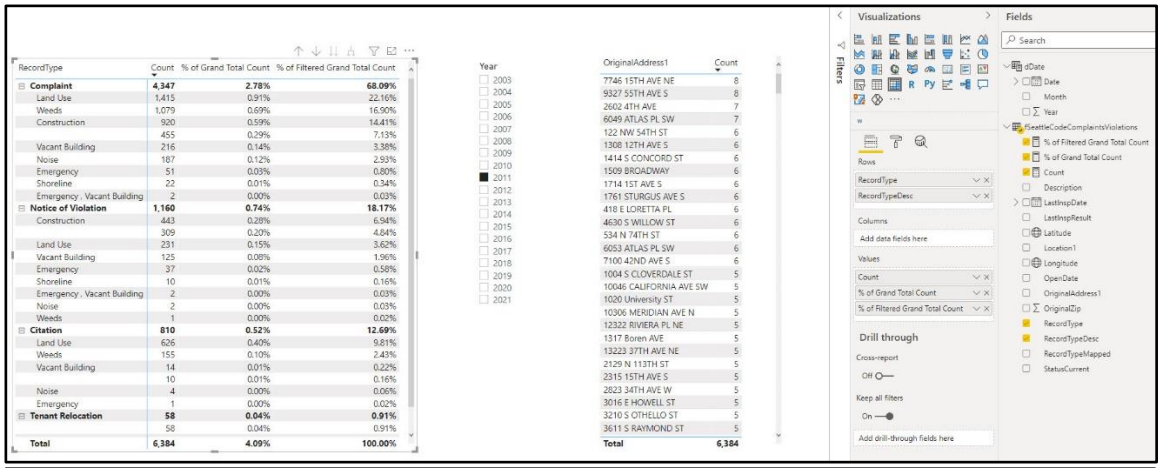
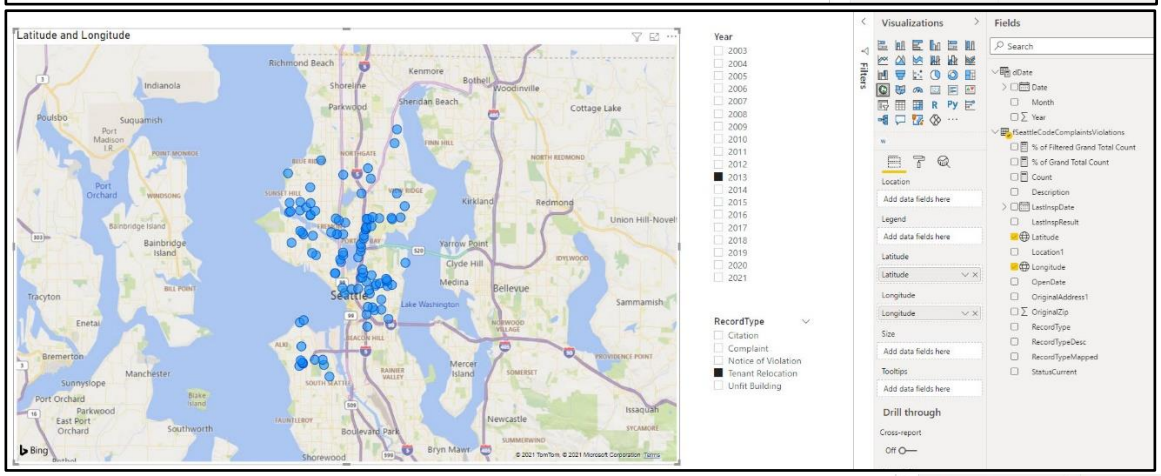
BI 348 Project 6

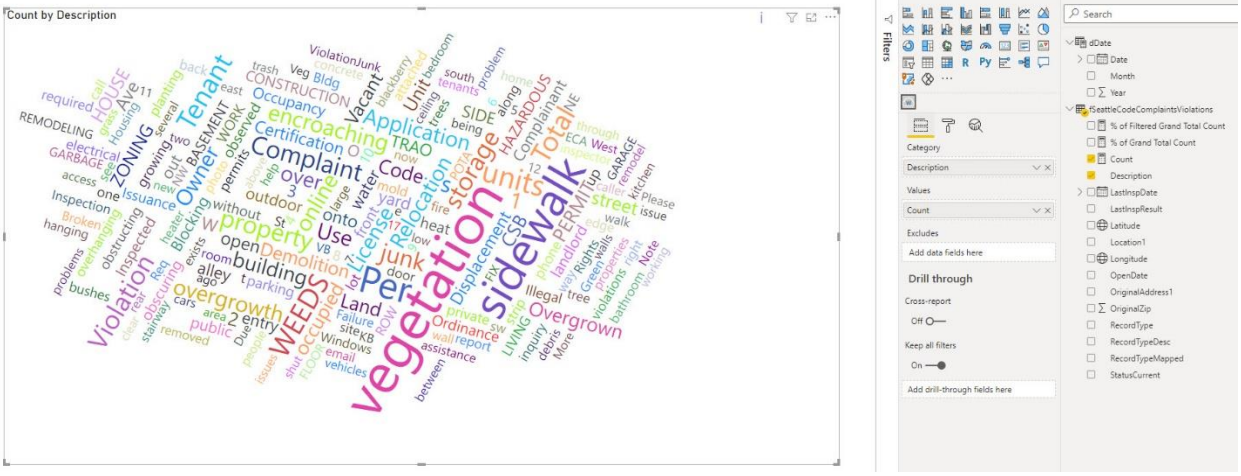
There are two problems to complete for this Project #6. Problem #1 will be completed using Power BI Desktop and problem #2 will be completed using Excel Power Pivot. For both problems, name things with names that communicate the meaning of the objects. When you are done with both problem #1 and problem #2, upload both files at the same time into the Week 9-10 area of the Home tab in Canvas.

Problem #1: Create a Power BI Desktop file with three pages.

The goal will be to download data from a Seattle government web site, import the data into a new Power BI Desktop file and create these three pages:

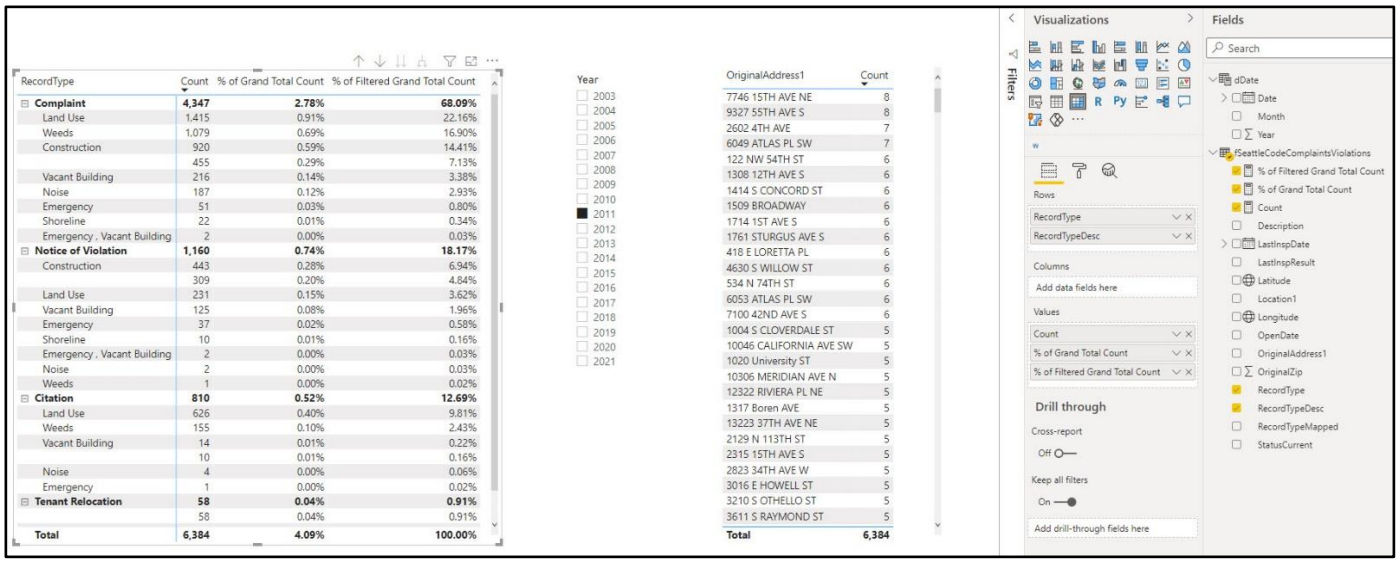






Here are the general steps you can take to complete this Problem #1:

1. Open up a new Power BI Desktop file and use the F12 key to Save As and name your file: "YourNameBI348-Project06-Spring2022.pbix".
2. Using Power Query, import the CSV file named "Code_Complaints_and_Violations.csv".
3. Name the query with a name that conveys the meaning of the data. Do not leave the default file name "Code_Complaints_and_Violations" as the name of the query.
4. Remove all fields in table, except these fields:
    i. RecordType
    ii. RecordTypeDesc
    iii. Description
    iv. OriginalAddress1
    v. OpenDate
    vi. Latitude
    vii. Longitude
5. Filter out null values in Latitude field.
6. Make sure each field has the correct data type.
7. Apply & Close the table to the Data Model.
8. Create a Date Table in the Data Model and name the table dDate. The date table must have at minimum fields for date, month and year.
9. Create a Relationship between the dDate Date field and the Open Date field in the fact table.
10. In the Fact Table, use the Column tools tab in Power BI Desktop, in the Properties group, to select these fields in the Fact Table and set these properties:
    i. Latitude:
        i. Data Category = Latitude
        ii. Summarization = Don't summarize.
    ii. Longitude:
        i. Data Category = Longitude
        ii. Summarization = Don't summarize.
11. Create these three Measures:
    i. Count (count the rows in the Fact Table)
    ii. % of Grand Total Count
    iii. % of Filtered Grand Total Count
12. On a New Page create the set of visuals as shown here:

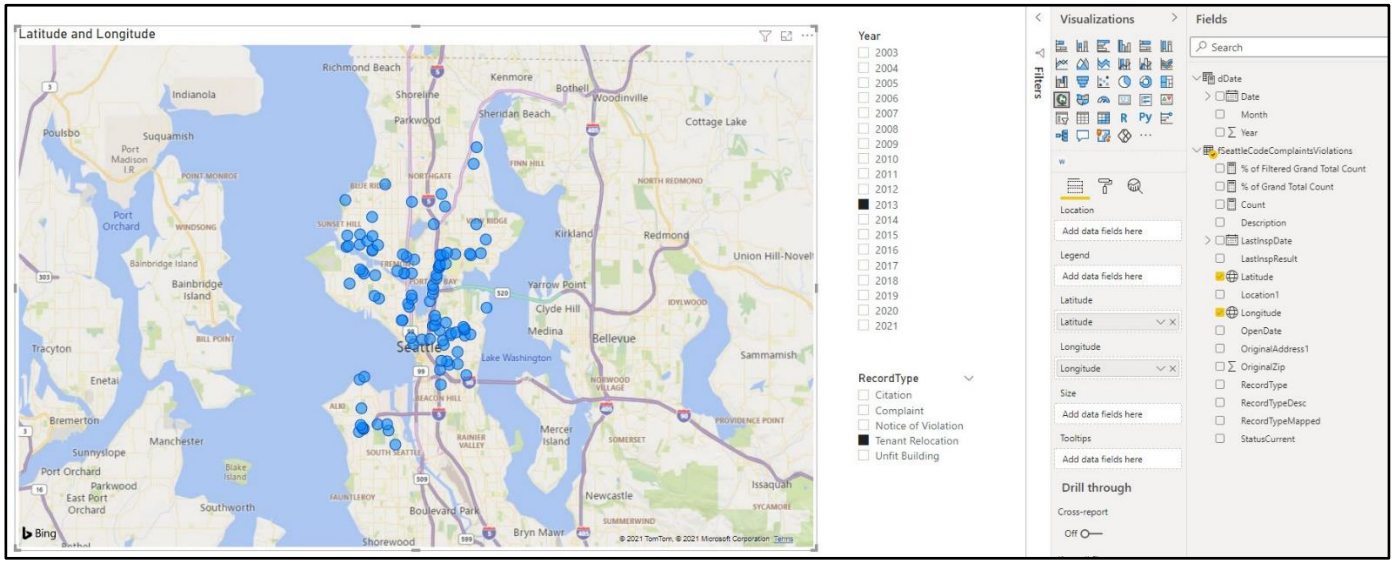


i. For the above visual on the left, you can use a Matrix visual and sorted the visual by the Count column.

ii. In the middle is a slicer with year.

iii. For the above visual on the right, you can use a Table visual and sorted the visual by the Count column.

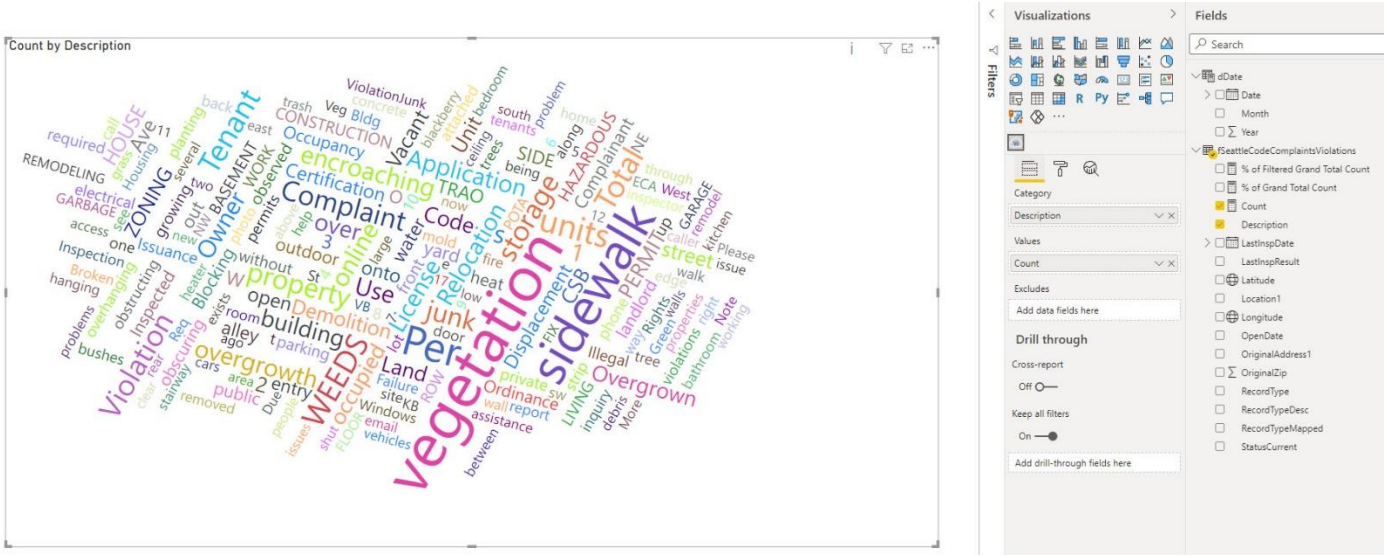
13. On a New Page create the set of visuals as shown here:



i. You can use the Map visual with latitude and longitude.

ii. Then you can add a slicer for year and RecordType.

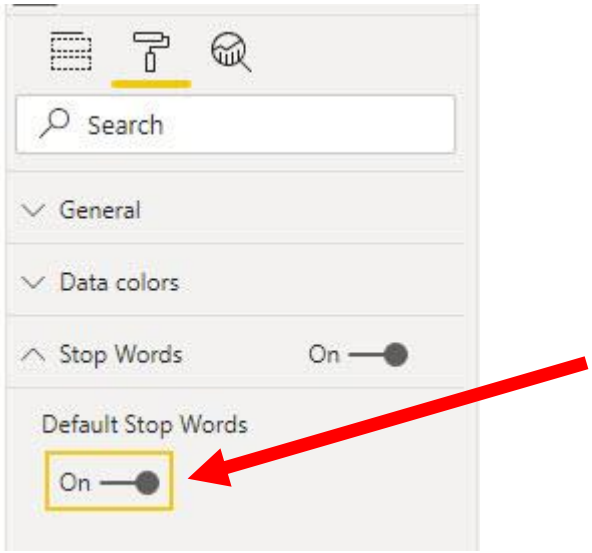
14. On a New Page create the set of visuals as shown here:



i. You can use the Word Cloud visual. This is a good visual for the description field in the data set because this field does not have a set of consistent categories. This visual shows that in Seattle, of all the complaints and violations in the city, most are about vegetation, sidewalks and weeds.

ii. In the Format tab (Paint Roller), you can turn on “Default Stop Words, to not show words like “the” and “and” in the visual.

i.



Problem #2: Create a new Excel file with a Power Pivot report.

The goal is to connect to the data in an online SQL database and create a simple Total Revenue & Total COGS by Product Report. The data base that you will access for this problem is located at the same online sever, but it is a different database. The database that you used in EDA video #4 was named "boomdata". The database that you access for this problem is named "boomerang".

Credentials to access SQL Server Database:

- Server = pond.highline.edu
- Database name = boomerang
- User = excelisfun
- Password: = ExcelIsFun!

Here are the general steps you can take to complete this Problem #2:

1. Open a new blank Excel file and save it with a file name that includes your name.
2. Using Power Query and the credentials above, access the boomerang SQL Server Database and import the fTransactions and dProduct Tables into the Power Pivot Data Model.
    a. If a message says that it "can not encrypt the data", click the OK button.
    b. You must import only two tables: fTransactions and dProduct. Do not import any of the other tables.
3. In the Fact Table, remove the TransactionID field (too many unique records that we do not need. If we did import them, it would make the columnar database very big).
4. Remove an related columns that contains data from the many side of the relationship.
5. Create a Date Table in the Data Model.
6. Create the Relationships.
7. Create a Measures for Total Revenue. Create a Measure using the One-Step Method.
8. Create a Measure for Total COGS. Create a Measure using the One-Step Method.
9. Create a Report and a Chart for Total Revenue & Total COGS by Product. Here is a picture:

Product	Total Revenue ($)	Total COGS($)
Alpine	87,505,399.66	54,573,137.42
Aspen	104,689,106.48	61,298,425.46
Bellen	216,208,260.83	127,286,653.20
Bower Aussie Round	196,399,974.64	118,906,604.50
Carlota	191,558,695.51	109,344,513.50
Carlota Doublers	26,511,391.61	11,988,615.63
Crested Beaut	159,328,170.80	100,222,586.36
Darnell Tri Fly	34,556,997.73	22,409,582.60
Eagle	69,262,468.55	38,405,124.75
Fire Aspen	51,122,362.98	30,640,013.12
Frido Fast Catch	15,507,090.01	8,412,495.64
Fun Fly	279,717,996.01	192,204,697.52
GelFast	56,732,839.33	35,538,773.05
Manu LD	94,175,049.61	39,809,522.59
Manu MTA	45,108,892.40	19,513,376.74
Mejestic Beaut	126,612,978.83	74,288,623.55
Phoenix	75,685,453.52	46,728,324.18
Quad	701,748,594.60	395,775,155.56
Sunset	92,636,764.83	56,484,878.37
Sunshine	95,776,560.03	55,771,145.94
Sunspot	31,576,466.38	19,307,646.22
Yanaki	112,980,527.05	64,495,896.05
Grand Total	**2,865,402,041.39**	**1,683,405,791.95**