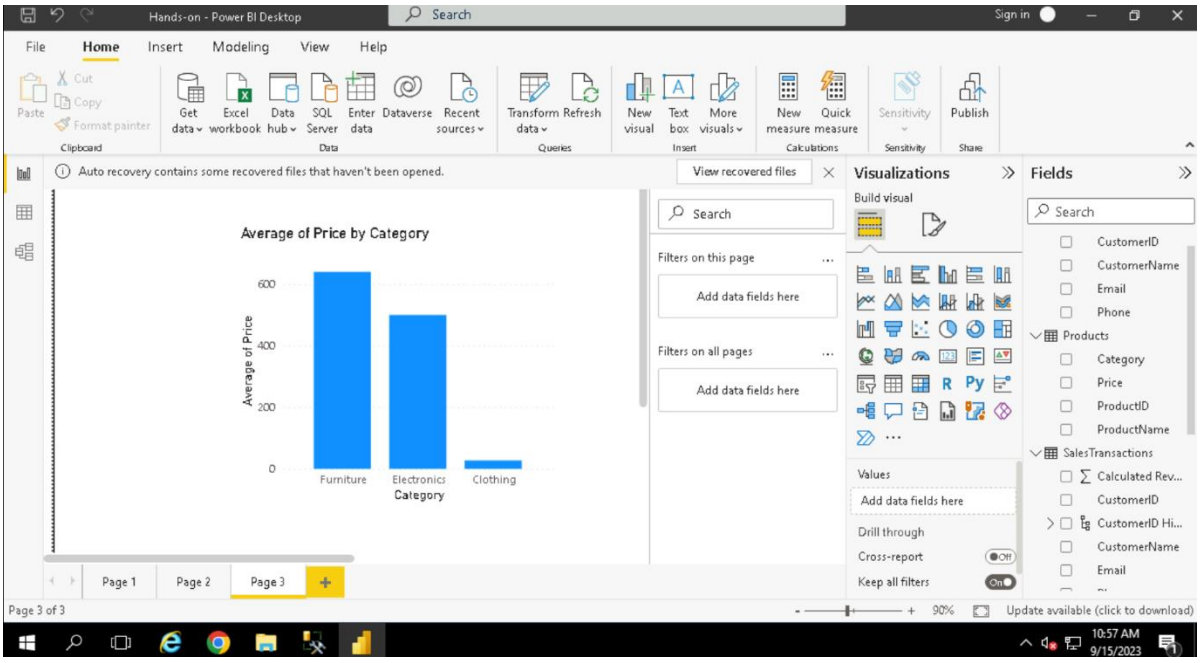
Requirement 4: Business Queries and Analysis

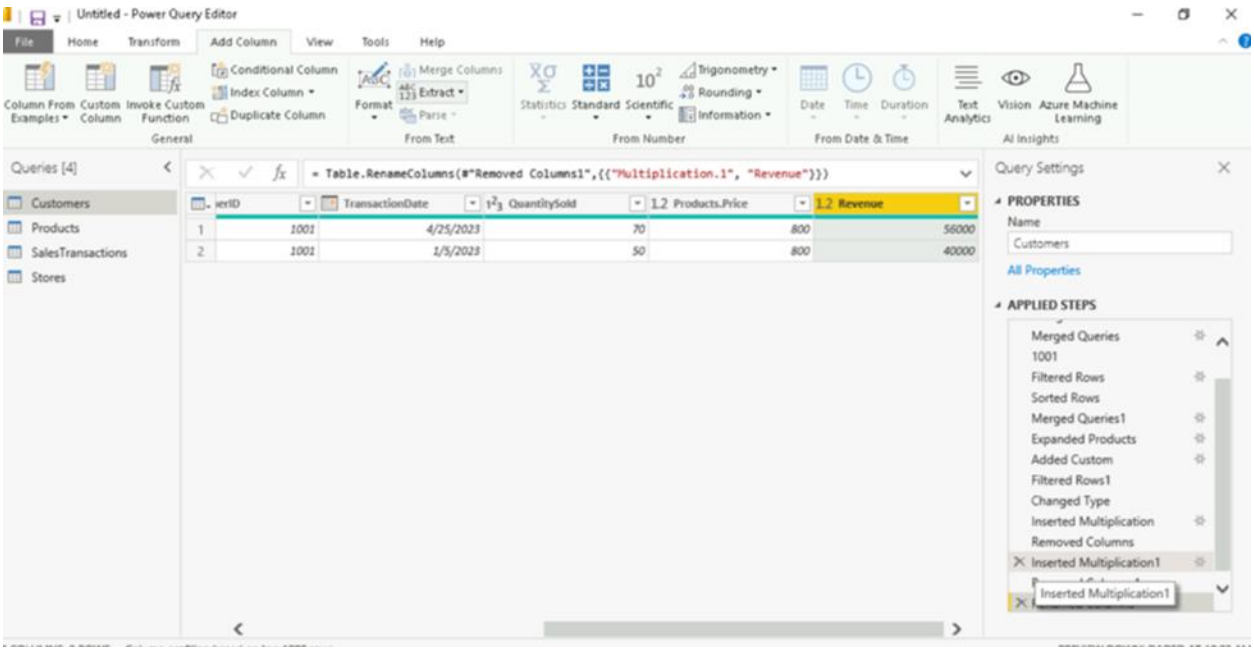


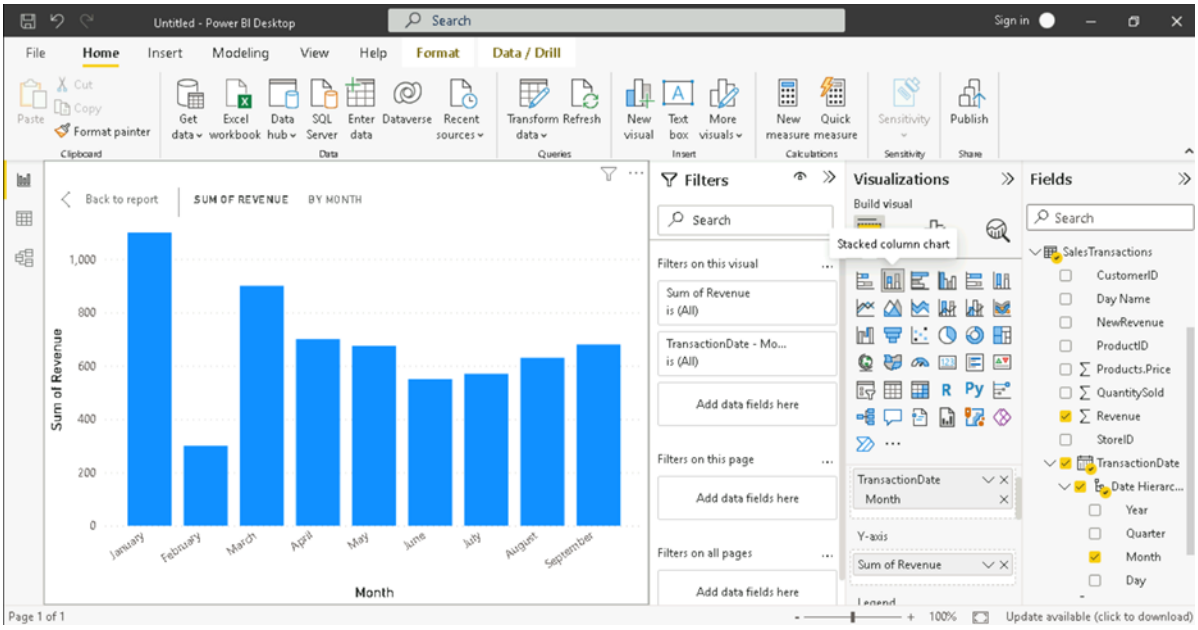
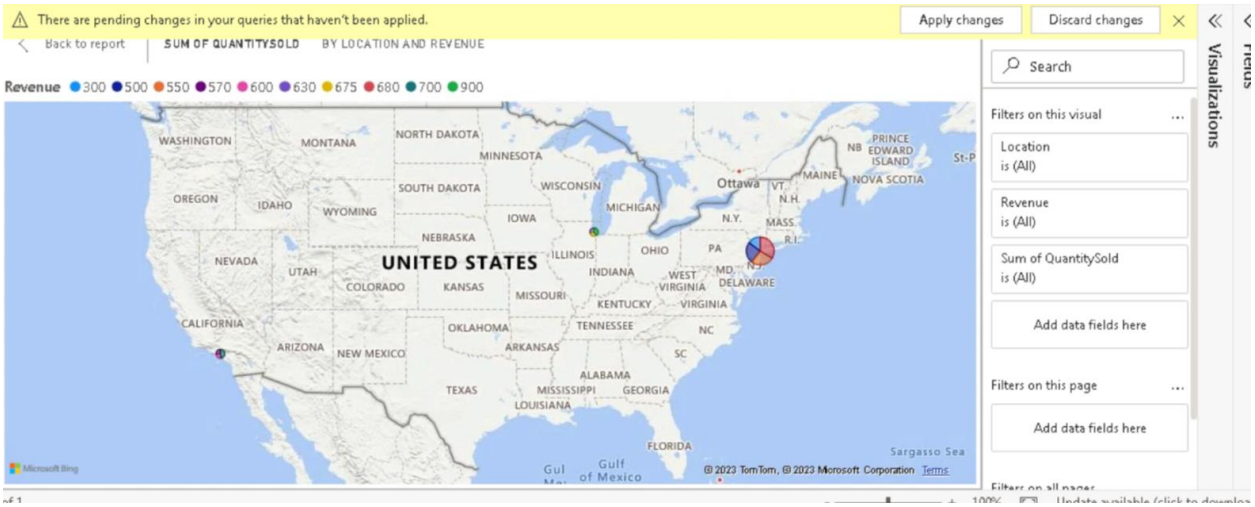
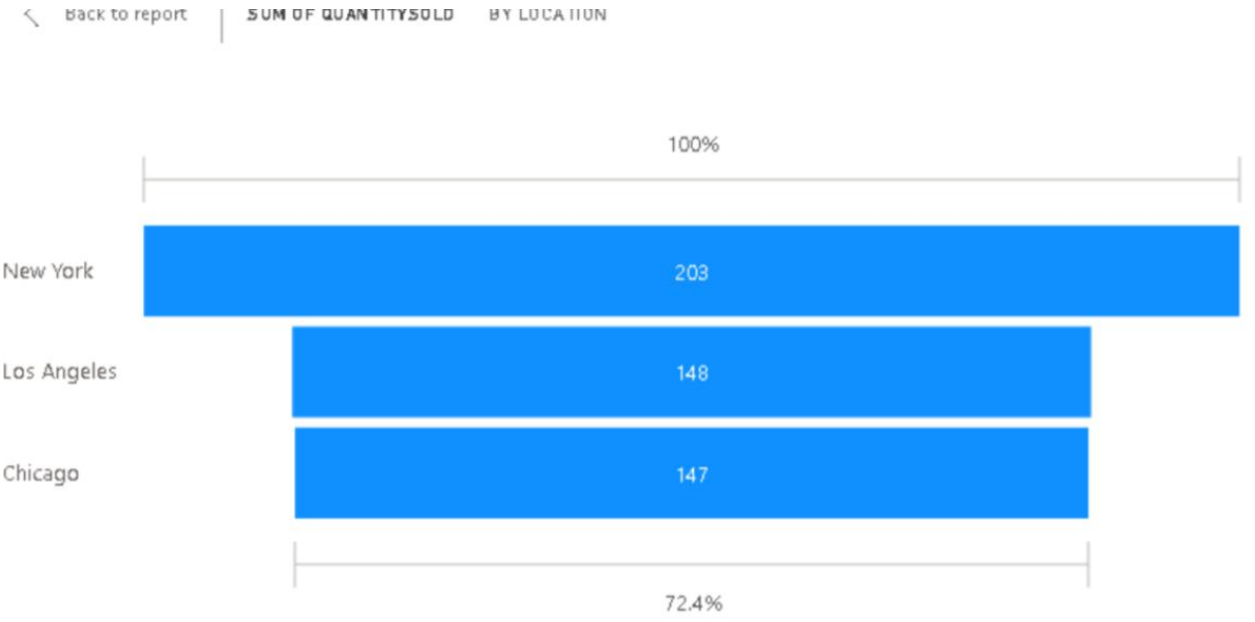

File
Home
Insert
Modeling
View
Help
Format
Data / Drill
Back to report
SUM OF REVENUE
BY CUSTOMERNAME
Sum of Revenue
CustomerName
Customer C
Customer F
Customer G
Customer D
Customer A
Customer E
Customer B
Filters
Search
Filters on this visual
CustomerName is (All)
Sum of Revenue is (All)
Add data fields here
Filters on this page
Filters on all pages
Visualizations
Build visual
X-axis
CustomerName
Y-axis
Sum of Revenue
Fields
sales
SalesTransactions
CustomerID
NewRevenue
ProductID
Products.Price
QuantitySold
Revenue
StoreID
TransactionDate
Date Hierarc...
Year
Quarter
Month
Day


Hands-on - Power BI Desktop
Search
Sign in
File
Home
Insert
Modeling
View
Help
Auto recovery contains some recovered files that haven't been opened.
View recovered files
Sum of Calculated Revenue by StoreManager
58K (26.06%)
89K (39.86%)
76K (34.09%)
StoreManager
John Smith
Mike Johnson
Jane Doe
Page 1
Page 2
Page 2 of 2
Visualizations
Build visual
Values
Add data fields here
Drill through
Cross-report
Keep all filters
Fields
Search
ProductName
SalesTransactions
Calculated Rev...
CustomerID
CustomerID Hi...
CustomerName
Email
Phone
Price
ProductID
QuantitySold
Revenue
StoreID
TransactionDate
TransactionID
90%
Update available (click to download)


Untitled - Power BI Desktop
Search
Sign in
File
Home
Insert
Modeling
View
Help
Auto recovery contains some recovered files that haven't been opened.
View recovered files
Sum of Revenue by Category and Month
Sum of Revenue
Day Name
Category
Visualizations
Build visual
Fields
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Drill through
Cross-report
Keep all filters
Add drill-through fields here
SalesTransactions
CustomerID
Day Name
ProductID
QuantitySold
Revenue
StoreID
TransactionDate
Date Hierarc...
Year
Quarter
Month
Day
Page 1
Page 2
Page 2 of 2
62%
Update available (click to download)


Hands-on - Power BI Desktop
Search
Sign in
File
Home
Insert
Modeling
View
Help
Auto recovery contains some recovered files that haven't been opened.
View recovered files
Average of Price by Category
Average of Price
600
400
200
0
Furniture
Electronics
Clothing
Category
Visualizations
Build visual
Fields
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Values
Add data fields here
Drill through
Cross-report
Keep all filters
CustomerID
CustomerName
Email
Phone
Products
Category
Price
ProductID
ProductName
SalesTransactions
Calculated Rev...
CustomerID
CustomerID Hi...
CustomerName
Email
Page 1
Page 2
Page 3
Page 3 of 3
90%
Update available (click to download)
10:57 AM
9/15/2023


Untitled - Power Query Editor
File
Home
Transform
Add Column
View
Tools
Help
Queries [4]
Customers
Products
SalesTransactions
Stores
= Table.RenameColumns(#"Removed Columns1",{{"Multiplication.1", "Revenue"}})
TransactionDate
QuantitySold
Products.Price
Revenue
1001
4/25/2023
70
800
56000
1001
1/5/2023
50
800
40000
Query Settings
PROPERTIES
Name
Customers
All Properties
APPLIED STEPS
Merged Queries
1001
Filtered Rows
Sorted Rows
Merged Queries1
Expanded Products
Added Custom
Filtered Rows1
Changed Type
Inserted Multiplication
Removed Columns
Inserted Multiplication1
Inserted Multiplication1


Untitled - Power BI Desktop
Search
Sign in
File
Home
Insert
Modeling
View
Help
Format
Data / Drill
Back to report
SUM OF REVENUE
BY MONTH
Sum of Revenue
Month
January
February
March
April
May
June
July
August
September
Filters
Filters on this visual
Sum of Revenue is (All)
TransactionDate - Mo... is (All)
Add data fields here
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Build visual
Stacked column chart
TransactionDate
Month
Y-axis
Sum of Revenue
Fields
SalesTransactions
CustomerID
Day Name
NewRevenue
ProductID
Products.Price
QuantitySold
Revenue
StoreID
TransactionDate
Date Hierarc...
Year
Quarter
Month
Day
Page 1 of 1
100%
Update available (click to download)

Requirement 5: Data Insights and Recommendations