

VERSION

2

CRASH COURSE

ELYSIUM
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CORE MSSQL

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CORE MSSQL

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SR. CODE

EAPL/CRASH/CRTC16

COURSE CODE

EACMS

SUB CATEGORY

DATABASE MANAGEMENT



TOTAL DURATION
45
HOURS



THEORY TAKEN
10
HOURS



PRACTICAL TAKEN
35
HOURS

COURSE DESCRIPTION



The MSSQL course provides in-depth training in Microsoft SQL Server, covering database design, T-SQL programming, stored procedures, and database administration tasks.

COURSE GOALS



By completion, you will proficiently design and administer MSSQL databases, write optimized T-SQL queries, and implement robust database solutions. They will develop the skills necessary to support mission-critical applications and ensure data integrity and security within the SQL Server environment.

FUTURE SCOPE



Graduates will be well-prepared for roles as database administrators, SQL developers, or business intelligence analysts. With SQL Server's widespread adoption in enterprise environments, opportunities for MSSQL professionals are abundant, ensuring a lucrative and stable career path in the data management field.

01

CHAPTER

GETTING STARTED MSSQL



4.5
HRS



08
HRS

O1. MSSQL

- What is MSSQL?
- What is difference between MSSQL and MYSQL?
- Purpose of MSSQL
- Versions of SQL
- Advantages and drawbacks
- Installation Setup

O2. Database and tables

- What is database?
- What is tables?
- Create, Alter and drop database
- Create, Alter and drop table
- Backup and restore a database
- RDBMS
- ER Model
- Hands on create database and tables

O3. Common Terminologies in SQL

- Data types
- Constraints
- Foreign key constraints
- Unique and check constraint
- Hands on data types and constraints
- Quiz

O4. Normalization

- a. What is normalization?
- b. First Normal Form
- c. Second Normal Form
- d. Third Normal Form Practically Normalizing Tables
- e. Hands on Normalization

02

CHAPTER

MSSQL COMMANDS

O1. Data Definition Language

- a. What is DDL?
- b. Purpose of DDL
- c. CREATE Table
- d. ALTER Table
- e. TRUNCATE Table
- f. RENAME
- g. DROP
- h. Hands on DDL

O2. Data Manipulation Language

- a. What is DML?
- b. SELECT
- c. UPDATE
- d. DELETE
- e. INSERT
- f. Hands on DML



3.5
HRS



6.5
HRS

O3. Data Control Language

- a. What is DCL?
- b. Purpose of DCL
- c. REVOKE
- d. GRANT
- e. Hands on DCL

O4. MSSQL Clauses

- a. WHERE
- b. DISTINCT
- c. ORDER BY
- d. GROUP BY
- e. HAVING
- f. FROM
- g. Hands on MSSQL clauses

03

CHAPTER

MSSQL COMMANDS

O1. Conditions

- a. AND
- b. OR
- c. AND OR
- d. Boolean
- e. LIKE
- f. IN
- g. ANY
- h. Exists
- i. NOT



2.5
HRS



8.5
HRS

- j. Not Equal
- k. IS NULL
- l. IS NOT NULL
- m. BETWEEN
- n. Hands on conditions

O2. Key

- a. Primary key
- b. Foreign key
- c. Unique key
- d. Hands on key constraints

O3. JOINS in MSSQL

- a. What is joins?
- b. Advantages of JOINS.
- c. Types of Joins
- d. INNER JOIN
- f. LEFT JOIN
- h. RIGHT JOIN
- j. CROSS JOIN
- k. Hands on JOIN

O4. Indexes and views in MSSQL

- a. What is index?
- b. CREATE index
- c. DROP index
- d. SHOW index
- e. UNIQUE index
- f. Hands on index

04

CHAPTER

FUNCTIONS, TRANSACTIONS AND AGGRAGATE



4.5
HRS



07
HRS

O1.Functions in MSSQL

- What is MSSQL?
- What is difference between MSSQL and MYSQL?
- Purpose of MSSQL
- Versions of SQL
- Advantages and drawbacks
- Installation Setup

O2. Transactions in MSSQL

- What is transactions?
- COMMIT
- ROLLBACK
- Hands on transactions

O3. Aggregate functions and Triggers

- What is aggregate functions?
- List the aggregate functions
- Hands on aggregate functions
- What is Triggers?
- Constraints vs Triggers
- Creating, Altering, Dropping triggers
- for/after/instead of triggers
- Using Rollback Tran
- Hands on triggers

O4. Working with cursors

- a. What is cursors?
- b. Creating Cursors
- c. Cursors vs. Select
- d. Types of cursors
- e. Locks on cursors
- f. Advantages of cursors
- g. Hands on cursors
- h. Quiz

O5. Backup and restore

- a. Generating SQL Script
- b. Executing SQL Script
- c. Generating Change Script
- d. Taking database Backup
- e. Restoring database using backup
- f. Attaching and Detaching of database
- g. Hands on backup and restore

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