Microsoft SQL Server For Everyone

HELLO!

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Course Objectives

Learn Microsoft SQL Server Development

- Install SQL Server and SQL Server Management Studio
- Connect to a Database Instance
- Create a Database
- Create Tables
- Run Queries against Tables
- General use of the Management Studio
- Create Relationships (Normalization)
- Practical use of SQL

- Normalization
- Primary and Foreign Keys
- Advanced SQL Concepts
  - Functions
  - Stored Procedures
  - Triggers
  - Security

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This course is for you if...

- You are a beginner with little to no experience.

- You are seeking to refresh your knowledge

- You are seeking to understand design principles in database development.

- You are seeking to learn Microsoft SQL Server technology

This Course Is For EVERYONE!

Benefits

- Database development will become second nature to you.

  - We explore the tooling extensively

  - We learn to troubleshoot errors

  - We learn best practices and design principles

  - We learn Structured Query Language (SQL)

  - We learn keyboard shortcuts

- Increase your income and marketability!

- Learn a new skill

Welcome!

Let's get Started

Types of Data and Storage

Unstructured Data

- Documents, Files, Videos, Images, etc.
  - File Storage
    - Filing Cabinets – Hard Copies
    - Hard Drives – Digital Copies

Semi-Structured Data

- – File based storage (JSON, XML, etc.)
  - NoSQL Database
    - MongoDB
    - Azure CosmosDB
  - Digital Documents

JSON FILE EXAMPLE

```json
{
    "emp_details": [
        {

            "emp_name": "Shubham",
            "email": "ksingh.shubh@gmail.com",
            "job_profile": "intern"
        },
        {

            "emp_name": "Gaurav",
            "email": "gaurav.singh@gmail.com",
            "job_profile": "developer"
        },
        {

            "emp_name": "Nikhil",
            "email": "nikhil@geeksforgeeks.org'
            "job_profile": "Full Time"
        }
    ]
}
```

XML FILE EXAMPLE

```xml
<?xml version="1.0"?>
- <job>
    - <production>
          <ApprovalType>WebCenter</ApprovalType>
          <Substrate>carton 150 gr</Substrate>
          <SheetSize>220-140</SheetSize>
          <press>SuperFlat2</press>
          <finishing>standard</finishing>
          <urgency>normal</urgency>
      </production>
    - <customer>
          <name>FruitCo</name>
          <number>2712</number>
          <currency>USD</currency>
      </customer>
  </job>
```

Structured Relational Data

▶ Tables, Rows and Columns

   ▷ Microsoft SQL Server

   ▷ Azure SQL

   ▷ MySQL

   ▷ PostgreSQL

   ▷ OracleDB

Microsoft SQL Server

What

- A powerful relational database management system provided by Microsoft

- Used in many companies for simple and complex database operations

Why

- Perfect for beginners

- Employable skills

- Learn Best Practices

- Industry Standard Database Development and Management Software

What is SQL?

- SQL is a standard language for storing, manipulating, and retrieving data in databases.
- Short for Structured Query Language
  - DDL – Data Definition Language
    - Manipulates the database structures
    - E.g. CREATE TABLE Lecturers (Id int Primary Key Identity);
  - DML – Data Manipulation Language
    - Manipulates the data in the database.
    - E.g. DELETE FROM Students WHERE Id = 1