Business Analytics

SQL Using MySQL

Duration: 4 Months

Introduction to RDBMS
- What is Relational Database Package
- Difference between SQL & Database
- Installing MySQL Server database

SQL Basic
- DDL: Create, Alter, Drop, etc.
- DML: Insert, Update, Delete ,etc.
- DQL : Select
- Autoincrement field
- SQL Comments
- SQL Aliases
- Savepoint & rollback

SQL Constraints
- Not NULL
- Unique key
- Primary key
- Check
- Default
- Foreign key

SQL Operators
- Arithmetic operators
- Logical operators
- Conditional operators
- Like, between, in operators

SQL Clause
- Order by
- Where
- Group by
- having

SQL Joins
- Inner Join
- Left Join
- Right Join
- Full Join

SQL View
- creating view
- updating view
- fetching data from view

SQL Functions
- String functions
- Aggregate functions
- Date & time functions

Working with Subqueries
- Understanding SQL subqueries, their rules
- Statements and operators with which subqueries can be used
- Using the set clause to modify subqueries

- Understanding different types of subqueries, such as where, select, insert, update, delete, etc.
- Methods to create and view subqueries

Stored Procedures & Functions
- Understanding stored procedures and their key benefits
- Working with stored procedures
- Studying user-defined functions

Advance 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

Advanced Excel Course - 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

Advanced Excel Course - Macros
- Relative & Absolute Macros
- Editing Macro's

Advanced Excel Course - WhatIf Analysis
- Goal Seek
- Data Tables
- Scenario Manager

Advanced Excel Course - Charts
- Using Charts
- Formatting Charts
- Using 3D Graphs
- Using Bar and Line Chart together
- Using Secondary Axis in Graphs
- Sharing Charts with PowerPoint / MS Word, Dynamically
- (Data Modified in Excel, Chart would automatically get updated)

Advanced Excel Course - New Features Of Excel
- Sparklines, Inline Charts, data Charts
- Overview of all the new features

Advanced Excel Course - Final Assignment
- The Final Assignment would test contains questions to be solved at the end of the Course

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

ETL(Extract Transform & Load) USING POWER QUERY
- 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

DAX(Data Analysis Expression)
- 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

DATA VISUALIZATION

- Understanding Power View and Power Map
- Data visualization techniques
- Page layout & Formatting
- Power BI Desktop visualization
- Formatting and customizing visuals
- Custom visualization in Power BI
- 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
- Power BI Q&A (Natural Language Query visual)
- Tooltips & custom tooltips
- Tables & matrix
- Conditional formatting on visuals
- Waterfall chart, KPI, Donut chart, Scatter chart
- Geographical data visualization using Maps

POWER BI SERVICE

- Introduction to Power BI Service
- Introduction of workspaces
- Publishing report
- Exporting report to PDF,PPT
- Creating & Configuring Dashboards
- Dashboard theme
- Reports versus Dashboards

Overview of Tableau

- Tableau Introduction
- Comparing Tableau with Power bi
- Tableau Charts
- Tableau Dashboards
- Tableau Story
- Calculated Fields
- Publishing Report to Server