**Practical 3: Using MS Access as a tool for creating ERD**

(Please read and bring along the **OrderProcessingScenario.doc** notes)

Learning objectives:

1. Add a table to an existing database
2. Assign Primary and Foreign keys to a table
3. Create a ERD for a database in Access

The following exercises will enable you to create the ERD for your practical assignment.

**Using MS Access**

1. Copy **Restaurant.accdb** to c:\
2. Start MS Access, open the **Restaurant.accdb** database

There are five tables already created in the database. We would like to create the table called CUSTOMER to store data about customers.

1. Select the ‘Create’ tab, click the ‘Table’ icon. A window will display the default ‘Table1’ (New) table structure. Click the ‘Save’ icon and a dialog box will appear. Name the table ‘customer’, click the OK button and close the ‘customer’ table window.
2. You should now see the ‘customer’ table listed on the left window pane.
3. Right click ‘customer’ table and select ‘Design View’. The Design View window is now opened. Design the following:

cust\_no char(7)

cust\_name char(25)

email char(35)

phone char(14)

birth\_date date

gender char(1)

1. Select the cust\_no field and make sure that it has been tagged as the primary key field.
2. Close the Design window.

**Creating primary key**

We shall first create **primary key** for the base tables: category, staff, customer.

1. Open the staff table in Design View.
2. Select the staff\_id field, click the “Primary key” icon, close the window, save the changes.
3. Repeat for category (cat\_id is the primary key) and customer (cust\_no is the primary key)

**Creating primary key and foreign key**

We will now create primary keys for the other tables (child tables) and also link these tables to the base tables (parent tables) to create a complete relationship. Refer to the diagram in **OrderProcessingScenario.doc**.

Linking of a **field** from a **child table** to a **parent table** creates a relationship. The field at the child table side is called a **foreign key**.

menu: PK is (menu, title\_id)

FK cat\_id references category(cat\_id)

food\_order: PK is (order\_no)

FK cust\_no references customer(cust\_no)

FK staff\_id references staff(staff\_id)

order\_list: PK is (order\_no, menu\_id) – composite key

FK order\_no references food\_order(order\_no)

FK menu\_id references menu(menu\_id)

**Creating the ERD**

1. Select the “Database Tools” tab. Click on the “Relationships” icon.
2. The relationship window is now opened. Right click anywhere inside the window and select “Show All”. Rearrange the tables so that the ERD looks similar to the one in

**OrderProcessingScenario.doc.**

1. Save the ERD. You can now print the ERD using the “Relationship Report” icon.

\*Note:

Instructions for practical 4:

Prepare data for the following to bring to Practical 4 :

3 new menu items

3 new customers

3 new orders, each order have 2 to 3 items from the menu.

Read SQL\*Plus User Guide and Reference.pdf, Chapter 12 SQL\*Plus Command Reference)

Page 12-10 (ACCEPT command)

Page 12-72 (PROMPT command)