SPSS
(Statistical Package for the Social Sciences)

What is SPSS?

- SPSS stands for "Statistical Package for the Social Sciences"

- The SPSS home-page is: www.spss.com

What can you do with SPSS?

- **Run Frequencies**
- **Calculate Descriptive Statistics**
- **Compare Means**
- **Conduct Cross-Tabulations**
- **Recode Data**
- **Create Graphs and Charts**
- **Do T-Tests**
- **Conduct ANOVAs**
- **Run Various Type of Regressions**

And Much More!

Bringing your data into SPSS:
1. Go to "File" then "Open" and click on "Data"
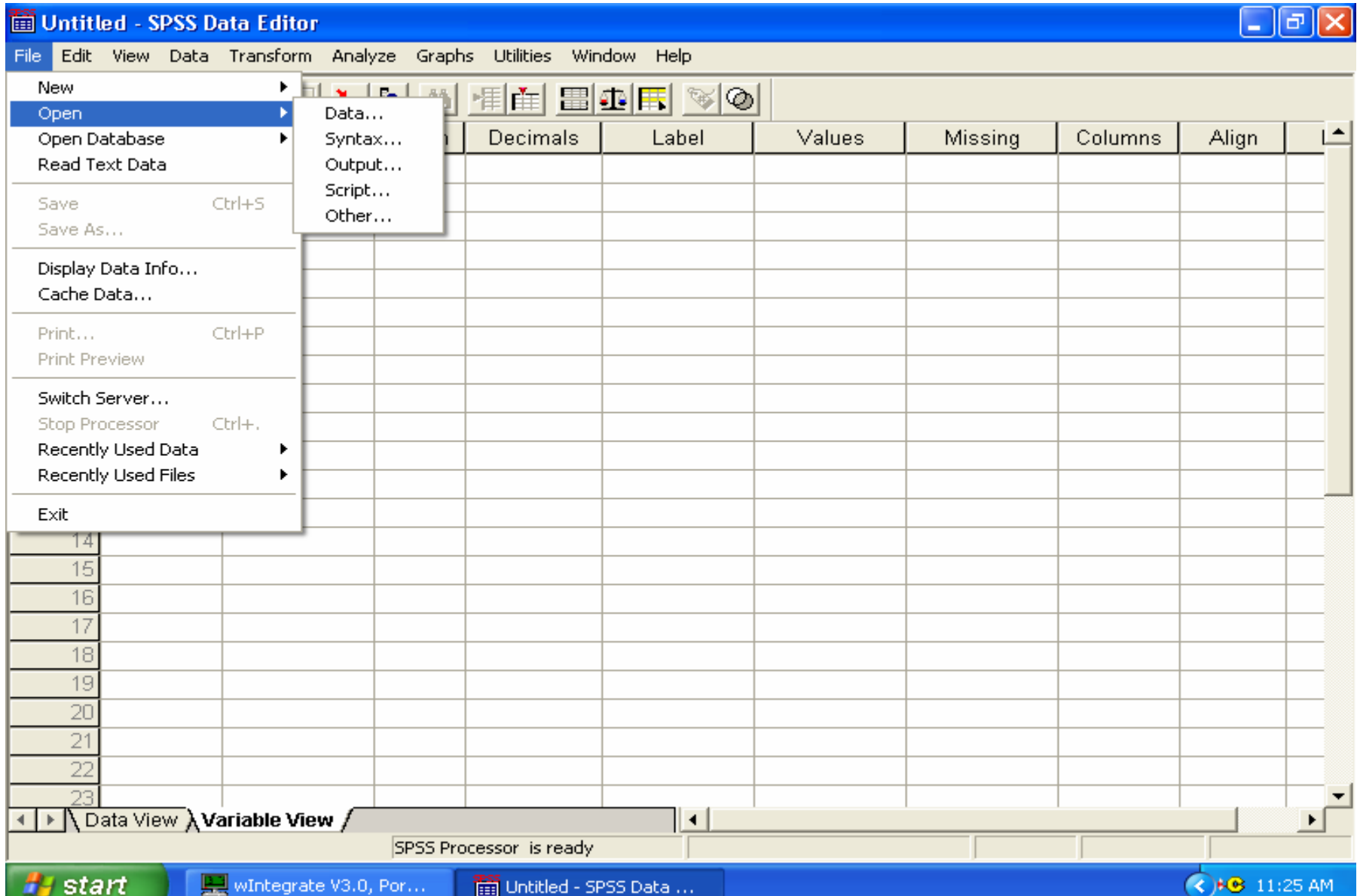
SPSS has three parts/windows:

Data - where you enter the data (.sav)

Syntax - where details of the analyses you are going to do are

displayed (.sps)

Viewer/Output

- where the results are displayed (.spo)

- any messages (such as errors) are displayed in this

window

- you must always have a data window open, and you do not have to use the syntax window

- if an output window is open, messages appear in this, and it remains where it was (e.g. behind the data screen)

Opening SPSS:

When you open SPSS, a data window will open

At the bottom are two tabs:

- data view: gives title of each variable at top, and allows

    you to enter your data, case by case

- variable view: gives the details of each variables, and

    allows you to define/describe the variables in your research

e.g., in a questionnaire survey:

- the variables are the questions you want to enter data under and go along the

   top

- the cases are the people who returned questionnaires and go down the side

If you look at the botton left, you'll see tabs for Data View and Variable View

Using SPSS

This involves three steps:

    1) set up data sheet

    2) enter data

    3) run analyses

Step 1: Set up a data sheet

This step involves defining/describing the variables of your research. To do this:

    a) ensure are in variable view (tab at bottom of window; double click title at top)

    b) enter name of variable

        - must start with a letter and contain no spaces (but can contain numbers and symbols)

        - can be up to 8 characters in length

After you have created a variable (through entering its name), the rest of the options appear

Step 1: Set up a data sheet . . . cont

       c)   define/describe variable

To do this, click on the cell you wish to change and one of three things will appear:

   - blank cell (type whatever you want)

   - numbers with up/down arrows (adjust till preferred option appears)

   - word (e.g., name, right, scale; when select cell, a box with dots appears on right - click on this for more options)

Step 1: Set up a data sheet . . . cont

type — type of variable (numeric, string etc)

width — how many characters do you want to be able to enter

decimals — how many decimal places do you want

label — full name for the variable

values — labels for variables (e.g., 1=male, 2=female)

missing — allows you to determine which numbers will be treated as missing data when doing analyses

columns — defines how wide the column display is

alignment — how do you want the columns to align

measure — options of scale (ordinal, nominal)

Step 2: Enter data

-    entering data is very similar to entering data into excel (and data can be copied between excel and SPSS)

-    the type of variable you have chosen will effect what you may enter (e.g. numbers vs letters)

  - you can't type letters into a numeric variable, but can type numbers into a string variable

  - use arrows or tab key to move - if you use tab then when reach the end of the row will return to the start of the next one

  - you can cut and paste within SPSS

  - you can sort cases (data/sort cases)

  - you can insert variables or shift the order of variables (data/insert variable)

Step 3: Analyses

- decide what analyses to do using menus under analyze

- usually will choose type of analysis, then which variables you wish to include

- variables are displayed by their variable label (with the variable name in brackets), in the order they are in the data window

- will also get options specific to each analysis, such as the type of information you want included, or the specific tests you want done

- then have choice of OK (run analysis) or paste (will paste analysis to syntax window for you to deal with later)

Step 3: Analyses . . . cont

- using syntax files:

    - disadvantages: extra window open

                             extra stage in process

    - advantages: can save syntax files

                             can make changes at this stage

When wish to run analyses, have four options (under run on menu bar):

    - run all analyses

    - run selected analyses

    - run current analysis (shortcut key is 'play' symbol)

    - run to end (analyses from cursor to end of page)

Step 3: Analyses . . . cont

Some things to remember:

- string variables can't be analysed, but you can sort using them; they can also be turned into numeric variables using the 'computer' function

- each type of window (data, syntax, output) has slightly different menu options

- the ANOVAs are found under General Linear Model; however, one-way ANOVAs are found under compare means

Output

- in the output window the results of the analysis are displayed

      - from here you can alter, delete, print etc

-the column to the left has a summary of the analyses/messages, the one on the right the actual analyses/messages

     -analyses can be selected in either column

-you can adjust headings by double clicking on the titles in either column - however it only changes in the column in which you selected it. If you wish to add headings before printing, make changes in the right hand column

Useful information:

Printing - all windows (data, output, syntax) can be printed

the printout is very large, students may wish to reduce the size to print (I use 50% for data and 75% for output files)

-ensure the page set up is correct!

-large tables etc will wrap on the page when printed

More options:

There are many more options in the menus, for example:

Data menu:
- transpose: new data file switching cases/variables
- merge files: combines two data files
- aggregate: combine cases/variables in a new data file
- split files: look at results breaking down by variables
- select cases: choose only certain cases and then run analyses
   on these

And yet more options:

Transform menu

- compute: compute new values for numeric/string data

  create new variables

  replace the values of existing variables

  use provided functions/formulae to change values

- recode: can change data values and recode the data into

  the same or different variables

- many options enable you to use if statements