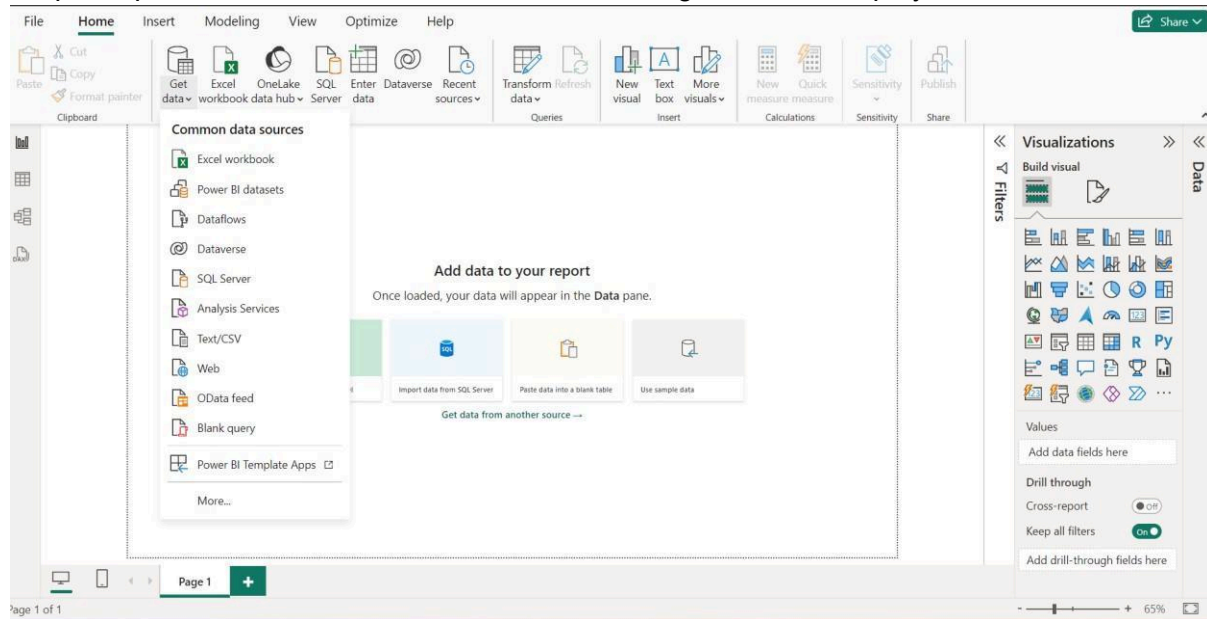


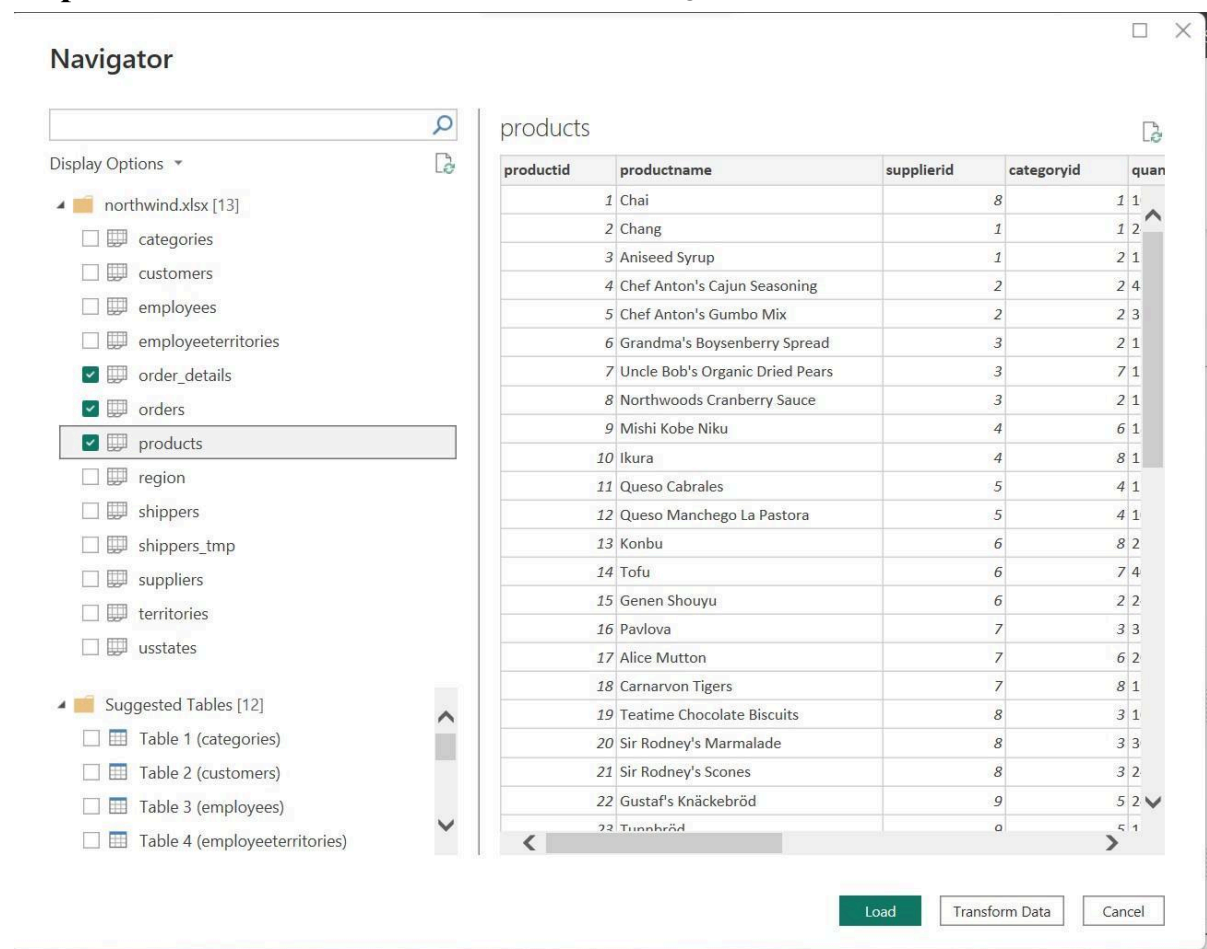
Practical No:1

Get data from Excel

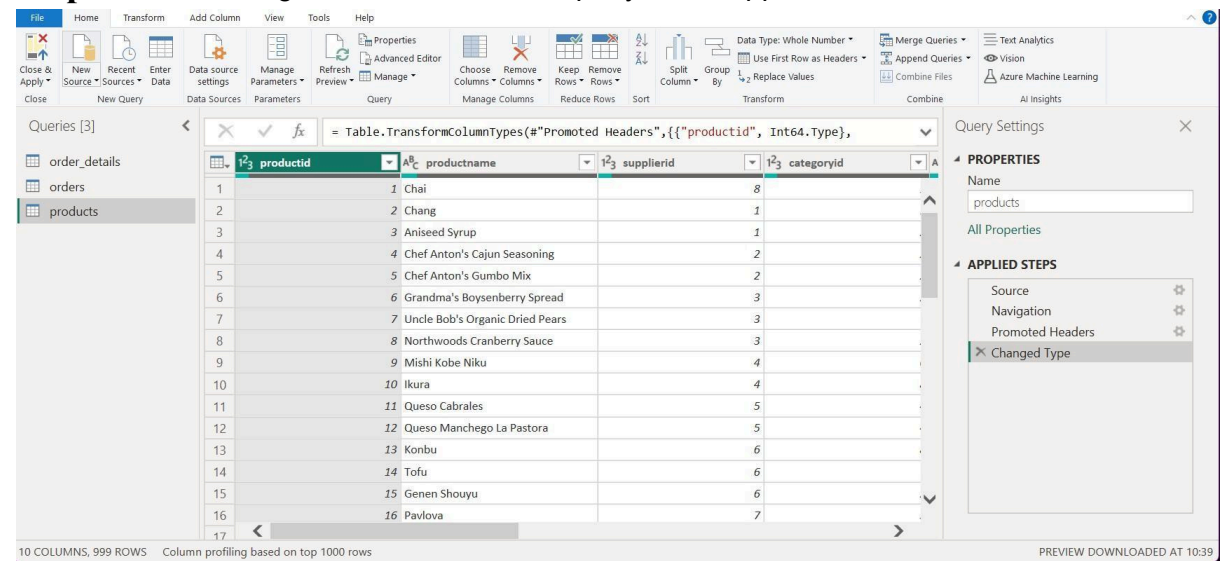
Step 1: Open Power BI & Click on Get data following list will be displayed → select Excel



Step2: Select required file and click on Open, Navigator screen appears

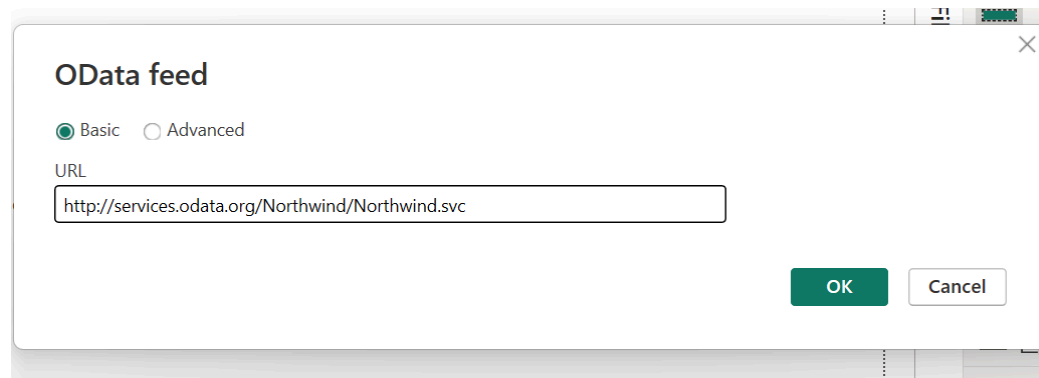


Step3: After clicking on transform Power query editor appears



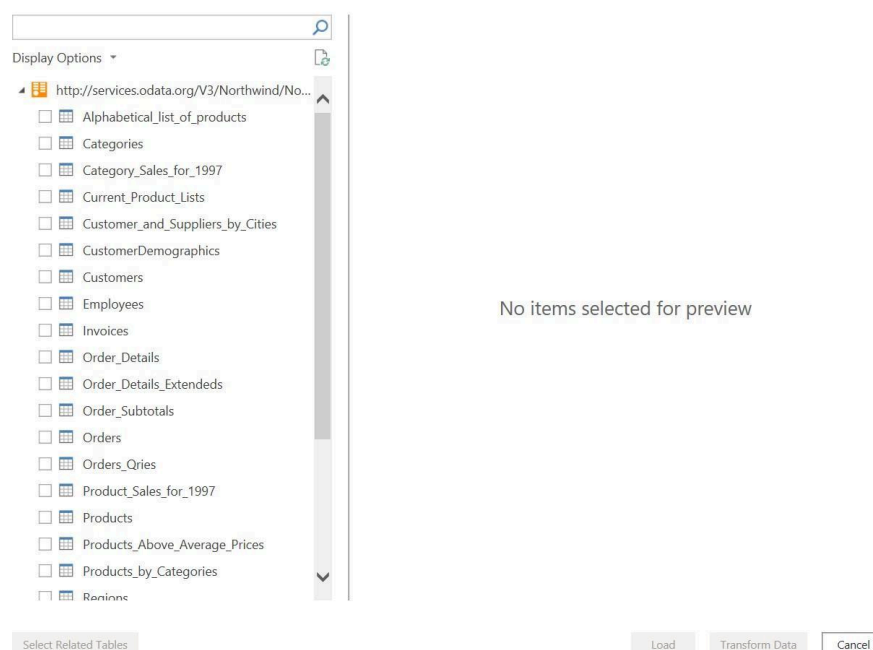
Get data from odata feed.

Step1: Paste link in odata feed.



Step2:Data load

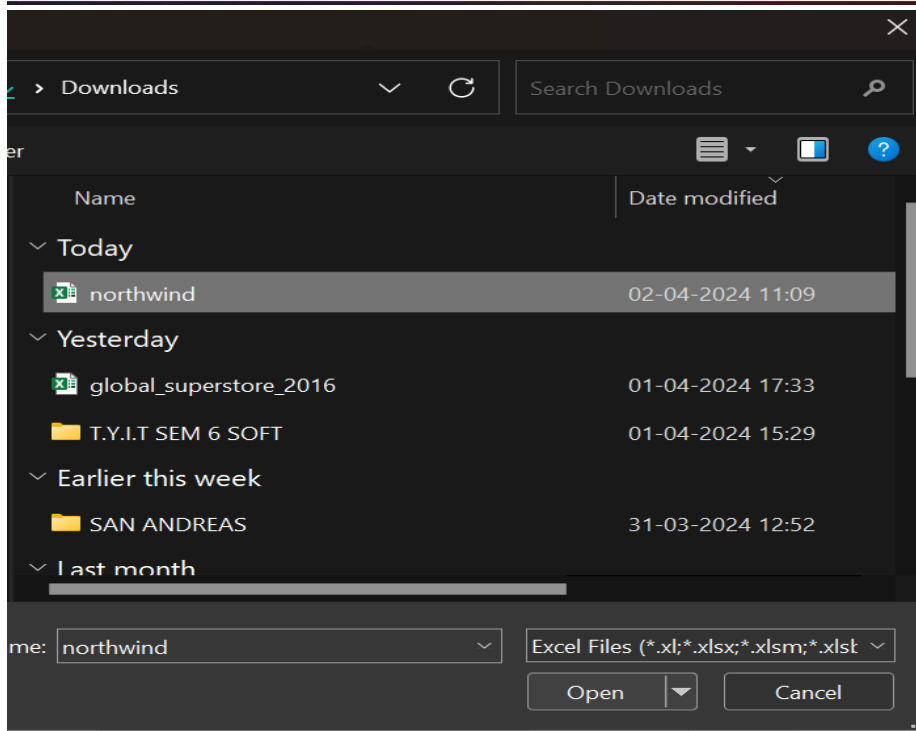
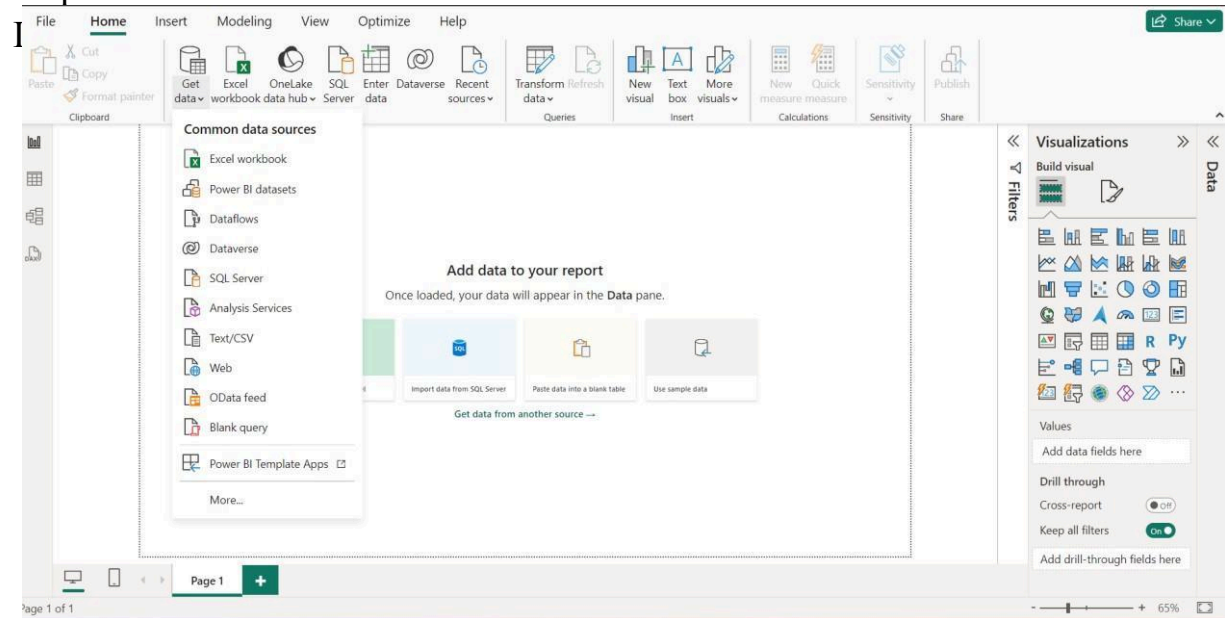
Navigator



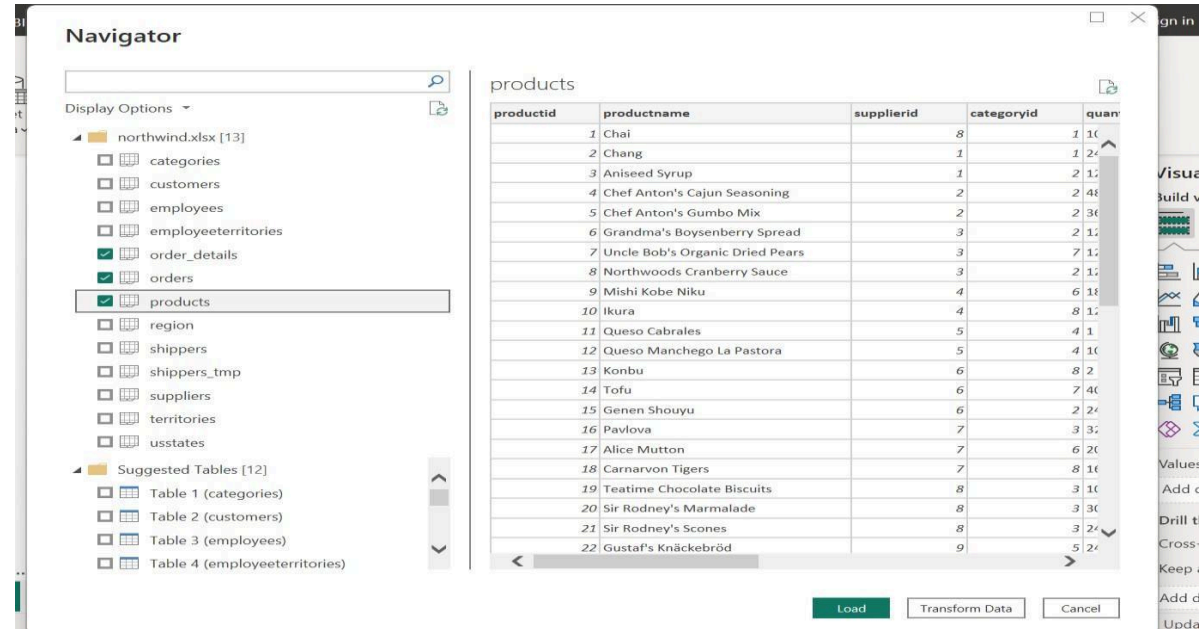
Practical No.2:

Pract 2A:

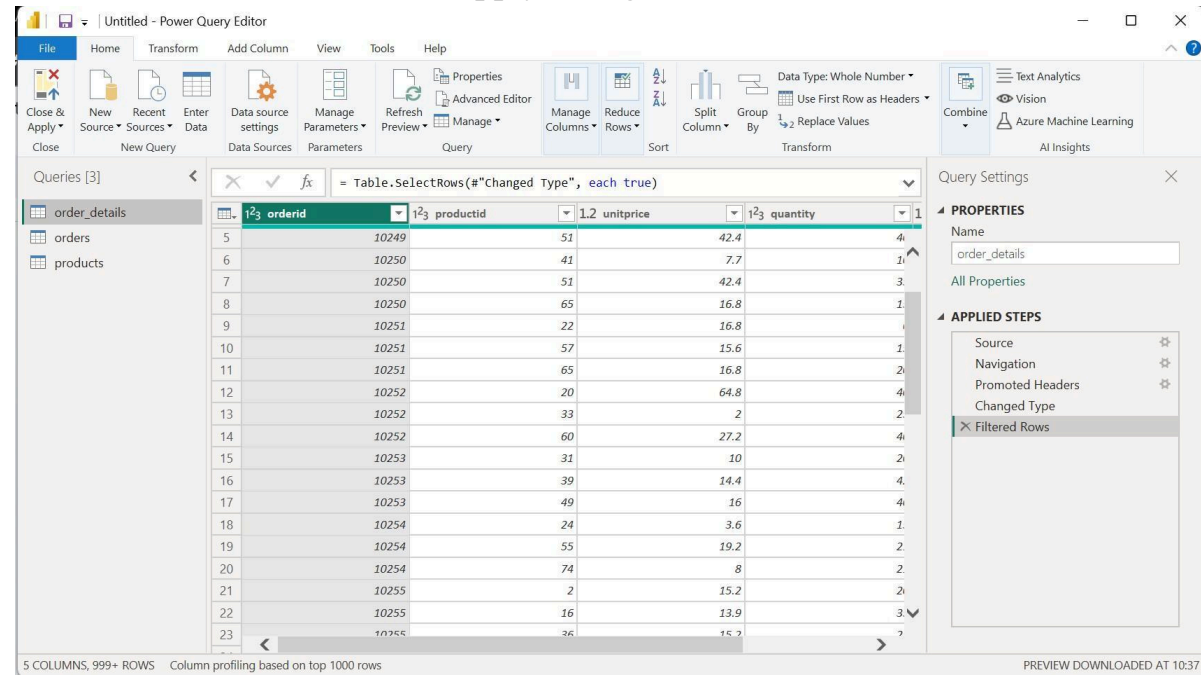
Step 1:



Step 2:
Select the necessary tables required.



Step 3:
Transform data and Close & Apply changes.



Step 4:
Managing relationship

Create relationship

×

Select tables and columns that are related.

order_details

orderid	productid	unitprice	quantity	discount
10251	65	16.8	20	0
10253	31	10	20	0
10255	2	15.2	20	0

products

productid	productname	supplierid	categoryid	quantityperunit	unitprice	unitsinstock	unitsonorder
1	Chai	8	1	10 boxes x 30 bags	18	39	
2	Chang		1	24 - 12 oz bottles	19	17	
3	Aniseed Syrup	1	2	12 - 550 ml bottles	10	13	

Cardinality

Many to one (*:1)

Cross filter direction

Single

☒ Make this relationship active

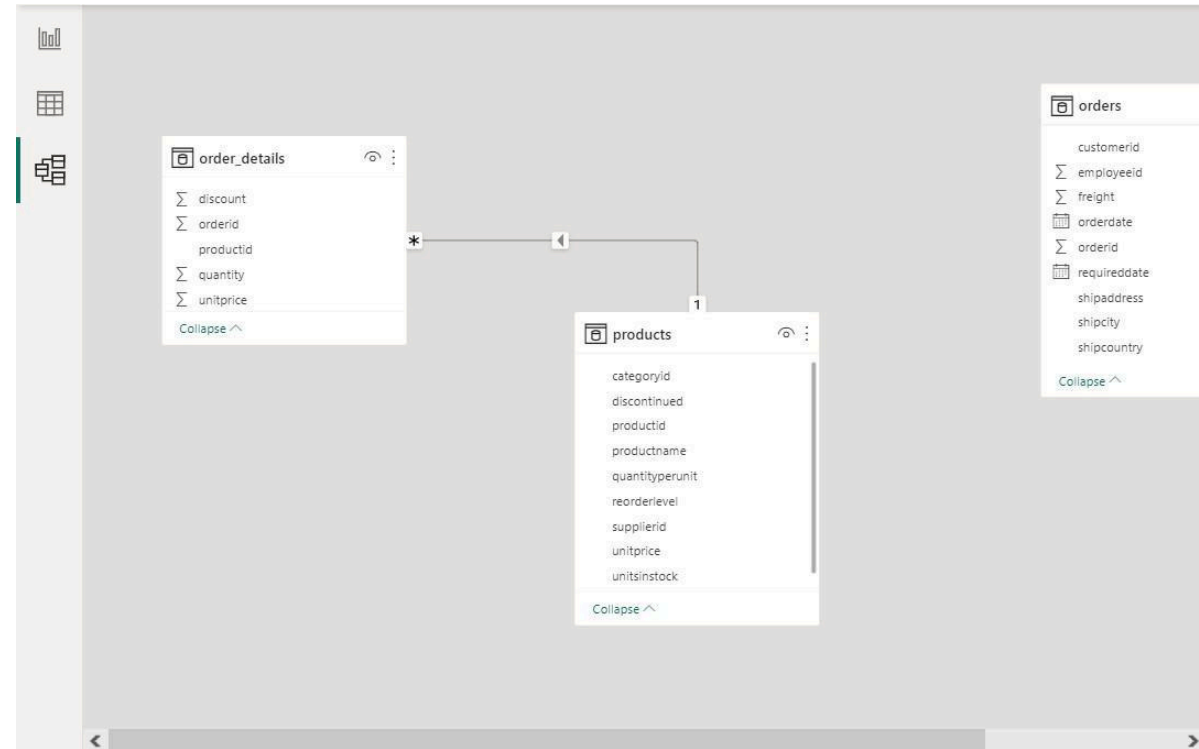
☐ Assume referential integrity

☐ Apply security filter in both directions

OK

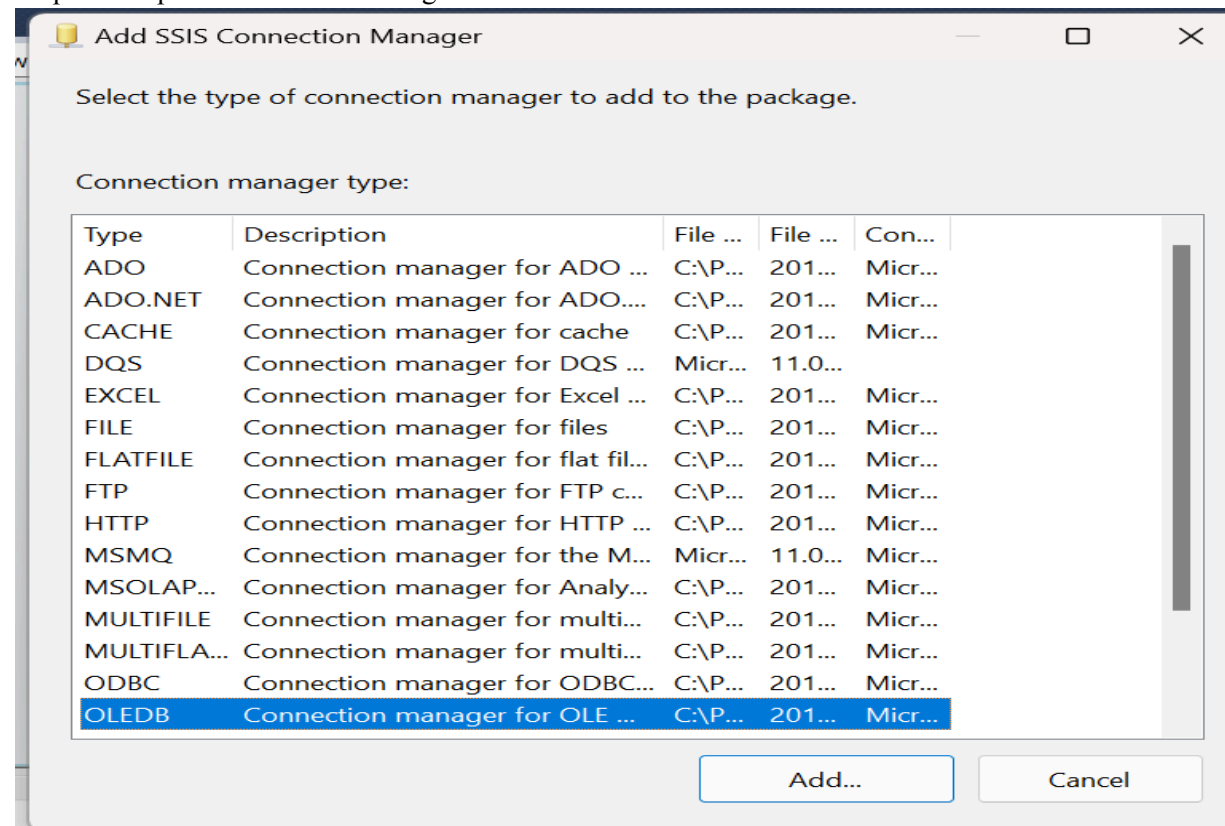
Cancel

Step 5:
Table representation



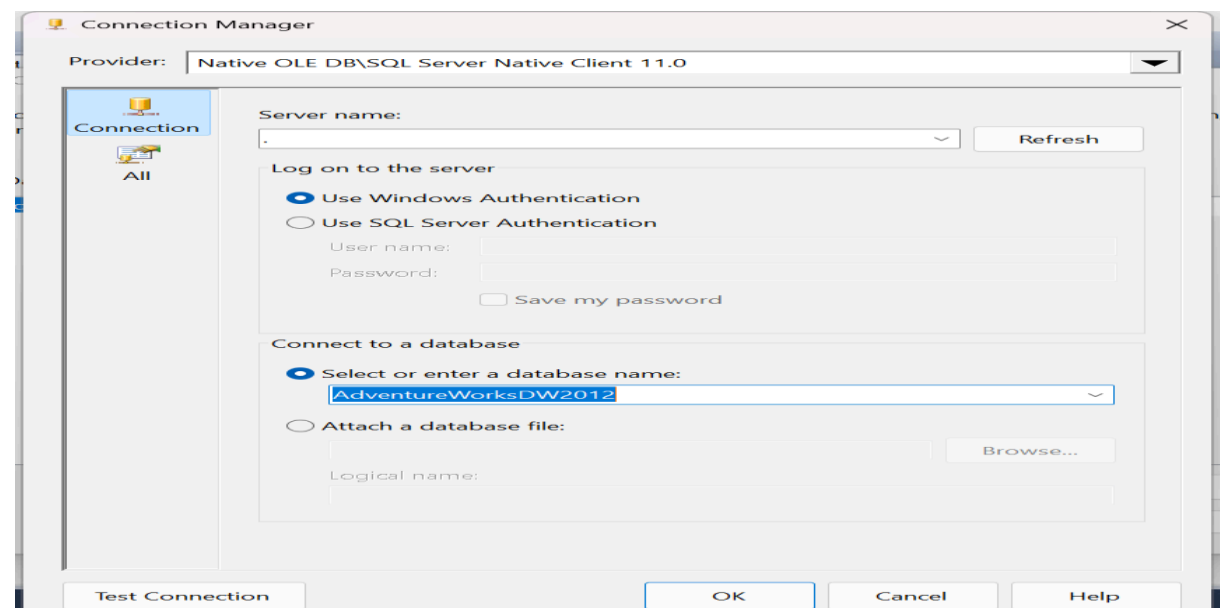
Practical No.2B

Step 1: Setup the connection manager

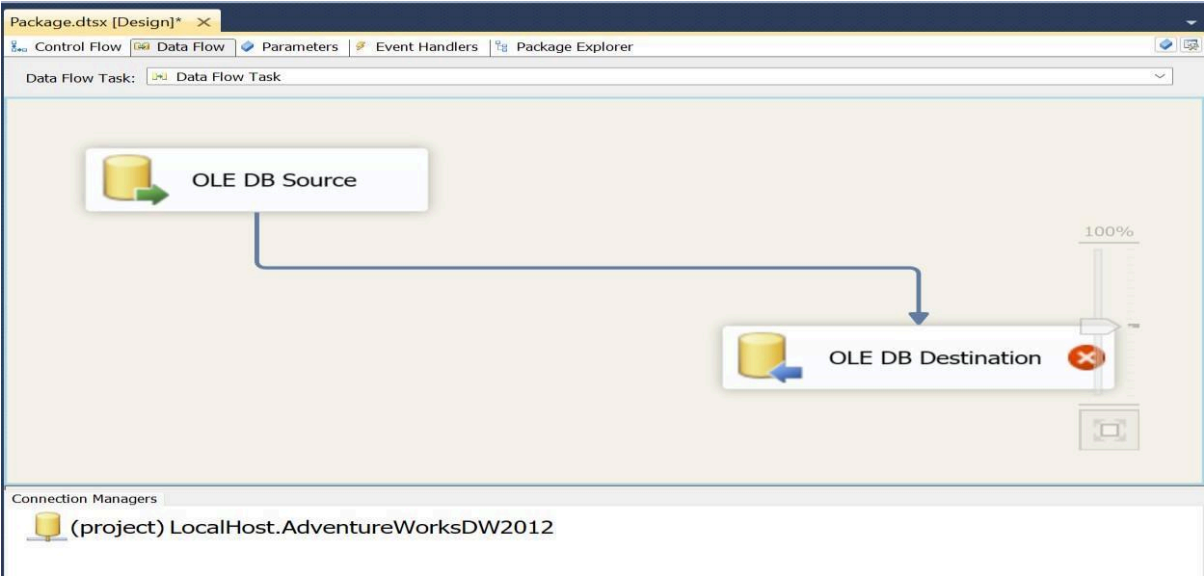


Step 2

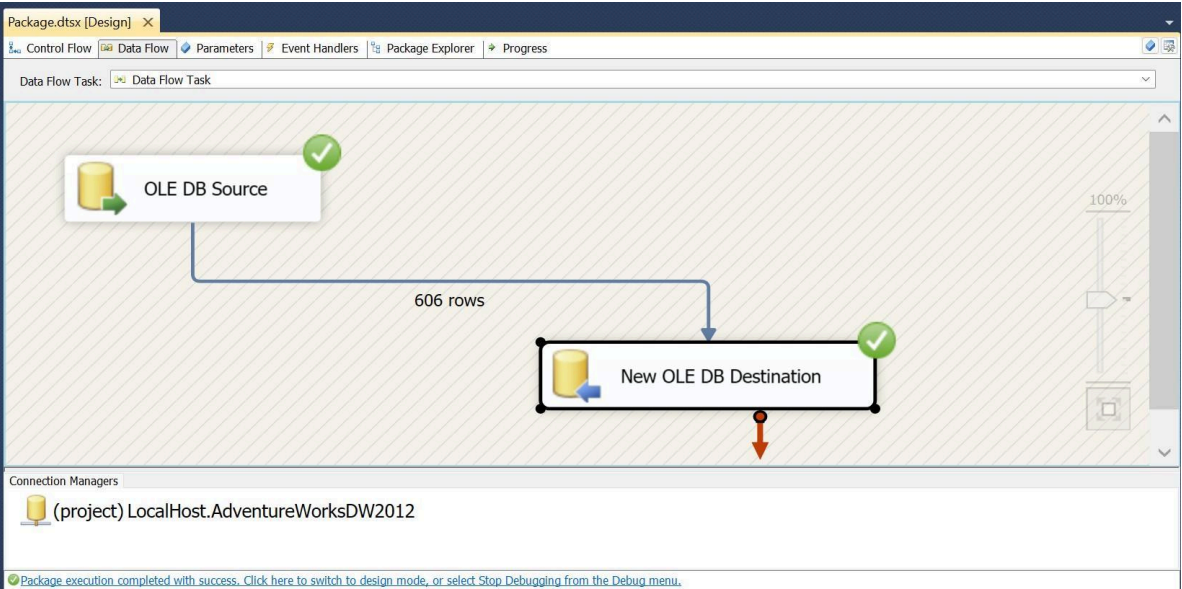
Create connection with the database



Step 3

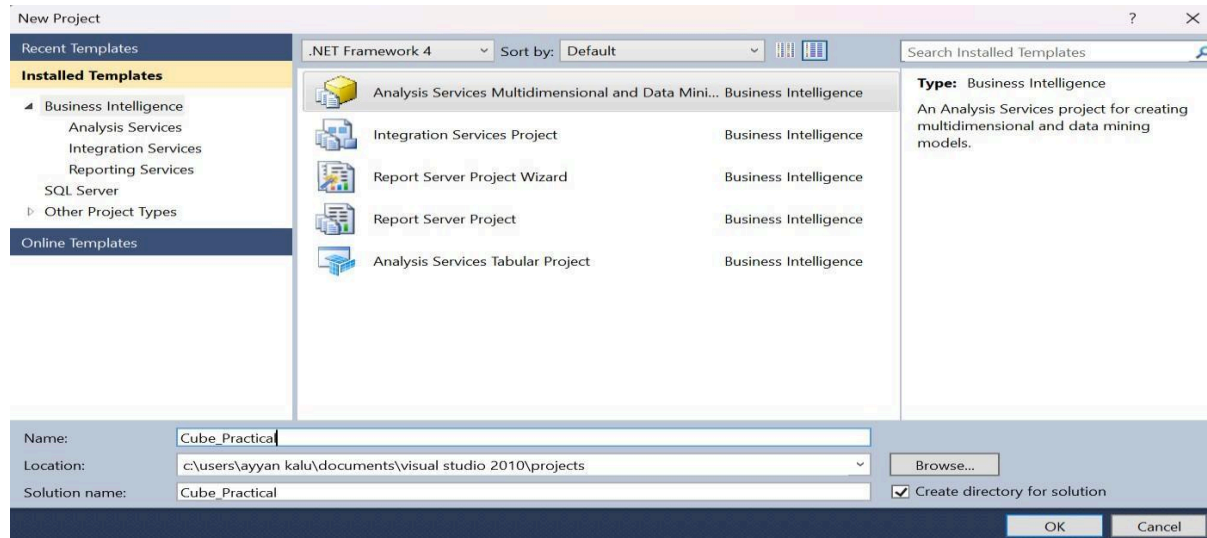


Step 4:

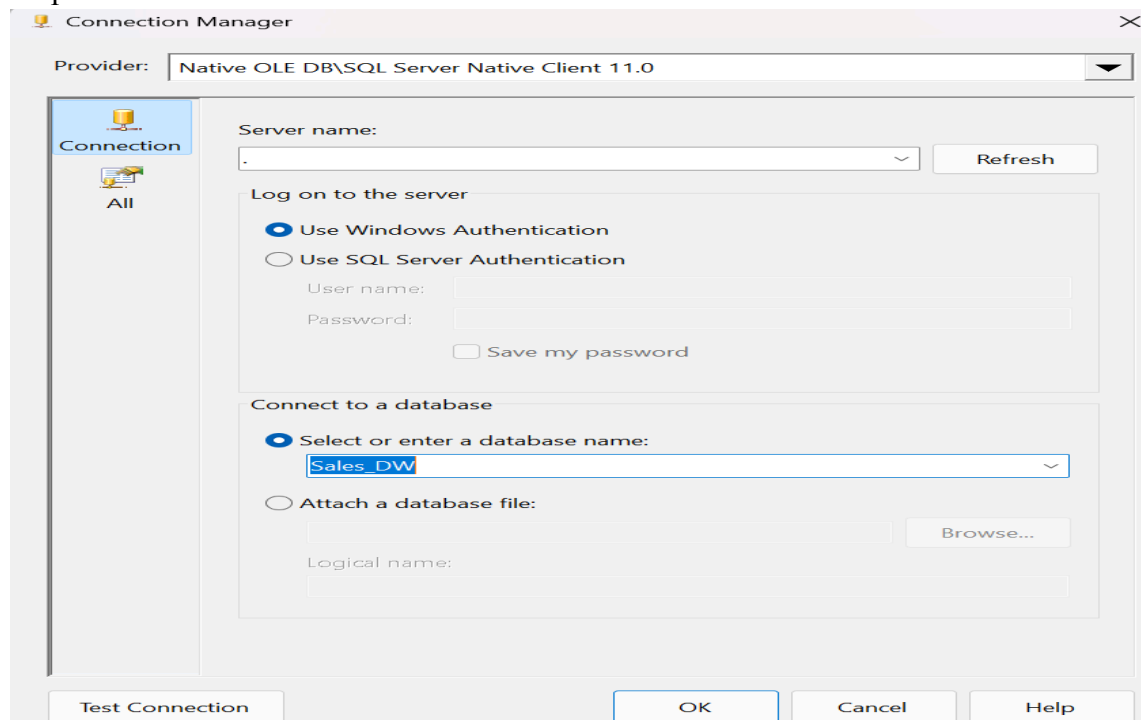


Practical No:3

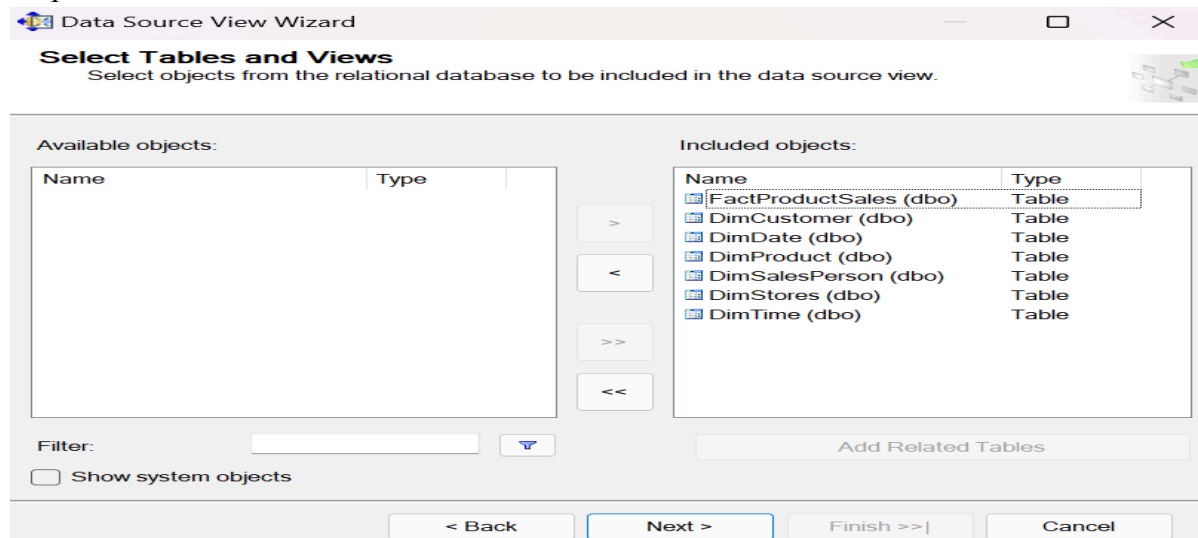
Step 1: Select the Analysis Services for multidimensional and data mining models.



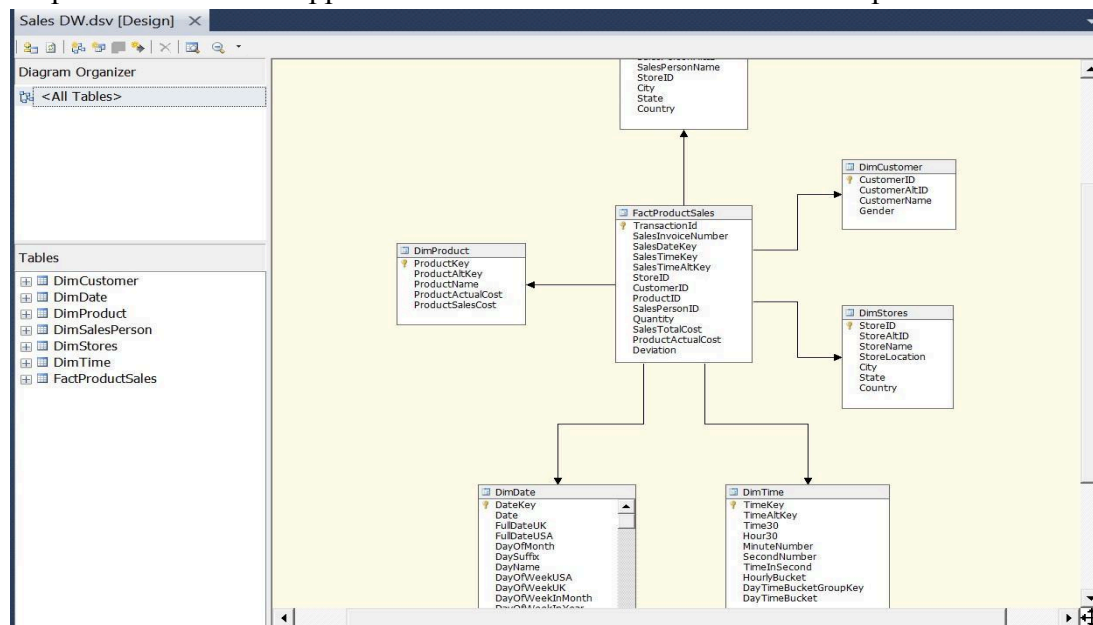
Step 2: Select the database



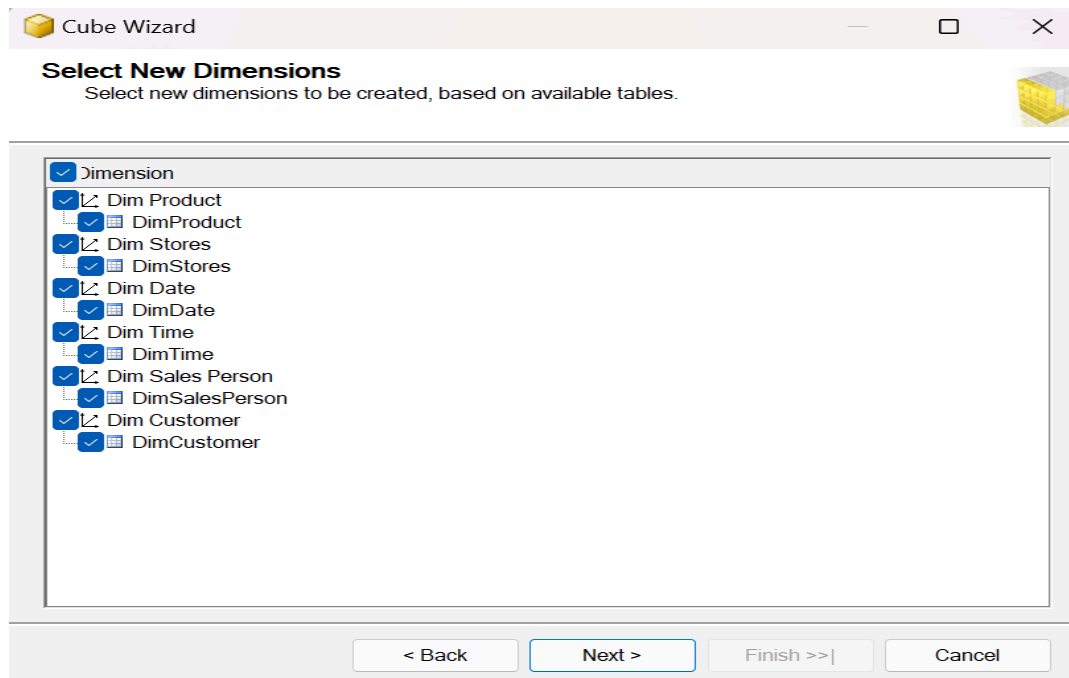
Step 3: Select the Tables and Views.



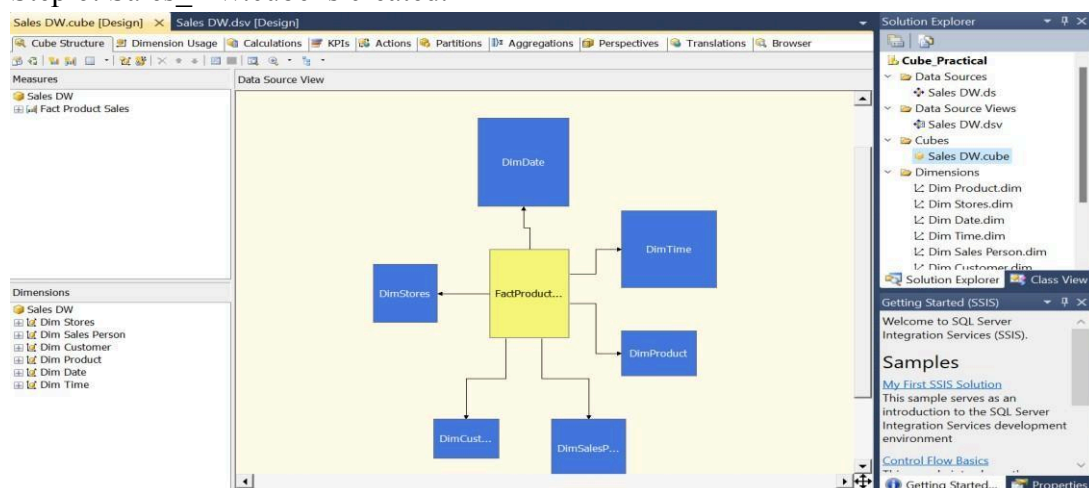
Step 4: Sales DW.dsv appears in Data Source Views in Solution Explorer.



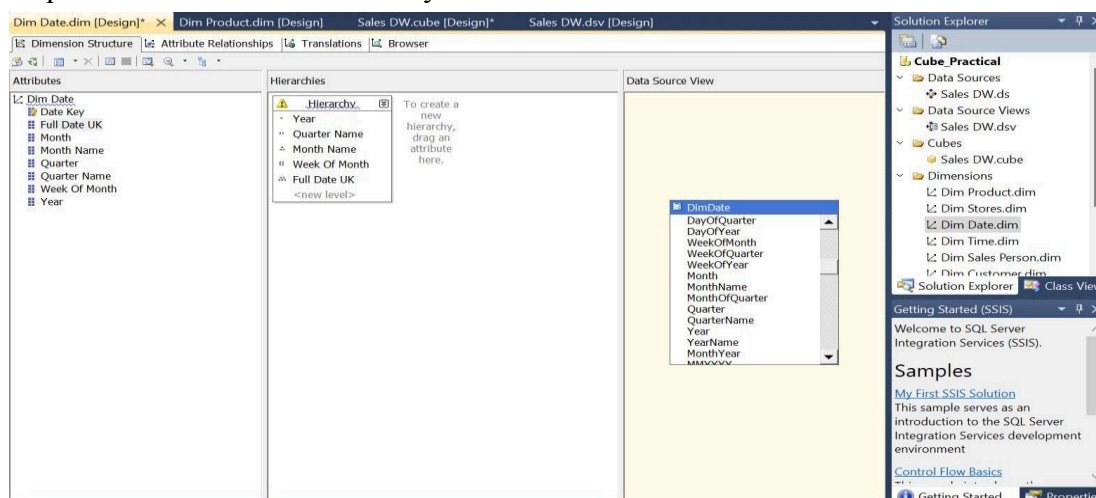
Step 5: Create a new Cube → Right click on Cubes → New Cube → select next steps
→ Select all dimensions



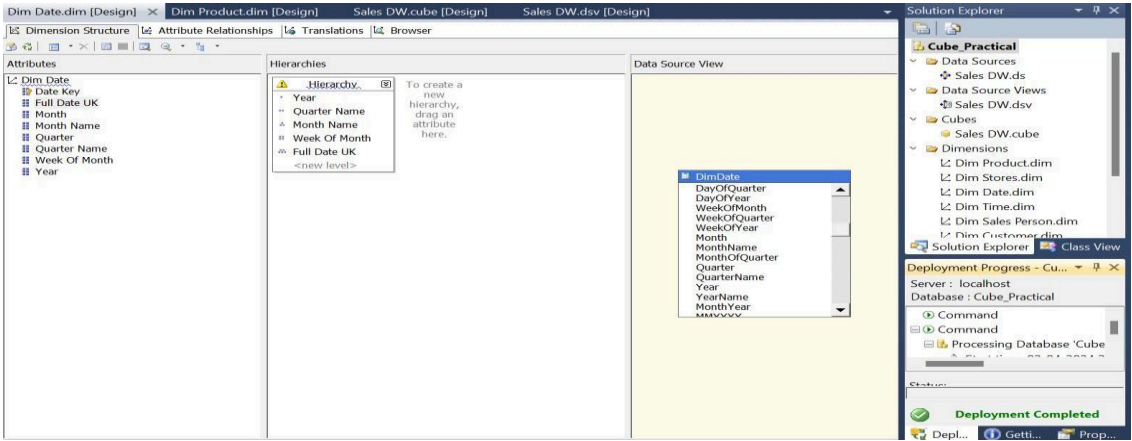
Step 6: Sales_DW.cube is created.



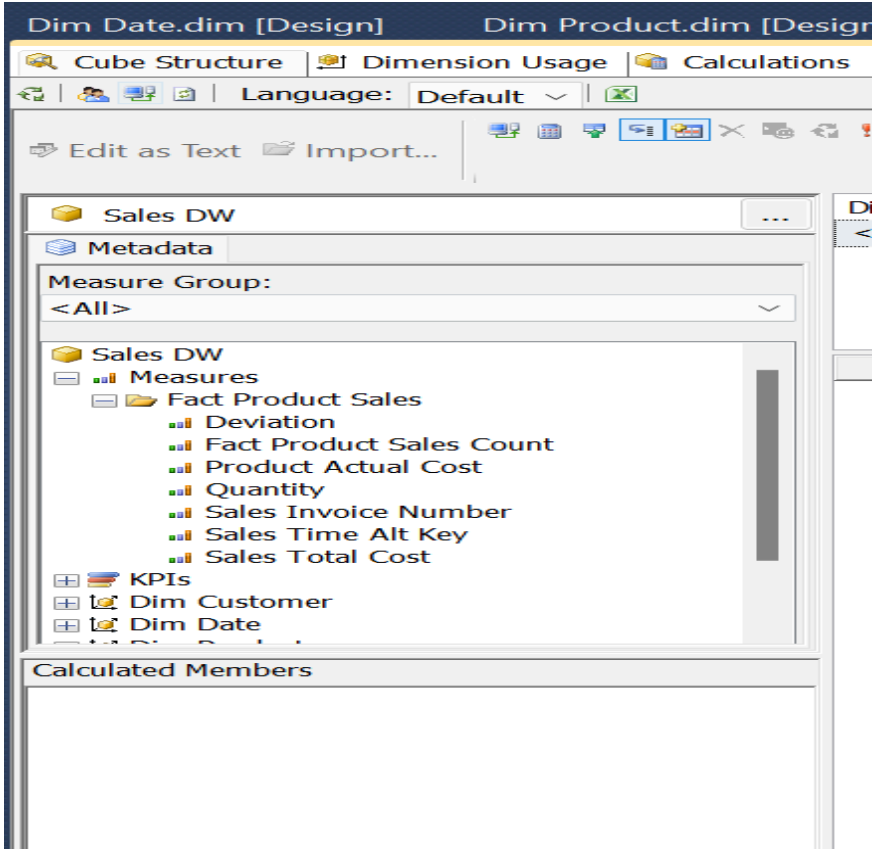
Step 7: Create Attribute hierarchy in Date Dimension



Step 8 : Deploy the Cube.

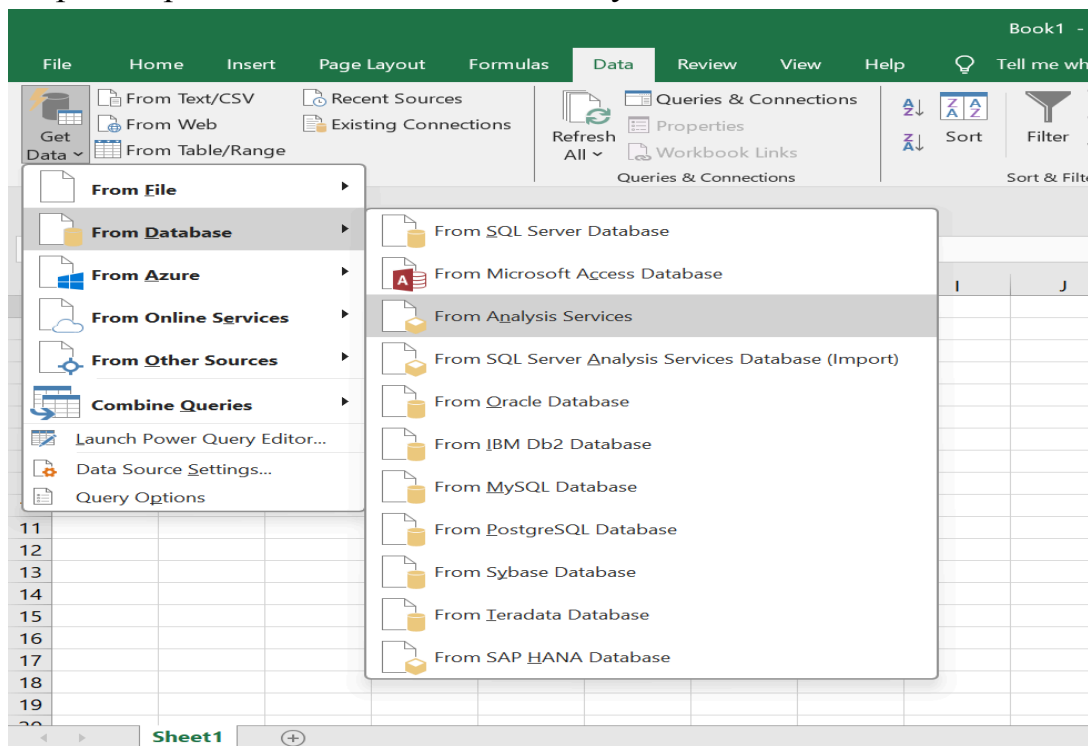


Step 9: Browse the Cube in the Solution Explorer

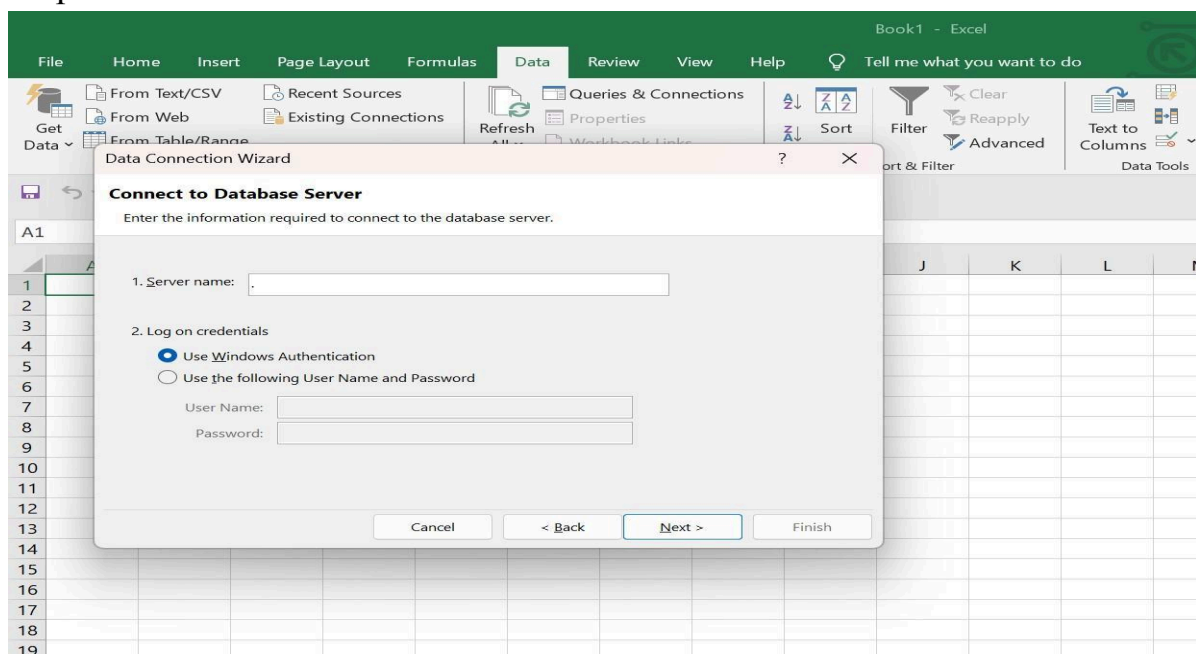


Practical 5B

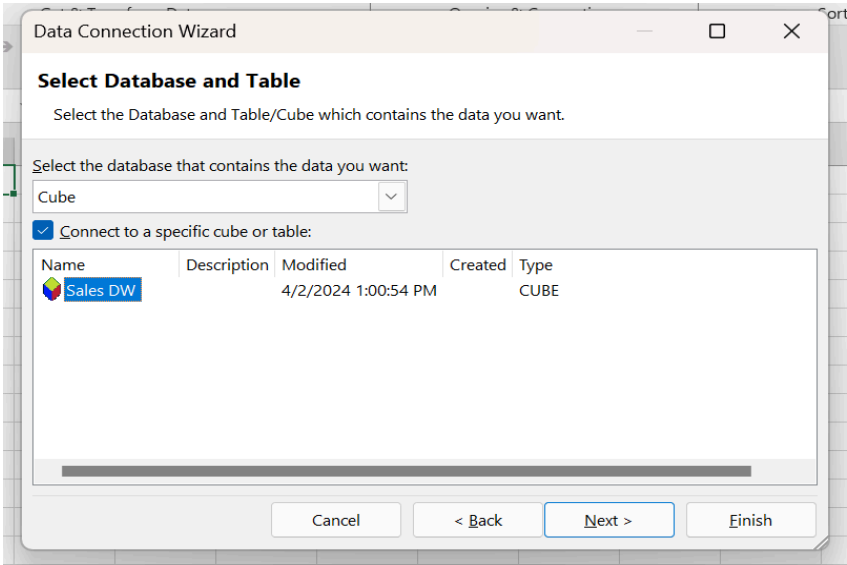
Step 1: Import the Cube from Data Analysis Services.



Step 2: Connect to the database server



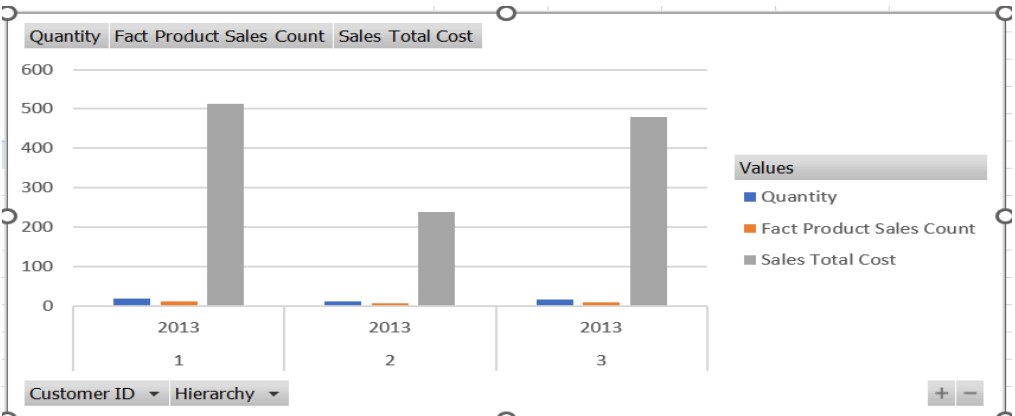
Step 3: Select the Cube created before



Step 4: Pivot Table report

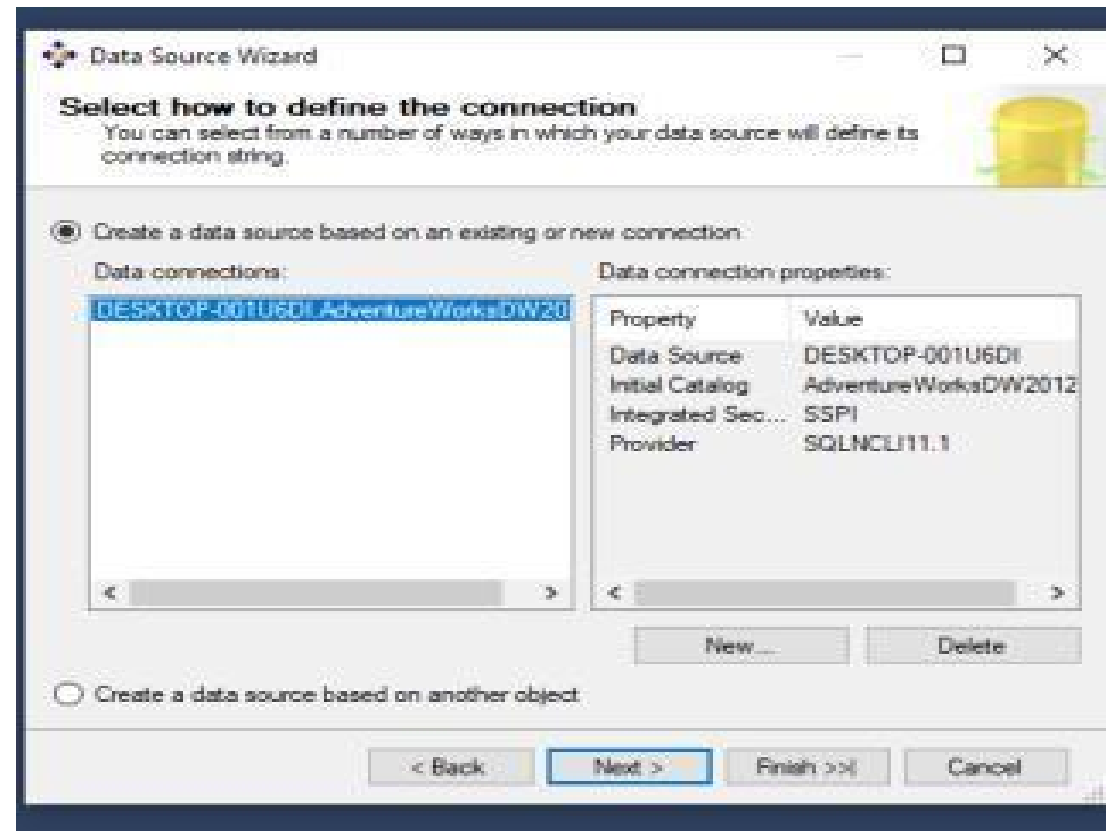
Row Labels	Fact Product Sales Count	Quantity	Sales	Total Cost
2013				
1	4	7	45.5	
2	6	8	104.5	
3	6	7	304.5	
4	6	18	360	
5	3	3	417	
Grand Total	25	43	1231.5	

Step 5: Pivot Chart Report

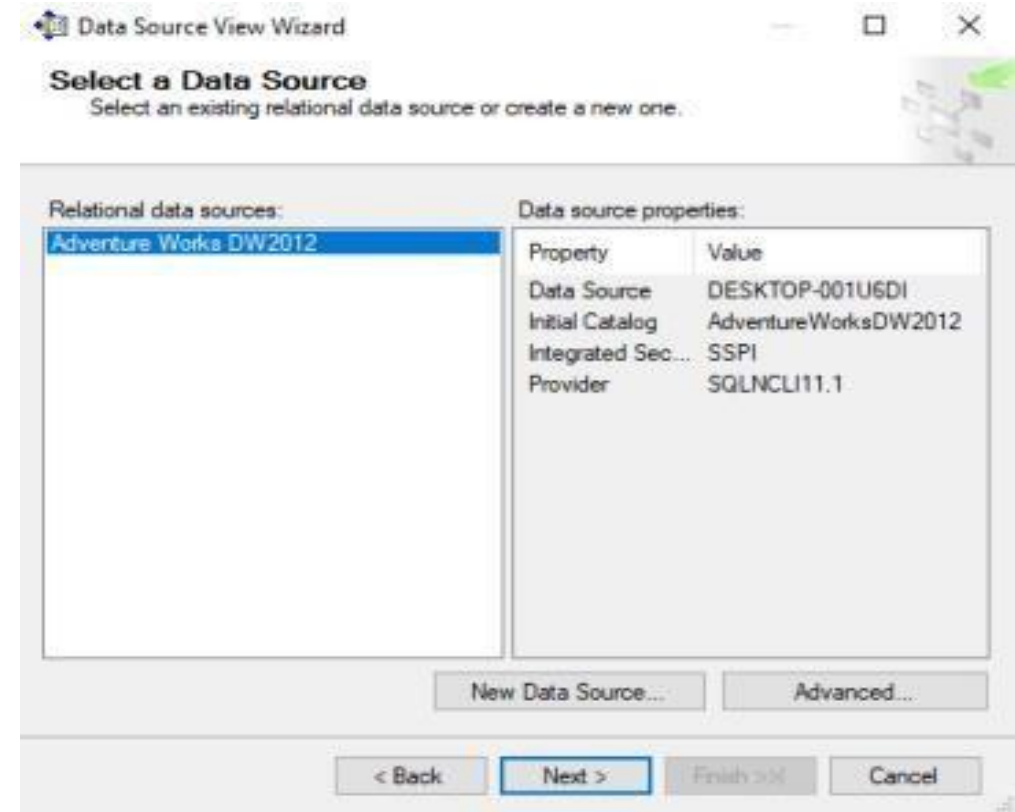


Practical No: 7 Data Classification using Classification Algorithm.

1) Data Source



2) Data Source View



Data Source View Wizard

Select Tables and Views

Select objects from the relational database to be included in the data source view.

Available objects:

Name	Type
FactInternetSales...	Table
FactProductInvent...	Table
FactResellerSales ...	Table
FactSalesQuota (d...	Table
FactSurveyRespo...	Table
sysdiagrams (dbo)	Table
vAssocSeqLineIt...	View
vAssocSeqOrders ...	View
vDMPrep (dbo)	View
vTimeSeries (dbo)	View

>

<

>>

<<

Included objects:

Name	Type
vTargetMail (dbo)	View
ProspectiveBuyer ...	Table

Filter:

Add Related Tables

☐ Show system objects

< Back

Next >

Finish >>

Cancel

Data Source View Wizard

Completing the Wizard

Provide a name, and then click Finish to create the new data source view.

Name:

Adventure Works DW2012

Preview:

Adventure Works DW2012

ProspectiveBuyer (dbo)

vTargetMail (dbo)

< Back

Next >

Finish

Cancel

3) Data Mining

Data Mining Wizard

Select the Definition Method
Select the method to be used while creating the mining structure definition.

Which method do you use to define the mining structure?

☒ From existing relational database or data warehouse

☐ From existing cube

Description:

This method defines a mining structure based on tables and columns from an existing relational database.

< Back **Next >** Finish >> Cancel

Data Mining Wizard

Create the Data Mining Structure
Specify if mining model should be created and select the most applicable technique.

☒ Create mining structure with a mining model

Which data mining technique do you want to use?

Microsoft Decision Trees

☐ Create mining structure with no models

Description:

The Microsoft Decision Trees algorithm is a classification algorithm that works well for predictive modeling. The algorithm supports the prediction of both discrete and continuous attributes.

< Back **Next >** Finish >> Cancel

Data Mining Wizard

Specify Table Types

Specify the type of tables to use for your analysis.

Input tables:

Tables	Case	Nested
ProspectiveBuyer	<input type="checkbox"/>	<input type="checkbox"/>
v TargetMail	<input checked="" type="checkbox"/>	<input type="checkbox"/>

< Back Next > Finish >> Cancel

Data Mining Wizard

Specify Columns' Content and Data Type

Specify mining structure columns' content and data type.

Mining model structure:

Columns	Content Type	Data Type
Age	Continuous	Long
Bike Buyer	Discrete	Long
Commute Distance	Discrete	Text
Customer Key	Key	Long
Gender	Discrete	Text
Number Cars Owned	Discrete	Long
Number Children At Home	Discrete	Long
Region	Discrete	Text
Total Children	Discrete	Long
Yearly Income	Continuous	Double

Detect continuous or discrete for numeric columns:

Detect

< Back Next > Finish >> Cancel

Data Mining Wizard

Create Testing Set

Specify the number of cases to be reserved for model testing.

Percentage of data for testing: %

Maximum number of cases in testing data set:

Description:

Input data will be randomly split into two sets, a training set and a testing set, based on the percentage of data for testing and maximum number of cases in testing data set you provide. The training set is used to create the mining model. The testing set is used to check model accuracy.

[Percentage of data for testing] specifies percentages of cases reserved for testing set.
[Maximum number of cases in testing data set] limits total number of cases in the testing set.
If both values are specified, both limits are enforced.

< Back **Next >** Finish >> Cancel

Data Mining Wizard

Completing the Wizard

Completing the Data Mining Wizard by providing a name for the mining structure.

Mining structure name:

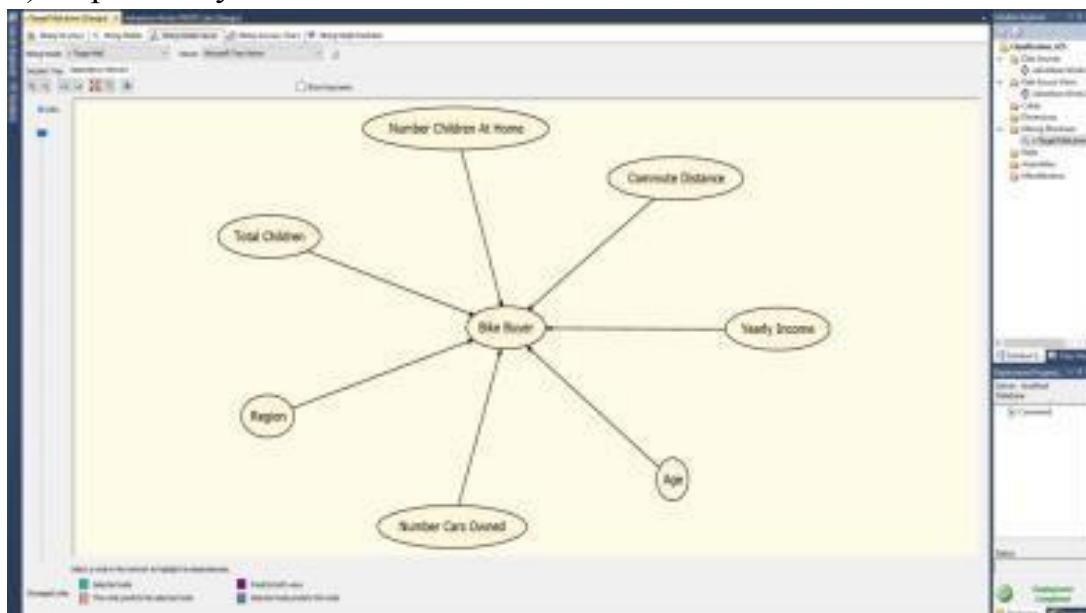
Mining model name:
 ☒ Allow drill through

Preview:

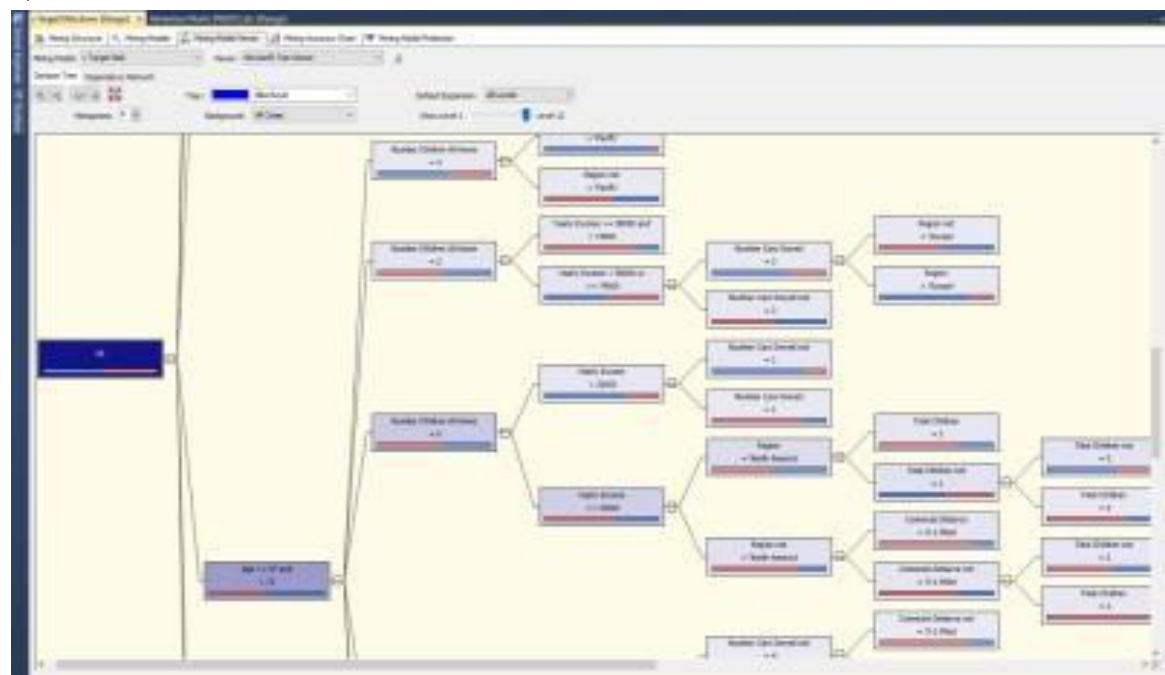
- [-] v Target Mail
 - [-] Columns
 - Age
 - Bike Buyer
 - Commute Distance
 - Customer Key
 - Gender
 - Number Cars Owned
 - Number Children At Home
 - Region

< Back Next > **Finish** Cancel

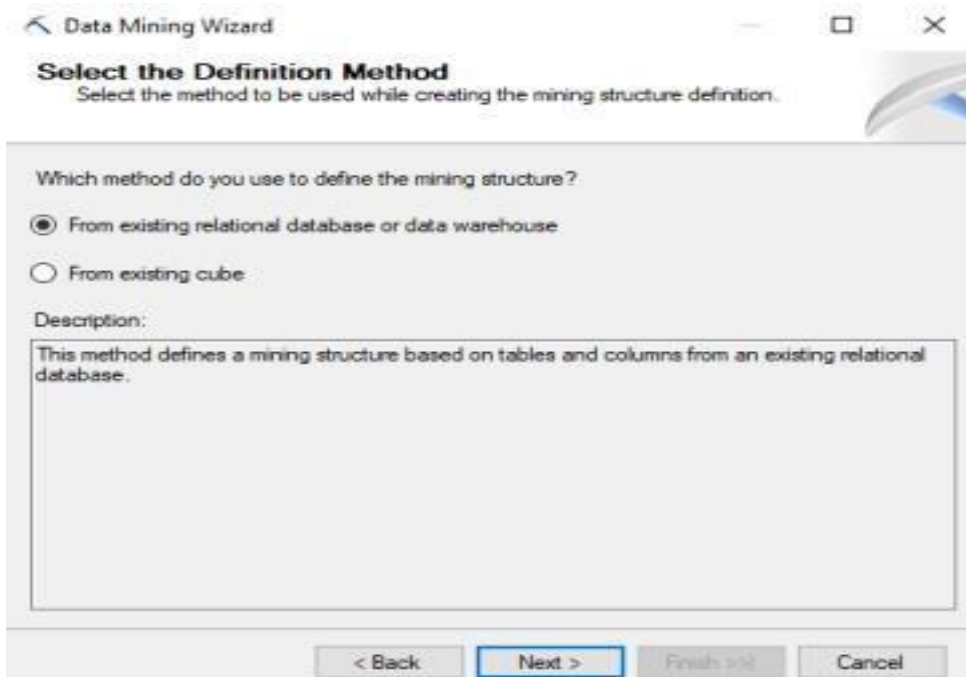
4) Dependency Network



5) Decision Tree



Practical No: 8 Data Clustering using Clustering



Data Mining Wizard

Select the Definition Method
Select the method to be used while creating the mining structure definition.

Which method do you use to define the mining structure?

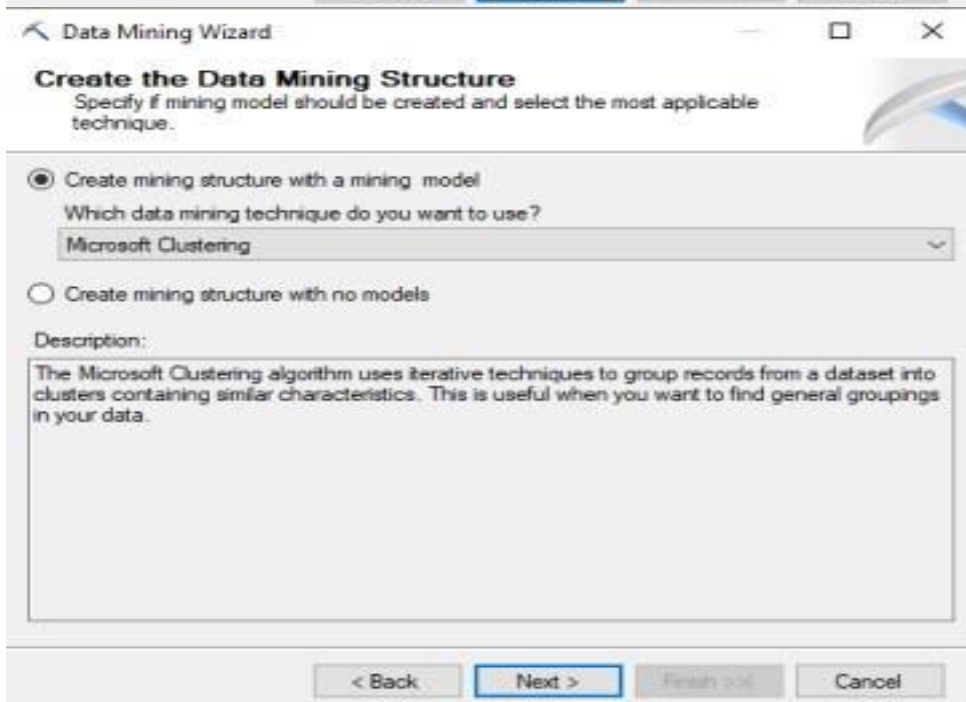
☒ From existing relational database or data warehouse

☐ From existing cube

Description:

This method defines a mining structure based on tables and columns from an existing relational database.

< Back **Next >** Finish >>> Cancel



Data Mining Wizard

Create the Data Mining Structure
Specify if mining model should be created and select the most applicable technique.

☒ Create mining structure with a mining model

Which data mining technique do you want to use?

Microsoft Clustering

☐ Create mining structure with no models

Description:

The Microsoft Clustering algorithm uses iterative techniques to group records from a dataset into clusters containing similar characteristics. This is useful when you want to find general groupings in your data.

< Back **Next >** Finish >>> Cancel

Data Mining Wizard

Select Data Source View

Select the data source view to provide the data for the mining structure.

Available data source views:

Adventure Works DW2012

Browse...

Tables:


ProspectiveBuyer
v TargetMail

Data Mining Wizard

Specify Table Types

Specify the type of tables to use for your analysis.

Input tables:

Tables	Case	Nested
ProspectiveBuyer	<input type="checkbox"/>	<input type="checkbox"/>
 v TargetMail	<input checked="" type="checkbox"/>	<input type="checkbox"/>

< Back

Next >

Finish >>

Cancel

Data Mining Wizard

Completing the Data Mining Wizard by providing a name for the mining structure.

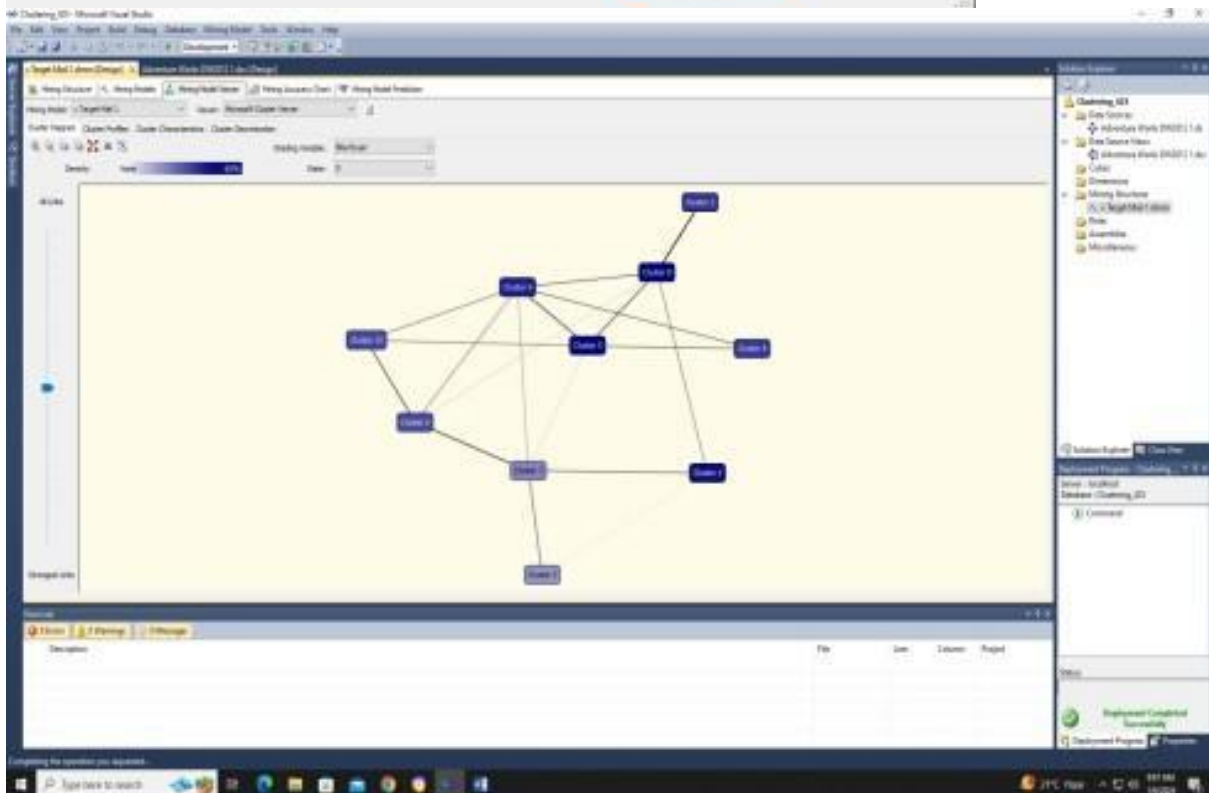
Mining structure name: v Target Mail

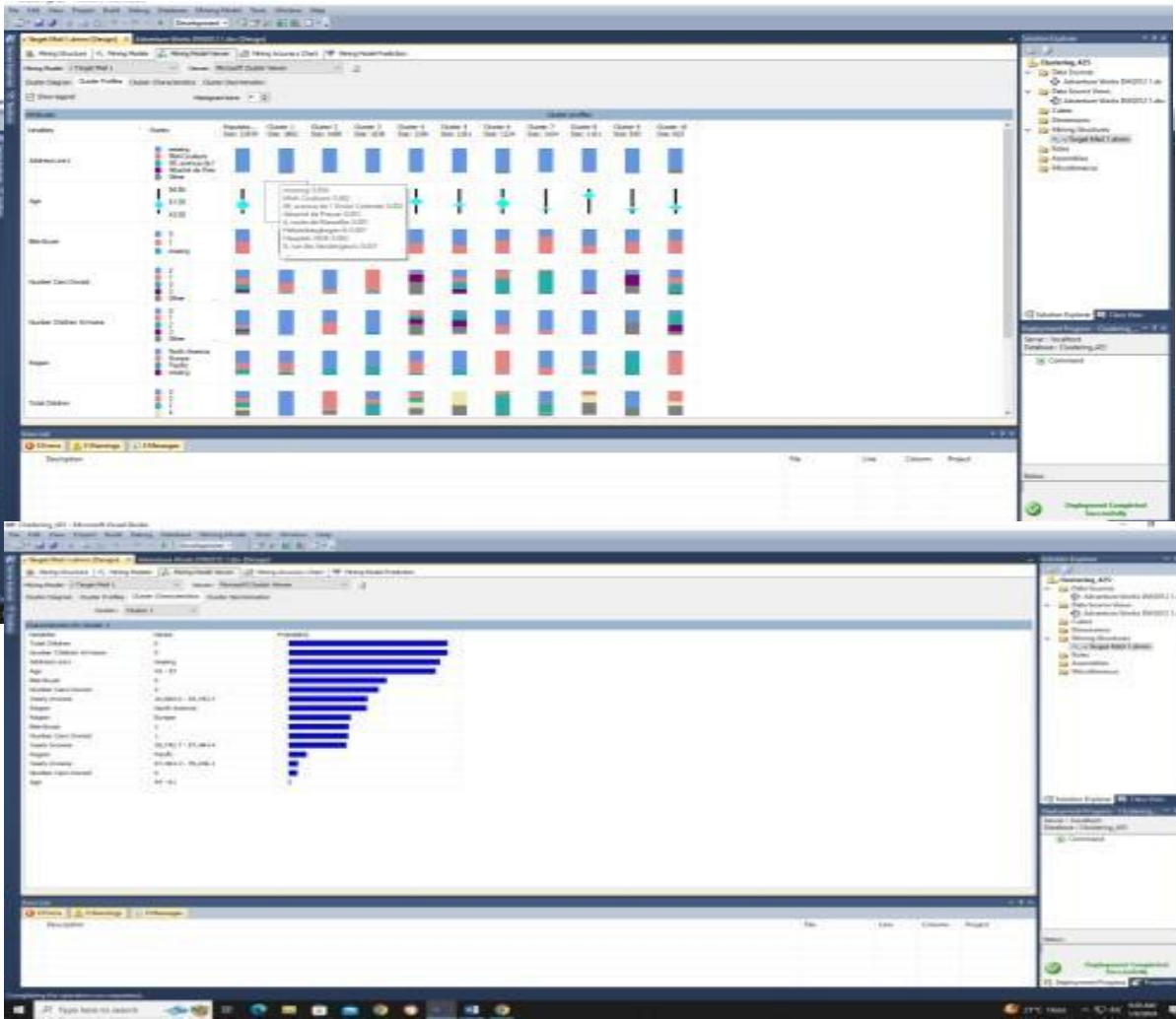
Mining model name: v Target Mail ☒ Allow drill through

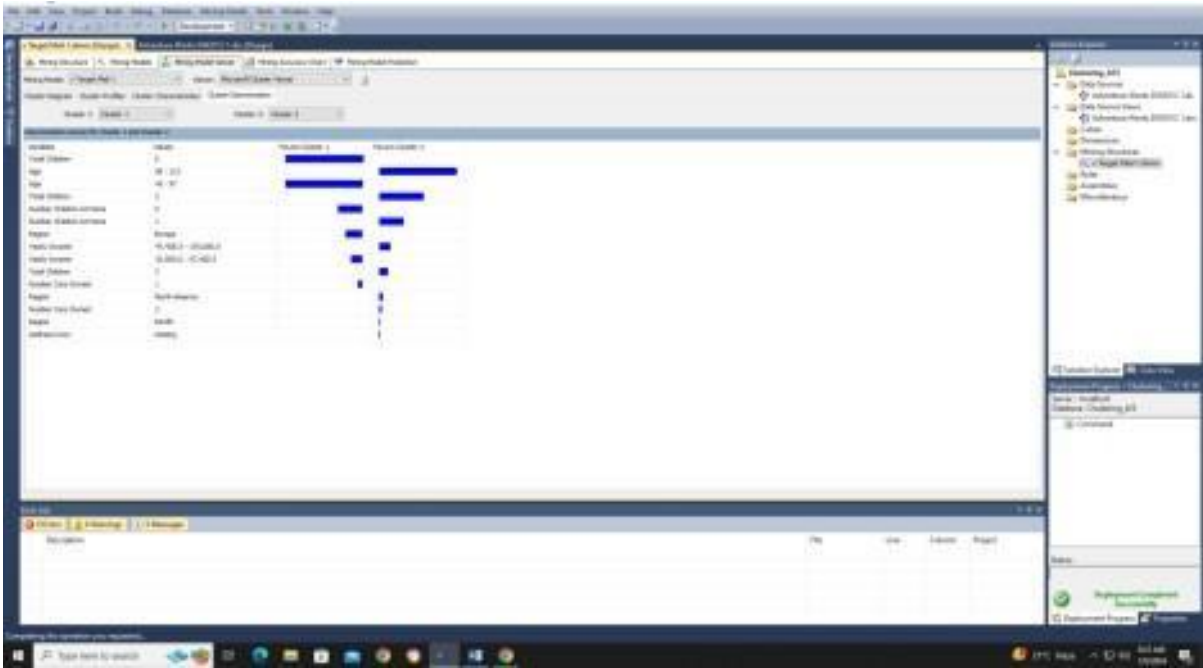
Preview:

- Bike Buyer
- Commute Distance
- Customer Key
- Gender
- Number Cars Owned
- Number Children At Home
- Region
- Total Children
- Yearly Income

< Back Next > Finish Cancel

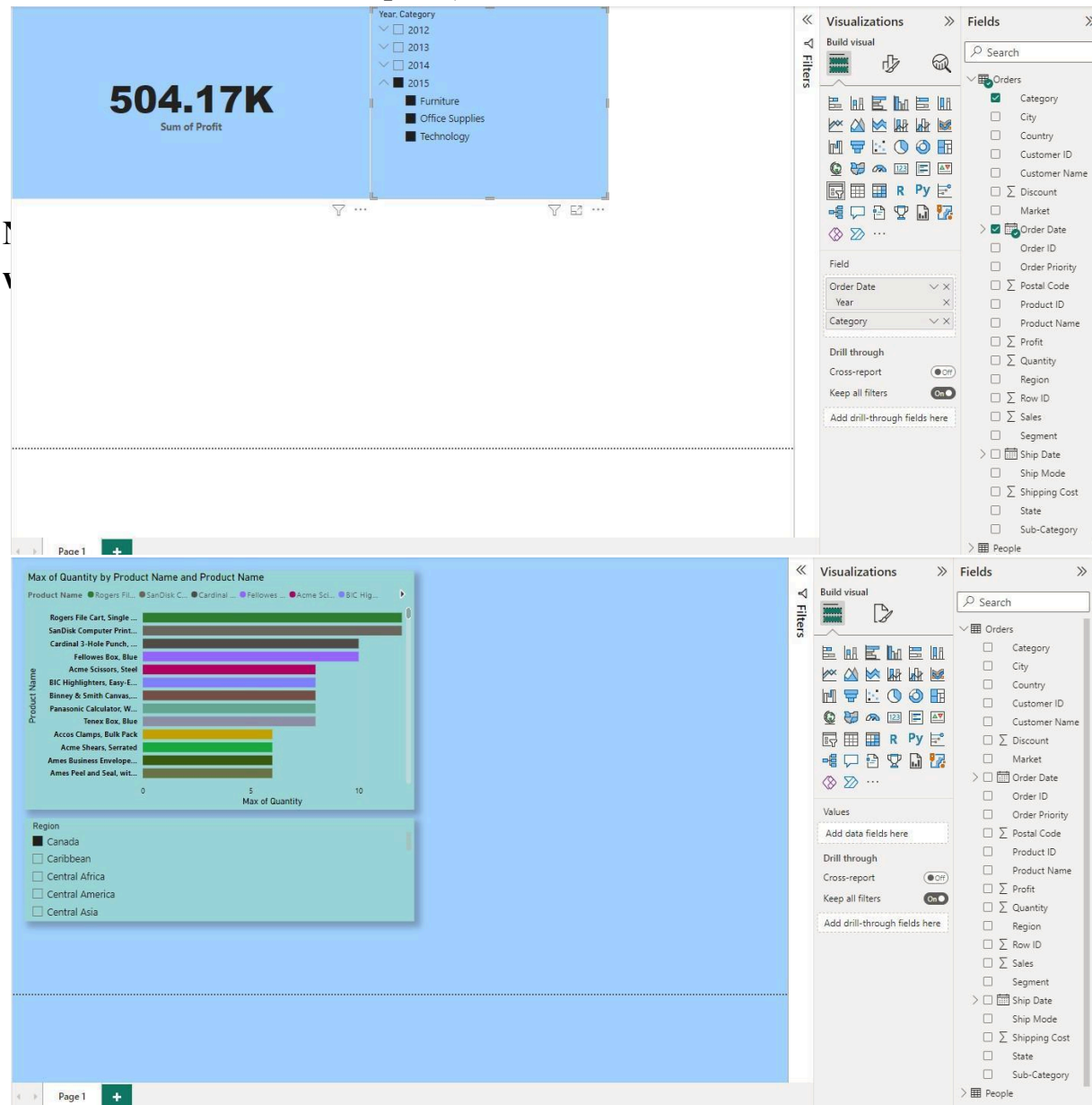






Practical No: 9

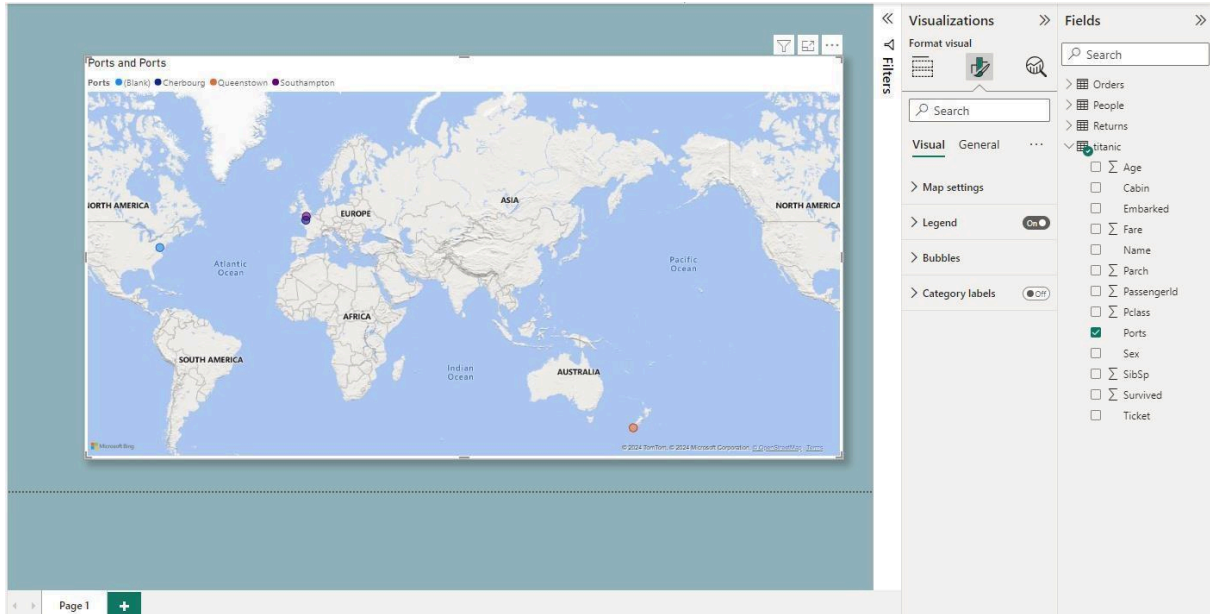
Data visualization using power BI (Use of visualization tools like Card, Donut, chart, stacked chart, tree,map etc.)



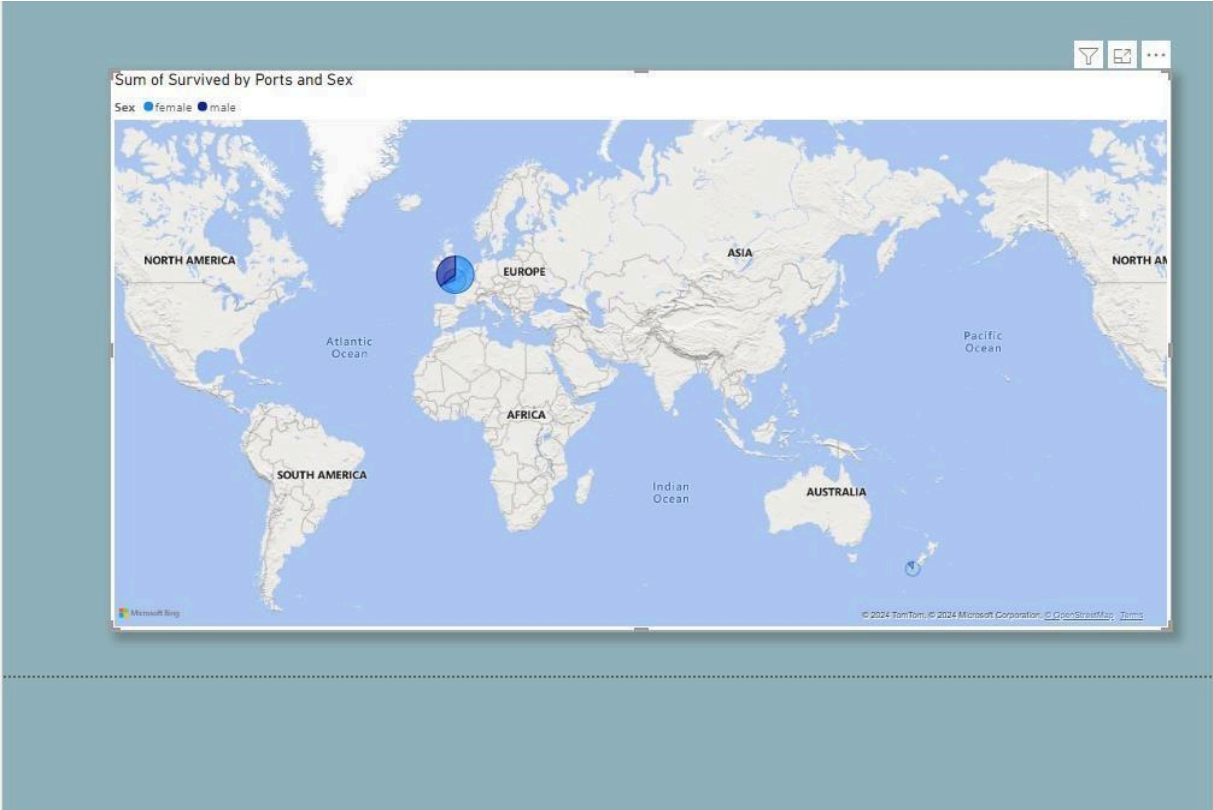
`= Table.AddColumn("#Changed Type", "Ports", each if [Embarked] = "S" then "Southampton" else if [Embarked] = "C" then`

Parch	A _C Ticket	1.2 Fare	A _C Cabin	A _C Embarked	Ports
1	0 A/5 21171	7.25		S	Southampton
2	0 PC 17599	71.2833	C85	C	Cherbourg
3	0 STON/O2. 3101282	7.925		S	Southampton
4	0 113803	53.1	C123	S	Southampton
5	0 373450	8.05		S	Southampton
6	0 330877	8.4583		Q	Queenstown
7	0 17463	51.8625	E46	S	Southampton
8	1 349909	21.075		S	Southampton
9	2 347742	11.1333		S	Southampton
10	0 237736	30.0708		C	Cherbourg
11	1 PP 9549	16.7	G6	S	Southampton
12	0 113783	26.55	C103	S	Southampton
13	0 A/5. 2151	8.05		S	Southampton
14	5 347082	31.275		S	Southampton
15	0 350406	7.8542		S	Southampton
16	0 248706	16		S	Southampton
17	1 382652	29.125		Q	Queenstown
18	0 244373	13		S	Southampton
19	0 345763	18		S	Southampton
20	0 2649	7.225		C	Cherbourg
21	0 239865	26		S	Southampton
22	0 248698	13	D56	S	Southampton
23	0 330923	8.0292		Q	Queenstown
24	0 113788	35.5	A6	S	Southampton
25	1 349909	21.075		S	Southampton
26	0 347082	31.275		S	Southampton

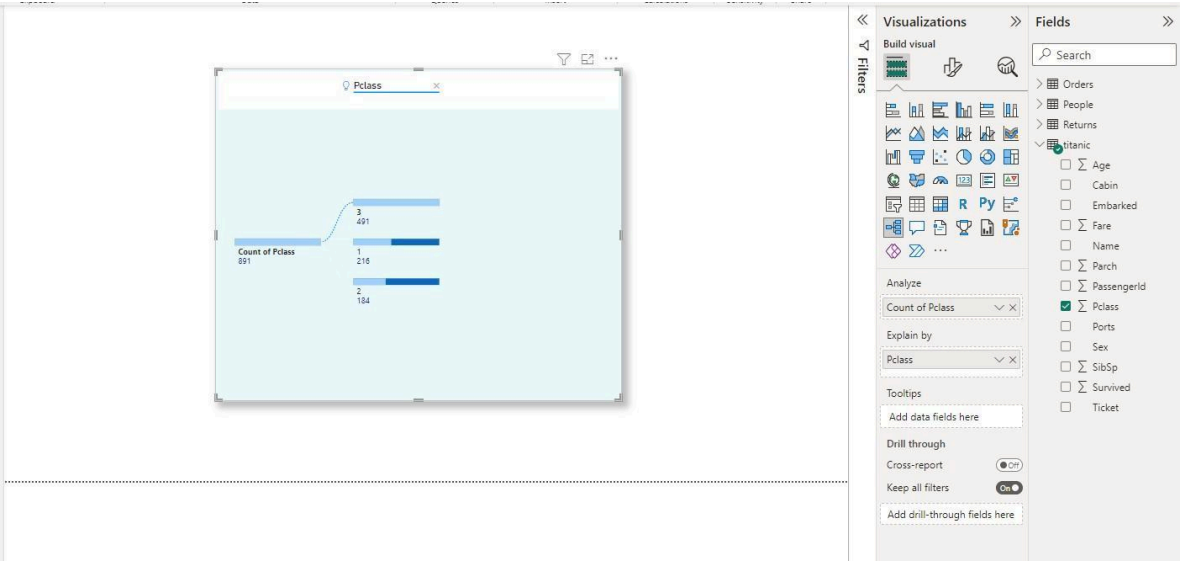
Using titanic dataset to map locations on MAP




Now analyzing the number of people survived based on their Sex



Now Analyzing using Decomposition Tree



 Data Source Wizard

Completing the Wizard
Provide a name and then click Finish to create the new data source.

Data source name:

Preview:

Connection string:

Provider=SQLNCLI11.1;Data Source=.;Integrated Security=SSPI;Initial Catalog=AdventureWorksDW2012

< Back Next > **Finish** Cancel

