TECH

KNOWLEDGE

Data Retrieval, Extraction and Business Reporting With SQL

About Course

If you have a database and want to perform data analytics or business reporting, you just in the right course. This course will help you to know many details of how extract and retrieve data from the database, which will get most of your report done. The course will start refreshing the mind on important database concepts for data analytics. After that an introduction about SQL will be given. Then, the structure of DML queries will be explained. This will be followed by going through many commands for basic extraction, conditional retrieval, retrieval based on comparisons, data manipulation, sorting data, extracting unique values, performing calculations, extracting summarized data, extracting data from different resources. After, there be important highlight in optimizing the data extraction performance with making use of Indexes and views. This course will share many tips, tricks and secrets that are a result of many year of work and research. In addition, this course will be prepared with many real-life examples from industry to give the real experience. Also, several free source and custom developed databases will be used to explain the different concepts and scenarios.

Outline

- Introduction
    - What is a database?
    - Relational database model
    - Entity relationship diagram (ERD)
- Data extraction with select statement
- Conditional retrieval with where statements
    - "and" & "or" operators
- Useful symbols and key words
    - < > , = , =!
    - In
    - Between
    - NOT
- Dealing with null values
- Aliases
- Useful functions
- Data extraction based on comparisons with "Like statements"
- Data manipulation:
    - Update statements
    - Delete statements
    - Insert statements

- Sorting data with "order by" statements
- Extracting unique data with distinct statements
- Performing calculations with aggregate functions:
    - SUM
    - AVG
    - MIN
    - MAX
    - Counts
- Summarizing and grouping data with group by statements
- "having" clause
- Integrating data with:
    - Join statements
        Inner join
        Right outer join
        Left outer join
        Full outer join
        Left anti join
        Right anti
    - Subqueries
- Optimizing performance with:
    - Indexes
    - Views
        Virtual views
        Materialized views

This course is important for:

- Professionals who need to deal with data extraction & retrieval.
- Professionals who need to deal with business reporting.
- Professionals who need to create business intelligence outcomes.
- Managers.
- 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 refereshments and lunch break.
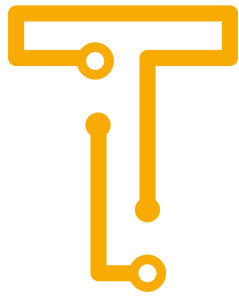
Software Requirements

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

- **ZOOM**

Course Prerequisites

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

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