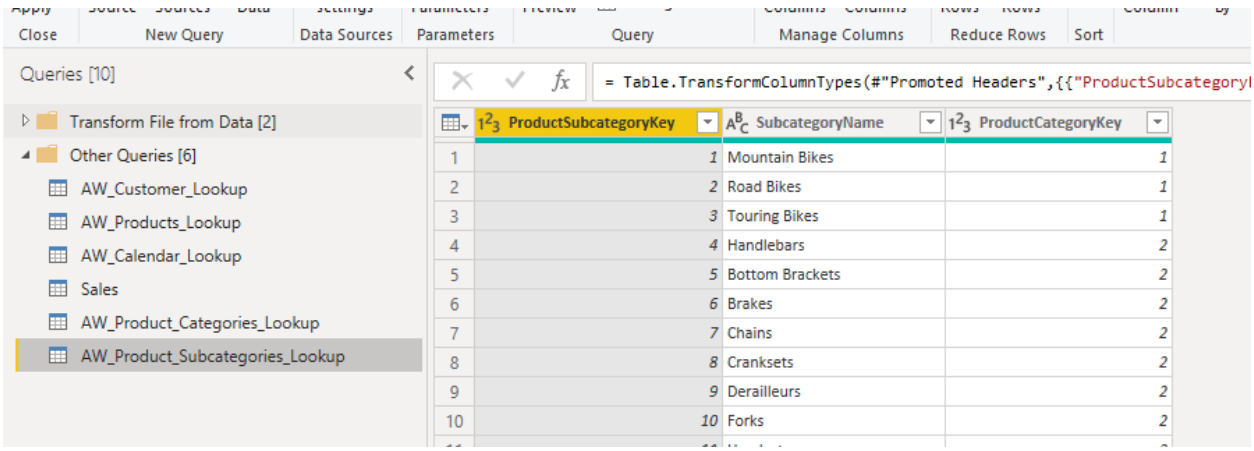
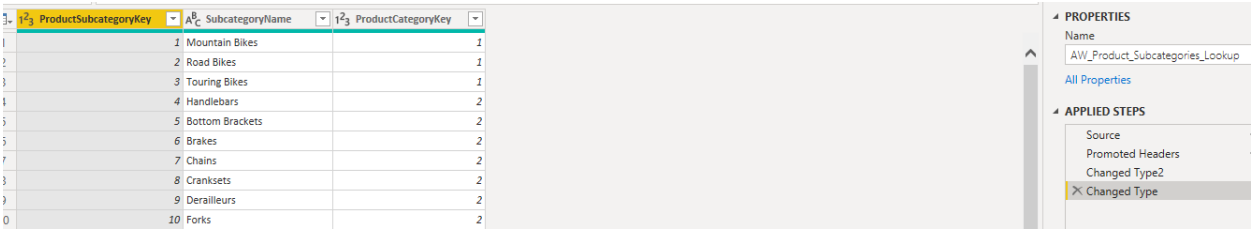
Using your Adventure Works Power BI file, complete the following:

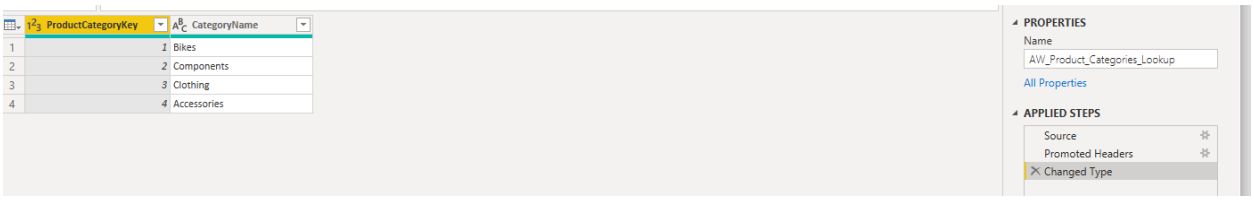
1) Create new queries to connect to the **(AdventureWorks_Product_Categories)** and **(AdventureWorks_Product_Subcategories)** files from the course resources:

- Name your queries (AW_Product_Category_Lookup) and (AW_Product_Subcategory_Lookup)

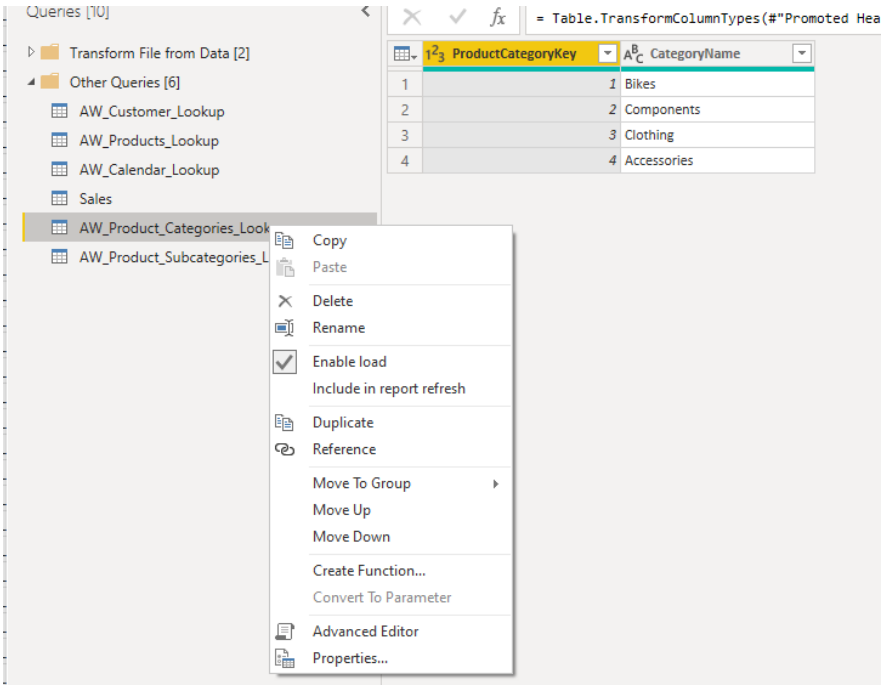


- Confirm that headers have been promoted and that detected data types are correct



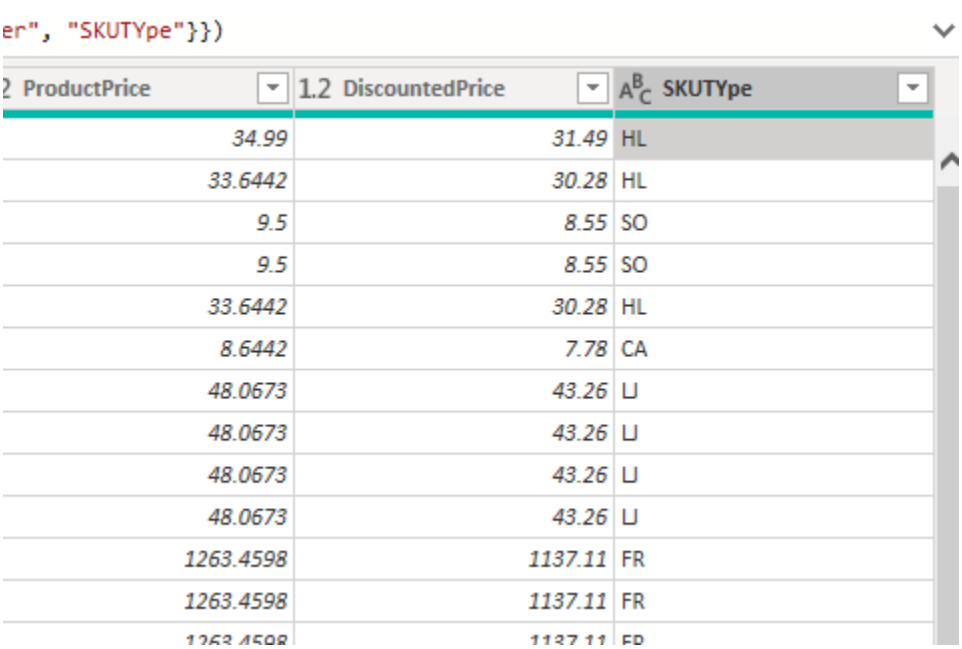


- Disable the report refresh option for both connections



2) Make the following modifications to the **AW_Product_Lookup** query:

- Add a calculated column that extracts all characters before the dash ("-") in the **ProductSKU** column, named "**SKUType**"



ProductPrice	DiscountedPrice	SKUTYpe
34.99	31.49	HL
33.6442	30.28	HL
9.5	8.55	SO
9.5	8.55	SO
33.6442	30.28	HL
8.6442	7.78	CA
48.0673	43.26	LJ
48.0673	43.26	LJ
48.0673	43.26	LJ
48.0673	43.26	LJ
1263.4598	1137.11	FR
1263.4598	1137.11	FR
1263.4598	1137.11	FR

- Update the **SKUType** calculation above to return all characters before second dash, instead of the first

1.2 ProductPrice	1.2 DiscountedPrice	ABC SKUType
34.99	31.49	HL-U509
33.6442	30.28	HL-U509
9.5	8.55	SO-B909
9.5	8.55	SO-B909
33.6442	30.28	HL-U509
8.6442	7.78	CA-1098
48.0673	43.26	LJ-0192
48.0673	43.26	LJ-0192
48.0673	43.26	LJ-0192
48.0673	43.26	LJ-0192
1263.4598	1137.11	FR-R92R
1263.4598	1137.11	FR-R92R
1263.4598	1137.11	FR-R92R
1263.4598	1137.11	FR-R92R
1263.4598	1137.11	FR-R92R
297.6346	267.87	FR-R38B
297.6346	267.87	FR-R38B
297.6346	267.87	FR-R38B
306.5636	275.91	FR-R38R

- Replace zeros (0) in the **ProductStyle** column with "NA"

```
eplaceValue(#"Renamed Columns2","0","N/A",Replacer.ReplaceText,{"ProductStyle"})
```

	ABC ProductColor	ABC ProductSize	ABC ProductStyle	1.2 ProductCost	1.2 ProductPrice
n visor.	Red	0	N/A	13.0863	34
n visor.	Black	0	N/A	12.0278	33.64
ays dry and provides just...	White	M	U	3.3963	
ays dry and provides just...	White	L	U	3.3963	
n visor.	Blue	0	N/A	12.0278	33.64
its all.	Multi	0	U	5.7052	8.64
g jersey	Multi	S	U	31.7244	48.06
g jersey	Multi	M	U	31.7244	48.06
g jersey	Multi	L	U	31.7244	48.06
g jersey	Multi	XL	U	31.7244	48.06
made from the newest a...	Red	62	U	747.9682	1263.45
made from the newest a...	Red	44	U	747.9682	1263.45
made from the newest a...	Red	48	U	747.9682	1263.45

- Update the **DiscountPrice** calculation to 15%, by multiplying the **ProductPrice** values by 0.85 (instead of 0.9)

```
'DiscountPrice", each Number.Round(_, 2), type number}})
```

1.2 ProductCost	1.2 ProductPrice	1.2 DiscountPrice	SKUType
13.0863	34.99	26.77	HL-U509
12.0278	33.6442	25.74	HL-U509
3.3963	9.5	7.27	SO-B909
3.3963	9.5	7.27	SO-B909
12.0278	33.6442	25.74	HL-U509
5.7052	8.6442	6.61	CA-1098
31.7244	48.0673	36.77	LJ-0192
31.7244	48.0673	36.77	LJ-0192
31.7244	48.0673	36.77	LJ-0192
31.7244	48.0673	36.77	LJ-0192
747.9682	1263.4598	966.54	FR-R92R
747.9682	1263.4598	966.54	FR-R92R
747.9682	1263.4598	966.54	FR-R92R

3) Using the Statistics tools in the Query Editor, confirm the following values :

- Average product cost (**$413.66**)

```
= Number.Round(#"Calculated Average", 2)
```

413.66

- Number of distinct product colors (**10**)

```
= List.NonNullCount(List.Distinct(#"Rounded Off1"[ProductColor]))
```

10

- Number of distinct customer names (**18,110**)

```
= List.NonNullCount(List.Distinct(#"Uppercased Text"[Full Name]))
```

18110

- Maximum annual customer income (**$170,000**)

```
= List.Max(#"Uppercased Text"[AnnualIncome])
```

170000

- Count of order numbers (**56,046**)

```
= List.NonNullCount(#"Changed Type"[OrderNumber])
```

56046

- Count of distinct order numbers (**25,164**)

```
= List.NonNullCount(List.Distinct(#"Changed Type"[OrderNumber]))
```

25164

4) Make the following modifications to the **AW_Customer_Lookup** query:

- Add a new calculated column for the year of birth (named "**BirthYear**"), based on **BirthDate**

erName	Domain	BirthYear
	ADVENTURE WORKS.COM	1966
:10	ADVENTURE WORKS.COM	1965
5	ADVENTURE WORKS.COM	1965
12	ADVENTURE WORKS.COM	1968
th5	ADVENTURE WORKS.COM	1968

- Add a conditional column to categorize customer income (named "**IncomeLevel**"), based on the following criteria *:*
  - If **AnnualIncome** >= $150,000, then **IncomeLevel** = "*Very High*"
  - If **AnnualIncome** >= $100,000, then **IncomeLevel** = "*High*"
  - If **AnnualIncome** >= $50,000, then **IncomeLevel** = "*Average*"
  - Otherwise **IncomeLevel** = "*Low*"

```
= Table.AddColumn(#"Renamed Columns1", "IncomeLevel", each if [AnnualIncome] >= 150000 then "Very High" else if [AnnualIncome] >= 100000 then "High" else if [AnnualIncome] >= 50000 then "Average" else "Low")
```

	ss	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	UserName	Domain	BirthYear	IncomeLevel
1	re-works.com	90,000.00	2	Bachelors	Professional	Y	jon24	ADVENTURE WORKS.COM	1966	Average
2	enture-works.com	60,000.00	3	Bachelors	Professional	N	eugene10	ADVENTURE WORKS.COM	1965	Average
3	ture-works.com	60,000.00	3	Bachelors	Professional	Y	ruben35	ADVENTURE WORKS.COM	1965	Average
4	nture-works.com	70,000.00	0	Bachelors	Professional	N	christy12	ADVENTURE WORKS.COM	1968	Average
5	enture-works.com	80,000.00	5	Bachelors	Professional	Y	elizabeth5	ADVENTURE WORKS.COM	1968	Average
6	re-works.com	70,000.00	0	Bachelors	Professional	Y	julio1	ADVENTURE WORKS.COM	1965	Average
7	nture-works.com	60,000.00	3	Bachelors	Professional	Y	marco14	ADVENTURE WORKS.COM	1964	Average
8	e-works.com	60,000.00	4	Bachelors	Professional	Y	rob4	ADVENTURE WORKS.COM	1964	Average
9	venture-works.com	70,000.00	0	Bachelors	Professional	N	shannon38	ADVENTURE WORKS.COM	1964	Average
10	lventure-works.com	70,000.00	0	Bachelors	Professional	N	jacquelyn20	ADVENTURE WORKS.COM	1964	Average
11	ure-works.com	60,000.00	4	Bachelors	Professional	Y	curtis9	ADVENTURE WORKS.COM	1963	Average
12	nture-works.com	100,000.00	2	Bachelors	Management	Y	lauren41	ADVENTURE WORKS.COM	1968	High
13	re-works.com	100,000.00	2	Bachelors	Management	Y	ian47	ADVENTURE WORKS.COM	1968	High
14	nture-works.com	100,000.00	3	Bachelors	Management	N	sydney23	ADVENTURE WORKS.COM	1968	High
15	ture-works.com	30,000.00	0	Partial College	Skilled Manual	N	chloe23	ADVENTURE WORKS.COM	1979	Low
16	ture-works.com	30,000.00	0	Partial College	Skilled Manual	Y	wyatt32	ADVENTURE WORKS.COM	1979	Low

Sort Ascending
Sort Descending
Clear Sort
Clear Filter
Remove Empty
Number Filters
Search
(Select All)
10000
20000
30000
40000
OK Cancel

	ss	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	UserName	Domain	BirthYear	IncomeLevel
			0	Partial College	Skilled Manual	N	chloe23	ADVENTURE WORKS.COM	1979	Low
			0	Partial College	Skilled Manual	Y	wyatt32	ADVENTURE WORKS.COM	1979	Low
			4	High School	Skilled Manual	Y	shannon1	ADVENTURE WORKS.COM	1944	Low
			2	Partial College	Clerical	Y	clarence32	ADVENTURE WORKS.COM	1944	Low
			0	High School	Skilled Manual	N	luke18	ADVENTURE WORKS.COM	1978	Low
			0	High School	Skilled Manual	N	jordan73	ADVENTURE WORKS.COM	1978	Low
			0	Partial College	Skilled Manual	N	destiny7	ADVENTURE WORKS.COM	1978	Low
			0	Partial College	Skilled Manual	Y	ethan20	ADVENTURE WORKS.COM	1978	Low
			0	Partial College	Skilled Manual	Y	seth46	ADVENTURE WORKS.COM	1978	Low
			2	Partial High School	Clerical	Y	alejandro45	ADVENTURE WORKS.COM	1945	Low
			2	Partial College	Clerical	N	harold3	ADVENTURE WORKS.COM	1946	Low
			2	Partial College	Clerical	Y	jessie16	ADVENTURE WORKS.COM	1946	Low
			2	Partial College	Clerical	Y	jill13	ADVENTURE WORKS.COM	1946	Low
			2	Partial College	Clerical	Y	jimmy9	ADVENTURE WORKS.COM	1946	Low
			2	Partial High School	Clerical	Y	bethany10	ADVENTURE WORKS.COM	1947	Low
			4	High School	Skilled Manual	Y	theresa13	ADVENTURE WORKS.COM	1947	Low

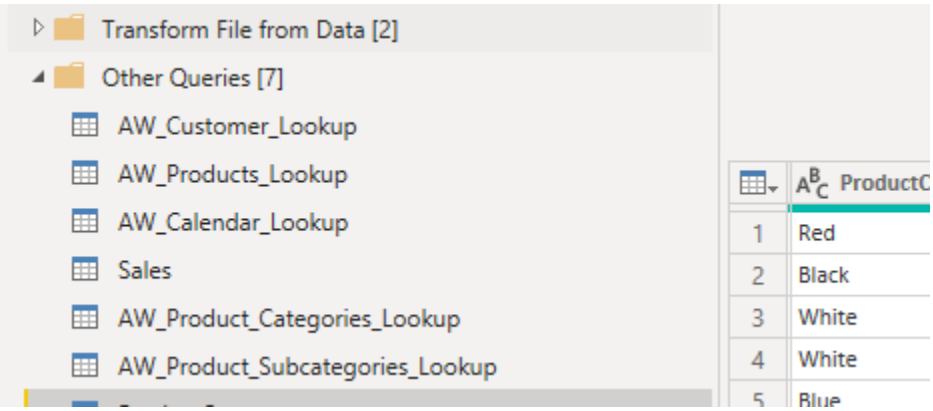
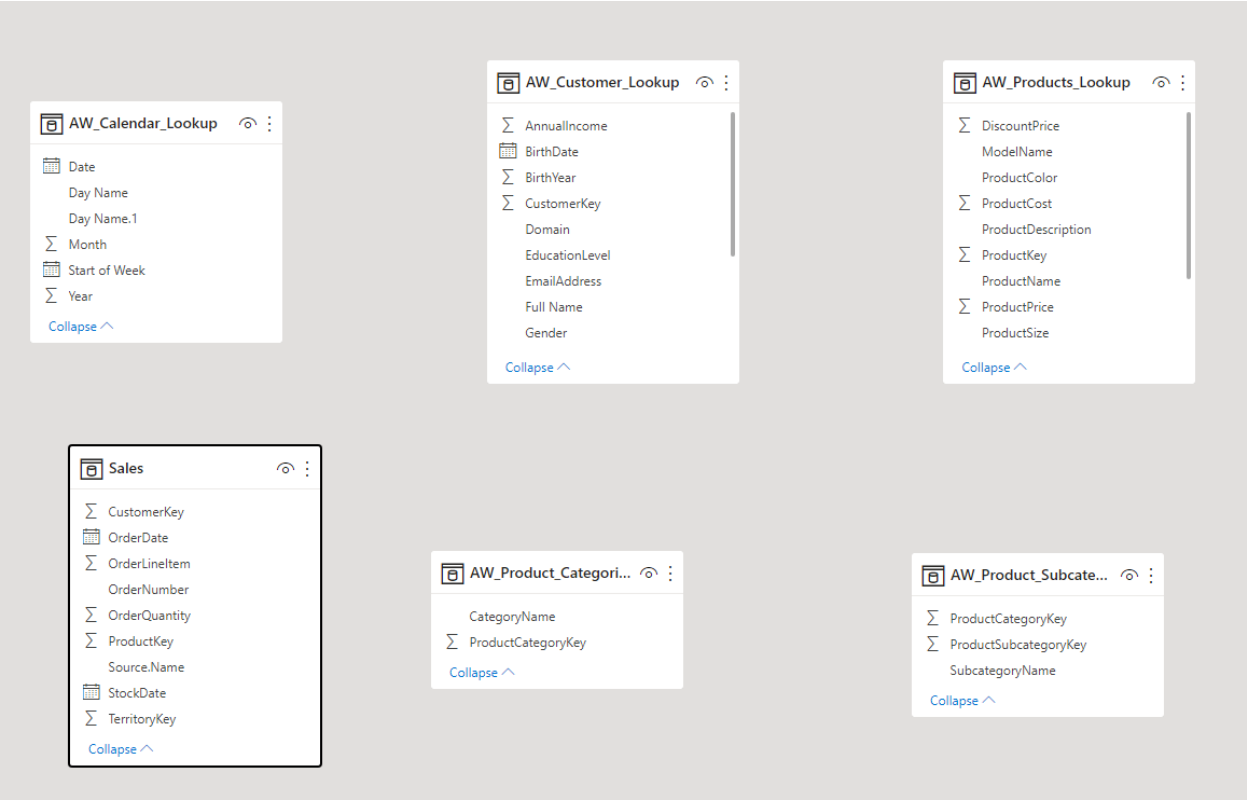
Sort Ascending
Sort Descending
Clear Sort
Clear Filter
Remove Empty
Number Filters
Search
(Select All)
50000
60000
70000
80000
90000
OK Cancel

	ss	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	UserName	Domain	BirthYear	IncomeLevel
			2	Bachelors	Professional	Y	jon24	ADVENTURE WORKS.COM	1966	Average
			3	Bachelors	Professional	N	eugene10	ADVENTURE WORKS.COM	1965	Average
			3	Bachelors	Professional	Y	ruben35	ADVENTURE WORKS.COM	1965	Average
			0	Bachelors	Professional	N	christy12	ADVENTURE WORKS.COM	1968	Average
			5	Bachelors	Professional	Y	elizabeth5	ADVENTURE WORKS.COM	1968	Average
			0	Bachelors	Professional	Y	julio1	ADVENTURE WORKS.COM	1965	Average
			3	Bachelors	Professional	Y	marco14	ADVENTURE WORKS.COM	1964	Average
			4	Bachelors	Professional	Y	rob4	ADVENTURE WORKS.COM	1964	Average
			0	Bachelors	Professional	N	shannon38	ADVENTURE WORKS.COM	1964	Average
			0	Bachelors	Professional	N	jacquelyn20	ADVENTURE WORKS.COM	1964	Average
			4	Bachelors	Professional	Y	curtis9	ADVENTURE WORKS.COM	1963	Average
			0	Partial College	Skilled Manual	Y	russell7	ADVENTURE WORKS.COM	1978	Average
			0	Partial College	Skilled Manual	Y	jennifer93	ADVENTURE WORKS.COM	1978	Average
			0	Partial College	Skilled Manual	Y	amanda53	ADVENTURE WORKS.COM	1977	Average
			0	Partial College	Skilled Manual	Y	megan28	ADVENTURE WORKS.COM	1977	Average
			0	Partial College	Skilled Manual	Y	nathan11	ADVENTURE WORKS.COM	1976	Average
			0	Partial College	Skilled Manual	N	ana0	ADVENTURE WORKS.COM	1980	Average

Sort Ascending
Sort Descending
Clear Sort
Clear Filter
Remove Empty
Number Filters
Search
(Select All)
100000
110000
120000
130000

	ss	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	UserName	Domain	BirthYear	IncomeLevel
			2	Bachelors	Management	Y	lauren41	ADVENTURE WORKS.COM	1968	High
			2	Bachelors	Management	Y	ian47	ADVENTURE WORKS.COM	1968	High
			3	Bachelors	Management	N	sydney23	ADVENTURE WORKS.COM	1968	High
			2	Bachelors	Management	Y	savannah39	ADVENTURE WORKS.COM	1966	High
			0	Graduate Degree	Management	N	angela17	ADVENTURE WORKS.COM	1966	High
			0	Graduate Degree	Management	Y	alyssa37	ADVENTURE WORKS.COM	1966	High
			0	Graduate Degree	Management	Y	aimee13	ADVENTURE WORKS.COM	1967	High
			1	Bachelors	Management	Y	jonathan43	ADVENTURE WORKS.COM	1967	High
			1	Bachelors	Management	Y	gabrielle58	ADVENTURE WORKS.COM	1967	High
			0	Graduate Degree	Management	N	sarah13	ADVENTURE WORKS.COM	1967	High
			0	Graduate Degree	Management	Y	nicholas19	ADVENTURE WORKS.COM	1967	High
			2	Graduate Degree	Management	Y	jose6	ADVENTURE WORKS.COM	1942	High
			2	Graduate Degree	Management	Y	nathan55	ADVENTURE WORKS.COM	1943	High
			2	Graduate Degree	Management	Y	molly18	ADVENTURE WORKS.COM	1943	High
			2	Bachelors	Management	N	clarence36	ADVENTURE WORKS.COM	1958	High

Sort Ascending
Sort Descending
Clear Sort
Clear Filter
Remove Empty
Number Filters
Search
(Select All)
150000
160000
170000
OK Cancel

	ss	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner	UserName	Domain	BirthYear	IncomeLevel
			0	Graduate Degree	Management	Y	donald20	ADVENTURE WORKS.COM	1959	Very High
			0	Graduate Degree	Management	Y	damien32	ADVENTURE WORKS.COM	1959	Very High
			1	Bachelors	Management	Y	april18	ADVENTURE WORKS.COM	1943	Very High
			2	Graduate Degree	Management	Y	devin13	ADVENTURE WORKS.COM	1943	Very High
			2	Partial College	Professional	Y	anne4	ADVENTURE WORKS.COM	1958	Very High
			2	Partial College	Professional	Y	robin2	ADVENTURE WORKS.COM	1957	Very High
			2	Bachelors	Management	N	alexis28	ADVENTURE WORKS.COM	1957	Very High
			3	High School	Professional	Y	shannon4	ADVENTURE WORKS.COM	1955	Very High
			2	Bachelors	Management	N	danielle23	ADVENTURE WORKS.COM	1964	Very High
			0	Graduate Degree	Management	Y	hunter16	ADVENTURE WORKS.COM	1962	Very High
			1	Partial College	Professional	N	seth42	ADVENTURE WORKS.COM	1961	Very High
			3	Graduate Degree	Management	Y	kyle43	ADVENTURE WORKS.COM	1945	Very High
			4	Bachelors	Management	Y	dustin1	ADVENTURE WORKS.COM	1946	Very High
			5	Partial College	Professional	Y	andre16	ADVENTURE WORKS.COM	1951	Very High
			3	Partial College	Management	N	taylor13	ADVENTURE WORKS.COM	1950	Very High
			0	Partial High School	Management	Y	grant6	ADVENTURE WORKS.COM	1971	Very High
			1	Graduate Degree	Management	Y	arthur21	ADVENTURE WORKS.COM	1969	Very High

5) Apply all changes, and confirm that new tables and fields are accessible within both the **Data** and **Relationships** views (recommend saving a backup copy of the report (i.e. *"AdventureWorks_Report_Backup"*))