

*SQL Essential*

Training Assignments

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

**Hanoi, 11/2016**

RECORD OF CHANGES

\*A - Added M - Modified D - Deleted

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| --- | --- | --- | --- | --- |
| Date | Changes | A\* M, D | Contents | Version |
| 14-Oct-2016 | Create | A | Add the new assignments. | v1.0 |
| 14-Oct-2018 | Update | M | Template. | v1.1 |
| 01-Jun-2019 | Update | M | Update Objective | v1.2 |
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|  | **CODE: Assignment1\_Opt4**  **TYPE: n/a**  **LOC: n/a**  **DURATION: 180 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 Assignment<i>\_AccountName.zip (for instance: Assignment1\_NamNT.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

## Assignment 1\_Opt4: Zoo Management

1. Exercise 1

**Barem**: a-40%, b-30%

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

**Problem Description**:

The LMF Zoo has many *types of* *animals*, every type has a unique name. Every animal of the same type has a unique animal ID.

Animals in two types may have the same animal ID. Animals also have age and gender. Animals may have diseases. The beginning time and the duration of a disease need to be recorded. A disease has a unique name. A type keeper takes care of only one type of animals. Every type may have many type keepers. A type keeper may or may not be familiar with diseases. But every disease must be handled by at least one type keeper. Type keepers have name, employee ID, ssn, address and phone number.

All animals are in *cages*, some cage may be empty. Every cage has a cage ID, space and height. A cage keeper may take care of many cages. Every non-empty cage must have at least one cage keeper. Empty cages don’t need any cage keepers. Cage keepers have name, employee ID, ssn, address and phone number.

**Questions to answer**:

1. Draw an ER diagram that captures this information.
2. Convert from ER diagram to relational schema.

**Estimated Time to complete**: 120 mins

1. Exercise 2

**Barem**: 30%

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

**Problem Description**:

Consider the following relations for a database that manage Sales. The information include: Customter, Invoice, InvoiceItem and Item.

Note: Primary Key is mark post-fix with #

**Customer**(CustId#, CustName, CustAddress, CustSuburd, CustState, CustPostcode)

**Invoice**(InvoiceNo#, InvDate, CustId#)

**InvoiceItem**(LineNo#, Quantity, InvoiceNo, ItemNo#)

**Item**(ItemNo#, ItemDesc, ItemPrice).

**Questions to answer**:

Draw a relational schema diagram specifying ,the foreign keys for this schema.

**Estimated Time to complete**: 60 mins

**-- THE END --**