

Data Analyst Portfolio Project

“Sales Management”

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Content

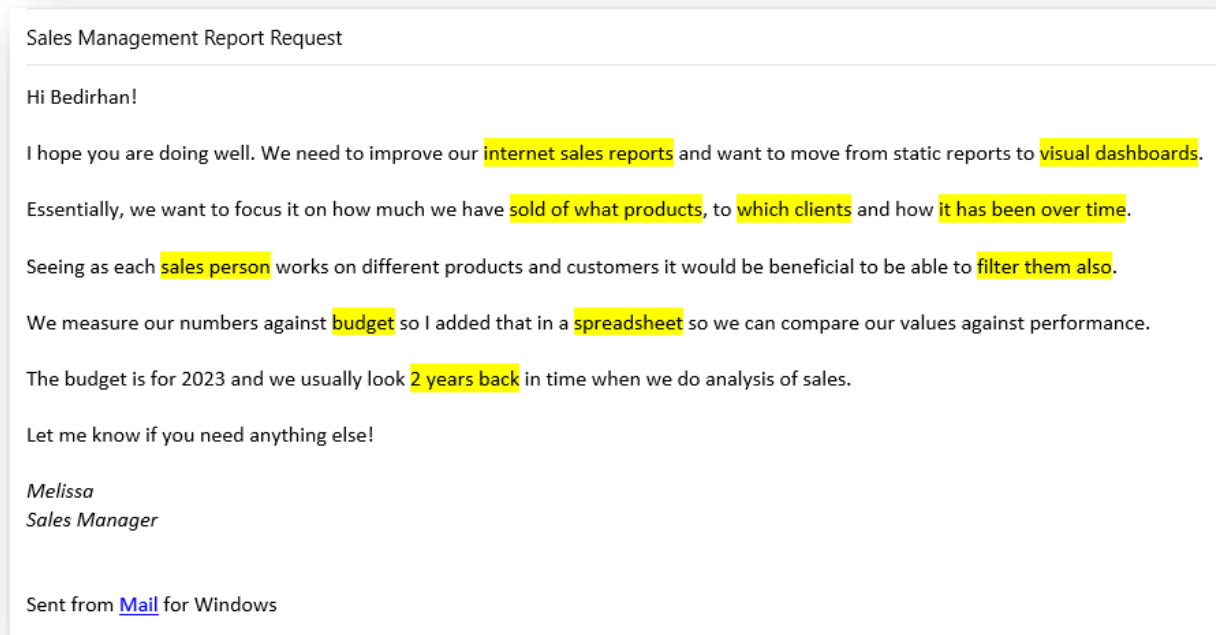
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1- Business Request and User Stories

The email shown below was sent by Melissa who is the Sales Manager of the company of ours in order to improve sales reports.

I painted key points on the email yellow so as to figure out business requests better before working on data analysis.

And also, created a user stories table to make our way clear on focusing business requests.



User Stories				
#	As a (Role)	I want (Request / Demand)	So that I (User Value)	Acceptance Criteria
1	Sales Manager	To get a dashboard overview of Internet sales	Can follow better which customers and products sell the best.	A Power BI dashboard that updates data once a day.
2	Sales Manager	A dashboard overview of Internet sales	Follow sales over time against budget.	A Power Bi dashboard with graphs and KPIs comparing against the budget.
3	Sales Representative	A detailed overview of Internet Sales per Products	Can follow up on the Products that sell the most.	A Power BI dashboard that allows me to filter data for each Product.
4	Sales Representative	A detailed overview of Internet Sales per Customers	Can follow up with the customers that buy the most and who we can sell more.	A Power BI dashboard that allows me to filter data for each customer.

2- Data Cleaning and Transformation with SQL

To create the necessary data model for data analysis and fulfilling our business request, the following tables were extracted from the database by using SQL.

I used 4 tables from the database and a table sent to us from Sales Manager.

The SQL statements for cleaning and transforming necessary data are shown below.

DimCustomer Table:

```
--Cleaned DimCustomer Table--

SELECT
    c.[CustomerKey] AS [Customer Key]
    --[GeographyKey]
    --[CustomerAlternateKey]
    --[Title]
    --[FirstName]
    --[MiddleName]
    --[LastName]
    ,
    CONCAT(c.FirstName, ' ', c.MiddleName, ' ', c.LastName) AS [Customer Name] -- Concatenating customer's first, middle and last name columns on one column.
    --[NameStyle]
    --[BirthDate]
    --[MaritalStatus]
    --[Suffix]
    --[Gender]
    ,
    CASE c.Gender WHEN 'M' THEN 'Male' WHEN 'F' THEN 'Female' END AS Gender
    --[EmailAddress]
    --[YearlyIncome]
    --[TotalChildren]
    --[NumberChildrenAtHome]
    --[EnglishEducation]
    --[SpanishEducation]
    --[FrenchEducation]
    --[EnglishOccupation]
    --[SpanishOccupation]
    --[FrenchOccupation]
    --[HouseOwnerFlag]
    --[NumberCarsOwned]
    --[AddressLine1]
    --[AddressLine2]
    --[Phone]
    ,
    c.[DateFirstPurchase] AS [Date First Purchase]
    --[CommuteDistance]
    ,
    g.City AS [Customer City] -- Joined Customer's City information from Geography Table.
FROM
    [AdventureWorksDW2019].[dbo].[DimCustomer] AS c
    LEFT JOIN DimGeography AS g on c.GeographyKey = g.GeographyKey
ORDER BY
    c.CustomerKey
```

DimProduct Table:

```
--Cleaned DimProduct Table--

SELECT
    p.[ProductKey] AS [Product Key],
    p.[ProductAlternateKey] AS [Product Alternate Key]
    --[ProductSubcategoryKey]
    --[WeightUnitMeasureCode]
    --[SizeUnitMeasureCode]
    ,
    p.[EnglishProductName] AS [Product Name],
    pc.ProductCategoryKey AS [Product Key],          -- Joined Product Sub Category Key information from Product Sub Category Table
    ps.ProductSubcategoryKey AS [Product Subcategory Key], -- Joined Product Category Key information from Product Category Table
    pc.EnglishProductCategoryName AS [Product Category]
    --[SpanishProductName]
    --[FrenchProductName]
    --[StandardCost]
    --[FinishedGoodsFlag]
    ,
    p.[Color] AS [Product Color]
    --[SafetyStockLevel]
    --[ReorderPoint]
    --[ListPrice]
    ,
    p.[Size] AS [Product Size]
    --[SizeRange]
    --[Weight]
    --[DaysToManufacture]
    ,
    p.[ProductLine] AS [Product Line]
    --[DealerPrice]
    --[Class]
    --[Style]
    --[ModelName]
    --[LargePhoto]
    ,
    p.[EnglishDescription] AS [Product Description]
    --[FrenchDescription]
    --[ChineseDescription]
    --[ArabicDescription]
    --[HebrewDescription]
    --[ThaiDescription]
    --[GermanDescription]
    --[JapaneseDescription]
    --[TurkishDescription]
    --[StartDate]
    --[EndDate]
    --[Status]
    ,
    ISNULL (p.Status, 'Outdated') AS [Product Status]
FROM
    [AdventureWorksDW2019].[dbo].[DimProduct] AS p
    LEFT JOIN dbo.DimProductSubcategory AS ps ON ps.ProductSubcategoryKey = p.ProductSubcategoryKey
    LEFT JOIN dbo.DimProductCategory AS pc ON ps.ProductCategoryKey = pc.ProductCategoryKey
```

DimDate Table:

--Cleaned DimDate Table--

```
SELECT
    [DateKey] AS [Date Key]
    , [FullDateAlternateKey] AS DATE
    --[DayNumberOfWeek]
    ,
    [EnglishDayNameOfWeek] AS DAY
    --[SpanishDayNameOfWeek]
    --[FrenchDayNameOfWeek]
    --[DayNumberOfMonth]
    --[DayNumberOfYear]
    ,
    [WeekNumberOfYear] AS [Week Number],
    [EnglishMonthName] AS Month
    --[SpanishMonthName]
    --[FrenchMonthName]
    ,
    [MonthNumberOfYear] AS [Month Number],
    [CalendarQuarter] AS Quarter,
    [CalendarYear] AS YEAR
    --[CalendarSemester]
    --[FiscalQuarter]
    --[FiscalYear]
    --[FiscalSemester]
FROM
    [AdventureWorksDW2019].[dbo].[DimDate]
WHERE CalendarYear >= 2021
```

FactInternetSales Table:

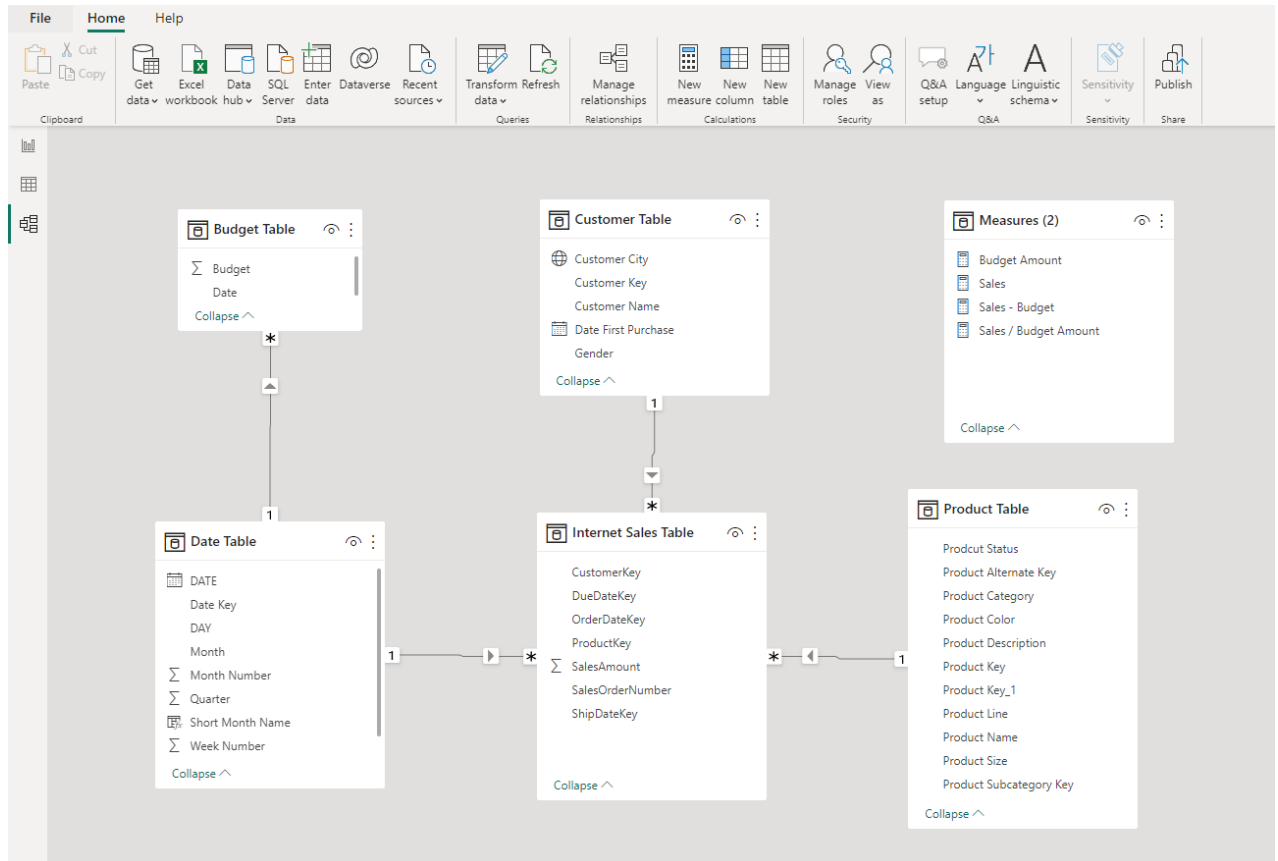
--Cleaned FactInternetSales Table--

```
SELECT
    [ProductKey],
    [OrderDateKey],
    [DueDateKey],
    [ShipDateKey],
    [CustomerKey]
    --[PromotionKey]
    --[CurrencyKey]
    --[SalesTerritoryKey]
    ,
    [SalesOrderNumber]
    --[SalesOrderLineNumber]
    --[RevisionNumber]
    --[OrderQuantity]
    --[UnitPrice]
    --[ExtendedAmount]
    --[UnitPriceDiscountPct]
    --[DiscountAmount]
    --[ProductStandardCost]
    --[TotalProductCost]
    ,
    [SalesAmount]
    --[TaxAmt]
    --[Freight]
    --[CarrierTrackingNumber]
    --[CustomerPONumber]
    --[OrderDate]
    --[DueDate]
    --[ShipDate]
FROM
    [AdventureWorksDW2019].[dbo].[FactInternetSales]
WHERE
    LEFT (OrderDate, 4) >= '2021' -- Ensures that bring only 2021 and after dated data because we are focusing last 2 year for sales analys.
ORDER BY
    OrderDateKey ASC
```

3- Data Model

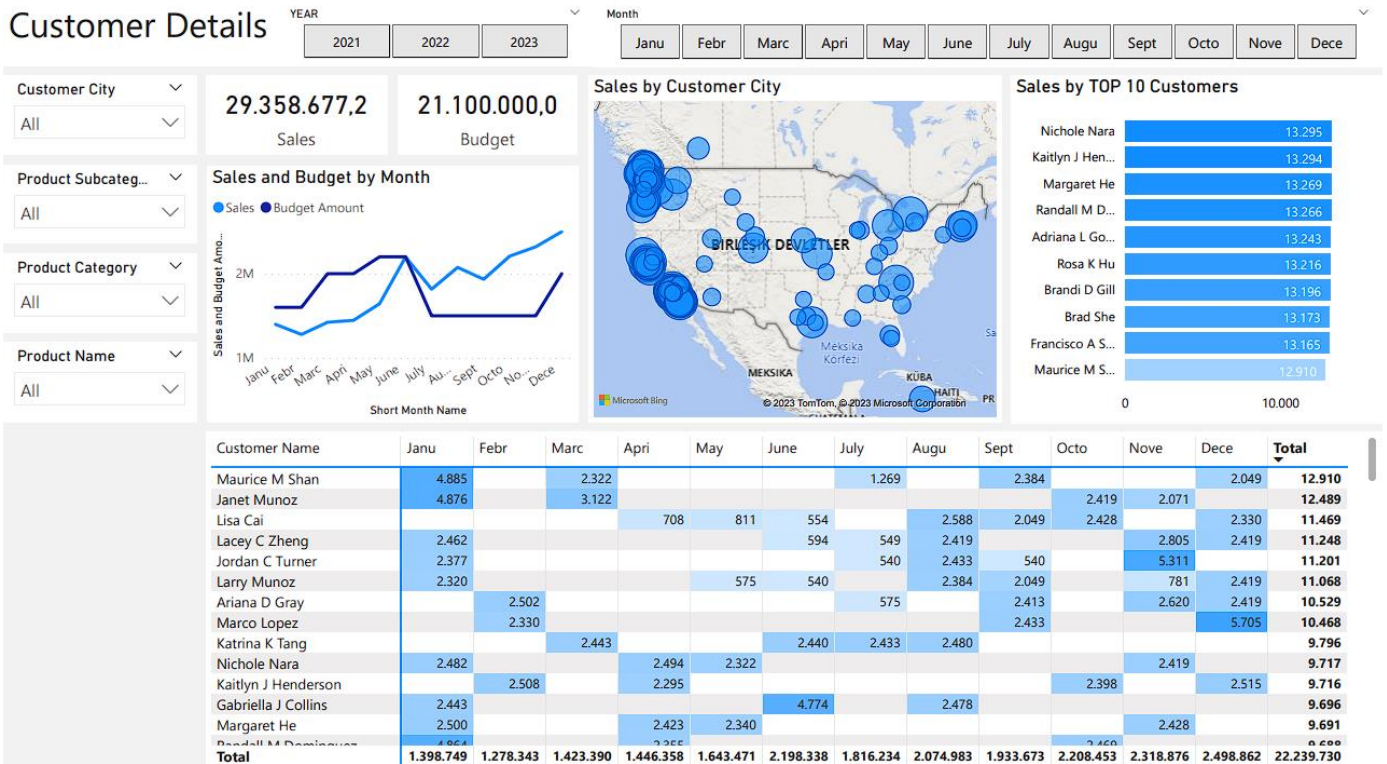
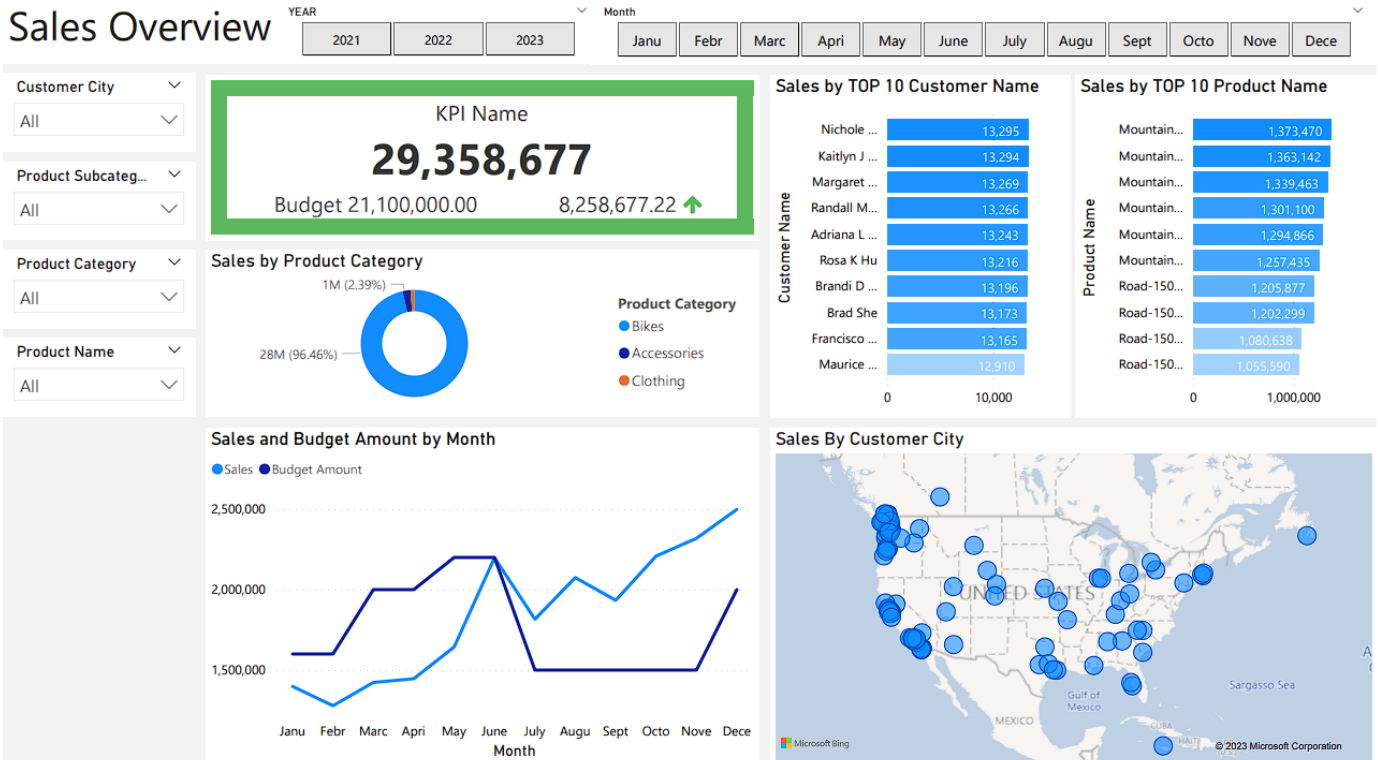
I created a data model after cleaning and preparing tables which were imported into Power BI shown below.

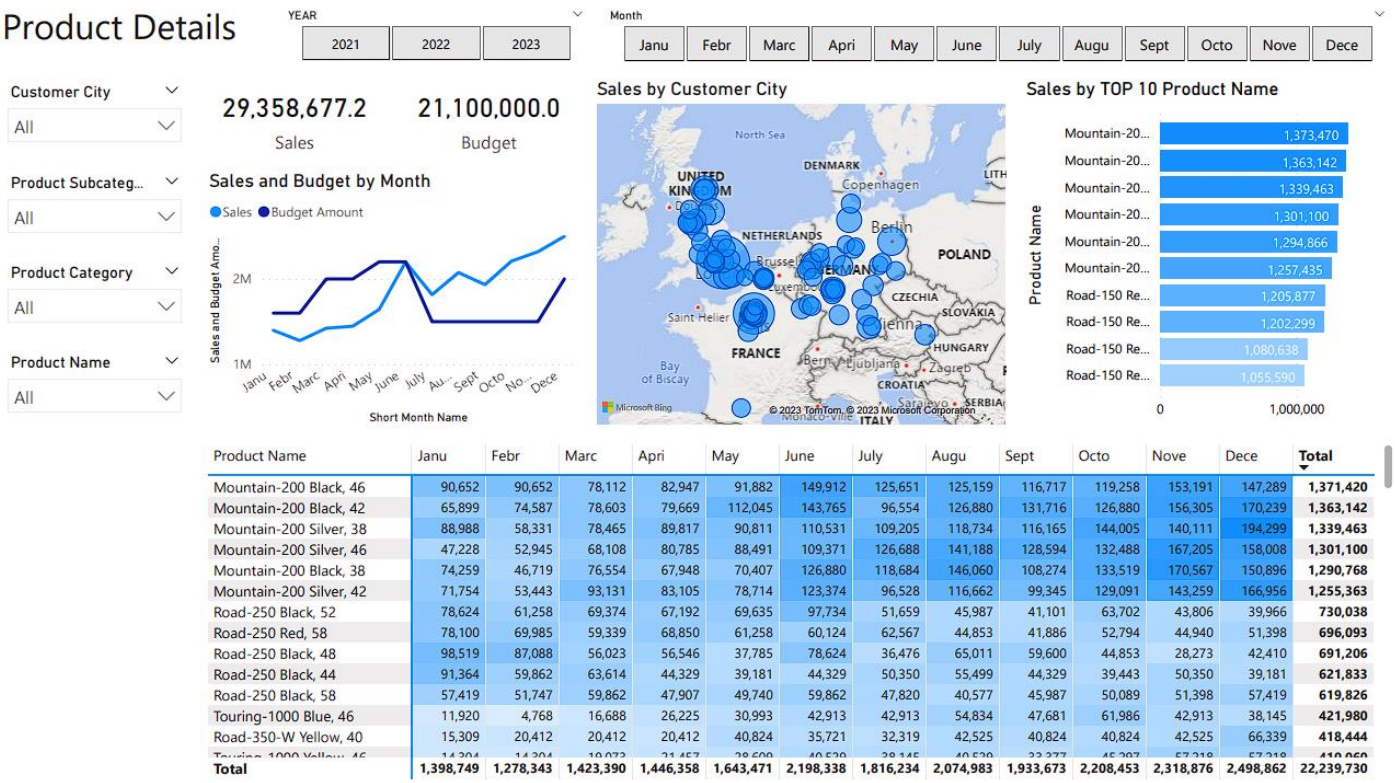
You can see which and how tables are integrated with each other.



4- Sales Management Dashboard

In light of the data analyses given above, I created three paged Sales Management Dashboards which are Sales Overview, Customer Details, and Product Details.





[You can also click this sentence to open this dashboard online and use it dynamically.](#)