



Up & Running Power BI Desktop

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August 1, 2023

Course Outline

01. Introduction Power BI

Installing Power BI, exploring the Power BI workflow, comparing Power BI vs Excel, etc.

02. Connecting and Shaping Data

Connecting to source data, shaping and transforming tables, editing, merging and appending query, etc.

03. Creating Data Model

Building relational models, creating table relationships, understanding cardinality, exploring filter flow, etc.

04. Add Calculated Field with DAX

Understanding DAX syntax, adding calculated columns and measures, writing commons formulas and functions, etc.

05. Visualizing Data With Report

Inserting charts and visuals, customizing formats, editing interactions, applying filters and bookmarks, etc.



Introducing The Course Project

THE SITUATION

You have just been hired by **Adventure Works Cycle**, a global manufacturing company to design and deliver an end-to-end business intelligence solution.

THE BRIEF

Your client needs a way to track KPIs (sales, revenue, profit, returns), compare regional performance, analyses product-level trends and forecasts, and identify high-value customers

All you've been given is a folder of raw csv files, containing information about transactions, returns, products, customers and territories

THE OBJECTIVE

Use Power BI Desktop to:

- Connect and transform the raw data
- Build a relational data model
- Create new calculated column and DAX measures
- Design and interactive report to analyze and visualize the data

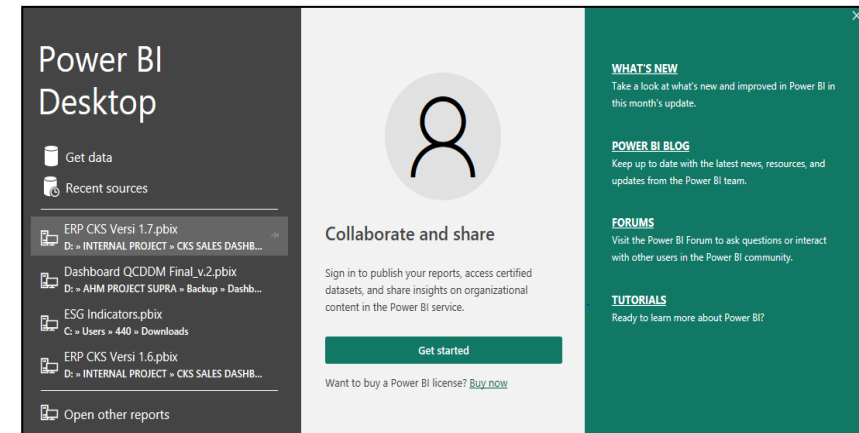
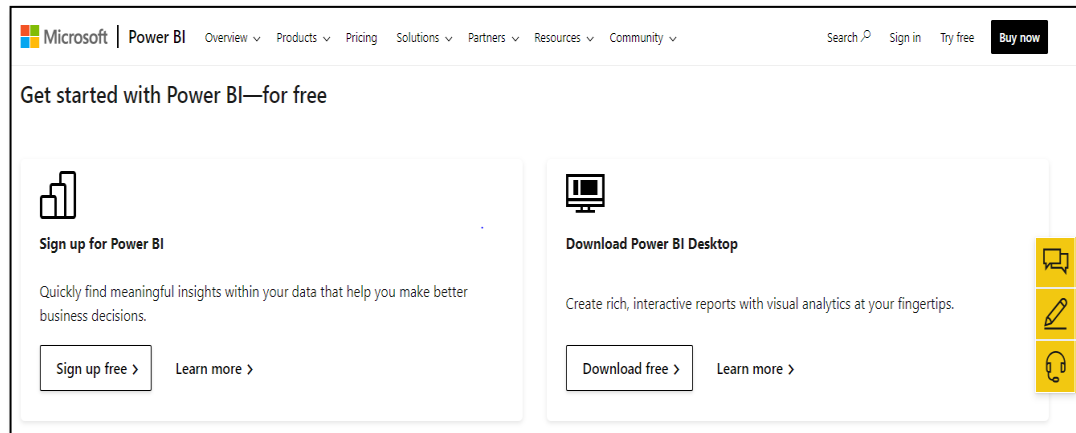
A series of overlapping geometric shapes, including triangles and diamonds, in teal, yellow, and green colors, arranged in a diagonal pattern across the top and right sides of the slide.

“

INTRODUCING POWER BI

Installing Power BI Desktop

Head to powerbi.microsoft.com and click “Sign Up Free” and click “Download free” to start Power BI Desktop download



Meet Power BI

Power BI is a standalone Microsoft business intelligence product, which includes both desktop and web-based applications for loading, modelling, and visualizing data

More information at powerbi.microsoft.com



As of January 2023 © Gartner, Inc
Gartner
Gartner Magic Quadrant for Analytics and Business Intelligence Platforms
2023

Why Power BI?



- **Connect, transform analyze millions of rows and data**

Access data from virtually anywhere (database tables, flat files, cloud services, folders, etc), and create fully automated data shaping and loading (ETL) procedures.

- **Build relational models to blend data from multiple sources**

Create table relationships to analyse holistic performance across an entire data model

- **Define complex calculations using Data Analysis Expressions (DAX)**

Enhance datasets and enable advanced analytics with powerful and portable DAX expressions

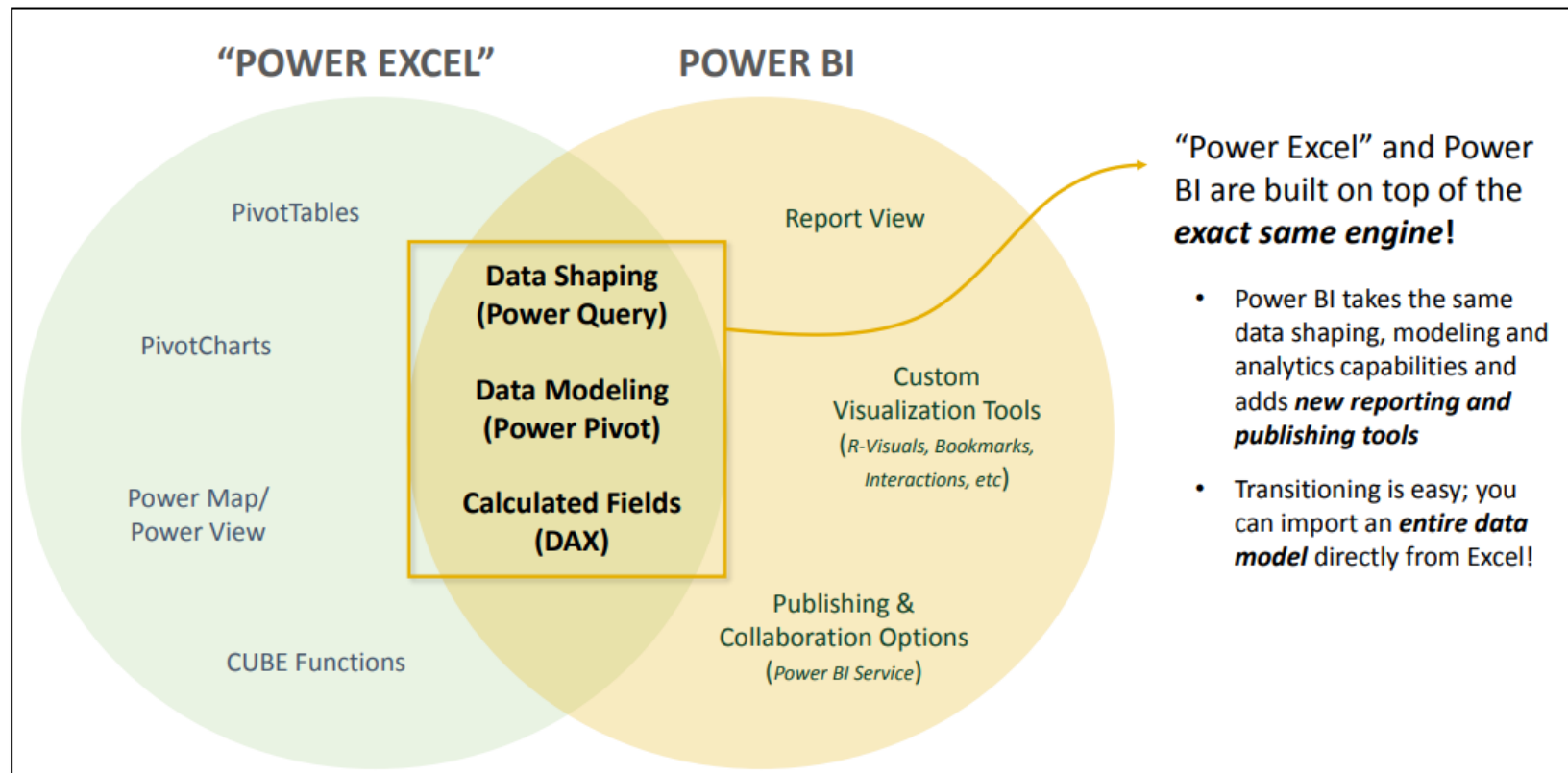
- **Visualize data with interactive reports and dashboard**

Build custom business intelligence tools with best-in-class visualization and dashboard features

- **Power BI is the industry leader among BI platforms**

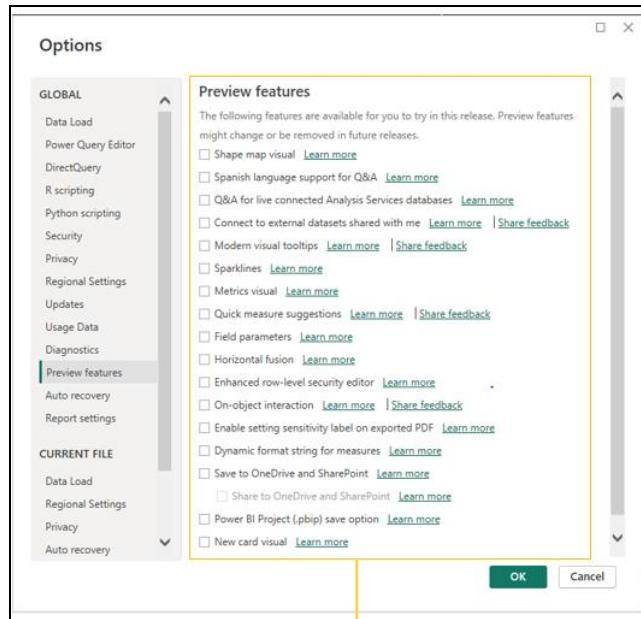
Microsoft Power BI is intuitive, powerful, and absolutely FREE to get started.

Power BI vs Power Excel



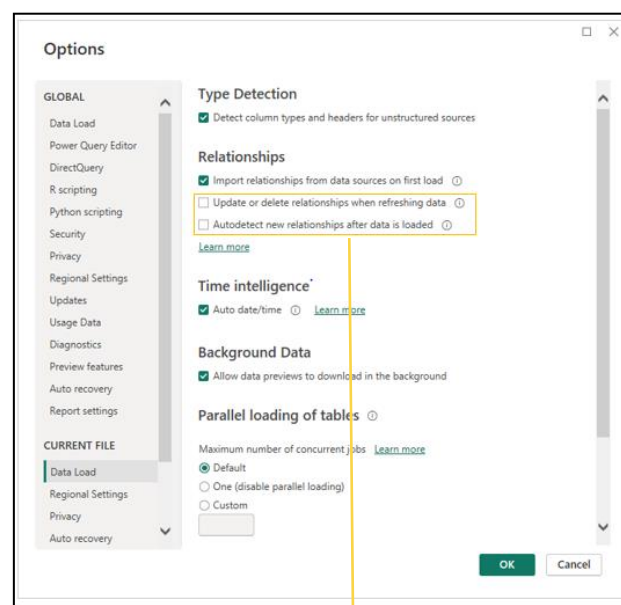
Course options & settings

Preview features



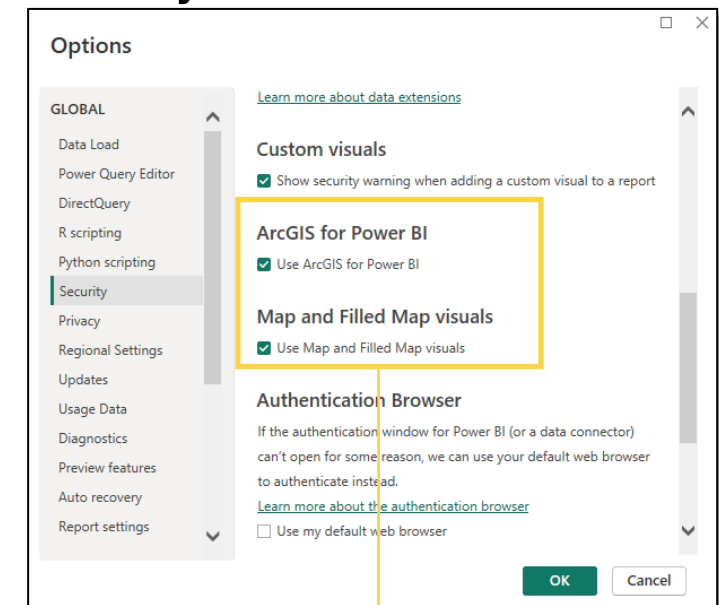
In the “**Preview Features**” tab, deselect any active features while you are taking the course.

Data Load



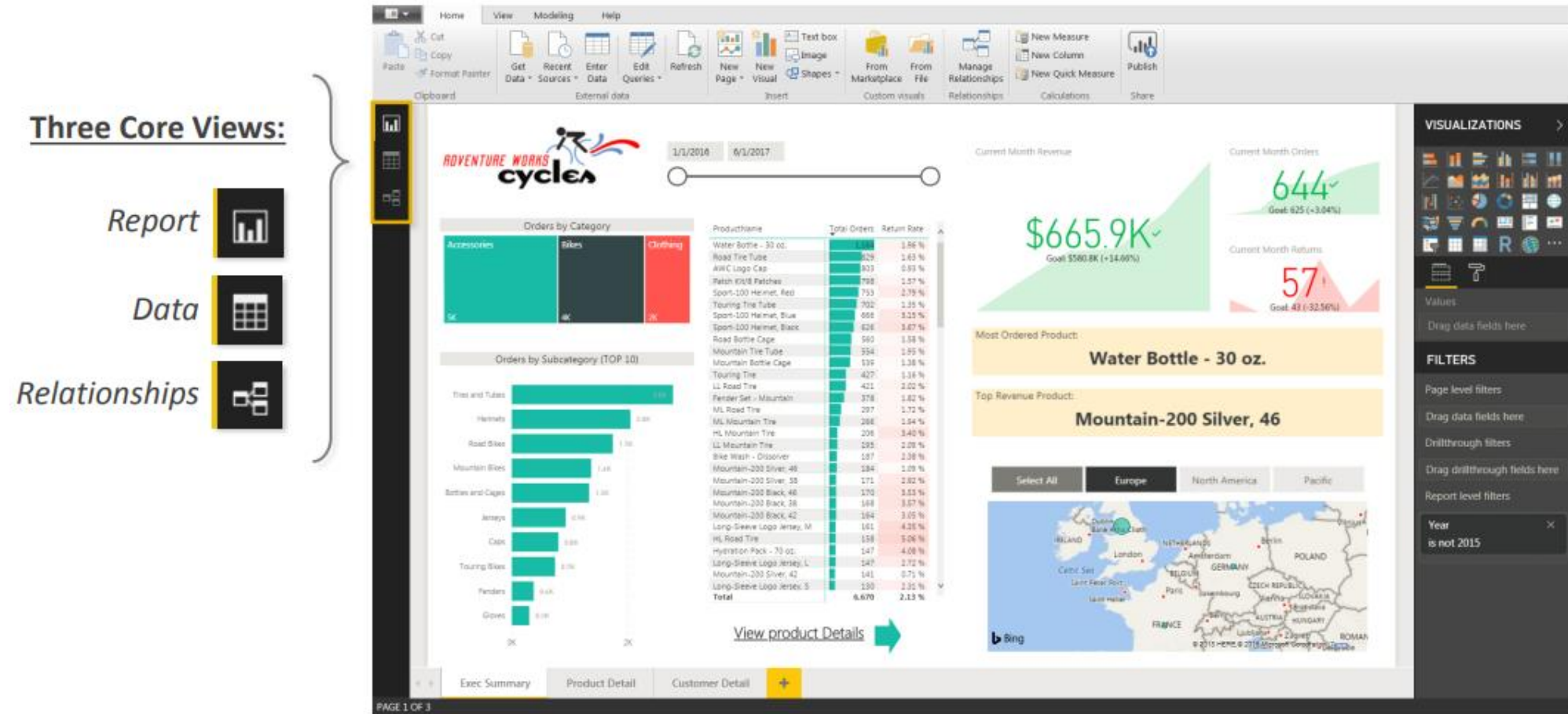
In the “**Data Load**” tab, deselect the “**Update or delete relationships when refreshing data**” and “**Autodetect new relationships after data is loaded**” options

Security

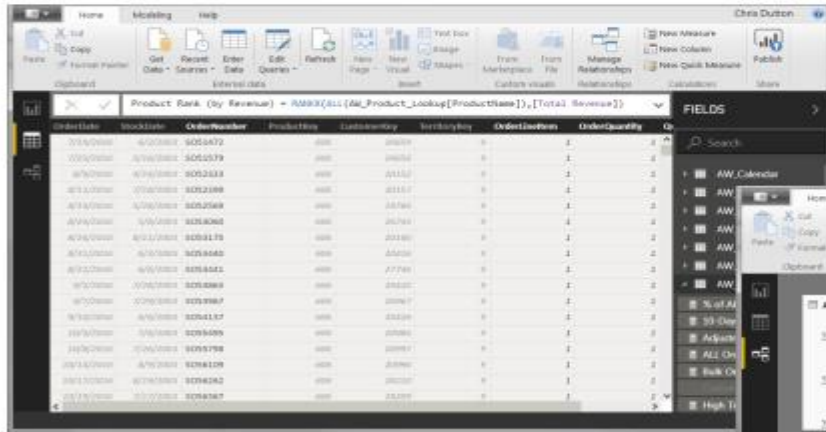


In the “**Security**” tab, select the “**Use ArcGIS for Power BI**” and “**Map and Filled Map Visuals**” options


The Power BI Interface

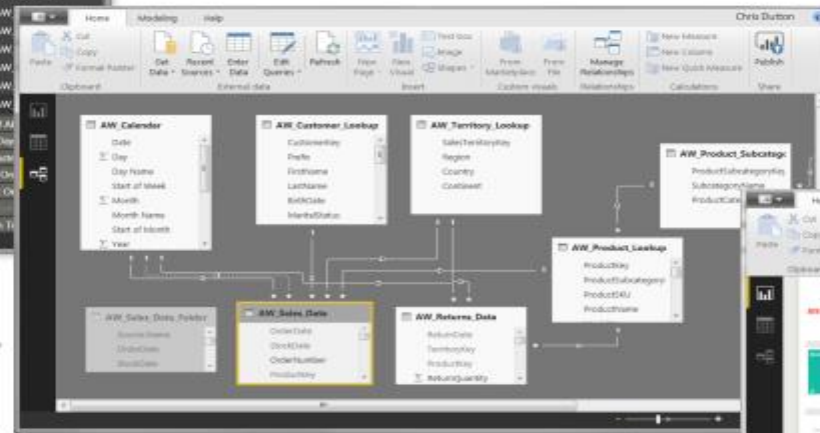



The Power BI Workflow

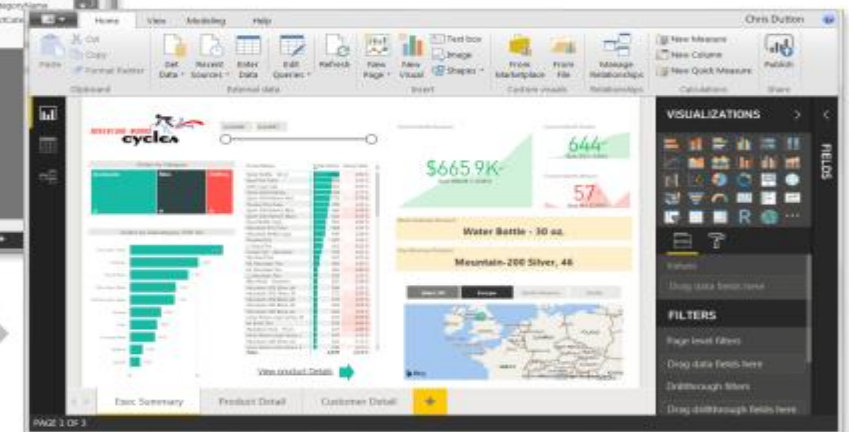



OrderDate	ProductID	OrderNumber	ProductName	CustomerID	TerritoryID	OrderStatus	OrderQuantity
1/1/2010	1	101470	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	2	101471	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	3	101472	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	4	101473	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	5	101474	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	6	101475	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	7	101476	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	8	101477	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	9	101478	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	10	101479	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	11	101480	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	12	101481	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	13	101482	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	14	101483	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	15	101484	Mountain-200 Silver, 48	1	1	1	1
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1/1/2010	17	101486	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	18	101487	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	19	101488	Mountain-200 Silver, 48	1	1	1	1
1/1/2010	20	101489	Mountain-200 Silver, 48	1	1	1	1

 **Connect, shape and transform raw data**

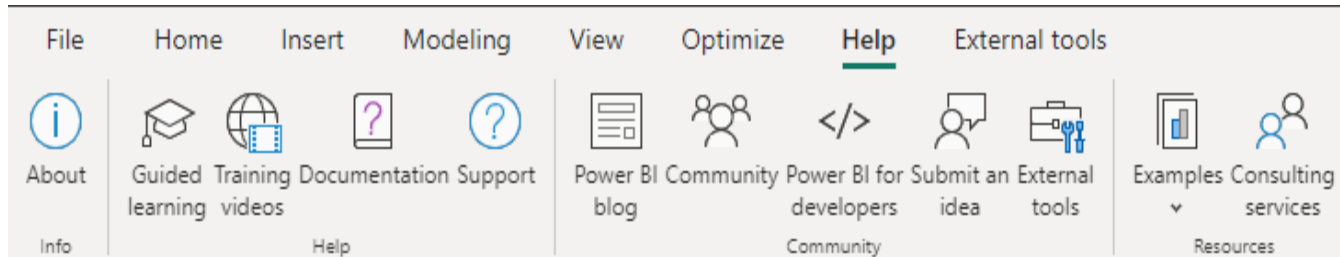


 **Build table *relationships* to tie sources together**



 **Design interactive *reports* to explore and visualize data**

Helpful Resources



The “**Help**” tab includes documentation, training videos, sample files, templates, and links to support blogs and communities – all within Power BI Desktop



The **Microsoft Power BI blog** (powerbi.microsoft.com/blog) publishes monthly summaries to showcase new features



Power BI User Groups (PUG) are communities of users, which include both local meet-ups and helpful online forums (pbusergroup.com)