Database Design

Faculty of Electrical and Computer Engineering

Fall 2023

1. Introduction to SQL
    1.1. DDL
    1.2. DML
2. Introduction to SQL Server
    2.1. SQL Server Management Studio.
        2.1.1. Create a new Database
        2.1.2. Queries
3. CREATE TABLE
    3.1. Database Modelling
    3.2. Create Tables using the Designer Tools
    3.3. SQL Constraints
        3.3.1. PRIMARY KEY
        3.3.2. FOREIGN KEY
        3.3.3. NOT NULL / Required Columns
        3.3.4. UNIQUE
        3.3.5. CHECK
        3.3.6. DEFAULT
        3.3.7. AUTO INCREMENT or IDENTITY
    3.4. ALTER TABLE
4. INSERT INTO
5. UPDATE
6. DELETE
7. SELECT
    7.1. The ORDER BY Keyword
    7.2. SELECT DISTINCT
    7.3. The WHERE Clause
        7.3.1. Operators
        7.3.2. LIKE Operator
        7.3.3. IN Operator
        7.3.4. BETWEEN Operator
    7.4. Wildcards
    7.5. AND & OR Operators
    7.6. SELECT TOP Clause
    7.7. Joins
        7.7.1. Different SQL JOINs
8. SQL Scripts
    8.1. Using Comments

        8.1.1. Single-line comment
        8.1.2. Multiple-line comment
    8.2. Variables
    8.3. Built-in Global Variables
    8.4. Flow Control
        8.4.1. IF – ELSE
        8.4.2.WHILE
        8.4.3. CASE
        8.4.4. CURSOR
9. Views
10. Stored Procedures