

UNIVERSITY *of* MARYLAND  
UNIVERSITY COLLEGE - *Asian Division*

## Project 4: Introduction to Databases

### **Objective:**

The purpose of this project is to gain familiarity with a Database Management System. Microsoft Access 2000 is available in the Lab and it is highly suggested that you use Access because of its popularity. You may use a different DBMS, however you are required to print out and submit all required parts of this project. The instructions for this project report assume that you are using Access 2000. This project describes an address book database, however you may create a database for any worthy personal situation. You will need to create data for at least ten records for this project.

The Project is Due the first class of the 8<sup>th</sup> week of classes. No late projects will be accepted.

### **Procedure:**

1. Start Access by clicking on the Yellow Key Icon via the Start (button) | Programs. Click cancel on opening dialogue box.
2. Begin by going to the Help menu and click to open **Microsoft Access Help**.
3. Double Click on the **Getting Started with Microsoft Access** Book, then the page **Get started with Microsoft Access 2000**. Click on **Ways to get started if you're using a database for the first time**. This will open the pseudo-tutorial for **Microsoft Access**
4. Begin with **Databases: What they are and how they work** and click on the graphic to enter the tutorial. Continue clicking through each item of this help file. This will give you a good introduction to the various parts of an Access database. In this lab you will be required to create a Table, Form, and Report. Tables describe the structure of the data in the database, Forms are used to input data, and Reports are used to display information.
5. Open the existing **Northwind.mdb** file by clicking on the **File | Open** menu item. The file is located in the following folder path **C:\Program Files\MSOffice\Office\Samples**. Examine each of the various database components: Tables, Queries, Forms, and Reports. Use the Northwind database to get familiar with the layout of an existing database.

### **Creating a New Database**

6. Click on the **File | New** menu items to create a new database. Click on the **General** Tab and then double click the **Database** Icon. (Note: You are not permitted to use a predefined database for this project)
7. Insert your diskette into drive A:
8. Select the A: drive and name your file **MyAddressBook.mbd** Then click the Create button.
9. You now have created a database without any data or structure. There are no entries in the **MyAddressBook:Database** Dialog Box for Tables, Queries, Forms, and Reports. You will begin by creating a table to provide structure and content for your data.

### **Tables**

10. A table is a collection of data organized in a record (row) and field (column) format. A database can have many related tables, however for simplicity sake it is suggested that you restrict yourself to one data table for this project. Creating relationships among several tables adds more complexity to your

database. Click on the **Objects:Tables** of the **MyAddressBook:Database** Dialog Box. Then click the **Create Table by Using Wizard** link. The Wizards will greatly aid in creation of the database.

11. You will notice that several sample tables are listed. Click on the **Personal** Radio Button to display the Personal Table Samples. Click on the **Contacts** Sample Table. Select the following fields by clicking on the single right pointing arrow: ContactID, FirstName, LastName, Address, City,StateOrProvince, PostalCode, Country, EmailAddress, HomePhone, WorkPhone, MobilePhone, FaxNumber, and Nickname. Click on the **Next** Button when completed.
12. The next Dialog Box will ask for the Table Name. Name the table **Address Book** and let Access select the primary key. Click on the **Next** Button when completed.
13. Select the Enter data directly into the table Radio Button and then click on the **Finish** Button.
14. You have now completed the data table for your database. Enter data for two records directly in the table. The next step is to create a Form, which will be used to enter data for the remaining records. Close the table by clicking on the **X** in the upper right corner of the Table Window.
15. All field names and specifications have been automatically created by the table wizard. You can examine and change any of the field specifications by clicking on the Design Button of the **MyAddressBook:Database** Dialog Box.

### Forms

16. Forms provide a more convenient way to add, modify, and examine data items one record at a time. Access provides a wizard for creating forms just like tables. Click on the **Objects : Forms** Button of the **MyAddressBook:Database** Dialog Box. Then click the **Create Form by Using Wizard**.
17. In the next dialog box, you will be selecting which database field you will want to display in the Form. Click on the >> button to select all files. Click the **Next** button to proceed.
18. Select Columnar Layout for the form and click the **Next** button to proceed with the style selection. Choose the style you like best and click the **Next** button. Choose a name for your Form, and then click the Finish button. The form wizard will now create you Form.
19. Enter the remaining records data in the form so that you have at least ten records. Use the buttons on the bottom of the form to move between records. You may want to create additional forms for displaying telephone numbers or just addresses. Any form layout can be modified by clicking on the **Design** button of the database dialog box.

### Reports

20. Reports are used to provide printed output of information from the database. . You can NOT modify data items in a report display as you can with tables and forms. You need to create at least two reports. It is suggested that one have name and addresses and the other name and telephone numbers. Click on the **Objects : Report** button of the MyAddressBook:Database Dialog Box. Then click the **Create Report Using Wizard**.
21. Select the **Report Wizard**, and then the **Address Book** table fields you would like to be included with the report by selecting them and then the > button. Click the **Next** Button.
22. Next select the sort order you would like by fields. Select Justified Layout and Casual Style. You can also create a custom form by clicking the Design button on the database dialog box.

**Submit a Project Report** that contains a cover sheet, a written description of your database, and printed copies of all table(s), forms, and reports.