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Module-1

Module-2

DATA DRIVEN DECISION MAKING

Module-3

DATA ANALYST VS BUSINESS ANALYST

Module-4

MS EXCEL

Module-5

Business Analysis Tools

Business Analytics can only be applied to problems through various tools and procedures. We'll now be looking at the various tools used in Business Analytics:-

Business Analytics tools include:-

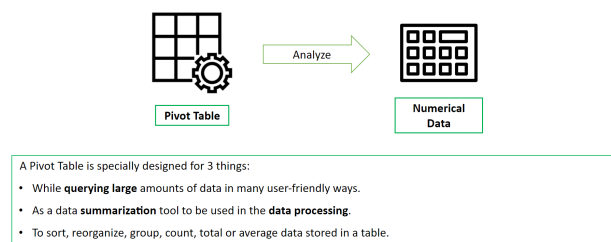
1) MS Excel -

Microsoft Excel is a spreadsheet developed by Microsoft for Windows, macOS, Android, and iOS. It features calculation or computation capabilities, graphing tools, pivot tables, and a macro programming language called Visual Basic for Applications, also popularly known as VBA. Excel forms part of the Microsoft Office suite of software.

MS Excel provides various tools that can aid a Business Analyst. They are:-

1. Pivot Table

- A Pivot Table is an interactive way to summarize large amounts of data quickly. You can use a PivotTable to analyze numerical data in detail and answer unanticipated questions about your data.



2. Slicers

- Slicers are another way of filtering. They narrow the portion of the dataset connected to the other reports. There are three types in which you can select the slicer items; single select, multi-select, and select all option.

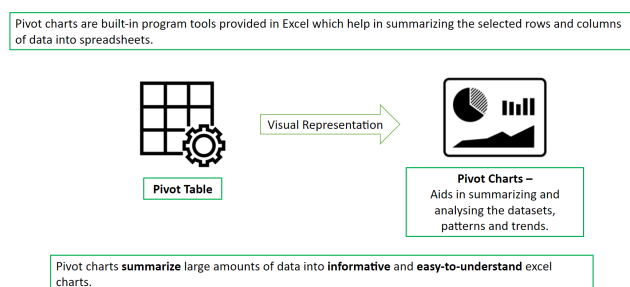


Slicers are a great choice when you want to:

- Display commonly used or important filters on the report canvas for easier access.
- Make it easier to see the currently filtered state without opening a drop-down list.
- Filter by columns that are unneeded and hidden in the data tables.
- Create more focused reports by putting slicers next to important visuals.

3. Pivot Charts

- Pivot charts are built-in program tools provided in Excel which help in summarizing the selected rows and columns of data into spreadsheets. It is a visual representation of a pivot table or any other tabular data which aids in summarizing and analyzing the datasets, patterns, and trends. In other words, Pivot charts summarize large amounts of data into informative and easy-to-understand excel charts.

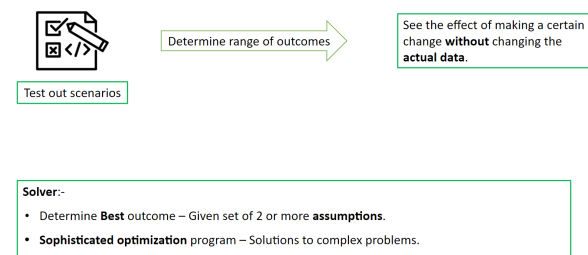


4. Macros

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- A Macro is an action or a set of actions that you can run as many times as you want.
- If you have tasks in MS Excel that you do repeatedly, we can record a Macro to automate those tasks. When we create a Macro, we are recording our mouse clicks and keystrokes.
- After we create a Macro, we can edit it to make minor changes to the way it works.
- It saves a lot of our time while working with MS Excel data and can have 50 steps or 100 steps or more.
- Before creating Macros, we have to be clear about what steps we would like to perform in a sequence.

5. What-If Analysis

- What-If-Analysis is a Microsoft Excel tool that allows its users to test out various scenarios and determine a range of possible outcomes. It even enables us to see the effect of making a certain change without changing the actual data.

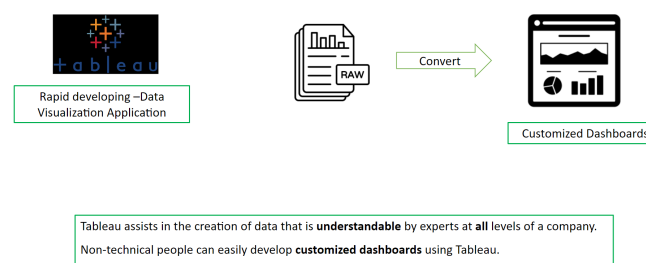


6. Solver

- It is a type of What-If analysis and is particularly useful when trying to determine the “best” outcome, given a set of more than two assumptions. Solver is a sophisticated optimization program that enables us to find the solutions to complex problems that would otherwise require high-level mathematical analysis.

2) Tableau -

Tableau is a strong and rapidly developing data visualization application in the business intelligence industry. It simplifies raw data in a manner that is simple to comprehend. Tableau assists in the creation of data that is understandable by experts at all levels of a company. Non-technical people can easily develop customized dashboards using Tableau.



The Tableau Product Suite consists of -

1. Tableau Desktop

- Apart from having a rich feature set, it allows its users to code and customizes reports.

2. Tableau Public

- Helps in creating workbooks that can be saved on Tableau’s public cloud which can then be viewed and accessed by anyone.

3. Tableau Server

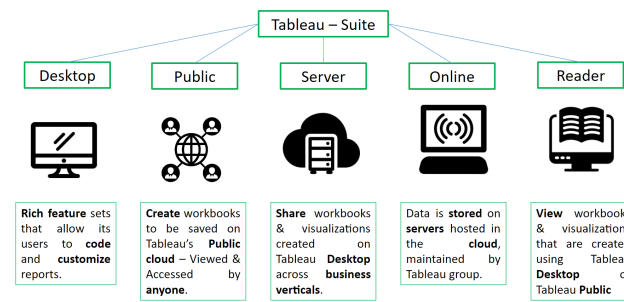
- Can be used to share workbooks and visualizations that are created in the Tableau Desktop application across business verticals.

4. Tableau Online

- Has all similar functionalities to the Tableau Server, but the data is stored on servers hosted in the cloud which are maintained by the Tableau group.

5. Tableau Reader

- It allows the users to view workbooks and visualizations that are created using Tableau Desktop or Tableau Public.



Apart from this, we'll look at some of the important tools & features of Tableau

The Multi-purpose Dashboard

- Tableau provides you with a modern technical tool dashboard also called a Homepage. Dashboards are available in many data and programming tools, allowing users to make rapid modifications, create presets, and add customized formats and layouts, all of which assist the data analyst's speed, accuracy, and effectiveness.

Data Extraction & Blending

- Tableau has several data source features that allow you to connect to and import data from a variety of external sources. Most of them, including large data, relational databases, on-cloud data, and Excel spreadsheets, may be readily deployed by copying the file from the source and pasting it into your Tableau worksheet.

Enhanced data visualization functions

- Tableau provides a variety of visualizations to choose from among their vast range of different visualization tools. Some visualization tools provided by Tableau are:-

1. Motion Chart
2. Histogram
3. Choropleth Maps
4. Stacked Maps
5. Heat Map
6. Highlights Table
7. Bullet Chart

Predictive Analysis and Forecast

- Tableau also has the option of using time series and forecasting. The drag and drop interface makes forecasting effective and productive.

Ask Data feature

- Tableau has a feature where users can communicate, seek answers, and connect to exchange ideas. This feature aims to promote data science experts' mutual communication and develop new ideas and patterns to address challenges.

3) MySQL -

MySQL is powered by the Oracle Corporation and is open-source Relational database management. Relational database management is a structure that allows the users to identify and access data with another piece of data in the database. It is a system that works across platforms like Linux, macOS, Microsoft Windows, and Ubuntu. It provides multi-user access to support many storage engines.

Some other features include:-

- It provides great connectivity so that users can connect with various databases of clients.
- It offers these features at a low cost and is quite flexible and scalable.
- It also provides MySQL Workbench which can be used as a dashboard that aids the user in preparing models, performing server administration, monitoring, and configuring data, and data migration among others.
- It is robust and secure.