

IDS 410 – Business Database Technology  
Spring 2016  
Individual Assignment #3 (database implementation)  
Database Implementation for a Simple Restaurant System

Assigned Date: February 25, 2016. Due Date: March 8, 2016

### Problem Statement

For the third assignment, you will use the Data Definition Language (DDL) to create ten Microsoft Access tables. Using Notepad, please create a script (text) file that contains CREATE TABLE definition for each of the ten relations in the Simple Restaurant's relational schema, which I have included on the last page. Please use this relational schema as your reference to do the Create Table statements. Use the following format to name your script file: yourNetidHwk3.txt. If your UIC email address is abc@uic.edu, your Netid would be abc and therefore you should name your script file abcHwk3.txt.

To get started, I have included *sample* DDL statements (see below) to create four tables: Customer\_t, Order\_t, Product\_t, and OrderLine\_t. You might want to test them by executing each of them in Microsoft Access. *Note that you do not need to submit this four sample DDL statements.*

Sample Data Definition Language Statements to create tables using Microsoft Access. Follow these steps:

1. Launch Microsoft Access 2013 or Access 2010 and create a blank database. Name the database file as follows: SampleDB
2. Click the Create tab and select Query Design.
3. Click the Close button on the Show Table window.
4. Be sure the Design tab is selected. Select SQL View.
5. Copy the Create Table Customer\_t statement below and paste it on the Query1 window.
6. Be sure the Design tab is selected. Click the Run button.
7. At this point, the Customer\_t should have been created.
8. Repeat steps 5 and 6 above to create Order\_t, Product\_t, and OrderLine\_t tables.

```
Create Table Customer_t
(
    Id          AutoIncrement Not Null,
    FirstName   Varchar(20) Not Null,
    LastName    Varchar(20),
    Primary Key(Id)
);

Create Table Order_t
(
    Id          AutoIncrement Not Null,
    OrderDate   DateTime Not Null,
    CustId     Int Not Null,
    Primary Key(Id),
    Foreign Key(CustId) References Customer_t(Id)
);

Create Table Product_t
(
    Id          Varchar(10) Not Null,
    Name        Varchar(30) Not Null,
    Description Varchar(30),
    Finish      Varchar(30),
    UnitPrice   Currency Not Null,
    Primary Key(Id)
);
```

```

Create Table OrderLine_t
(
    OrderId      Long not null,
    ProductId    Varchar(10) not null,
    Quantity     Int Not Null,
    Primary Key(OrderId, ProductId),
    Foreign Key(OrderId) References Order_t(Id),
    Foreign Key(ProductId) References Product_t(Id)
);

```

#### Note:

- Notice that in the above sample DDL statements, Order\_t should be created *after* Customer\_t is created. Otherwise, the Foreign Key reference in Order\_t would refer to a non-existence Customer\_t. Similarly, OrderLine\_t should be created after Order\_t and Product\_t are created; otherwise, the Foreign Key references in OrderLine\_t would refer to non-existence Order\_t and Product\_t.
- You may want to test each of your ten Create Table statements by executing each statement using Microsoft Access. After you are sure that each statement produces a table as expected, you can copy the statement and paste it onto your script file. By the end of this process, you will have ten Create Table statements in your script file.
- Use your judgment to specify an appropriate data type for each field (column).
- Be sure to specify a primary key, either simple or composite primary key, for each table.
- Be sure that the data type of a foreign key is the same as that of its corresponding primary key. Note, however, if the data type of a primary key is an AutoIncrement, the data type of its corresponding foreign key should be Long, meaning long integer.
- You do *not* need to submit your Access database file. Simply submit your script file that contains ten Create Table statements.

#### Submission

Submit the script file that contains ten create table statements via the Blackboard by 11:59 PM on March 8, 2016.

# A Relational Schema for a Simple Restaurant System

