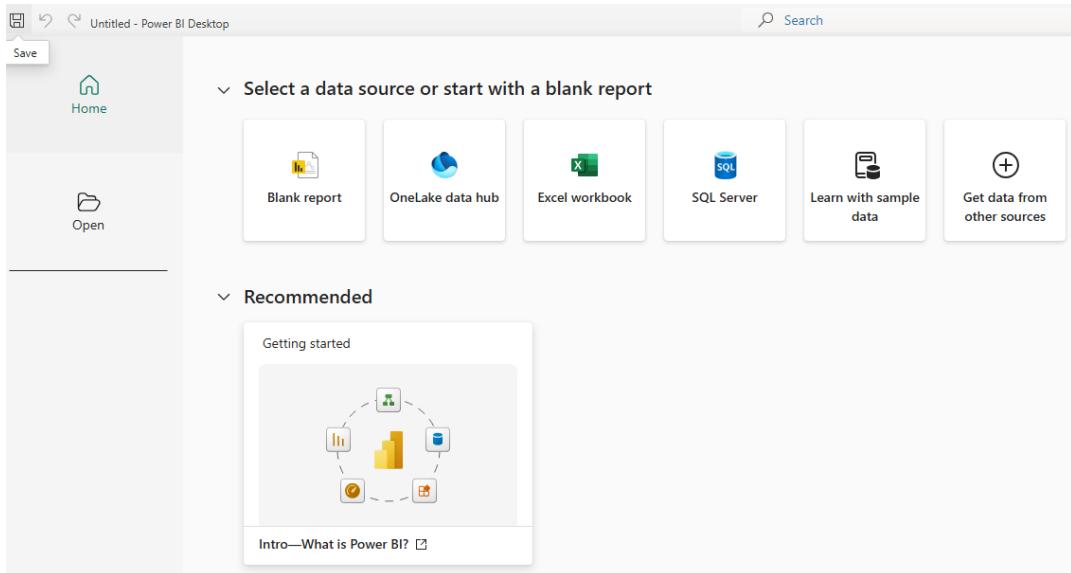


Module 3 – Assignment

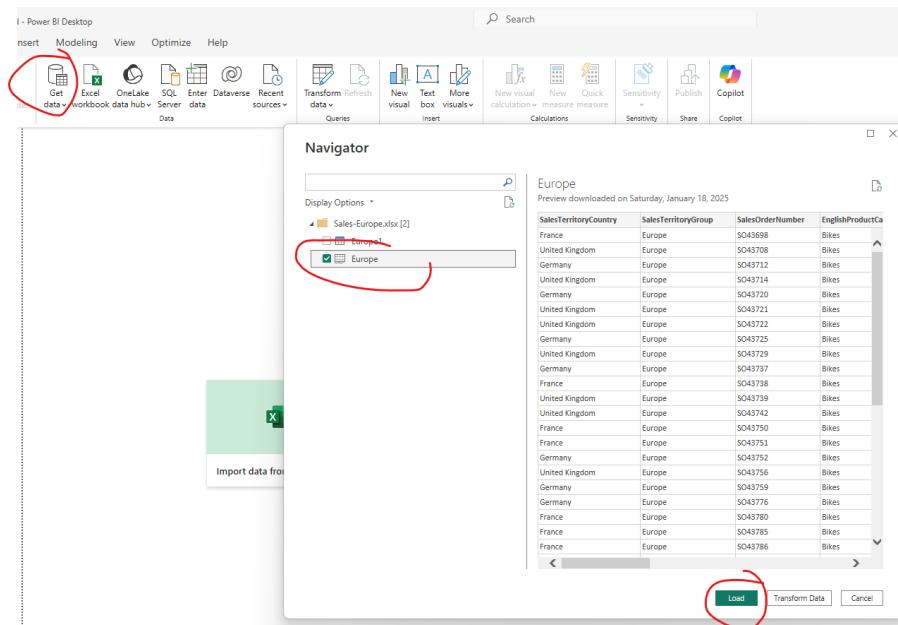
Tasks To Be Performed:

Importing Data from Excel:

- Open Power BI Desktop.



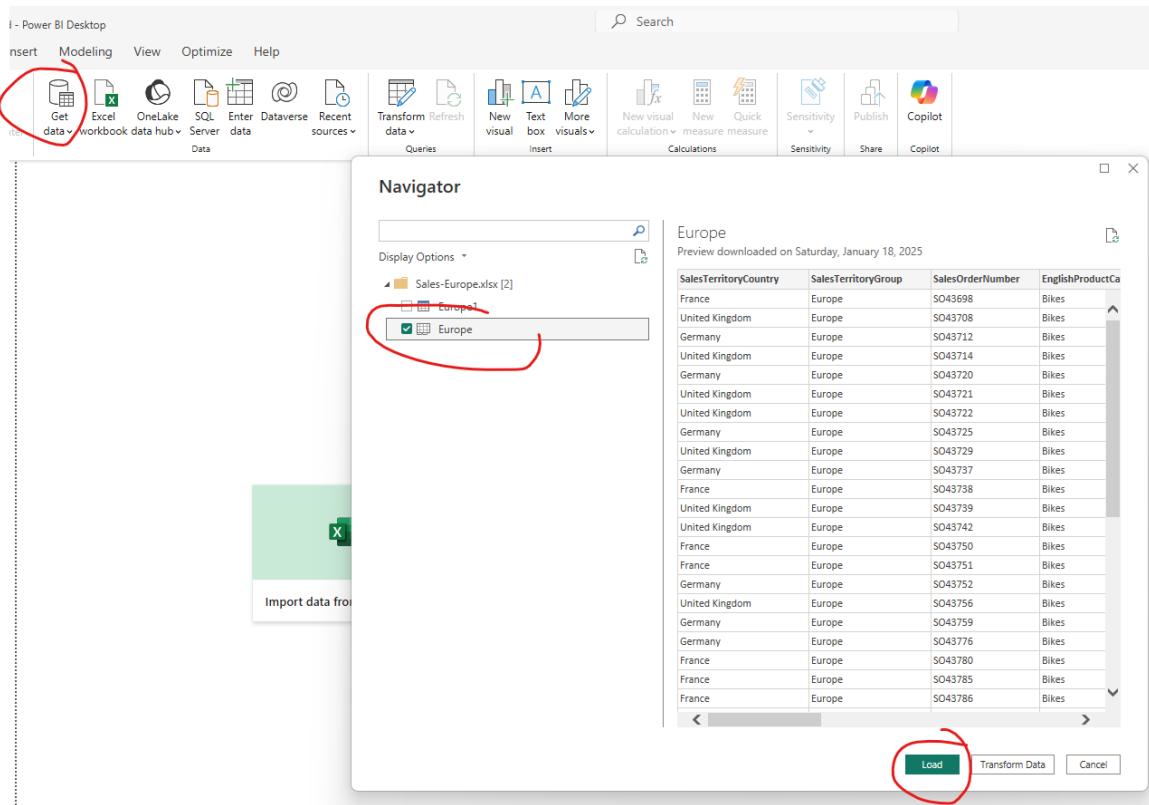
- Import the sales-Europe Excel file.



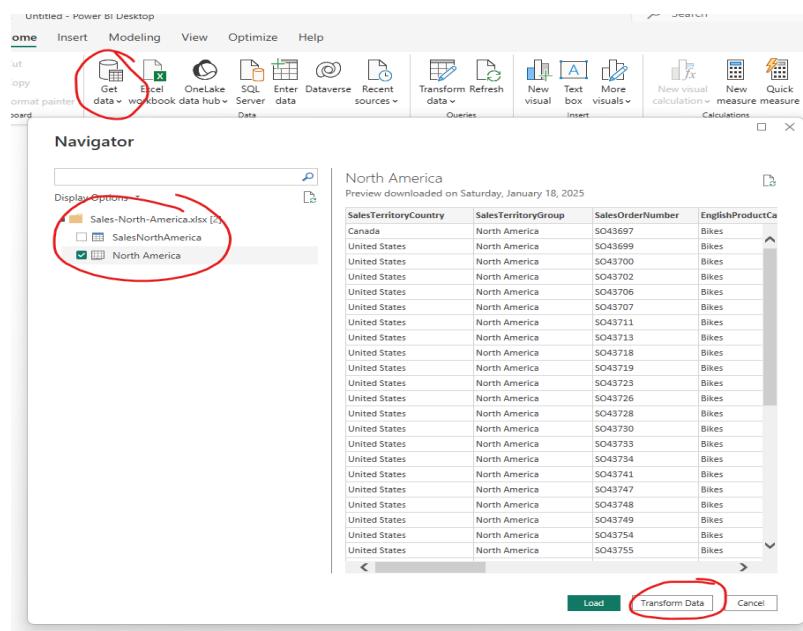
The screenshot shows the Power BI Desktop interface with the 'Data' tab selected. A 'Navigator' dialog box is open, showing the structure of the 'Sales-Europe.xlsx' file. The 'Europe' table is selected. The 'Load' button at the bottom right of the dialog is highlighted with a red circle.

SalesTerritoryCountry	SalesTerritoryGroup	SalesOrderNumber	EnglishProductCa
France	Europe	S043698	Bikes
United Kingdom	Europe	S043708	Bikes
Germany	Europe	S043712	Bikes
United Kingdom	Europe	S043714	Bikes
Germany	Europe	S043720	Bikes
United Kingdom	Europe	S043723	Bikes
United Kingdom	Europe	S043722	Bikes
Germany	Europe	S043725	Bikes
United Kingdom	Europe	S043729	Bikes
Germany	Europe	S043737	Bikes
France	Europe	S043738	Bikes
United Kingdom	Europe	S043739	Bikes
United Kingdom	Europe	S043742	Bikes
France	Europe	S043750	Bikes
France	Europe	S043753	Bikes
Germany	Europe	S043752	Bikes
United Kingdom	Europe	S043756	Bikes
Germany	Europe	S043759	Bikes
Germany	Europe	S043776	Bikes
France	Europe	S043780	Bikes
France	Europe	S043785	Bikes
France	Europe	S043786	Bikes

c) In the Navigator window, select Europe, and click on Load.



d) Import the sales-North America Excel file.



- e) In the Navigator window, select North America, and click on Transform Data to open in Power Query Editor.

The screenshot shows the Power Query Editor interface. The title bar says "Untitled - Power Query Editor". The ribbon menu has tabs: Home, Transform, Add Column, View, Tools, and Help. Below the ribbon are various icons for file operations like Close & Apply, New Source, Recent Sources, Enter Data, Data source settings, Manage Parameters, Refresh, Preview, Properties, Advanced Editor, and Manage. The "Transform" tab is highlighted. The "Queries [2]" pane on the left shows two entries: "Europe" and "North America", with "North America" selected and highlighted with a red circle. The main area displays a table with columns: SalesTerritoryCountry, SalesTerritoryGroup, SalesOrderNumber, EnglishProductCategoryName, and EnglishProductSubcategory. The table data shows 13 rows of United States data, each with "North America" in the SalesTerritoryGroup column. A status bar at the bottom indicates "2 distinct, 0 unique" for SalesTerritoryCountry and "1000 distinct, 1000 unique" for SalesOrderNumber.

Shaping and Combining Data:

- a) In the Queries pane, click on Europe to display the data in the preview mode.

This screenshot is similar to the previous one but with the "Europe" query selected in the "Queries [2]" pane, indicated by a red circle. The main table preview shows 13 rows of United States data, with "Europe" listed in the SalesTerritoryGroup column. The status bar at the bottom of the table preview shows "3 distinct, 0 unique" for SalesTerritoryCountry and "1000 distinct, 1000 unique" for SalesOrderNumber.

b) Remove ProductKey and SalesOrderNumber columns.

The screenshot shows the Power BI Data Editor interface. The ribbon at the top has the 'Manage' tab selected, specifically the 'Columns' section. A red circle highlights the 'Remove Columns' button. A context menu is open over the 'ProductKey' column, with the 'Remove Columns' option also circled in red. The main table view shows data from the 'SalesTerritoryCountry' query, including columns like SalesOrderNumber, EnglishProductCategoryName, EnglishProductSubcategoryName, and ProductKey. The 'ProductKey' column has a context menu open with various options like Copy, Remove Columns, Remove Other Columns, etc.

c) Rename the SalesTerritoryCountry column to Country.

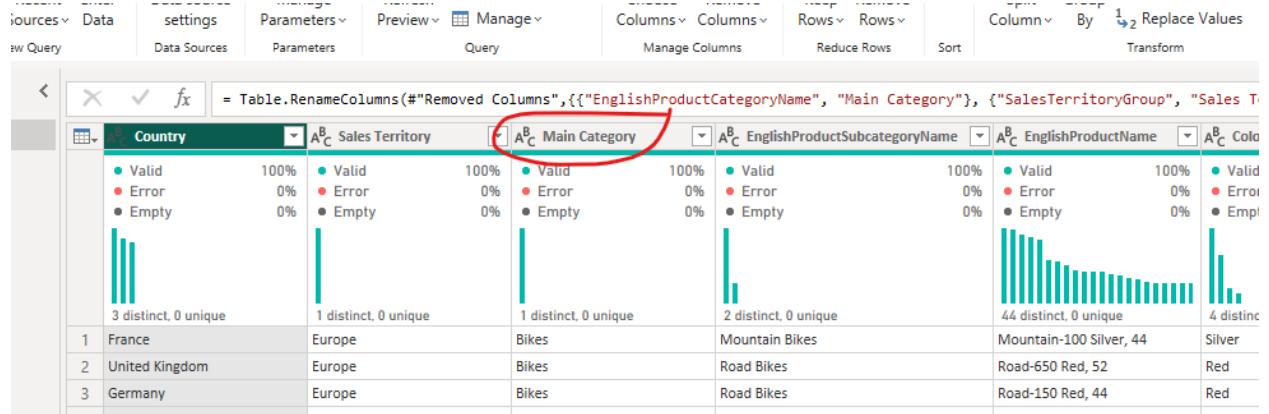
The screenshot shows the Power Query Editor interface. The ribbon at the top has the 'Transform' tab selected. A red circle highlights the 'Advanced Editor' button. A context menu is open over the 'Country' column, with the 'Rename' option circled in red. The main table view shows data from the 'Changed Type' query, including columns like SalesTerritoryGroup, EnglishProductCategoryName, EnglishProductSubcategoryName, and EnglishProduct. The 'Country' column has a context menu open with various options like Close & Apply, New Source, Recent Sources, Enter Data, Data source settings, Manage Parameters, Refresh, Advanced Editor, Choose Columns, Remove Columns, Keep Rows, Remove Rows, and Reduce Rows.

d) Rename the SalesTerritoryGroup column to Sales Territory.

The screenshot shows the Power BI Data Editor interface. A context menu is open over the "Sales Territory" column header. The menu items include: Copy, Remove, Remove Other Columns, Duplicate Column, Add Column From Examples..., Remove Duplicates, Remove Errors, Change Type, Transform, Replace Values..., Replace Errors..., Split Column, Group By..., Fill, Unpivot Columns, Unpivot Other Columns, Unpivot Only Selected Columns, Rename... (which is circled in red), Move, Drill Down, and Add as New Query. The "Rename..." option is highlighted with a red circle. A large red annotation "Double Click" is placed over the first few rows of the table. The table itself has columns: Country, Sales Territory, and EnglishProductCategoryName. The "Country" column contains values like France, United Kingdom, Germany, etc., with counts of 3 distinct, 0 unique. The "Sales Territory" column contains values like Europe, Europe, Europe, etc., with counts of 1 distinct, 0 unique. The "EnglishProductCategoryName" column is partially visible on the right.

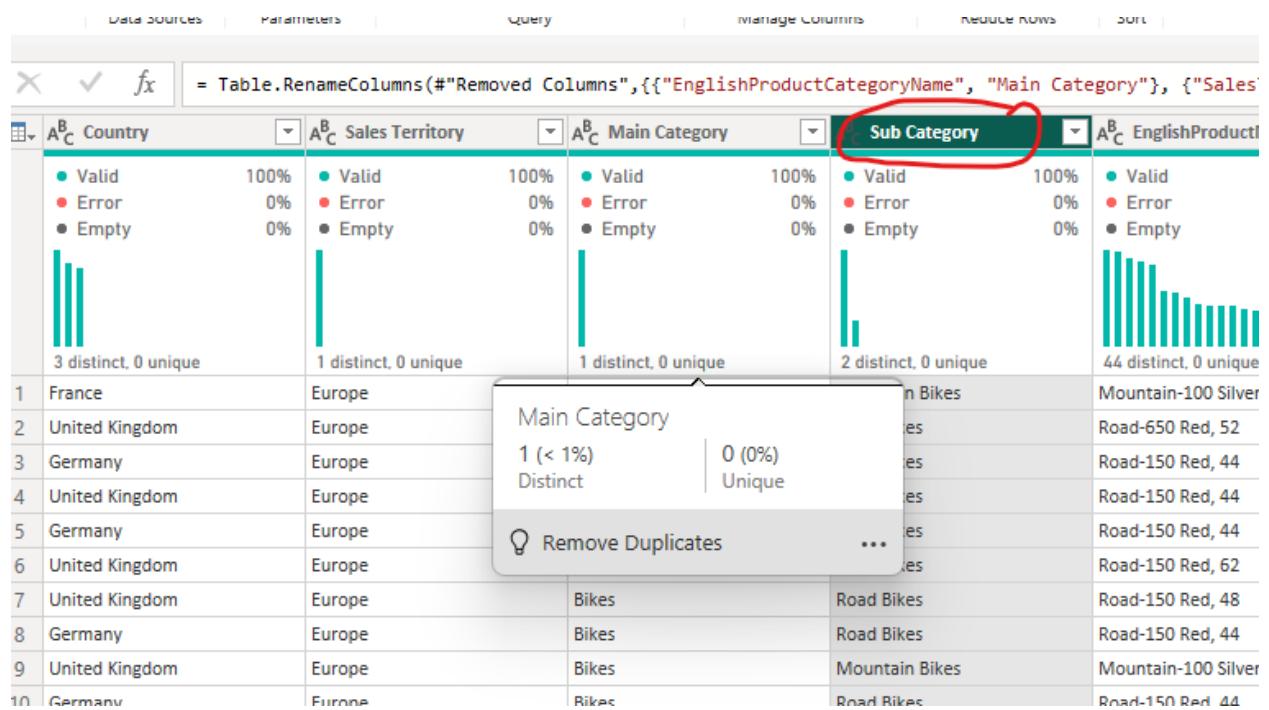
Country	Sales Territory	EnglishProductCategoryName
France	Europe	Rides
United Kingdom	Europe	Road
Germany	Europe	Road
United Kingdom	Europe	Road
Germany	Europe	Road
United Kingdom	Europe	Road
United Kingdom	Europe	Road
Germany	Europe	Road
United Kingdom	Europe	Road
Germany	Europe	Road
France	Europe	Road
United Kingdom	Europe	Road
United Kingdom	Europe	Road
France	Europe	Road
France	Europe	Road
Germany	Europe	Road
United Kingdom	Europe	Road
Germany	Europe	Road

e) Rename the EnglishProductName to Main Category.



A screenshot of the Power BI Data View interface. The top navigation bar includes 'Sources', 'Data', 'settings', 'Parameters', 'Preview', 'Manage', 'Columns', 'Rows', 'Column By', 'Replace Values', 'New Query', 'Data Sources', 'Parameters', 'Query', 'Manage Columns', 'Reduce Rows', 'Sort', and 'Transform'. The main area displays a table with columns: Country, Sales Territory, Main Category, EnglishProductSubcategoryName, EnglishProductName, and Color. The 'Main Category' column is highlighted with a red circle. A formula bar at the top shows the query: = Table.RenameColumns(#"Removed Columns", {"EnglishProductName", "Main Category"}, {"SalesTerritoryGroup", "Sales Territory"}).

f) Rename the EnglishProductSubcategoryName column to Sub Category.



A screenshot of the Power BI Data View interface. The top navigation bar includes 'Data Sources', 'Parameters', 'Query', 'Manage Columns', 'Reduce Rows', and 'Sort'. The main area displays a table with columns: Country, Sales Territory, Main Category, Sub Category, and EnglishProductSubcategoryName. The 'Sub Category' column is highlighted with a red circle. A formula bar at the top shows the query: = Table.RenameColumns(#"Removed Columns", {"EnglishProductName", "Main Category"}, {"SalesTerritoryGroup", "Sales Territory"}). A context menu is open over the 'Main Category' column, showing options: 'Main Category', '1 (<1%) Distinct', '0 (0%) Unique', 'Remove Duplicates', and '...'. A tooltip for 'Remove Duplicates' says 'Remove Duplicates'.

g) Rename EnglishProductName to Product.

Data Sources		Parameters		Query		Manage Columns		Reduce Rows		Sort		Tr
X	✓	fx		= Table.RenameColumns(#"Removed Columns",{{"EnglishProductCategoryName", "Main Category"}, {"SalesTerritoryGr								
	A ^B Country		A ^B Sales Territory		A ^B Main Category		A ^B Sub Category		A ^B Product			A ^B
● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid	100%	● Valid
● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error	0%	● Error
● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty	0%	● Empty
												
	3 distinct, 0 unique		1 distinct, 0 unique		1 distinct, 0 unique		2 distinct, 0 unique		44 distinct, 0 unique			4
1	France	Europe		Bikes		Mountain Bikes		Mountain-100 Silver, 44		Si		
2	United Kingdom	Europe		Bikes		Road Bikes		Road-650 Red, 52		Re		
3	Germany	Europe		Bikes		Road Bikes		Road-150 Red, 44		Re		
4	United Kingdom	Europe		Bikes		Road Bikes		Road-150 Red, 44		Re		
5	Germany	Europe		Bikes		Road Bikes		Road-150 Red, 44		Re		
6	United Kingdom	Europe		Bikes		Road Bikes		Road-150 Red, 62		Re		
7	United Kingdom	Europe		Bikes		Road Bikes		Road-150 Red, 48		Re		
8	Germany	Europe		Bikes		Road Bikes		Road-150 Red, 44		Re		

h) Move the color column to the left.

Power BI Data Editor

Table: [Removed Columns]

```
= Table.RenameColumns(#"Removed Columns", {"EnglishProductName", "Main Category"}, {"SalesTerritoryGroup", "Sales Territory"} )
```

Color

	Sales Territory	Main Category	Sub Category	Product	Color
Valid	100%	100%	100%	100%	Valid
Error	0%	0%	0%	0%	Error
Empty	0%	0%	0%	0%	Empty
	3 distinct, 0 unique	1 distinct, 0 unique	1 distinct, 0 unique	2 distinct, 0 unique	44 distinct, 0 unique
France	Europe	Bikes	Mountain Bikes	Mountain-100 Silver, 44	Silver
United Kingdom	Europe	Bikes	Road Bikes	Road-650 Red, 52	Red
Germany	Europe	Bikes	Road Bikes	Road-150 Red, 44	Red
United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 44	Red
Germany	Europe	Bikes	Road Bikes	Road-150 Red, 44	Red
United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	Red
United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 48	Red
Germany	Europe	Bikes	Road Bikes	Road-150 Red, 44	Red
United Kingdom	Europe	Bikes	Mountain Bikes	Mountain-100 Silver, 44	Silver
Germany	Europe	Bikes	Road Bikes	Road-150 Red, 44	Red
France	Europe	Bikes	Road Bikes	Road-150 Red, 48	Red
United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	Red
United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 56	Red
France	Europe	Bikes	Road Bikes	Road-150 Red, 44	Red

- i) In the Queries pane, click on North America.

	SalesTerritoryCountry	SalesTerritoryGroup	SalesOrderNumber
1	Canada	North America	SO43697
2	United States	North America	SO43699
3	United States	North America	SO43700
4	United States	North America	SO43702
5	United States	North America	SO43706

- j) Repeat Steps from 2 to 8.

	Color	Country	SalesTerritory	Main Category	Sub category	Product	OrderQuantity	UnitPrice	OrderDate	DueDate
1	Red	Canada	North America	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	7/1/2	
2	Silver	United States	North America	Bikes	Mountain Bikes	Mountain-100 Silver, 44	1	3399.99	7/1/2	
3	Black	United States	North America	Bikes	Road Bikes	Road-650 Black, 52	1	699.0982	7/1/2	
4	Red	United States	North America	Bikes	Road Bikes	Road-150 Red, 44	1	3578.27	7/2/2	
5	Red	United States	North America	Bikes	Road Bikes	Road-150 Red, 48	1	3578.27	7/3/2	
6	Red	United States	North America	Bikes	Road Bikes	Road-150 Red, 48	1	3578.27	7/3/2	
7	Red	United States	North America	Bikes	Road Bikes	Road-150 Red, 56	1	3578.27	7/4/2	
8	Red	United States	North America	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	7/5/2	
9	Red	United States	North America	Bikes	Road Bikes	Road-150 Red, 44	1	3578.27	7/6/2	
10	Red	United States	North America	Bikes	Road Bikes	Road-150 Red, 48	1	3578.27	7/6/2	
11	Black	United States	North America	Bikes	Road Bikes	Road-650 Black, 58	1	699.0982	7/7/2	

k) Append Europe and North America tables.

The screenshot shows the Power Query Editor interface with the 'Home' tab selected. In the 'Queries [3]' pane, 'Europe', 'North America', and 'Append1' are listed. The 'Append1' query is selected, and its preview shows a combined table of 'Europe' and 'North America' data. A context menu is open over the preview area, with the 'Append' option highlighted and circled in red. The 'Append' dialog box is displayed, showing 'Two tables' selected, with 'Europe' in the 'First table' dropdown and 'North America' in the 'Second table' dropdown. The 'OK' button is circled in red. The background shows the combined table's schema and some data rows.

l) Import the country code.xlsx.

The screenshot shows the Power Query Editor interface with the 'Home' tab selected. In the 'Queries [3]' pane, 'Europe', 'North America', and 'Append1' are listed. The 'Append1' query is selected, and its preview shows a combined table of 'Europe' and 'North America' data. The 'Navigator' pane is open, showing 'Display Options' with 'Country Code.xlsx [1]' and 'Country Codes' selected. The 'Country Codes' table is displayed on the right, showing territory names and their corresponding codes. The 'OK' button at the bottom of the Navigator pane is circled in red.

Column1	Column2	Column3
Territory	Country	Code
North America	Canada	CA
Europe	France	FR
Europe	Germany	DE
Europe	Italy	IT
Europe	Spain	SP
Europe	Switzerland	SZ
Europe	United Kingdom	UK
North America	United States	US

m) Merge the country code query with Europe.

Screenshot of the Power BI Data Editor showing the 'Merge' dialog box.

The 'Merge' dialog box is open, showing two tables being compared:

- Country Codes** (Top Table):

Territory	Country	Code
North America	Canada	CA
Europe	France	FR
Europe	Germany	DE
Europe	Italy	IT
Europe	Spain	SP
- Europe** (Bottom Table):

Color	Country	Sales Territory	Main Category	Sub Category	Product	OrderQuantity
Silver	France	Europe	Bikes	Mountain Bikes	Mountain-100 Silver, 44	
Red	United Kingdom	Europe	Bikes	Road Bikes	Road-650 Red, 52	
Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 44	
Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 44	

The 'Join Kind' dropdown is set to "Left Outer (all from first, matching from second)".

A note at the bottom states: "The selection matches 3 of 8 rows from the first table."

Buttons at the bottom right: **OK** and **Cancel**.

n) Get the country code from the merged column, and move it to the beginning of the table.

The screenshot shows the Power Query Editor interface with the 'Country Codes' query selected. The 'Code' column is highlighted with a red circle. The 'Merge1' entry in the 'Queries' list is also highlighted with a red circle. The data table contains 16 rows of country information, including columns for Country, Territory, Color, Europe.Country, Sales Territory, and Main Category.

	Country	Code	Territory	Color	Europe.Country	Sales Territory	Main Category
1	France	FR	Europe	Silver	France	Europe	Bikes
2	United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes
3	United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes
4	United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes
5	United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes
6	United Kingdom	UK	Europe	Silver	United Kingdom	Europe	Bikes
7	Germany	DE	Europe	Red	Germany	Europe	Bikes
8	Germany	DE	Europe	Red	Germany	Europe	Bikes
9	Germany	DE	Europe	Red	Germany	Europe	Bikes
10	Germany	DE	Europe	Red	Germany	Europe	Bikes
11	France	FR	Europe	Red	France	Europe	Bikes
12	United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes
13	United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes
14	France	FR	Europe	Red	France	Europe	Bikes
15	France	FR	Europe	Red	France	Europe	Bikes
16	Germany	DE	Europe	Dark	Germany	Europe	Rivers

o) Rename the Code column to Country Code.

The screenshot shows the Power Query Editor interface with the 'Reordered Columns' query selected. The 'Country Code' column is highlighted with a red circle. The data table contains 22 rows of country information, with the 'Country Code' column now at the beginning of the table.

	Country	Country Code	Territory	Color	Europe.Country	Sales Territory
1	France	FR	Europe	Silver	France	Europe
2	United Kingdom	UK	Europe	Red	United Kingdom	Europe
3	United Kingdom	UK	Europe	Red	United Kingdom	Europe
4	United Kingdom	UK	Europe	Red	United Kingdom	Europe
5	United Kingdom	UK	Europe	Red	United Kingdom	Europe
6	United Kingdom	UK	Europe	Silver	United Kingdom	Europe
7	Germany	DE	Europe	Red	Germany	Europe
8	Germany	DE	Europe	Red	Germany	Europe
9	Germany	DE	Europe	Red	Germany	Europe
10	Germany	DE	Europe	Red	Germany	Europe
11	France	FR	Europe	Red	France	Europe
12	United Kingdom	UK	Europe	Red	United Kingdom	Europe
13	United Kingdom	UK	Europe	Red	United Kingdom	Europe
14	France	FR	Europe	Red	France	Europe
15	France	FR	Europe	Red	France	Europe
16	Germany	DE	Europe	Red	Germany	Europe
17	United Kingdom	UK	Europe	Black	United Kingdom	Europe
18	Germany	DE	Europe	Red	Germany	Europe
19	Germany	DE	Europe	Red	Germany	Europe
20	France	FR	Europe	Red	France	Europe
21	France	FR	Europe	Red	France	Europe
22	France	FR	Europe	Red	France	Europe

p) Save the file as Shaping and Combining Data.

The screenshot shows the Microsoft Power BI Data Editor interface. The ribbon at the top has 'Table tools' selected. A red box highlights the 'Table tools' tab and the 'Merge1' table name in the top-left corner. The main area displays a large table with multiple columns, including Country, Country Code, Territory, Europe.Color, Europe.Country, Europe.Sales Territory, Europe.Main Category, Europe.Sub Category, Europe.Product, Europe.OrderQuantity, Europe.UnitPrice, and Europe.OrderDate. The 'Europe.OrderDate' column contains dates like 'Wednesday, 2019-01-01'. A red circle highlights the 'Merge1' entry in the navigation pane on the right side, which also lists 'Append1', 'Country Codes', 'Europe', and 'North America'.

Country	Country Code	Territory	Europe.Color	Europe.Country	Europe.Sales Territory	Europe.Main Category	Europe.Sub Category	Europe.Product	Europe.OrderQuantity	Europe.UnitPrice	Europe.OrderDate
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Wednesday, 2019-01-01
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Monday, 2019-01-07
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Saturday, 2019-01-05
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Monday, 2019-01-07
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Friday, 2019-01-04
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Sunday, 2019-01-06
France	FR	Europe	Red	France	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Tuesday, 2019-01-08
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Saturday, 2019-01-05
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Saturday, 2019-01-05
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Sunday, 2019-01-06
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Monday, 2019-01-07
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Sunday, 2019-01-06
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Thursday, 2019-01-03
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Monday, 2019-01-07
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Sunday, 2019-01-06
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Monday, 2019-01-07
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Friday, 2019-01-04
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Sunday, 2019-01-06
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Tuesday, 2019-01-08
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Tuesday, 2019-01-08
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Thursday, 2019-01-03
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Tuesday, 2019-01-08
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Friday, 2019-01-04
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Sunday, 2019-01-06
Germany	DE	Europe	Red	Germany	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Tuesday, 2019-01-08
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Tuesday, 2019-01-08
United Kingdom	UK	Europe	Red	United Kingdom	Europe	Bikes	Road Bikes	Road-150 Red, 62	1	3578.27	Tuesday, 2019-01-08