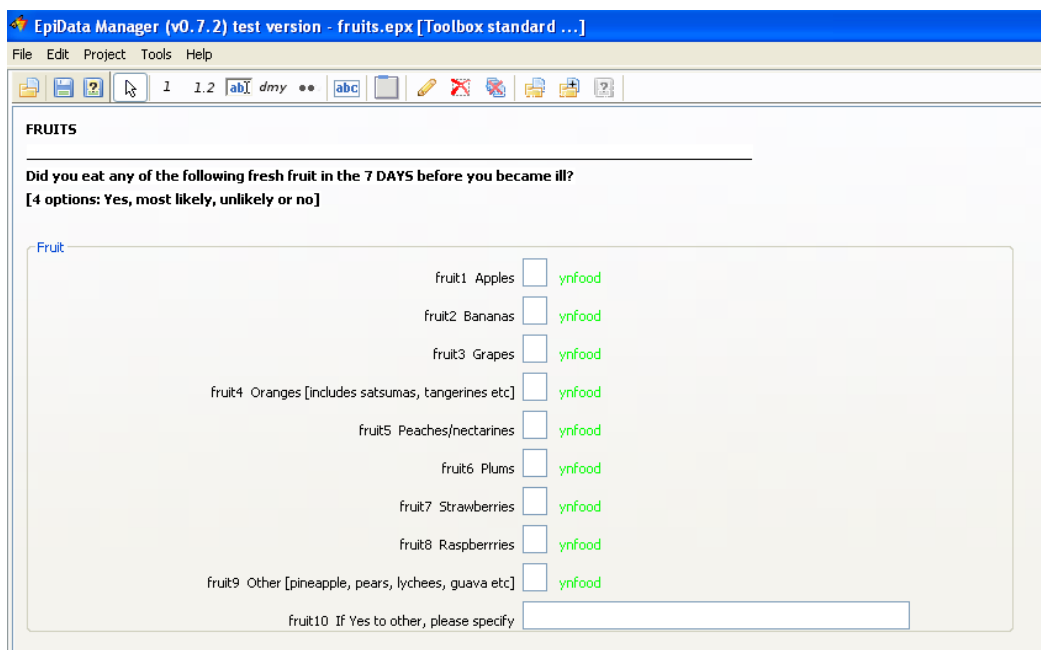# How to make questionnaire template files

The EpiData questionnaire template files - the .epx files - can be produced from flat files with a specified structure. To do this you'll need a special program, the Template-Builder, which is included here. Also you'll need to know how to structure the flat files (.txt files). This is all explained in this document.

Structure of the templates

First a little guidance as to how the templates are structured. They contain *fields, sections, headings* and a *title* plus *valuelabels*. See the figure below and Fig 2, next page.

Figure 1. Example of a questionnaire based on a single template. The EpiData Manager programme was used to open the file and then this screen dump was made.
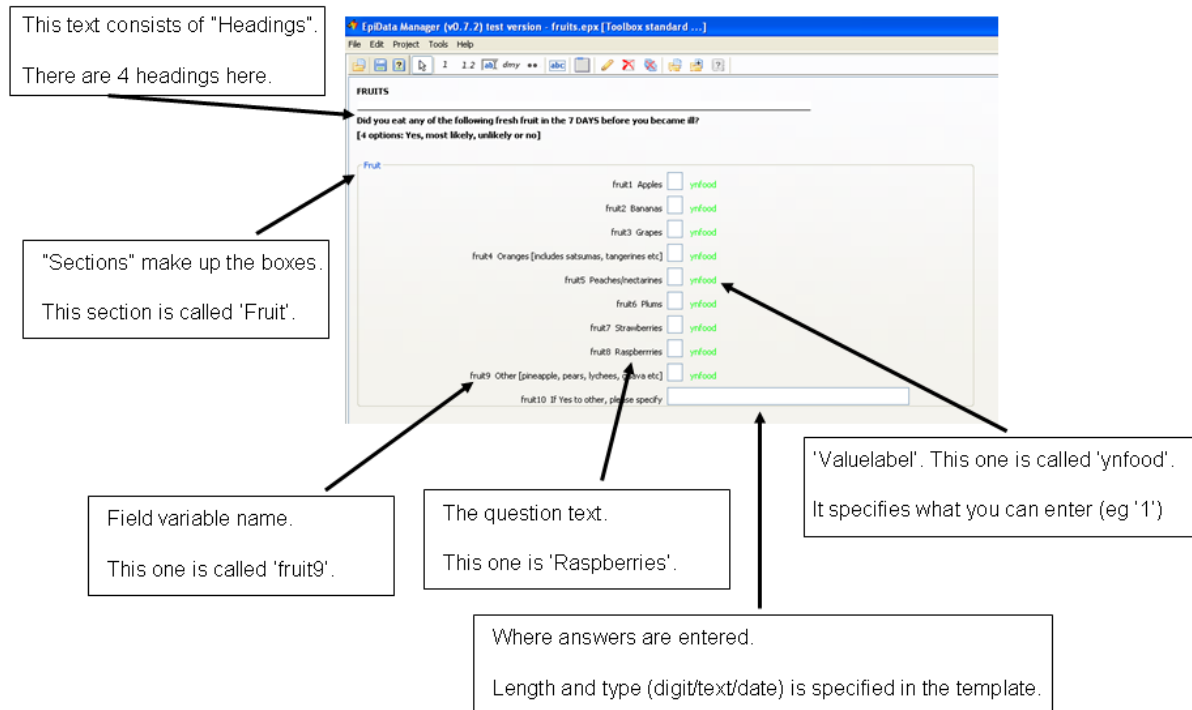
Figure 2. Same template as in Figure 1, but here with the structural elements outlined.

Figure 2 shows where the different elements go on the template. The text file that you make must contain all these elements. In addition to the fields, sections, headings and valuelabels, the text file should also have a Title. This is just a single line which should be placed in the very beginning of the file. The information in this title is not shown.

In short, the elements are:

- Fields. Contain the actual questions.
- Sections. A box in which one or more questions (i.e. fields) are grouped.
- Headings. Text printed in bold above the sections.
- Title. A single line in the beginning; this text is not shown.
- Valuelabels. A format that specifies what can be entered and the corresponding labels. For instance a valuelabel may define that the user can enter '0' meaning 'No' and '1' meaning 'Yes'.

How to make a txt template file

To make a template you first write a txt file. In Windows this can for instance be done using the Notepad program or the Wordpad program (found under 'Accessories' in the 'All programs' menu under 'Start'). You can also use other programs; what is important is that the file is coded using **UTF-8.** Otherwise it will not be understood correctly by the Template-builder.

The resulting file will have the suffix '.txt'. In this file, the variables should be separated by spaces. Most variables should be placed in "".

Remarks or comments may be inserted in the txt file – they should begin with the sign "#". If the Template-builder sees a line beginning with # it will simply skip it.

As an example we'll make a very basic questionnaire. It consists of one heading, one section, one question (field) and a valuelabel specifying that 'Y' means 'yes', 'N' means 'No' and '?' means 'Don't remember'. The resulting questionnaire (.epx file) looks like this (when opened with EpiDataManager):
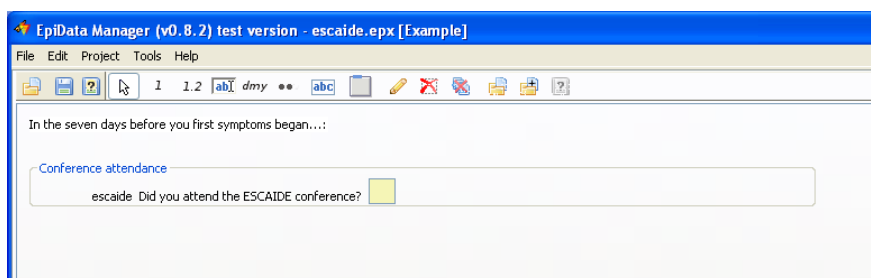
Figure 3. A very simple test questionnaire.

The txt file used to create this .epx file is shown below. If you wish, you may copy it into Notepad and use it to create the .epx file yourself (see below).

```
# "****** Make Title ******"
"title" "en" "Example"


# "****** Make Valuelabels ******"
"valuelabel" "yn" "s" "y" "Yes"
"valuelabel" "yn" "s" "n" "No"
"valuelabel" "yn" "s" "?" "Don't remember"


# "***** Make Heading ******"
"heading" "main" "h1" "In the seven days before you first symptoms began...:"


# "***** Make Section ******"
```

```
"section" "conf" "Conference attendance" 500

# "***** Make Field ******"
"field" "conf" "s" 1 "escaide" "Did you attend the ESCAIDE conference?" "yn"
```

Figure 4. The lines that when saved as a .txt file can be used to produce the questionnaire shown in Fig 3.

Syntax

The syntax is explained in full in an EpiData document which is included here and may also be found at the EpiData website here. In brief, the syntax is as follows:

Title
1. This line must begin with the word "title".
2. Code for language. English = "en".
3. The text you want to enter, in "". It will not be shown in the data entry file.

Valuelabels
1. All lines must begin with the word "valuelabel".
2. Then follows a name (which you choose). It will not be shown in the data entry file.
3. The code for the type of character that can be entered (there are three types, "s" = text (string), "i" = number (integer) and f = number with decimal points in (float).
4. Next you specify what you enter. If it is text (i.e. "s") it should be put into "", but if it is a number (i.e. "i") it shouldn't.
5. Finally the label, i.e. what the value should be shown as. Normally some kind of text.

Headings
1. All lines must begin with the word "heading".
2. Must be followed by "main". It will not be shown in the data entry file.
3. The name of the heading. For instance "h1" for the first and "h2" for the second (if there are several). If the same name is used several times, the Template-builder will automatically rename them.
4. The text you want to enter; in "".

Sections
1. All lines must begin with the word "section".
2. Then follows a name (which you choose). It will not be shown in the data entry file. However, it must be the same as used in the field code below.
3. The text you want to enter (which you choose freely), in "". This will be shown as the 'box text'.
4. The size of the box in pixels, ie the width of the box. The height will be calculated automatically by the Template-builder depending on the number of fields.

Fields
1. All lines must begin with the word "field".
2. Then follows a name (which you choose). It will not be shown in the data entry file. However, it must be the same as used for the section which contains it (above, point 2).

3. The code for the type of character that can be entered. There are several possibilities, please see the long guide. The most often used are: "s" = text (string), "i" = number (integer) and d = date (in DMY format).
4. Length of the field (for instance, if the questions concern age, you'd probably want to enter 3 (and use "i")).
5. Field name, i.e. the variable name… i.e. the name of the column in the table that results when you enter data.
6. Text of the question.
7. The Valuelabel that should be used. Must have been specified above.

How to transform the .txt files to .epx files

The EpiData template-builder programme will do this for you. This programme is also called EpiDataCMD. It is included here (in the Windows version) and is also available from the EpiData website, see under EpiData Command Line Tool.

In order to use the programme, you'll need to put it in the same folder as the .txt file you wish to transform. You can then use it doing either of two things. You can use the Windows 'Command Prompt' or make a .bat file. The second option (which we think is the simpler one) is explained first:

What you do is to again make a .txt file. It should contain a short series of commands which in the most basic form looks like this:

```
epidatacmd template -i <input-file> -o <output-file>
```

The word '**epidatacmd'** evokes the programme and the command '**template'** starts the programme template builder function. '-i' followed by a file name specifies the input file and . '-o' followed by a file name tells the program what to call the resulting .epx output file.

As an example we can use the file shown in Fig 4 to form the questionnaire shown in Fig 3. First the text in Fig 4 should be copied into the Notepad text editor and saved. For instance save it, calling it 'escaide.txt'. The command line would then be:

```
epidatacmd template -i escaide.txt -o escaide.epx
```

Now, make a txt file containing this line. Then save it as a .bat file. Simply choose 'Save as' and enter '.bat' after the file name. For instance call it 'make_escaide.bat'. Then double click on this file and the .epx file will be created within the same folder.

You can add several extra commands to the .bat file. To see the different possibilities, please consult the long EpiData document. One thing which is very handy though, is a command for deciding where on the page the questions should begin. The command --fieldleft=*number* will move the questions as many pixels to the right as specified – the default value being 300 pixels. Also ending with the command 'pause' will keep the command prompt window open. This is useful if there are errors in

the .txt file because error messages will be shown which can help you to figure out what was wrong. So if you for instance write:

```
epidatacmd template -i escaide.txt -o escaide.epx --fieldleft=400
pause
```

Then the prompt window will stay open and the field where the answer can be entered will be moved 400 pixels to the right; 100 pixels further than if this command had not been included.

You can have several command lines in the same .bat file. That means that you can very quickly create or modify a large set of .txt files into .epx files. Note that you need to first delete existing .epx files if you wish to make new files with the same name.

If you want to use the Windows Command window directly (instead of making a .bat file) you should:

1. Open a DOS terminal (the prompt window) by going to 'Start', 'All programs' and 'Accessories'.
2. Make the folder where your .txt file and the Template Builder programme is located your "active folder": for instance write: "cd c:\data\toolbox\templates" and then press Enter. The command 'cd' means 'change directory'.
3. Enter the commands, i.e. now write for instance:
    ```
    epidatacmd template -i escaide.txt -o escaide.epx --
    fieldleft=200
    ```

Note that there are several additional possibilities. For instance you can quite easily incorporate the formation of jumps directly into the .txt file. For this, please consult the EpiData guidance [document](#).

One last example

As a final example, the code below (Fig 5), when saved in UTF-8 format as a file called poultry_eks.txt can give you the .epx template poultry_eks.epx shown in Fig 6, after invoking the file make_example.bat which contains the commands:

```
epidatacmd template  -i  poultry_eks.txt  -o  poultry_eks.epx  --
sectionleft=10
--fieldleft=500 --backuponclose --showvaluelabels
pause
```

"title" "en" "Toolbox standard file for food items"

"****** Definition of Valuelabels ******"

"valuelabel" "ynfood" "i" 1 "Yes"
"valuelabel" "ynfood" "i" 2 "Likely"

```
"valuelabel" "ynfood" "i" 3 "Unlikely"
"valuelabel" "ynfood" "i" 0 "No"


"valuelabel" "ffu" "i" 0 "Bought fresh"
"valuelabel" "ffu" "i" 1 "Bought frozen"
"valuelabel" "ffu" "i" 9 "Don't know"



# "***** Definition of Heading(s), section(s) and fields: *****"

"heading" "main" "h1" "POULTRY"
"heading" "main" "h2" "_____"
"heading" "main" "h3" "Did you eat any of the following foods in the X days before you became ill?"
"section" "poultry" "poultry"  1000
"field " "poultry" "i" 1 "poult1" "Hot chicken [eg roasts, casseroles, curries, pies, nuggets etc]" "ynfood" "show"
"field " "poultry" "i" 1 "poult2" "Cold chicken [eg coldcuts in sandwiches/baguettes, salads etc]" "ynfood" "show"
"field " "poultry" "i" 1 "poult3" "Chicken liver pâté/parfait" "ynfood" "show"
"field " "poultry" "i" 1 "poult4" "Hot turkey" "ynfood" "show"
"field " "poultry" "i" 1 "poult5" "Cold turkey [eg sandwiches/baguettes, salads etc]" "ynfood" "show"
"field " "poultry" "i" 1 "poult6" "Other poultry [eg duck, goose, guinea fowl, quail, partridge etc]" "ynfood" "show"
"field " "poultry" "s" 30 "poult7" "If YES to other please specify [specify, eg quail, partridge]"

"heading" "main" "h4" "If YES, was it bought as fresh or frozen?"
"section" "poultry2" "poultry2"  1000
"field " "poultry2" "i" 1 "poult10" "Whole chicken" "ffu" "show"
"field " "poultry2" "i" 1 "poult11" "Chicken portions" "ffu" "show"
"field " "poultry2" "i" 1 "poult12" "Whole turkey" "ffu" "show"
"field " "poultry2" "i" 1 "poult13" "Turkey portions" "ffu" "show"
"field " "poultry2" "i" 1 "poult14" "Whole duck" "ffu" "show"
"field " "poultry2" "i" 1 "poult15" "Other " "ffu" "show"
"field " "poultry2" "s" 30 "poult16" "If YES to other please specify [specify eg quail, partridge]"
```

Figure 5. Example of text file code. It will form the template shown below.
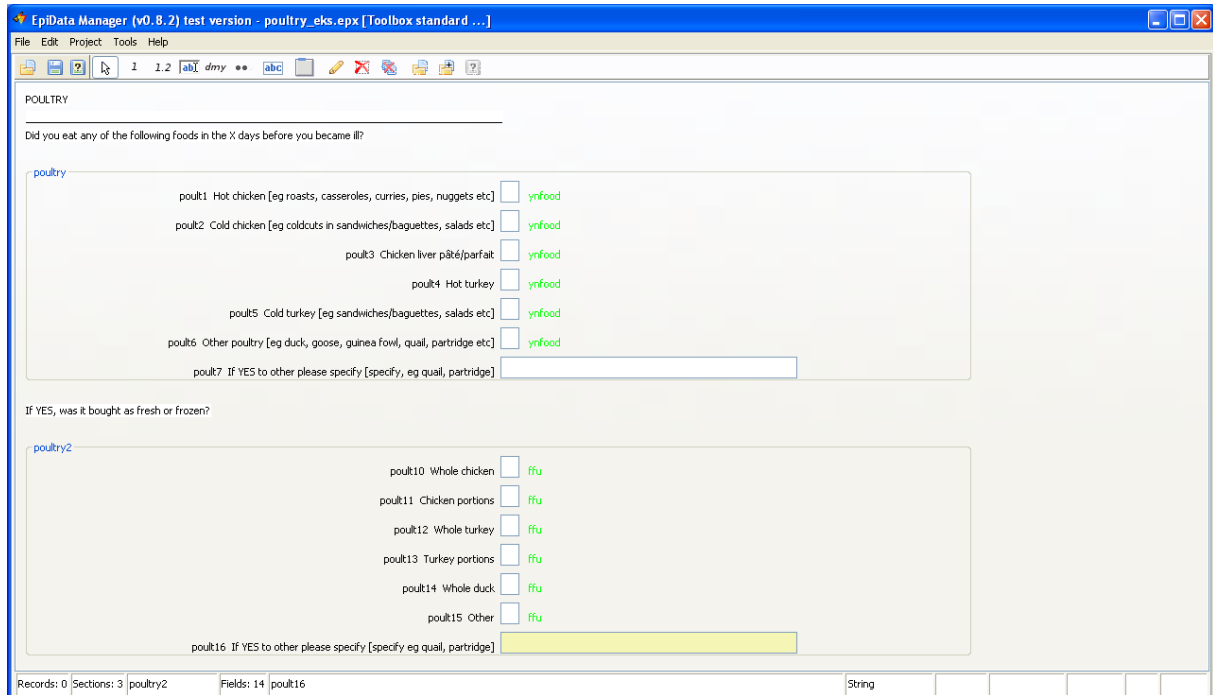
Figure 6. The resulting .epx file as shown after opening it using the EpiData Manager.