Microsoft Certified: Data Analyst Associate

1. Introduction

Introduction

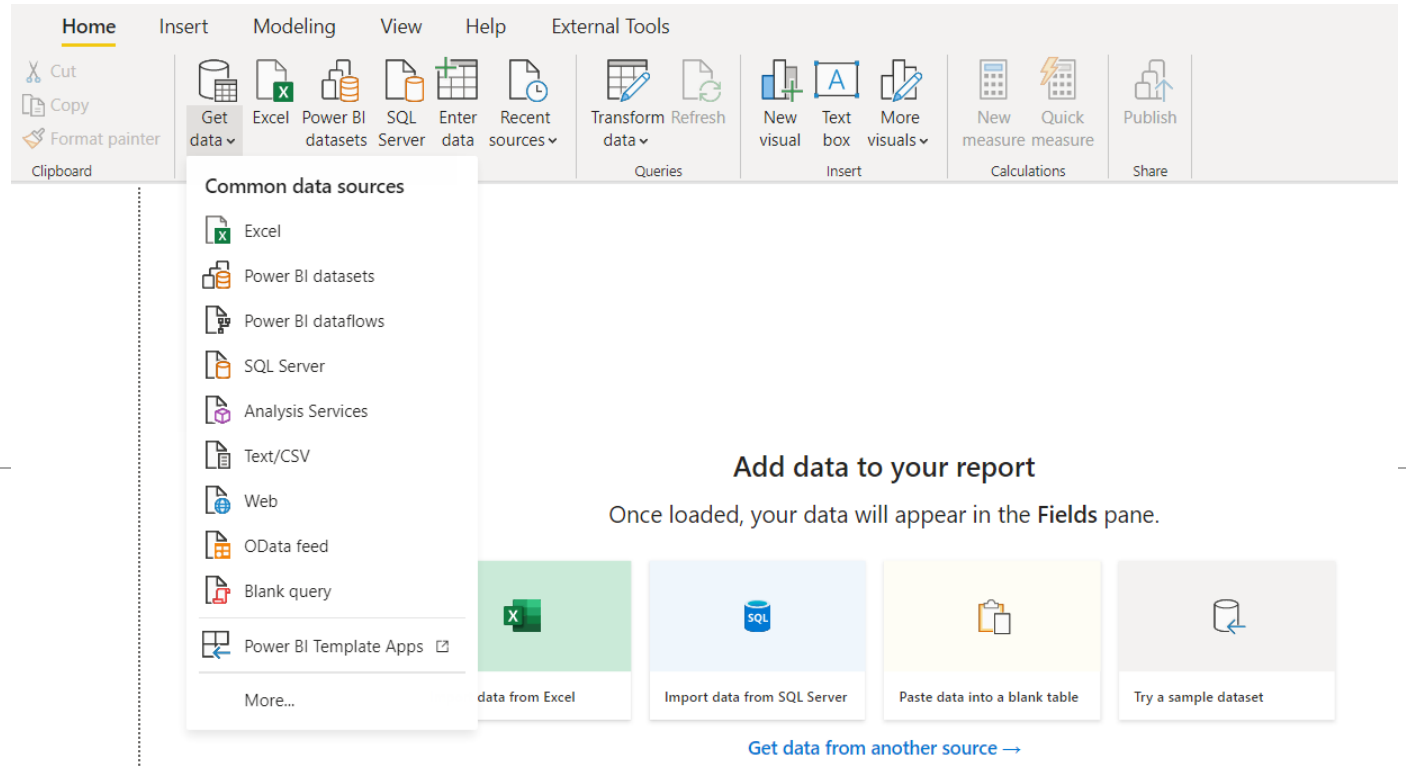
- ✓ Overview for PL – 300 exam
- ✓ Setting up Power BI desktop and Power BI service
- ✓ Measured skills review
  - ❖ Prepare the Data (15-20 %)
  - ❖ Model the data (30-35%)

Introduction continued…

- ✓ Measured skills review
  - ❖ Visualise and Analyse the data (25-30%)
  - ❖ Deploy and Maintain Assets (20-25%)

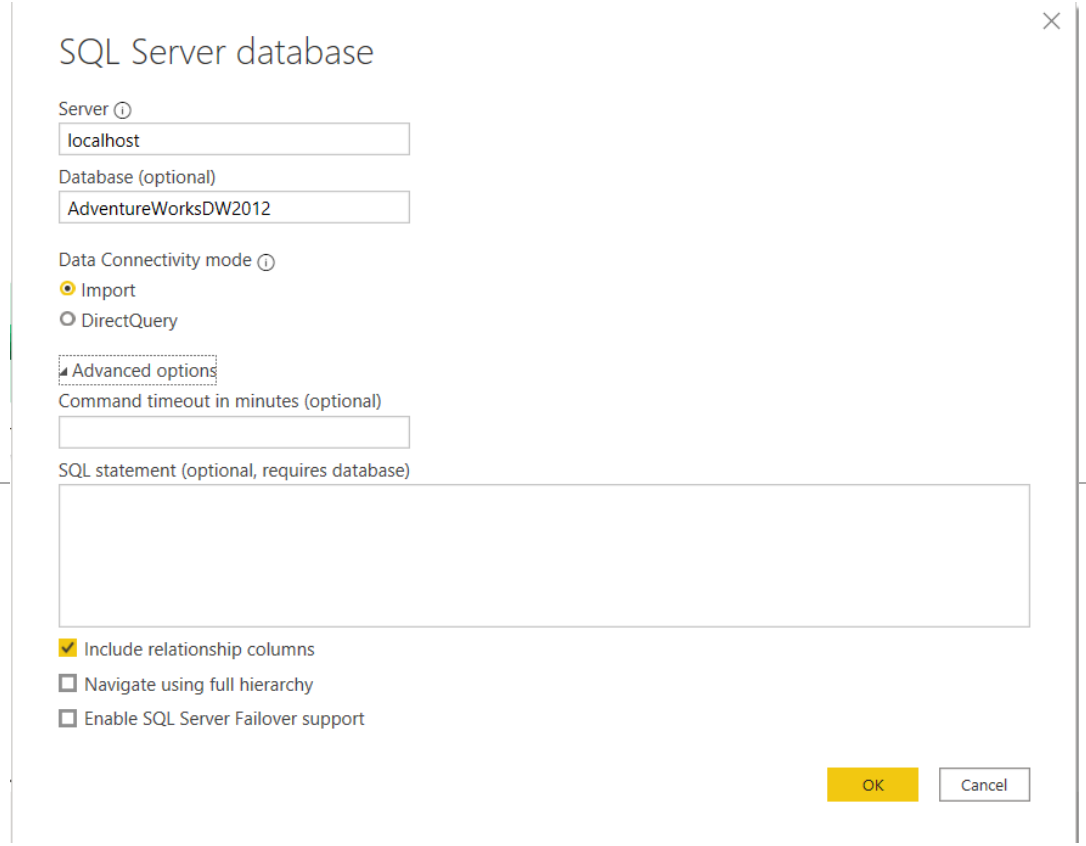
Prepare the data –get data from different data sources

- ✓ Identify and connect to a data source



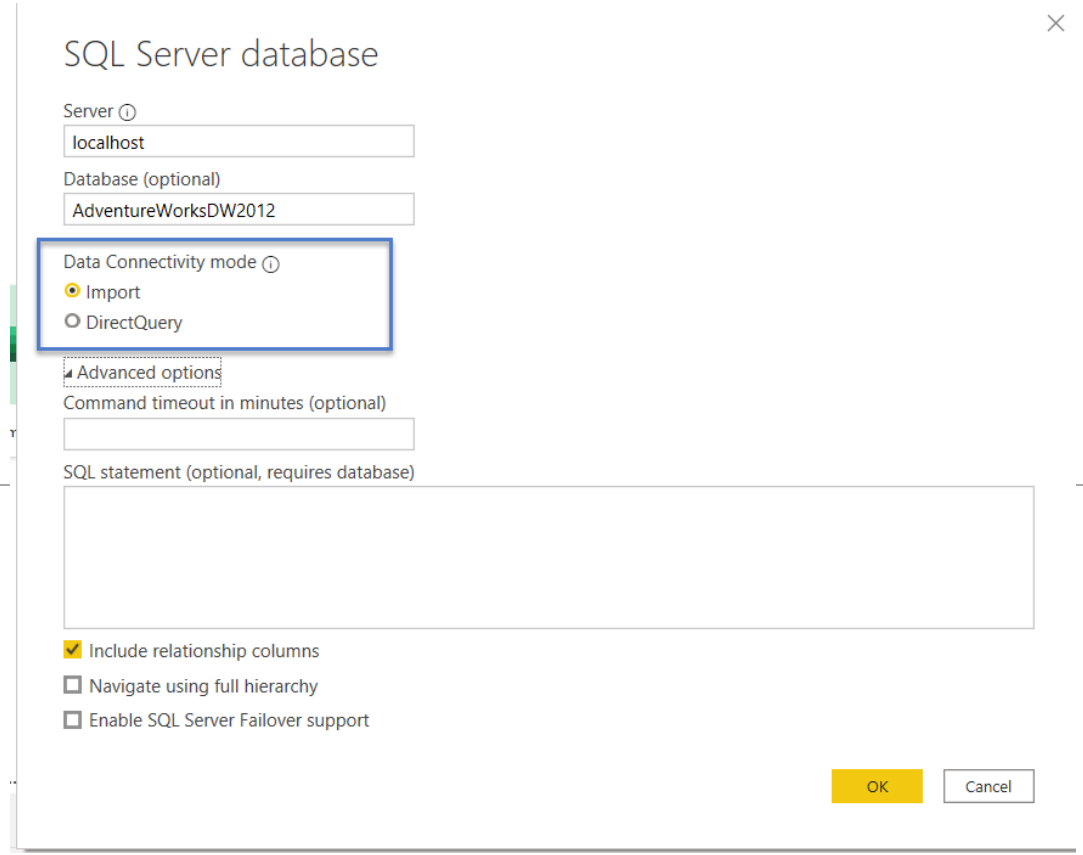
Prepare the data –get data from different data sources

- ✓ Change data source settings



Prepare the data –get data from different data sources

- ✓ Select a storage mode



Prepare the data –get data from different data sources

- ✓ Select a shared dataset or create a local dataset
- ✓ Use Microsoft Dataverse
- ✓ Change the value in a parameter
- ✓ Connect to a dataflow

Prepare the data –clean transform and load the data

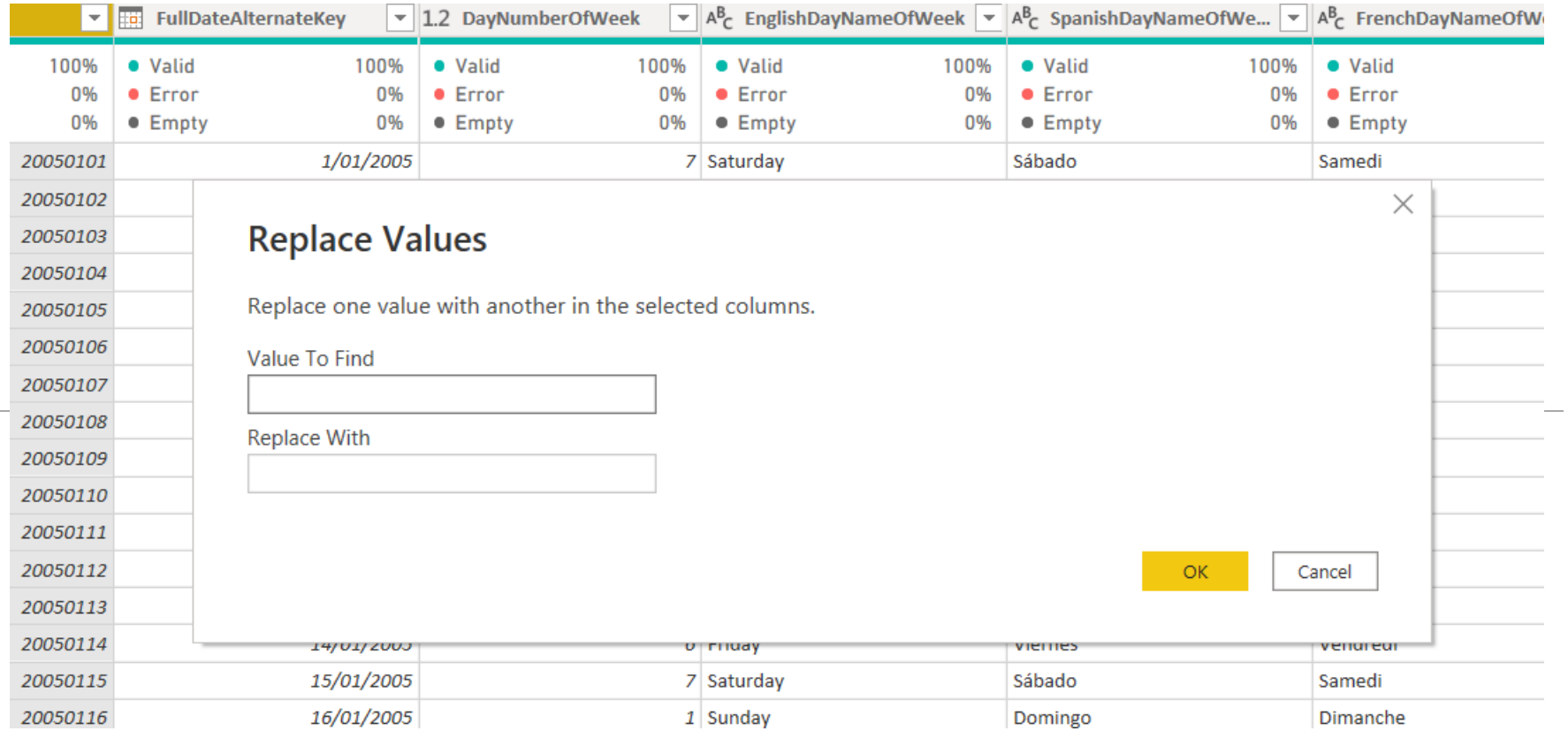
- ✓ Profile the data

```
= AdventureWorksDW2017{[Schema="dbo",Item="DimDate"]}[Data]
```

	DateKey	FullDateAlternateKey	DayNumberOfWeek	EnglishDayNameOfWeek	SpanishDayNameOfWe...	Frenc
	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid Error Empty
1	20050101	1/01/2005	7	Saturday	Sábado	Samedi
2	20050102	2/01/2005	1	Sunday	Domingo	Dimanche
3	20050103	3/01/2005	2	Monday	Lunes	Lundi
4	20050104	4/01/2005	3	Tuesday	Martes	Mardi
5	20050105	5/01/2005	4	Wednesday	Miércoles	Mercredi
6	20050106	6/01/2005	5	Thursday	Jueves	Jeudi
7	20050107	7/01/2005	6	Friday	Viernes	Vendredi
8	20050108	8/01/2005	7	Saturday	Sábado	Samedi
9	20050109	9/01/2005	1	Sunday	Domingo	Dimanche
10	20050110	10/01/2005	2	Monday	Lunes	Lundi
11	20050111	11/01/2005	3	Tuesday	Martes	Mardi
12	20050112	12/01/2005	4	Wednesday	Miércoles	Mercredi
13	20050113	13/01/2005	5	Thursday	Jueves	Jeudi

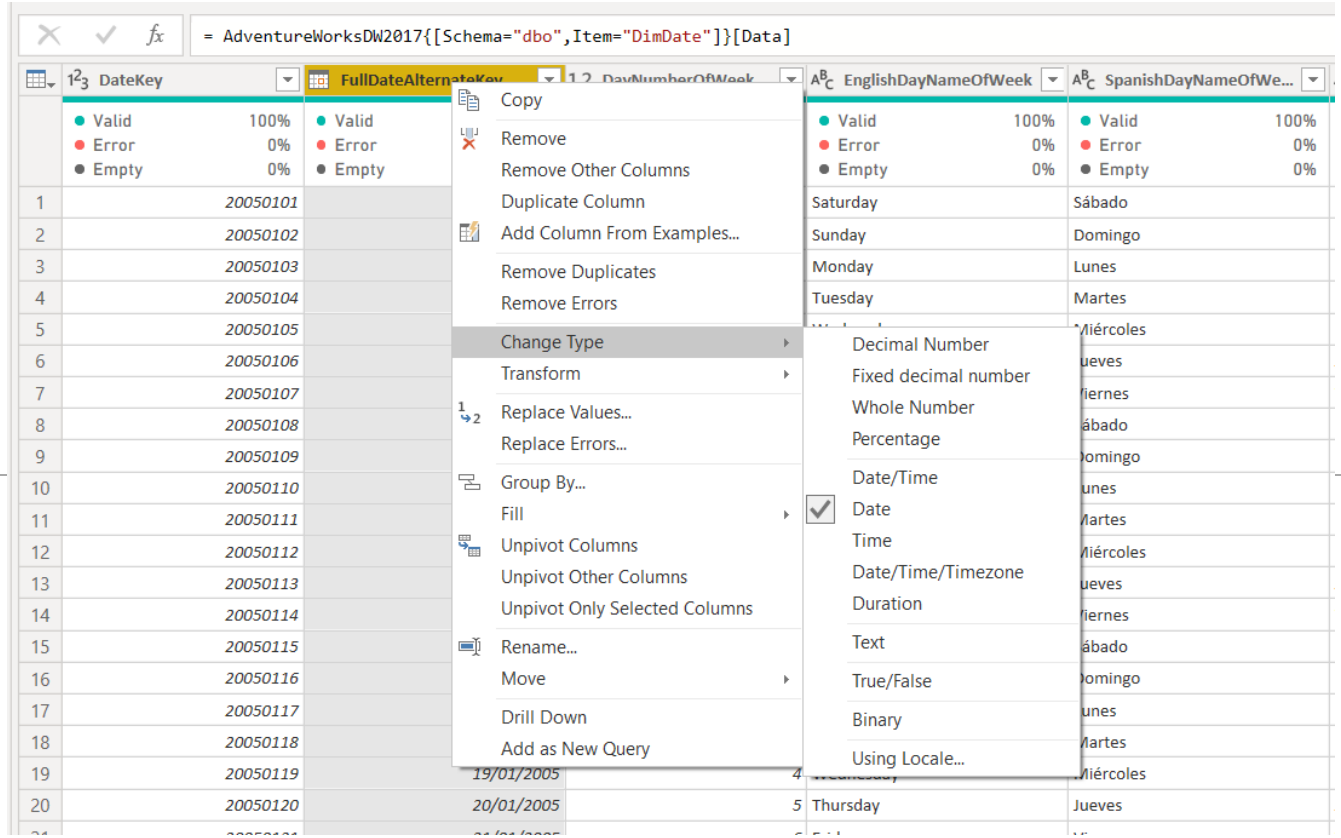
Prepare the data –clean transform and load the data

- ✓ Resolve the inconsistencies, unexpected or null values, and data quality issues



Prepare the data –clean transform and load the data

- ✓ Evaluate and transform column data types



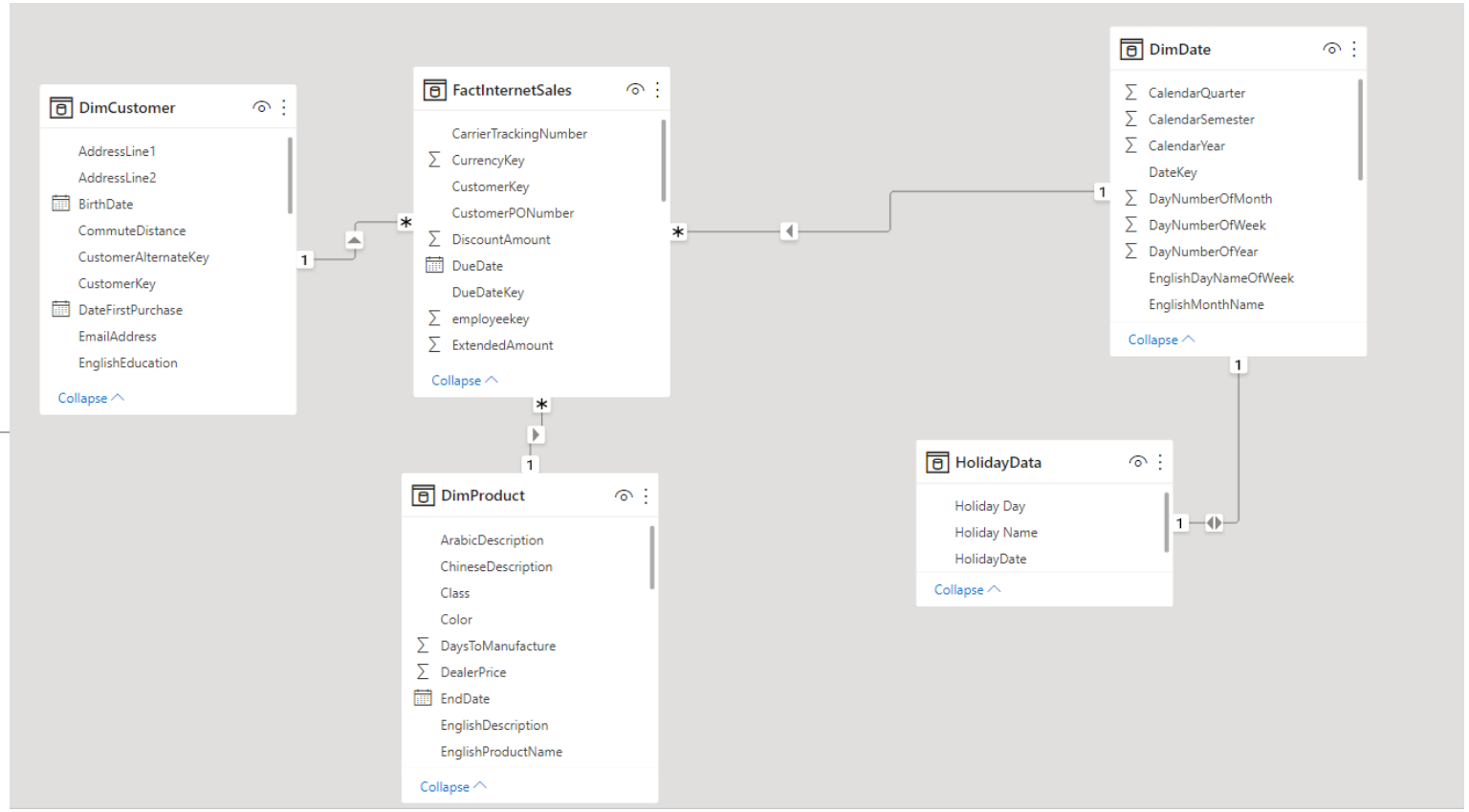
Prepare the data –clean transform and load the data

- ✓ Identify and create appropriate keys for joins
- ✓ Shape and transform tables
- ✓ Combine queries
- ✓ Apply user friendly naming conventions to columns and queries
- ✓ Configure data loading

- ✓ Resolve data import errors

Model the data- Design a data model

- ✓ Design a data model



Model the data- Design a data model

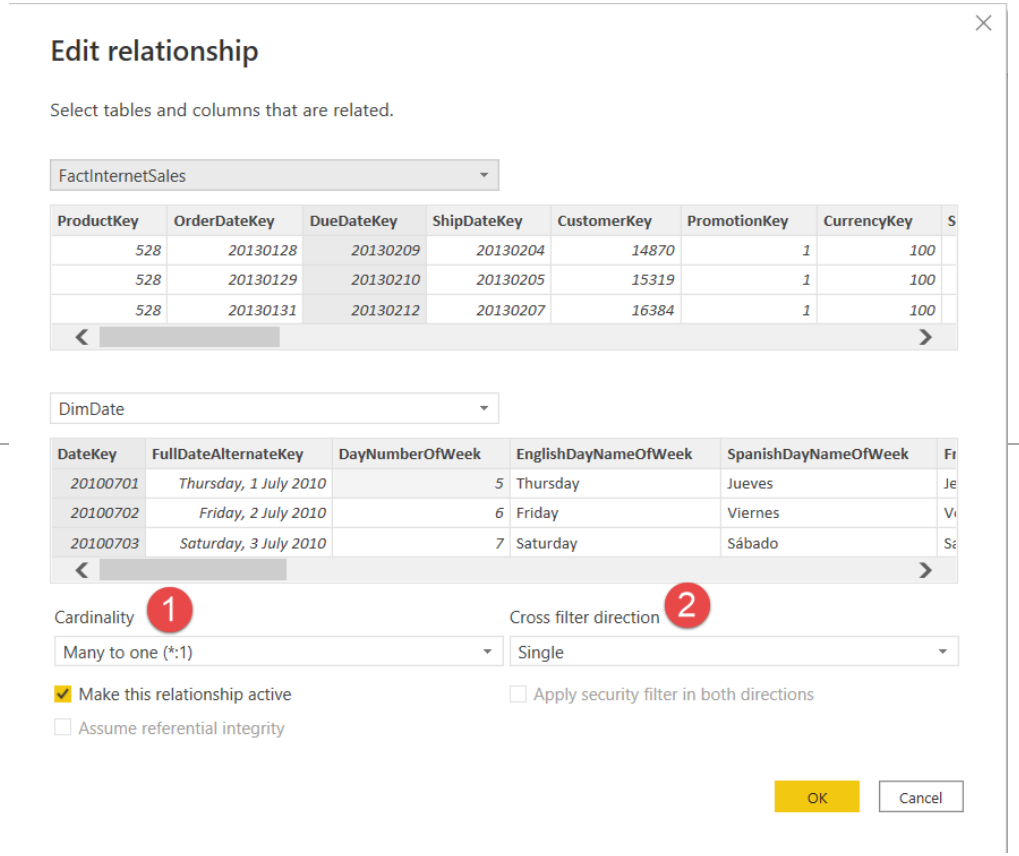
- ✓ Configure table and column properties
- ✓ Design and implement role playing dimensions
- ✓ Design a data model that uses a star schema
- ✓ Create a common date table

Model the data- Design a data model

- ✓ Create calculated tables
- ✓ Create hierarchies
- ✓ Create calculated columns
- ✓ Implement row-level security roles
- ✓ Use the Q & A feature

Model the data- Develop a data model

- ✓ Define a relationships cardinality and cross filter direction

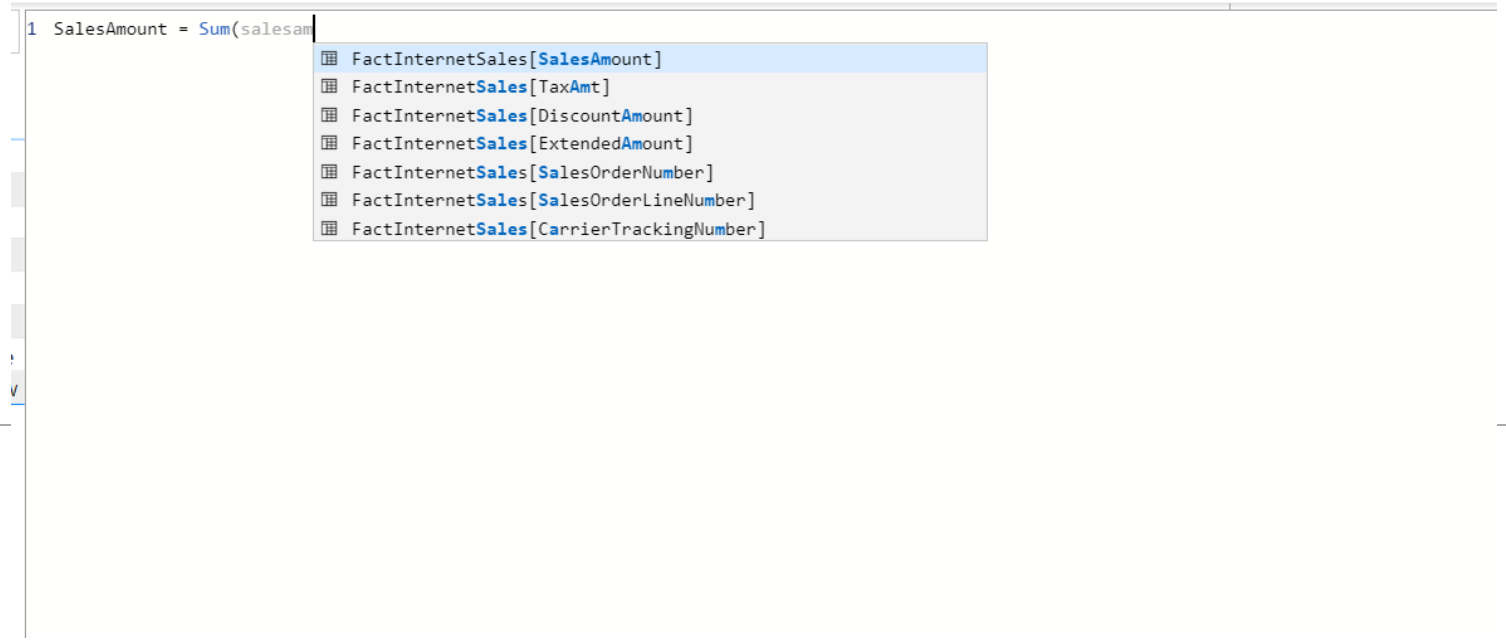


Model the data- Develop a data model

- ✓ Create calculated tables
- ✓ Create hierarchies
- ✓ Create calculated columns
- ✓ Implement row-level security roles
- ✓ Use the Q & A feature

Model the data- Create model calculations using DAX

- ✓ Create basic measures by using DAX

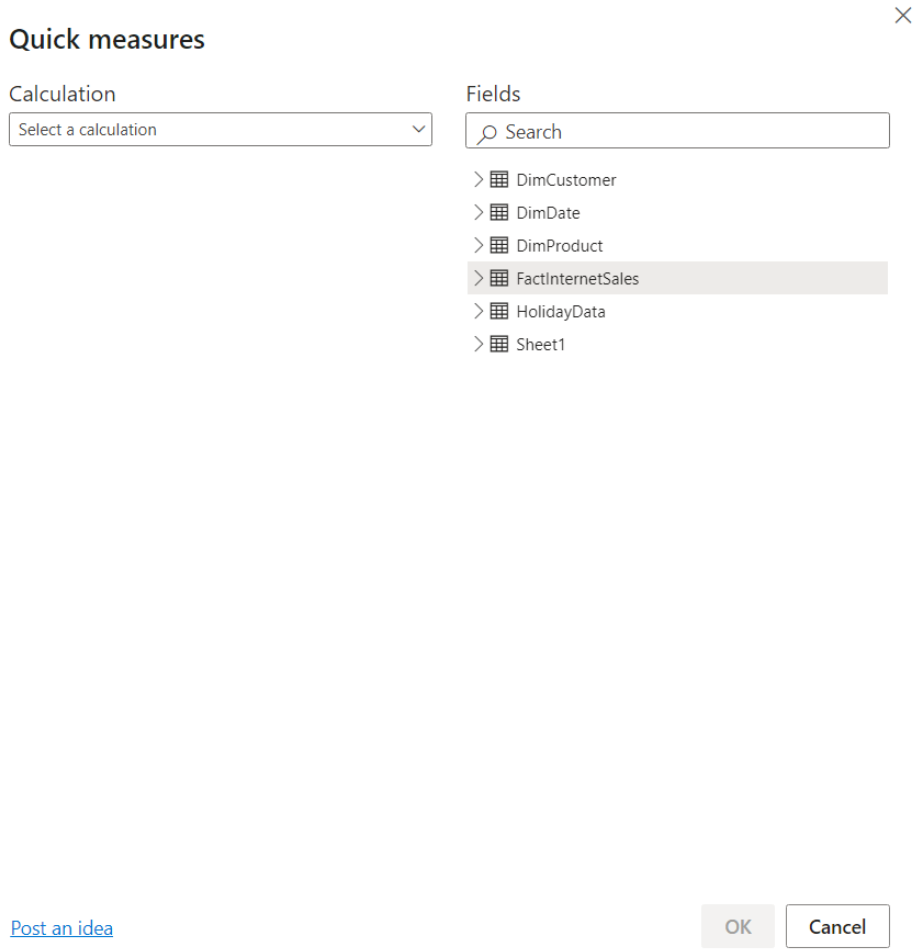


Model the data- Create model calculations using DAX

- ✓ Use calculate to manipulate filters
- ✓ Implement time intelligence using DAX
- ✓ Replace implicit measures with explicit measures
- ✓ Use basic statistical functions
- ✓ Create semi additive measures

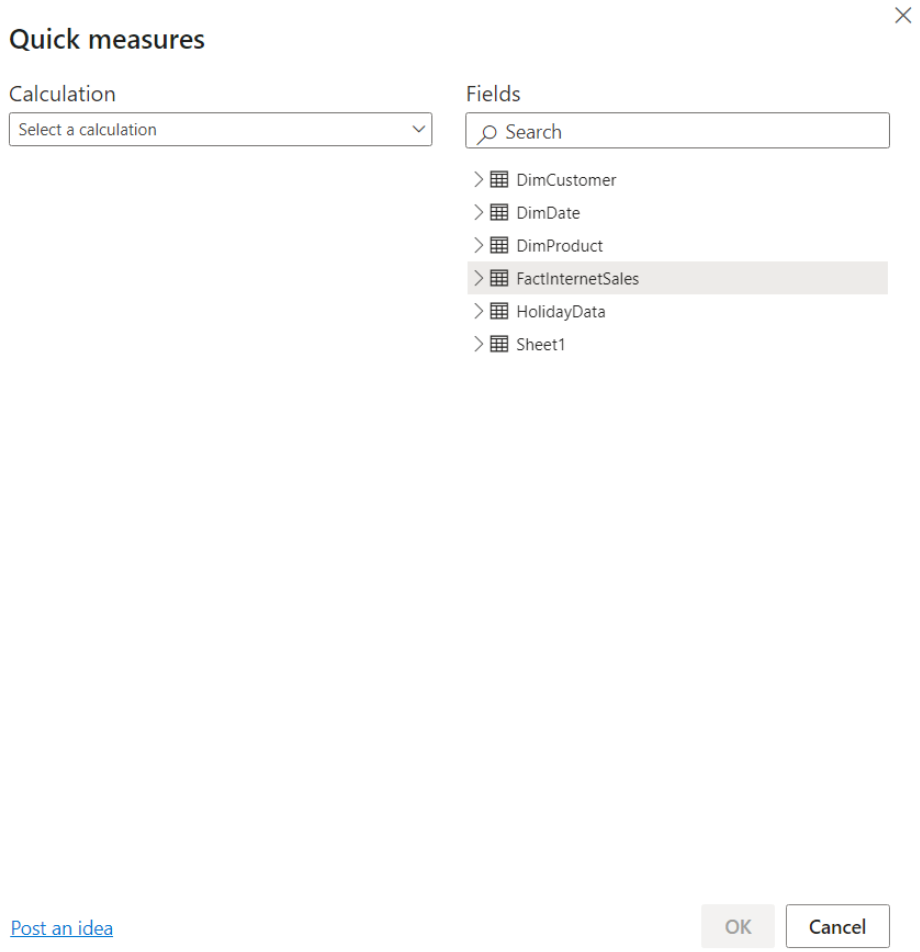
Model the data- Create model calculations using DAX

- ✓ Use quick measures



Model the data- Create model calculations using DAX

- ✓ Use quick measures

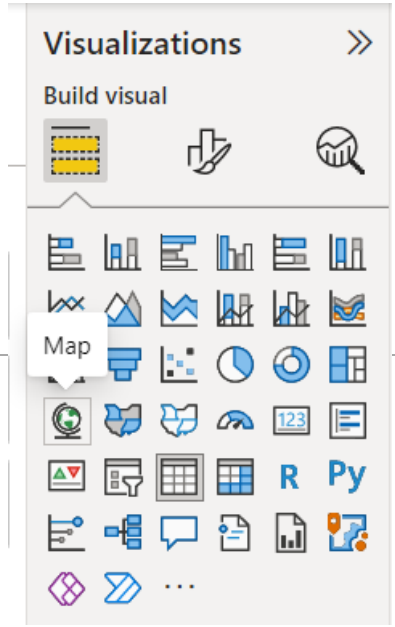


Model the data- Optimise model performance

- ✓ Remove unnecessary rows and columns
- ✓ Identify poorly performing measures, relationships and visuals
- ✓ Reduce cardinality levels to improve performance

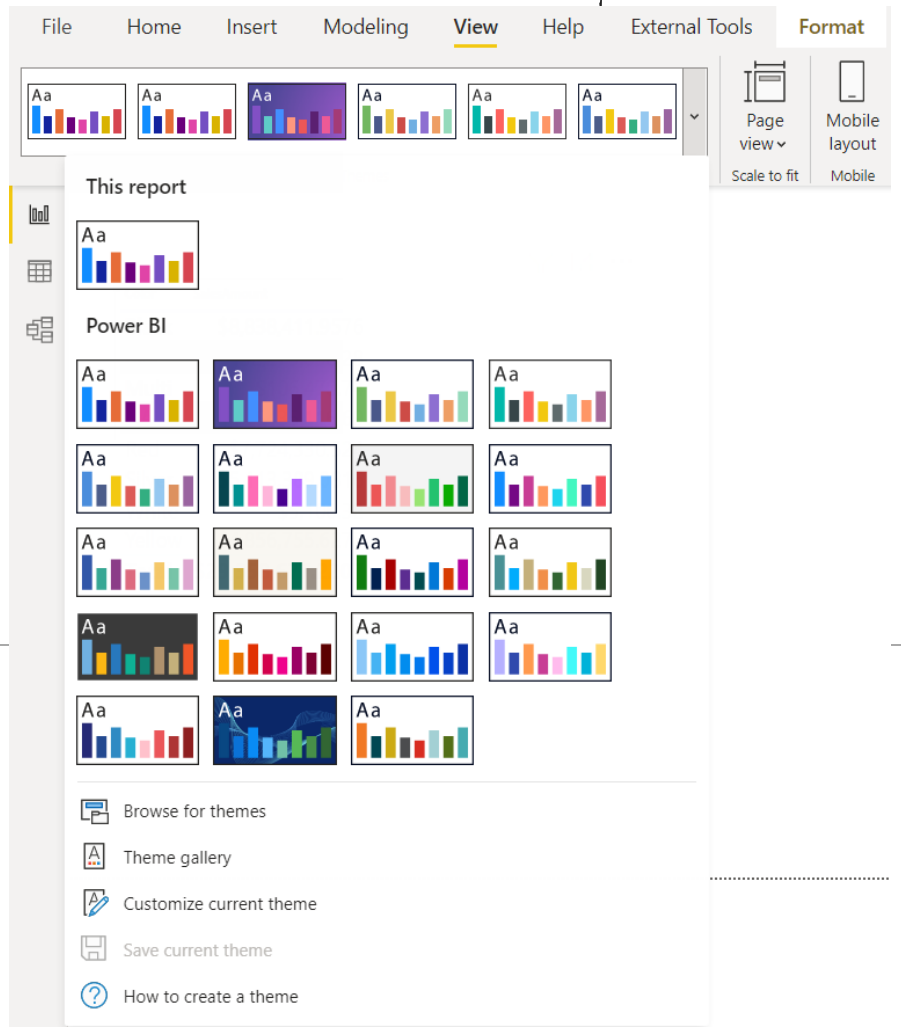
Visualise and analyse data – create reports

- ✓ Add visualization items to reports
- ✓ Choose and appropriate visualisation type



Visualise and analyse data – create reports

- ✓ Format and configure visualisations
- ✓ Use a custom visual
- ✓ Apply and customise a theme



Visualise and analyse data – create reports

- ✓ Configure conditional formatting
- ✓ Apply slicing and filtering
- ✓ Configure the report page
- ✓ Use the analyse in excel feature
- ✓ Choose when to use a paginated report

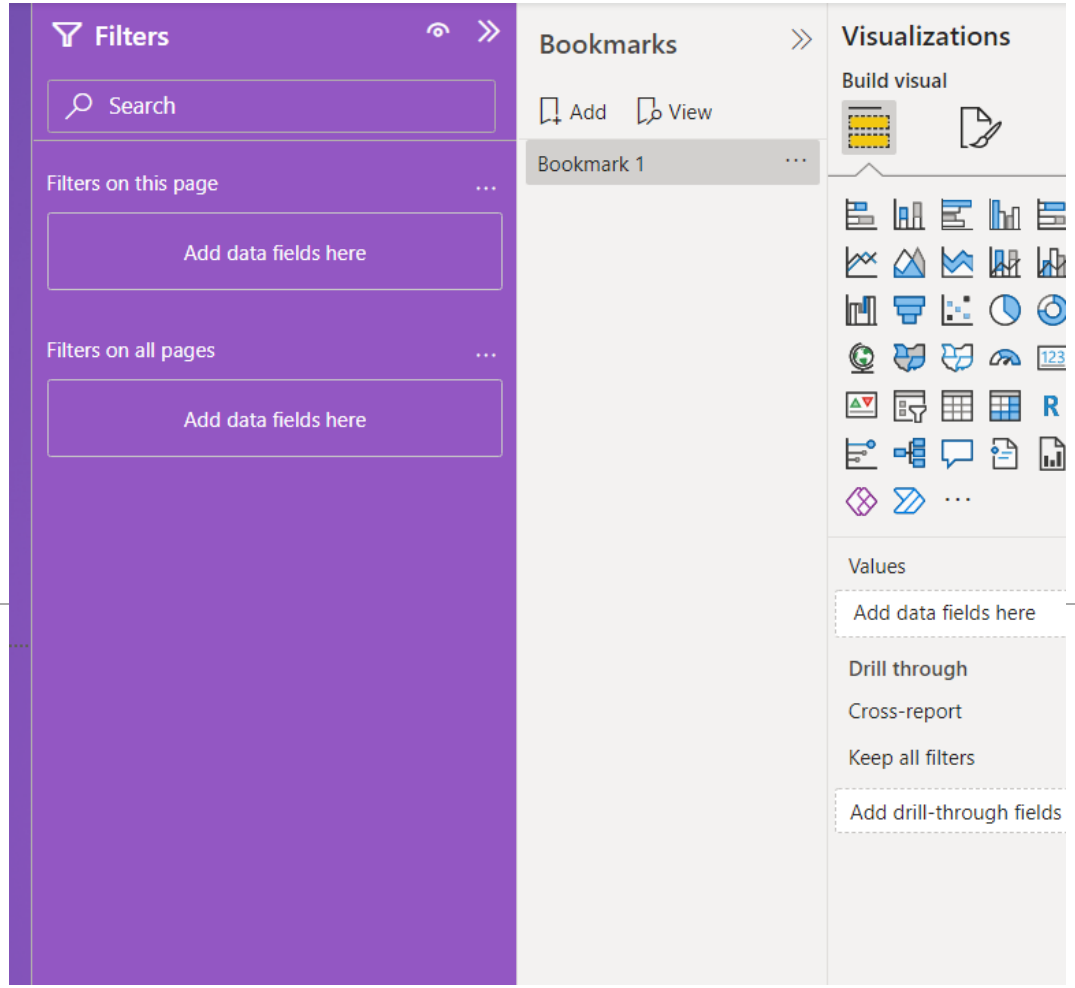
Visualise and analyse data – create dashboards

- ✓ Manage tiles on a dashboard
- ✓ Configure mobile view
- ✓ Use the Q&A feature
- ✓ Add a quick insights result to a dashboard
- ✓ Apply a dashboard theme

- ✓ Pin a live page to a dashboard

Visualise and analyse data – enhance reports for usability and story telling

- ✓ Configure bookmarks



Visualise and analyse data – enhance reports for usability and story telling

- ✓ Create custom tool tips
- ✓ Edit and configure interactions between visuals
- ✓ Configure navigation for a report
- ✓ Apply sorting
- ✓ Configure sync slicers

Visualise and analyse data – enhance reports for usability and story telling

- ✓ Group and layer visuals by using the selection pane
- ✓ Drilldown into data using interactive visuals
- ✓ Export report data
- ✓ Design reports for mobile devices

Visualise and analyse data – identify patterns and trends

- ✓ Use the analyse feature in Power BI
- ✓ Identify outliers
- ✓ Choose between continuous and categorical axes
- ✓ Use groupings, binning's, and clustering
- ✓ Use AI visuals

- ✓ Use the forecast feature
- ✓ Create reference lines by using the Analytics pane

Deploy and maintain Assets – Manage files and datasets

- ✓ Identify when a gateway is required
- ✓ Configure a dataset schedule refresh
- ✓ Configure row-level security group membership
- ✓ Provide access to datasets
- ✓ Manage global options for files

Deploy and maintain Assets – Manage workspaces

- ✓ Create and configure a workspace
- ✓ Assign workspace roles
- ✓ Configure and update a workspace app
- ✓ Publish, import, or update assets in a workspace
- ✓ Apply sensitivity labels in workspace content

- ✓ Configure subscriptions and data alerts
- ✓ Promote or certify Power BI content

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Case Study

Microsoft
EXAM

Case study

Situation

You have been hired as the principal data analysts for PBI CycleWorks. PBI CycleWorks is a boutique bicycle equipment shop

Case

Build and end-to-end business intelligence solution. Use raw data about sales information, product, product category, Employee and customer information.
Build and distribute Power BI reports using the **Microsoft Power BI Ecosystem**

Tools

- Extract, Transform and Load the data using Power Query Editor
- Model the data in Power BI Desktop
- Visualise the data
- Analyse the data
- Distribute the reports and dashboards using Power BI Service

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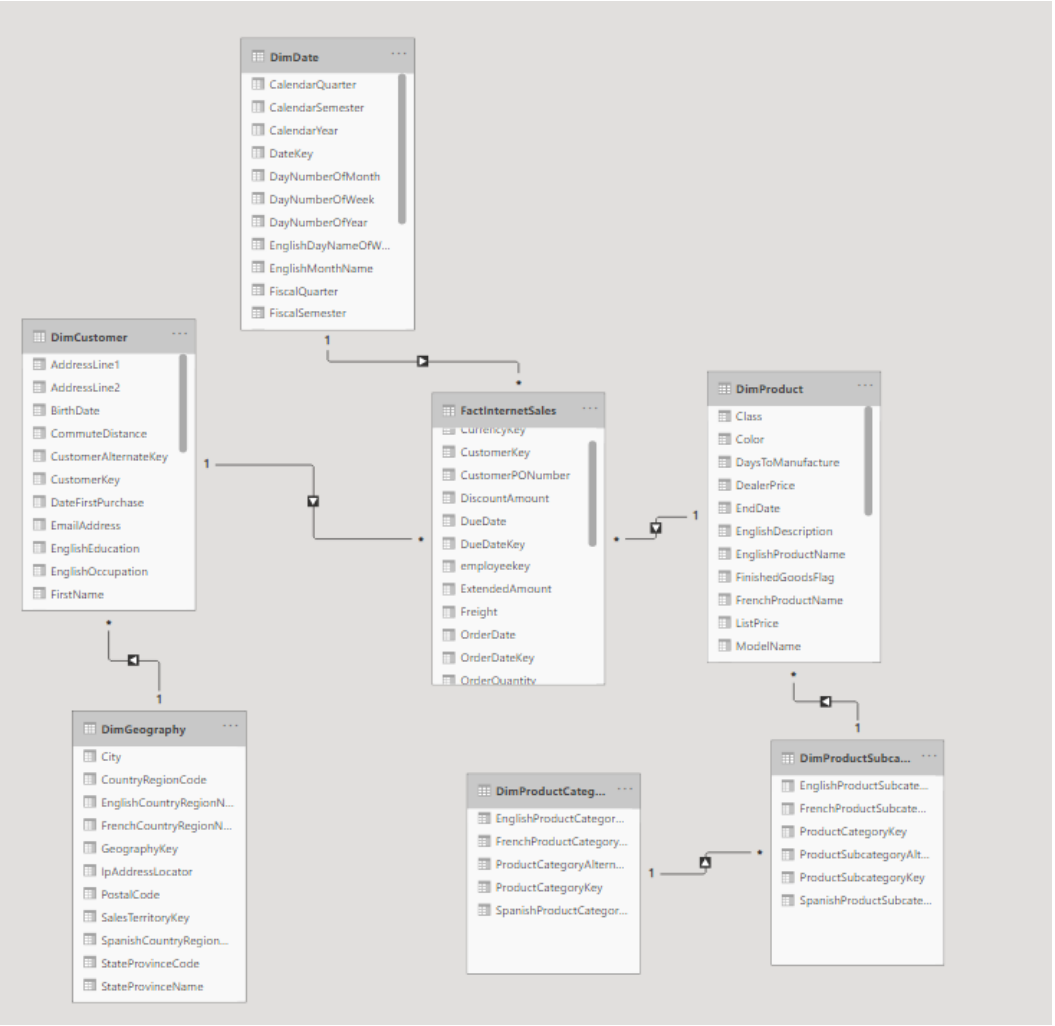
Data Model

Microsoft
EXAM

Data Model

Table Name	Table Description
DimCustomer	Information about customers who purchase cycles and cycle accessories with PBI CycleWorks
DimDate	Date related information like day, week, month, quarter and year for a given date
DimGeography	Geographical information about the customers who buy our products
DimProduct	Contains information about the products available for sale
DimProductCategory	Contains information about the product categories
DimProductSubCategory	Contains information about product subcategories
FactInternetSales	This tables contains information about the sales transactions for PBI cycleworks



Additional Sources:

- **MS SSAS Tabular**
- **MS Dataverse**