Extracting Data from SharePoint Online using Query Functions

Lab Time: 40 minutes

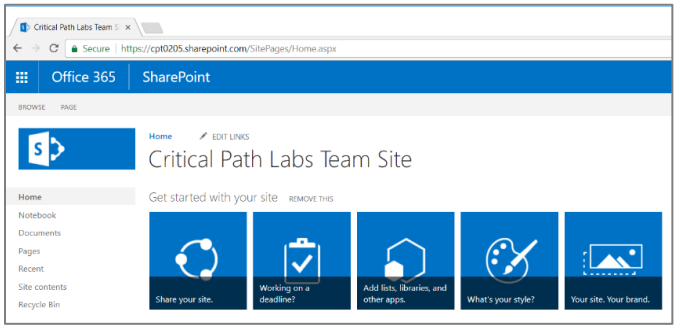
Lab Folder: C:\Student\Modules\02_Queries\Lab\

Lab Overview: In this lab you will begin.

Exercise 1: Designing Advanced Queries for SharePoint Online using Query Functions

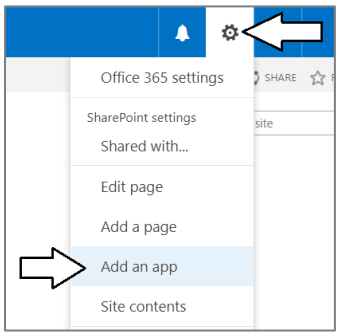
In the following exercise, you will use the **Query Editor** window to design an advanced query using a query function.

1. Navigate to the SharePoint team site at the root of your SharePoint tenancy.
   a) The SharePoint site should have a URL in the form of **https://[Your tenant name].sharepoint.com**.

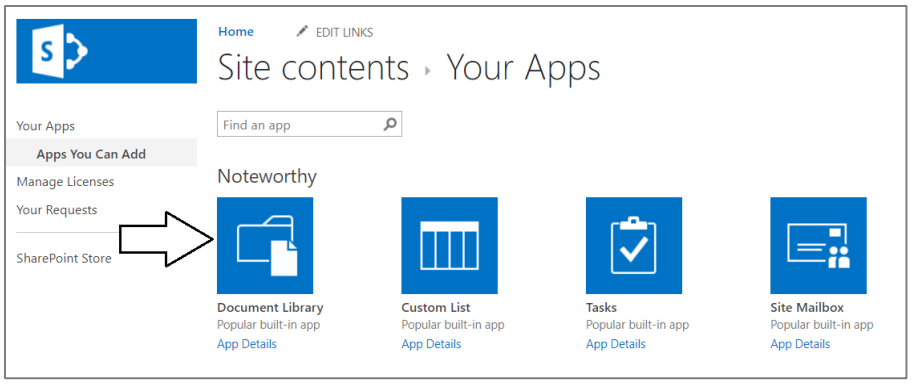


You can use any SharePoint Online team site as long as you have permissions to create a list.

2. Create a new document library named Data to store the files with expense data.
   a) Drop down the Site Actions menu and select **Add an app**.

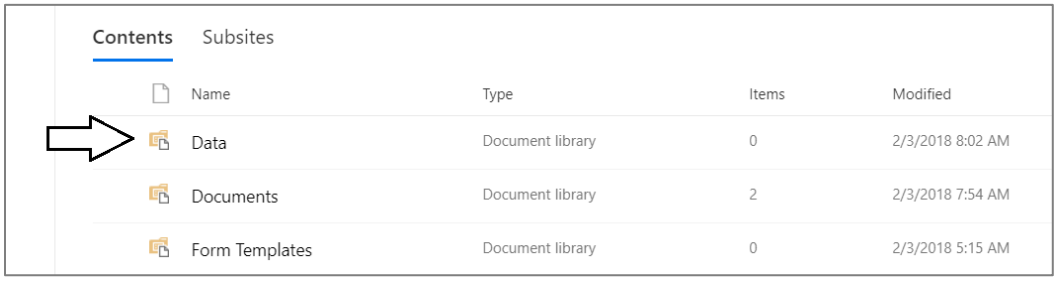


   b) Select **Document Library** as the type of list to create.

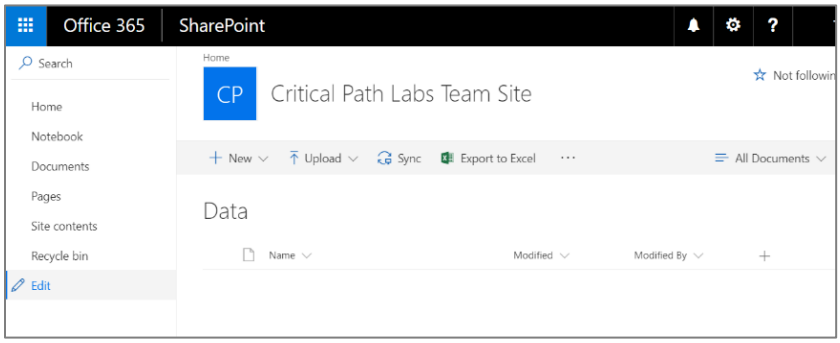


c) In the **Adding Document Library** dialog, add a name of Data and click **Create**.

d) Once the **Data** document library has been created, navigate to its default view.



e) You should now be at the default view for the Data document library.

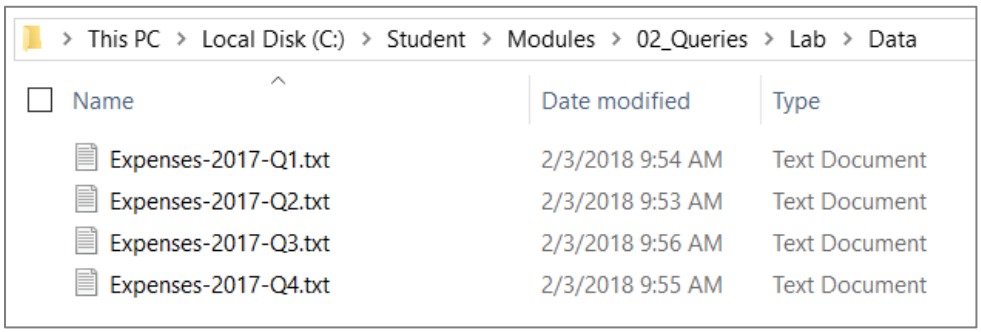


3. Update data files to the Data document library.

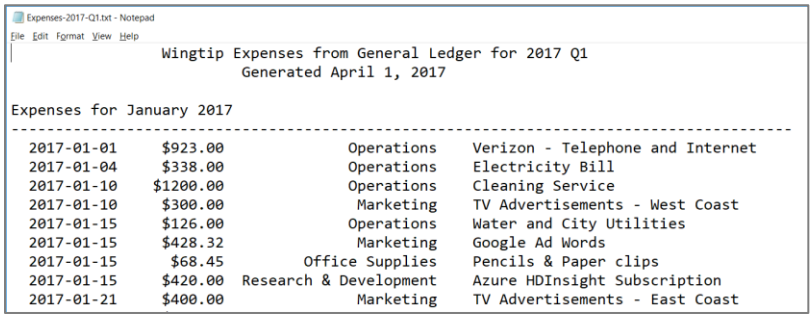
a) Using Windows Explorer, examine the data files into the follow folder.

```
C:\Student\Modules\02_Queries\Lab\Data
```

b) You should see the following four files as shown in the following screenshot.



c) Double-click on the file named **Expenses-2017-Q1.txt**. to open it in Notepad and inspect its contents.



```
Expenses-2017-Q1.txt - Notepad
File  Edit  Format  View  Help
                Wingtip Expenses from General Ledger for 2017 Q1
                         Generated April 1, 2017

Expenses for January 2017
-------------------------------------------------------------------------------------
  2017-01-01     $923.00              Operations    Verizon - Telephone and Internet
  2017-01-04     $338.00              Operations    Electricity Bill
  2017-01-10    $1200.00              Operations    Cleaning Service
  2017-01-10     $300.00               Marketing    TV Advertisements - West Coast
  2017-01-15     $126.00              Operations    Water and City Utilities
  2017-01-15     $428.32               Marketing    Google Ad Words
  2017-01-15      $68.45         Office Supplies    Pencils & Paper clips
  2017-01-15     $420.00  Research & Development    Azure HDInsight Subscription
  2017-01-21     $400.00               Marketing    TV Advertisements - East Coast
```

As you can see, this file is an unstructured text files with fixed-width lines which contain expense data. The other three files in the Data folder have expenses for different time periods, but the format of their contents is the same.

d) Upload the following three files to the **Data** document library.

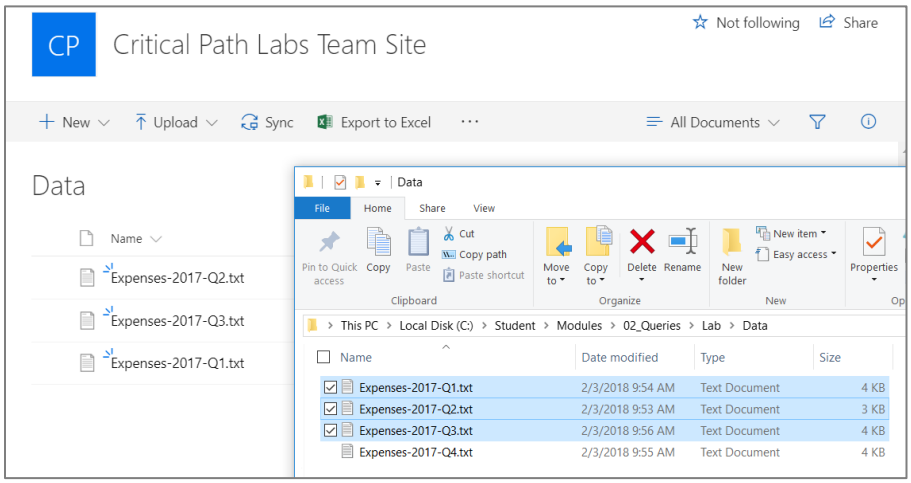
i) **Expenses-2017-Q1.txt**

ii) **Expenses-2017-Q2.txt**

iii) **Expenses-2017-Q3.txt**

Note that you should NOT upload the fourth file named **Expenses-2017-Q4.txt**. You will upload the last file later in this lab.

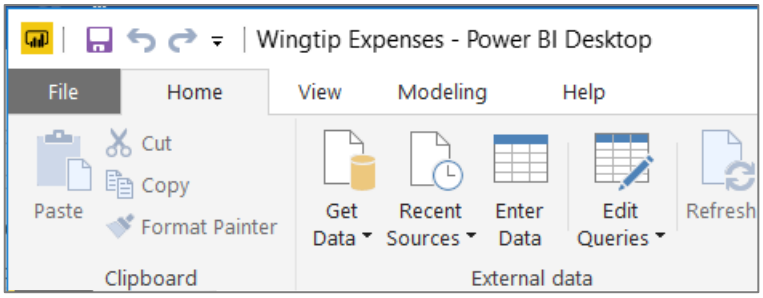
e) You should be able to verify that those three files have been upload to the **Data** document library.

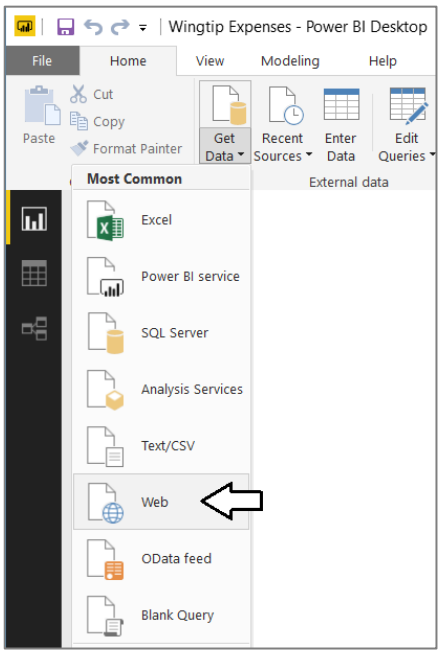


4. Create a new Power BI Desktop project named **Wingtip Expenses.pbix**.

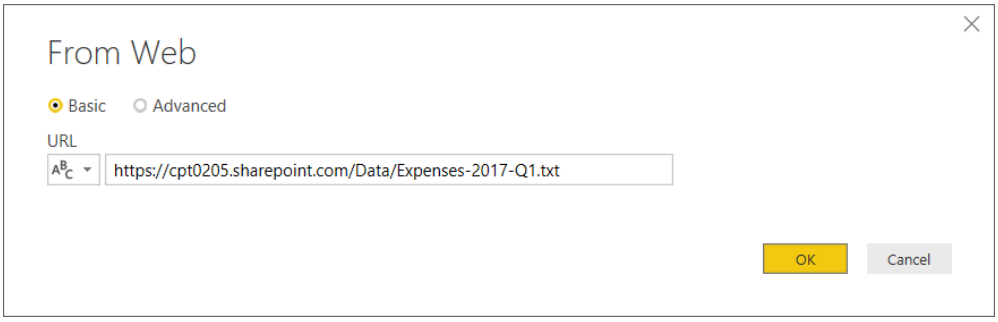
a) Launch Power BI Desktop.

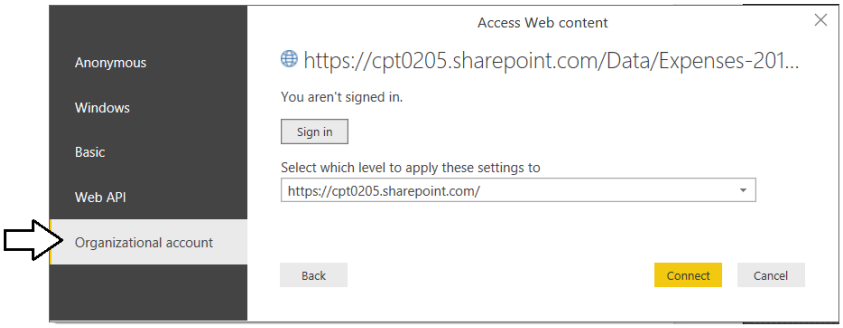
b) Begin by saving the new project and give it a name of

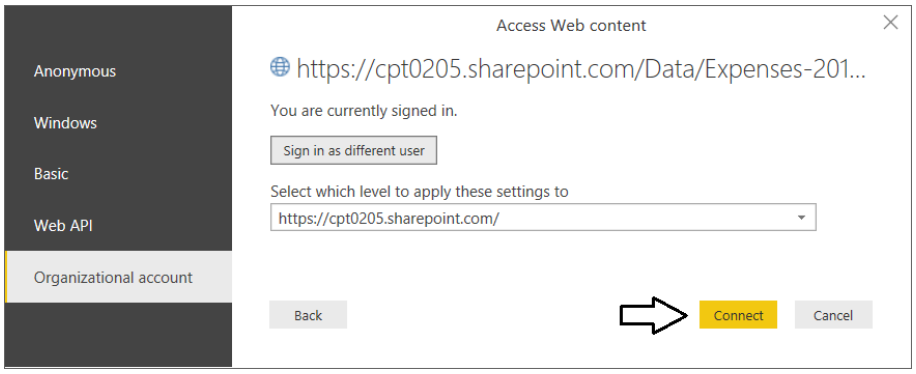


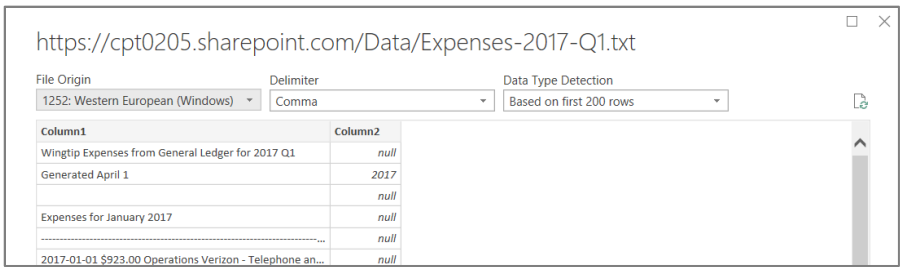


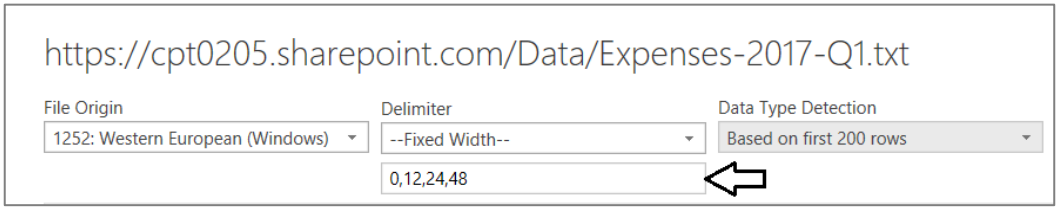

```
https://cpt0205.sharepoint.com/Data/Expenses-2017-Q1.txt
```

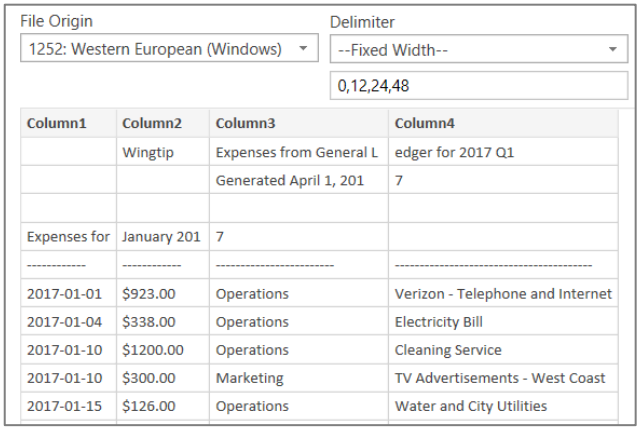


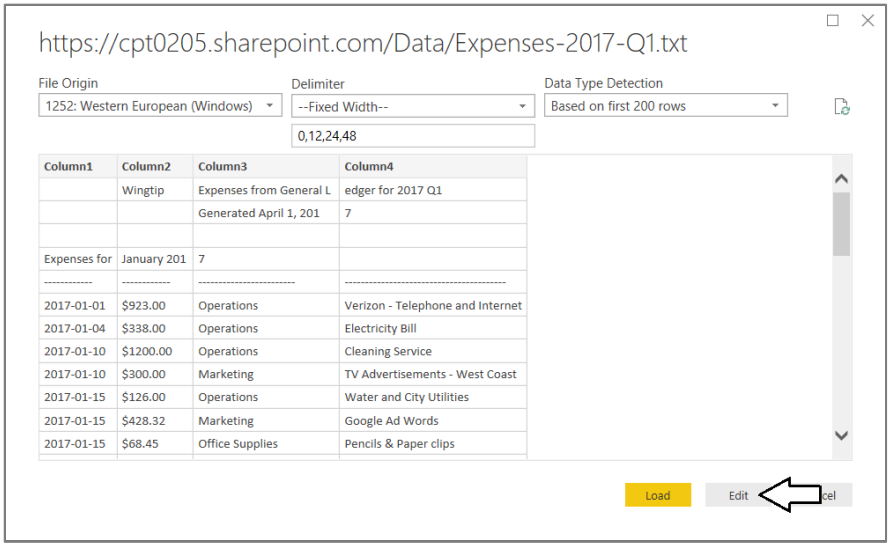


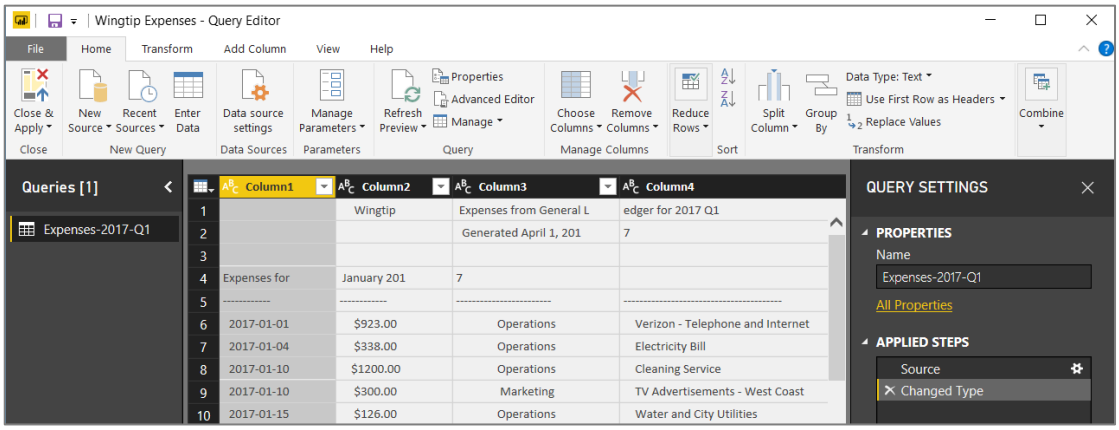


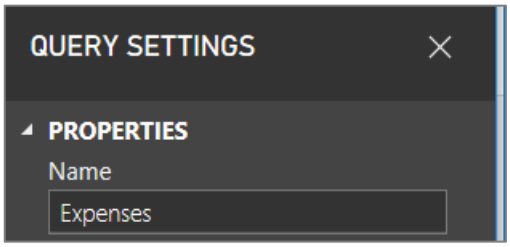


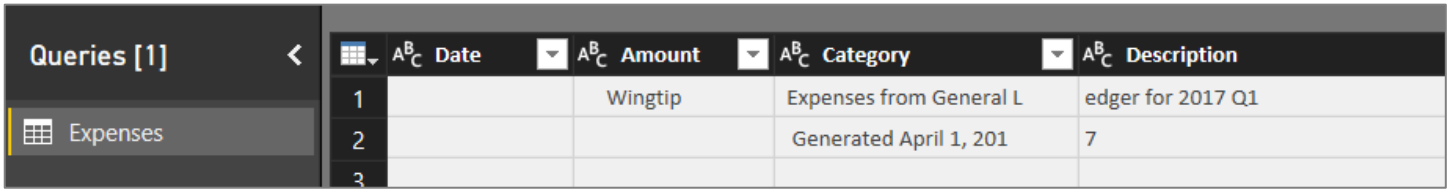


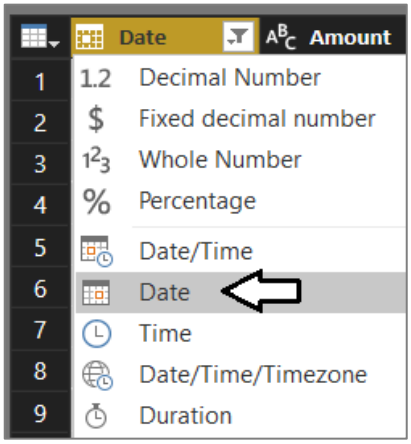


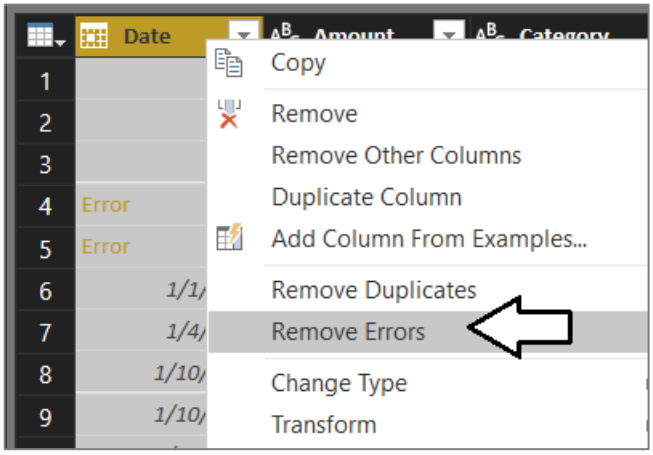


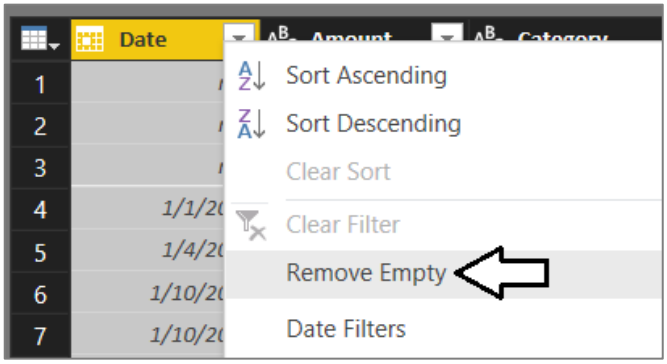




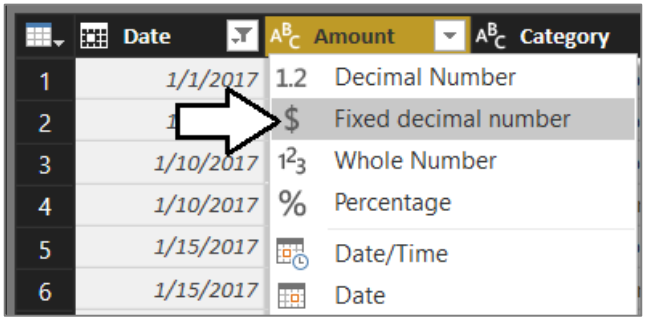




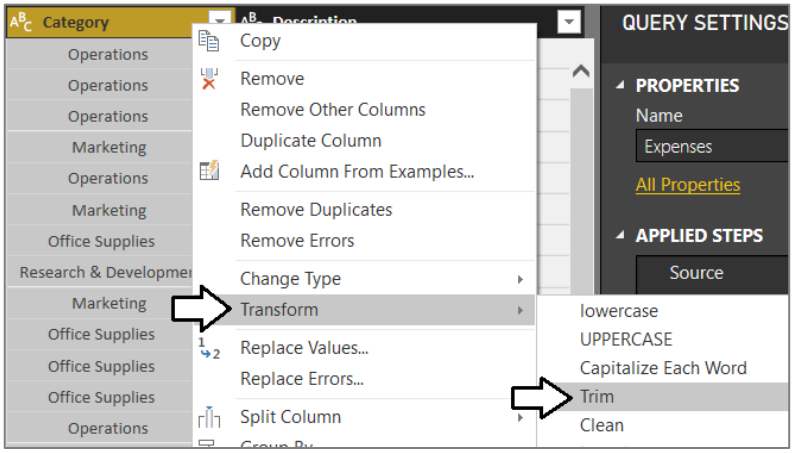




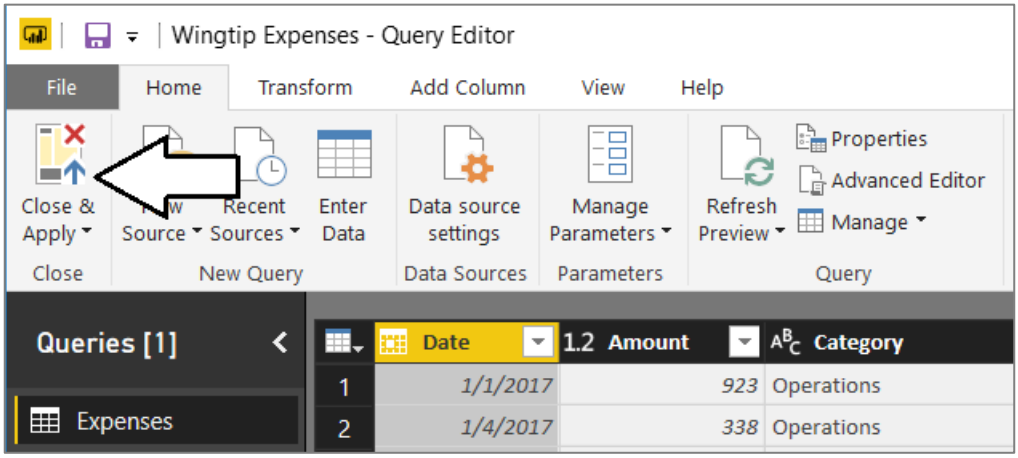
	Date	Amount	Category	Description
1	1/1/2017	$923.00	Operations	Verizon - Telephone a
2	1/4/2017	$338.00	Operations	Electricity Bill
3	1/10/2017	$1200.00	Operations	Cleaning Service
4	1/10/2017	$300.00	Marketing	TV Advertisements - W
5	1/15/2017	$126.00	Operations	Water and City Utilitie
6	1/15/2017	$428.32	Marketing	Google Ad Words
7	1/15/2017	$68.45	Office Supplies	Pencils & Paper clips
8	1/15/2017	$420.00	Research & Development	Azure HDInsight Subsc
9	1/21/2017	$400.00	Marketing	TV Advertisements - E

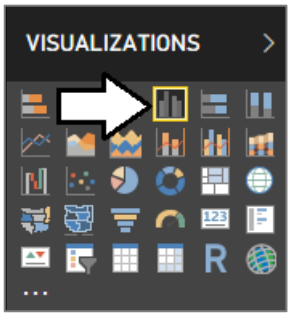


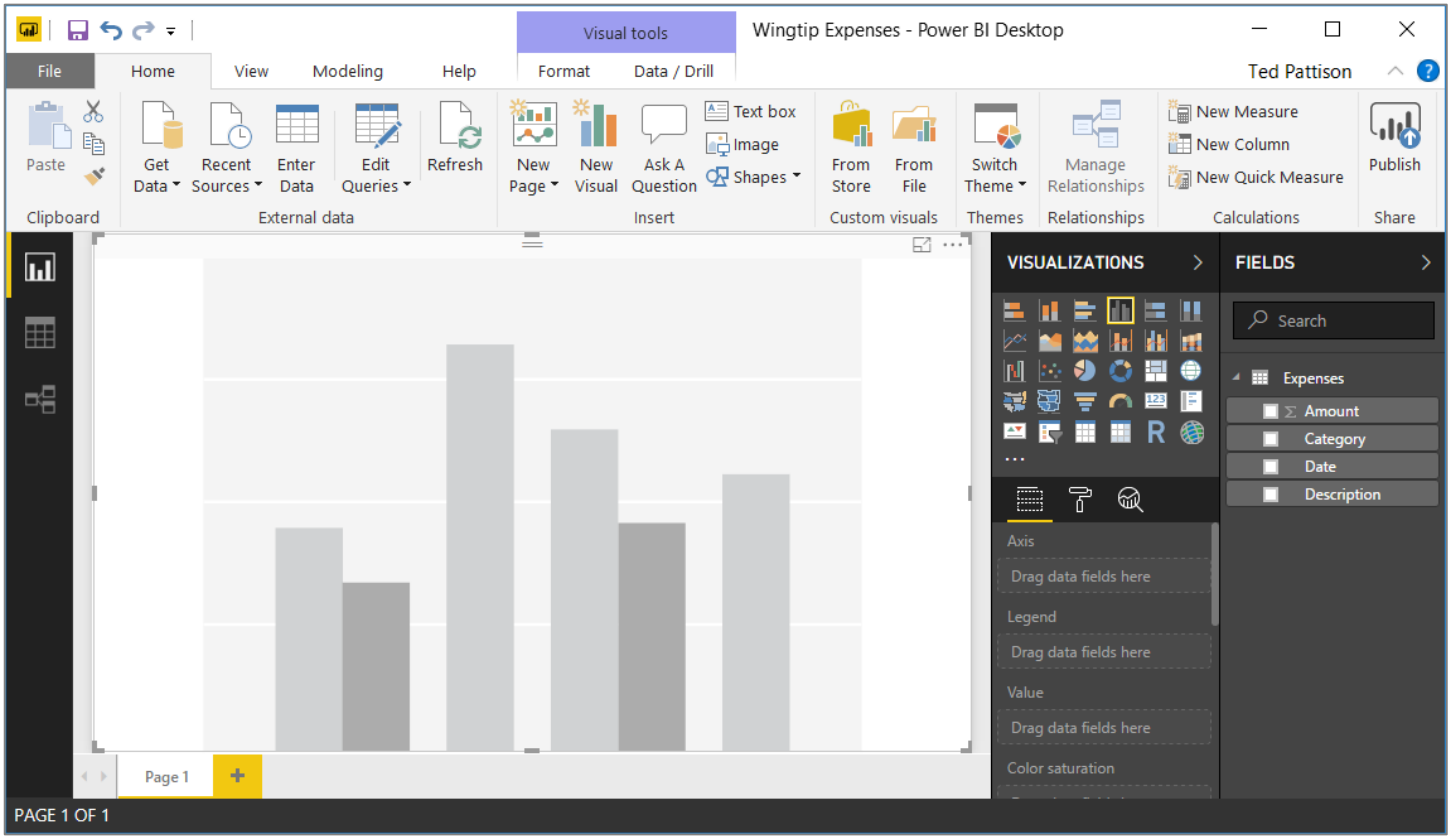
	Date	$ Amount	Category	Description
1	1/1/2017	923	Operations	Verizon - Telephone and Internet
2	1/4/2017	338	Operations	Electricity Bill
3	1/10/2017	1200	Operations	Cleaning Service
4	1/10/2017	300	Marketing	TV Advertisements - West Coast
5	1/15/2017	126	Operations	Water and City Utilities
6	1/15/2017	428.32	Marketing	Google Ad Words

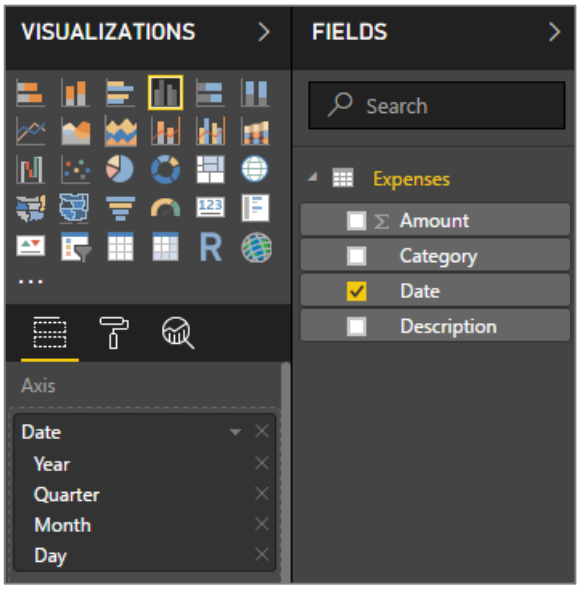


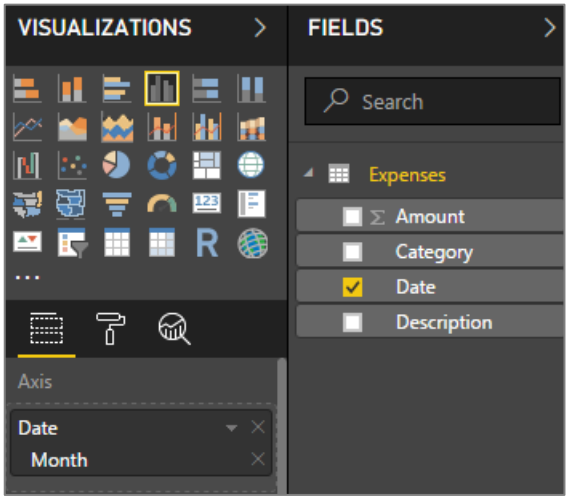
	Date	Amount	Category	Description
1	1/1/2017	923	Operations	Verizon - Telephone and Internet
2	1/4/2017	338	Operations	Electricity Bill
3	1/10/2017	1200	Operations	Cleaning Service
4	1/10/2017	300	Marketing	TV Advertisements - West Coast
5	1/15/2017	126	Operations	Water and City Utilities
6	1/15/2017	428.32	Marketing	Google Ad Words

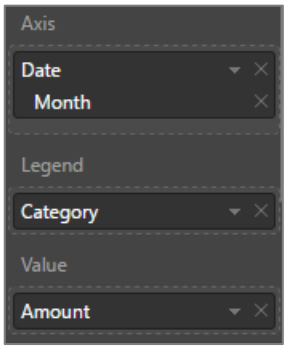


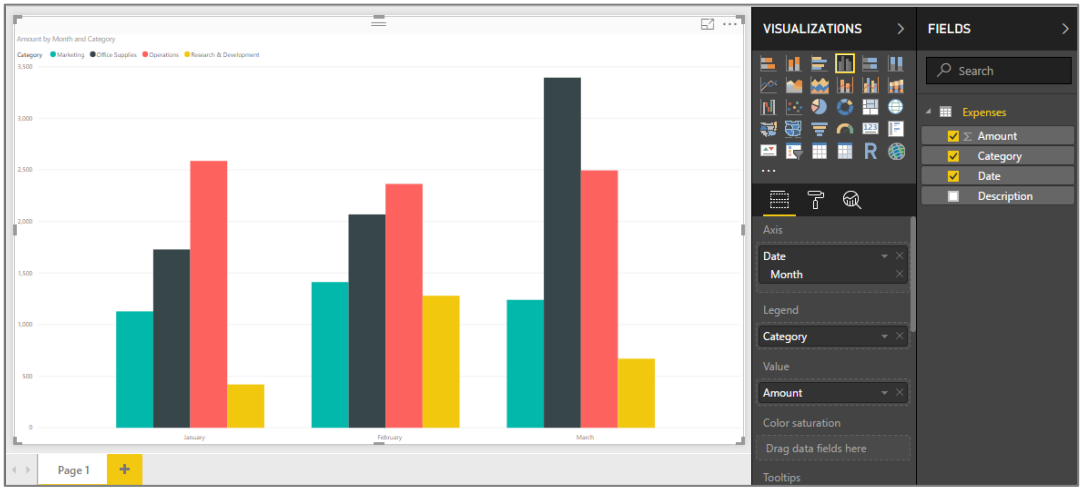


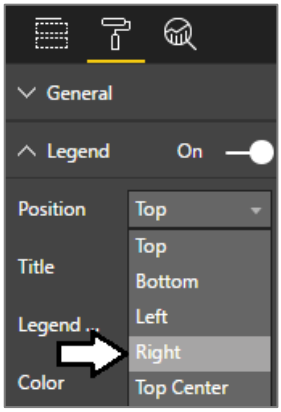


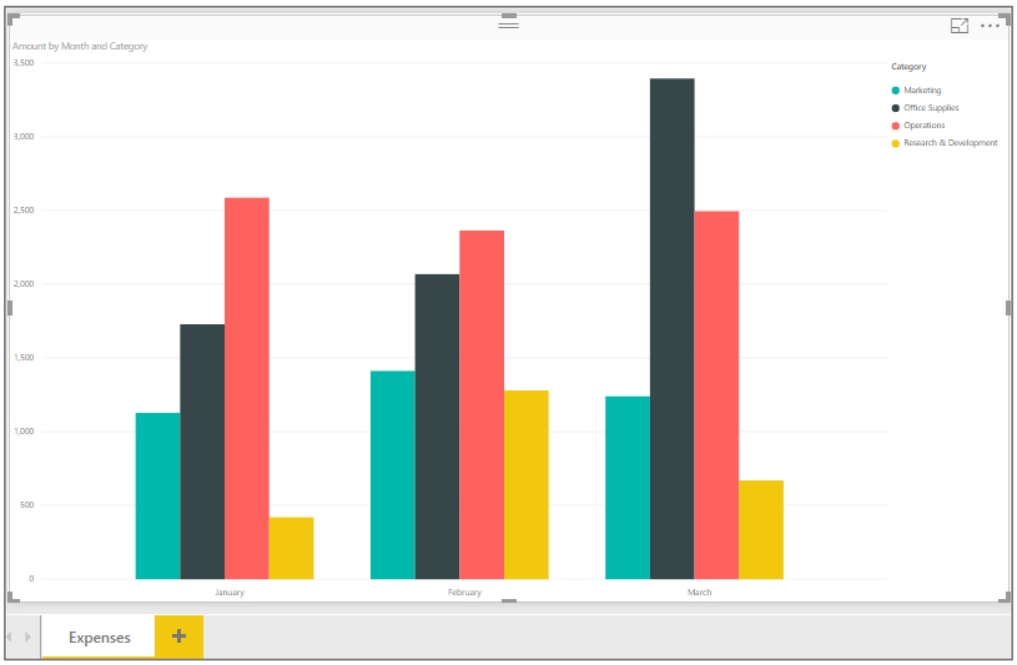


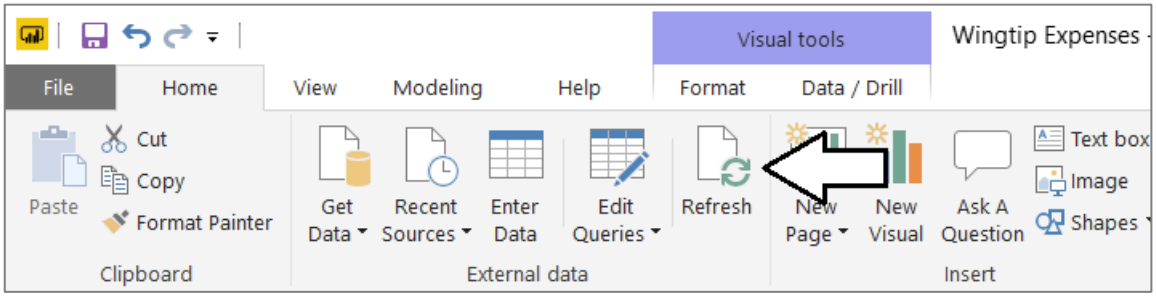


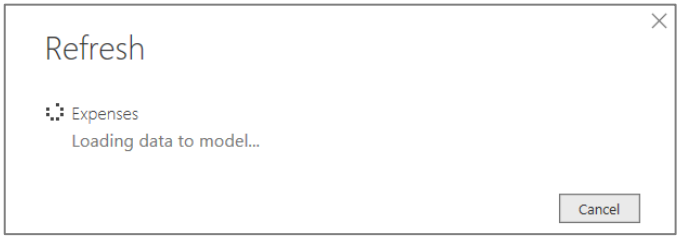


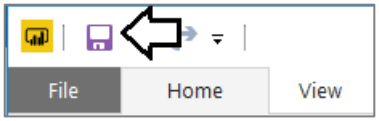




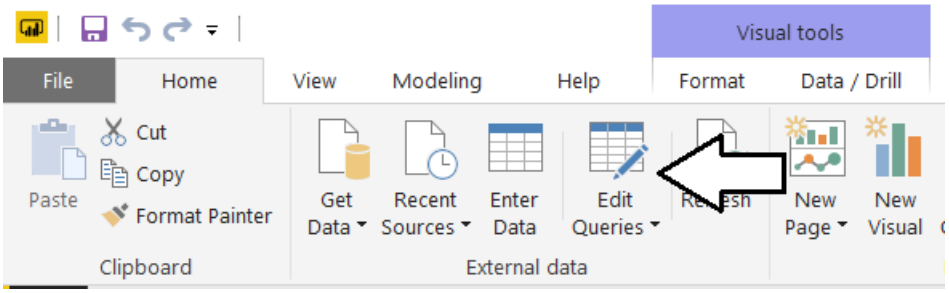


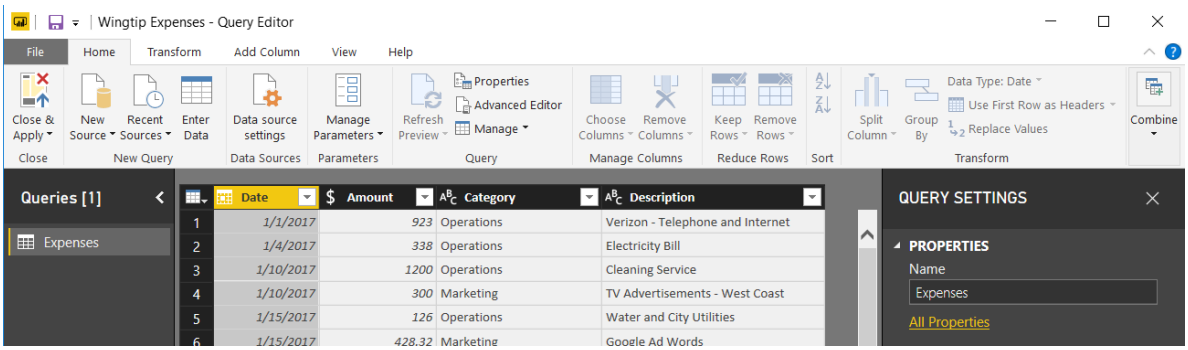


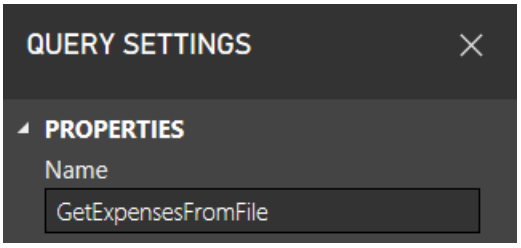


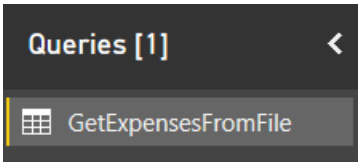


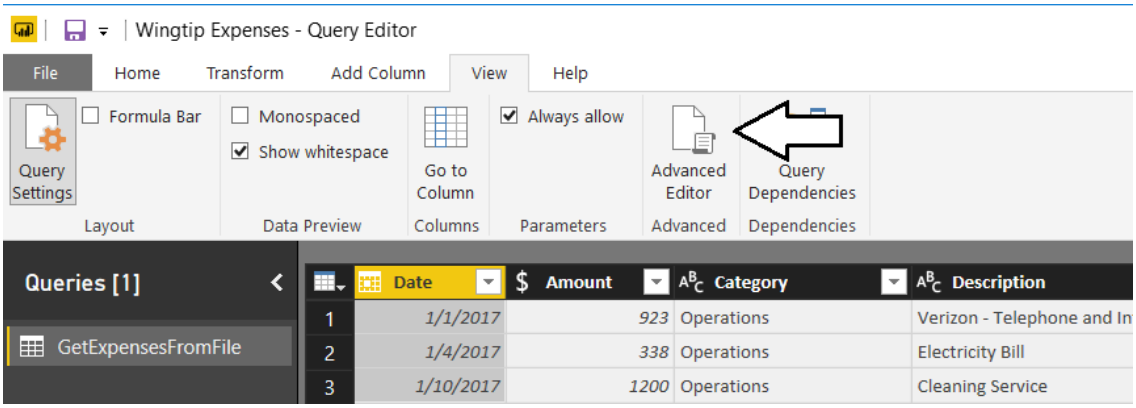
5. Xxxx

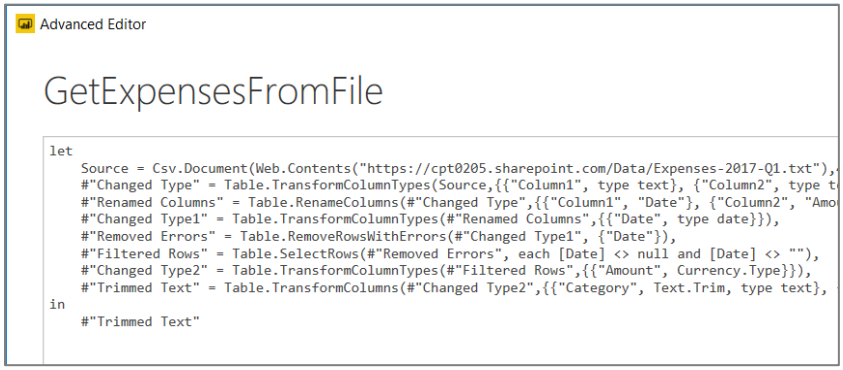


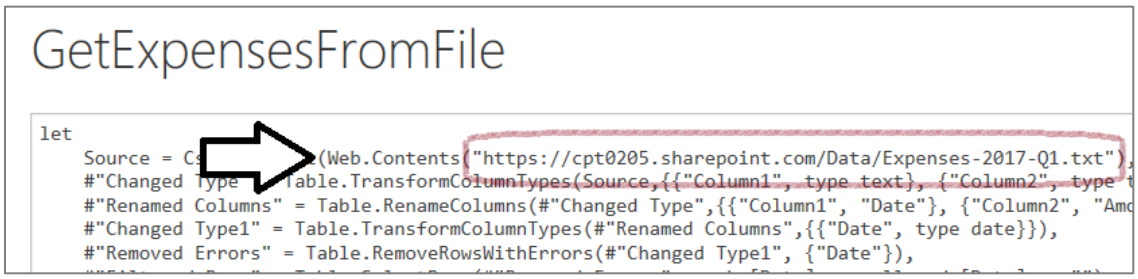










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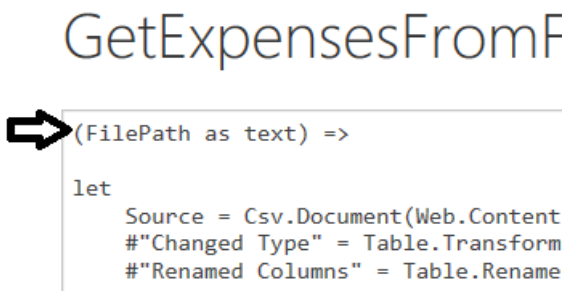


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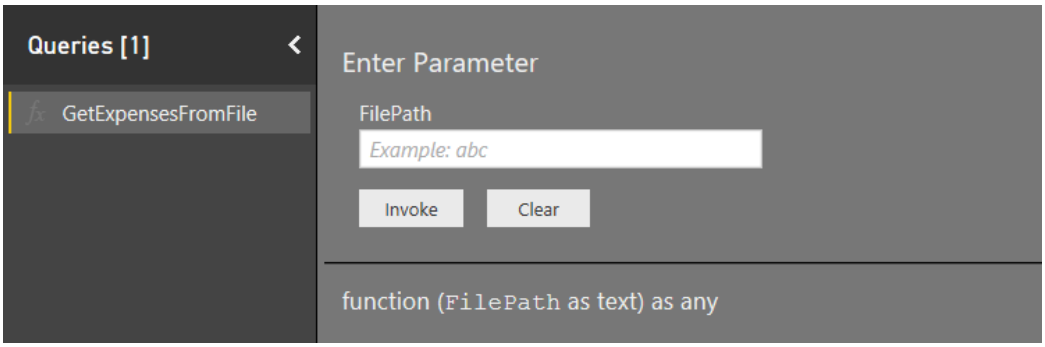

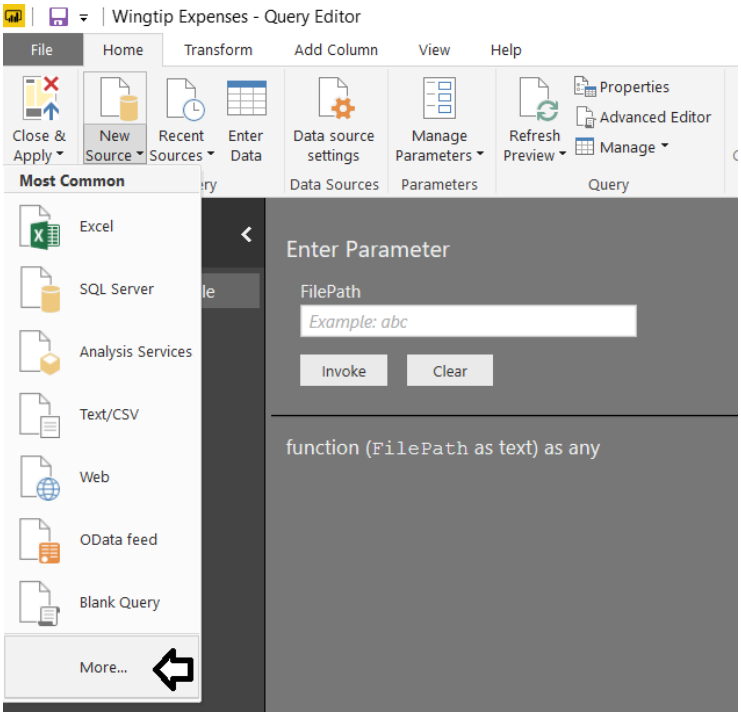

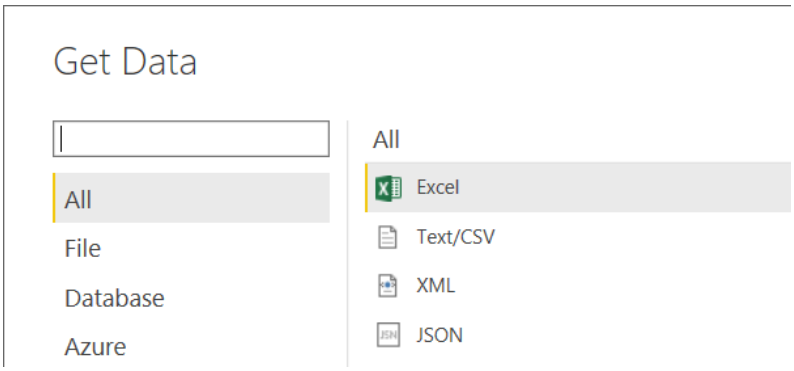

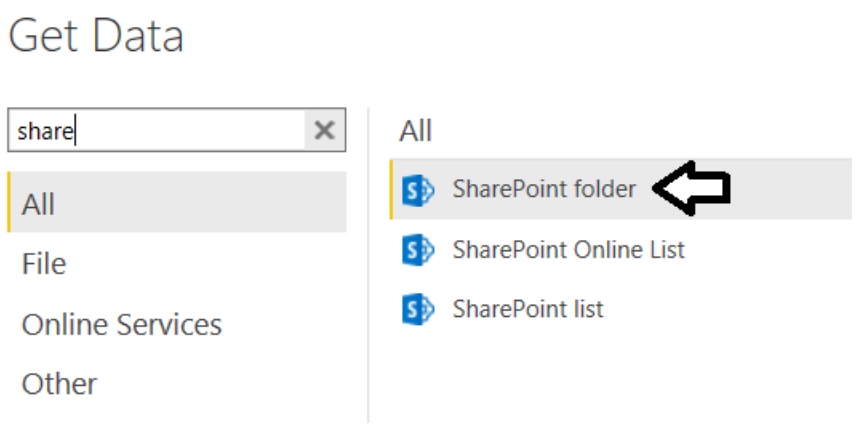

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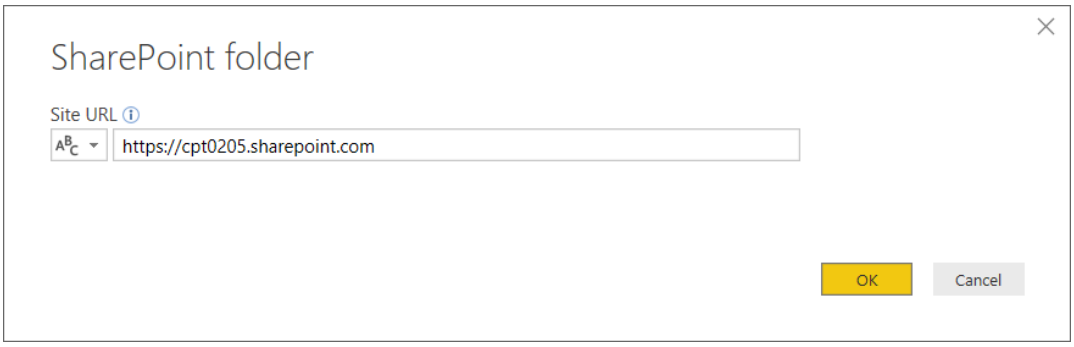

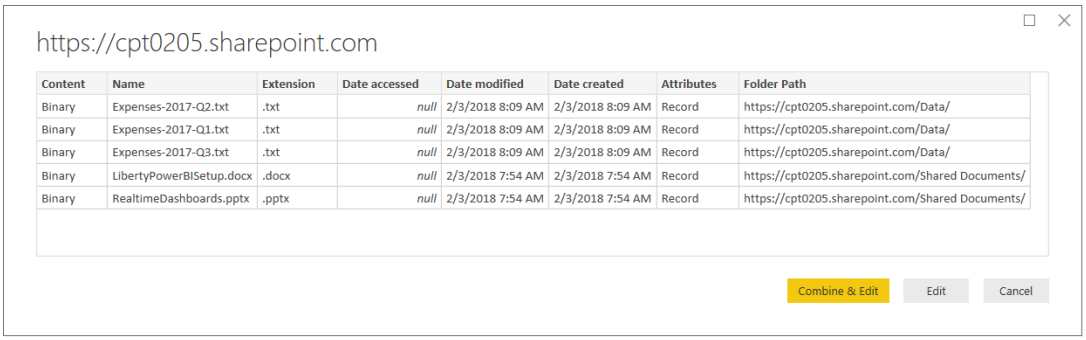

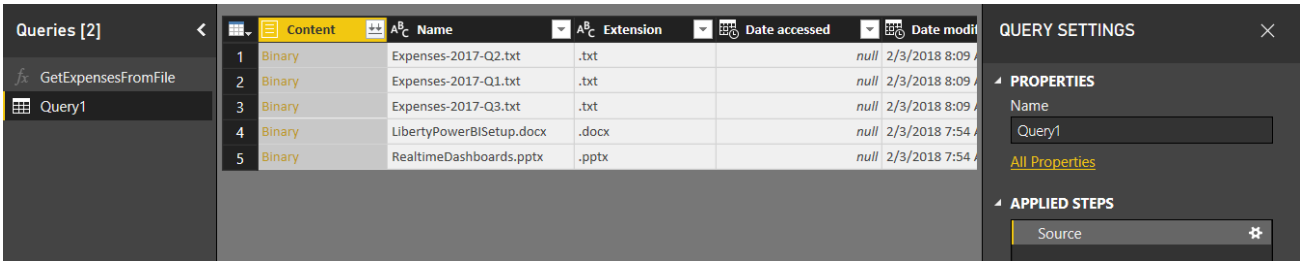

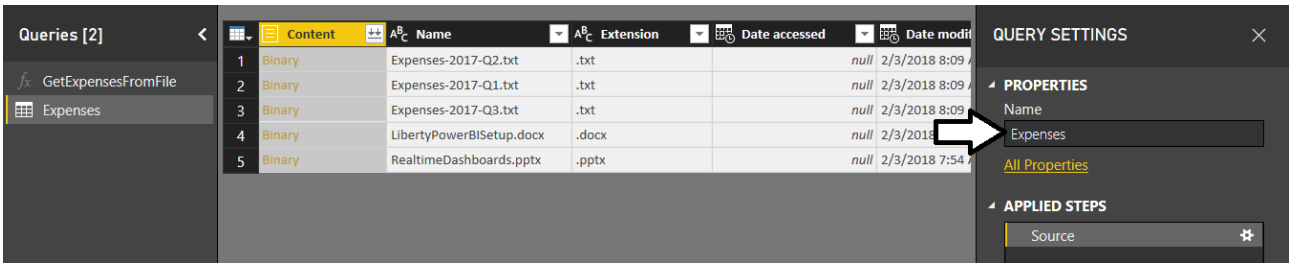

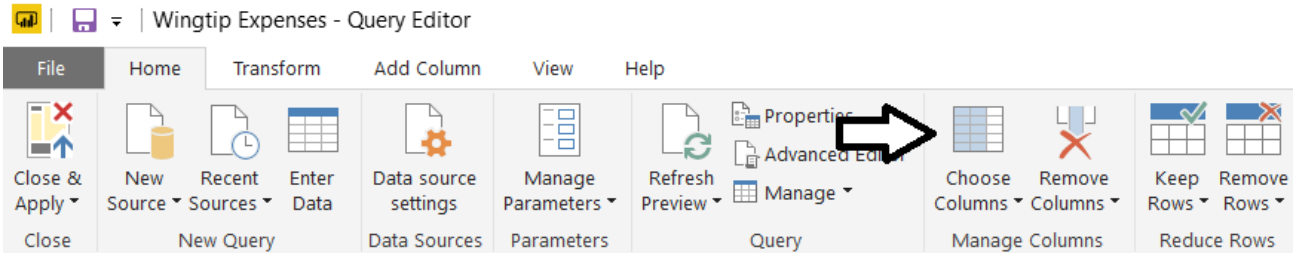

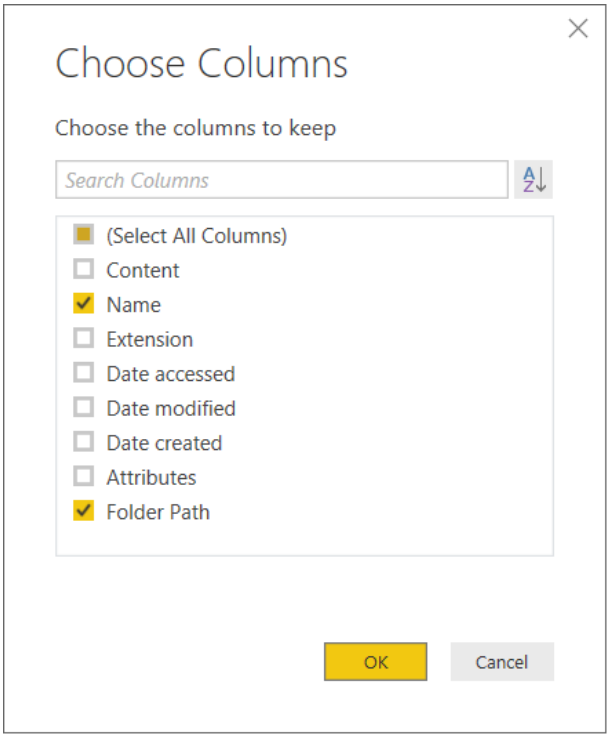

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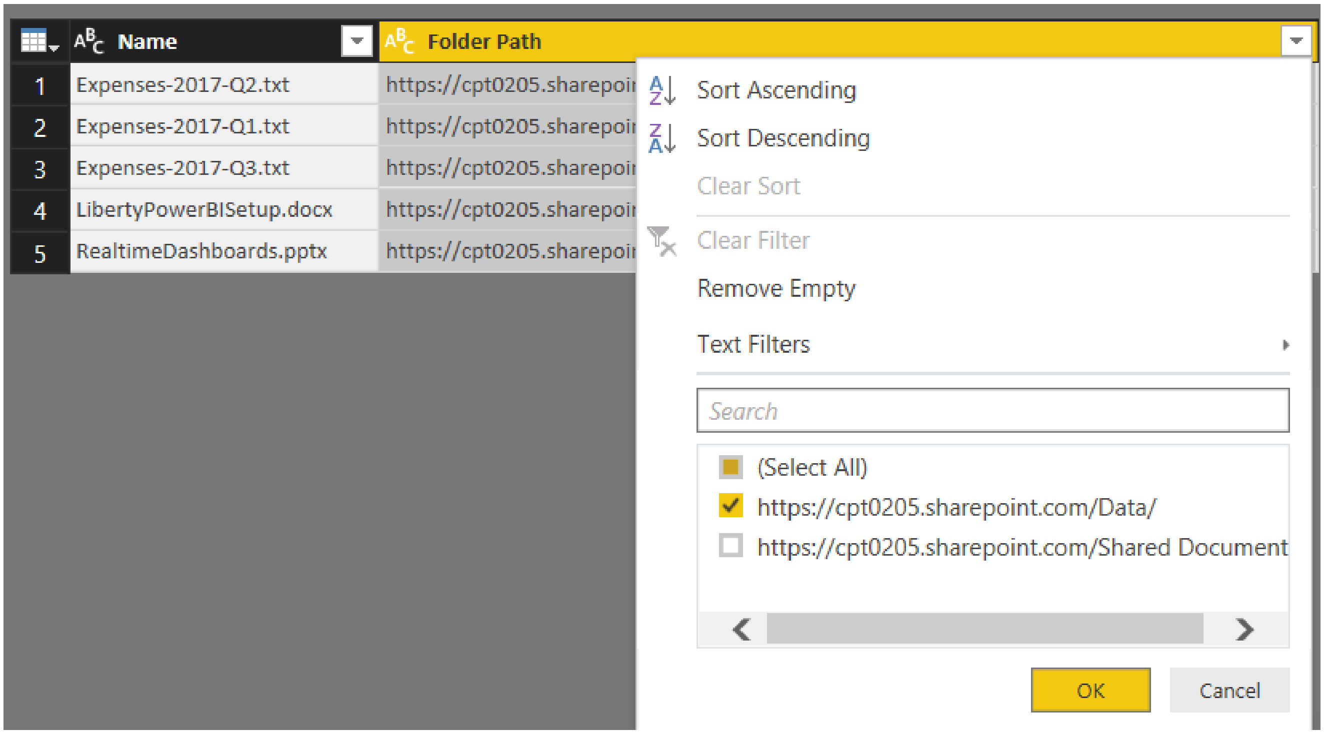
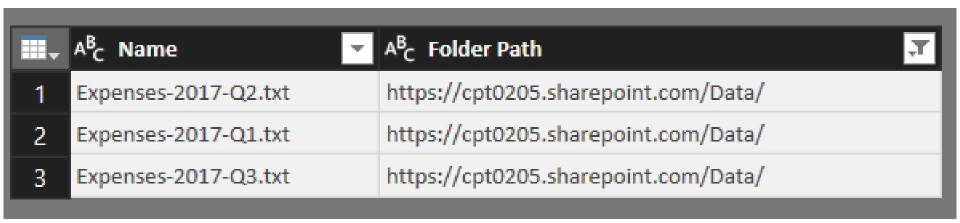
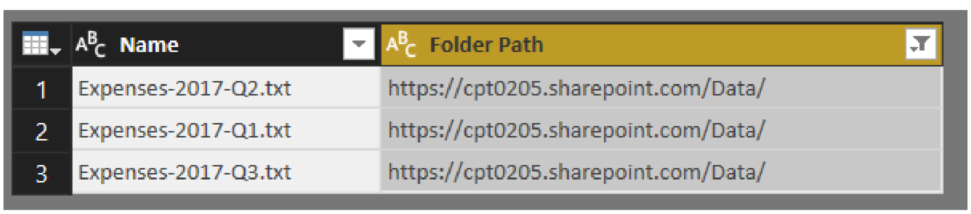
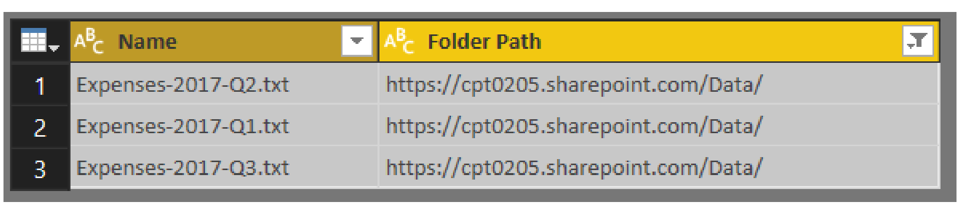
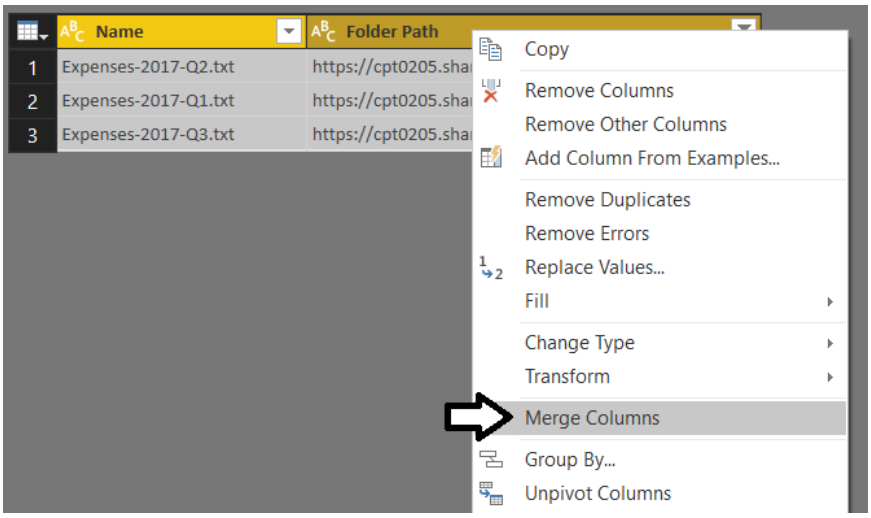
2	Expenses-2017-Q1.txt	https://cpt0205.sharepoint.com/Data/
3	Expenses-2017-Q3.txt	https://cpt0205.sharepoint.com/Data/
4	LibertyPowerBISetup.docx	https://cpt0205.sharepoint.com/Shared Documents/
5	RealtimeDashboards.pptx	https://cpt0205.sharepoint.com/Shared Documents/

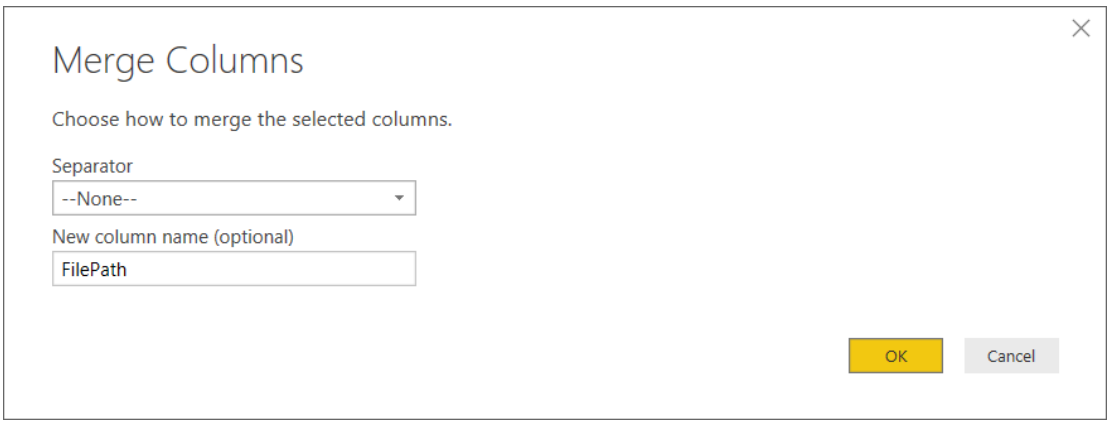


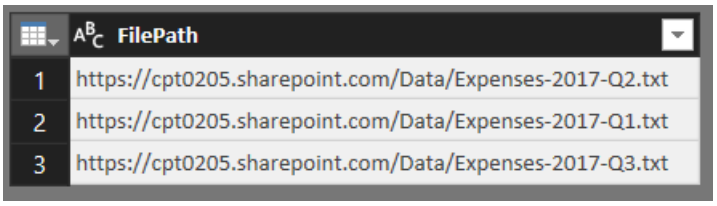


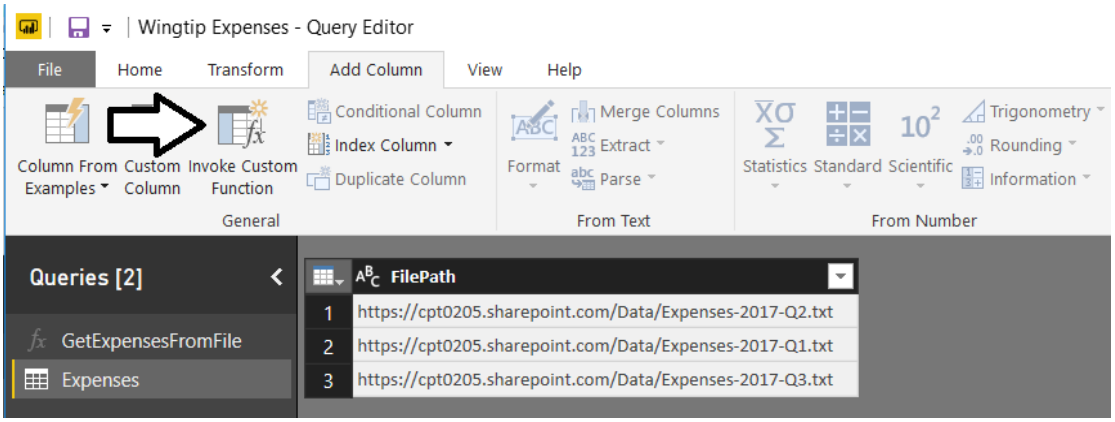


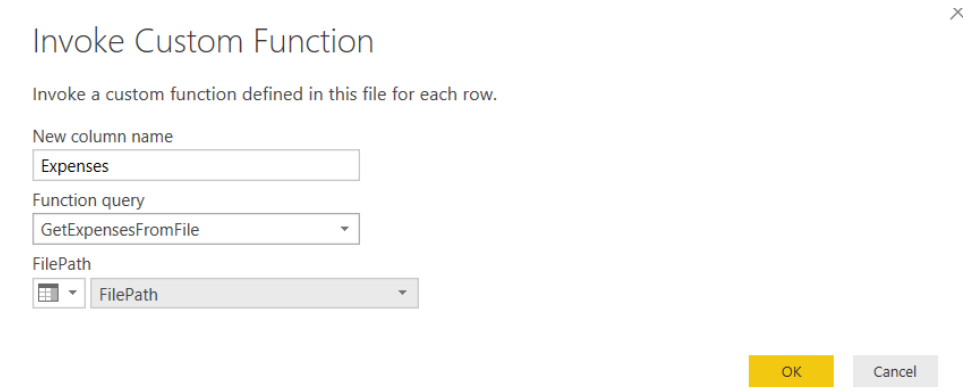


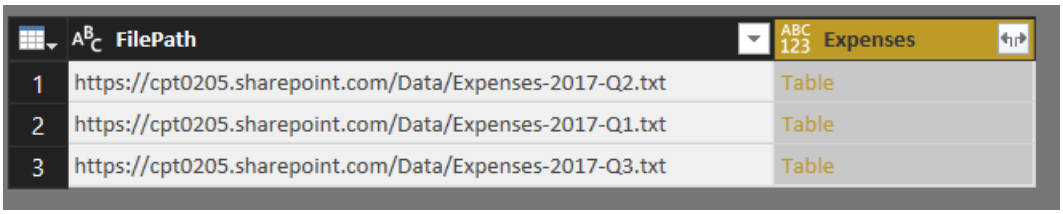


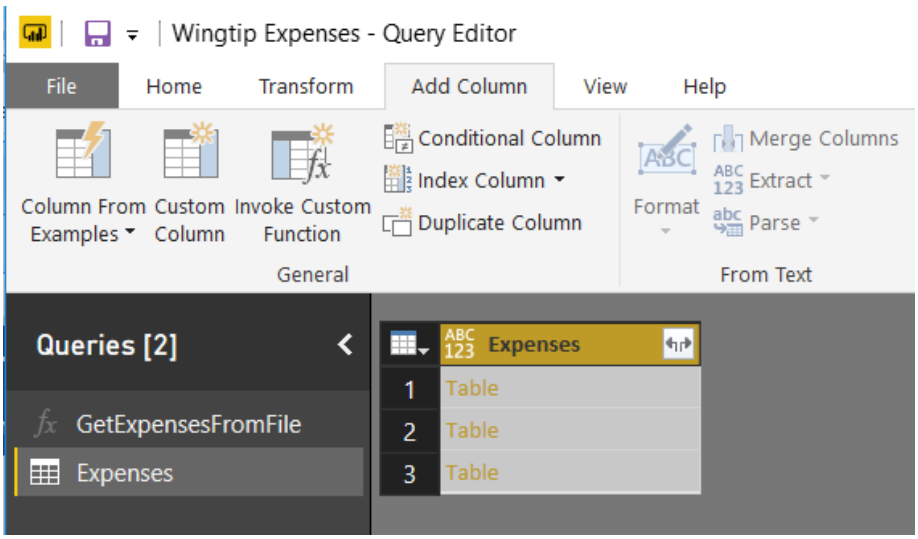


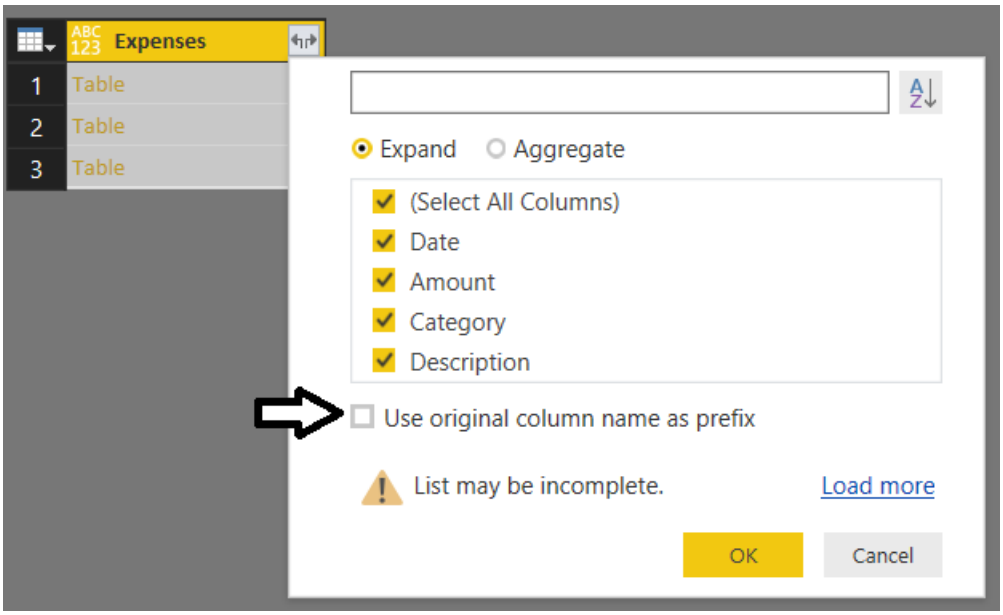












	Date	Amount	Category	Description
1	4/2/2017	925	Operations	Verizon - Telephone and Internet
2	4/3/2017	142	Office Supplies	Postage Stamps
3	4/5/2017	294	Operations	Electricity Bill
4	4/5/2017	120.25	Office Supplies	Coffee Supplies
5	4/13/2017	1200	Operations	Cleaning Service
6	4/15/2017	126	Operations	Water and City Utilities
7	4/15/2017	560.22	Marketing	Google Ad Words

	Date	Amount	Category	Description
1	4/2/2017	925	Operations	Verizon - Telephone and Internet
2	4/3/2017	142	Office Supplies	Postage Stamps
3	4/5/2017	294	Operations	Electricity Bill
4	4/5/2017	120.25	Office Supplies	Coffee Supplies
5	4/13/2017	1200	Operations	Cleaning Service
6	4/15/2017	126	Operations	Water and City Utilities

	Date	Amount	Category	Description
1	4/2/2017	925	Operations	Verizon - Telephone and Internet
2	4/3/2017	142	Office Supplies	Postage Stamps
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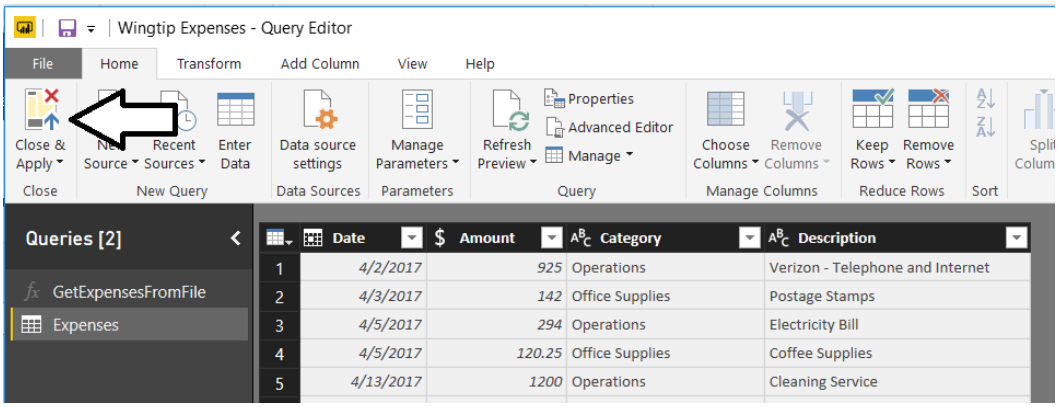
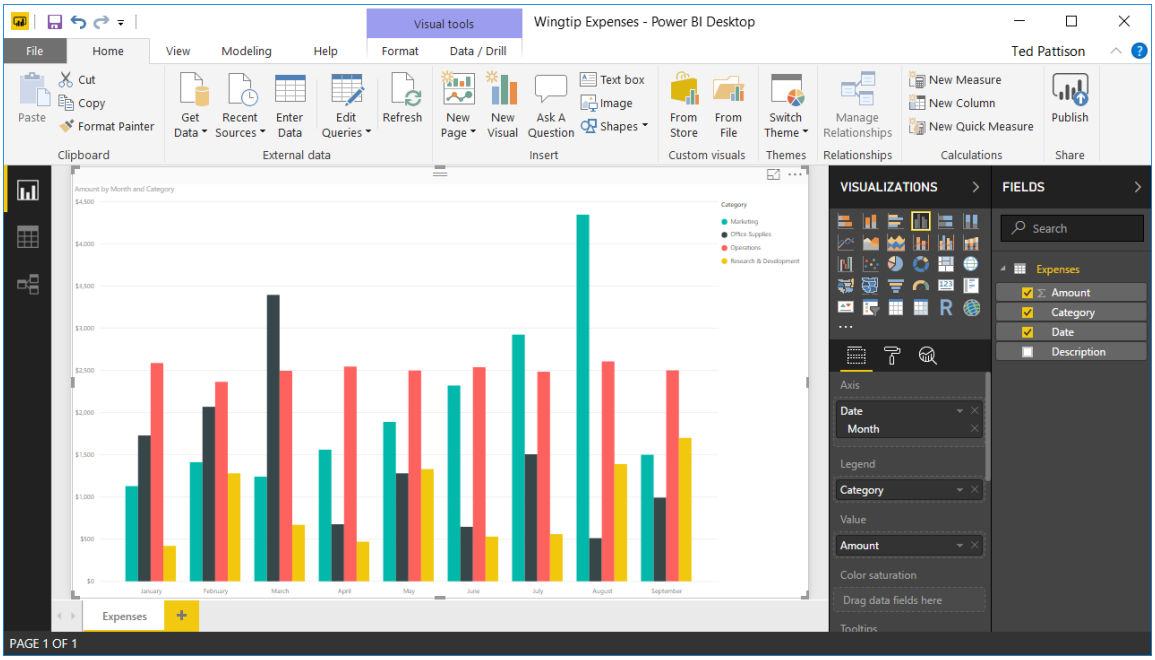
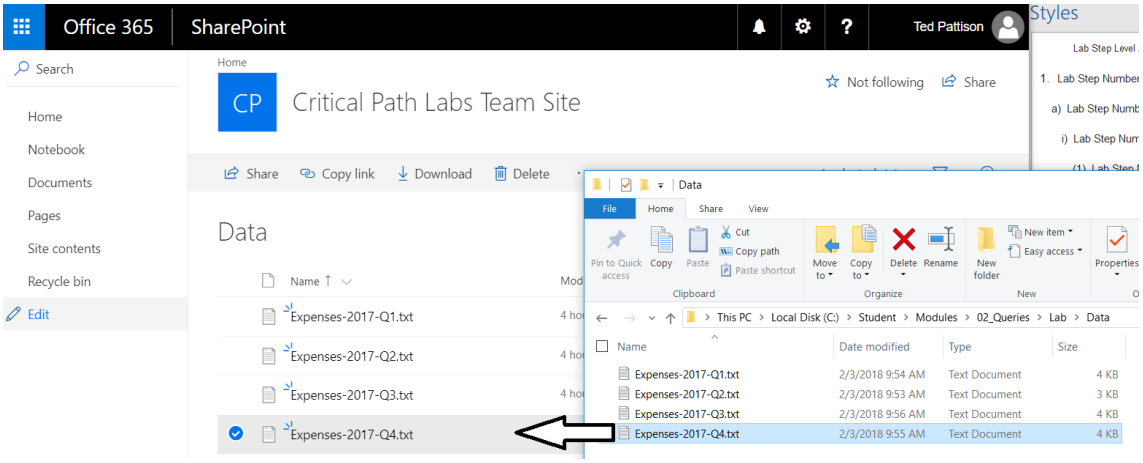
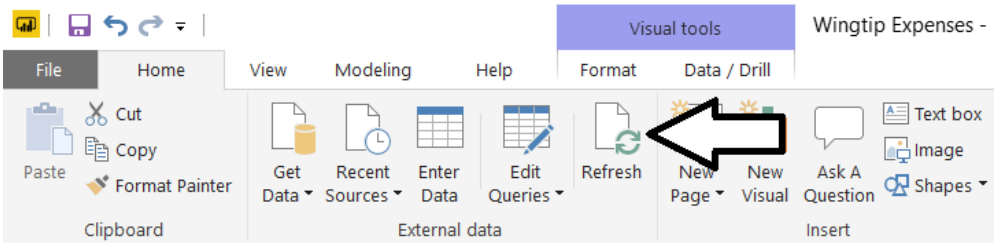
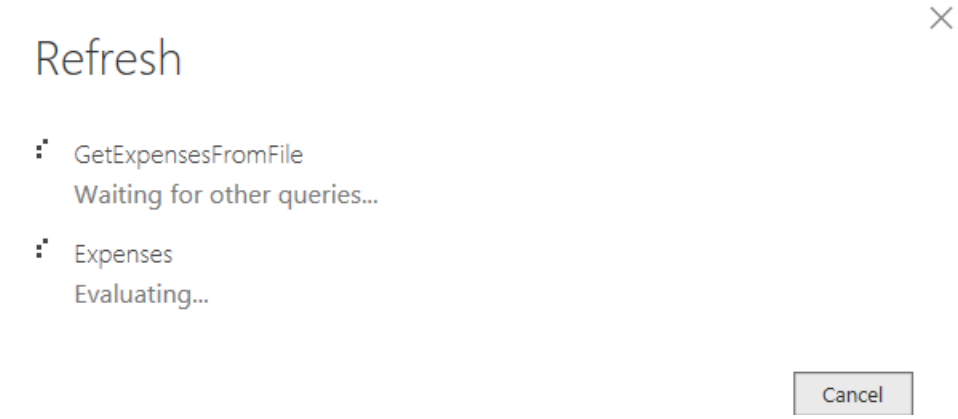
4	4/5/2017	120.25	Office Supplies	Coffee Supplies
5	4/13/2017	1200	Operations	Cleaning Service
6	4/15/2017	126	Operations	Water and City Utilities

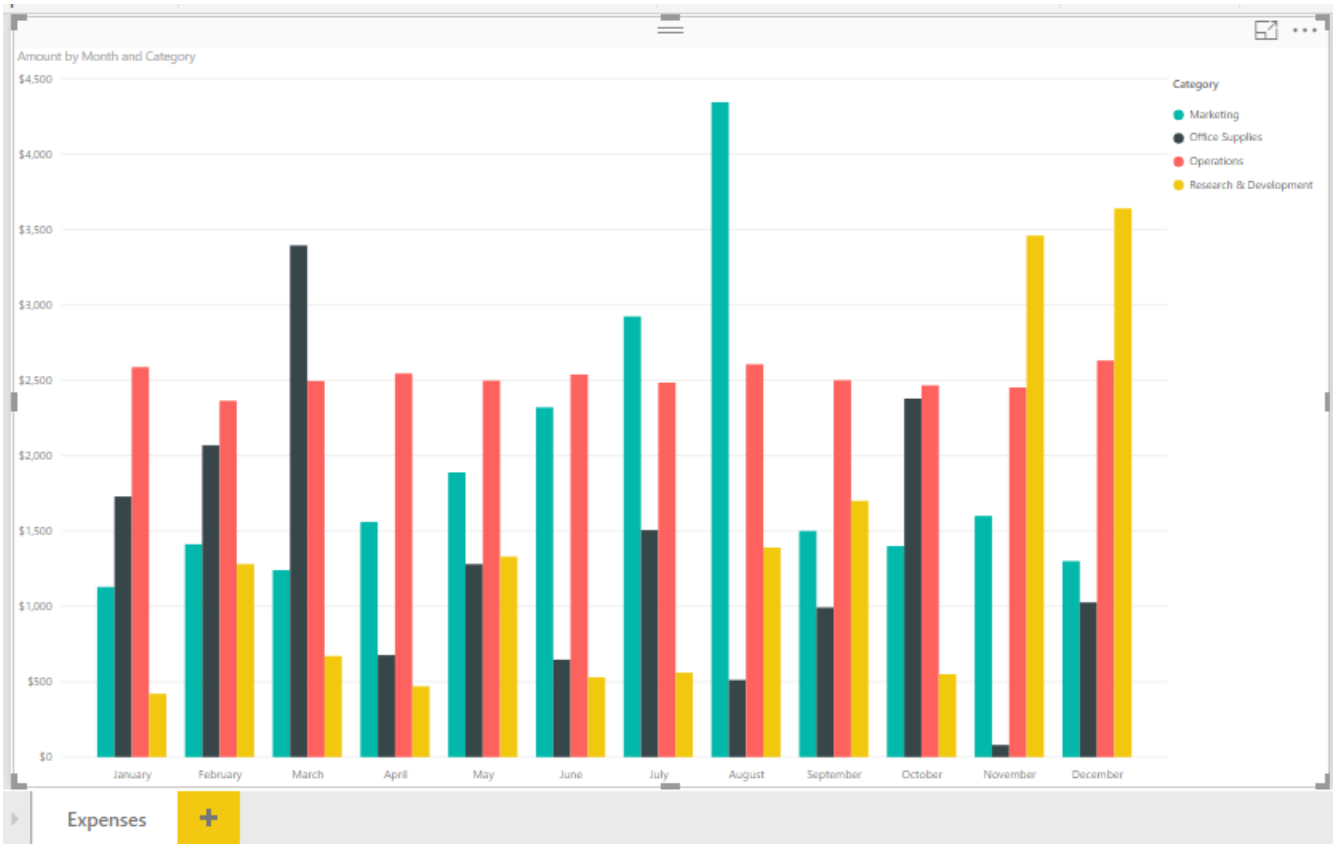


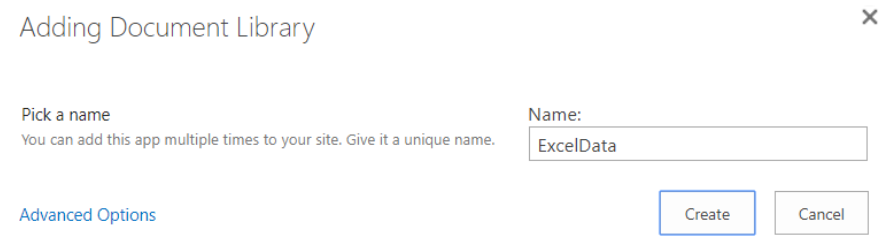


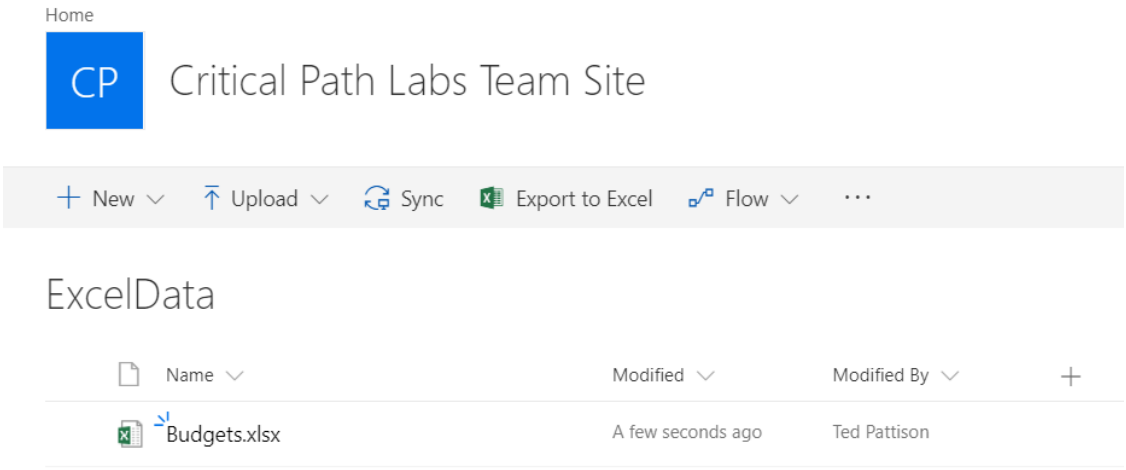


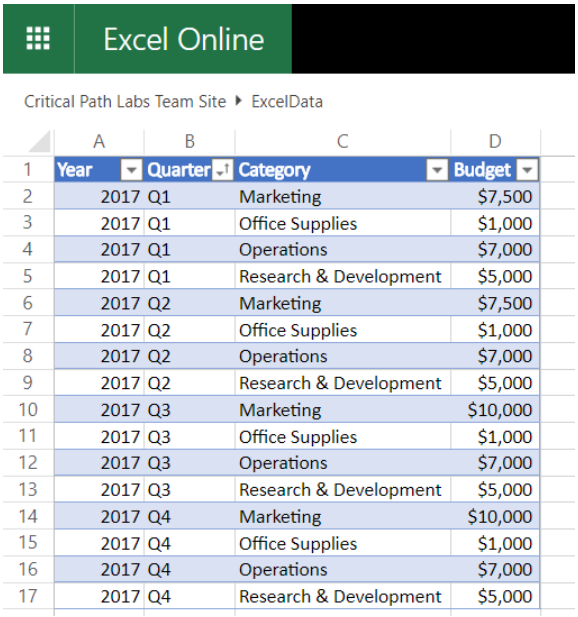




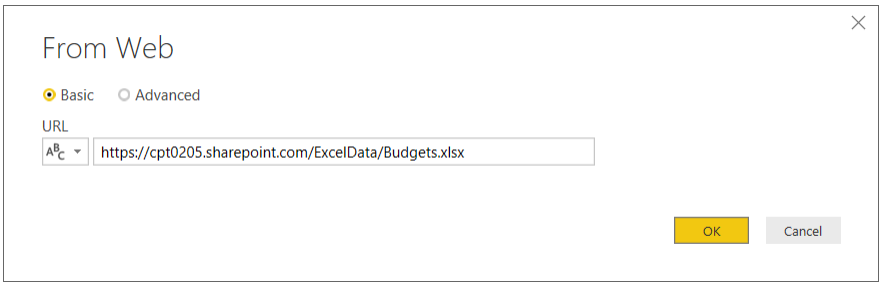


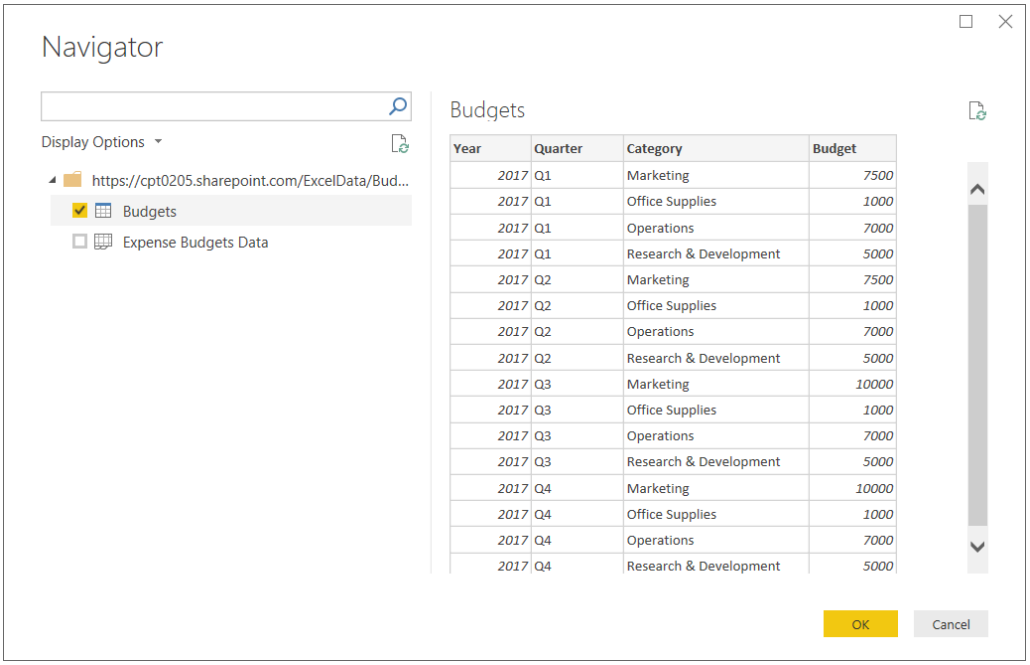


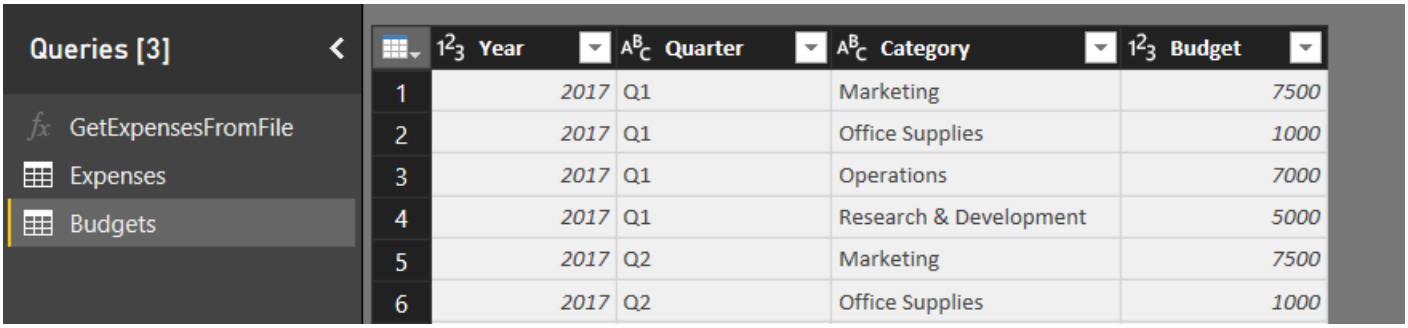


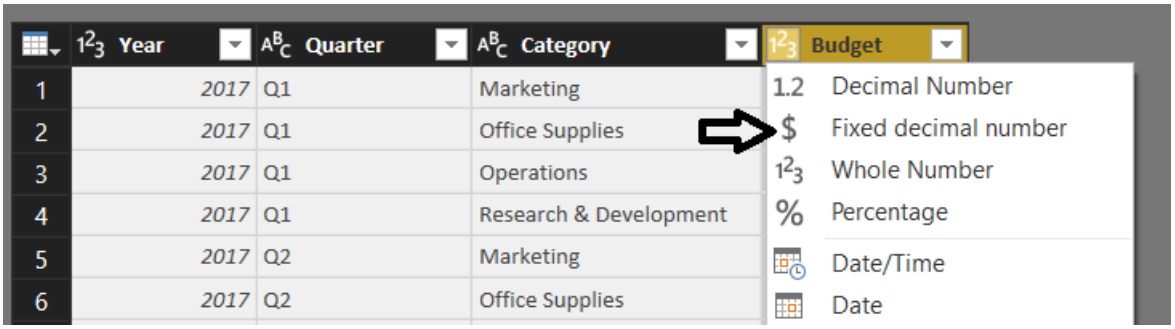


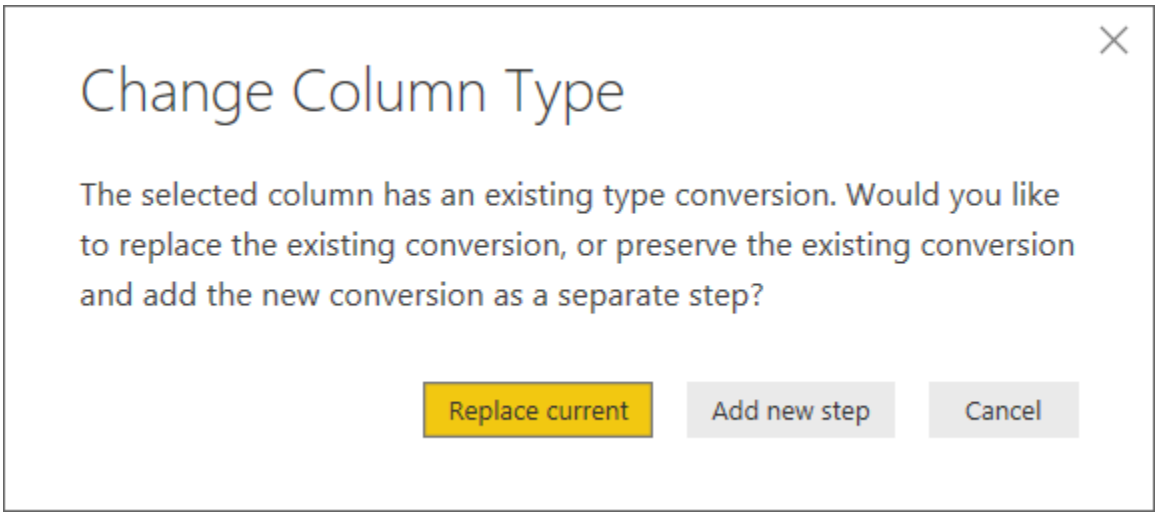
	A	B	C	D
1	Year	Quarter	Category	Budget
2	2017	Q1	Marketing	$7,500
3	2017	Q1	Office Supplies	$1,000
4	2017	Q1	Operations	$7,000
5	2017	Q1	Research & Development	$5,000
6	2017	Q2	Marketing	$7,500
7	2017	Q2	Office Supplies	$1,000
8	2017	Q2	Operations	$7,000
9	2017	Q2	Research & Development	$5,000
10	2017	Q3	Marketing	$10,000
11	2017	Q3	Office Supplies	$1,000
12	2017	Q3	Operations	$7,000
13	2017	Q3	Research & Development	$5,000
14	2017	Q4	Marketing	$10,000
15	2017	Q4	Office Supplies	$1,000
16	2017	Q4	Operations	$7,000
17	2017	Q4	Research & Development	$5,000



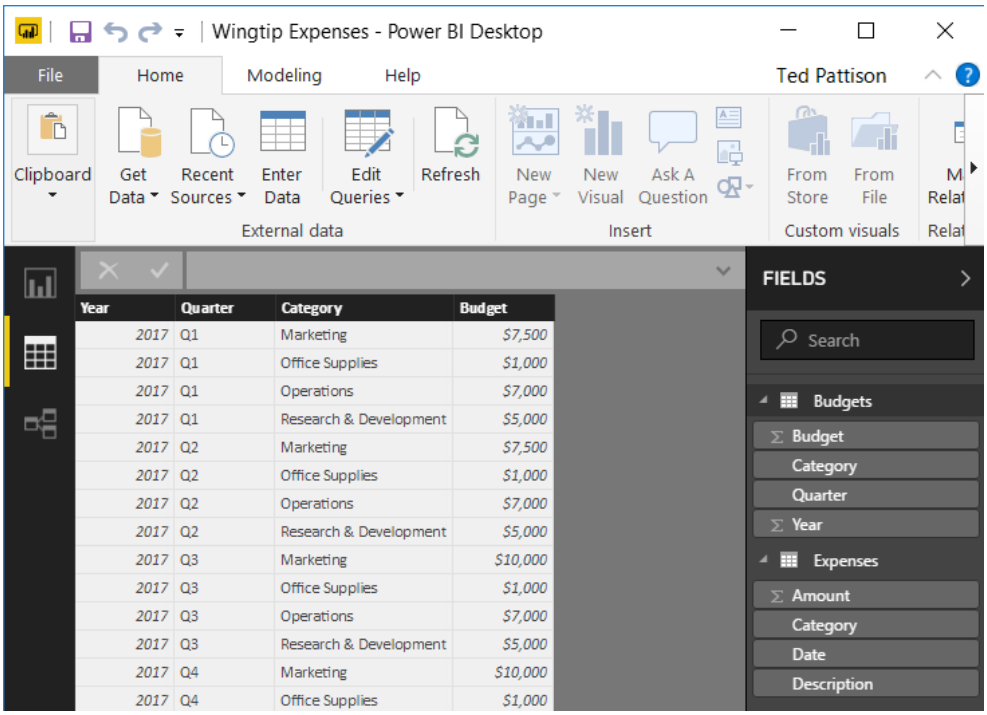




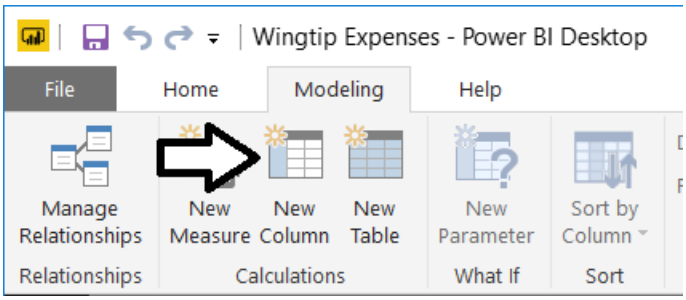




	Year	Quarter	Category	Budget
1	2017	Q1	Marketing	7500
2	2017	Q1	Office Supplies	1000
3	2017	Q1	Operations	7000
4	2017	Q1	Research & Development	5000
5	2017	Q2	Marketing	7500



Year	Quarter	Category	Budget
2017	Q1	Marketing	$7,500
2017	Q1	Office Supplies	$1,000
2017	Q1	Operations	$7,000
2017	Q1	Research & Development	$5,000
2017	Q2	Marketing	$7,500
2017	Q2	Office Supplies	$1,000
2017	Q2	Operations	$7,000
2017	Q2	Research & Development	$5,000
2017	Q3	Marketing	$10,000
2017	Q3	Office Supplies	$1,000
2017	Q3	Operations	$7,000
2017	Q3	Research & Development	$5,000
2017	Q4	Marketing	$10,000
2017	Q4	Office Supplies	$1,000




```
Budget Key = [Year] & "-" & [Quarter] & "-" & [Category]
```

```
Budget Key = [Year] & "-" & [Quarter] & "-" & [Category]
```

Year	Quarter	Category	Budget	Budget Key
2017	Q1	Marketing	$7,500	2017-Q1-Marketing
2017	Q1	Office Supplies	$1,000	2017-Q1-Office Supplies
2017	Q1	Operations	$7,000	2017-Q1-Operations
2017	Q1	Research & Development	$5,000	2017-Q1-Research & Development
2017	Q2	Marketing	$7,500	2017-Q2-Marketing
2017	Q2	Office Supplies	$1,000	2017-Q2-Office Supplies
2017	Q2	Operations	$7,000	2017-Q2-Operations

```
Budget Key =
VAR BudgetYear = YEAR([Date])
VAR BudgetMonth = "Q" & FORMAT([Date],"q")
RETURN
 BudgetYear & "-" & BudgetMonth & "-" & [Category]
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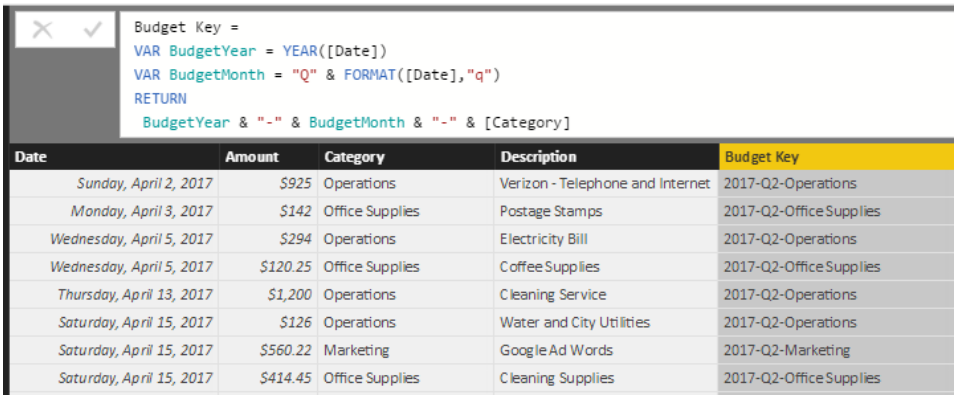
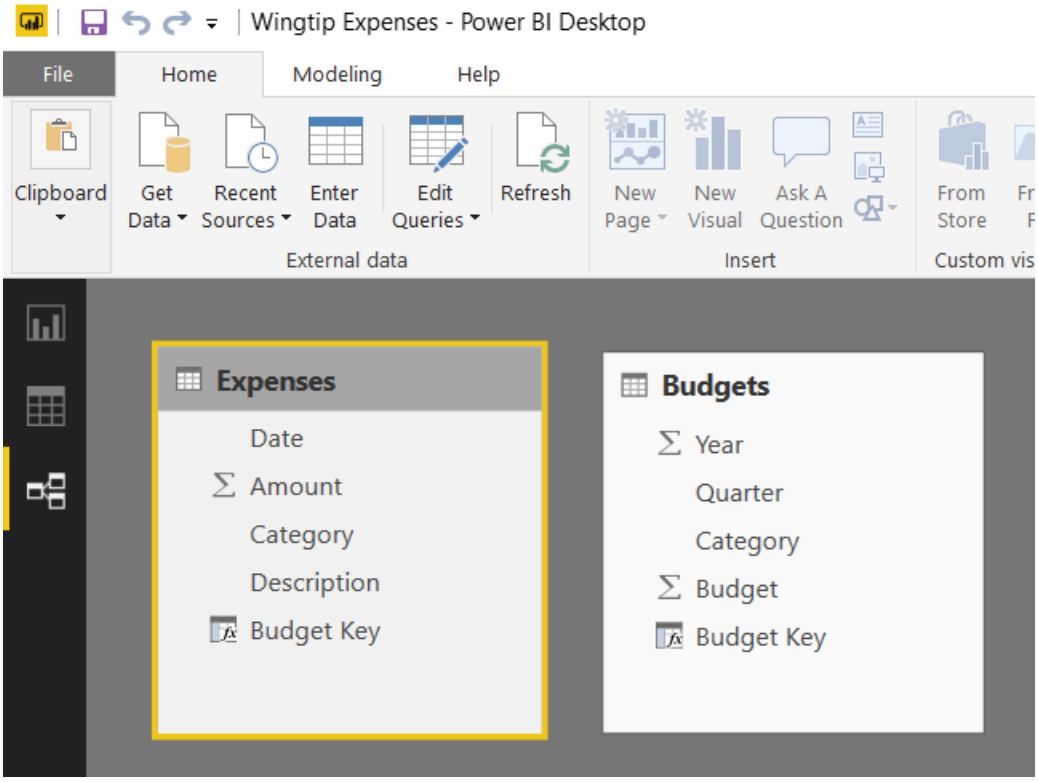
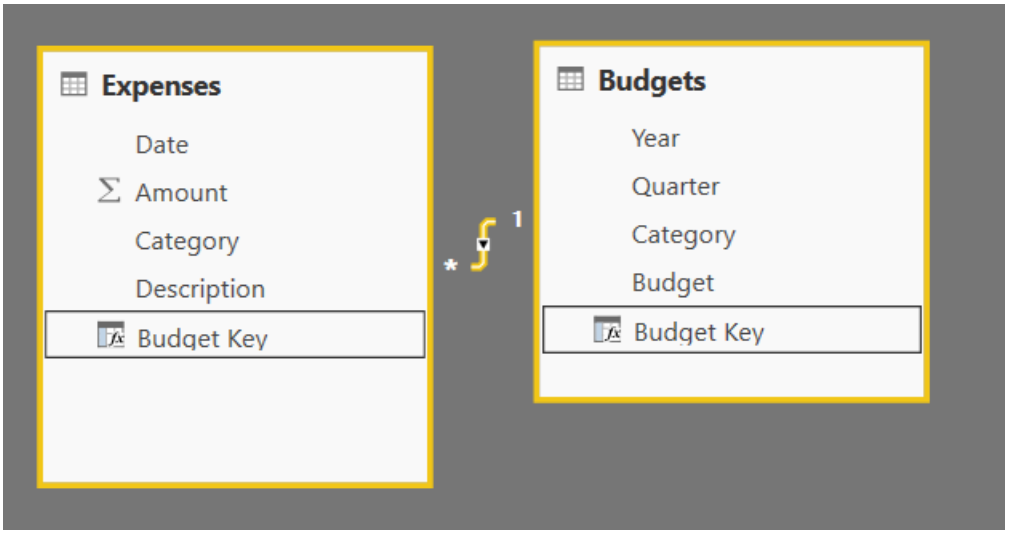
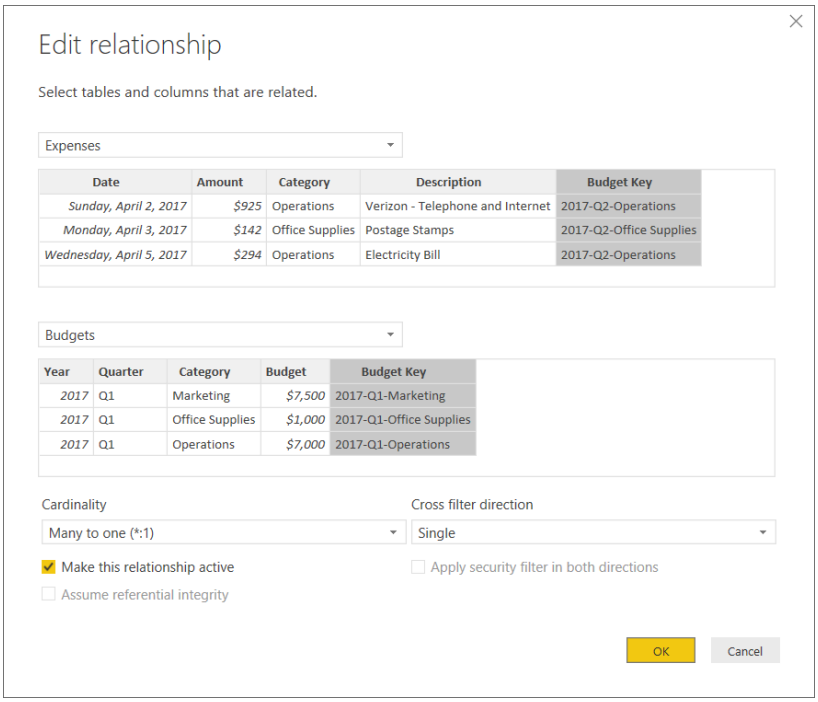


```
Budget Key =
VAR BudgetYear = YEAR([Date])
VAR BudgetMonth = "Q" & FORMAT([Date],"q")
RETURN
 BudgetYear & "-" & BudgetMonth & "-" & [Category]
```

Date	Amount	Category	Description	Budget Key
Sunday, April 2, 2017	$925	Operations	Verizon - Telephone and Internet	2017-Q2-Operations
Monday, April 3, 2017	$142	Office Supplies	Postage Stamps	2017-Q2-Office Supplies
Wednesday, April 5, 2017	$294	Operations	Electricity Bill	2017-Q2-Operations
Wednesday, April 5, 2017	$120.25	Office Supplies	Coffee Supplies	2017-Q2-Office Supplies
Thursday, April 13, 2017	$1,200	Operations	Cleaning Service	2017-Q2-Operations
Saturday, April 15, 2017	$126	Operations	Water and City Utilities	2017-Q2-Operations
Saturday, April 15, 2017	$560.22	Marketing	Google Ad Words	2017-Q2-Marketing
Saturday, April 15, 2017	$414.45	Office Supplies	Cleaning Supplies	2017-Q2-Office Supplies





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Actual Expenses = SUM(Expenses[Amount])

Budget Amount = Sum(Budgets[Budget])
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