1. Introduction to Data and Data Analysis

11 May 2024 23:25

- Data Engineers: Build and design the data.
- Data Architect: Design data systems
- Data Analyst: Model the data, more access, automates the flow of data
- Data scientist: Process skill of analyst, engineer, and architect

- Data Literate: Ability to read, speak, listen and understand the data
- Data Fluent: The ability to create, something beyond just being able to understand read and use it.

  Data Governance*:* A framework that incorporates strategies to create solid state of data, enable accountability and provide transparency to data in the organization.
  1. Access information
  2. Source of truth
  3. Master data management

  Quality of Data: Data can be trusted to produce accurate insights.
  Hallmark of quality data:
  1. Completeness
  2. Consistency
  3. Validity
  4. Accurate

2. Introduction to Business Intelligence

11 May 2024 23:25

- Data and business intelligence (BI) give you the information and ability to make intelligent decisions.
- KPI- Key Performance Indicators
- Store the data which is important to the business.
- Businesses need to define the metrics that help track the overall data for the organization.

- **Data Analysis:** Analyzing and capturing the original data to compare over time.
- **Business Intelligence:** Understanding where we stand on any given day.
- **Business Analytics:** Seeing and predicting future outcomes.

3. Identifying Data

11 May 2024 23:35

Overcoming Analysis Approach

- Build an approach
- Think through standard questions
- Use critical thinking
- Practice Active listening

Sample problem: *A company has 5 products. All of these products are being purchased, but the company is losing money. As a data analyst find solution.*

Solution: Data is everywhere. As an analyst, find why the sales are not growing.

1. Have these products ever been profitable?
2. If they are profitable in past, at what point of time?
3. What is different about now vs then?
4. Did the wholesale cost change?
5. Did the list price change?
6. Did the cost of storing or delivery change?

- Wholesale cost – no change
- List price – no change
- Cost to deliver – no significant change
- Cost to store – steadily increasing

Now 2nd round of questions:

1. What can we do to reduce cost of storage?
2. What type of price increase can be justified?

Multiple types of data:

- Personal data
- Work data
- Real time data
- Geographical data
- Social data

Types of company data:

- People management
- Marketing and Sales
- Purchasing
- Warehouse
- Shipment
- Accounting

Types of Systems:

- Spreadsheets
- Databases
- Data warehouses – Data warehouses have refined tables from production systems. Database include hundreds of data and details with only certain fields needed for reporting. Data warehouse store data and keep it safe.
- Data Lakes – Data lakes helps organizations capture data to store before its refined for reporting needs.

4. Preparing data

02 June 2024 19:58

Clean and prepare the data to meet business requirements.

Describing data best practices – work with duplicate data.

Data Profiling: We can use this approach when we have in front of us to learn about it a higher level.

- Tells how much data we have
- Helps us validate our numbers
- Shows what we are facing when we are ready to transform our data.

Business Rule: Defines and controls the flow of data.

For the sales data business rules for Data Profiling:

- SalesOrderID must be converted into a text data type
- SalesOrderNumber must be converted to text data type and must not contain any number.
- All date fields should not include time.
- The main account GL Number field must be included.
- The main account GL Number holds the 4 digit code for accounting and the last two digits to specify the category
- TerritoryID and Comments fields must be removed.
- The final file must be saved as CSV in order for the import into the reporting system to be successful.

5. Transforming Data

02 June 2024 19:59

A. Transforming Data in Excel:

1. Learnt how to configure the path (Csv.Document(File.Contents("F:_DS+DA\Career-Essentials-in-Data-Analysis-by-Microsoft-and-LinkedIn_1_Intoduction to Career Skills in Data Analytics\05_Transforming Data\Suppliers.csv"),[Delimiter=",", Columns=9, Encoding=65001, QuoteStyle=QuoteStyle.None]))
2. Changes SupplierName type of text
3. Change SupplierName to UPPERCASE – Right Click – Transform – Uppercase
4. Create a new Column from TransactionDate , extract only year.
5. Added a new column from "TotalAmount", which is [AmountExcludingTax]+[TaxAmount] and changed type to currency
6. Removed unnecessary columns.
7. Added custom column "Days", which is [TransactionDate]-[FinalizationDate] and changed type and absolute value
8. Added conditional coloum.
9. Added Pivot table, learnt and implemented.

Advance Query :

```
let
    Source = Csv.Document(File.Contents("F:\_DS+DA\Career-Essentials-in-Data-
Analysis-by-Microsoft-and-LinkedIn\_1_Intoduction to Career Skills in Data
Analytics\05_Transforming Data\Suppliers.csv"),[Delimiter=",", Columns=9,
Encoding=65001, QuoteStyle=QuoteStyle.None]),
    #"Promoted Headers" = Table.PromoteHeaders(Source,
[PromoteAllScalars=true]),
    #"Changed Type" = Table.TransformColumnTypes(#"Promoted
Headers",{{"SupplierName", type text}, {"SupplierTransactionID", Int64.Type},
{"SupplierID", Int64.Type}, {"PurchaseOrderID", Int64.Type},
{"SupplierInvoiceNumber", Int64.Type}, {"TransactionDate", type date},
{"AmountExcludingTax", type number}, {"TaxAmount", type number},
{"FinalizationDate", type date}}),
    #"Uppercased Text" = Table.TransformColumns(#"Changed
Type",{{"SupplierName", Text.Upper, type text}}),
    #"Duplicated Column" = Table.DuplicateColumn(#"Uppercased Text",
"TransactionDate", "TransactionDate - Copy"),
    #"Extracted Year" = Table.TransformColumns(#"Duplicated
Column",{{"TransactionDate - Copy", Date.Year, Int64.Type}}),
    #"Renamed Columns" = Table.RenameColumns(#"Extracted
Year",{{"TransactionDate - Copy", "TransactionYear"}}),
    #"Reordered Columns" = Table.ReorderColumns(#"Renamed
Columns",{"SupplierName", "SupplierTransactionID", "SupplierID",
"PurchaseOrderID", "SupplierInvoiceNumber", "TransactionDate",
"TransactionYear", "AmountExcludingTax", "TaxAmount", "FinalizationDate"}),
    #"Added Custom" = Table.AddColumn(#"Reordered Columns", "TotalAmount",
each [AmountExcludingTax]+[TaxAmount]),
    #"Changed Type1" = Table.TransformColumnTypes(#"Added
Custom",{{"TotalAmount", Currency.Type}}),
    #"Removed Other Columns" = Table.SelectColumns(#"Changed
Type1",{"SupplierName", "SupplierTransactionID", "SupplierID",
"PurchaseOrderID", "SupplierInvoiceNumber", "TransactionDate",
"TransactionYear", "FinalizationDate", "TotalAmount"}),
    #"Added Custom1" = Table.AddColumn(#"Removed Other Columns", "Days", each
[TransactionDate]-[FinalizationDate]),
    #"Changed Type2" = Table.TransformColumnTypes(#"Added Custom1",{{"Days",
Int64.Type}}),
    #"Calculated Absolute Value" = Table.TransformColumns(#"Changed
Type2",{{"Days", Number.Abs, Int64.Type}}),
    #"Added Conditional Column" = Table.AddColumn(#"Calculated Absolute
```

```
Value", "OverUnder", each if [Days] >= 3 then "3 Days or More" else "2 Days or
Less")
in
    #"Added Conditional Column"
```

B. Transforming Data in SQL:

Structured Query Language (SQL): A computer language that works with data in a relational database management system.

Microsoft SQL Server: A relational database management system with the primary function of storing and retrieving data.

1. SELECT – fields from the Table
2. FROM – table name
3. WHERE – filter data
4. GROUP BY – group rows that have same values
5. HAVING – filters groups based on specified condition
6. ORDER BY – sort data

C. Transforming data in Power BI:

Power BI:

- Transforms Data
- Presents data

1. Load data in Power query in Power Editor.
2. Removed other unnecessary columns.
3. Uppercased ProductName
4. Merge Queries (Select the foreign key and select what kind of join you want to perform)
5. Expand the new table, select only necessary info
6. Use group by.

1. Exclude other tables

```
let
    Source = Excel.Workbook(File.Contents("F:\_DS+DA\Career-Essentials-in-
Data-Analysis-by-Microsoft-and-LinkedIn\_1_Intoduction to Career Skills in
Data Analytics\05_Transforming Data\Power BI\Data\Products.xlsx"), null,
true),
    Products_Sheet = Source{[Item="Products",Kind="Sheet"]}[Data],
    #"Promoted Headers" = Table.PromoteHeaders(Products_Sheet,
[PromoteAllScalars=true]),
    #"Changed Type" = Table.TransformColumnTypes(#"Promoted
Headers",{{"ProductID", Int64.Type}, {"ProductName", type text},
{"SupplierID", Int64.Type}, {"CategoryID", Int64.Type}, {"QuantityPerUnit",
type text}, {"UnitPrice", type number}, {"UnitsInStock", Int64.Type},
{"UnitsOnOrder", Int64.Type}, {"ReorderLevel", Int64.Type}, {"Discontinued",
type logical}}),
    #"Removed Other Columns" = Table.SelectColumns(#"Changed
Type",{"ProductName", "ProductID"}),
    #"Reordered Columns" = Table.ReorderColumns(#"Removed Other
Columns",{"ProductID", "ProductName"}),
    #"Uppercased Text" = Table.TransformColumns(#"Reordered
Columns",{{"ProductName", Text.Upper, type text}}),
```

```
    #"Merged Queries" = Table.NestedJoin(#"Uppercased Text", {"ProductID"},
Order_Details, {"ProductID"}, "Order_Details", JoinKind.Inner),
    #"Expanded Order_Details" = Table.ExpandTableColumn(#"Merged Queries",
"Order_Details", {"TotalOrderAmount"}, {"Order_Details.TotalOrderAmount"}),
    #"Renamed Columns" = Table.RenameColumns(#"Expanded
Order_Details",{{"Order_Details.TotalOrderAmount", "TotalOrderAmount"}}),
    #"Grouped Rows" = Table.Group(#"Renamed Columns", {"ProductName"},
{{"Total", each List.Sum([TotalOrderAmount]), type nullable number}})
in
    #"Grouped Rows"
```

D. Common Cleaning and Transformation:

1. Spaces are characters that need to be removed.
    - Leading Spaces are at the front of the field
    - Trailing spaces are end of the field
    - Use functions like TRIM or CLEAN to removed spaces
2. Concatenate – Combine text with one another
3. Replace Text if required
4. Change the Case of the text.
5. Remove Duplicates
6. Transform data types

E. Using Built-in Function:

Learnt about built in functions

6. Modelling Data

02 June 2024 20:06

RDMS – SQL,
Access Database
Structured and Unstructured Data

One to One – One record tied with one record between two tables
One to Many and Many to One - One record from one table tied with many records from another table

Master Data Management Data

Structured Data – Data that fits neatly into tables and spreadsheets
Unstructured Data – Doesn't fit, all pdfs, notes, etc. Requires our brain to review and provide context
Semi-structured Data – Mix of Structured and Unstructured Data

7. Visualizing Data

02 June 2024 20:06

Visualization Best Practice:

- Be consistent (use same color for all for a particular item)
- Keep it simple, don't overcomplete
- Title, label and tooltips appropriately

Power BI report Builder allow us to build paginated report.
Paginated Reports allow you to connect to data.

- If it a multiple page dashboard, build a wireframe.
- Look at samples for inspiration.
- What type of filters are needed on the data?
- What type of filter are needed for the customer?
- Understand who the dashboard is actually for.

8. Job Mapping in the Data Analytics Field

02 June 2024 20:08

A. Data Workers:

- Export data out of systems
- Build weekly or monthly reports
- Work with functions
- Growth Opportunities – Power Query, PivotTables, PowerPoint, MS Word
- Soft skills – effective communication and presentation

B. Data Analysts:

- Deeper understanding of data systems
- More Knowledge about database design
- Basic SQL querying skills
- Understand the Data governance plan
- Clean and transform data to meet project requirements
- Create functions of varying types
- Work with statistics and aggregate functions
- Growth opportunities – Basic statistics, writing functions, understand joins
- Soft skills – Active listening, data storytelling and critical thinking

C. Data Engineers:

- Translate large amounts of data into data sets
- Know how to refine data sets into smaller sets
- Have more access to data
- Understand security and Data privacy
- Growth Opportunities – Structured and Unstructured data, RDBMS, Database Design
- Soft skills – Communication, presentation etc.
- ETL or ELT

D. Data Scientists:

- Develop tools and instruments that provide valuable insights
- Interpret large sets – Build ML Models
- Present outcomes and make suggestions
- Provide support and strategy to data governance plan
- Growth Opportunities – Programming, Python or R, Statistics, Mathematics

Introduction

11 May 2024 23:25

1. Getting started with Data Analysis

14 May 2024 18:20

What is Data?

- The word data has been used in 1946.
- Factual Information used as a basis of reasoning, discussion, or calculation
- Information in digital form that can be transmitted or process detail

What is Analysis?

A details examination of anything complex in order to understand its nature or to determine its essential features, a thorough study.

What is Analyze?

To study or determine the nature and relationship of the parts of something by analysis

What is Data Analyst?

A data analyst is a professional who collects, processes, and analyzes data to derive insights and inform decision-making. They work with various types of data, including structured and unstructured data, and employ statistical and analytical techniques to interpret patterns, trends, and relationships within datasets. Data analysts use specialized tools and software to organize and clean data, conduct descriptive and inferential analysis, create visualizations, and communicate findings to stakeholders. Their primary goal is to extract actionable insights from data to help organizations make informed decisions and solve complex problems.

4 Key Areas of an Organization :

1. Research - Defines the questions to be answered
2. Data Governance - Ensures that ownership and accountability of data is clearly defined. Also ensures who need access or allows access to data
3. Technology - Includes server infrastructure, security and access
4. Data -Can be found every level of organization

Data Workers - Workers who collect, store, manage and analyze data as their primary activity

Data Architect - Tasked with procedures around the data storage, consumption, management and integration with systems.

Data Engineer - Tasked with dealing with data and making it meaningful for others to consume. Create systems , datasets etc.

Skills required for Data Analyst:

1. Understand the basic questions
2. Finding and gathering data to answer the question
3. Understanding the quality of the data
4. Determining what data is important
5. Creating valid data through calculations
6. Presenting the information clearly

2. Fundamentals of Data Understanding

15 May 2024 17:44

Data Point:

1. Field Name
2. Data type
3. Value

Field name should be named meaningfully.

Common Data Types:

1. Text or String
2. Numbers
3. Date and Time
4. Boolean

Excel is formatting what it believes is a serial number to display a date.

Every person work with data must understand the concepts of

1. basic math function,
2. sum, count, average
3. Concatenation
4. IF function

Syntax : The underlying language of a program used to execute commands.

Tips for searching:

1. User real people terms to find the answer to common questions
2. Remember that syntax is application specific
3. Search for similar commands in other languages.

Power query we look in m code
For Macros we look in VBA
Access ----> SQL statement

Learning Basic SQL statement:

SQL - **S**tructured **Q**uery **L**anguage

```
SELECT [SalesOrderID]
      ,[OrderDate]
      ,[DueDate]
      ,[ShipDate]
      ,[SalesOrderNumber]
      ,[CustomerID]
      ,[SubTotal]
      ,[TaxAmt]
      ,[Freight]
      ,[TotalDue]
FROM SalesOrderHeader;
```

3. Key Elements to understand when Starting Data Analysis

17 May 2024 18:12

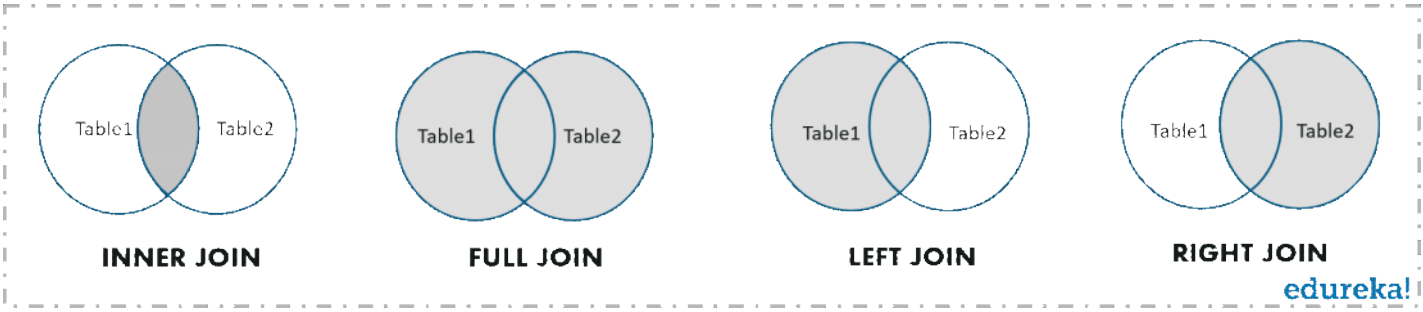
What is Data Cleaning?
The process of standardizing data and making it meaningful

- Remove unnecessary column
- Remove extra spaces using TRIM or Clean commands
- Change case
- Break apart address
- Remove duplicated data

The key goal is to create a high quality data set that is useful.
Diagrams help figure out where data is captured

Different Types of Joins:

Cross Join: Joins every record in one table with every record in another table
Inner Join: Joins record in that matches with another table
Left join: Every record from left table with only matching record with right table
Right Join: Every record from right table with only matching record with left table



4. Getting started with a Data Project

20 May 2024 21:27

Best Practices:

1. No guess work in data
2. Don't publish or write something until you verify the result
3. Be prepared for meeting and use your time effectively.
4. Take notes of everything that is relationship to your objective
5. Provide detailed information about what you are presenting
6. Don't put data on screen before diving in.
7. Use a slide deck to keep pace.

Common mistakes for new Analysts:

1. Not spending enough time to understand the data
2. Not looking for duplicated data in the set
3. Not doing preliminary math like sum, avg, counts
4. Not capturing record counts
5. Not documenting questions and follow up answers.
6. Not verifying the numbers with some other method.
7. Not asking questions.
8. Not asking for documentation.
9. Not analyzing existing or canned reports.

Steps for a New database:

1. Look at the table names
2. Look at a sample of data
3. Look at relationship
4. Look at queries

Understanding Truth

1. Statistics Truth - Statistical significance of your results
2. Data Truth - what the available data shows the analyst
3. Business Truth - A measure of the production of an organization

5. Data Importing, Exporting and Connections

25 May 2024 20:32

Data Governance

1. USA: Sarbanes-Oxley (SOX) Act
2. Canada: C-SOX Act
3. Japan: J-SOX Act

What is Data Governance?
A plan that ensures data sets are understandable, correct, secure and high quality

Areas of Data Governance:
Determine ownership of data
Keep notes of where data is coming from and access procedures
Request access to only the data you need

Understand source of the Data:
Data comes from an unmanipulated source
Work with different source of data and connect them for analysis, reporting or visualization.

Considerations:

- Keep notes of where your source data comes from and how you received it
- The same data can be in multiple location

Working with Flat Files:

Flat files - Flat files are disconnected from a data source
Types of Flat files

- Comma-separated value (CSV)
- Tab delimited
- Fixed width

Creating Datasets for others:

Best Practices:

- There is no such thing as too much information and documentation
- Create a working field set of the data with a README tab in a data set
- Consider who has access to the data and disconnect, if necessary
- Spend time making your file as easy as possible for others to use.

6. Getting started with data cleaning and modelling

25 May 2024 22:52

Understanding ETL in Data

Various sources (Sales, inventory, accounting) ------> Data Warehouse ------> Analysis

E - Extract
T - Transform
L - Load

ETL is The process of getting data from a source, making it meaningful and placing it others to use

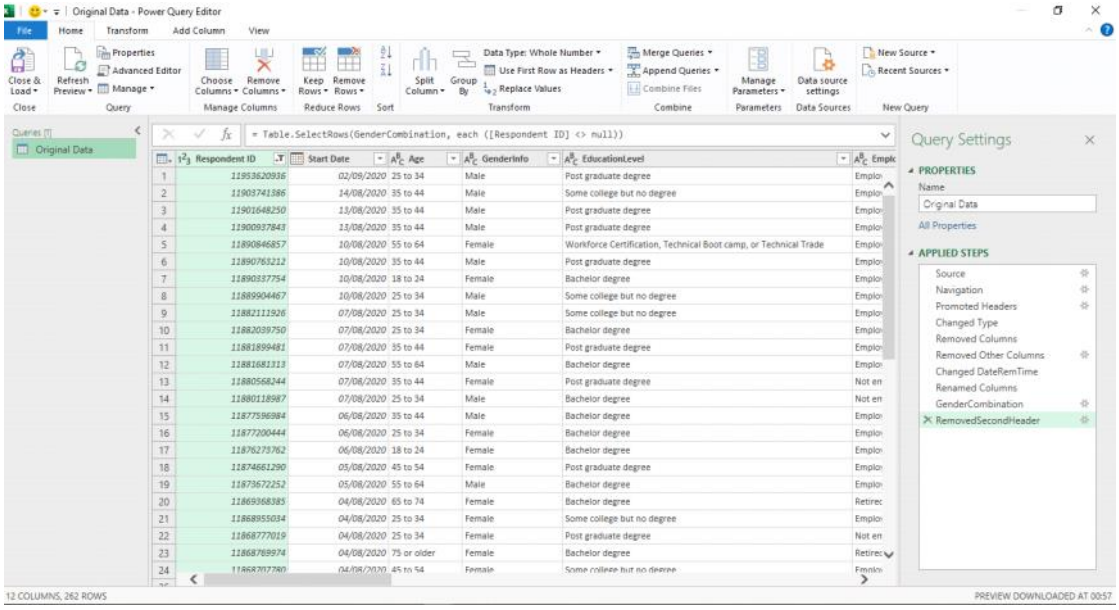
Macro - A macro in Excel is a set of actions or instructions that can be run repeatedly to automate tasks.
Macros are recorded in the Visual Basic for Applications (VBA) programming language, and are a subset of the commands available in VBA.

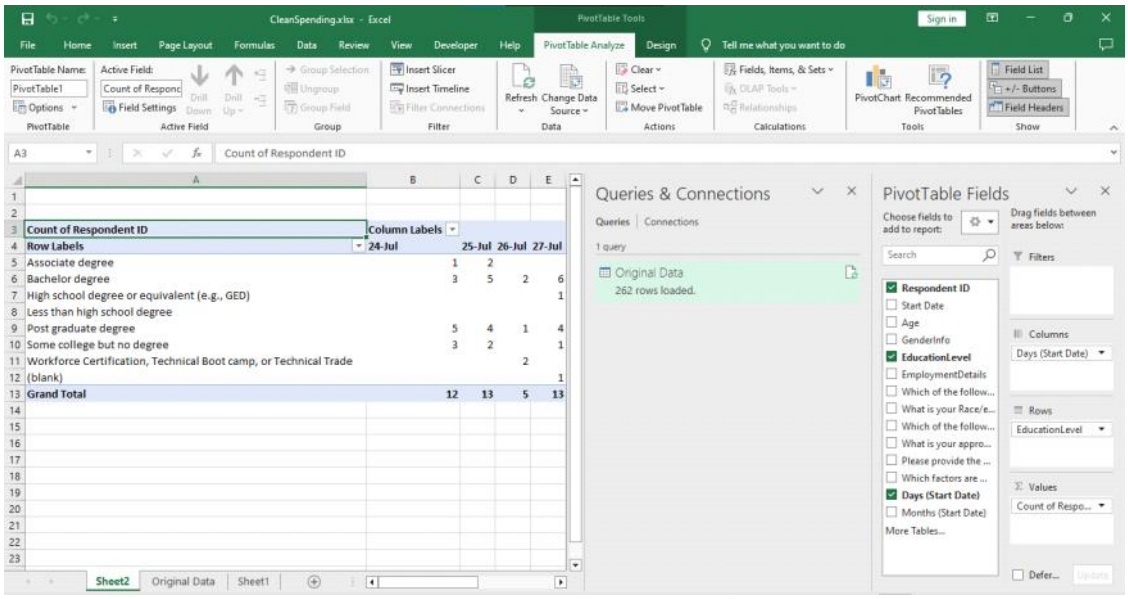
```
Sub Step1CopiesData()
'
' Step1CopiesData Macro
'

'
    Sheets("Original Data").Select
    Sheets("Original Data").Copy Before:=Sheets(1)
    Sheets("Original Data (2)").Select
    Sheets("Original Data (2)").Name = "CopiedData"
End Sub
Sub Step2DelCols()
'
' Step2DelCols Macro
'

'
    Columns("B:B").Select
    Selection.Delete Shift:=xlToLeft
    Columns("C:C").Select
    Selection.Delete Shift:=xlToLeft
    Columns("C:G").Select
    Selection.Delete Shift:=xlToLeft
End Sub
Sub Step3SizeData()
'
' Step3SizeData Macro
'

'
    Cells.Select
    Cells.EntireColumn.AutoFit
    Range("A1").Select
End Sub
Sub Step4CleanHeader()
'
' Step4CleanHeader Macro
'

'
    Range("E2").Select
    Selection.Copy
    Range("E1").Select
    ActiveSheet.Paste
    Range("E2").Select
    Application.CutCopyMode = False
    Selection.ClearContents
    Range("F2").Select
    Selection.Copy
    Range("F1").Select
    ActiveSheet.Paste
    Range("F2").Select
    Application.CutCopyMode = False
    Selection.ClearContents
    Range("C1").Select
    ActiveCell.FormulaR1C1 = "Age"
    Range("D1").Select
    ActiveCell.FormulaR1C1 = "Gender"
    Range("F1").Select
```

```
    ActiveCell.FormulaR1C1 = "Education"
    Range("G1").Select
    ActiveCell.FormulaR1C1 = "Employment Details"
    Range("H1").Select
    ActiveWindow.LargeScroll ToRight:=-1
    Rows("2:2").Select
    Selection.Delete Shift:=xlUp
End Sub
Sub RunAll()
'
' RunAll Macro
'

'
    Application.Run "'Spending Trends Survey_Cleaned.xlsm'!Step1CopiesData"
    Application.Run "'Spending Trends Survey_Cleaned.xlsm'!Step2DelCols"
    Application.Run "'Spending Trends Survey_Cleaned.xlsm'!Step3SizeData"
    Application.Run "'Spending Trends Survey_Cleaned.xlsm'!Step4CleanHeader"
End Sub
```

Power Query

```
let
    Source = Excel.Workbook(File.Contents("F:\_DS+DA\Career-Essentials-in-Data-Analysis-by-Microsoft-and-LinkedIn\_2_Learning Data Analytics - 1 Foundations\Ch06\Spending Trends Survey.xlsx"), null, true),
    #"Original Data_Sheet" = Source{[Item="Original Data",Kind="Sheet"]}[Data],
    #"Promoted Headers" = Table.PromoteHeaders(#"Original Data_Sheet", [PromoteAllScalars=true]),
    #"Changed Type" = Table.TransformColumnTypes(#"Promoted Headers",{{"Respondent ID", Int64.Type}, {"Collector ID", Int64.Type}, {"Start Date", type datetime}, {"End Date", type datetime}, {"IP Address", type any}, {"Email Address", type any}, {"First Name", type any}, {"Last Name", type any}, {"Custom Data 1", type any}, {"What is your age?", type text}, {"What is your Gender?", type text}, {"Column12", type text}, {"What is the highest level of education you have received?", type text}, {"Which of the following categories best describes your employment status?", type text}, {"Which of the following best describes the principal industry in which you work?", type text}, {"What is your Race/ethnicity?", type text}, {"Column17", type text}, {"Which of the following best describes your current relationship status?", type text}, {"What is your approximate average household income? ", type text}, {"Please provide the number of each in your household including yourself.", type any}, {"Column21", type any}, {"Column22", type any}, {"Which factors are most important to you when deciding where to spend? (Drag and drop, or select drop down to assign ranking.)", type any}, {"Column24", type any}, {"Column25", type any}, {"Column26", type any}, {"Column27", type any}}),
    #"Removed Columns" = Table.RemoveColumns(#"Changed Type",{"Collector ID", "End Date"}),
    #"Removed Other Columns" = Table.SelectColumns(#"Removed Columns",{"Respondent ID", "Start Date", "What is your age?", "What is your Gender?", "Column12", "What is the highest level of education you have received?", "Which of the following categories best describes your employment status?", "Which of the following best describes the principal industry in which you work?", "What is your Race/ethnicity?", "Which of the following best describes your current relationship status?", "What is your approximate average household income? ", "Please provide the number of each in your household including yourself.", "Which factors are most important to you when deciding where to spend? (Drag and drop, or select drop down to assign ranking.)"}),
    #"Changed DateRemTime" = Table.TransformColumnTypes(#"Removed Other Columns",{{"Start Date", type date}}),
    #"Renamed Columns" = Table.RenameColumns(#"Changed DateRemTime",{{"What is your age?", "Age"}, {"What is your Gender?", "Gender"}, {"Column12", "SelfDescribe"}, {"What is the highest level of education you have received?", "EducationLevel"}, {"Which of the following categories best describes your employment status?", "EmploymentDetails"}}),
    GenderCombination = Table.CombineColumns(#"Renamed Columns",{"Gender", "SelfDescribe"},Combiner.CombineTextByDelimiter("", QuoteStyle.None),"GenderInfo"),
    RemovedSecondHeader = Table.SelectRows(GenderCombination, each ([Respondent ID] <> null))
in
    RemovedSecondHeader
```

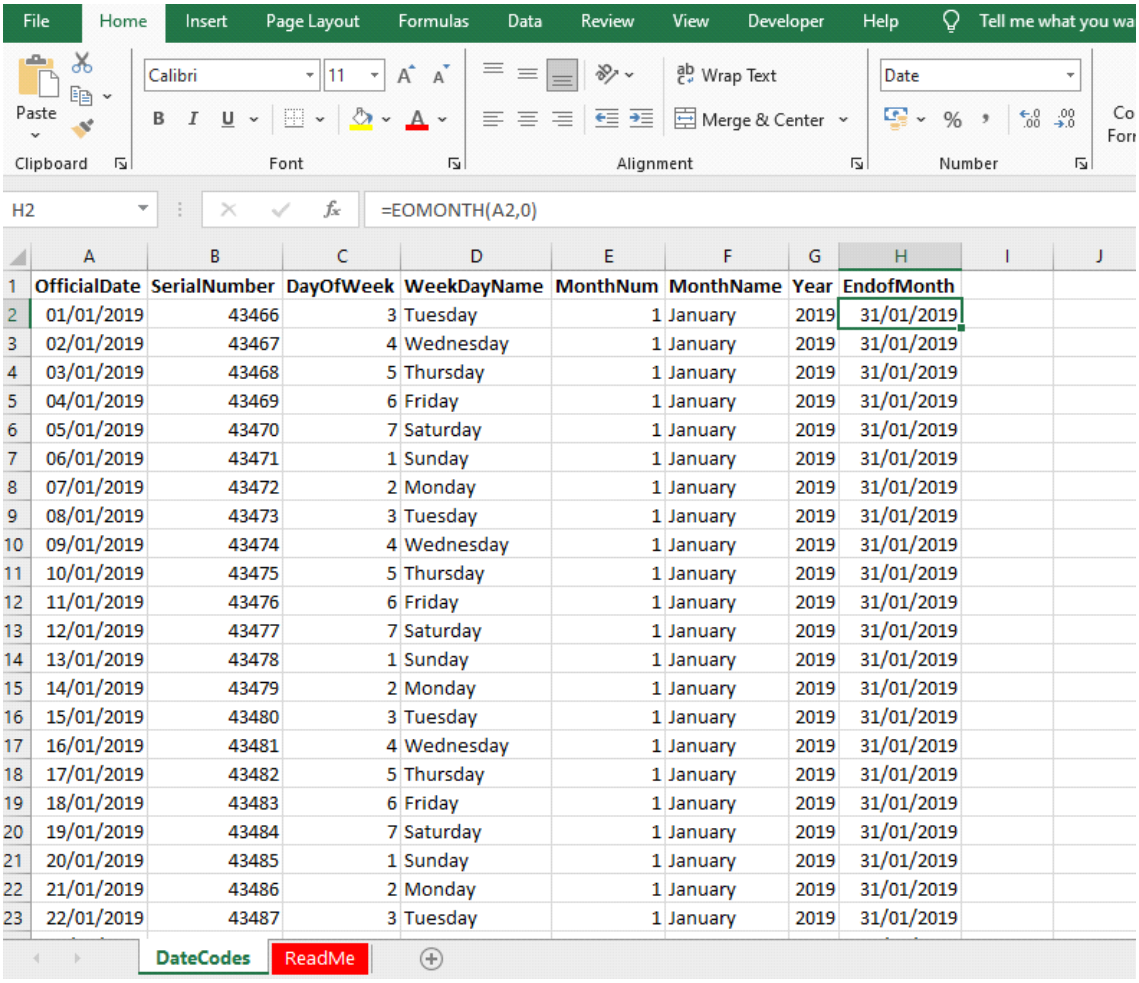




Working with reusable data

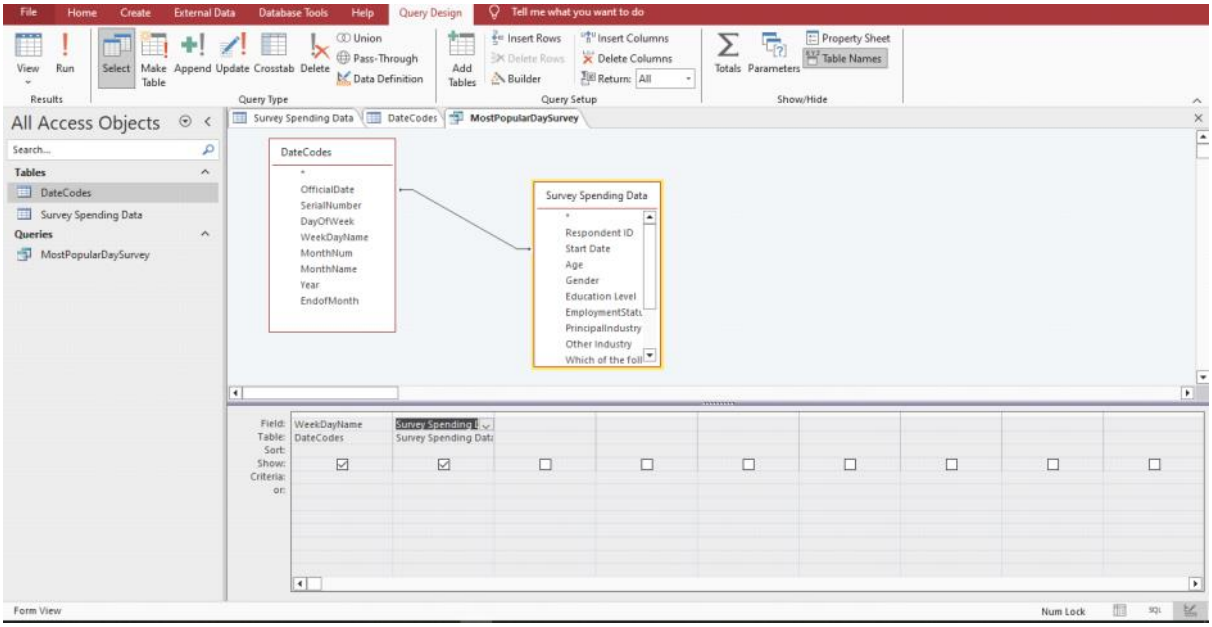
Date Table

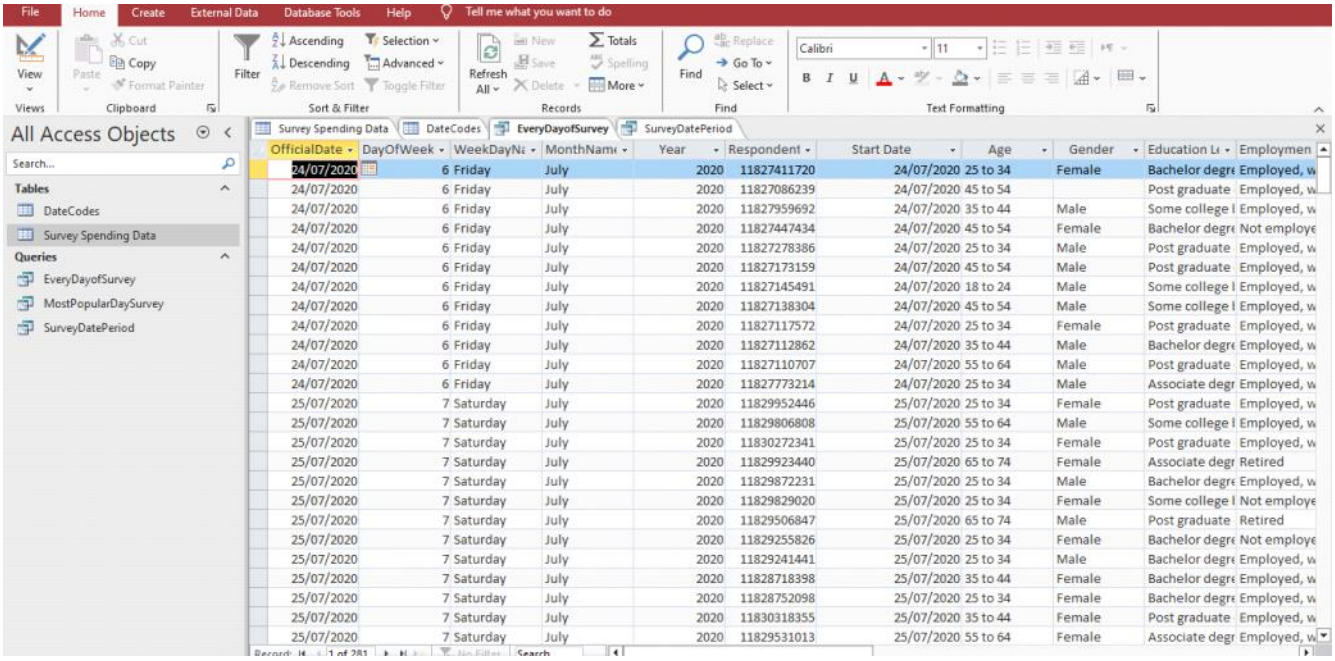
=VALUE(A2) for serial number
=WEEKDAY(A2) for daysofweek
=TEXT(A2,"dddd") for weekdayname
=MONTH(A2) for month
=TEXT(A2,"mmmm") for monthname
=YEAR(A2) for year
=EOMONTH(A2,0) for endofmonth



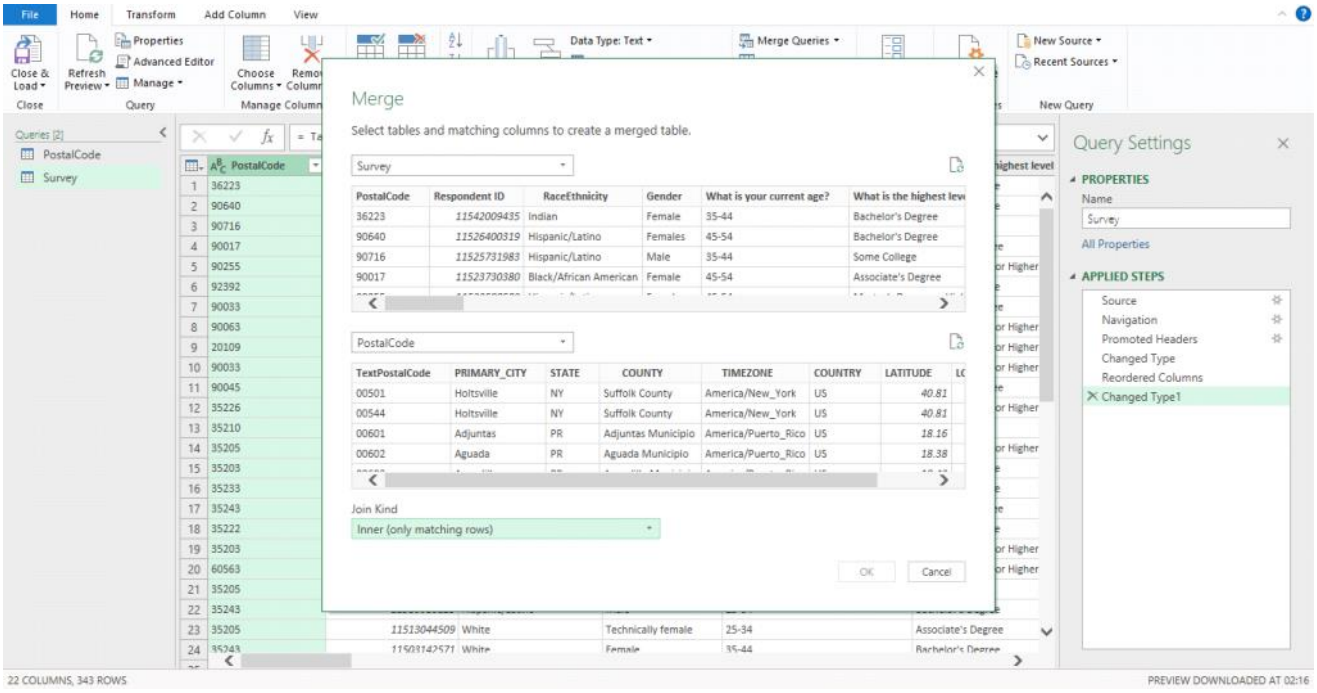
	A	B	C	D	E	F	G	H
1	OfficialDate	SerialNumber	DayOfWeek	WeekDayName	MonthNum	MonthName	Year	EndofMonth
2	01/01/2019	43466	3	Tuesday	1	January	2019	31/01/2019
3	02/01/2019	43467	4	Wednesday	1	January	2019	31/01/2019
4	03/01/2019	43468	5	Thursday	1	January	2019	31/01/2019
5	04/01/2019	43469	6	Friday	1	January	2019	31/01/2019
6	05/01/2019	43470	7	Saturday	1	January	2019	31/01/2019
7	06/01/2019	43471	1	Sunday	1	January	2019	31/01/2019
8	07/01/2019	43472	2	Monday	1	January	2019	31/01/2019
9	08/01/2019	43473	3	Tuesday	1	January	2019	31/01/2019
10	09/01/2019	43474	4	Wednesday	1	January	2019	31/01/2019
11	10/01/2019	43475	5	Thursday	1	January	2019	31/01/2019
12	11/01/2019	43476	6	Friday	1	January	2019	31/01/2019
13	12/01/2019	43477	7	Saturday	1	January	2019	31/01/2019
14	13/01/2019	43478	1	Sunday	1	January	2019	31/01/2019
15	14/01/2019	43479	2	Monday	1	January	2019	31/01/2019
16	15/01/2019	43480	3	Tuesday	1	January	2019	31/01/2019
17	16/01/2019	43481	4	Wednesday	1	January	2019	31/01/2019
18	17/01/2019	43482	5	Thursday	1	January	2019	31/01/2019
19	18/01/2019	43483	6	Friday	1	January	2019	31/01/2019
20	19/01/2019	43484	7	Saturday	1	January	2019	31/01/2019
21	20/01/2019	43485	1	Sunday	1	January	2019	31/01/2019
22	21/01/2019	43486	2	Monday	1	January	2019	31/01/2019
23	22/01/2019	43487	3	Tuesday	1	January	2019	31/01/2019

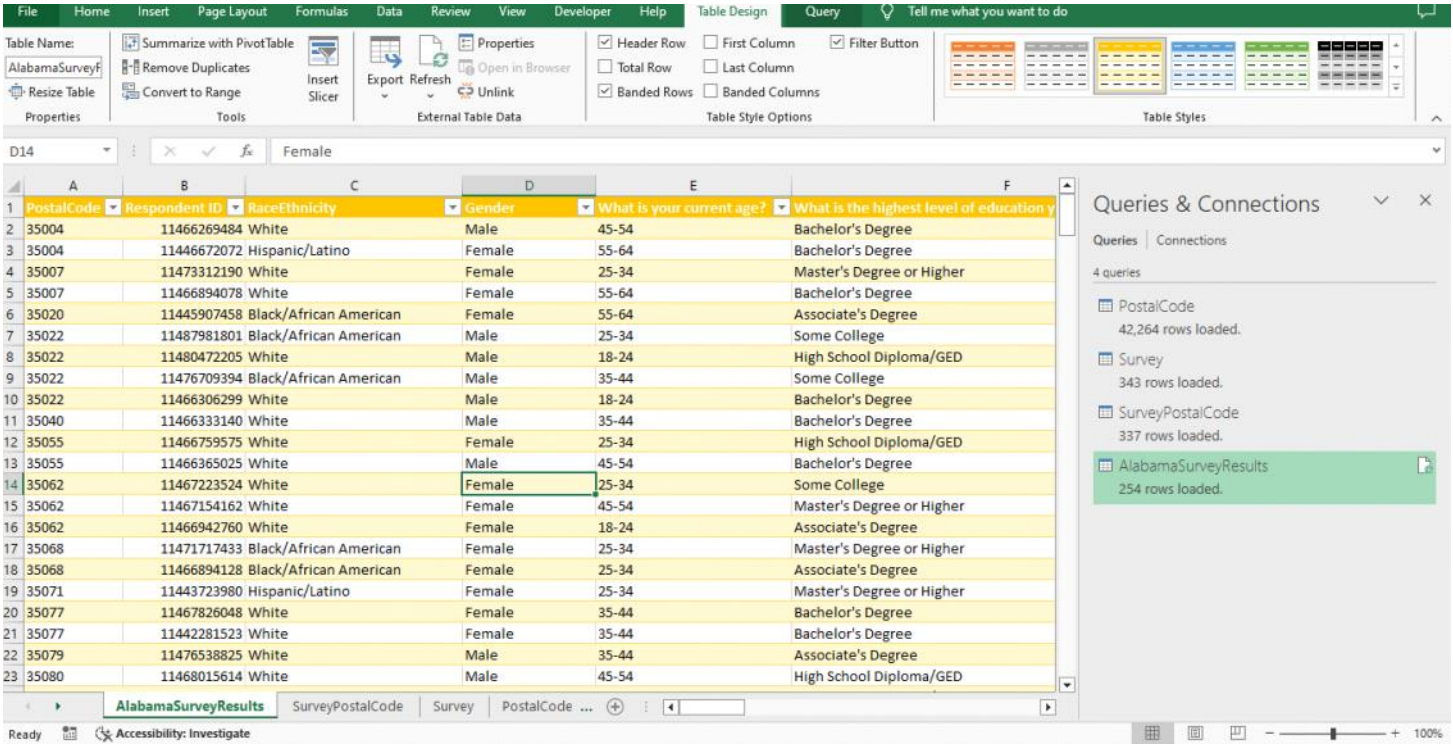
Model Data with Queries





Modelling Data in Power Query

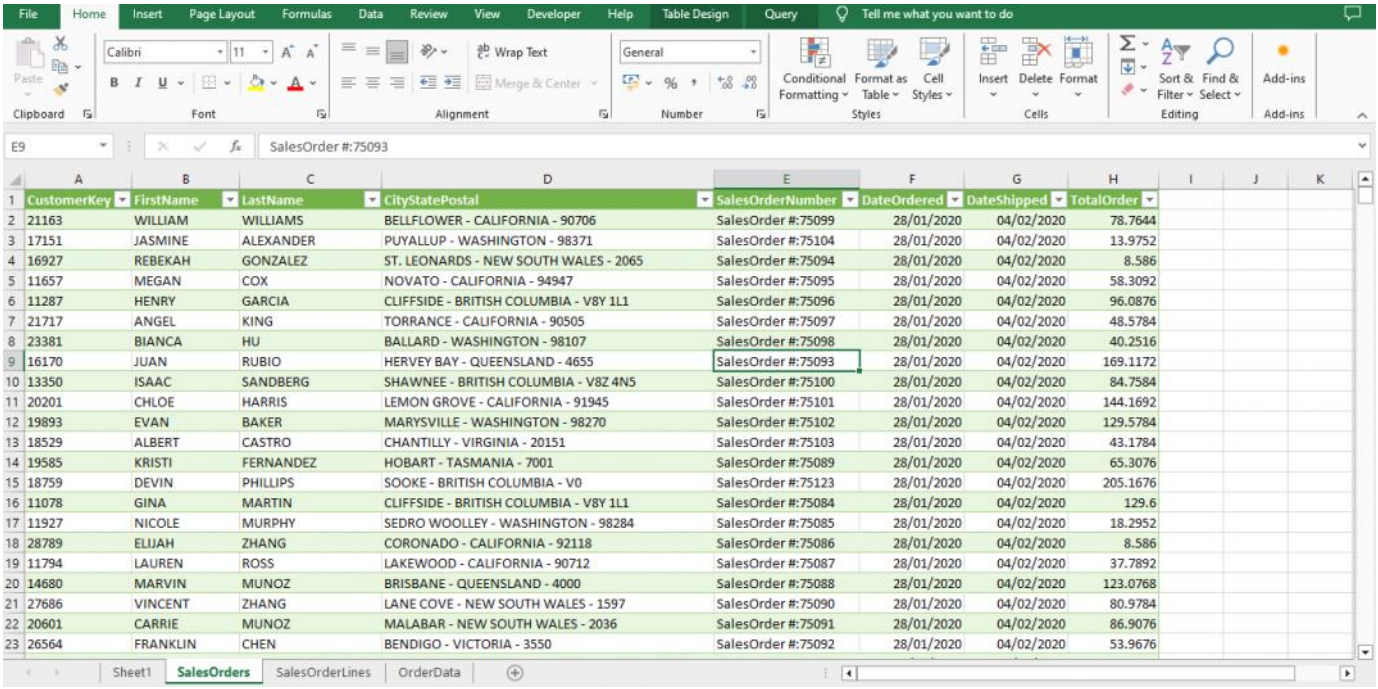




	A	B	C	D	E	F
1	PostalCode	Respondent ID	RaceEthnicity	Gender	What is your current age?	What is the highest level of education y
2	35004	11466269484	White	Male	45-54	Bachelor's Degree
3	35004	11446672072	Hispanic/Latino	Female	55-64	Bachelor's Degree
4	35007	11473312190	White	Female	25-34	Master's Degree or Higher
5	35007	11466894078	White	Female	55-64	Bachelor's Degree
6	35020	11445907458	Black/African American	Female	55-64	Associate's Degree
7	35022	11487981801	Black/African American	Male	25-34	Some College
8	35022	11480472205	White	Male	18-24	High School Diploma/GED
9	35022	11476709394	Black/African American	Male	35-44	Some College
10	35022	11466306299	White	Male	18-24	Bachelor's Degree
11	35040	11466333140	White	Male	35-44	Bachelor's Degree
12	35055	11466759575	White	Female	25-34	High School Diploma/GED
13	35055	11466365025	White	Male	45-54	Bachelor's Degree
14	35062	11467223524	White	Female	25-34	Some College
15	35062	11467154162	White	Female	45-54	Master's Degree or Higher
16	35062	11466942760	White	Female	18-24	Associate's Degree
17	35068	11471717433	Black/African American	Female	25-34	Master's Degree or Higher
18	35068	11466894128	Black/African American	Female	25-34	Associate's Degree
19	35071	11443723980	Hispanic/Latino	Female	25-34	Master's Degree or Higher
20	35077	11467826048	White	Female	35-44	Bachelor's Degree
21	35077	11442281523	White	Female	35-44	Bachelor's Degree
22	35079	11476538825	White	Male	35-44	Associate's Degree
23	35080	11468015614	White	Male	45-54	High School Diploma/GED

7. Applying Common Techniques for All Data Analysis

26 May 2024 10:06



	A	B	C	D	E	F	G	H
1	CustomerKey	FirstName	LastName	CityStatePostal	SalesOrderNumber	DateOrdered	DateShipped	TotalOrder
2	21163	WILLIAM	WILLIAMS	BELLFLOWER - CALIFORNIA - 90706	SalesOrder #:75099	28/01/2020	04/02/2020	78.7644
3	17151	JASMINE	ALEXANDER	PUYALLUP - WASHINGTON - 98371	SalesOrder #:75104	28/01/2020	04/02/2020	13.9752
4	16927	REBEKAH	GONZALEZ	ST. LEONARDS - NEW SOUTH WALES - 2065	SalesOrder #:75094	28/01/2020	04/02/2020	8.586
5	11657	MEGAN	COX	NOVATO - CALIFORNIA - 94947	SalesOrder #:75095	28/01/2020	04/02/2020	58.3092
6	11287	HENRY	GARCIA	CLIFFSIDE - BRITISH COLUMBIA - V8Y 1L1	SalesOrder #:75096	28/01/2020	04/02/2020	96.0876
7	21717	ANGEL	KING	TORRANCE - CALIFORNIA - 90505	SalesOrder #:75097	28/01/2020	04/02/2020	48.5784
8	23381	BIANCA	HU	BALLARD - WASHINGTON - 98107	SalesOrder #:75098	28/01/2020	04/02/2020	40.2516
9	16170	JUAN	RUBIO	HERVEY BAY - QUEENSLAND - 4655	SalesOrder #:75093	28/01/2020	04/02/2020	169.1172
10	13350	ISAAC	SANDBERG	SHAWNEE - BRITISH COLUMBIA - V8Z 4N5	SalesOrder #:75100	28/01/2020	04/02/2020	84.7584
11	20201	CHLOE	HARRIS	LEMON GROVE - CALIFORNIA - 91945	SalesOrder #:75101	28/01/2020	04/02/2020	144.1692
12	19893	EVAN	BAKER	MARYSVILLE - WASHINGTON - 98270	SalesOrder #:75102	28/01/2020	04/02/2020	129.5784
13	18529	ALBERT	CASTRO	CHANTILLY - VIRGINIA - 20151	SalesOrder #:75103	28/01/2020	04/02/2020	43.1784
14	19585	KRISTI	FERNANDEZ	HOBART - TASMANIA - 7001	SalesOrder #:75089	28/01/2020	04/02/2020	65.3076
15	18759	DEVIN	PHILLIPS	SOOKE - BRITISH COLUMBIA - V0	SalesOrder #:75123	28/01/2020	04/02/2020	205.1676
16	11078	GINA	MARTIN	CLIFFSIDE - BRITISH COLUMBIA - V8Y 1L1	SalesOrder #:75084	28/01/2020	04/02/2020	129.6
17	11927	NICOLE	MURPHY	SEDRO WOOLLEY - WASHINGTON - 98284	SalesOrder #:75085	28/01/2020	04/02/2020	18.2952
18	28789	ELIJAH	ZHANG	CORONADO - CALIFORNIA - 92118	SalesOrder #:75086	28/01/2020	04/02/2020	8.586
19	11794	LAUREN	ROSS	LAKEWOOD - CALIFORNIA - 90712	SalesOrder #:75087	28/01/2020	04/02/2020	37.7892
20	14680	MARVIN	MUNOZ	BRISBANE - QUEENSLAND - 4000	SalesOrder #:75088	28/01/2020	04/02/2020	123.0768
21	27686	VINCENT	ZHANG	LANE COVE - NEW SOUTH WALES - 1597	SalesOrder #:75090	28/01/2020	04/02/2020	80.9784
22	20601	CARRIE	MUNOZ	MALABAR - NEW SOUTH WALES - 2036	SalesOrder #:75091	28/01/2020	04/02/2020	86.9076
23	26564	FRANKLIN	CHEN	BENDIGO - VICTORIA - 3550	SalesOrder #:75092	28/01/2020	04/02/2020	53.9676

Introduction

31 May 2024 17:52

Excel
SQL
Power BI
Access

1. Working with Business Data

31 May 2024 18:07

Noise in data
Unnecessary information in a data set that gets in the way of analysis.

Impacts of Noise in data
1. Productivity lost to unnecessary fields
2. Aggregate total queries are more challenging
3. Unnecessary big files size
4. Increased computer processing times

Universal Questions
1. What system contains the data?
2. Are there multiple sources the data?
3. What are the key terms and definitions?
4. What format do they want/need to receive the information?
5. Who needs to receives this information?

Getting Started Solution

Goal:
Provide the list of top 50 customers based on their order amounts.

Business Rule:
Top customers is based on the highest amount on a single order.

Noise:
- PickedByPersonID
- ContactPersonID
- IsUndersupplyBackordered
- Comments
- DeliveryInstructions
- InternalComments
- PickingCompletedWhen
- LastEditedBy
- LastEditedWhen

Additional Questions:
Does Back Order matter to us for this report?

Requirements:
1. Make copy of the data and name its original data.
2. Remove the noise.
3. Confirm that you don't have duplicated order ID using conditional formatting.
4. Multi Sort the Customers then by highest single order amount.
5. Remove the duplicates based on customer ID.
6. Sort by the highest dollar amount.
7. Filter for the top 50 items in the list.

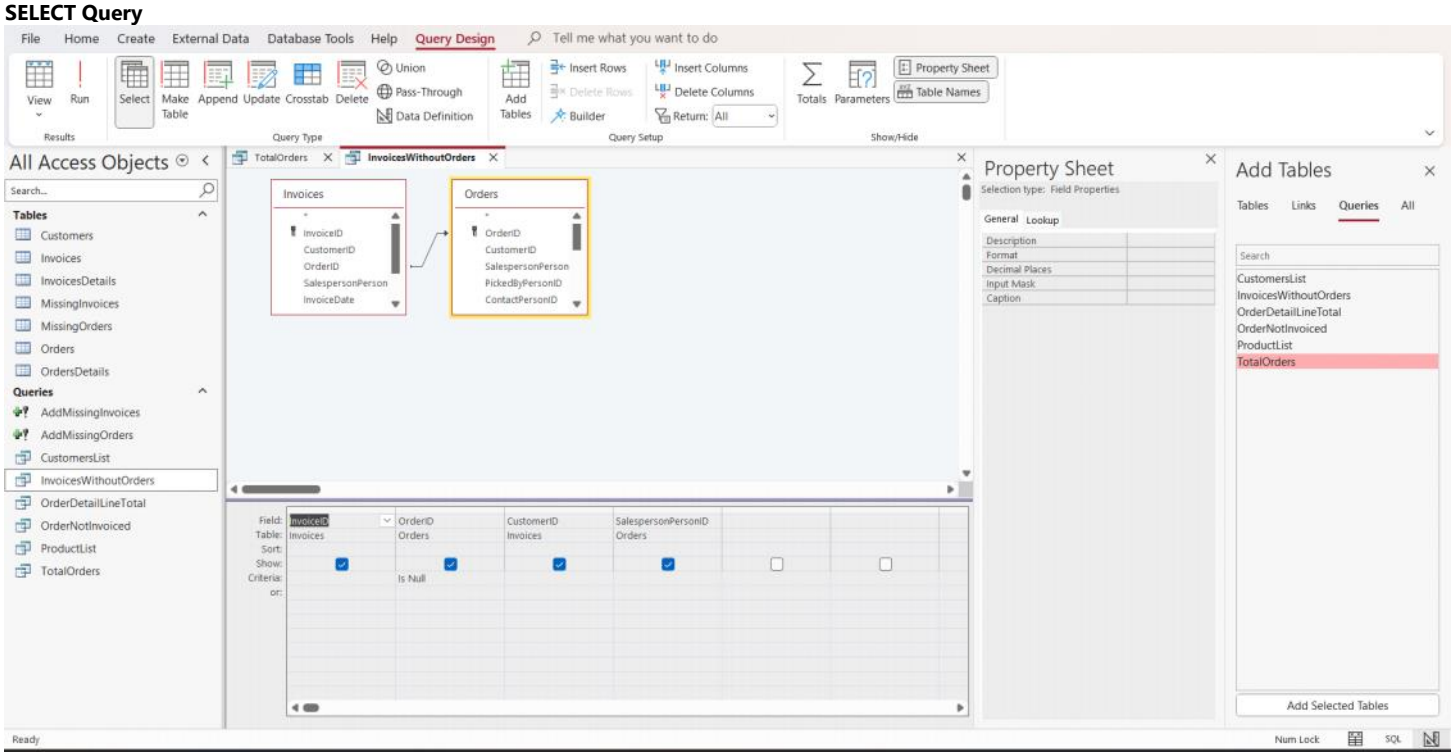
8. Copy to a new sheet.

2. Business Data Sets with Queries

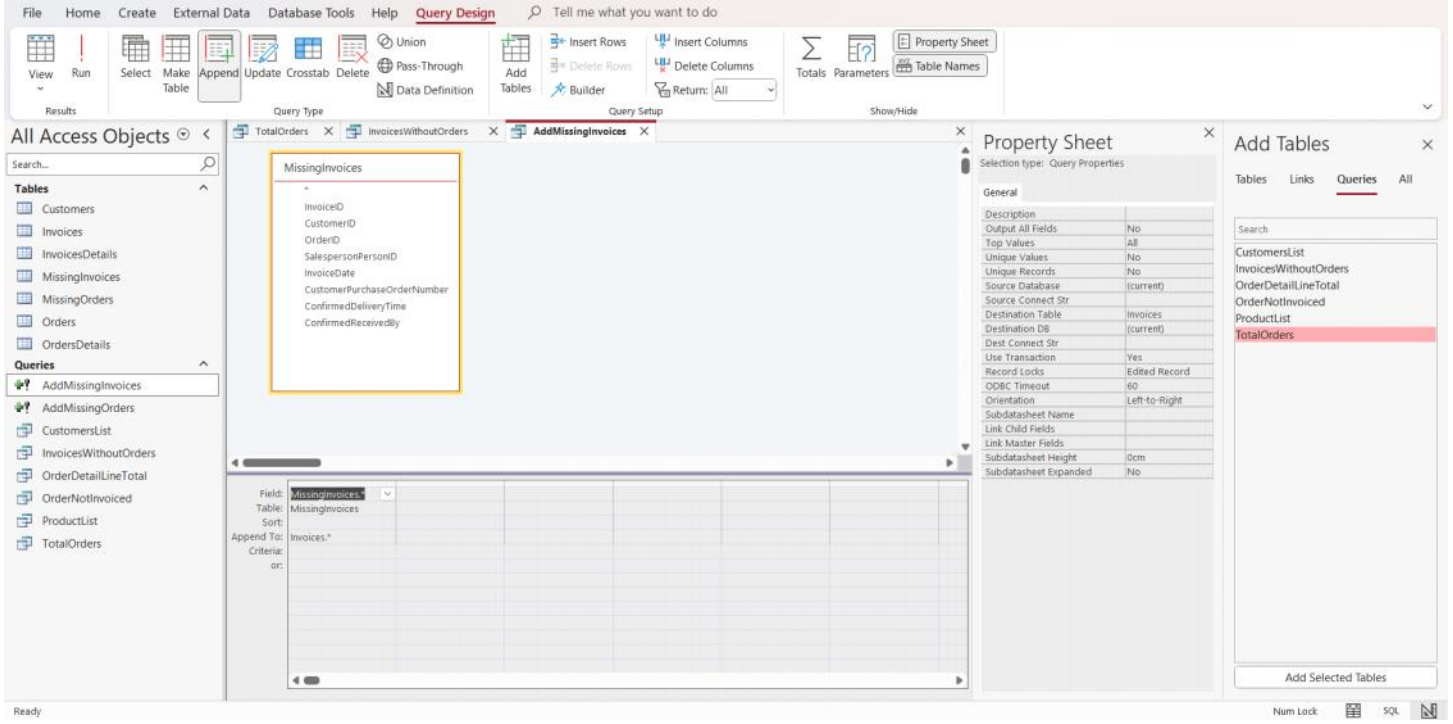
31 May 2024 18:13

Query - Statement created in a data tool to provide data needed.

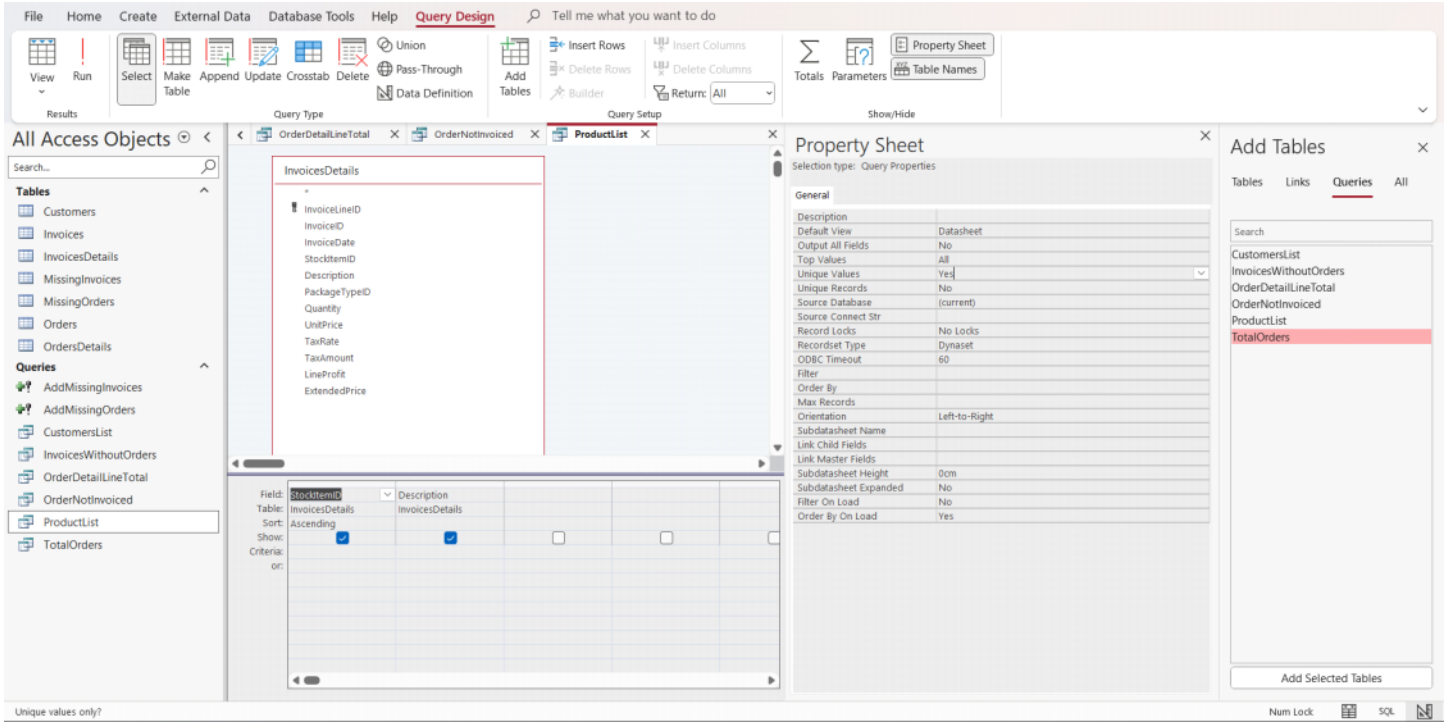
SELECT Query



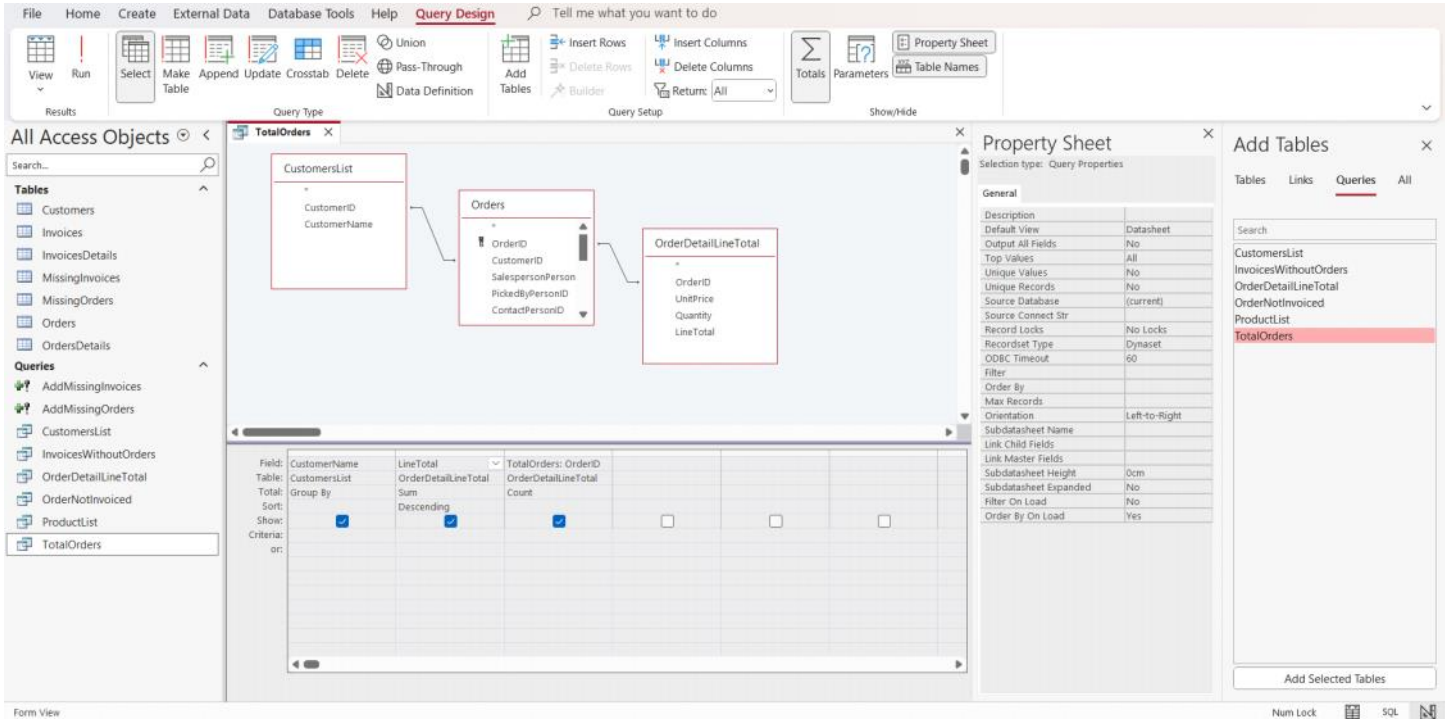
Append



Distinct


File Home Create External Data Database Tools Help Query Design Tell me what you want to do
View Run Select Make Table Append Update Crosstab Delete Union Pass-Through Data Definition Add Tables Insert Rows Delete Rows Builder Insert Columns Delete Columns Return: All Totals Parameters Property Sheet Table Names
Results Query Type Query Setup Show/Hide
All Access Objects
Search...
Tables
Customers
Invoices
InvoicesDetails
MissingInvoices
MissingOrders
Orders
OrdersDetails
Queries
AddMissingInvoices
AddMissingOrders
CustomersList
InvoicesWithoutOrders
OrderDetailLineTotal
OrderNotInvoiced
ProductList
TotalOrders
OrderDetailLineTotal
OrderNotInvoiced
ProductList
InvoicesDetails
InvoiceLineID
InvoiceID
InvoiceDate
StockItemID
Description
PackageTypeID
Quantity
UnitPrice
TaxRate
TaxAmount
LineProfit
ExtendedPrice
Field: StockItemID Description
Table: InvoicesDetails InvoicesDetails
Sort: Ascending
Show:
Criteria:
or:
Property Sheet
Selection type: Query Properties
General
Description
Default View Datasheet
Output All Fields No
Top Values All
Unique Values Yes
Unique Records No
Source Database (current)
Source Connect Str
Record Locks No Locks
Recordset Type Dynaset
ODBC Timeout 60
Filter
Order By
Max Records
Orientation Left-to-Right
Subdatasheet Name
Link Child Fields
Link Master Fields
Subdatasheet Height 0cm
Subdatasheet Expanded No
Filter On Load No
Order By On Load Yes
Add Tables
Tables Links Queries All
Search
CustomersList
InvoicesWithoutOrders
OrderDetailLineTotal
OrderNotInvoiced
ProductList
TotalOrders
Add Selected Tables
Unique values only?
Num Lock SQL

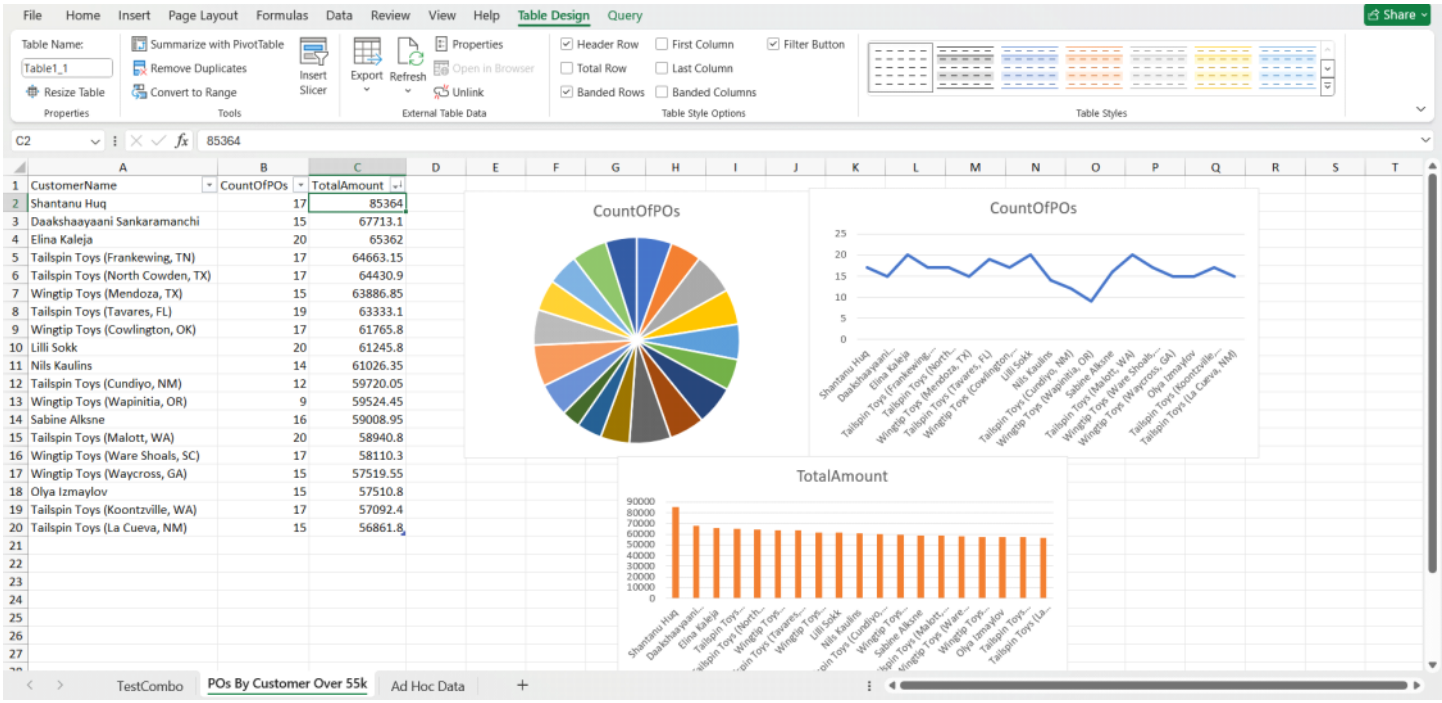
Total


File Home Create External Data Database Tools Help Query Design Tell me what you want to do
View Run Select Make Table Append Update Crosstab Delete Union Pass-Through Data Definition Add Tables Insert Rows Delete Rows Builder Insert Columns Delete Columns Return: All Totals Parameters Property Sheet Table Names
Results Query Type Query Setup Show/Hide
All Access Objects
Search...
Tables
Customers
Invoices
InvoicesDetails
MissingInvoices
MissingOrders
Orders
OrdersDetails
Queries
AddMissingInvoices
AddMissingOrders
CustomersList
InvoicesWithoutOrders
OrderDetailLineTotal
OrderNotInvoiced
ProductList
TotalOrders
TotalOrders
CustomersList
CustomerID
CustomerName
Orders
OrderID
CustomerID
SalespersonPerson
PickedByPersonID
ContactPersonID
OrderDetailLineTotal
OrderID
UnitPrice
Quantity
LineTotal
Field: CustomerName LineTotal TotalOrders: OrderID
Table: CustomersList OrderDetailLineTotal OrderDetailLineTotal
Total: Group By Sum Count
Sort: Descending
Show:
Criteria:
or:
Property Sheet
Selection type: Query Properties
General
Description
Default View Datasheet
Output All Fields No
Top Values All
Unique Values No
Unique Records No
Source Database (current)
Source Connect Str
Record Locks No Locks
Recordset Type Dynaset
ODBC Timeout 60
Filter
Order By
Max Records
Orientation Left-to-Right
Subdatasheet Name
Link Child Fields
Link Master Fields
Subdatasheet Height 0cm
Subdatasheet Expanded No
Filter On Load No
Order By On Load Yes
Add Tables
Tables Links Queries All
Search
CustomersList
InvoicesWithoutOrders
OrderDetailLineTotal
OrderNotInvoiced
ProductList
TotalOrders
Add Selected Tables
Form View
Num Lock SQL

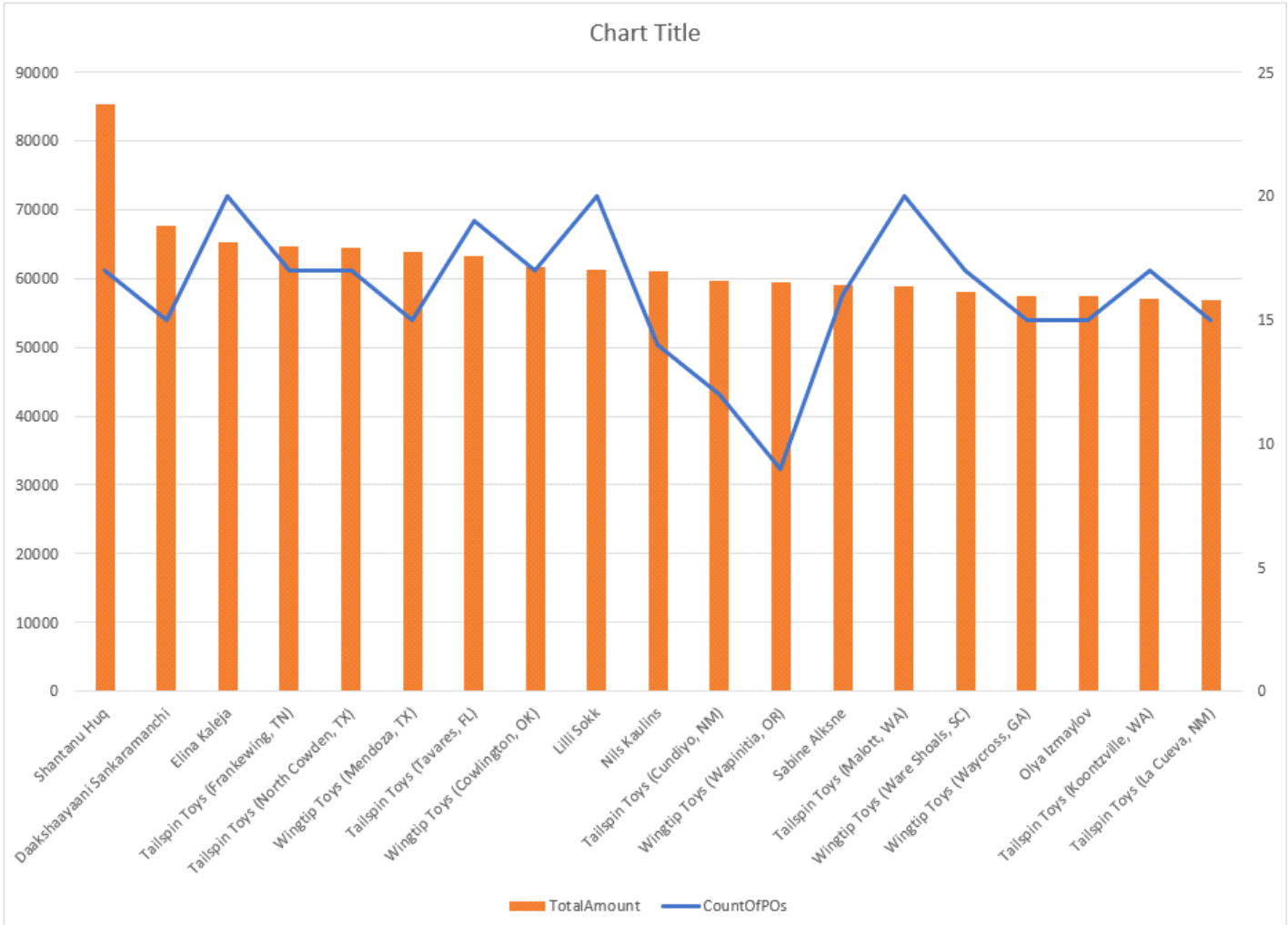
3. Chart Data Anytime and Anywhere

01 June 2024 00:30

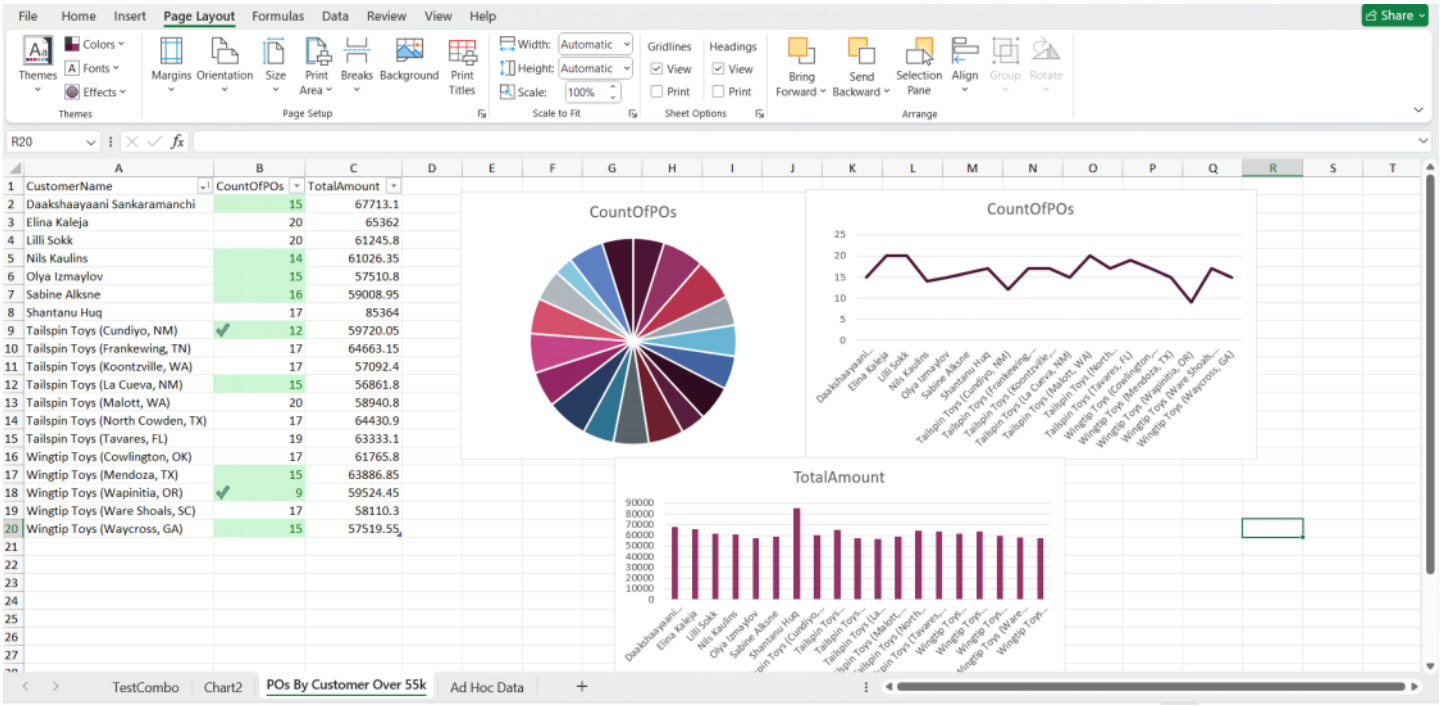
Ad Hoc requests : Also known as one-off requests; informal requests that are not a standard part of an individual's workload.



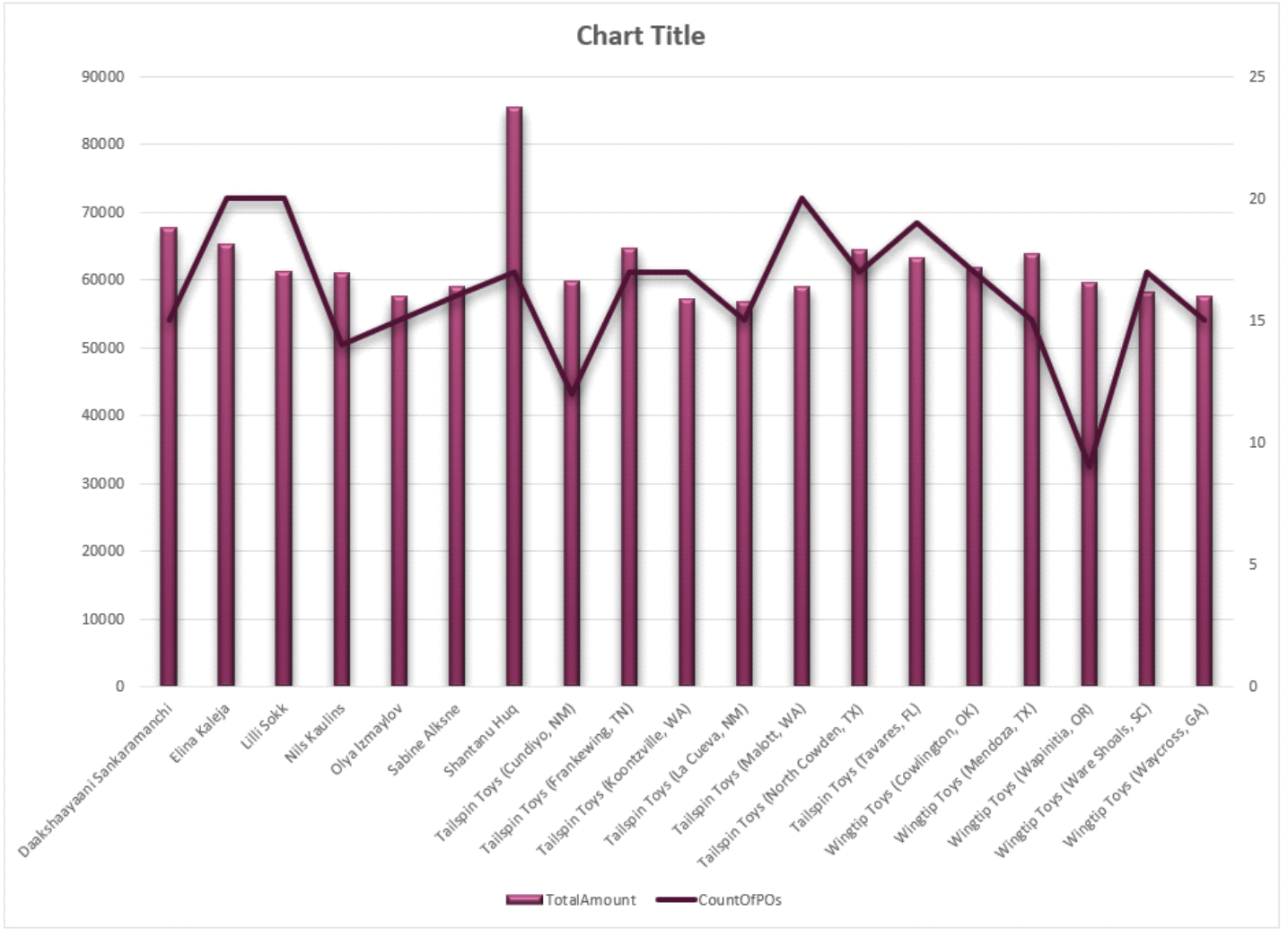
	A	B	C
1	CustomerName	CountOfPOs	TotalAmount
2	Shantanu Huq	17	85364
3	Daakshaayaani Sankaramanchi	15	67713.1
4	Elina Kaleja	20	65362
5	Tailspin Toys (Frankewing, TN)	17	64663.15
6	Tailspin Toys (North Cowden, TX)	17	64430.9
7	Wingtip Toys (Mendoza, TX)	15	63886.85
8	Tailspin Toys (Tavares, FL)	19	63333.1
9	Wingtip Toys (Cowlington, OK)	17	61765.8
10	Lilli Sokk	20	61245.8
11	Nils Kaulins	14	61026.35
12	Tailspin Toys (Cundiyo, NM)	12	59720.05
13	Wingtip Toys (Wapinitia, OR)	9	59524.45
14	Sabine Alksne	16	59008.95
15	Tailspin Toys (Malott, WA)	20	58940.8
16	Wingtip Toys (Ware Shoals, SC)	17	58110.3
17	Wingtip Toys (Waycross, GA)	15	57519.55
18	Olya Izmaylov	15	57510.8
19	Tailspin Toys (Koontzville, WA)	17	57092.4
20	Tailspin Toys (La Cueva, NM)	15	56861.8



Charts colors to match brand standards is an important aspect of presenting data analysis.



	CustomerName	CountOfPOs	TotalAmount
2	Daakshaayaani Sankaramanchi	15	67713.1
3	Elina Kaleja	20	65362
4	Lilli Sokk	20	61245.8
5	Nils Kaulins	14	61026.35
6	Olya Izmaylov	15	57510.8
7	Sabine Alksne	16	59008.95
8	Shantanu Huq	17	85364
9	Tailspin Toys (Cundiyo, NM)	12	59720.05
10	Tailspin Toys (Frankewing, TN)	17	64663.15
11	Tailspin Toys (Koontzville, WA)	17	57092.4
12	Tailspin Toys (La Cueva, NM)	15	56861.8
13	Tailspin Toys (Malott, WA)	20	58940.8
14	Tailspin Toys (North Cowden, TX)	17	64430.9
15	Tailspin Toys (Tavares, FL)	19	63333.1
16	Wingtip Toys (Cowlington, OK)	17	61765.8
17	Wingtip Toys (Mendoza, TX)	15	63886.85
18	Wingtip Toys (Wapinitia, OR)	9	59524.45
19	Wingtip Toys (Ware Shoals, SC)	17	58110.3
20	Wingtip Toys (Waycross, GA)	15	57519.55



Paste Options:

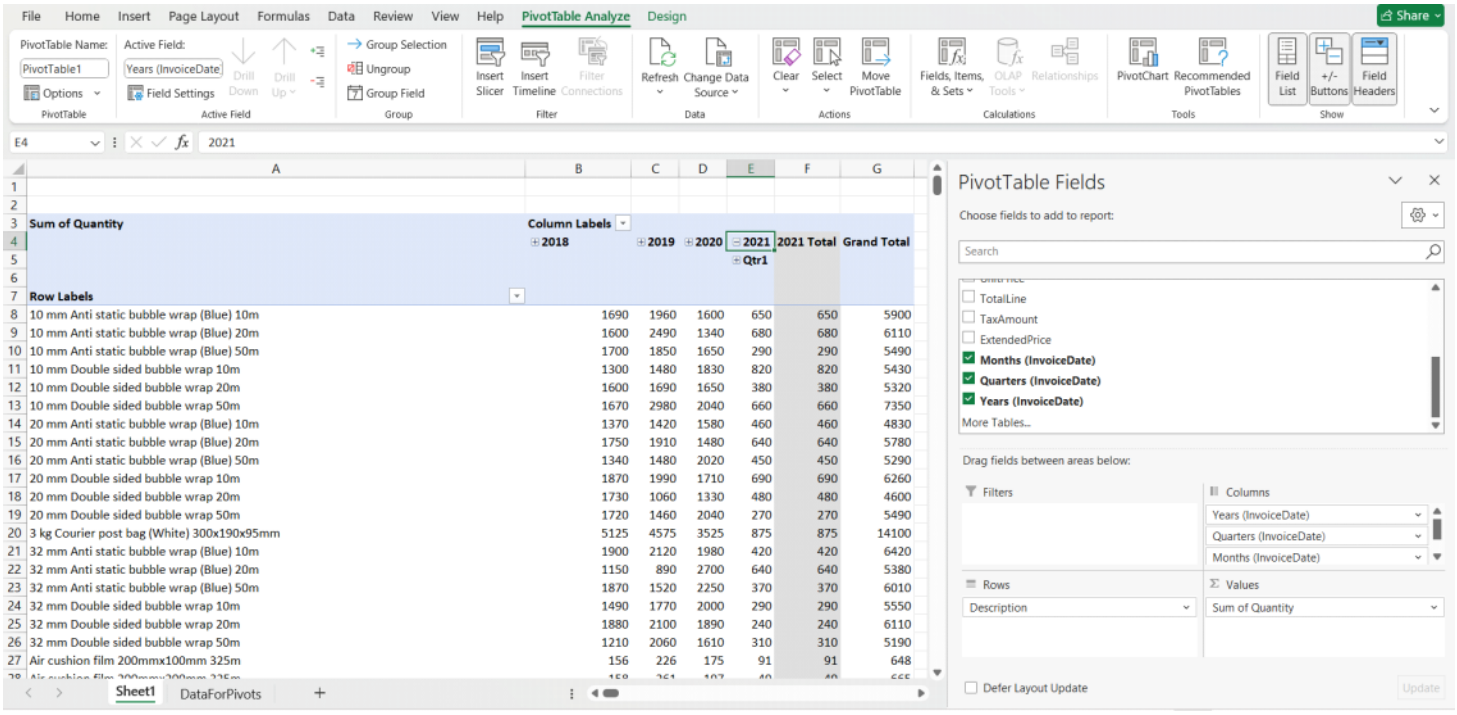
1. **Use Destination Theme & Embed Workbook :**
    - Use existing theme in PowerPoint
    - Add workbook inside of PowerPoint
    - Excel workbook will not update PowerPoint file
2. **Keep Source Formatting & Embed Workbook:**
    - Use theme in Excel file
    - Add workbook inside PowerPoint
    - Excel workbook will not update PowerPoint File
3. **Use Destination Theme & Link Data:**
    - Use existing theme in PowerPoint
    - Link workbook from excel file
    - Excel workbook will update PowerPoint file
4. **Keep source formatting & Link Data:**
    - Use theme in excel file
    - Link workbook from excel file
    - Excel workbook will update PowerPoint File
5. **Picture**
    - Treats visualization as picture object
    - Will not update

4. Pivot Data Anytime and Anywhere

01 June 2024 17:36

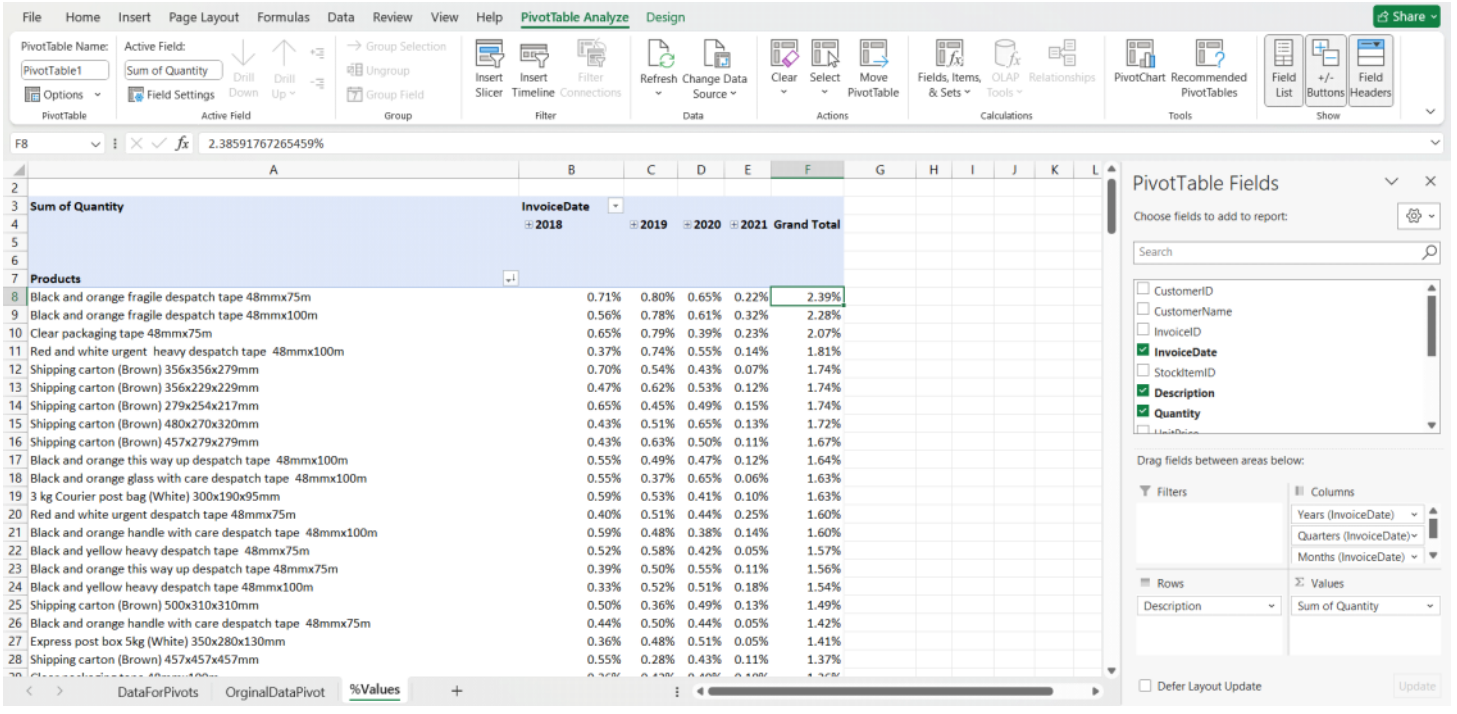
Pivots will not change underlying dataset
Pivot makers a copy of data

Pivot table fields
Filter
Columns
Rows
Value



Sum of Quantity	Column Labels					
	2018	2019	2020	2021 Qtr1	2021 Total	Grand Total
Row Labels						
10 mm Anti static bubble wrap (Blue) 10m	1690	1960	1600	650	650	5900
10 mm Anti static bubble wrap (Blue) 20m	1600	2490	1340	680	680	6110
10 mm Anti static bubble wrap (Blue) 50m	1700	1850	1650	290	290	5490
10 mm Double sided bubble wrap 10m	1300	1480	1830	820	820	5430
10 mm Double sided bubble wrap 20m	1600	1690	1650	380	380	5320
10 mm Double sided bubble wrap 50m	1670	2980	2040	660	660	7350
20 mm Anti static bubble wrap (Blue) 10m	1370	1420	1580	460	460	4830
20 mm Anti static bubble wrap (Blue) 20m	1750	1910	1480	640	640	5780
20 mm Anti static bubble wrap (Blue) 50m	1340	1480	2020	450	450	5290
20 mm Double sided bubble wrap 10m	1870	1990	1710	690	690	6260
20 mm Double sided bubble wrap 20m	1730	1060	1330	480	480	4600
20 mm Double sided bubble wrap 50m	1720	1460	2040	270	270	5490
3 kg Courier post bag (White) 300x190x95mm	5125	4575	3525	875	875	14100
32 mm Anti static bubble wrap (Blue) 10m	1900	2120	1980	420	420	6420
32 mm Anti static bubble wrap (Blue) 20m	1150	890	2700	640	640	5380
32 mm Anti static bubble wrap (Blue) 50m	1870	1520	2250	370	370	6010
32 mm Double sided bubble wrap 10m	1490	1770	2000	290	290	5550
32 mm Double sided bubble wrap 20m	1880	2100	1890	240	240	6110
32 mm Double sided bubble wrap 50m	1210	2060	1610	310	310	5190
Air cushion film 200mmx100mm 325m	156	226	175	91	91	648

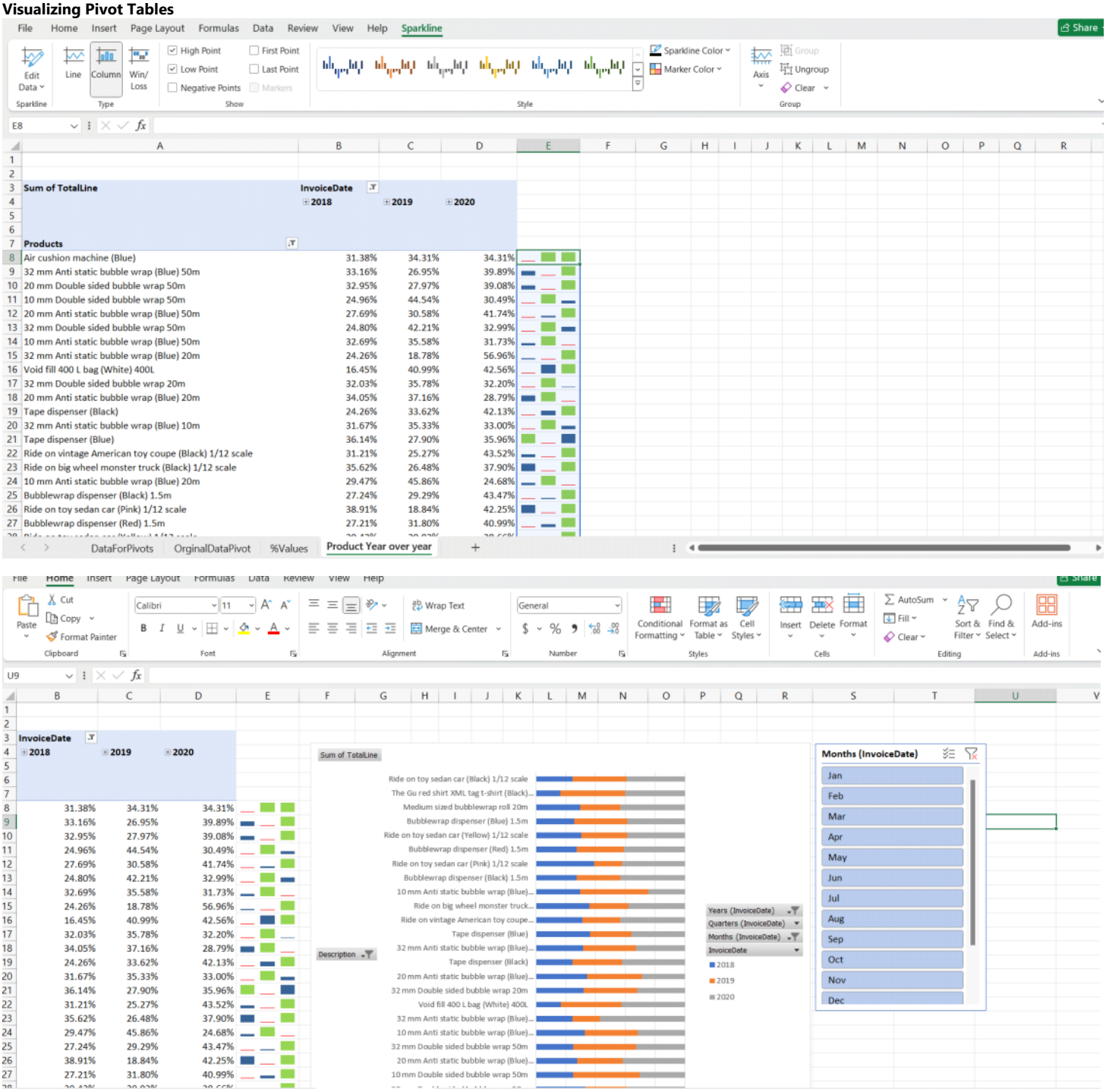
Percentage of grand total
Percentage of row total
Percentage of column total



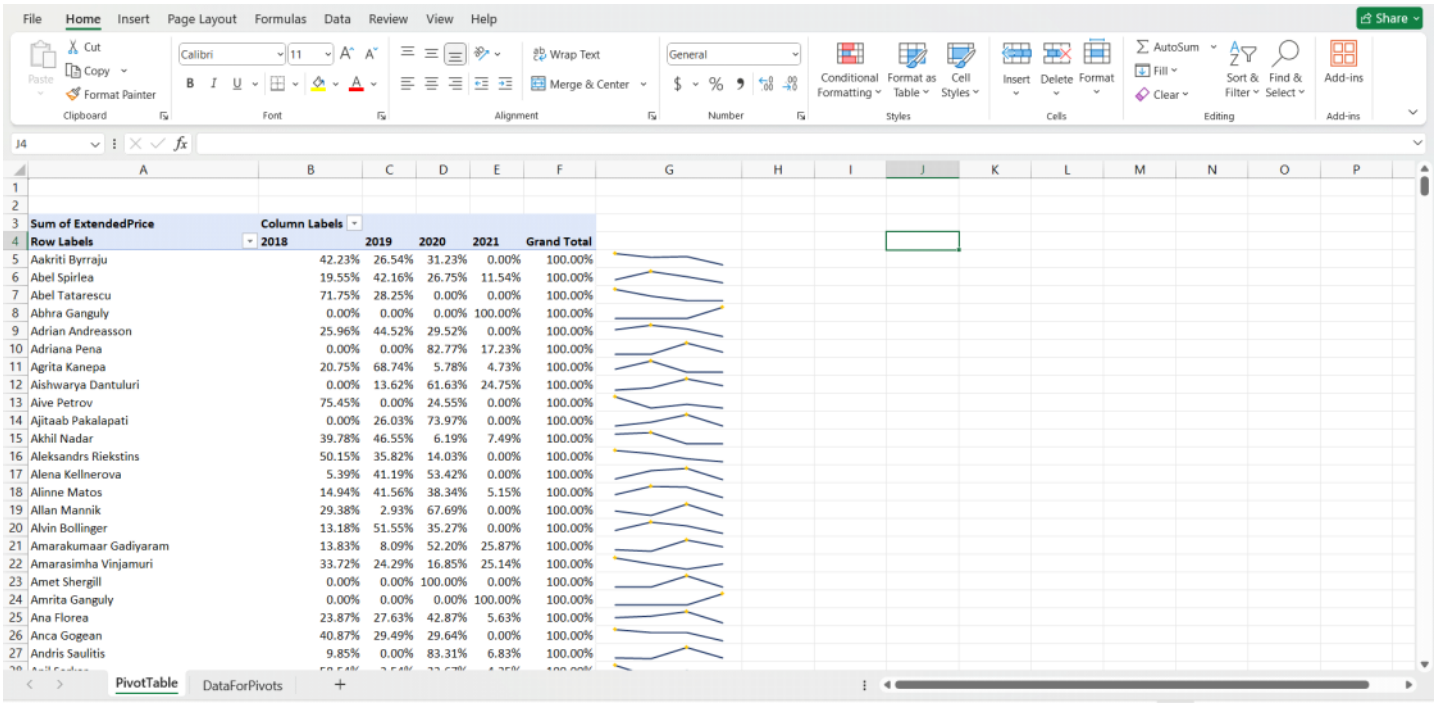
Sum of Quantity	InvoiceDate				
	2018	2019	2020	2021	Grand Total
Products					
Black and orange fragile despatch tape 48mmx75m	0.71%	0.80%	0.65%	0.22%	2.39%
Black and orange fragile despatch tape 48mmx100m	0.56%	0.78%	0.61%	0.32%	2.28%
Clear packaging tape 48mmx75m	0.65%	0.79%	0.39%	0.23%	2.07%
Red and white urgent heavy despatch tape 48mmx100m	0.37%	0.74%	0.55%	0.14%	1.81%
Shipping carton (Brown) 356x356x279mm	0.70%	0.54%	0.43%	0.07%	1.74%
Shipping carton (Brown) 356x229x229mm	0.47%	0.62%	0.53%	0.12%	1.74%
Shipping carton (Brown) 279x254x217mm	0.65%	0.45%	0.49%	0.15%	1.74%
Shipping carton (Brown) 480x270x320mm	0.43%	0.51%	0.65%	0.13%	1.72%
Shipping carton (Brown) 457x279x279mm	0.43%	0.63%	0.50%	0.11%	1.67%
Black and orange this way up despatch tape 48mmx100m	0.55%	0.49%	0.47%	0.12%	1.64%
Black and orange glass with care despatch tape 48mmx100m	0.55%	0.37%	0.65%	0.06%	1.63%
3 kg Courier post bag (White) 300x190x95mm	0.59%	0.53%	0.41%	0.10%	1.63%
Red and white urgent despatch tape 48mmx75m	0.40%	0.51%	0.44%	0.25%	1.60%
Black and orange handle with care despatch tape 48mmx100m	0.59%	0.48%	0.38%	0.14%	1.60%
Black and yellow heavy despatch tape 48mmx75m	0.52%	0.58%	0.42%	0.05%	1.57%
Black and orange this way up despatch tape 48mmx75m	0.39%	0.50%	0.55%	0.11%	1.56%
Black and yellow heavy despatch tape 48mmx100m	0.33%	0.52%	0.51%	0.18%	1.54%
Shipping carton (Brown) 500x310x310mm	0.50%	0.36%	0.49%	0.13%	1.49%
Black and orange handle with care despatch tape 48mmx75m	0.44%	0.50%	0.44%	0.05%	1.42%
Express post box 5kg (White) 350x280x130mm	0.36%	0.48%	0.51%	0.05%	1.41%
Shipping carton (Brown) 457x457x457mm	0.55%	0.28%	0.43%	0.11%	1.37%

Always make your PivotTable displays readable for decision-making.

Visualizing Pivot Tables



Pivot tables are more than just a display tool
You can use pivot to create new data sets.



Sum of ExtendedPrice	Column Labels				
Row Labels	2018	2019	2020	2021	Grand Total
Aakriti Byrraju	42.23%	26.54%	31.23%	0.00%	100.00%
Abel Spirlea	19.55%	42.16%	26.75%	11.54%	100.00%
Abel Tatarescu	71.75%	28.25%	0.00%	0.00%	100.00%
Abhra Ganguly	0.00%	0.00%	0.00%	100.00%	100.00%
Adrian Andreasson	25.96%	44.52%	29.52%	0.00%	100.00%
Adriana Pena	0.00%	0.00%	82.77%	17.23%	100.00%
Agrita Kanepa	20.75%	68.74%	5.78%	4.73%	100.00%
Aishwarya Dantuluri	0.00%	13.62%	61.63%	24.75%	100.00%
Aive Petrov	75.45%	0.00%	24.55%	0.00%	100.00%
Ajitaab Pakalapati	0.00%	26.03%	73.97%	0.00%	100.00%
Akhil Nadar	39.78%	46.55%	6.19%	7.49%	100.00%
Aleksandrs Riekstins	50.15%	35.82%	14.03%	0.00%	100.00%
Alena Kellnerova	5.39%	41.19%	53.42%	0.00%	100.00%
Alinne Matos	14.94%	41.56%	38.34%	5.15%	100.00%
Allan Mannik	29.38%	2.93%	67.69%	0.00%	100.00%
Alvin Bollinger	13.18%	51.55%	35.27%	0.00%	100.00%
Amarakumaar Gadiyaram	13.83%	8.09%	52.20%	25.87%	100.00%
Amarasimha Vinjamuri	33.72%	24.29%	16.85%	25.14%	100.00%
Amet Shergill	0.00%	0.00%	100.00%	0.00%	100.00%
Amrita Ganguly	0.00%	0.00%	0.00%	100.00%	100.00%
Ana Florea	23.87%	27.63%	42.87%	5.63%	100.00%
Anca Gogean	40.87%	29.49%	29.64%	0.00%	100.00%
Andris Saulitis	9.85%	0.00%	83.31%	6.83%	100.00%

5. Building in Power BI Desktop

01 June 2024 23:46

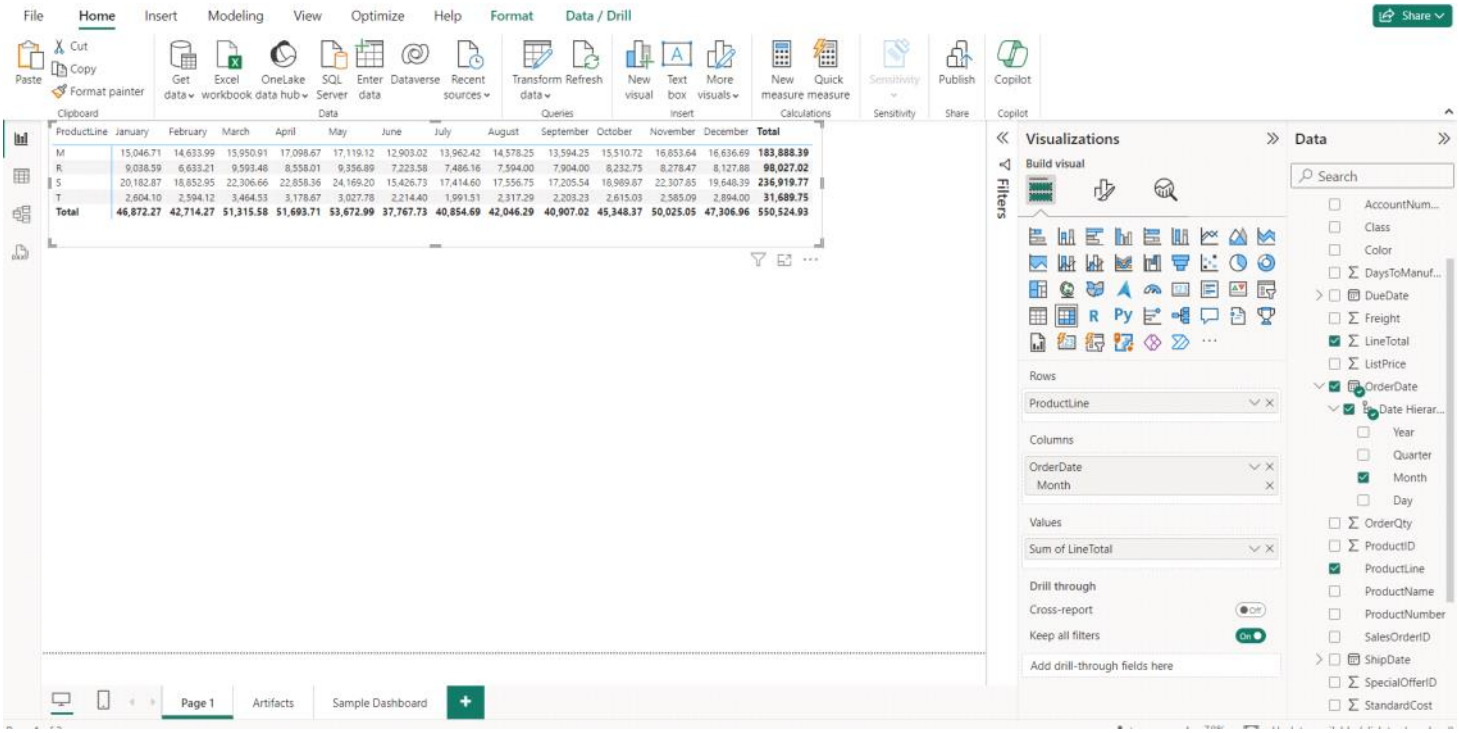
Steps to build a Dashboard:

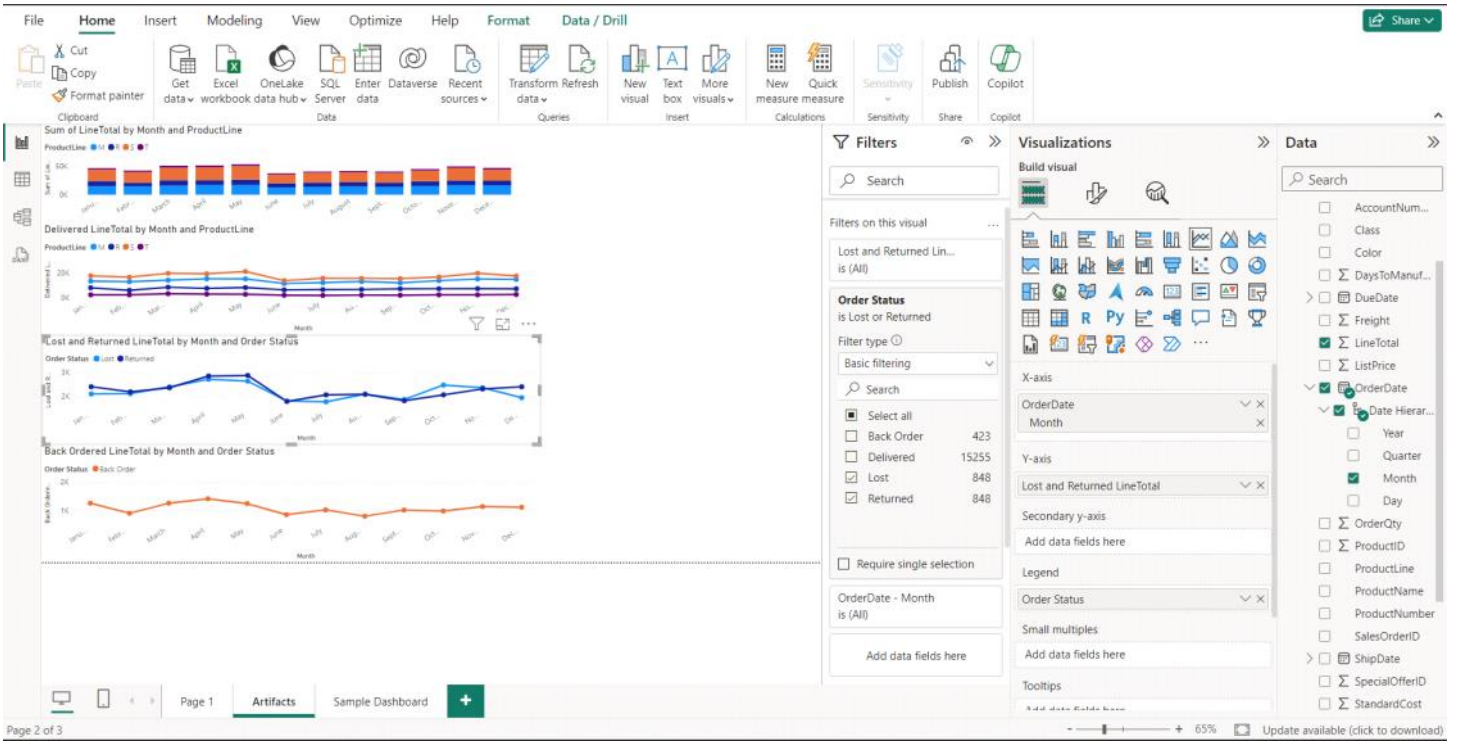
1. Gather and clean Data
2. Build Dashboard Artifacts
3. Build a sample Dashboard
4. Explore the user experience through filters
5. Refine and publish your dashboard

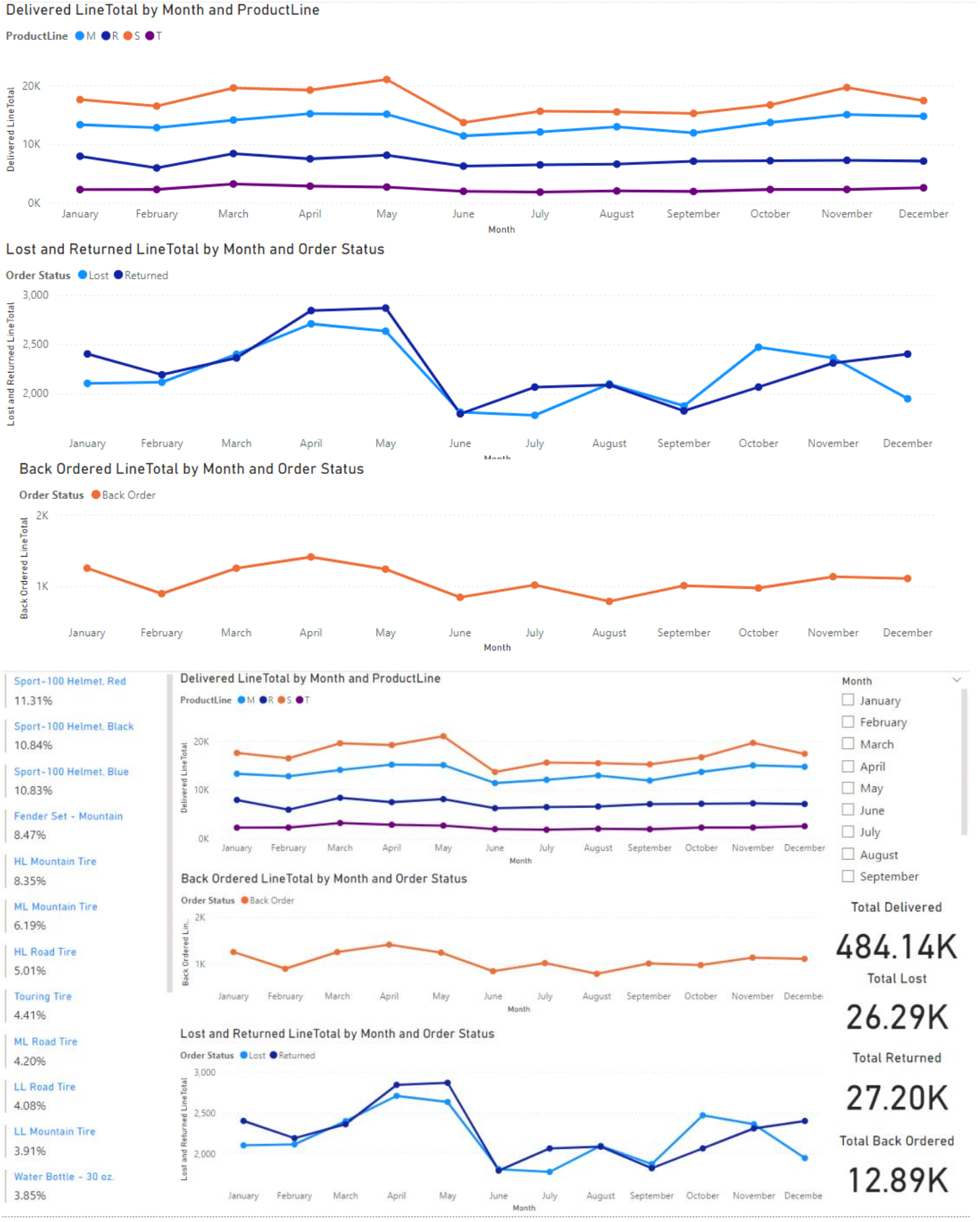
Paginated Report:

Reports that are full of line items and suitable for printing on more than one page.

Soft Filters	Hard Filters
Applied by the user	Coded into visual or page

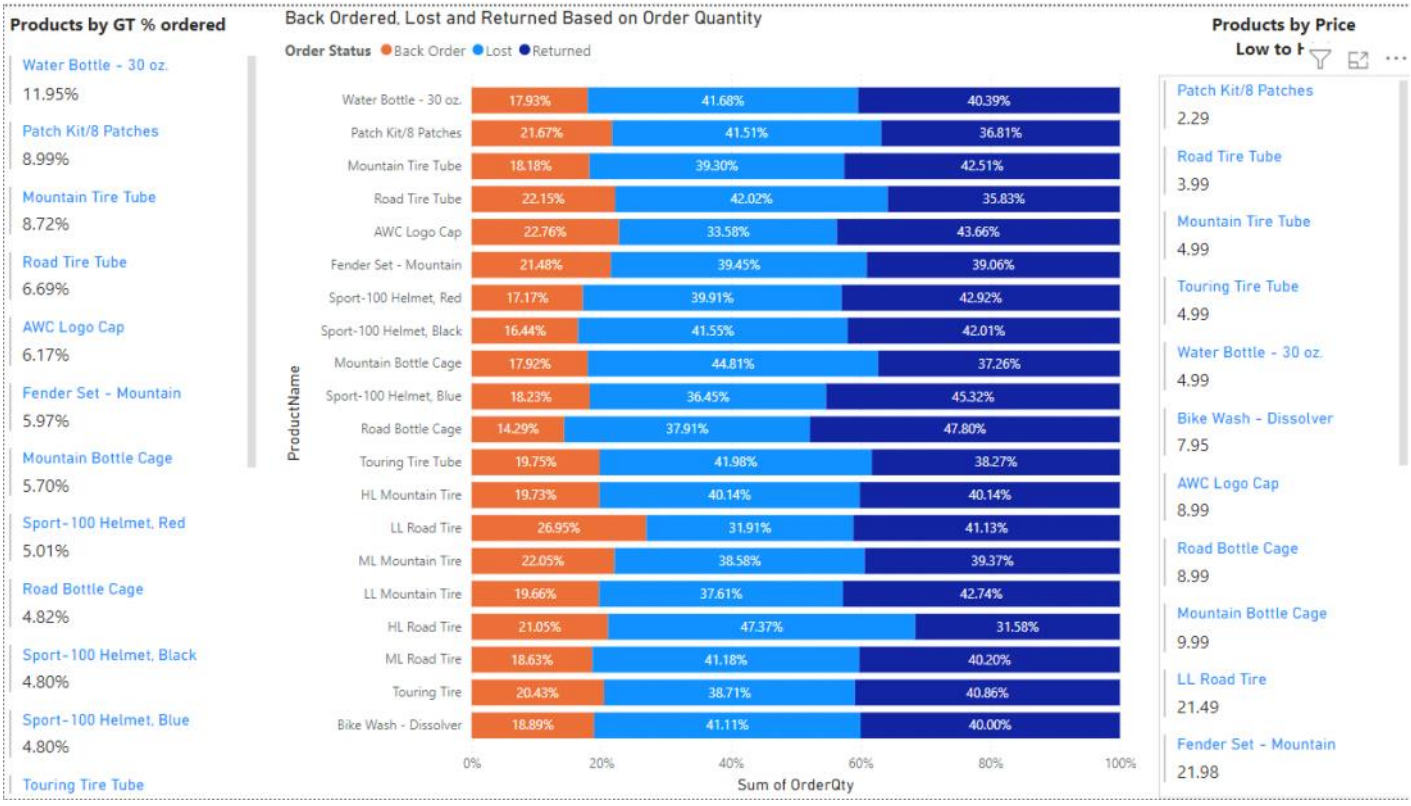






Sizing and aligning are elements is one of the final steps before publishing your findings.

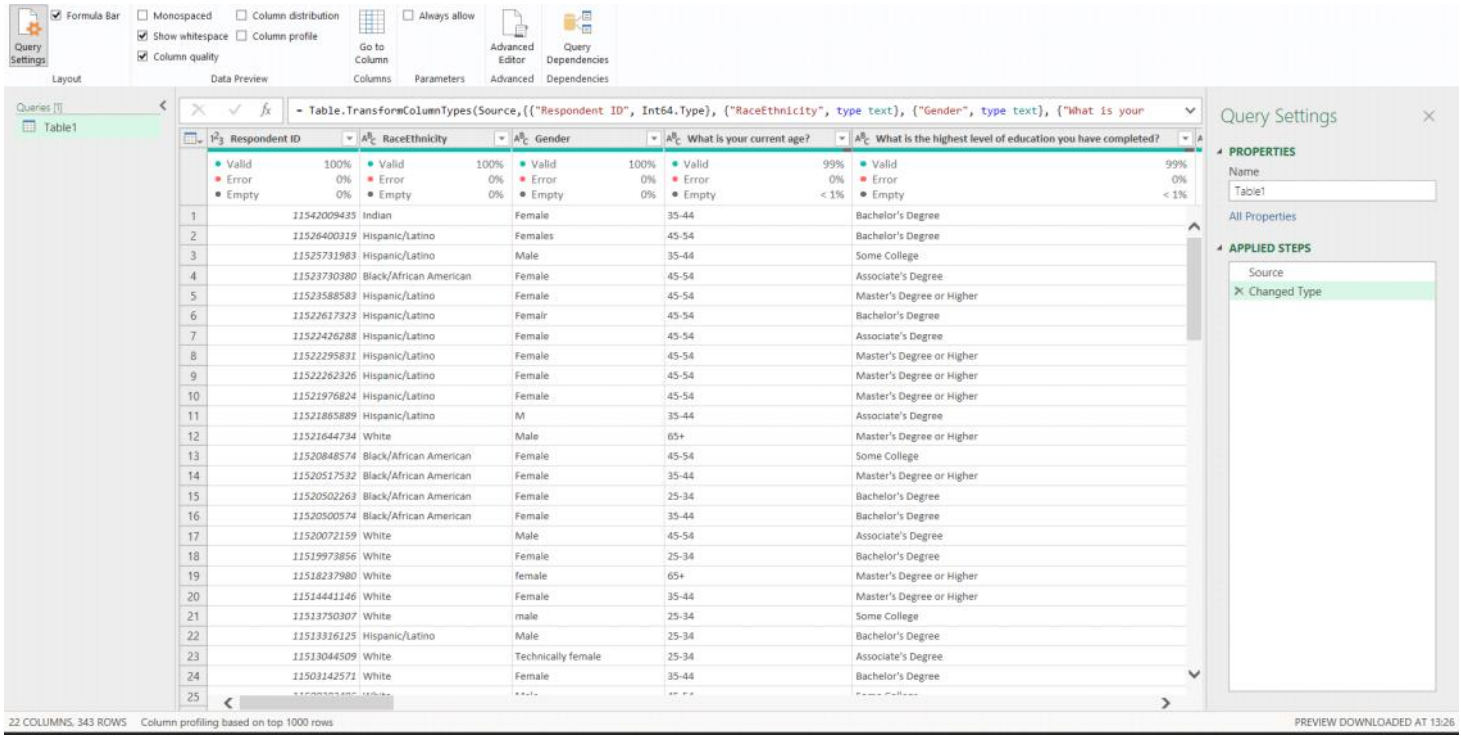
Challenge


Products by GT % ordered
Water Bottle - 30 oz.
11.95%
Patch Kit/8 Patches
8.99%
Mountain Tire Tube
8.72%
Road Tire Tube
6.69%
AWC Logo Cap
6.17%
Fender Set - Mountain
5.97%
Mountain Bottle Cage
5.70%
Sport-100 Helmet, Red
5.01%
Road Bottle Cage
4.82%
Sport-100 Helmet, Black
4.80%
Sport-100 Helmet, Blue
4.80%
Touring Tire Tube
Back Ordered, Lost and Returned Based on Order Quantity
Order Status Back Order Lost Returned
ProductName
Water Bottle - 30 oz. 17.93% 41.68% 40.39%
Patch Kit/8 Patches 21.67% 41.51% 36.81%
Mountain Tire Tube 18.18% 39.30% 42.51%
Road Tire Tube 22.15% 42.02% 35.83%
AWC Logo Cap 22.76% 33.58% 43.66%
Fender Set - Mountain 21.48% 39.45% 39.06%
Sport-100 Helmet, Red 17.17% 39.91% 42.92%
Sport-100 Helmet, Black 16.44% 41.55% 42.01%
Mountain Bottle Cage 17.92% 44.81% 37.26%
Sport-100 Helmet, Blue 18.23% 36.45% 45.32%
Road Bottle Cage 14.29% 37.91% 47.80%
Touring Tire Tube 19.75% 41.98% 38.27%
HL Mountain Tire 19.73% 40.14% 40.14%
LL Road Tire 26.95% 31.91% 41.13%
ML Mountain Tire 22.05% 38.58% 39.37%
LL Mountain Tire 19.66% 37.61% 42.74%
HL Road Tire 21.05% 47.37% 31.58%
ML Road Tire 18.63% 41.18% 40.20%
Touring Tire 20.43% 38.71% 40.86%
Bike Wash - Dissolver 18.89% 41.11% 40.00%
0% 20% 40% 60% 80% 100%
Sum of OrderQty
Products by Price
Low to H
Patch Kit/8 Patches
2.29
Road Tire Tube
3.99
Mountain Tire Tube
4.99
Touring Tire Tube
4.99
Water Bottle - 30 oz.
4.99
Bike Wash - Dissolver
7.95
AWC Logo Cap
8.99
Road Bottle Cage
8.99
Mountain Bottle Cage
9.99
LL Road Tire
21.49
Fender Set - Mountain
21.98

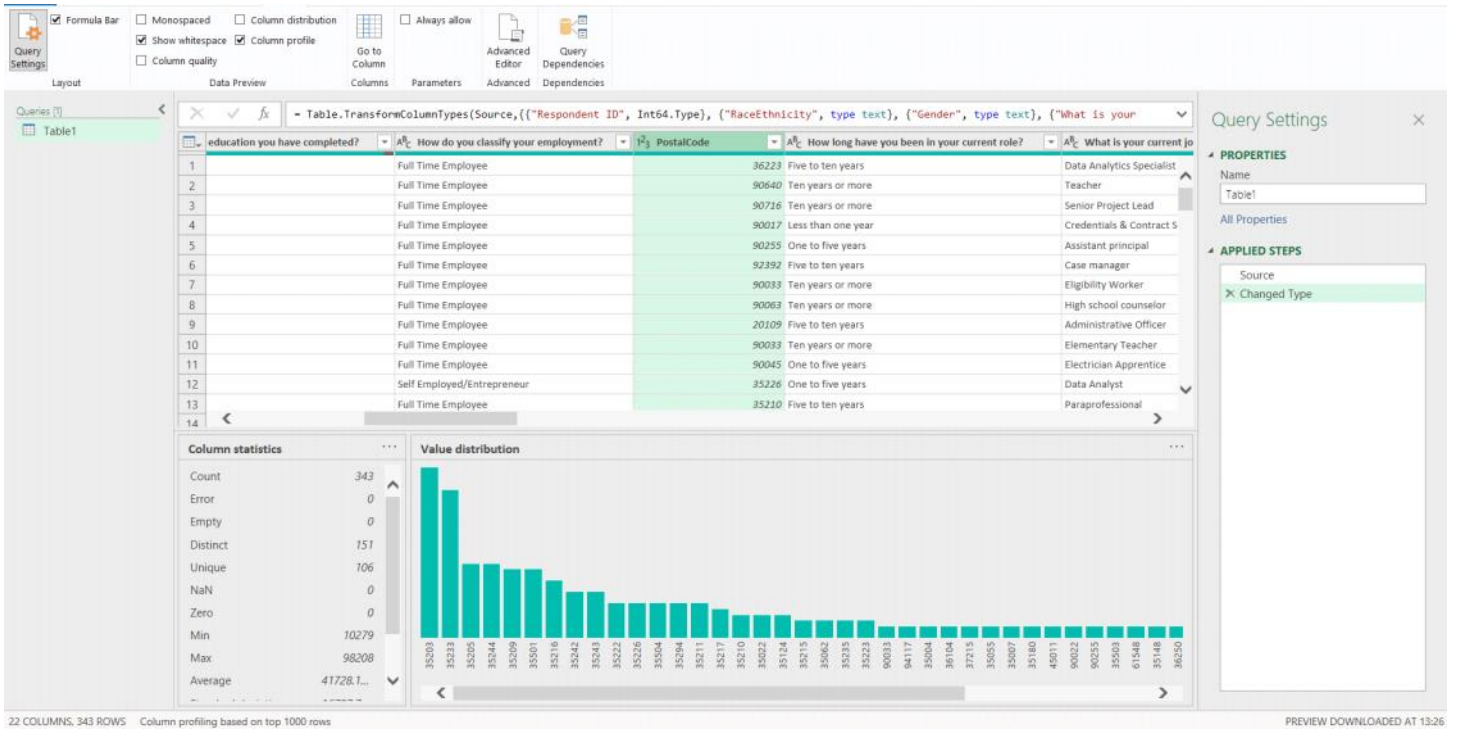
6. Power Query Tips and Tricks for Data Analysis

02 June 2024 13:09

Column Quality

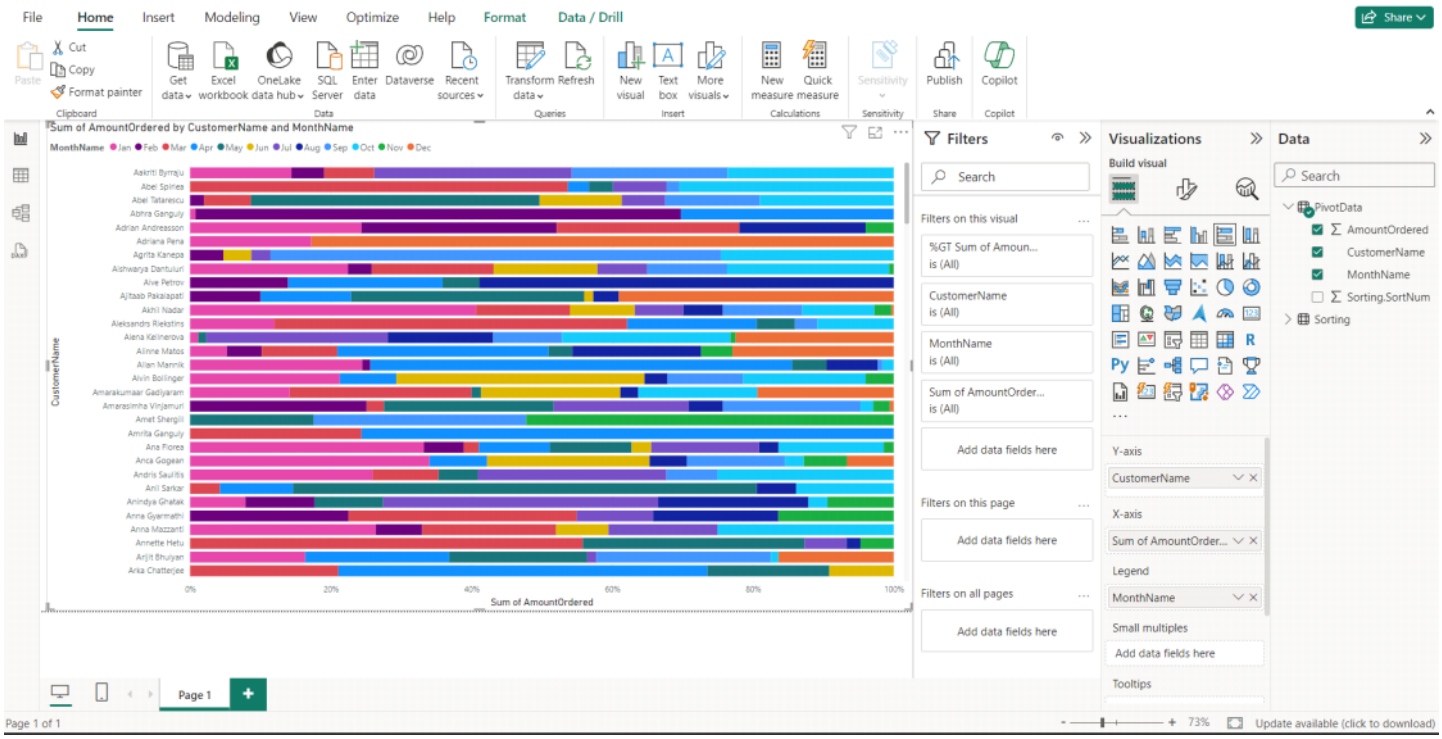


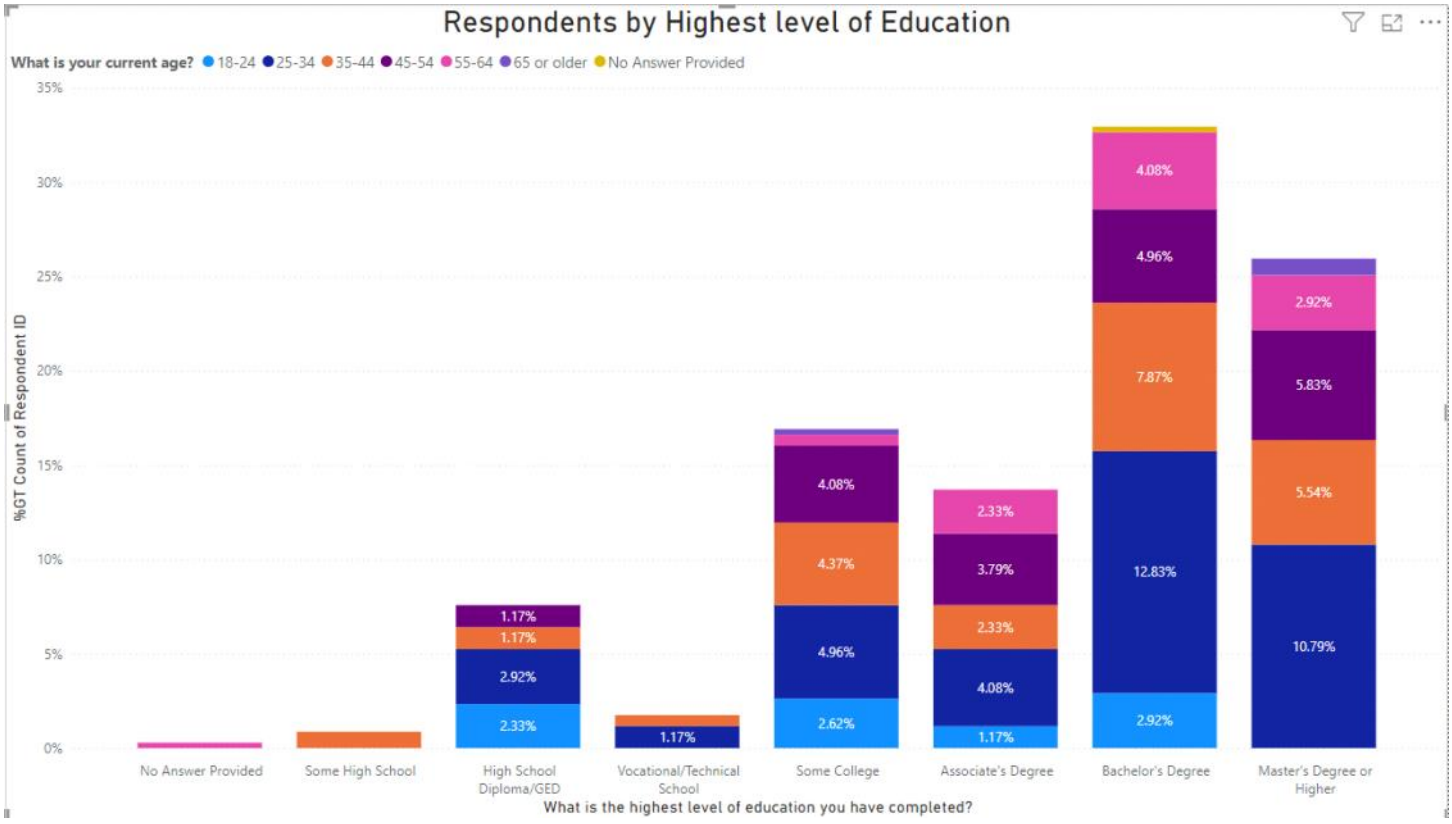
Column Profile



Duplicate: Independent from original data Set
Reference: Carried over changes we made

Power Query lets us take wide displays and unpivot them to create long displays





Why we use Custom Sorting?

The custom sort by a table allows you to completely define how your data is sorted by any value. It removes the limits of sorting by highest to lowest or alphabetical sorting.

7.Presenting Data in Meetings

02 June 2024 16:48

- Include Standard definitions up front
- Defining products included or excluded from your data
- Talking about the pace you are delivering the data
- Practice your presentation with a colleague
- Send materials ahead of time

Key considerations for Organization-wide Reports

- Audience
- Branding guidelines
- Permissions
- License requirement
- Email and notifications requirements
- Training Guidance

How to Sort Values

1. Custom sorts are controlled by the sort file in the reporting data folder.
2. To change the sort, adjust the Sort Order column.
3. To add a new item, add to the list and add its sort number.