Retrieving Sales Records by Using POWER BI

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ABSTRACT

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1.INTRODUCTION

Microsoft Power BI is a collection of apps, software services and connectors that come together to turn unrelated data into visually impressive and interactive insights. Power BI can work with simple data sources like Microsoft Excel and complicated ones like cloud-based or on-premises hybrid Data warehouses. Power BI has the capabilities to easily connect to your data sources, visualize and share and publish your findings with anyone and everyone. Power BI is simple and fast enough to connect to an Excel workbook or a local database. It can also be robust and enterprise-grade, ready for extensive modelling and real time analytics. This means it can be used in a variety of environments from a personal report and visualization tool to the analytics and decision engine behind group projects, divisions, or entire corporations. As Power BI is a Microsoft product and has built in connections toExcel, there are many functions that will be familiar to an Excel user.Parts of Power BI

Power BI consists of a Microsoft Windows desktop application called Power BI Desktop, an online SaaS (Software as a Service) called Power BI Service and a mobile Power BI app that can be accessed from Windows phones and tablets, and also available on Apple iOS and Google Android devices. These three elements— Desktop, the Service, and Mobile apps - are the backbone of the Power BI system and lets users create, shareand consume the actionable insights in the most effective way.

Use of Power BI and roles

The use of Power BI could depend on the role that you are in. For example: if you are the stakeholder of a project, then you might want to use Power BI.Service or the Mobile app to have a glance at how the business is performing. But on the other hand, if you are a developer, you would be using Power BI Desktop extensively to publish Power BI desktop reports to the Power BI Service. In the upcoming modules we would be discussing these three components - Desktop, Service and Mobile apps - in more

Power BI flow Generally, the flow starts at the Power BI Desktop, where a report is created. This created report can be published to the Power BI Service and finally shared so that the users can use it from the Mobile apps. This is the most common approach for sharing reports. There are other approaches but we will stick to this flow for this entire tutorial to help learn the different aspects of Power BI.

Use Power BI

The common flow of activity in Power BI looks like this: 1. Bring data into Power BI Desktop, and create a report. 2. Publish to the Power BI service, where you can

create new visualizations or build dashboards. 3. Share dashboards with others, especially people who are on the go. 4. View and interact with shared dashboards and reports in Power BI Mobile apps. Depending on the user role, the user might spend most of the time in one of the three components than the other.
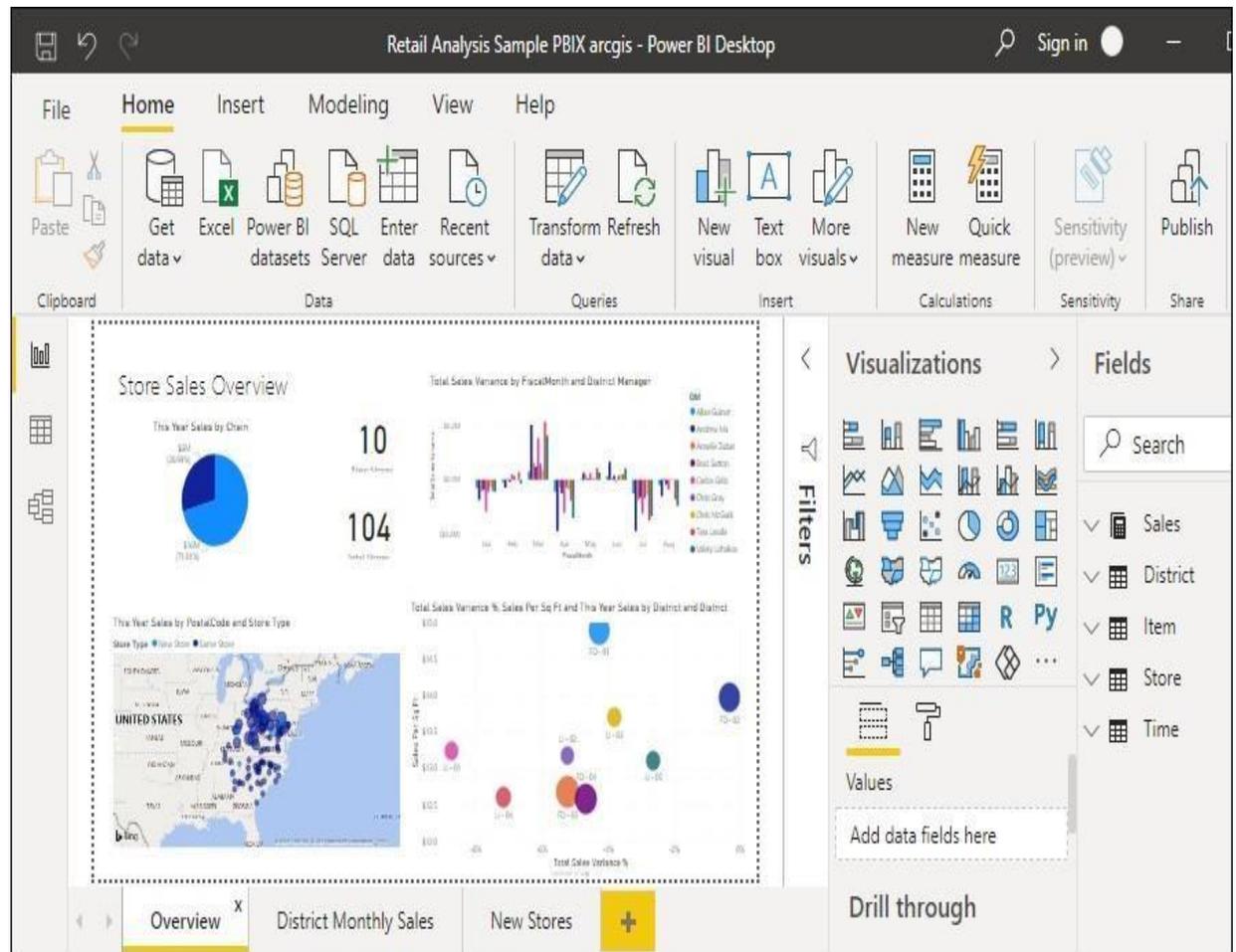

Importing Dataset and Modelling

Power BI can connect to a whole range of data sources from Excel sheets and local databases to several Cloud services. Currently, over 60 different cloud services have specific connectors to help you connect with generic sources through XML, CSV, text, and ODBC. Let us start connecting to one of the data sources. For today we will beWorking on the gap_minder_map.csv file.

Importing data into Power BI Desktop

Power BI Desktop has a Get Data button from the ribbon on the Home tab. In Power BI, there are all sorts of different data sources available. Select a source to establish a connection. Depending on your selection, you will be asked to find the source on your computer or network, or be prompted to sign in to a service to authenticate your

request. As our first step to import the dataset/file into Power BI, we click on the Get Data icon on the ribbon of Home tab.
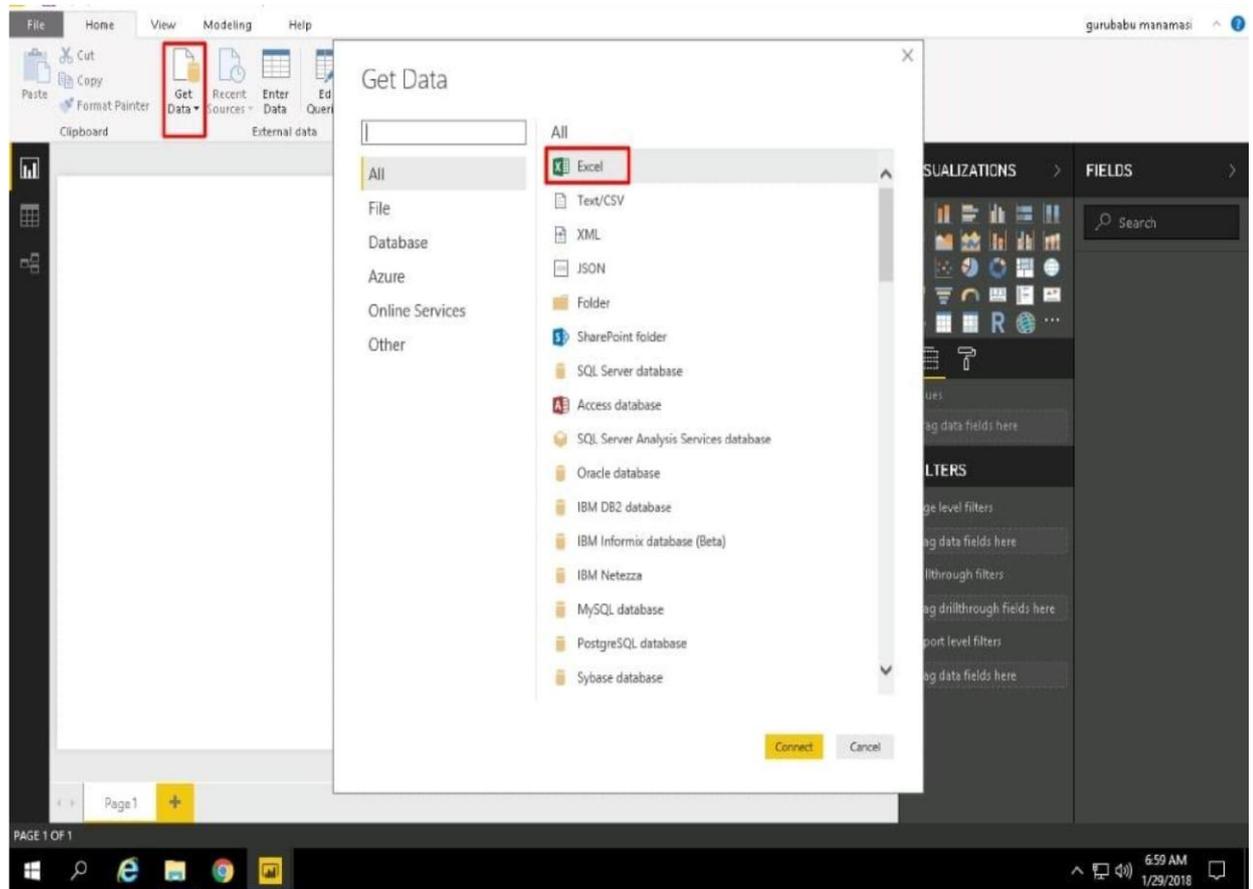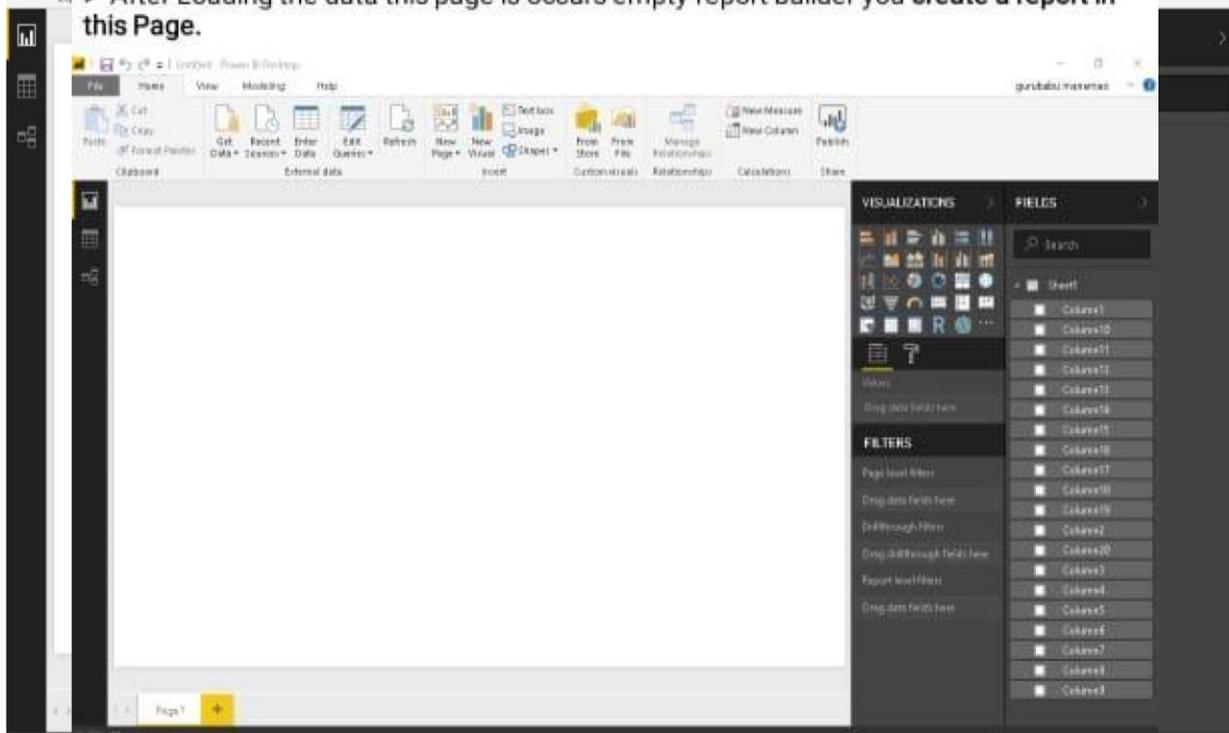
➤ Select **Excel** file then click on **open**.
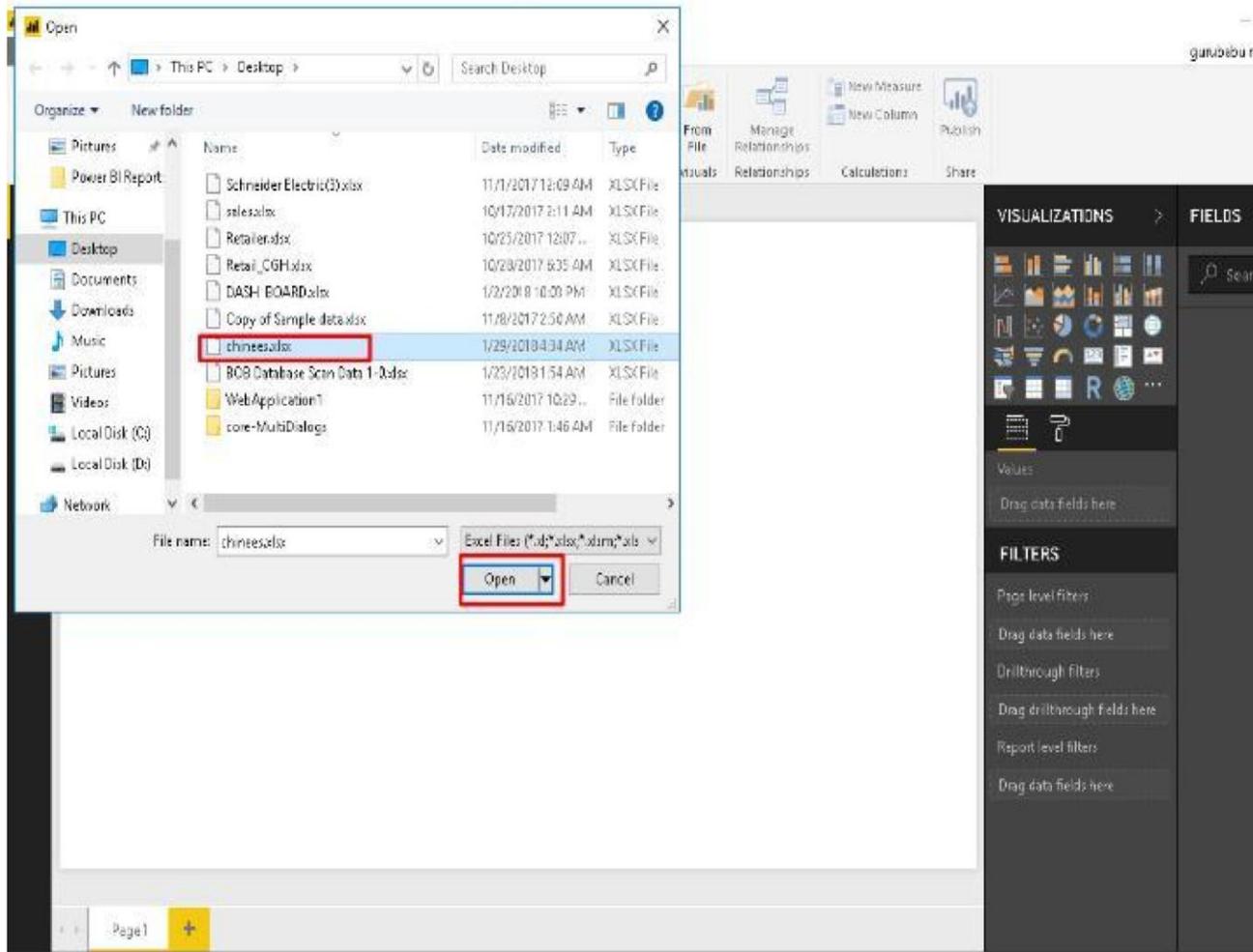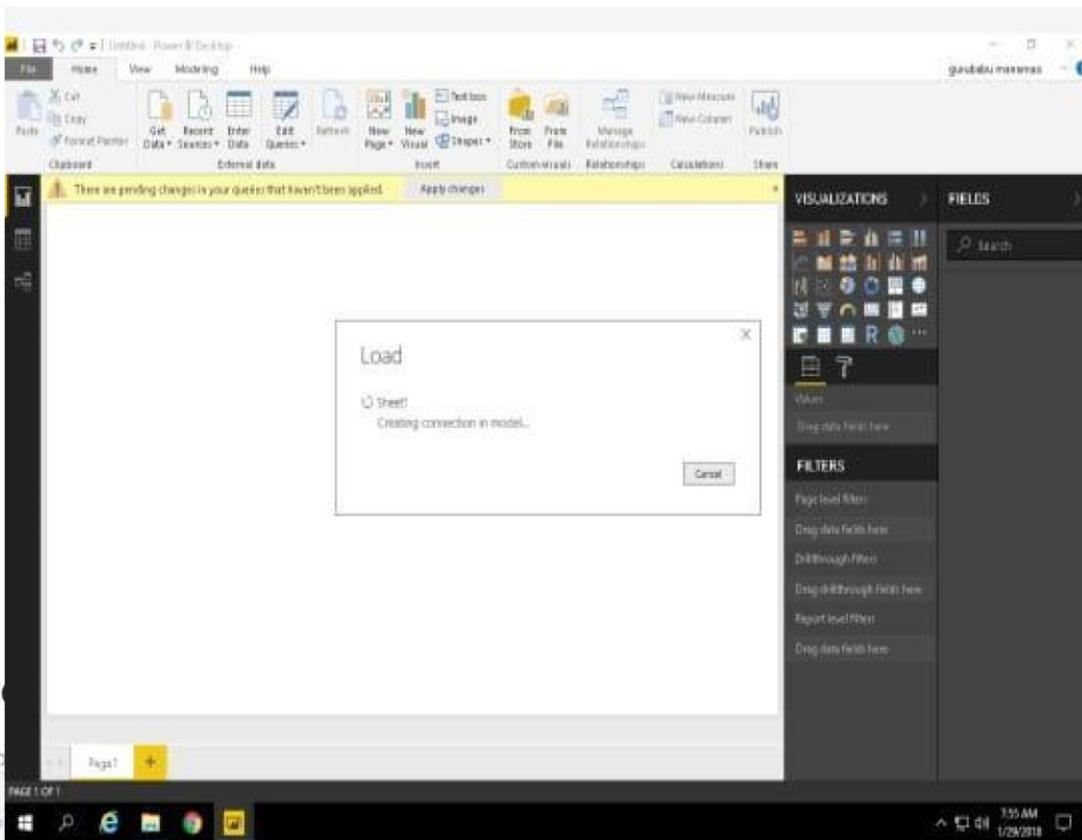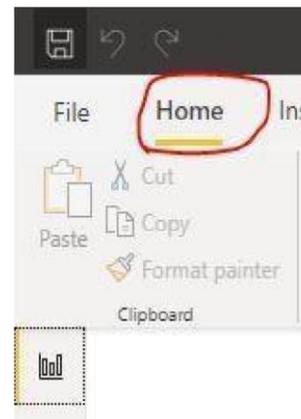
> After Loading the data this page is occurs empty report builder you **create a report in this Page.**

Dealing with errors   checking
for automatically detected errors

Once queried, any detected errors will be displayed. Clicking on these errors will provide a brief description on what might have gone wrong. There will be some errors showing up in your data, click on the errors to see what has caused the issue. 2.2.2 Changing data type of column one of the most common errors is the detection of the data type of a particular column. While loading the data, Power BI automatically assigns a column type based on the first lines of data. This can cause errors or other problems if the automated data type is not suited for that column. You may need to change data types of the columns to a relevant type for your data model. Any changes to the data needs to be done under the Data file listed under Other Queries. The life_exp column is displayed as text data. This is a problem as we may want to do numerical calculations with this data. We should change this to a numerical data type. • Select the gap-minder file. • Right click on top of the column and select Change type. • Change to Decimal Number.

 Changing data type of column

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• Select the gap-minder file.

• Right click on top of the column and select Change type.

• Change to Decimal Number

You can replace a current step in the query with Replace current step or add a new step

To the query with Add new step.
• Click Add new step.

Once necessary changes are made, it is important to refresh and check if the change was applied. We can do this by clicking on the Refresh Preview button on the ribbon.

You will notice that this has created errors due to several cells containing N/A.

<u>Plotting</u>

Visualization Panel

We touched upon the different panels present in the Power BI interface. We will now explore the different panels dedicated to creating and formatting charts in detail. One of the panels is the Visualization panel highlighted in the Red box. It contains various types of charts that you can create to visualize your data. Some of the available chart types are - Stacked bar chart, Line chart, Area chart, Scatter plot, Pie chart, etc. You can also import a custom visual from a file or the marketplace if you click on the . . . icon. We will explore that in the later section.
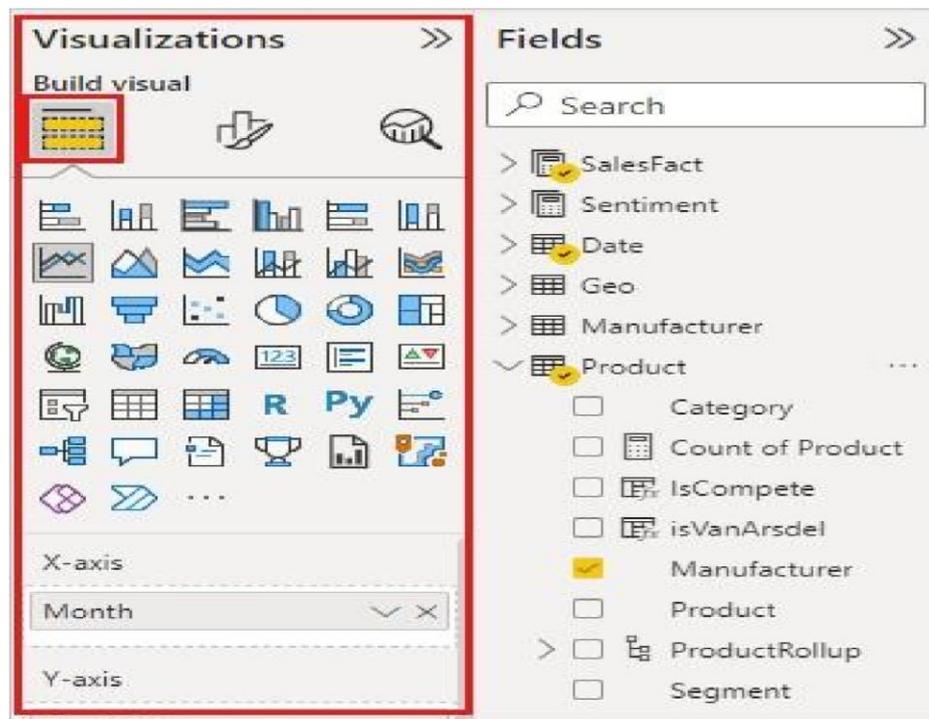
4 .Exporting and publishing report

Now we want to create a report of our analysis and share it with others. We use Power BI to publish the report on the Power BI server. To do this, go to File > Publish > Publish to Power BI.
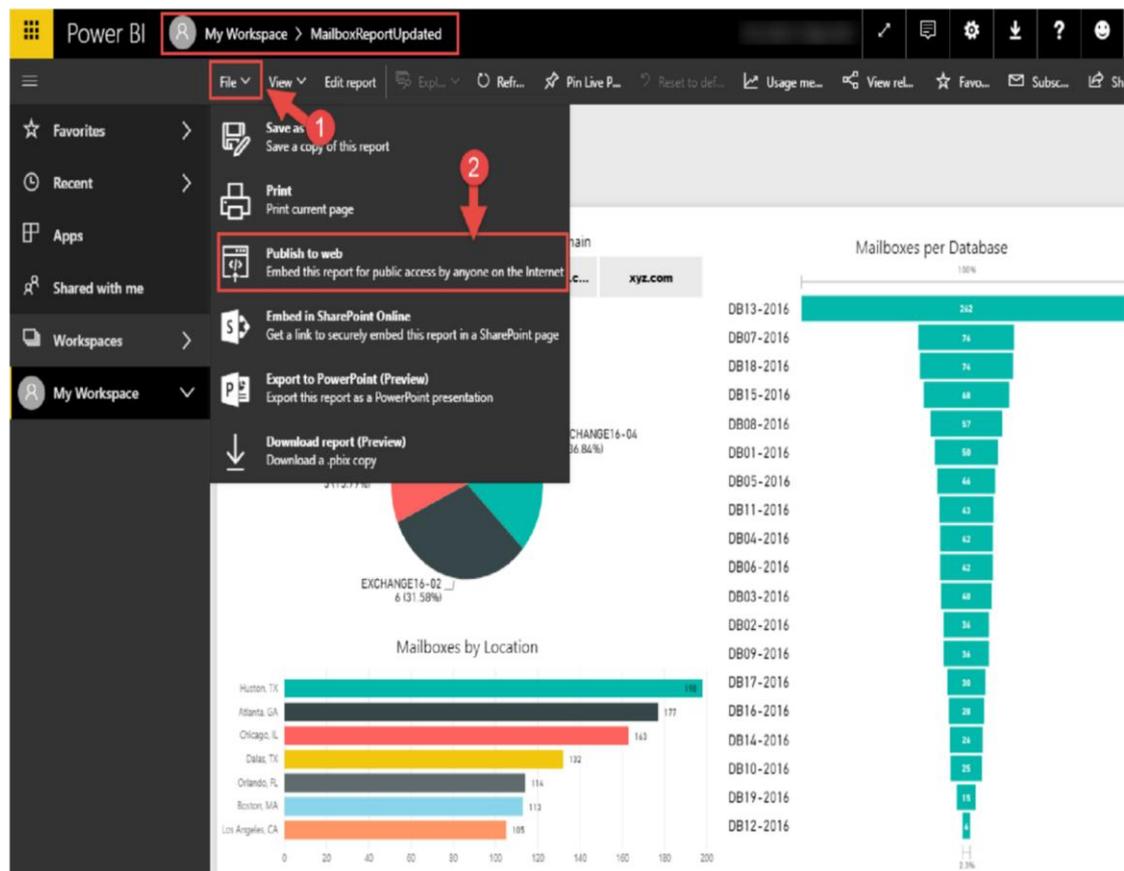
After clicking on Publish to Power BI, you will be prompted to select a destination on the Power BI server where you want to publish your report. The default setting is my workspace. You can create different workspaces dedicated to different projects on the server. Let's use the default option, and click Select. It takes about 2-3 mins to finalize the report and you will see the following success message on your screen.

CONCLUSION

Power BI is a business intelligence and reporting tool that allows users to create intuitive reports. A growing number of organizations are using Power BI as their business analytics solution. According to

Gartner's report, by 2020, the companies that are investing in analytics will see their value enhanced compared to those that are not. This chapter provides a summary of all the chapters covered in this book. Data visualization is the concept of presenting data through visuals, such as info graphics, charts, Sparkline, and geographic

Maps, etc. **Power BI is able to drive better decision-making in businesses through its ability to provide insights in visually impressive and interactive reports**. It established a data-driven culture with BI for everyone. Data visualization

provides an efficient and effective way to communicate concepts in general because the human brain processes visualized information …

References:https://docs.microsoft.com/en-us/power-bi/fundamentals

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