

Modeling Data with Power Pivot



Power BI: Introduction to Business Analytics

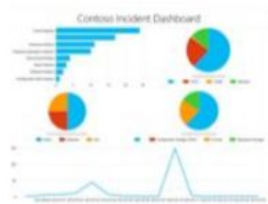
Course Author: Joshua Michalik



Power Query



Power Pivot



Power View



Publish



Graphical User Interface

Select Tables and Columns

Choosing Cardinality

Cross Filters



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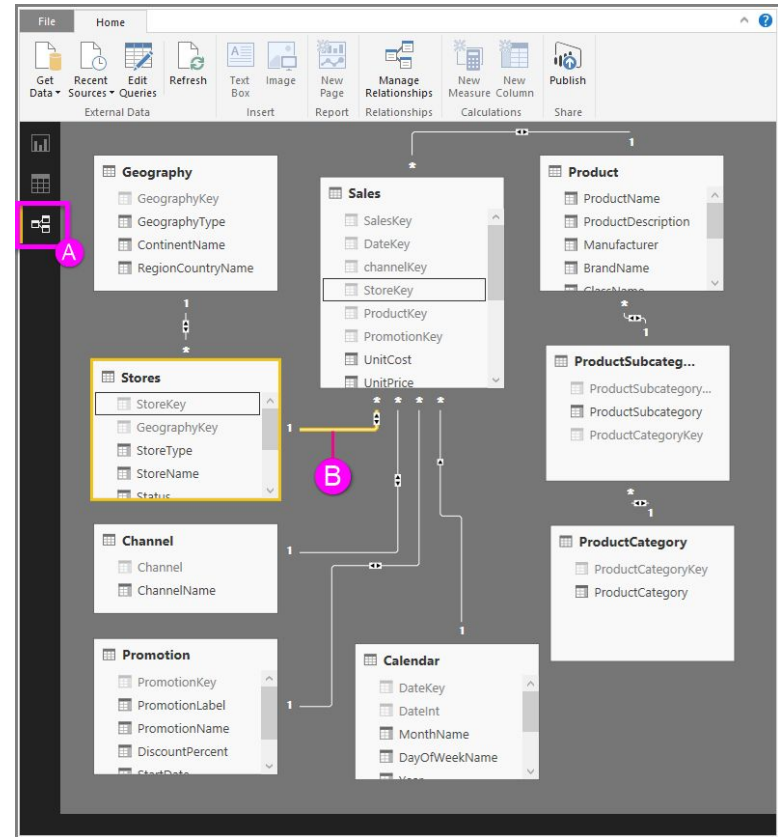
Select Tables and Columns

Select First Table

Choose Column

Select Second Table

Choose Column



Choosing Cardinality

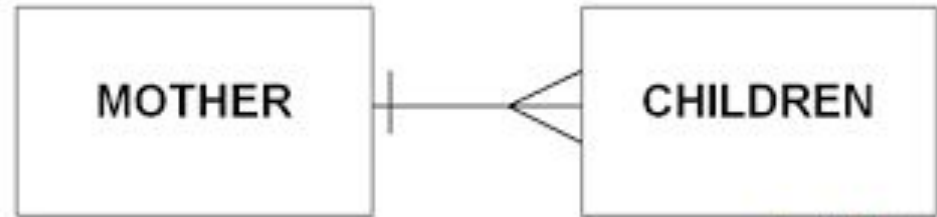
Many to 1 relationships

1 to 1 relationships

1 to Many relationships

Many to Many relationships

**One-to-many (or many-to-one)
relationships**



Cross Filters

Filter Single-Side

Filter Bi-Directional Tables

×

Edit Relationship

Select tables and columns that relate to one another.

Articles

CategoryID	SectionID	Source	Author	ArticleDate	Section	Category	Days Old	Fresh
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Categories

CategoryID	Category
1	Power BI Desktop
2	Power BI Developer
3	Power BI Mobile Apps

Cardinality

Many to One (*:1)

Cross filter direction

Both

☒ Make this relationship active

☐ Assume Referential Integrity

☒ Apply security filter in both directions

OK

Cancel



Preparing Source Data

Setting Up Data from One
Source

Setting Up Data from Many
Sources



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Setting Up Data from One Source

Name the Columns

Set Data Types

Import Multiple Pages

Verify All Data has Same Number
and Name of Columns



Setting Up Data from Many Sources

Name the Column

Set Data Types

Import Various Sources



Efficient Queries

Measured VS Calculated Columns

Static Files VS Live Data

All Data VS Needed Data



Measured VS Calculated Columns

Measured

Aggregated Data Loads Entire Dataset
First

Calculated at Run-Time

Calculated

Based Only on Current Row's Data

Calculated as Data is Loaded



Static Files VS Live Data

Static Files

Doesn't Change

Easier on Processor

Live Data

Constant Updates

Harder on Processor



All Data VS Needed Data

All Data

Collects and Prepares Everything

Harder on Processor

Needed Data

Collects only the Tables and Columns
Used

Easier on Processor

More Efficient

