Power BI

POWER BI
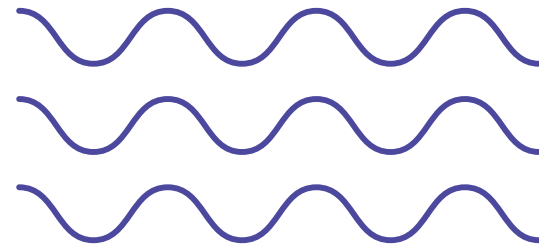
Fusion Software Institute

Unleash the power of data science at Fusion Software Institute. Dive into the world of analytics, machine learning, and AI to unlock insights and drive innovation.

SQL SYLLABUS

INTRODUCTION OF DATABASE

- List the features of MySQL Database.
- Discuss the basic design, theoretical, and physical aspects of a relational database.
- Categorize the different types of SQL statements.
- Describe the data set used by the course.
- Log on to the database using SQL Developer environment.
- Save queries to files and use script files in SQL Developer

HANDS-ON-EXERCISE:

- List the features of MySQL Database.
- Work with MySQL database tools.
- Understand and work with language features.

RETRIEVE DATA USING THE SQL SELECT STATEMENT :

- List the capabilities of SQL SELECT statements.
- Generate a report of data from the output of a basic SELECT statement.
- Select All Columns
- Select Specific Columns
- Use Column Heading Defaults
- Use Arithmetic Operators
- Understand Operator Precedence.
- Learn the DESCRIBE command to display the table structure.

HANDS-ON-EXERCISE:

- Individual statements in SQL scripts are commonly terminated by a line break (or carriage return) and a forward slash on the next line, instead of a semicolon.
- You can create a SELECT statement, terminate it with a line break, include a forward slash to execute the statement, and save it in a script file.

LEARN TO RESTRICT AND SORT DATA:

- Write queries that contain a **WHERE** clause to limit the output retrieved
- List the comparison operators and logical operators that are used in a **WHERE** clause.
- Describe the rules of precedence for comparison and logical operators.
- Use character string literals in the **WHERE** clause.
- Write queries that contain an **ORDER BY** clause to sort the output of a **SELECT** statement.
- Sort output in descending and ascending order.

HANDS-ON-EXERCISE:

- Creating the queries in a compound query must return the same number of columns.
- Create corresponding columns in each query must be of compatible data types.
- ORDER BY; it is, however, permissible to place a single ORDER BY clause at the end of the compound query.

USAGE OF SINGLE-ROW FUNCTIONS TO CUSTOMIZE OUTPUT

- Describe the differences between single-row and multiple-row functions.
- Manipulate strings with character functions in the **SELECT** and **WHERE** clauses.
- Manipulate numbers with the **ROUND, TRUNC**, and **MOD** functions
- Perform arithmetic with date data.
- Manipulate dates with the **DATE** functions.

HANDS-ON-EXERCISE:

- Create the distinction is made between single-row functions, which execute once for each.
- row in a dataset, and multiple-row functions, which execute once for all the rows in a data- set.

INVOKE CONVERSION FUNCTIONS AND CONDITIONAL EXPRESSIONS.

- Describe implicit and explicit data type conversion.
- Use the **TO_CHAR, TO_NUMBER**, and **TO_DATE** conversion functions.
- Nest multiple functions.
- Apply the **NVL, NULLIF**, and **COALESCE** functions to data.
- Use conditional **IF THEN ELSE** logic in a **SELECT**.

HANDS-ON-EXERCISE:

- We create and discuss the NVL function, which provides a mechanism to convert null values into more arithmetic-friendly data values.

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AGGREGATE DATA USING THE GROUP FUNCTIONS

- Use the aggregation functions in **SELECT** statements to produce meaningful reports
- Divide the data into groups by using the **GROUP BY** clause
- Exclude groups of date by using the **HAVING** clause

HANDS-ON-EXERCISE:

- Group functions operate on aggregated data and return a single result per group.
- These groups usually consist of zero or more rows of data.

DISPLAY DATA FROM MULTIPLE TABLES USING JOINS

- Write **SELECT** statements to access data from more than one table
- View data that generally does not meet a join condition by using outer joins
- Join a table by using a self-join

USE SUBQUERIES TO SOLVE QUERIES

- Describe the types of problems that subqueries can solve
- Define sub-queries
- List the types of sub-queries

HANDS-ON-EXERCISE:

- Write a query that uses subqueries in the column projection list.
- Write single-row and multiple-row subqueries

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DATA MANIPULATION STATEMENTS:

- Describe each **DML** statement
- Insert rows into a table
- Change rows in a table by the **UPDATE** statement
- Delete rows from a table with the **DELETE** statement Save and discard changes with the **COMMIT** and **ROLLBACK** statements.
- Explain read consistency.

HANDS-ON-EXERCISE:

Expressions and create expose a vista of data manipulation possibilities through the interaction of arithmetic and character operators with column or literal data, or a combination of the two.
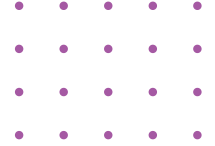
USE OF DDL STATEMENTS TO CREATE AND MANAGE TABLES

- Categorize the main database objects
- Review the table structure.
- List the data types available for columns
- Create a simple table.
- Decipher how constraints can be created at table creation.

MANIPULATING DATA

- Selecting rows/Observations Rounding Number
- Selecting columns/fields Merging data
- Data aggregation

HANDS-ON-EXERCISE-CONSTRUCTING OPERATORS

- As you gain experience with CSV and JSON files, you'll be able to process almost any data you want to analyze.
- Most online data sets can be downloaded in either or both of these From working with these formats, you'll be able to learn other data formats as well.
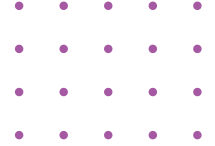
POWER BI SYLLABUS

1. INTRODUCTION TO POWER BI

- What Is Power BI and Why Power BI
- Installing Power BI Desktop
- Exploring The Power BI Workflow
- Adjusting Settings Of Power BI Desktop
- Comparison Of Power BI vs Other Reporting
- Tools

2. ETL IN POWER BI

- Connecting To Different Sources
- Different Connecting Options(DirectQuery vs
- Import Data Vs Live Connection)
- Shaping And Transforming Data With
- Power Query
- Editing, Merging, Appending Queries, ETC

3. MODELLING WITH POWER BI

- Connecting To Different Sources
- Different Connecting Options(DirectQuery vs
- Import Data Vs Live Connection)
- Shaping And Transforming Data With
- Power Query
- Editing, Merging, Appending Queries, ETC

4. DAX

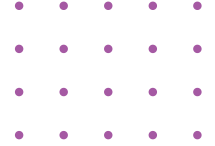- Understanding Dax Syntax
- Calculated Columns vs Measures

5. FUNCTIONS

- Filter
- Financial
- Logical
- Parent-Child Relationship
- Text
- Statistical : Median, Norm, Percentile,
- ETC Time Intelligence

6. M FUNCTIONS
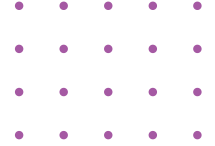
- Data Access
- Binary
- Combiner
- Date & Time
- Duration

7. VISUALISING DATA WITH REPORTS

- Creating Visualizations
- Color & Conditional Formatting
- Setting Sort Order
- Scatter & Bubble Charts & Play Axis
- Tooltips
- Slicers, Timeline Slicers & Sync
- Slicers Cross Filtering and
- Highlighting Visual, Page and
- Report Level Filters Drill Down/Up
- Hierarchies
- Constant Lines
- Tables, Matrices & Table Conditional
- Formatting
- KPI's, Cards & Gauges
- Map Visualizations
- Custom Visuals
- Managing and Arranging
- Drill Through
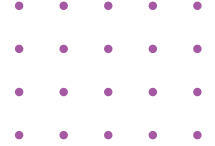- Custom Report Themes
- Grouping and Binning
- Bookmarks & Buttons

8. INTRODUCTION TO POWER BI SERVICE

- Introduction To Power BI Service
- Quick Tour Of Power BI Service
- Connecting To Data From Power BI
- Service Building Blocks Of Power BI
- Service

9. SHARING AND COLLABORATION TOOLS

- Sharing And Collaboration Options Overview
- Publish From Power BI Desktop
- Publish Reports To Web
- Printing And Exporting From Power BI Service
- Sharing Reports & Dashboards
- Workspaces (My Workspace vs App
- Workspace) Publishing Apps In Power BI
- Service
- Row Level Security In Power BI Desktop And
- Service

10. POWER BI GATEWAY AND REFRESHING DATASETS

- Understanding Gateways In Power BI
- Difference Between Personal And On-Premise
- Gateway
- Installation Of Personal Gateway
- Installation Of On Premise Enterprise Gateway
- Setting Up Gateway In Power BI Service
- Understanding Data Refresh(Manual vs
- Scheduled Refresh)
- Troubleshooting Refreshing Scenarios
- Case Study

WHY CHOOSE US?

- 100% Job Placement Assistance
- Industry Experts as a Trainer
- Resume Preparation
- Weekly Mock Interviews
- Digital Classroom
- 2 Real-time Projects
- Expert Faculty
- Expert Instructors
- Hands-On Learning
- Career Support
- Innovative Curriculum
- State-of-the-Art Facilities
- Career Path Support
- Industry-Relevant Courses
- Community Connection
- Exclusive Networking Opportunities
- Career Services Beyond Graduation
- Industry-Recognized Certifications
- Provide Internship Program
- We Provide Soft Skill Corporate Training

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