HOMEWORK: Creating a Data Model

Using your Adventure Works report file, complete the following:

**1)** Navigate to the **RELATIONSHIPS**view, and perform the following actions *(00:14 mark)*:

* Right-click to delete each relationship between **AW\_Sales**, **AW\_Customer\_Lookup** and **AW\_Calendar\_Lookup**(*including both date fields*) *(00:21 mark)*
* Use the **Manage Relationships** tool to delete *all* remaining relationships between all tables *(01:05 mark)*

**2)** Recreate all table relationships (*using any method you prefer*), and confirm the following *(01:30 mark)*:

* Cardinality is **1-to-Many** for all relationships *(03:16 mark)*
* Filters are all **One-Way**(*no two-way filters*) *(04:02 mark)*
* Filter direction correctly flows "**downstream**" to data tables *(04:24 mark)*
* Data tables are **not connected** directly to one another *(04:30 mark)*
* Both data tables are connected to **all valid lookup tables***(04:50 mark)*
* Product-related tables follow a **snowflake schema***(05:20 mark)*

**3)** Return to the **REPORT**view, and complete the following *(05:32 mark)*:

* Edit (*or insert*) the  matrix visual to show **ReturnQuantity** (*values*) by **CategoryName** (*rows*) from the **AW\_Product\_Category\_Lookup**table *(05:39 mark)*
  + *Which category saw the highest volume of returns? How many? (06:11 mark)*
* Replace **CategoryName** with **Year**from the **AW\_Calendar\_Lookup**table *(06:32 mark)*
  + *How many returns do you see in 2015 vs. 2016? (07:00 mark)*
* Replace **Year** with **FullName** from the **AW\_Customer\_Lookup**table *(07:12 mark)*
  + *What do you see, and why? (07:22 mark)*
* Update the matrix to show both **OrderQuantity** and **ReturnQuantity** (*values*) by **ProductKey** (*rows*) from the **AW\_Product\_Lookup** table *(07:59 mark)*
  + *What was the total OrderQuantity for Product #338? (08:34 mark)*

**4)**Unhide the **ProductKey** field from the **AW\_Returns**tables (*using either the****DATA****or****RELATIONSHIPS****view*) *(08:47 mark)*:

* In the matrix, replace **ProductKey** from **AW\_Product\_Lookup** with **ProductKey**from the **AW\_Returns** table *(09:21 mark)*
  + *Why do we the same repeating values for OrderQuantity? (09:44 mark)*
* Edit the relationship between **AW\_Returns** and **AW\_Product\_Lookup** to change the cross filter direction from *Single* to *Both (10:29 mark)*
  + *Why does the visual now show OrderQuantity values by product, even though we are using****ProductKey****from****AW\_Returns****? (11:04 mark)*
  + *How many orders do we see now for Product #338? What's going on here? (11:34 mark)*

**5)** Complete the following *(13:05 mark)*:

* Change the cross filter direction between **AW\_Returns** and **AW\_Product\_Lookup** back to *single* (*One-Way*) *(13:15 mark)*
* Hide the **ProductKey** field in the **AW\_Returns** table from report view (*and any other foreign keys, if necessary*) *(13:29 mark)*
* Update the matrix to show **ProductKey** from the **AW\_Product\_Lookup**, rather than **AW\_Returns***(13:38 mark)*
* **Recommendation:** Save a separate backup copy of the .pbix file (*i.e. "AdventureWorks\_Report\_Backup"*) *(13:57 mark)*