



*SQL Essential*

## **Training Assignments**

Program Code	SQLE
Version	3.1
Effective Date	01/11/2016

Hanoi, 11/2016

**RECORD OF CHANGES**

\*A - Added M - Modified D - Deleted

Date	Changes	A* M, D	Contents	Version
10-Apr-2022	Create	A	Add the new assignments.	v1.0

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CODE: SQL\_ITF\_Assignment01\_Opt1  
 TYPE: n/a  
 LOC: n/a  
 DURATION: 120 MINUTES

### For the following assignments:

- Print out respectively the screenshots to show the query results.
- Pack **screenshots** and **SQL scripts** or **your answers** into the zip file named SQL\_ITF\_Assignment<i>\_Account\_v1.0.zip (for instance: SQL\_ITF\_Assignment01\_NamNT\_v1.0.zip) then handle to the evaluator via email ([XYZ@fsoft.com.vn](mailto:XYZ@fsoft.com.vn)) or follow the guidance of the class admin.

## Lesson 1: Database Basics

### Assignment01\_Opt1: ER – Diagram

#### 1. Exercise 1

**Barem:** a - 50%, b – 50%

**Objective:** K4SD (Understand basic database knowledge (DBMS, RDBMS, ERD))

#### **Problem Description:**

ViVu Store wants to switch to using a web-based sales management system instead of the old system using excel. The image below is their sales invoice:



Invoice No: 220426KBHC115Q  
 Invoice Date: 16:40 26/04/2022

**Customer No:** 19  
**Customer Name:** Cong Dinh  
**Phone Number:** +84 944551345  
**Email:** cong dinh2021@gmail.com  
**Address:** 102, Xuan Dinh, Bac Tu Liem, Ha Noi

#	Product Name	Category	Unit Price (vnd)	Quantity	Discount	Amount
1	iPhone 13 Pro Max	Smartphone	29.999.000	1	5%	28.499.050
2	Samsung Galaxy S22 Ultra	Smartphone	26.799.000	2	10%	48.238.200
3	iPhone 13 Pro Max Silicone Case with MagSafe - Eucalyptus	Phone Accessories	1.099.000	2	30%	1.538.600
4						
Total (vnd):						78.275.850

Based on the information on the invoice:

- Identify and separate entities, attributes of each entity.
- Build relationships between entities.

**Questions to answer:**

- a) Draw an ER diagram representing the relationships between the entities found.
- b) Convert from ER diagram to relational schema.

**Estimated Time to complete:** 60 mins

## 2. Exercise 2

**Barem:** a - 50%, b – 50%

**Objective:** K4SD (Understand basic database knowledge (DBMS, RDBMS, ERD))

**Problem Description:**

Database of FA Management System (FPT Software Academy) needs to store information about:

**Trainee** (identified by *TraineeId*, with *Email*, *PhoneNumber* as attributes),

**ETScore** (*EnglishScore* and *TechScore*, *InterviewScore*)

**Class** (identified by *ClassId*, with *ClassCode*, *Start Date*, *EndDate* and *ClassType* as attributes),

**Course** (*CourseCode*, *CourseName*, *Duration* and *CourseType* as attributes)

Before being assigned to classes, trainee will have to take a Entry Test(ET). After the test, each trainee will have ET scores for 3 subjects English, Tech and Interview. Assume that each trainee is only allowed to take the ET test once and the FA won't care about that score if the trainee drops out.

After that, trainees will be allocated to the classes of their choice if they have enough points. A class can have many trainees, each trainee can only join one class at a time.

Each class has a learning path that includes many different courses. Some basic courses will be applicable to many different classes

**Questions to answer:**

- a) Draw an ER diagram that captures this information.
- b) Convert from ER diagram to relational schema.

**Estimated Time to complete:** 60 mins.

--THE END--