Database Practical 1 1999-2000

Objectives To create a small database with one table and one form.

(a) In using software, there are often several different ways of producing the same result. I tend to prefer simplicity to generality, and the mouse to the keyboard. The demonstrators are there to help, and ***you should ask if you are in difficulty.*** However, they cannot be expected to know everything. In particular, if you get into difficulties by not following the suggested path, they may be unable to help. Moreover, learning how to help yourself is part of the syllabus!

(b) You should read the whole of this practical sheet before you start, and the whole of each section before you carry it out.

(c) Go into **Windows NT Start** menu and open the **Databases** group, and then open **Microsoft Access 2000** *If you have any trouble with the practical details or the concepts involved in any of this, you should talk to a demonstrator about your difficulties.* **Cancel** the dialog box.

(d) Activate the online help system by choosing **Microsoft Access Help** from the **Help** menu. Scroll to the top left of the **Contents** window. The material in the help system 'books' will be used as a tutorial aid throughout the practicals. Try opening (click +) and closing (click -) some books. You may find it easier to use the Help system with the window maximised to fill the screen. You can alter the split between the Contents window and the help page window if you wish.

(e) Choose the **Creating and Working with Databases** book from the top menu. Read through **Databases: What they are and how they work.** Then choose (from the **Creating and Working with Databases** book) **Create a database.** Follow the instructions under **Create a database without using a Database Wizard** to create a new (blank) database. You should choose an appropriate name; your database is to be for the information on European countries provided. Create your database in the directory **d:\docs** . (This may be the default directory for creating/saving an Access 2000 database.) Note that the Microsoft Access Help window will have to be moved, minimised (i.e. iconised) and later restored, or closed when it gets in the way. Note also that the backwards-pointing arrow on the toolbar will take you back to the previous help screen.

(f) After creating a new database, use the (Help) Contents window to open and then read *Creating and Designing Tables =>**Tables: What they are and how they work***

(g) In the **Database** window for your newly created blank database, make sure that **Tables** are the Objects selected, and double-click the icon **Create table in Design view** to produce a window that allows you to set up the fields of a table by adding them one by one.

(h) Read through the procedure for setting up the design (structure) of a table in this way as described in *Creating and Designing Tables =>Adding Fields and Choosing Data Types =>* ***Add a field to a table in Design view*** You can obtain help on **field names** by putting the cursor in any box for a (prospective) field name and pressing **F1.** Help is similarly available for **data types** and **descriptions.** Choose appropriate **field names** and **data types** for the data provided. If you think any field name needs clarification or explanation, add a **description.** (You are not required to include the area in both the units given - choose *either* square miles *or* square km. You *should* include the information on whether the capital is a seaport - indicated by Neptune's trident -or not.) The only **field properties** you are asked to set are **Field Size,** and a **Format** which includes commas (thousands separators) for numbers. Before you try to save the design of your table, set a **Primary Key** as described in the next section.

(i) Read *Creating and Designing Tables => Working with Primary Keys and Indexes =>* ***What kind of primary key should I use*** and ***…Set or change the primary key*** to help you define a primary key. You should consider your choice and type of primary key field carefully. (You ought to be able to think of a field that will uniquely identify a record, even if other countries appear in Europe, or populations change! Use it!) Set the primary key**. Save** the table design with a sensible name and then you have finished designing your table.

(j) Change to Datasheet view using this button 

(k) Read *Working with data => Adding or Editing Data in a Datasheet or Form =>* ***Add new data in Datasheet or Form view.*** Put two or three records into your table noting that **Access** saves your data automatically as you move to the next record. Close your table.

(l) Go back to the **Help Topics** and read through *Working with Forms =>* ***Forms: What they are and how they work***. In the database window, click the **Tables** tab, then select your table. Click on the **New Object: AutoForm** button  . Note that, although the form appears with the name you have given the table in the title bar of the form window, it has NOT yet been saved. **Save** the form with a meaningful name.

(m) Use your form to add a few more records, using the tab key to move between fields as before.

(n) Close your database. ***Minimise (not close)*** **Access.** Use **Explore My Computer** (on the Windows NT desktop) to find your database file in **d:\docs** . Use the right mouse button shortcut menu to copy it to a floppy and to your central filestore (**m:** drive). ***You need to do one of these things if you are not to leave your database behind when you leave, and lose it in the daily clean-up! Remember that your floppy disk copy is an emergency backup. Do not use this to work from!***

(o) When you have created your table and form, and put in a few records using each of the two methods***, you should get the practical signed off by a demonstrator.*** The demonstrator will ask to see your table and form, and will check some data types, some field sizes, and your primary key. (You may be asked to show some other things as well!)

(p) Go back to your database and make it up to 20 records by whichever means you prefer. Save it and transfer it to your floppy and your central filestore before you leave.

(q) You should keep this practical sheet (and later ones) in a *practical file* that you should bring with you to all your practicals, so that you can refer back to the techniques used in previous practicals if necessary. You should also include any printouts you are asked to produce, so that you build up a collection of examples.

(r) You should now have met the concepts:

- field
- record
- data type
- field property
- primary key

If you don't know what any of the above is, you should discuss this with a demonstrator.

To print PowerPoint slides from the CS10610 Web page

(a) Use **Netscape Navigator** ***(NT Start menu / Network Access / Netscape Communicator)*** to find the CS10610 Web page:

`http://www.aber.ac.uk/~dcswww/Dept/Teaching/Courses/CS10610/`

Click the link to attempt to open the page containing the slides you want. (At the time of writing, only the *Introduction* is available.)

(b) Choose to **Save it to disk,** NOT to *Open it.* I suggest that you do so in the directory **D:\docs.**

(c) Open **PowerPoint (NT Start menu / Graphics / Microsoft PowerPoint 2000)** and use it to **Open** the file that you saved.

(d) **Print** (**File** menu) will bring up the **Print** dialog box. You should choose an appropriate printer. I suggest you choose **Handouts** in ***Print What*** and **6** in ***Slides per page.*** **OK** to print. (You may choose to print **Outline view** instead of Handouts, but any graphics on slides will be lost.)

(e) Note: **Internet Explorer** is *Information Services* preferred browser, and **Netscape** is not supported. However, at the time of writing the browsers are so configured that this is the only way I know to print PowerPoint slides several to a page.