Microsoft SQL Server 2017

Introduction

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Overview

- What is Relational Database?
- ACID
- The SQL Language
- Attributes & Constraints

What is Relational Database?

- Collection or a repository of data
- Structure or Tabular or Semi structured or Unstructured documents
- Relational, Object relational databases, and NoSQL Databases.
- Relational Database, one of the most-used DBMSs in the world
- Adhere to the ANSI SQL Standards
- Transaction
- ACID Properties
- Table with Header, Column and Rows

ACID

- Atomicity : All or Nothing
- Consistency : Remain consistent after any transaction
- Durability : Transaction should update the data on disk even in case of failure.
- Isolation : Each transaction should be executed in a isolated mode and shall not affect other transactions

SQL

- Declarative programming language.
- DDL – Defines and modify structure
- DML – Retrieve and modify data
- DCL – Manage access rights to relations

Attributes & Constraints

Attributes

- Each has a Name and Data
- Data has Data Types and constraints
- Example of Data : Salary, Phone Number, Name

Constraints

- To control data integrity, redundancy and validity
- Records in table must be distinct
- Primary Key, Check, Default, Unique, Not Null
- Surrogate Key : DBMS Generated
- Referential Integrity constraints : Relation between tables
- Semantic constraints : Triggers and Rule Systems

Summary

- About Database and types of it
- What is Relational Database?
- ACID Principles
- Types of SQL command
- Attribute, Data and types of constraints.