

TECH 
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Microsoft Power Business Intelligence Training

About Course

Upon completing this course, you will have gained the skills to produce different types of Business Intelligence (BI) reports and visualizations using Microsoft Power BI software. Our personalized training course will firstly help you to have a better understanding of BI and its main processes, and how these processes can be achieved using Microsoft Power BI Software. At the same time, you will receive extensive hands-on practice on Extraction, Transformation and Loading (ETL) processes. During this part vital concepts will be explained about data cleaning & manipulation, data modeling, data integration and merging, star-schemas, and converting existing data sources into dimension & fact tables to be a base for powerful reporting and visualization. Moreover, you will be exposed to the different loading options to optimize performance. In addition, our course will give you the experience on how different dataset can be integrated based on understanding the concepts of cardinality and database relationship concepts. Following that, the course will take you through the detailed stage of how to create different kinds of reports and visualizations. It is at this stage that you will master how to utilize many powerful features such as multi-level filters and interactivity features. Also, to consolidate your reporting capabilities you will learn about functions, calculated columns, while measures will be illustrated. This will be followed by illustrating the different methodologies of publishing and by sharing the produced reports and visualizations safely using the tools of the Power BI software. Not only the Power BI (desktop) version will be used, but you will also be exposed to the Power BI (mobile) versions as well. The course is prepared with many real-life and industry examples used in the explanation. At the same time, the course will be hands-on practical based to help strengthen the understanding of the concepts. Rest assured that this course will share with you many secrets in BI and reporting that are the result of many years of work and research.

Outline

- Introduction
- What is Business Intelligence?
- Installing Power BI Desktop
- What is Microsoft Power BI?
 - Exploring Power BI Desktop
 - Power Query and (ETL)
 - Data sets
 - Modeling
 - Visualizations and Reports
 - Exploring Power BI service
 - Workspace
 - Dashboards
 - Content packs
 - Reports
 - Datasets
 - Dashboards
 - Natural Language Queries
 - Exploring Power BI Mobile
 - Workspace
 - Dashboards
 - Reports and visualizations
 - Datasets
 - Dashboards
- Describing the process of business intelligence and data analysis in Power BI.

Extensive Practice for Extraction, Transformation and Loading (ETL):

- Extensive practice for Extraction, Transformation and Loading
- Import vs. Direct Query
- Updating data in Power BI
- Utilizing transformation tools capabilities:
 - Using rows as headers
 - Deleting columns
 - Deleting rows
 - Pivoting and unpivoting columns
 - Tips and tricks for filtering data
 - Changing data type
 - Utilizing the applied steps tool capability to go back to any step
 - or process during the ETL
 - Defining data categories
 - Data cleaning:
 - Dealing with null values
 - Dealing with data that has errors
 - Removing duplicates
 - Explaining star schemas and data modeling concepts
 - Fact tables and dimension tables
 - Combining data vs. Merging data
 - Options for combining data with append queries
 - Options for merging data using join concepts with merge queries
 - Right outer join
 - Left outer join
 - Inner join
 - Left anti join
 - Right anti join

- Renaming headers and datasets
- Replacing values
- Changing data types options
- Splitting columns options
- Create query groups
- Creating reference queries
- Creating duplicate queries
- Creating different data models from different data sources
- Creating data sets
- Adding indexing columns
- Adding conditional columns
- Adding duplicate columns
- Adding calculated columns
- Applying mathematical operations
- Loading options
- Optimizing performance with loading settings
- Data integration

Data formatting and shaping:

- Describe the difference between M & DAX language
- Calculation functions
- Logical functions
- Calculated columns
- Creating measures

Data Integration:

- Explaining cardinality concepts
 - One – one relationships
 - One – many relationships
 - Many – many relationships

Data Visualizations:

- Exploring visualizations and reporting interface
- Exploring different formatting options for the page layout:
 - Phone layout
 - Page view layout
 - Grid lines
 - Snap option
 - Send back & bring forward
 - Align
 - Distribute

- Adding text boxes, images or shapes to the layout
- Utilizing different visualizations:
 - Stacked bar chart
 - Stacked column chart
 - Clustered bar chart
 - Clustered column chart
 - Line chart
 - Area chart
 - Line & stacked chart
 - Water full chart
 - Pie chart
 - Donut chart
 - Tree map
 - Map visualization
 - Gauge visualization
 - Card
 - Multi row card
 - KPI
 - Slicers
 - Table
 - Metrix
- Multi-level filtering:
 - Visual level filtering
 - Page level filtering
 - report level filtering
- Advanced filtering options
- Visualizations interactivity between each other
- Creating hierarchies
- Utilizing the drill-down capabilities
- Extensive formatting for the visualizations

Explore Power BI service (The Power BI online platform):

- Publishing the work done and content packs:
 - Publishing from Power BI service
 - Publishing from Power BI desktop
- Setting periodic automatic update process from Power BI desktop to Power BI service
- Installing gateway
- Creating workspaces
- Creating dashboards
- Creating content packs
- Using Natural Language Tool
- Utilizing the quick insights tool
- Exploring the collaborative tools for viewing and sharing content
- Exploring Power BI mobile
- Installing Power BI mobile
- Exploring contents packs:
 - Reports and visualizations
 - Datasets
 - Dashboards

This course is important for:

- Professionals who need to deal with data and data stores.
- Professionals who is concerned with creating different kinds of reports & visualizations.
- Managers.
- Business Reporting Officers.
- Decision Makers.

The course is available with the following modes:

- **Online live instructor-led mode:**

The course will be delivered using ZOOM application. Participants are required to install ZOOM application to their computers.

- **Face to face instructor-led mode:**

The course will be held in a training venue at reputable hotel or business center. The participants will be informed about the venue details after registration. Participants are required to bring their own computing devices.

Duration

- One day, from 9 am - 5 pm , including refreshments and lunch break.

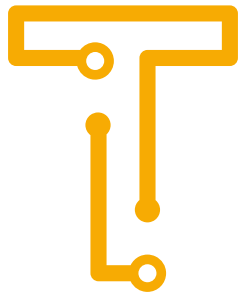
Software Requirements

Participants are required to have the following software to be installed prior to the course session:

- **ZOOM**
- **Microsoft Excel 2016 or higher**

Course Prerequisites

To have good understanding for the course, it is important to have at least basic computer skills and basic understanding for relational database concepts.



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