

# **Business Analyst**

## **Duration- 3 Month**

### **SQL**

- Introduction to Database
- Database Concepts
- What is Database Package?
- Understanding Data Storage
- Relational Database (RDBMS) Concept

#### **SQL (Structured Query Language)**

- SQL Basics
- DML, DDL & DQL
- DDL: Create, Alter, Drop
- SQL Constraints:-
  1. NOT NULL, UNIQUE
  2. PRIMARY & FOREIGN KEY, COMPOSITE KEY
  3. CHECK, DEFAULT
- DML: Insert, Update, Delete and Merge
- DQL : Select
- SELECT DISTINCT
- SQL WHERE
- SQL Operators
- SQL Like
- SQL ORDER BY
- SQL Aliases ·
- SQL Views ·
- SQL JOINS
  1. INNER JOIN
  2. LEFT (OUTER) JOIN
  3. RIGHT (OUTER) JOIN
  4. FULL (OUTER) JOIN
- MySQL Functions

- String Functions
  1. CHAR\_LENGTH
  2. CONCAT
  3. LOWER
  4. REVERSE
  5. UPPER
- Numeric Functions
  1. MAX, MIN, SUM
  2. AVG, COUNT, ABS
- Date Functions
  1. CURDATE
  2. CURTIME
  3. NOW

## **POWER BI**

### **INTRODUCTION TO POWER BI**

- Introduction to Business Intelligence (BI)
- Various BI tools
- Introduction to Power BI
- Why Power BI
- Power BI Components
- Introduction of Power BI Desktop
- Installation of Power BI Desktop

### **DATA VISUALIZATION**

- Understanding Power View and Power Map
- Data visualization techniques
- Page layout & Formatting
- Power BI Desktop visualization
- Formatting and customizing visuals
- Column chart, Pie chart, Donut chart,

- Scatter chart, Funnel chart ·
- Include & exclude ·
- Geographical data visualization using Maps
- Drill down
- Drill through
- Page navigations
- Bookmarks
- Selection pane to show/hide visuals
- Comparing volume and value-based analytics
- Combinations charts (dual axis charts)
- Filter pane
- Slicers
- Use of Hierarchies in drill down analysis
- Sync slicers
- Tooltips & custom tooltips
- Tables & matrix
- Conditional formatting on visuals

## **POWER BI SERVICE, PUBLISHING & SHARING**

- Introduction to Power BI
- Service Introduction of workspaces
- Dashboard
- Creating & Configuring Dashboards
- Dashboard theme
- Reports vs Dashboards
- Sharing reports & dashboards

## **DATA TRANSFORMATION – SHAPING & COMBINING DATA**

- Shaping data using Power Query Editor
- Formatting data
- Transformation of data

- Understanding of Data types
- Naming conventions & best practices to consider
- Working with Parameters
- Merge Query
- Append Query
- Group by of data (aggregation of data)
- Duplicate & Reference tables
- Fill
- Pivot & Un-pivot of data
- Custom columns
- Conditional columns
- Replace data from the tables
- Split columns values
- Move columns & sorting of data
- Detect data type, count rows & reverse rows
- Promote rows as column headers
- Hierarchies in Power BI

## DATA MODELING & DAX

- Introduction of relationships
- Creating relationships
- Cardinality
- Cross filter direction
- Use of inactive relationships
- Introduction of DAX
- Why DAX is used
- DAX syntax
- DAX functions
- Context in DAX
- Calculated columns using DAX

- Measures using DAX
- Calculated tables using DAX
- Learning about table, information, logical, text, iterator
- Time intelligence functions (YTD, QTD, MTD)
- Cumulative values, calculated tables, and ranking and rank over groups
- Date and time functions

## Advanced Excel

### Advanced Excel Course - Overview of the Basics of Excel

- Customizing common options in Excel
- Absolute and relative cells
- Protecting and un-protecting worksheets and cells
- Working with Functions
- Writing conditional expressions (using IF)
- Using logical functions (AND, OR, NOT)
- Using lookup and reference functions (VLOOKUP, HLOOKUP, MATCH, INDEX)
- Vlookup with Exact Match, Approximate Match
- Nested Vlookup with Exact Match
- Vlookup with Tables, Dynamic Ranges
- Nested Vlookup with Exact Match
- Using VLookup to consolidate Data from Multiple Sheets

### Advanced Excel Course - Data Validations

- Specifying a valid range of values for a cell
- Specifying a list of valid values for a cell
- Specifying custom validations based on formula for a cell

### Advanced Excel Course - Working with Templates

- Designing the structure of a template
- Using templates for standardization of worksheets

### **Advanced Excel Course - Sorting and Filtering Data**

- Sorting tables
- Using multiple-level sorting
- Using custom sorting
- Filtering data for selected view (AutoFilter)
- Using advanced filter options

### **Advanced Excel Course - Working with Reports**

- Creating subtotals
- Multiple-level subtotals
- Creating Pivot tables
- Formatting and customizing Pivot tables
- Using advanced options of Pivot tables
- Pivot charts
- Consolidating data from multiple sheets and files using Pivot tables
- Using external data sources
- Using data consolidation feature to consolidate data
- Show Value As (% of Row, % of Column, Running Total, Compare with Specific Field)
- Viewing Subtotal under Pivot
- Creating Slicers (Version 2010 & Above)

### **Advanced Excel Course - More Functions**

- Date and time functions
- Text functions
- Database functions
- Power Functions (CountIf, CountIFS, SumIF, SumIfS)
- Advanced Excel Course – Formatting
- Using auto formatting option for worksheets
- Using conditional formatting option for rows, columns and cells