Bài tập môn IT202_SS02

Link Mindmap: https://app.xmind.com/YUtfu0h0

Bài 1:

```
1 •    USE school_db;
2 •    SELECT DATABASE();
3 • ⊖  CREATE TABLE Classes (
4          class_id VARCHAR(10) PRIMARY KEY,
5          class_name VARCHAR(50) NOT NULL,
6          school_year VARCHAR(9) NOT NULL
7      );
8 • ⊖  CREATE TABLE Student (
9          student_id VARCHAR(10) PRIMARY KEY,
10         full_name VARCHAR(100) NOT NULL,
11         date_of_birth DATE NOT NULL,
12         class_id VARCHAR(10) NOT NULL,
13
14         CONSTRAINT fk_student_class
15             FOREIGN KEY (class_id)
16             REFERENCES Classes(class_id)
17             ON UPDATE CASCADE
18             ON DELETE RESTRICT
19     );
20 •   INSERT INTO Classes VALUES ('CTK42', 'Công nghệ thông tin K42', '2024-2025');
21 •   INSERT INTO Student VALUES
```

	student_id	full_name	date_of_birth	class_id
▶	SV001	Nguyễn Văn A	2004-05-10	CTK42
	SV002	Trần Thị B	2004-08-20	CTK42
*	NULL	NULL	NULL	NULL

Bài 2:

```sql
1 •    USE school_db;
2 •    SELECT DATABASE();
3 • ⊖  CREATE TABLE Student (
4          student_id VARCHAR(10) PRIMARY KEY,
5          full_name VARCHAR(100) NOT NULL
6      );
7 • ⊖  CREATE TABLE Subject (
8          subject_id VARCHAR(10) PRIMARY KEY,
9          subject_name VARCHAR(100) NOT NULL,
10         credits INT NOT NULL CHECK (credits > 0)
11     );
12 •   DESCRIBE Student;
13 •   DESCRIBE Subject;
14 •   INSERT INTO Subject VALUES ('MH01', 'Cơ sở dữ liệu', 3);
15 •   INSERT INTO Subject VALUES ('MH02', 'Lập trình với Java', '5');
16 •   SELECT * FROM Student;
17 •   SELECT * FROM Subject;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

subject_id	subject_name	credits
MH01	Cơ sở dữ liệu	3
MH02	Lập trình với Java	5
NULL	NULL	NULL

Bài 3:

```sql
1   USE school_db;
2   SELECT DATABASE();
3   CREATE TABLE Enrollment (
4       student_id VARCHAR(10) NOT NULL,
5       subject_id VARCHAR(10) NOT NULL,
6       enrollment_date DATE NOT NULL,
7       PRIMARY KEY (student_id, subject_id),
8       CONSTRAINT fk_enrollment_student
9           FOREIGN KEY (student_id)
10          REFERENCES Student(student_id)
11          ON UPDATE CASCADE
12          ON DELETE CASCADE,
13      CONSTRAINT fk_enrollment_subject
14          FOREIGN KEY (subject_id)
15          REFERENCES Subject(subject_id)
16          ON UPDATE CASCADE
17          ON DELETE CASCADE
18  );
19  INSERT INTO Student (student_id, full_name, date_of_birth, class_id)
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

student_id	full_name	date_of_birth	class_id
SV001	Nguyễn Văn A	2004-05-10	CTK42
SV002	Trần Thị B	2004-08-20	CTK42
NULL	NULL	NULL	NULL

Bài 4:

```sql
1   USE school_db;
2   SELECT DATABASE();
3   CREATE TABLE Teacher (
4       teacher_id VARCHAR(10) PRIMARY KEY,
5       full_name VARCHAR(100) NOT NULL,
6       email VARCHAR(100) NOT NULL UNIQUE
7   );
8   ALTER TABLE Subject
9   ADD COLUMN teacher_id VARCHAR(10);
10  ALTER TABLE Subject
11  ADD CONSTRAINT fk_subject_teacher
12  FOREIGN KEY (teacher_id)
13  REFERENCES Teacher(teacher_id)
14  ON UPDATE CASCADE
15  ON DELETE SET NULL;
16  INSERT INTO Teacher VALUES
17  ('GV01', 'Trần Văn C', 'tranvanc@school.edu.vn'),
18  ('GV02', 'Nguyễn Thị D', 'nguyenthid@school.edu.vn');
19  UPDATE Subject
20  SET teacher_id = 'GV01'
```

	teacher_id	full_name	email
►	GV01	Trần Văn C	tranvanc@school.edu.vn
	GV02	Nguyễn Thị D	nguyenthid@school.edu.vn
*	NULL	NULL	NULL

Bài 5:

```
1  •    USE school_db;
2  •    SELECT DATABASE();
3  • ⊖  CREATE TABLE Score (
4           student_id VARCHAR(10) NOT NULL,
5           subject_id VARCHAR(10) NOT NULL,
6           process_score DECIMAL(4,2) NOT NULL,
7           final_score DECIMAL(4,2) NOT NULL,
8           PRIMARY KEY (student_id, subject_id),
9           CHECK (process_score BETWEEN 0 AND 10),
10          CHECK (final_score BETWEEN 0 AND 10),
11          CONSTRAINT fk_score_student
12              FOREIGN KEY (student_id)
13              REFERENCES Student(student_id)
14              ON UPDATE CASCADE
15              ON DELETE CASCADE,
16          CONSTRAINT fk_score_subject
17              FOREIGN KEY (subject_id)
18              REFERENCES Subject(subject_id)
19              ON UPDATE CASCADE
20              ON DELETE CASCADE
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
student_id	varchar(10)	NO	PRI	NULL	
subject_id	varchar(10)	NO	PRI	NULL	
process_score	decimal(4,2)	YES		NULL	
final_score	decimal(4,2)	YES		NULL	

Bài 6:

```sql
1 • USE school_db;
2
3 ⊖ CREATE TABLE IF NOT EXISTS Score (
4       student_id VARCHAR(10) NOT NULL,
5       subject_id VARCHAR(10) NOT NULL,
6       process_score DECIMAL(4,2) CHECK (process_score BETWEEN 0 AND 10),
7       final_score DECIMAL(4,2) CHECK (final_score BETWEEN 0 AND 10),
8
9       PRIMARY KEY (student_id, subject_id),
10
11      FOREIGN KEY (student_id)
12          REFERENCES Student(student_id)
13          ON DELETE CASCADE
14          ON UPDATE CASCADE,
15
16      FOREIGN KEY (subject_id)
17          REFERENCES Subject(subject_id)
18          ON DELETE CASCADE
19          ON UPDATE CASCADE
20 );
```

Table	Create Table
Subject	CREATE TABLE `subject` (`subject_id` varch...

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝗔