Session02

Bài 1:

MindMap

Bài 2:

```sql
•   CREATE DATABASE QuanLyHocTap;
•   USE QuanLyHocTap;
• ⊖ CREATE TABLE SinhVien (
        MaSV VARCHAR(20) PRIMARY KEY,
        HoTen NVARCHAR(100) NOT NULL
    );
• ⊖ CREATE TABLE MonHoc (
        MaMonHoc VARCHAR(20) PRIMARY KEY,
        TenMon NVARCHAR(100) NOT NULL,
        SoTinChi INT CHECK (SoTinChi > 0),
        MaSV VARCHAR(20),
        FOREIGN KEY (MaSV) REFERENCES SinhVien(MaSV)
    );
• ⊖ CREATE TABLE MucTieuHocTap (
        MaMucTieu INT PRIMARY KEY AUTO_INCREMENT,
        NoiDungMucTieu NVARCHAR(255) NOT NULL,
        MaMonHoc VARCHAR(20),
        FOREIGN KEY (MaMonHoc) REFERENCES MonHoc(MaMonHoc)
    );
```

subject_id	subject_name	credits
1	Toán	223
2	Văn	2
3	Anh	2
NULL	NULL	NULL

Bài 3:

```sql
1    CREATE DATABASE QuanLyHocTap;
2    USE QuanLyHocTap;
3    CREATE TABLE SinhVien (
4        MaSV VARCHAR(20) PRIMARY KEY,
5        HoTen NVARCHAR(100) NOT NULL
6    );
7    CREATE TABLE MonHoc (
8        MaMonHoc VARCHAR(20) PRIMARY KEY,
9        TenMon NVARCHAR(100) NOT NULL,
10       SoTinChi INT CHECK (SoTinChi > 0),
11       MaSV VARCHAR(20),
12       FOREIGN KEY (MaSV) REFERENCES SinhVien(MaSV)
13   );
14   CREATE TABLE MucTieuHocTap (
15       MaMucTieu INT PRIMARY KEY AUTO_INCREMENT,
16       NoiDungMucTieu NVARCHAR(255) NOT NULL,
17       MaMonHoc VARCHAR(20),
18       FOREIGN KEY (MaMonHoc) REFERENCES MonHoc(MaMonHoc)
19   );
```

Tạo bảng `Subject`

MaMonHoc	TenMon	SoTinChi	MaSV
1	Toán	1	123
2	Anh	2	34
3	VIN	3	23

bảng `Student`

MaSV	HoTen
123	Duy
345	Hello4
23	HiHi
NULL	NULL

Bài 4:

```sql
USE session02;
DROP TABLE IF EXISTS Enrollment;
DROP TABLE IF EXISTS Subject;
DROP TABLE IF EXISTS Student;
CREATE TABLE Student (
    student_id VARCHAR(20) PRIMARY KEY,
    full_name NVARCHAR(100) NOT NULL
);
CREATE TABLE Subject (
    subject_id VARCHAR(20) PRIMARY KEY,
    subject_name NVARCHAR(100) NOT NULL,
    credits INT NOT NULL,
    CONSTRAINT chk_credits CHECK (credits > 0)
);
CREATE TABLE Enrollment (
    student_id VARCHAR(20),
    subject_id VARCHAR(20),
    enrollment_date DATE NOT NULL,
    PRIMARY KEY (student_id, subject_id),
    FOREIGN KEY (student_id) REFERENCES Student(student_id),
    FOREIGN KEY (subject_id) REFERENCES Subject(subject_id)
);
```

bảng `Enrollment`

student_id	subject_id	enrollment_date
SV001	SUB01	2025-12-28
SV001	SUB02	2025-12-28
NULL	NULL	NULL

Bài 5:

```sql
USE session02;
INSERT INTO Teacher (teacher_id, full_name, email) VALUES
('GV03', 'Thầy Minh', 'minh@school.edu.vn'),
('GV04', 'Cô Hoa', 'hoa@school.edu.vn'),
('GV05', 'Thầy Tuấn', 'tuan@school.edu.vn');
INSERT INTO Subject (subject_id, subject_name, credits, teacher_id) VALUES
('SUB03', 'Thiết kế Web', 3, 'GV03'),
('SUB04', 'Tiếng Anh Chuyên Ngành', 2, 'GV04'),
('SUB05', 'Kỹ năng mềm', 2, 'GV04'),
('SUB06', 'Mạng máy tính', 3, 'GV05');
INSERT INTO Student (student_id, full_name) VALUES
('SV003', 'Lê Văn C'),
('SV004', 'Phạm Thị D'),
('SV005', 'Hoàng Văn E');
INSERT INTO Enrollment (student_id, subject_id, enrollment_date) VALUES
-- SV001 học thêm Web và Tiếng Anh
('SV001', 'SUB03', '2025-12-30'),
('SV001', 'SUB04', '2025-12-30'),

-- SV003 (mới) đăng ký CSDL và Mạng máy tính
('SV003', 'SUB01', '2026-01-02'),
('SV003', 'SUB06', '2026-01-02'),
```

teacher_id	full_name	email
GV03	Thầy Minh	minh@school.edu.vn
GV04	Cô Hoa	hoa@school.edu.vn
GV05	Thầy Tuấn	tuan@school.edu.vn
NULL	NULL	NULL

Bài 6:

```sql
USE session02;

CREATE TABLE Score (
    student_id VARCHAR(20),
    subject_id VARCHAR(20),
    process_score DECIMAL(4, 2),
    final_score DECIMAL(4, 2),
    PRIMARY KEY (student_id, subject_id),
    FOREIGN KEY (student_id) REFERENCES Student(student_id),
    FOREIGN KEY (subject_id) REFERENCES Subject(subject_id),
    CONSTRAINT chk_process CHECK (process_score >= 0 AND process_score <= 10),
    CONSTRAINT chk_final CHECK (final_score >= 0 AND final_score <= 10)
);
```

student_id	subject_id	process_score	final_score
SV001	SUB01	8.50	9.00
SV001	SUB02	7.50	8.00
SV001	SUB03	9.00	9.50
SV002	SUB01	6.50	7.00
SV003	SUB01	5.00	4.50
SV003	SUB06	8.00	8.50
SV004	SUB02	9.50	10.00
SV004	SUB05	9.00	9.00
SV005	SUB03	6.00	6.00
NULL	NULL	NULL	NULL