Power BI Introduction

⇨ Introduction to Power BI
⇨ A Brief History of Power BI
⇨ Power BI Vs Tableau
⇨ Power BI Characteristics (Names)
⇨ Self-Serviced Software, Cloud Based Software
⇨ Data Visualization Software, Reporting Software
⇨ Data Analytics Software, Business Intelligence (BI) Software
⇨ Cloud Based BI Vs On premise BI
⇨ Power BI Products
⇨ Power BI Desktop (Power Query, Power Pivot, Power View)
⇨ Flow of Work in Power BI Desktop
⇨ Power BI Service, Power BI Report Server, Power BI Mobile
⇨ Flow of Work in Power BI / Power BI Architecture

PBI Desktop Installation Power BI Desktop & Power BI Service Overview

⇨ Power BI Desktop Software Installation
⇨ Download & Installation of Power BI Desktop Software
⇨ What are the Prerequisites to Install Power BI Desktop Software?

Power BI Desktop User Interface

⇨ Understanding Power BI Desktop User Interface
⇨ Fields Pane, Visualizations Pane, Filters Pane
⇨ Ribbon, Multiple Views (Report View, Data View & Model View)
⇨ Report Canvas, Pages Section

Power Query

⇨ Introduction to Power Query & Power Query Editor User Interface
⇨ Overview of Power Query / Query Editor
⇨ How to Open Power Query / Query Editor
⇨ Extracting the Data from Data Sources
⇨ Transforming the Data using GUI Options
⇨ Loading the Data in Power Pivot
⇨ Query Editor UI (Queries Pane, Data Pane / Results Pane, Power Query Ribbon)
⇨ Query Settings, Pane Applied Steps, Formula Bar

- ⇨ Advanced Editor, Query Dependencies
- ⇨ Understanding Power Query Conceptually
- ⇨ Data Processing, Data types and Filters in Power Query
- ⇨ How Data Processed in Power Query
- ⇨ Data types, Changing the Data type of a Column, Detect Data Type
- ⇨ Filters in Power Query and their Purpose
- ⇨ Types of Filters in Power Query (Basic Filtering, Advanced Filtering)
- ⇨ Auto Filter / Basic Filtering
- ⇨ Filter a Column using Advanced Text Filters, Number Filters, Date Filters
- ⇨ Filter Multiple Columns

Inbuilt Column Transformations

- ⇨ Remove Columns / Remove Other Columns, Choose Columns, Go to Column
- ⇨ Name or Rename a Column
- ⇨ Reorder Columns or Sort Columns (Move Left, Right, To Beginning, To End)
- ⇨ Column from Examples (From All Columns, From Selection)
- ⇨ Add Column / Custom Column
- ⇨ Duplicate Column, Split Column, Merge Columns
- ⇨ PIVOT, UNPIVOT Columns, Transpose Columns
- ⇨ Replace Values, Remove Empty

In built Row Transformations

- ⇨ Header Row or Use First Row as Headers, Use Headers as First Row
- ⇨ Keep Top Rows, Keep Bottom Rows, Keep Range of Rows
- ⇨ Keep Duplicates, Keep Errors
- ⇨ Remove Top Rows, Remove Bottom Rows, Remove Alternative Rows
- ⇨ Remove Duplicates, Remove Blank Rows, Remove Errors
- ⇨ Group Rows / Group By
- ⇨ Combine Queries (Merge Queries & Append Queries)
- ⇨ Merge Queries / Join Tables
- ⇨ Merge Queries, Merge Queries as New
- ⇨ Need of Merge Queries, Minimum requirements to Perform Merge Queries

Types of Joins / Join Kinds / Merge Type

⇨ Left Outer (all from first, matching from second)
⇨ Right Outer (all from second, matching from first)
⇨ Full Outer (all rows from both)
⇨ Inner (only matching rows)
⇨ Left Anti (rows only in first), Right Anti (rows only in second)
⇨ Cartesian Join or Cross Join, Self-Join
⇨ Merging the Tables using Multiple Join Conditions
⇨ How to Merge 3 Tables
⇨ Use Fuzzy Matching Option

Append Queries / Union ALL Tables

⇨ Append Queries, Append Queries as New
⇨ Minimum requirements to perform Append Queries
⇨ Append Two Tables, Append Three or More Tables
⇨ Folder as Source
⇨ Appending Multiple Files of same type from a folder using Single Query
⇨ Appending Multiple Excel Files and Multiple Sheets using Single Query
⇨ Union All, how to get Union Result

Query Options

⇨ Copy Query, Paste Query, Delete Query, Rename Query
⇨ Enable Load, Include in report Refresh
⇨ Duplicate Query, Reference Query
⇨ Move to Group, Move Up, Move Down
⇨ Advanced Editor, Properties

Home Tab Options

⇨ Close & Apply, Apply, Close
⇨ New Source, Recent Sources, Enter Data, Data Source Settings
⇨ Manage Parameters (Manage Parameters, Edit Parameters, New Parameter)
⇨ Suggested Values (Any Value, List of Values, Query), Convert to List
⇨ Query Parameters and Power BI Templates
⇨ Refresh Preview, Refresh All, Cancel Refresh
⇨ Sorting Data

Transform Tab Options

⇨ Reverse Rows, Count Rows, Replace Values, Replace Errors, Fill Down, Fill Up
⇨ Text Column, Number Column, Date & Time Column Options
⇨ Structured Column (Expand, Aggregate, Extract Values)
⇨ Run R Script, Run Python Script
⇨ Add Column Tab Options
⇨ Create Custom Function, Invoke Custom Function
⇨ Conditional Column, Index Column, Duplicate Column
⇨ From Text, From Number, From Date & Time Column Options

View Tab, Tools Tab & Help Tab Options

Power Pivot

Power Pivot Software Overview

⇨ Understanding about Power Pivot – A In Memory Columnar Database
⇨ Advantage of In Memory Columnar Database
⇨ Power Pivot - Xvelocity In-memory Analytics Engine (Previously called Vertipaq)
⇨ Overview of Data Modeling – Model View (Previously Relationship View)
⇨ Enhancing the Data Model – DAX (Data Analysis eXpressions) Language – Data View
⇨ Power BI Data Modeling – Model View (Previously Relationship View)
⇨ Data Modeling Introduction
⇨ Relationships, Need of Relationship Between Tables
⇨ Dimension Column, Fact Column, Dimension Table, Fact Table

Data Connectivity Modes in Power BI

⇨ Import, Direct Query & Connect Live / Live

Schemas in Power BI

⇨ Star Schema, Snowflake Schema
⇨ Galaxy Schema or Hybrid Schema or Fact Constellation Schema
⇨ Relationship Types / Cardinality in General
⇨ One-to-One, One-to-Many (or Many-to-One), Many-to-Many
⇨ AutoDetect the relationship, Create a new relationship
⇨ Edit existing relationships, Delete a relationship
⇨ Make Relationship Active or Inactive
⇨ Cross filter direction (Single, Both), Apply Security Filter in Both Directions

- ⇨ Assume Referential Integrity
- ⇨ Enhancing the Data Model – DAX
- ⇨ What is DAX (Data Analysis eXpressions) Language – Functional Language
- ⇨ New Column, New Measure / Quick Measure, New Table
- ⇨ DAX Table and Column Name Syntax
- ⇨ Creating New Column, Creating New Measure
- ⇨ Implicit Measures, Explicit Measures
- ⇨ Difference Between New Columns & New Measures

DAX Operators, Types of Operators

- ⇨ Arithmetic Operators, Comparison Operators
- ⇨ Text Concatenation Operator, Logical Operators

DAX Functions - Categories

- ⇨ Text Functions
- ⇨ Logical Functions
- ⇨ Date and Time Functions
- ⇨ Filter Functions
- ⇨ Math & Statistical Functions
- ⇨ Time Intelligence Functions

DAX Text Functions

- ⇨ LEN, CONCATENATE (&)
- ⇨ LEFT, RIGHT, MID
- ⇨ UPPER, LOWER
- ⇨ TRIM, SUBSTITUTE, REPLACE, BLANK
- ⇨ DAX Logical Functions
- ⇨ IF, Nested IF
- ⇨ TRUE, FALSE, NOT, OR, IN, AND
- ⇨ IFERROR
- ⇨ SWITCH

DAX Date & Time Functions

- ⇨ YEAR, QUARTER, MONTH, DAY
- ⇨ WEEKDAY, WEEKNUM
- ⇨ FORMAT (Text Function)Month Name, Weekday Name
- ⇨ DATE, TODAY, NOW
- ⇨ HOUR, MINUTE, SECOND, TIME

⇨ DATEDIFF, YEARFRAC, CALENDAR, CALENDARAUTO
⇨ EDATE, EOMONTH, DATEVALUE
⇨ Week Number of Month, Fiscal Year, Fiscal Quarter
⇨ YEAR, QUARTER, MONTH, DAY
⇨ WEEKDAY, WEEKNUM
⇨ FORMAT (Text Function)Month Name, Weekday Name
⇨ DATE, TODAY, NOW
⇨ HOUR, MINUTE, SECOND, TIME
⇨ DATEDIFF, YEARFRAC, CALENDAR, CALENDARAUTO
⇨ EDATE, EOMONTH, DATEVALUE
⇨ Week Number of Month, Fiscal Year, Fiscal Quarter

DAX Filter Functions

⇨ Calculate, Calculatetable
⇨ Allselected, Allexcept
⇨ Related, Relatedtable
⇨ Lookupvalue (information Function)
⇨ Userelationship
⇨ Filter, Distinct(column), Distinct(table), Values, Selectedvalue

DAX Math and Statistical Functions

⇨ Int, Round, Roundup, Rounddown
⇨ Int,Divide, Even, Odd, Power, Sign, Sqrt, Fact
⇨ Int,Sum, Sumx, Min, Minx, Max, Maxx, Count, Countx
⇨ Int,Average, Averagex
⇨ Int,Countrows, Countblank
⇨ Int,Rankx, Summarize

DAX Time Intelligence Functions

⇨ Time Intelligence Introduction
⇨ Date Dimension Table, Mark As Date Table
⇨ Totalmtd, Totalqtd, Totalytd
⇨ Previousday, Previousmonth, Previousquarter, Previousyear
⇨ Nextday, Nextmonth, Nextquarter, Nextyear
⇨ Sameperiodlastyear
⇨ Yoy Growth, Qoq Growth, Mom Growth
⇨ Firstdate, Lastdate

- ⇨ Quick Measures
- ⇨ Creating Measures Without Writing The Dax Formula Using Quick Measures
- ⇨ Sales Yoy Growth %, Sales Ytd, Sales Mtd

Power View

- ⇨ Report View User Interface / Power BI Desktop User Interface
- ⇨ Fields Pane, Visualizations pane, Filters Pane
- ⇨ Ribbon, Multiple Views, Report Canvas, Pages Section
- ⇨ Fields, Filed Wells, Formatting, Analytics
- ⇨ Visuals Interactions
- ⇨ Interaction Type (Highlight, Filter, None)
- ⇨ Visual Interactions Default Behavior
- ⇨ Changing the Default Interaction Behavior, Edit Interactions

Filters in Power View

- ⇨ Filters, Filter Types in Power View
- ⇨ Filters on this Visual, Filters on this Page, Filters on All Pages
- ⇨ Drill Through Filters, Cross Report Drill Through, Keep All Filters
- ⇨ Filter Sub Types – Basic Filtering, Advanced Filtering, Top N, Relative Date Filtering
- ⇨ Numeric field filters, Text field filters, Date and Time field Filters

Hierarchies and Drill-Down Reports

- ⇨ Hierarchy Introduction, Default Date Hierarchy
- ⇨ Creating Hierarchy, Creating Custom Date Hierarchy, Change Hierarchy Levels
- ⇨ Drill Actions – Drill Down, Drill Up, Show Next Level, Expand Next Level
- ⇨ Apply Drill Down filters to Selected Visual

Power BI Visualizations

- ⇨ Visualizing Data, Why Visualizations
- ⇨ Visualization types, Build Visuals/ Field Wells
- ⇨ Visuals for Filtering, Visualizing Categorical Data, Visualizing Trend Data
- ⇨ Visualizing KPI Data, Visualizing Tabular Data, Visualizing Geographical Data
- ⇨ Leveraging Power BI Custom Visuals
- ⇨ Visuals for Filtering
- ⇨ Slicer Visualization, when to use a Slicer
- ⇨ Create and format Slicer Visualization
- ⇨ Hierarchy Slicer (Custom Visualization)

⇨ When to use a Hierarchy Slicer, Create and format Hierarchy Slicer
⇨ Advantages of Hierarchy Slicer
⇨ Play Axis (Dynamic Slicer) – Custom Visualization
⇨ When to use a Play Axis Visual, Create and format Play Axis Visual

Visualizing Categorical Data

⇨ Purpose of Pie and Donut Charts, Create and Format Pie and Donut Charts
⇨ Purpose of Tree map Visual, Create and Format the Tree Map Visual
⇨ Purpose of Bar & Column Charts
⇨ Create and Format Bar and Column Charts
⇨ Create and Format Stacked Bar Chart, Stacked Column Chart
⇨ Create and Format Clustered Bar Chart, Clustered Column Chart
⇨ Create and Format 100% Stacked Bar Chart, 100% Stacked Column Chart
⇨ Purpose of Scatter Chart, Create and Format Scatter Chart

Visualizing Trend Data

⇨ Purpose of Line and Area Charts
⇨ Create and Format Line Chart, Area Chart, Stacked Area Chart
⇨ Combo Charts
⇨ Create and Format Line and Stacked Column Chart, Line and Clustered Column Chart
⇨ Create and Format Ribbon Chart, Waterfall Chart

Visualizing KPI Data

⇨ Create and Format Gauge Visual, KPI Visual
⇨ Create and Format Card Visualization, Multi Row Card
⇨ Create and Format Funnel Chart
⇨ Visualizing Tabular Data
⇨ Create and Format Table Visual, Matrix Visualization
⇨ Visualizing Geographical Data
⇨ Create and Format Map Visual, Filled Map Visual

Tooltip Page

⇨ Create a Report Tooltip Page, Configure your Tooltip Report Page
⇨ Manually setting a Report Tooltip

Bookmarks, Selection Pane & Buttons

⇨ Changing the chart type dynamically
⇨ Changing the Axis of Chart Dynamically

Power BI Service

⇨ Power BI Service Introduction
⇨ Power BI Service Introduction, Power BI Cloud Architecture
⇨ Cloud Vs. On Premise
⇨ Creating Power BI Service Account, SIGN IN to Power BI Service Account
⇨ Power BI Pro & Power BI Premium

My Workspace & Project Workspace

⇨ Adding Dataset to Power BI Service and Creating Multiple New Reports
⇨ Publishing Reports to the Power BI service, Import / Getting the Report to PBI Service
⇨ Creating Multiple Reports using Dataset
⇨ Power BI Datasets Live Connection using Desktop to Create New Report
⇨ Creating New Reports in Cloud using Published Datasets
⇨ Shared and Certified Datasets, Sharing Dataset across Multiple Projects

Dashboards Development

⇨ Dashboard, Creating Dashboards using Multiple Reports
⇨ Pin Visuals and Pin LIVE Report Pages to Dashboard
⇨ Advantages of Dashboards
⇨ Interacting with Dashboards
⇨ Adding Tiles to Dashboards
⇨ Web Content, Image, Text Box, Video

Installing & Configuring the Data Gateways

⇨ Introduction to Data Gateways, How Data Gateways work
⇨ Connect to an on-premise Data Source by using a Data Gateway
⇨ Download Data Gateway, Installing a Data Gateway
⇨ Types of Gateways – Enterprise & Personal Gateway
⇨ Difference Between Enterprise & Personal Gateway
⇨ Manage Data Gateway
⇨ Sharing the Gateway, Add and Remove Administrators
⇨ Add Data Source, Add or Remove Users to a Data Source
⇨ Refresh On Premise Data

⇨ Configuring Automatic Refresh using Schedules
⇨ Full Refresh / Truncate & Load, Incremental Refresh the Data in Dataset

Understanding Sub folder in Workspace

⇨ Datasets + Dataflows - Dataflows, Datasets
⇨ Content - Workbooks, Reports & Dashboards
⇨ All - Dataflows, Datasets, Workbooks, Reports & Dashboards

Dataflows

⇨ Dataflows, Purpose of Dataflows
⇨ Creating and Working with Dataflows
⇨ Using Dataflows to Create a Dataset in Power BI Desktop
⇨ Power BI Architecture with Dataflows

Dashboard Actions

⇨ Share, Mark as Favorite, Delete, Settings, View usage Metrics Report, View Lineage
⇨ Team Collaboration in Power BI using Workspaces

Introduction to Workspaces

⇨ Classic Workspaces, Upgraded Workspaces
⇨ Create a Workspace, Add Members to Workspace to Collaborate
⇨ Workspace Access - Admin, Member, Contributor, Viewer Roles
⇨ Sharing Power BI Content using Basic Sharing, Content Packs and Apps
⇨ Sharing Reports & Dashboards using Direct Sharing / Basic Sharing

Introduction to App

⇨ Publish an App, Update a Published App
⇨ Manage Content in App, Include in App, Exclude in App
⇨ Sharing App
⇨ Entire Organization, Specific individuals or group
⇨ Un publishing an App

Row Level Security in Power BI

⇨ Introduction to Row Level Security
⇨ Row Level Security (RLS) with DAX
⇨ Manage Roles, Creating Roles, Testing Roles
⇨ Adding Members to Roles in Power BI Service
⇨ Dynamic Row Level Security
⇨ Creating Users Table Adding to the Model
⇨ Capturing users using Username () or UserPrincipalName () DAX Functions

ADD ON

⇨ Real-time Project Explanation
⇨ Resume Preparation, Power BI Developer Roles & Responsibilities
⇨ Interview Questions & Answers
⇨ Mock Interviews
⇨ SQL & Adv Excel Classes

SQL COURSE

SQL Server Complete Introduction

⇨ What is the Definition of Data?
⇨ Types of Data
⇨ What is DBMS
⇨ What is RDBMS
⇨ What are Tables
⇨ Difference B/W DBMS and RDBMS
⇨ What is Database

Complete Introduction to SQL SERVER

⇨ What is SQL
⇨ What is MS SQL SERVER?
⇨ What is query

SQL Server Software Installation

⇨ Download and Installation of SQL SERVER Software
⇨ Download and Installation of SSMS Software
⇨ Prerequisites to Install SQL SERVER Software

SSMS Window

⇨ What is an SSMS Window
⇨ What is Server Name
⇨ What is Authentication
⇨ Types of Authentications
⇨ User Name
⇨ Password

Data Types

⇨ What are Data Types
⇨ Different Types of Data Types

Sub-Languages in SQL Server

⇨ DDL(Data Definition Language)
⇨ DML(Data Manipulation Language)
⇨ DRL(Data Retrieval Language)
⇨ TCL(Transaction Control Language)
⇨ DCL(Data Control Language)

Arithmetic Operators

⇨ Addition
⇨ Subtraction
⇨ Multiplication
⇨ Division
⇨ Modulos

Comparison Operators

⇨ EQUAL TO (=)
⇨ NOT EQUAL TO (<> , !=)
⇨ GREATER THAN (>)
⇨ LESS THAN (<)
⇨ GREATER THAN OR EQUAL TO (>=)
⇨ LESS THAN OR EQUAL TO (<=)

Logical Operators

⇨ AND
⇨ OR
⇨ NOT

Set Operators

⇨ UNION
⇨ UNION ALL
⇨ INTERSECT
⇨ EXCEPT

Special Operators

⇨ IN
⇨ BETWEEN-AND
⇨ LIKE
⇨ IS NULL

Functions

⇨ What is Function

Single-Row Functions

⇨ What are Single- Row Functions
⇨ Number Functions
⇨ Character Functions
⇨ Date Functions

Column/Group/Aggregate

⇨ What Are Aggregated Functions
⇨ Sum ()
⇨ Max ()
⇨ Min ()
⇨ Count ()

Special Clauses

⇨ Group BY
⇨ Having
⇨ Order BY
⇨ Distinct
⇨ Rollup
⇨ Cube

Ranking Functions

⇨ Purpose of Ranking
⇨ Row-Number ()
⇨ Rank ()
⇨ Dense-Rank ()

Constraints

Domain
⇨ Check
⇨ Not null
⇨ Default

Entity
⇨ Primary Key
⇨ Unique
⇨ Composite Key

Referential
⇨ Foreign Key
⇨ Self-Referential Key

Joins

⇨ Purpose of Joins
⇨ Types of Joins
⇨ Inner Join

Outer Joins

⇨ Left- Outer Join
⇨ Right- Outer Join
⇨ Full- Outer Join
⇨ Cross Join
⇨ Self-Join

Views

⇨ What is View
⇨ Advantages of View
⇨ Types of Views
⇨ Simple View
⇨ Complex View
⇨ Row-Level Security using Views
⇨ Column Level Security using Views

Sub Queries

⇨ What are Sub Queries
⇨ Purpose of Sub Queries
⇨ Types of Sub Queries
⇨ Correlated Sub Queries
⇨ Single Row Sub Query
⇨ Multi Row Sub Query
Non-Correlated Sub Queries

Advanced Excel Course Content

| **Introduction to MS Excel**

| **Excel Keyboard Shortcuts**

| **Number Functions**

⇨ Sum ( )
⇨ Average ( )
⇨ Max ( )
⇨ Min ( )
⇨ Count ( )
⇨ Counta ( )
⇨ Absolute ( )

| **Logical Functions**

⇨ IF ( ) & Nested IF ( )
⇨ SumIf ( )
⇨ SumIfs ( )
⇨ CountIf ( )
⇨ CountIfs ( )
⇨ AverageIf ( )
⇨ AverageIfs ( )

| **Text Functions**

⇨ Upper ( )
⇨ Lower ( )
⇨ Proper ( )
⇨ Left ( )
⇨ Mid ( )
⇨ Right ( )
⇨ Concatenate ( )

| **Time and Date Functions**

⇨ Today ( )
⇨ Now ( )
⇨ Date ( )
⇨ DateAdd ( )
⇨ Day ( )
⇨ Month ( )

⇨ Year ( )
⇨ Month ( )
⇨ Weekday ( )
⇨ Format ( )

| **Pivot Tables (PT)**

⇨ Creating Simple Pivot Tables
⇨ Classic Pivot table
⇨ Basic and Advanced Value Field Setting
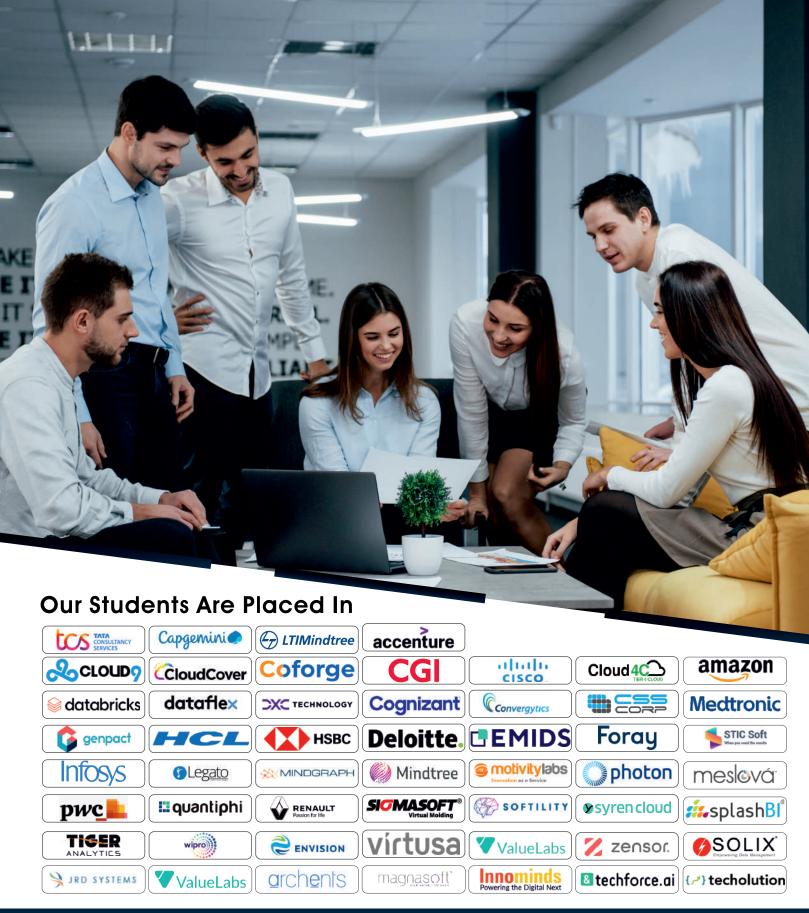⇨ Calculated Field & Calculated Items
⇨ Grouping based on numbers and Dates

| **Slicers and Charts**

⇨ Using SLICERS, Filter data with Slicers
⇨ Various Charts
   a. Column & Bar Charts
   b. Pie & Donut Charts
   c. Line Charts
⇨ Manage Primary and Secondary Axis

| **Vlookup & Hlookup**

⇨ Vertical Lookup (Vlookup)
⇨ Horizontal Lookup (Hlookup)

| **Excel Real Time examples**

Our Students Are Placed In

QualityThought

📞 **73373 44490**

Quality Thought Infosystems India (P) Ltd.

#302, Nilgiri Block, Ameerpet, Hyderabad-500016 | www.qualitythought.in | info@qualitythought.in