SPSS

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2nd class

Objectives

- To describe opening and closing SPSS
- To introduce the look and structure of SPSS
- To introduce the data entry windows: Data View and Variable View
- To outline the components necessary to define a variable
- To introduce the SPSS online tutorial

Uses for SPSS

- Data management
- Data analysis

Data management

- Defining variables
- Coding values
- Entering and editing data
- Creating new variables
- Recoding variables
- Selecting cases

Data analysis

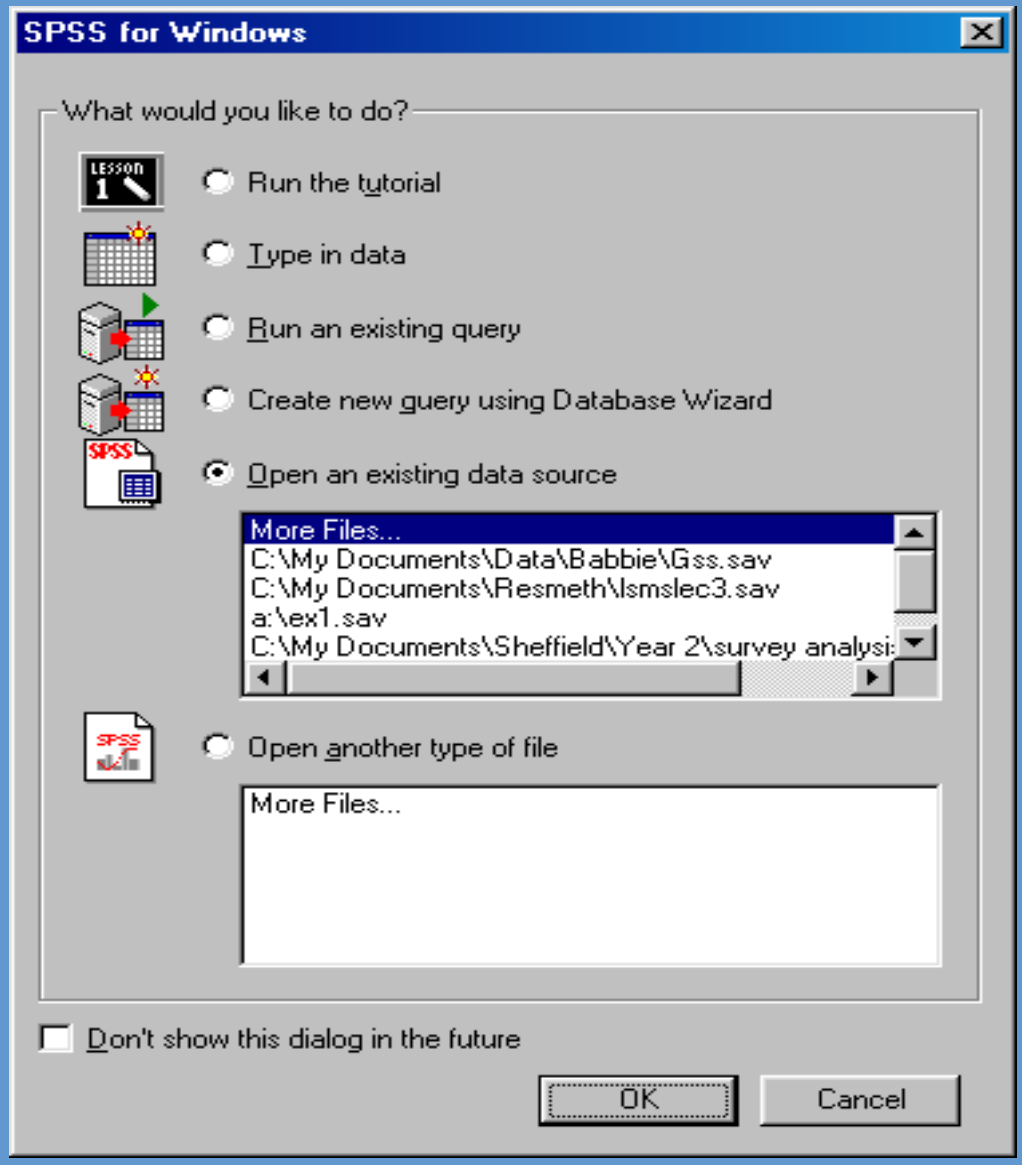
- Univariate statistics
- Bivariate statistics
- Multivariate statistics

Opening SPSS

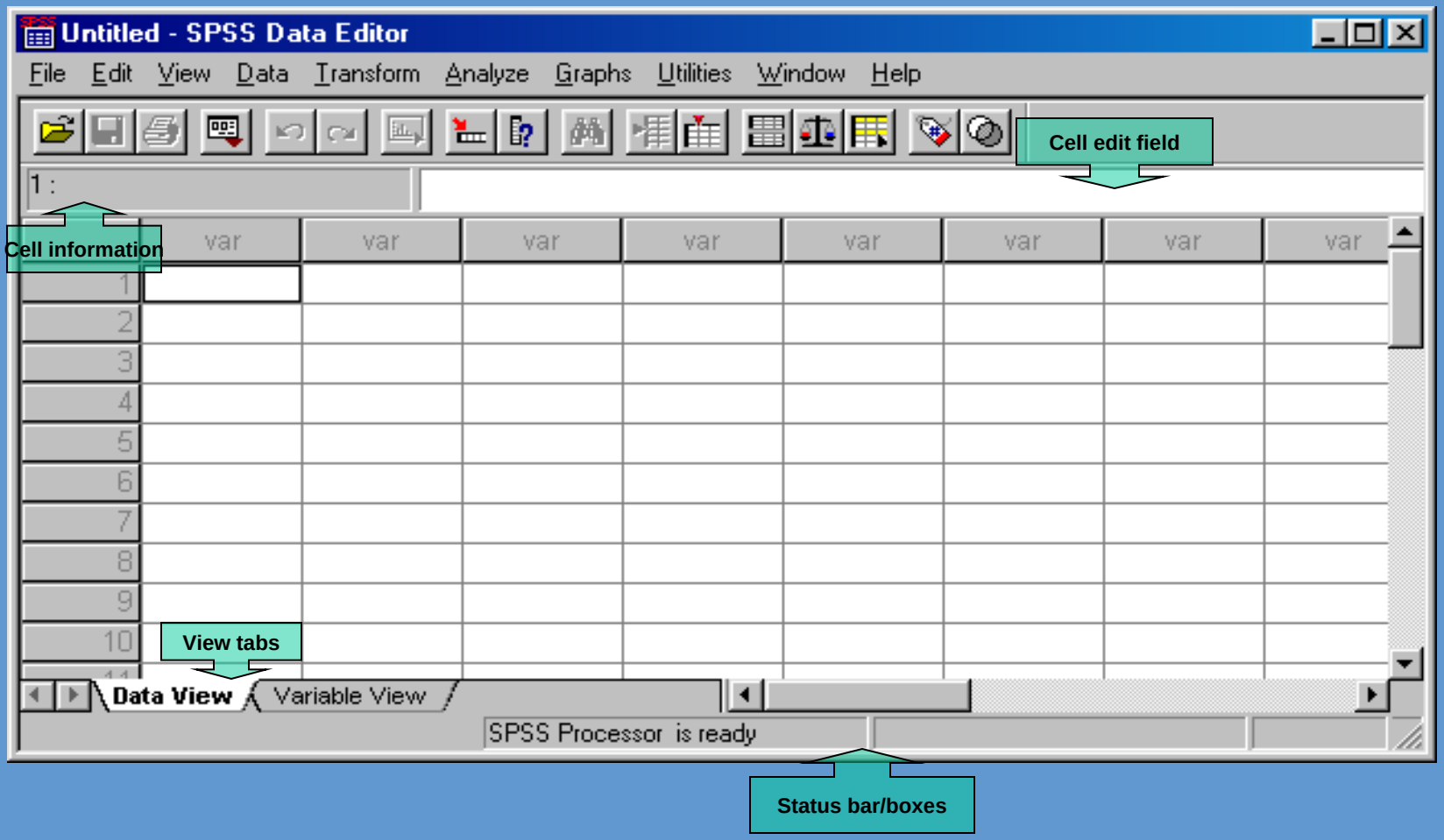
- Double click the SPSS icon on the desktop

  OR

- Start/Programs/SPSS for Windows/SPSS**
- The following introductory screen should appear:


SPSS for Windows
What would you like to do?
Run the tutorial
Type in data
Run an existing query
Create new query using Database Wizard
Open an existing data source
More Files...
C:\My Documents\Data\Babbie\Gss.sav
C:\My Documents\Resmeth\lsmslec3.sav
a:\ex1.sav
C:\My Documents\Sheffield\Year 2\survey analysi
Open another type of file
More Files...
Don't show this dialog in the future
OK
Cancel

The Data View window



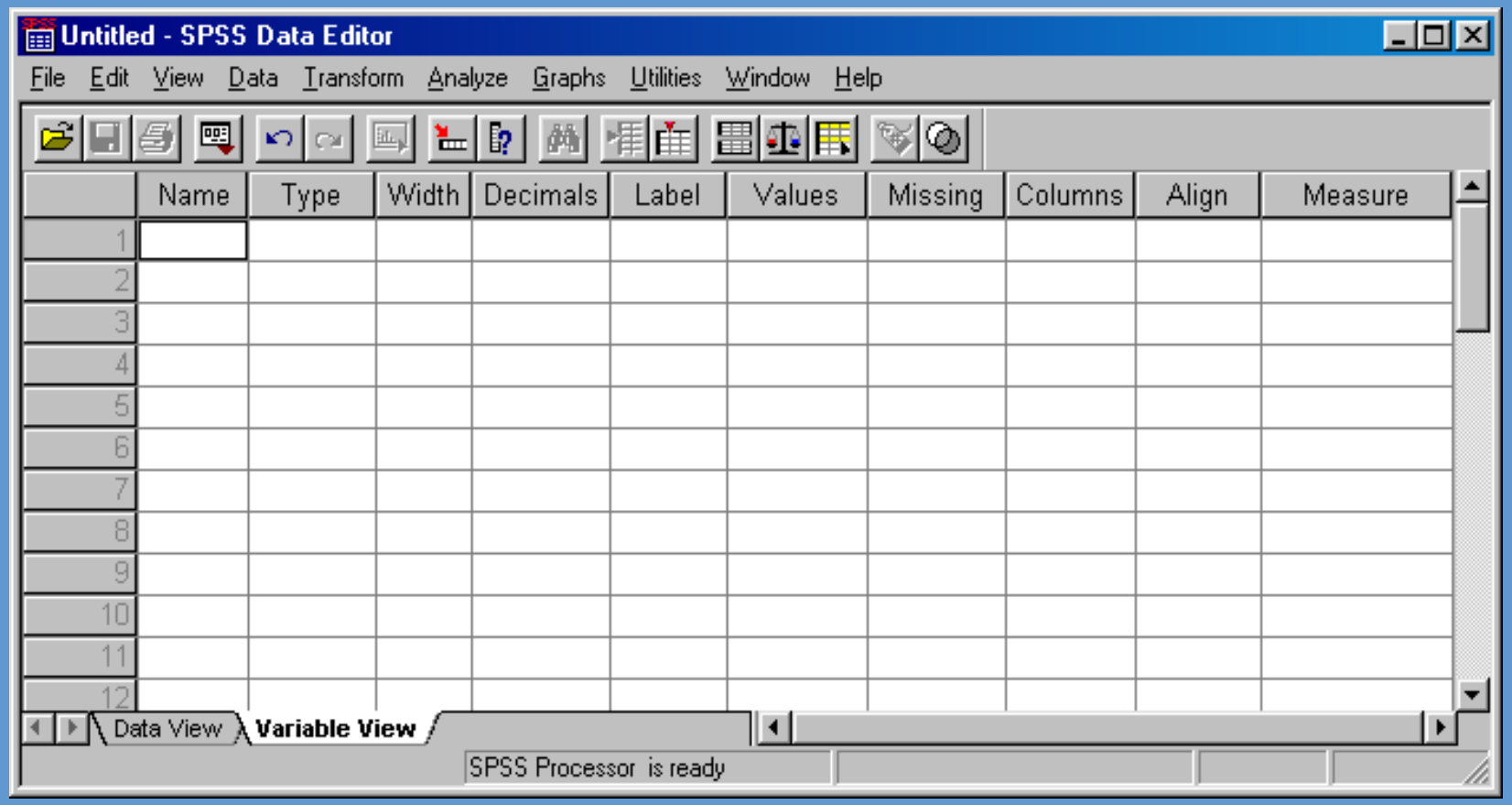
Data View

- Rows represent cases or observations, that is, the objects on which data have been collected:
  - For example, rows represent the contents of a single treatment data collection form, the information on an individual
- Columns represent variables or characteristics of the object of interest:
  - For example, each column contains the answers to the questions on the treatment data collection form: age, gender, primary drug of use, etc.

Data Editor

- Data Editor comprises two screens:
  - Data View: the previous screen
  - Variable View: used to define the variables
- To move between the two:
  - Use the View tab at the bottom of the screen
    OR
  - Ctrl + T
    OR
  - View/Variables from the Data View window
  - View/Data from the Variable View window

Variable View



The data entry process

- Define your variables in Variable View
- Enter the data, the values of the variables, in Data View

Definition of variables

10 characteristics are used to define a variable:

Name	Values
Type	Missing
Width	Column
Decimals	Align
Label	Measure

Name

- Each variable must have a unique name of not more than 8 characters and starting with a letter
- Try to give meaningful variable names:
  - Describing the characteristic: for example, age
  - Linking to the questionnaire: for example, A1Q3
- Keep the names consistent across files

Type

- Internal formats:
  - Numeric
  - String (alphanumeric)
  - Date
- Output formats:
  - Comma
  - Dot
  - Scientific notation
  - Dollar
  - Custom currency

Numeric

- Numeric variables:
  - Numeric measurements
  - Codes
- Definition of the size of the variable

String (alphanumeric)

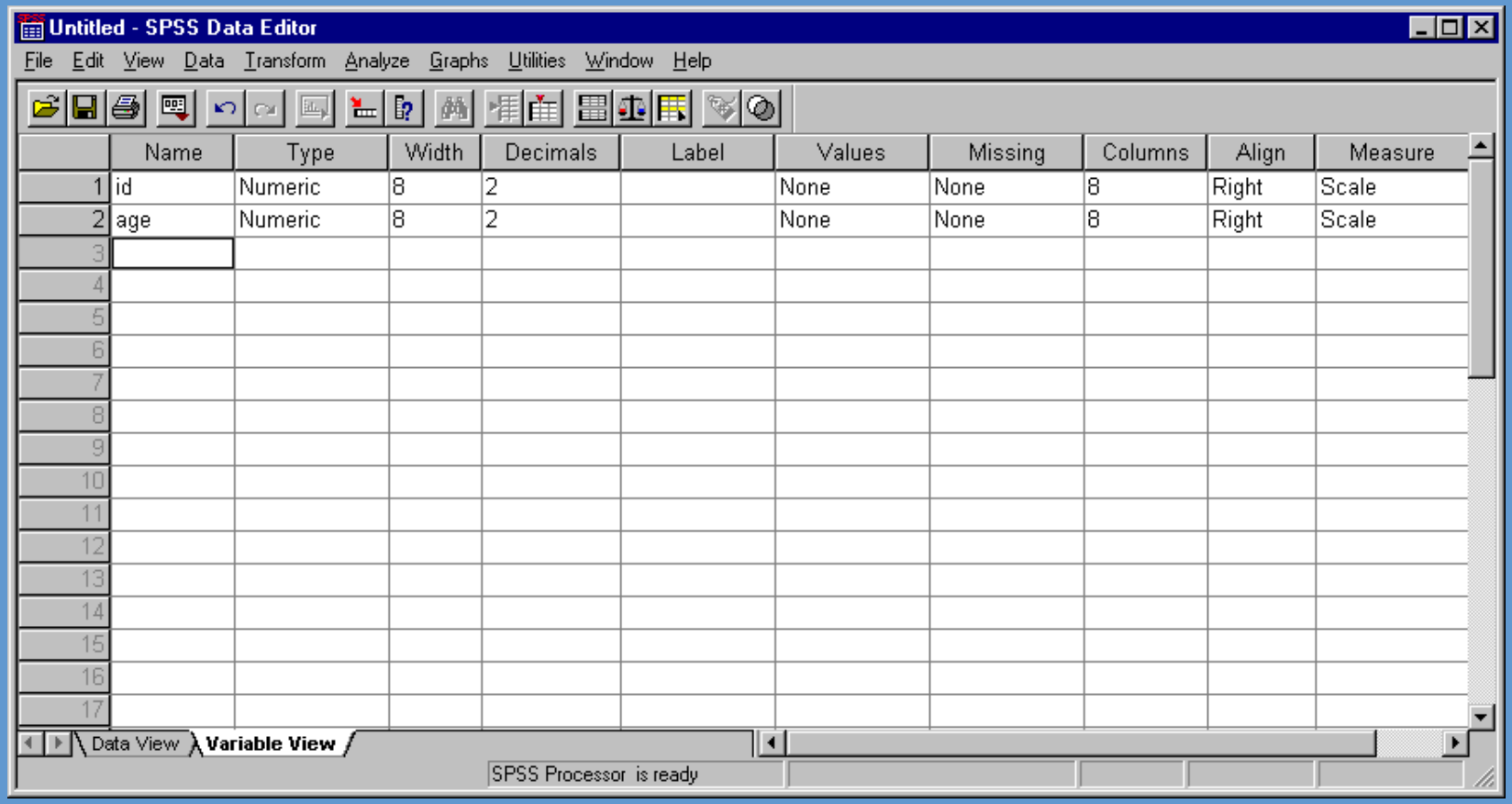
- String variables contain words or characters; strings can include numbers but, taken here as characters, mathematical operations cannot be applied to them
- The maximum size of a string variable is 255 characters

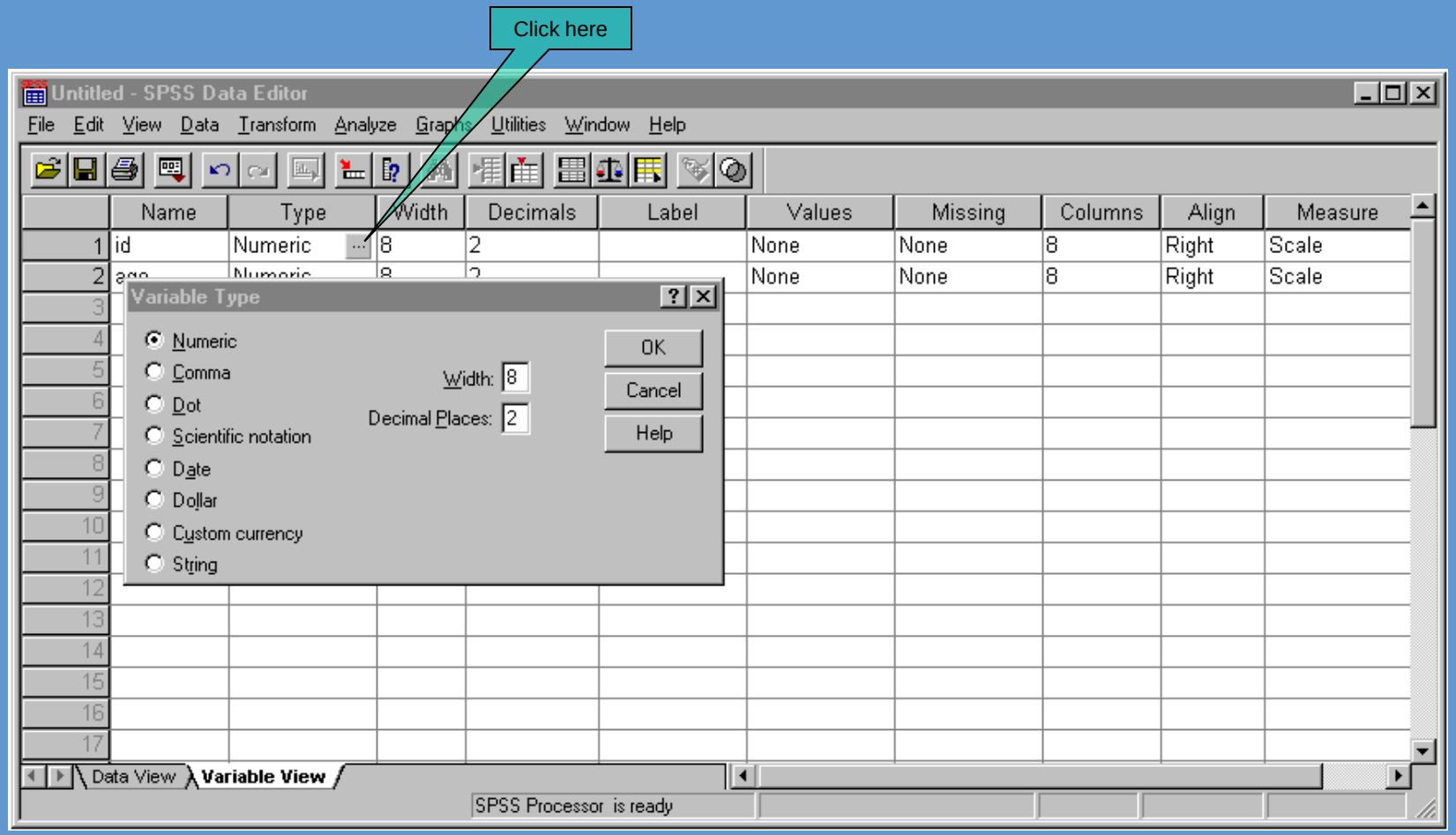
Date

- The input format for date variables must be defined, such as DD/MM/YYYY, MM/DD/YYYY or MM/DD/YY
- Computers store dates as numbers from a base date; in SPSS, dates are stored as the number of seconds from 14 October 1582

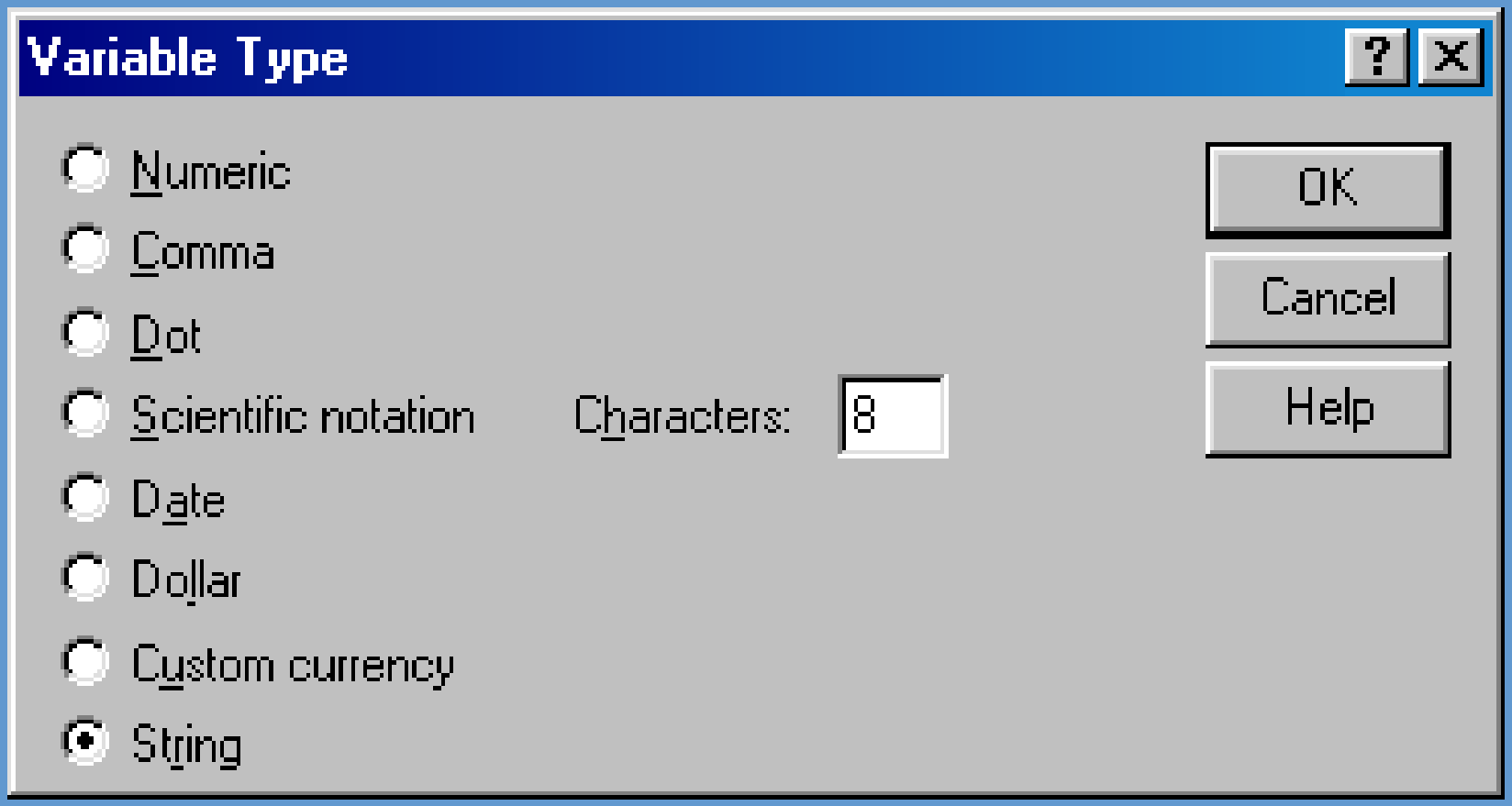
Example

- Create two variables:
  - **ID**: the unique identifier, which will be alphanumeric with a maximum of 8 characters
  - **Age:** the age of the respondent measured in years, a discrete variable ranging between 10 and 100

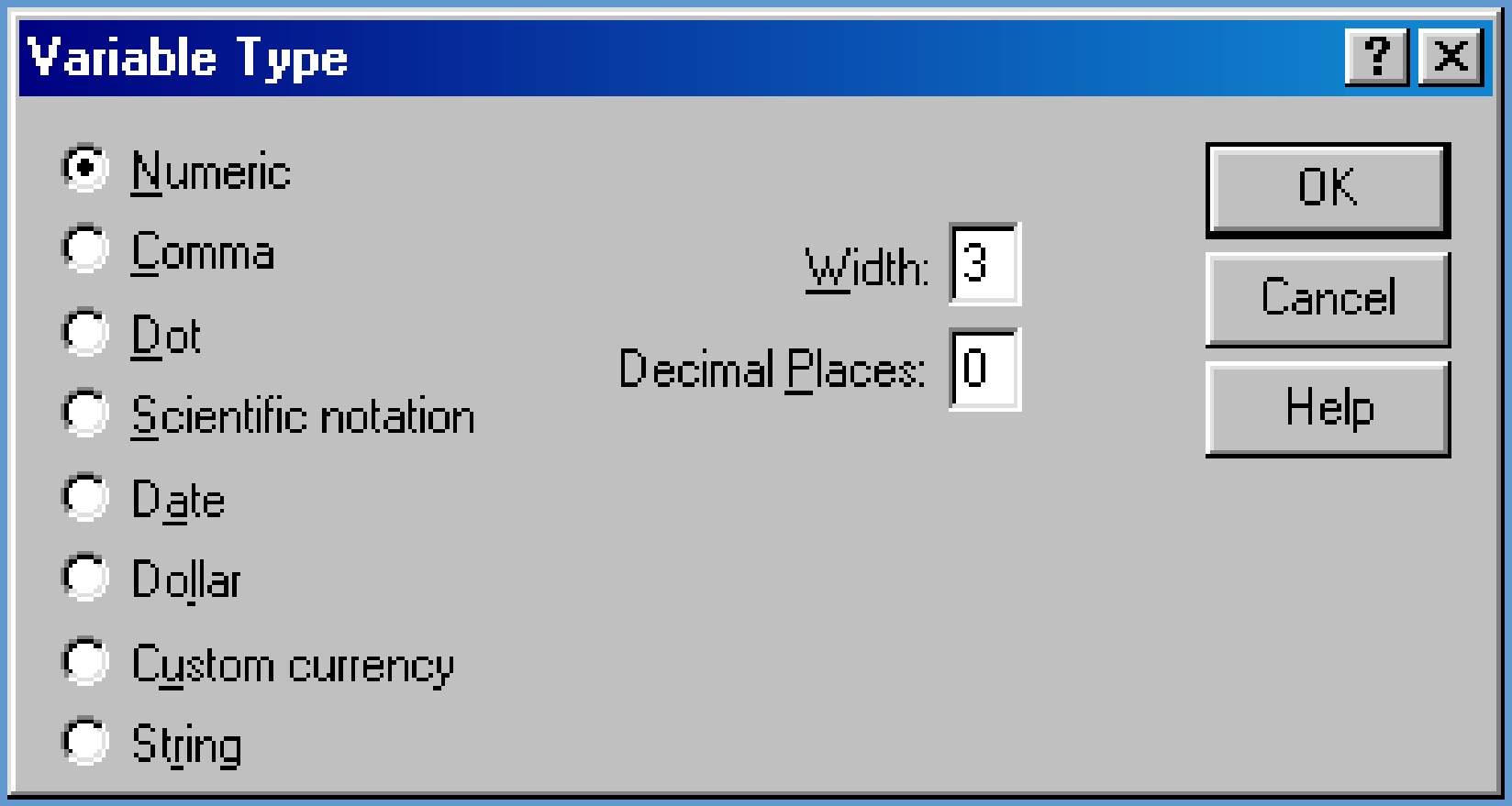

Untitled - SPSS Data Editor
File Edit View Data Transform Analyze Graphs Utilities Window Help
Name Type Width Decimals Label Values Missing Columns Align Measure
1 id Numeric 8 2 None None 8 Right Scale
2 age Numeric 8 2 None None 8 Right Scale
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Data View
Variable View
SPSS Processor is ready


Click here
Untitled - SPSS Data Editor
File Edit View Data Transform Analyze Graphs Utilities Window Help
Name Type Width Decimals Label Values Missing Columns Align Measure
1 id Numeric 8 2 None None 8 Right Scale
2 None None 8 Right Scale
Variable Type
Numeric
Comma
Dot
Scientific notation
Date
Dollar
Custom currency
String
Width: 8
Decimal Places: 2
OK
Cancel
Help
Data View
Variable View
SPSS Processor is ready

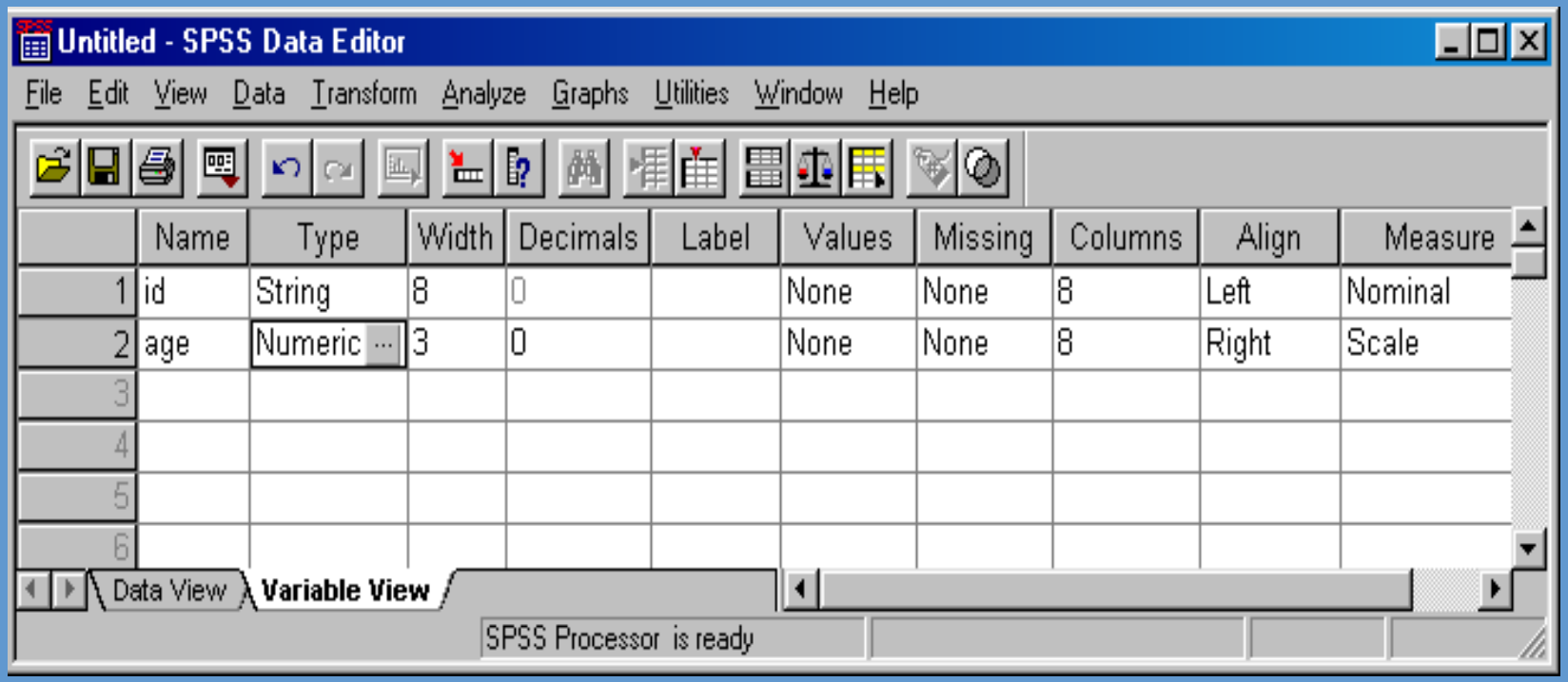
Click on the String radio button and change the characters to the size of the variable, 8 in this case. Click OK.



Click on the Type column in the second row and define a numeric variable with a maximum size of 3 with no decimal points.
Click on OK to continue.



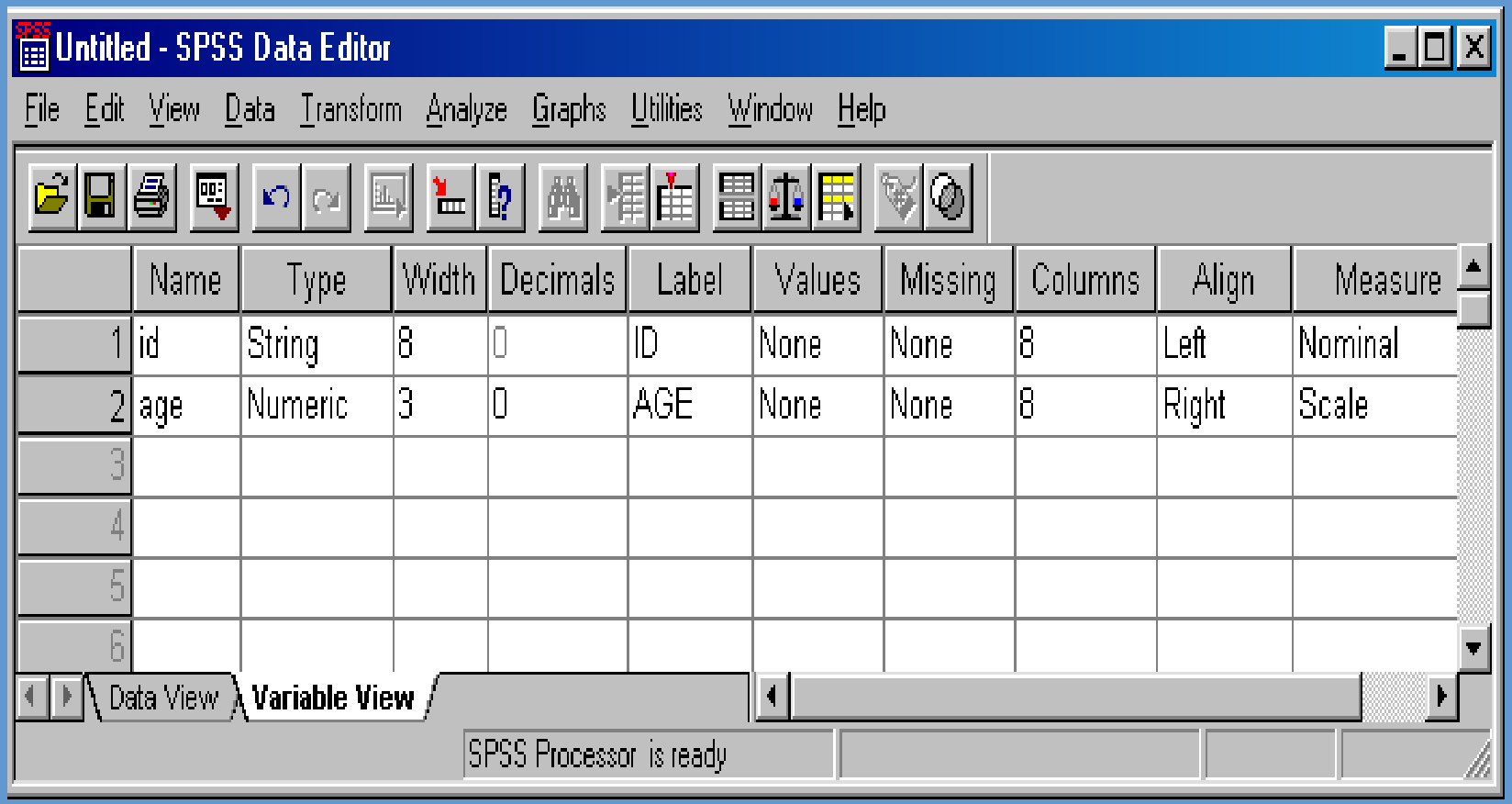
Note that a number of default values have been entered into the remaining columns.



Labels

- Descriptors for the variables
- Maximum 255 characters
- Used in the output

Variable labels added



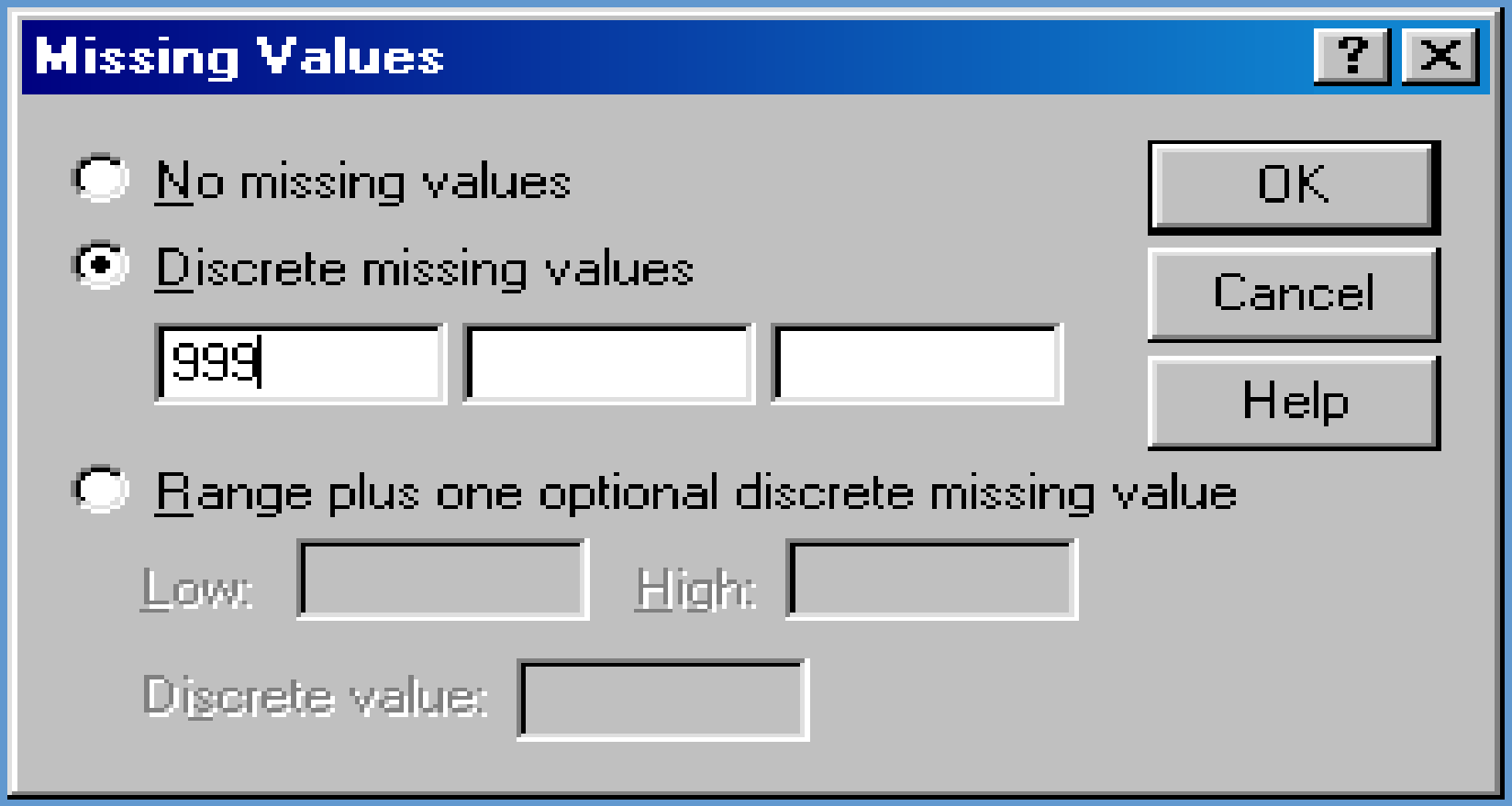
Values

- Value labels are descriptors of the categories of a variable
- Coding

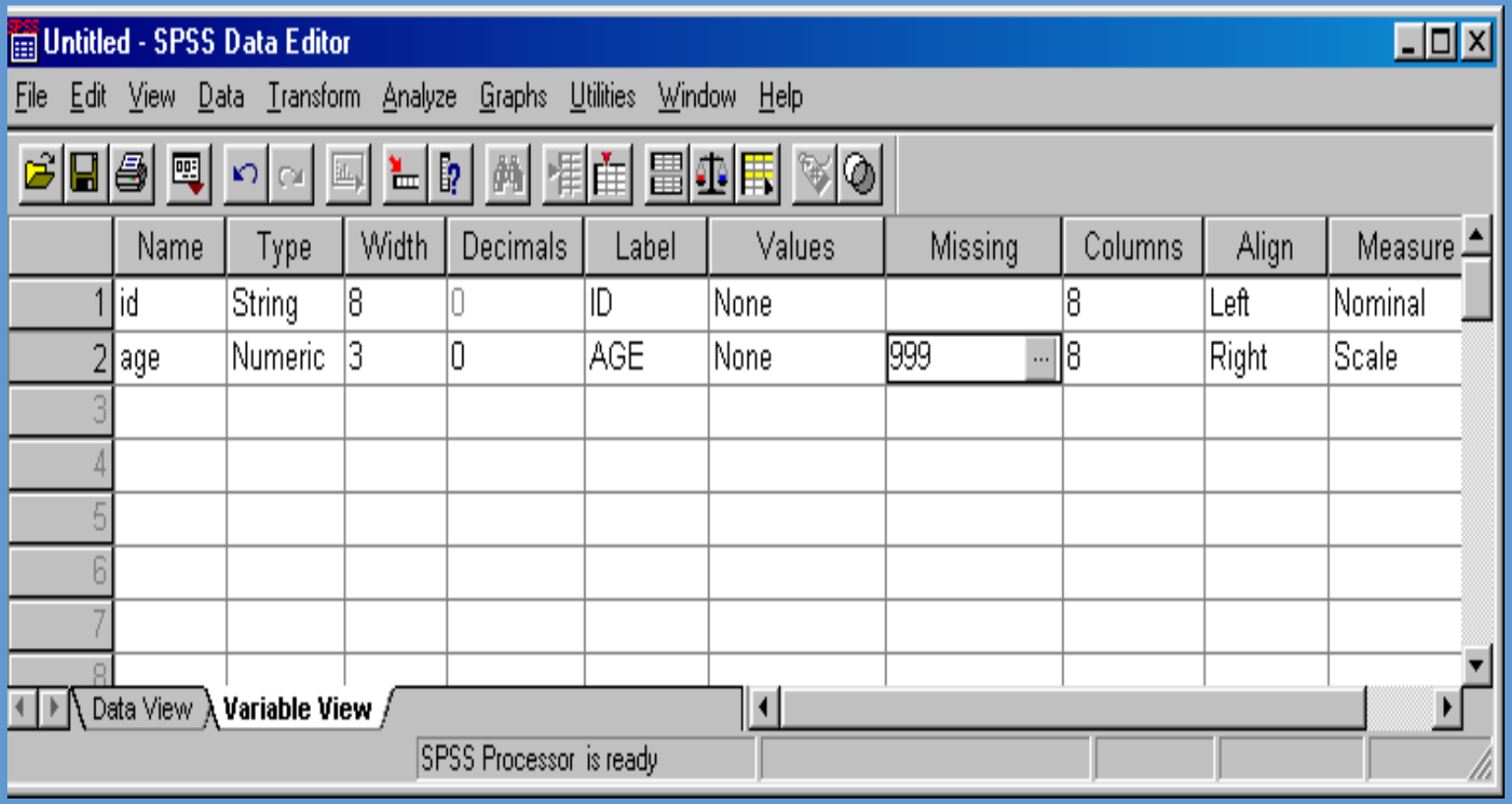
Missing

- Defines missing values
- The values are excluded from some analysis
- Options:
  - Up to 3 discrete missing values
  - A range of missing values plus one discrete missing value

Click in the Missing Values column to obtain the dialogue box below. Enter the value 999 for Age.



Missing values added



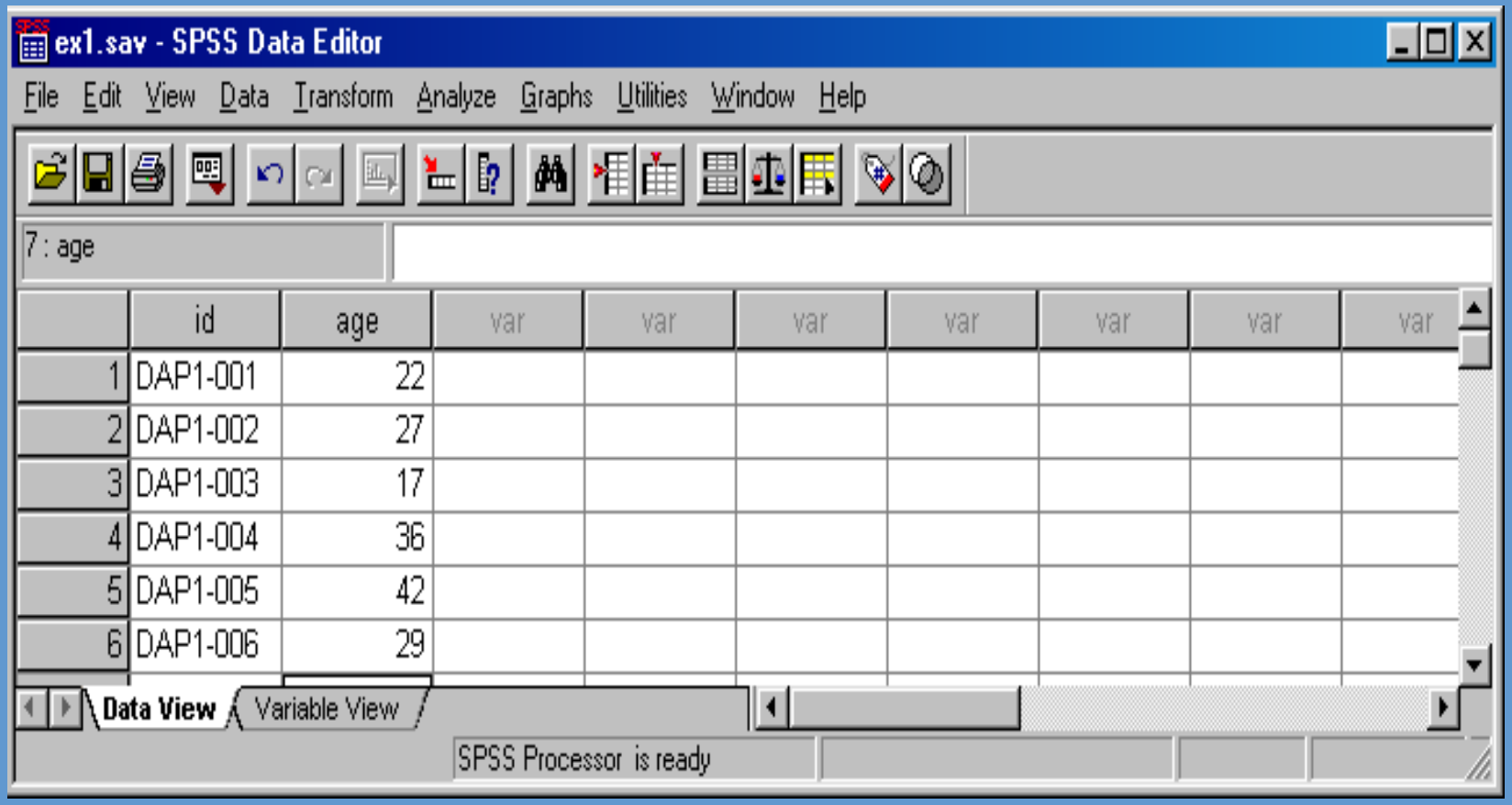
Columns and Align

- Columns sets the amount of space reserved to display the contents of the variable in Data View; generally the default value is adequate
- Align sets whether the contents of the variable appear on the left, centre or right of the cell in Data View
- Numeric variables are right-hand justified by default and string variables left-hand justified by default; the defaults are generally adequate

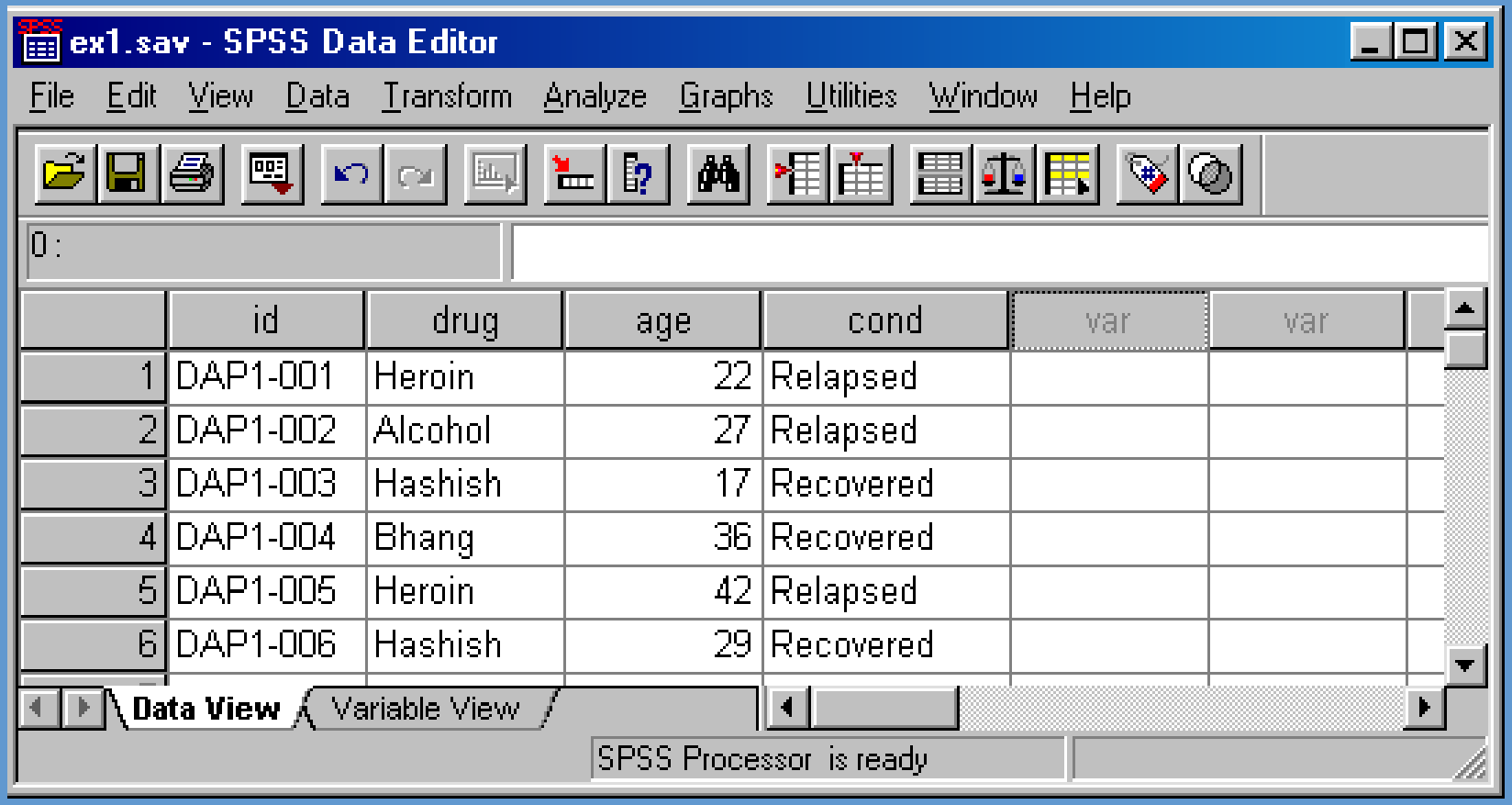
Measure

- Levels of measurement:
  - Nominal
  - Ordinal
  - Interval
  - Ratio
- In SPSS, interval and ratio are designated together as Scale
- The default for string variables is Nominal
- The default for numeric variables is Scale

Returning to Data View, the first two column headings will reflect the two variables created: ID and Age. Here the first six observations have been entered.



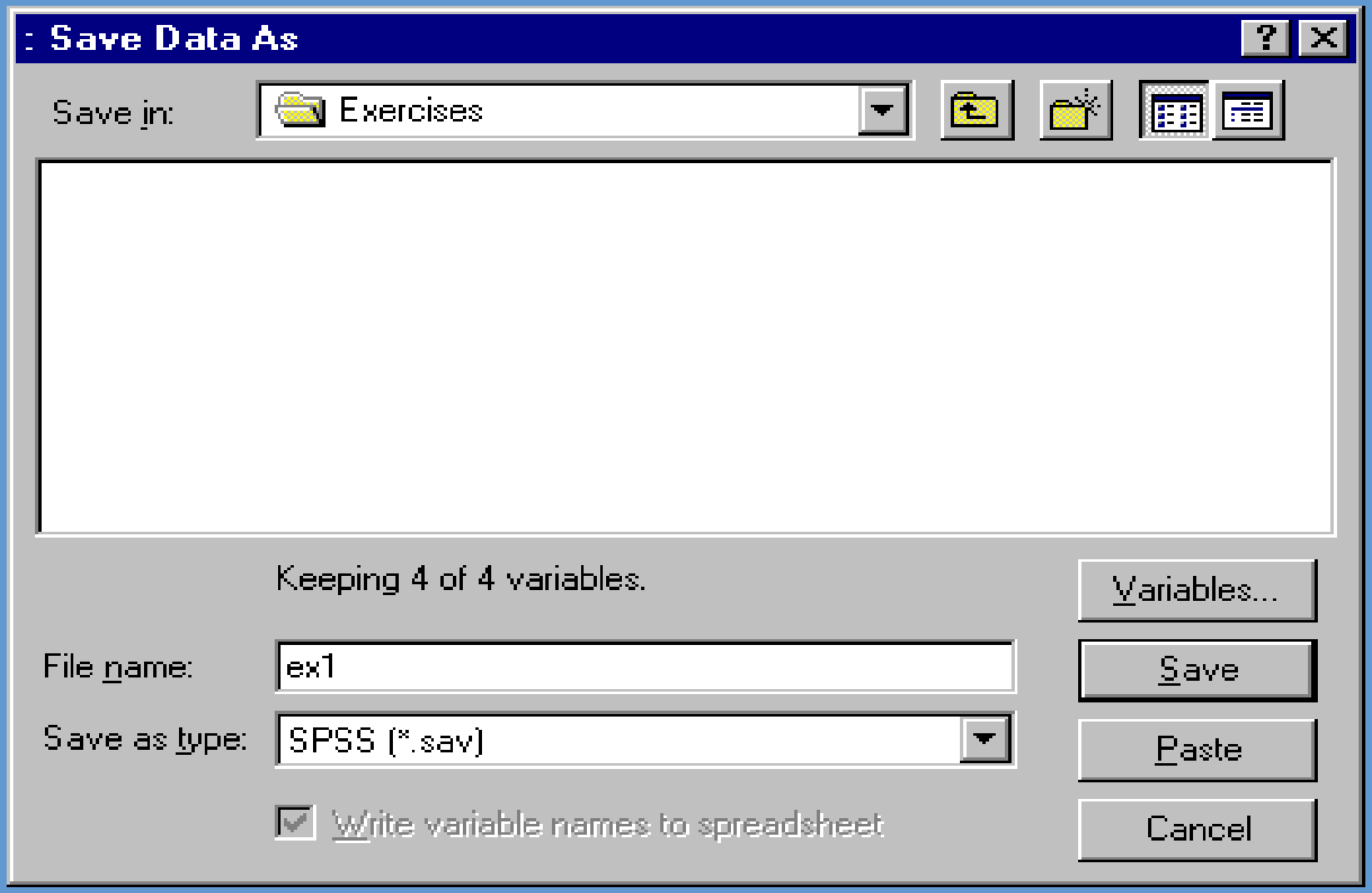
Exercise: define the necessary variables and enter the following data



	id	drug	age	cond	var	var
1	DAP1-001	Heroin	22	Relapsed		
2	DAP1-002	Alcohol	27	Relapsed		
3	DAP1-003	Hashish	17	Recovered		
4	DAP1-004	Bhang	36	Recovered		
5	DAP1-005	Heroin	42	Relapsed		
6	DAP1-006	Hashish	29	Recovered		

Saving the file

- The file must always be saved in order to save the work that has been done to date:
  - File/Save
  - Move to the target directory
  - Enter a file name
  - Save


: Save Data As
Save in:
Exercises
Keeping 4 of 4 variables.
Variables...
File name:
ex1
Save
Save as type:
SPSS (*.sav)
Paste
Write variable names to spreadsheet
Cancel

Summary

- Data Editor
  - Data View
  - Variable View
- File/Save

- Variable definition
  - Name
  - Type
  - Width
  - Decimals
  - Label
  - Values
  - Missing
  - Columns
  - Align
  - Measure