Block 1: From questionnaire to SPSS saved file

1.4.2: Labelling your values in SPSS [30 November 2010]

Previous session: 1.4.1 Labelling your variables in SPSS

In the previous exercises we defined our variables, fed the raw data into SPSS and created the first edition of our SPSS saved file **myclass1.sav** in folder **myclass** Next we enhanced the data dictionary by adding labels to our **variables** and saved the SPSS Data Editor as **myclass2.sav**. We now need to add labels to the **values** of our categorical and ordinal variables, so that tables and other output can be more easily understood. If we do this carefully, much of our output will be ready for copying direct into reports with little or no need for subsequent editing.

Now let's put the labels on the **values** for each variable.

VALUE LABELS

To label individual values for a variable or list of variables you use the **VALUE LABELS** command.

General format:

```
VALUE LABELS      < variable name(s) >  <value1>  ' <label1> '
                                        <value2>  ' <label2> '
                                          ~ ~ ~ ~
                  / < variable name(s) >  <value1>  ' <label1> '
                                          ~ ~ ~ ~ .
```

You can label values for one or more variables within the same command, but each new variable or variable list must be separated by a forward slash. (In older versions of SPSS the labels could only be up to 20 characters in length, but in practice it was better to use 16 as, when printing contingency tables, the column captions were formatted in two groups of 8[1] with a wrap-around – very bizarre). The Windows version can handle longer labels, but these affect the layout of eventual tables, so we'll stick to fairly short labels for now. As with variable labels, the value labels must be enclosed in single primes[2] (apostrophes).

Some SPSS manuals and textbooks put several value labels on a single line. This may have saved cards, computer time and money in the old days, but it is better to use a separate line for each value, which is much easier to read and check for errors. This also helps if you want to copy lines from one part of the file to another, as variables often have some, but not all, labels in common. Again, the labels look much nicer and are easier to read on output in mixed upper and lower case, so you could write:

```
value labels    sex       1  'Male'
                          2  'Female'
                /v759     1  'Yes'
                          2  'No'
                          3  'Depends'  .
```

[1] Older versions of SPSS could print only the first 40 characters of variable labels and the first 20 of value labels (only 16 in two blocks of 8 for column headings in tables). The labels in this file conform to this convention, but SPSS for Windows can handle more, except for multiple response. However some of the examples retain my 2 x 8 format for value labels.

[2] It is best to type primes (apostrophes) directly into the SPSS syntax window or into Wordpad or Notepad: if you try to copy them from a Word *.doc file, they will be interpreted as "smart" quotes and cause an error.

The character count starts at the first printing character after the opening prime, including any initial spaces. Variables with the same value labels can be specified with single set of labels eg:

```
value labels   v120 to v127 v248 v340
                    1 'Yes'
                    2 'No' .
```

Remember that everything in the specification field is what we call free format, so provided you leave at least one space at the beginning of the line, you can carry on for as many lines as you like as long as you don't split a variable name or a variable **TO** variable list across lines.

With both variable and value labels, you may sometimes want to include a **prime** (apostrophe) in the label itself. To do this, you have to use **double primes** to enclose the text you want to see on your output: e.g.

```
value labels   v759   1  'Yes'
                       2  'No'
                       3  'Depends'
                       9  "Don't know"          [my pink double primes]
```

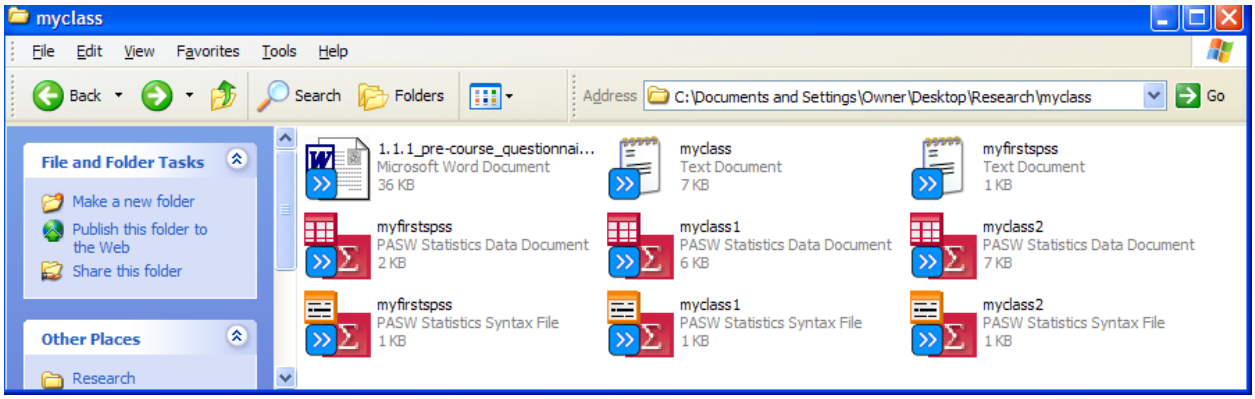
If your values are **alphabetic**, the value has to be enclosed in primes as well: e.g.

```
value labels   sex     'F'  'Female'
                       'M'  'Male'
```

To continue with our example, we can now extend the file to include labels for the values of each variable. They are slightly more extensive to write than variable labels and, again, it's easier to spread the instructions out with tabs[3] to keep everything clear and to find any errors later. Once you get used to it, you can do things more quickly just using spaces, provided you remember to leave at least one space at the beginning of each continuation line.

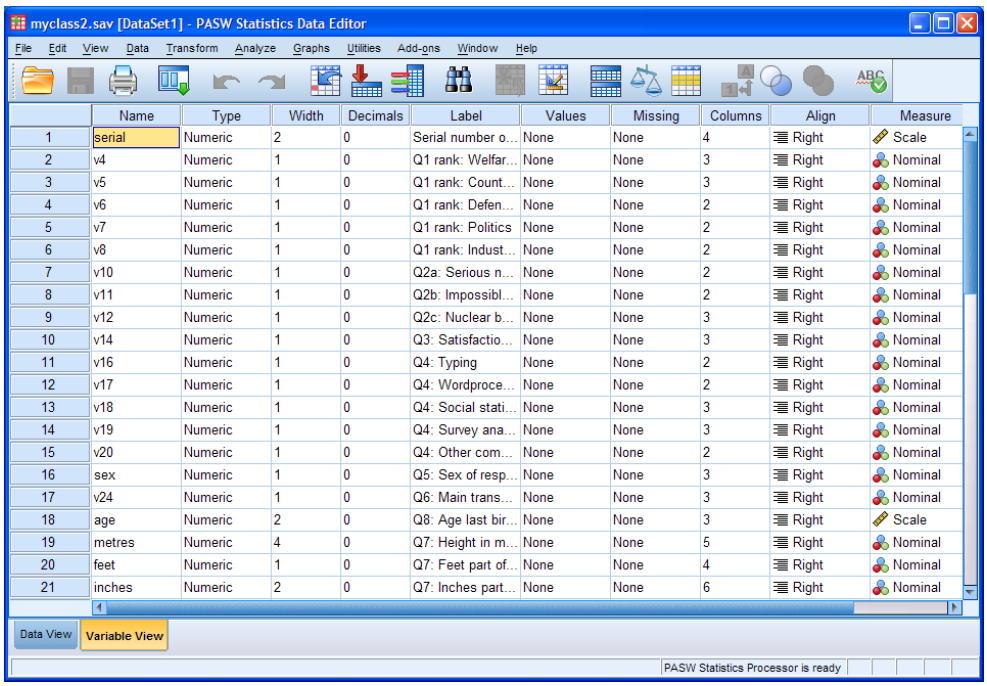
By now you may have noticed that SPSS ignores upper and lower case in commands and variable names, so it doesn't matter how you write them. Later on, you'll realise that SPSS only normally reads the first few letters of **commands**, **sub-commands** and **keywords**, which makes it even quicker to write instructions, but for now we'll stick to full text, but allow ourselves to work in lower case.

Open folder **myclass**

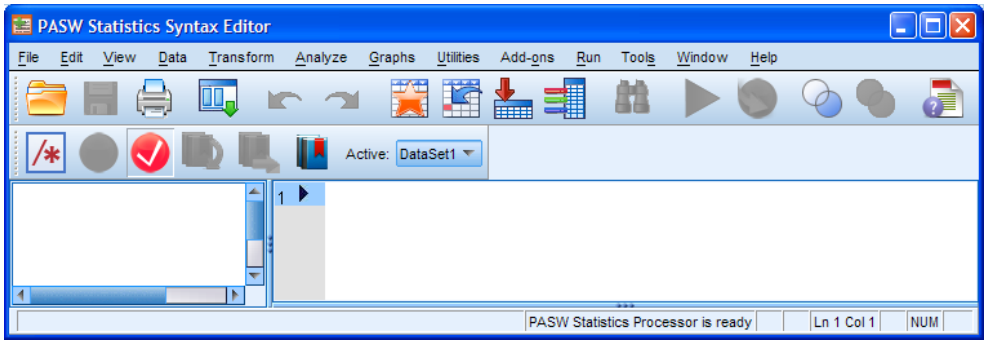


..and double click on **myclass2.sav**

[3] SPSS 15 copies tabs across correctly from Word *.doc files: SPSS/PASW 18 doesn't, so it's best to use spaces instead (or compose your syntax files in Wordpad or Notepad).



Click on File > New > Syntax to open a new syntax editor:



.. and type in your instructions.

[NB: Not all variables need value labels (ie **serial**, **age**, **metres**, **feet**, **inches**).]

Try to do it all yourself, or copy the first few lines below ...

```
value labels
        v10 to v12
                1 'Very  likely'
                2 'Quite  likely'
                3 'Not very likely'
                4 'Not   likely'
        /v14    1 'Very  satisfied.'
                2 'Quite  satisfied.'
                3 'Neither'
                4 'Quite  dissatisfied'
                5 'Very  dissatisfied'
```

… and then do the rest yourself without looking at the next page!

Whilst you are typing, SPSS will display your text in **red** until elements of the syntax are complete: if you miss a prime or forget the full stop, part or all of your text will still be **red**.

Syntax for value labels

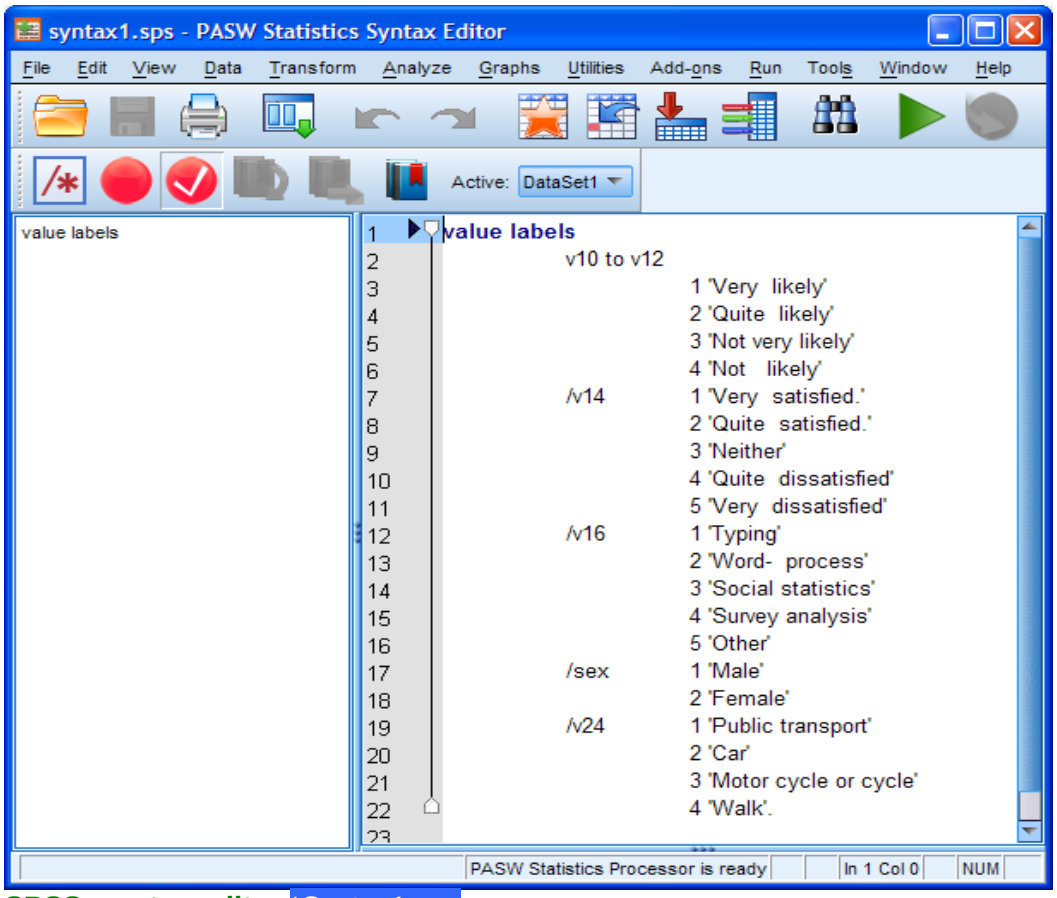
```
value labels
   v10 to v12
         1 'Very  likely'
         2 'Quite  likely'
         3 'Not very likely'
         4 'Not   likely'
   /v141 'Very  satisfied.'
         2 'Quite  satisfied.'
         3 'Neither'
         4 'Quite  dissatisfied'
         5 'Very  dissatisfied'
   /v161 'Typing'
         2 'Word-  process'
         3 'Social statistics'
         4 'Survey analysis'
         5 'Other'
   /sex1 'Male'
         2 'Female'
   /v241 'Public transport'
         2 'Car'
         3 'Motor cycle or cycle'
         4 'Walk' .
```

Type this syntax carefully into the SPSS syntax window, leaving at least one space in the first column of the continuation lines. Make sure you type all the single primes (apostrophes) and don't forget the full stop (period) at the end.

You can put the labels on the same line as the variable names and you can put more than one label on the same line. I've done it like this to make it clearer. Once you're inside the SPSS syntax editor you can use the tab key →| to indent.

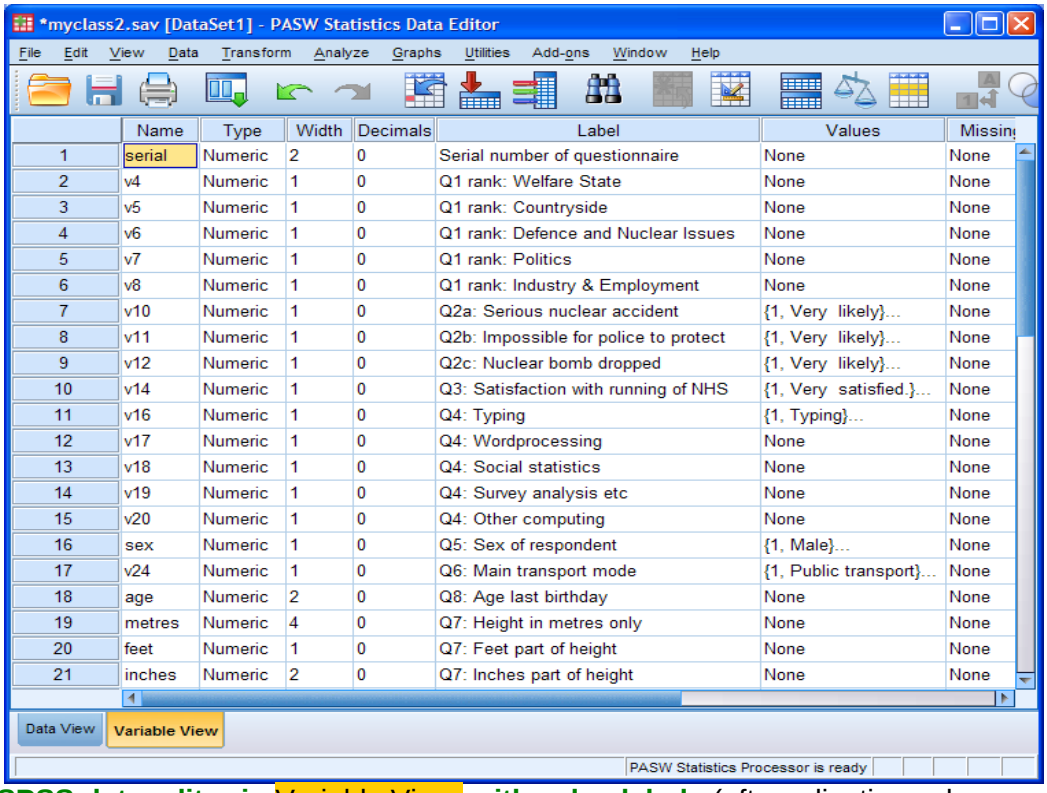
Don’t forget the full stop (period) at the end!

When you've finished, your syntax editor should look something like this:



SPSS syntax editor *Syntax1.sps

Click on ▶ to run the job, correct errors (if any) as before, then go back to the **Data Editor**:

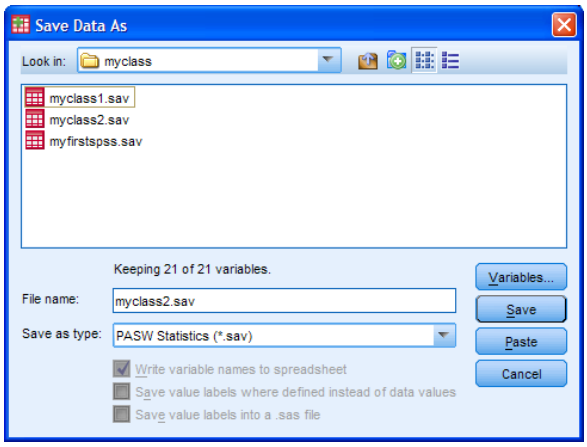


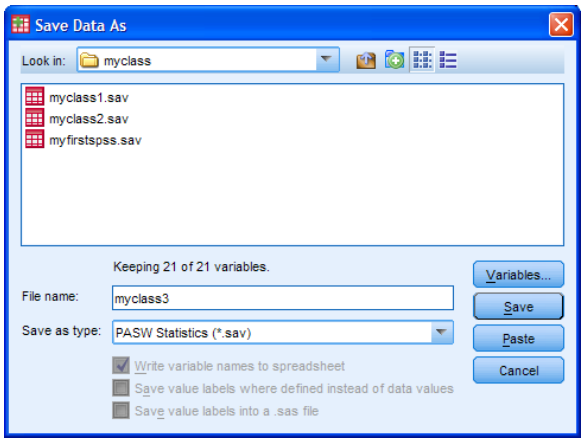
	Name	Type	Width	Decimals	Label	Values	Missing
1	serial	Numeric	2	0	Serial number of questionnaire	None	None
2	v4	Numeric	1	0	Q1 rank: Welfare State	None	None
3	v5	Numeric	1	0	Q1 rank: Countryside	None	None
4	v6	Numeric	1	0	Q1 rank: Defence and Nuclear Issues	None	None
5	v7	Numeric	1	0	Q1 rank: Politics	None	None
6	v8	Numeric	1	0	Q1 rank: Industry & Employment	None	None
7	v10	Numeric	1	0	Q2a: Serious nuclear accident	{1, Very likely}...	None
8	v11	Numeric	1	0	Q2b: Impossible for police to protect	{1, Very likely}...	None
9	v12	Numeric	1	0	Q2c: Nuclear bomb dropped	{1, Very likely}...	None
10	v14	Numeric	1	0	Q3: Satisfaction with running of NHS	{1, Very satisfied.}...	None
11	v16	Numeric	1	0	Q4: Typing	{1, Typing}...	None
12	v17	Numeric	1	0	Q4: Wordprocessing	None	None
13	v18	Numeric	1	0	Q4: Social statistics	None	None
14	v19	Numeric	1	0	Q4: Survey analysis etc	None	None
15	v20	Numeric	1	0	Q4: Other computing	None	None
16	sex	Numeric	1	0	Q5: Sex of respondent	{1, Male}...	None
17	v24	Numeric	1	0	Q6: Main transport mode	{1, Public transport}...	None
18	age	Numeric	2	0	Q8: Age last birthday	None	None
19	metres	Numeric	4	0	Q7: Height in metres only	None	None
20	feet	Numeric	1	0	Q7: Feet part of height	None	None
21	inches	Numeric	2	0	Q7: Inches part of height	None	None

SPSS data editor in Variable View with value labels (after adjusting column separators)

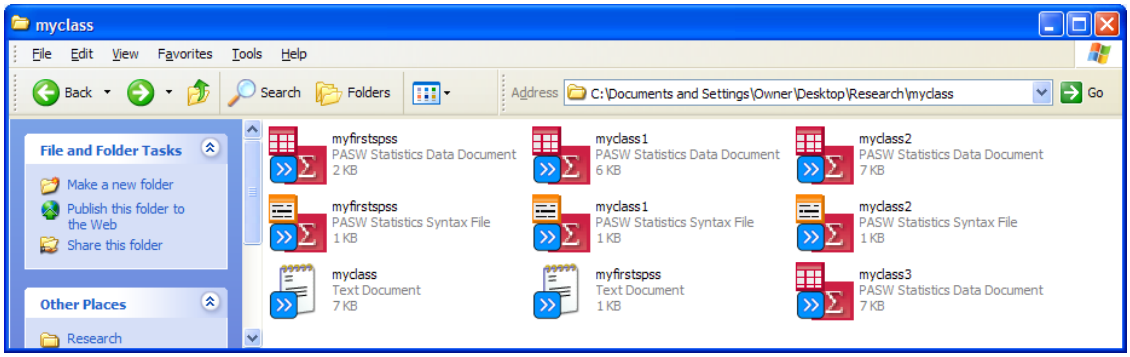
At this stage you should **save your work again**!

File > Save As ... Change **myclass2** to **myclass3** in the File name: box





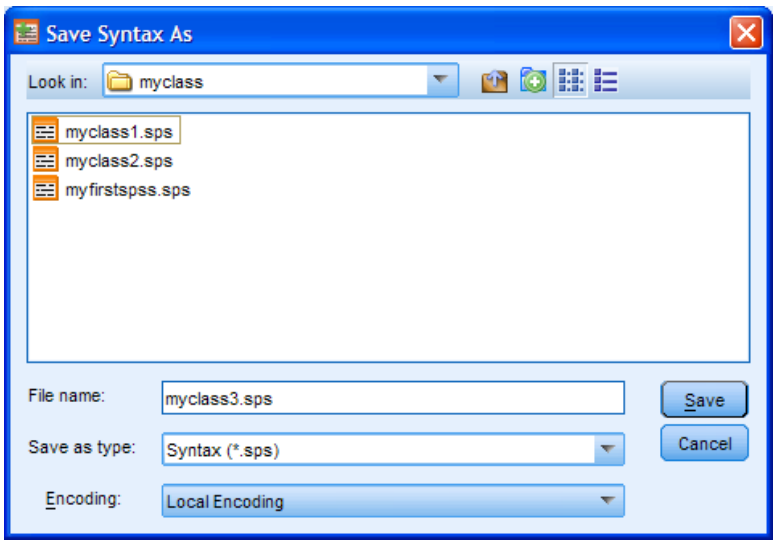
and press Save



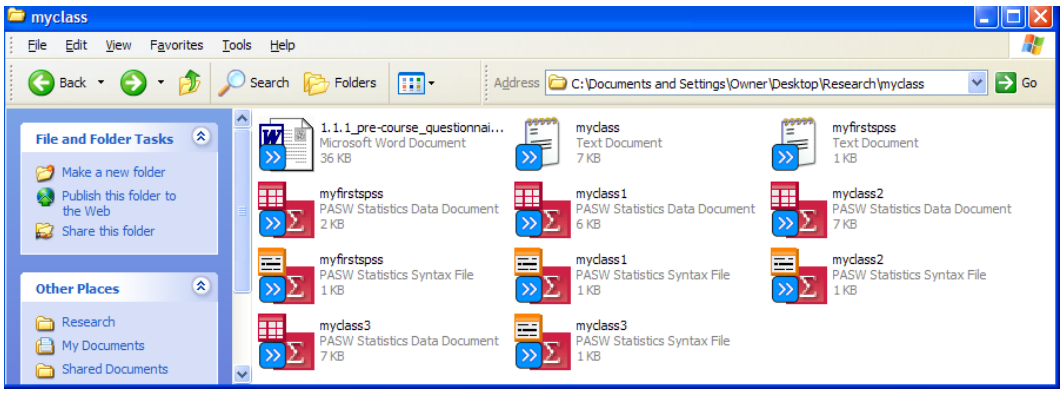
Don't forget to save your syntax file as well.

Go back to the syntax file and click on File > Save As ...

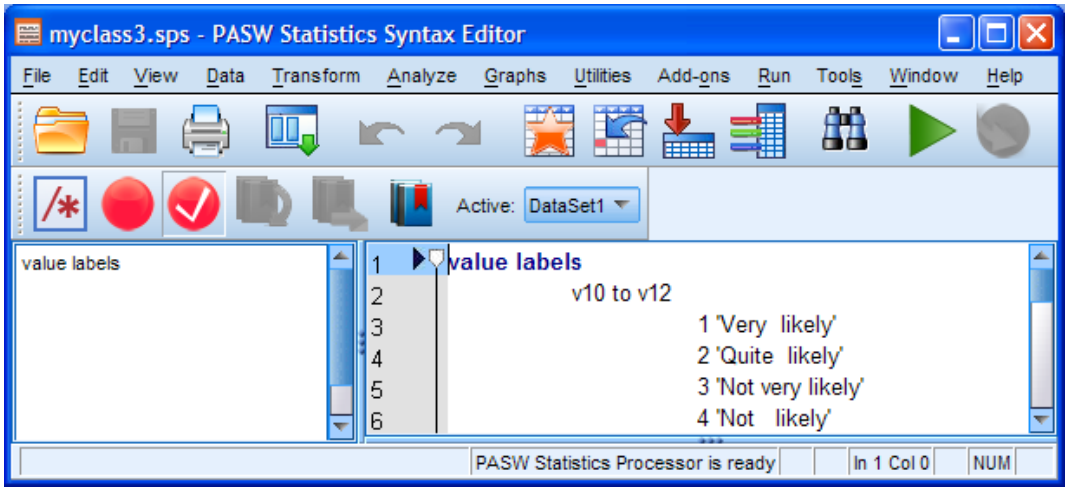
Navigate to folder **myclass**



There already three previously saved ***.sps** files in the folder. Write **myclass3** in the File name box, make sure that the Save as type box displays Syntax (*.sps), and click on Save



The syntax file name will change from **Syntax1.sps** to **myclass3.sps**



Although we don't really need value labels for the ranking of items at Q.1, we can add them later by using **add value labels**. This applies to any later amendments to labels, so you don't need to worry about getting them all present and correct on the first run. Sometimes it might be easier to add or edit them directly inside the Data Editor. The syntax is the same as for **value labels**:

```
add value labels
        v4 to v8 1 'First' 2 'Second' 3 'Third' 4 'Fourth' 5 'Fifth'.
```

Just write the above lines at the end of the syntax file, click on ▶ to run the job and repeat the process of saving the syntax file **myclass3.sp**s and Data Editor **myclass3.sav** in folder **myclass**. If the files have already been saved with these names you can just click on the screen icon or press **[CTRL]+S** to save them again.

Checking the contents of your Data Editor

Provided you have not made any errors in your SPSS runs, you can print hard copies of the SPSS ***.sps** and ***.spo** output file(s) but the latter can get a bit cluttered with unwanted bits and it's often easier to copy sections of the output into a separate Word document.

For now you can check what's in your Data Editor by using **display dictionary** to generate output for your hard copy file, but the full printout is cumbersome and has information superfluous for beginners.

Here's an example of output from **display dictionary .** :

Display of dictionary information from SPSS saved file myclass3.sav

(edited to save space and to retain only variable and value labels: full format includes Measurement Level, Column Width, Alignment, Print Format, Write Format.)

List of variables on the working file

Name		**Position**
SERIAL	Serial # of questionnaire	1
V4	Q1 rank: Welfare State	2
V5	Q1 rank: Countryside	3
V6	Q1 rank: Defence and Nuclear Issues	4
V7	Q1 rank: Politics	5
V8	Q1 rank: Industry & Employment	6

(V4 to V8) Value Label
1 First
2 Second
3 Third
4 Fourth
5 Fifth

V10 Q2a: Serious nuclear accident 7

Value Label
1 Very likely
2 Quite likely
3 Not very likely
4 Not likely

V11 Q2b: Impossible for police to protect 8

Value Label
1 Very likely
2 Quite likely
3 Not very likely
4 Not likely

V12 Q2c: Nuclear bomb dropped 9

Value Label
1 Very likely
2 Quite likely
3 Not very likely
4 Not likely

Dictionary display contd..

V14 Q3: Satisfaction with running of NHS 10

Value Label
1 Very satisfied.
2 Quite satisfied.
3 Neither
4 Quite dissatisfied
5 Very dissatisfied

V16 Q4: Typing 11

V17 Q4: Word-processing 12

V18 Q4: Social statistics 13

V19 Q4: Survey analysis 14

V20 Q4: Other computing 15

(V16 to V20) Value Label
1 Typing
2 Word- process
3 Social stats
4 Survey analysis
5 Other
6 None of these

SEX Q5: Sex of respondent 16

Value Label
1 Male
2 Female

V24 Q6: Main transport mode 17

Value Label
1 Public transport
2 Car
3 Motor cycle or cycle
4 Walk

AGE Q8: Age last birthday. 18

METRES Q7: Height in metres only 19

FEET Q7: Feet part of height 20

INCHES Q7: Inches part of height 21

End of session

Final tutorial in Block 1: **1.4.3 Missing values - a note**

Next section: **Block 2: Analysing one variable**

[Back to Block 1 menu]