

Exercise 2: The QES-REC-CHK triplet

At the end of this exercise you should be able to:

- a. Create and edit a questionnaire file (*.qes).
- b. Make record file (*.rec).
- c. Make and edit a check file (*.chk).

Understand the QES-REC-CHK triplet and how the three are related to each other.

You are now ready to start with the design of the questionnaire in EpiData Entry, based on your data documentation sheet.

Open EpiData Entry by double-clicking the icon on your desktop or single-clicking the icon in your quick-launch task bar. You see the EpiData Entry task bar on top of the screen. It has three rows. For the time being we concentrate only on the middle row that shows the following sequence (this is called the “Process bar”):



Each of these has a menu which you see when you click on the box. You can see immediately where you have to start.

Step 1: Creating the *.QES file

If you click on “**1. Define data**” (or using the shortcut **ALT+1**) the menu with two options pops up: “New .QES file” and “Open .QES file”. EpiData questionnaire files have the extension “*.QES”. As you must now create a questionnaire file, click “New .QES file” and the empty screen ready for writing opens.

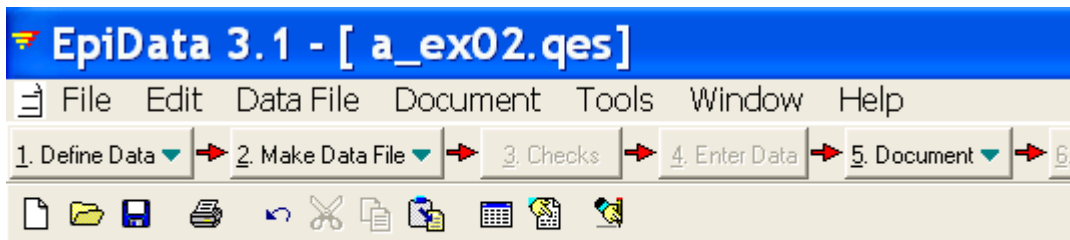
Start to type like in any word processor the following:

```
This is the questionnaire for the laboratory register
```

```
serno
```

Let’s save this right away as **A_EX02.QES** (shortcut: **CTRL+S**).

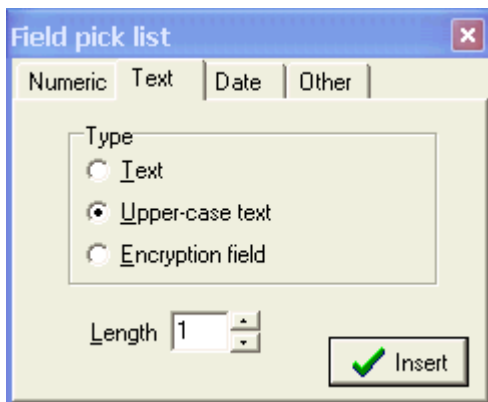
We have to associate now two things with this field, the type of field and the field length. In the top menu line you see “Edit”.



This is the questionnaire for the laboratory register
serno |

Note: While EpiData Entry is not case-sensitive (that is, you may use upper-case or lower-case), some statistical packages are case-sensitive (“sex” is not identical to “Sex” or “SEX”). You are on the safe side if you make it a habit of using always lower-case for field names. See also “File” “Options” “Create Data File” to force lower-case in the data file.

Click on it to get the drop down menu. However, we encourage you to learn the shortcuts without using the mouse. If you click the **Alt** key, you see that each of these menus has one letter underlined. In this case it is the E in Edit. Thus **Alt+E** is a fast way to see the drop down menu. In it, you see “Field pick list **CTRL+Q**”. Pick it by typing “f” twice in sequence and the Field pick list box opens. Our field is a text field. You see that there are three types:



Text: using this type you may enter upper or lower case letters or a mixture of cases, and the value will be exactly as you entered it.

Upper-case text: if you enter a lower-case letter from your keyboard, it will automatically be converted to upper case. This is often very useful as the field value “m” is not the same as “M” and we would get a counting for each of these values depending of the data entry person’s preference. *We will thus use this option for now.*

Encryption field: this is a powerful tool if you enter information like personal identifiers that should be openable only by persons with access to a password. More on data encryption later in this course.

Choose now Numeric and a field length of 4. Make sure that you have a space between the field name and the field type / field length:

```
serno ####
```

You will complete the questionnaire later in the Tasks. For the time being, let's leave it with just this one field and save the questionnaire as A_EX02.QES (the extension .QES is automatically supplied).

2. Make Data File ▼

Step 2: Making the *.REC file

We have now the QES file, and this provides the information on field definitions for the data file. **Alt+2** opens the drop down menu to pick the Make data file sub-menu which opens the “Create data file from *.QES file” dialogue box. The name of the *.QES file is already there and the same file name (with the *.REC extension) is proposed. That is very sensible, it should be so, and it must be so, and we accept this. We are now prompted to enter a description. This is not necessary but it is helpful documentation. Thus we type in for instance “Exercise 2” and we are informed that the A_EX02.REC has been created.

3. Checks

Step 3: Making the *.CHK file

With **Alt+3** we open the dialog box “Select data file for checks”. The A_EX02.REC is suggested and that is the file we need. Thus open it. The entry screen appears with one variable and a box showing that we have indeed now the third file A_EX02.CHK.

It shows the field SERNO and that this is a Numeric field. It also shows different things we could modify for the checks of this field:

Range Here you can enter all legal values, i.e., the Range defines what values the data entry person is allowed to enter. In the case of the unique identifier, there will, by definition, be as many as there are individuals on whom information has to be entered. It does therefore not make any sense to define legal values for the variable SERNO. Examples of legal values for the variables SEX and REGDATE could be:

```
M, F, 9  
01/01/2000-31/12/2005, 01/01/1800
```

Jumps You could determine here if a subsequent field should be skipped if the current value takes a certain value. For instance, you may have the value “M” for male and the value “F” for female in the field SEX. If the person is female, you might ask how many pregnancies (variable, e.g., PREGNO) she has had, but if the person is male, you would obviously not ask this question. Thus, you would jump (bypass) the question about pregnancies in case the study subject is male and go in that case to the field after pregnancies which might be AGE. To tell that a jump is needed in case the value of the field SEX is “M”, you would simply type:

M>age

In the case of the field SERNO, no Jumps are needed, and we will leave this open.

Must enter Here you define whether information must be entered or not. If you state that it must be entered, values for the following field cannot be entered unless the current one has a value entered. In the case of the field SERNO, we will require that it is entered. Choose thus “yes” from the drop-down menu at the right. You will therefore not have any missing values for this variable. **Note: in this course, we will always use Must enter fields** (except for automatically calculated variables).

Repeat Here you can specify whether a value for the field should be repeated in all subsequent records, unless you choose to overwrite. This comes in handy when you make a file for a specific district, and the district name in this file is always the same. For the field SERNO this is obviously not the case.

Value label If we code, e.g., the value “female” for the field SEX with “1” and the value “male” with “2”, then it could prove useful to label it so that an explanation appears that “1” stands for “female” and “2” for “male” to reduce data entry errors. This will be shown in the next exercise. It will make the life of the data entry person so much easier.

You are reminded to save by clicking on ‘save and close’ after working on checks.

Tasks:

- o Open the existing A_EX02.QES file and complete it.*
- o Create the A_EX02.REC file (overwrite the existing one).*
- o Edit the A_EX02.CHK file, make all fields Must enter fields, and try to enter legal values where appropriate (and as defined in the data documentation sheet).*