Use of Statistical Package in Research

An Introduction SPSS & Data Entry

- Developers: IBM Corporations
- Initial release: 1968
- Operating System: Windows, Zlinux, Linux/ Unix And MAC.
- Platform: Java
- Type: Statistical analysis, Data Mining, Text Analysis, Data Collection, Collaboration & Deployment.
- License: Proprietary Software

Introduction: What is SPSS?

- Originally it is an acronym of Statistical Package for the Social Sciences which was further changed to Statistical Product and Service Solutions and finally it is now known as PASW (The Predictive Analytics Software).

- One of the most popular statistical packages which can perform highly complex data manipulation and analysis with simple instructions.

- Norman H. Nie, C. Hadlai (Tex) Hull, and Dale H. Bent, developed a software called SPSS in Stanford University for easy and quick calculation of statistical data in 1968.

- With growing popularity of SPSS, a commercial entity, SPSS Inc. was formed in 1975.

- The SPSS/PC was introduced in 1984 as the first statistical package for PC that worked on the MS-DOS platform.

- SPSS was the first statistical product for the Microsoft Windows (version 3.1) operating system when a version for Windows 3.1 was launched in 1992.
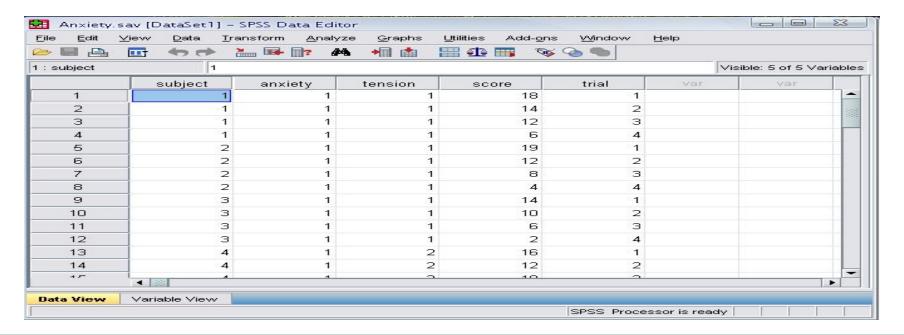
Advantages of SPSS

- **EASY OF USE**

- **UP TO DATE**

- **BROAD COVERAGE**

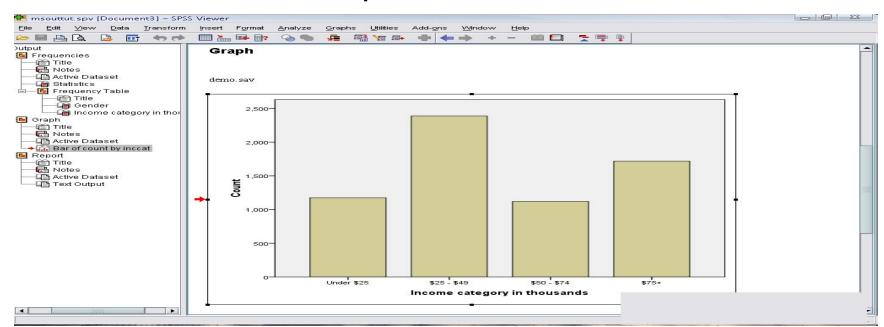- **AVAILABILITY OF HELP**

The Two Windows: Data Editor

- Data Editor

  Spreadsheet-like system for defining, entering, editing, and displaying data. Extension of the saved file will be "sav."
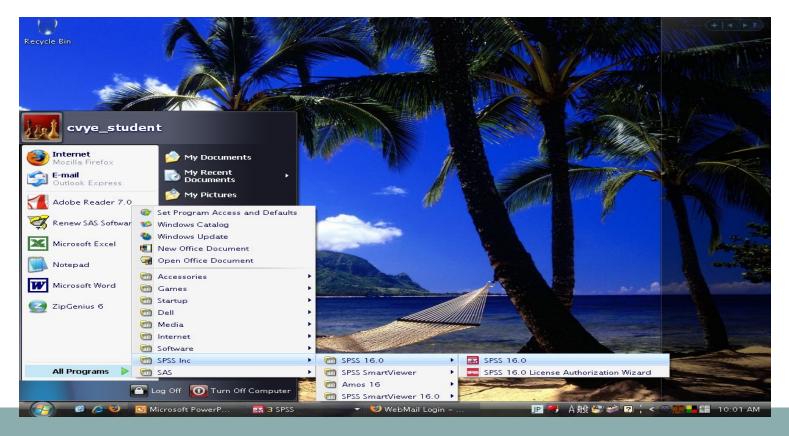
The Two Windows: Output Viewer

- Output Viewer

  Displays output and errors. Extension of the saved file will be "spv."
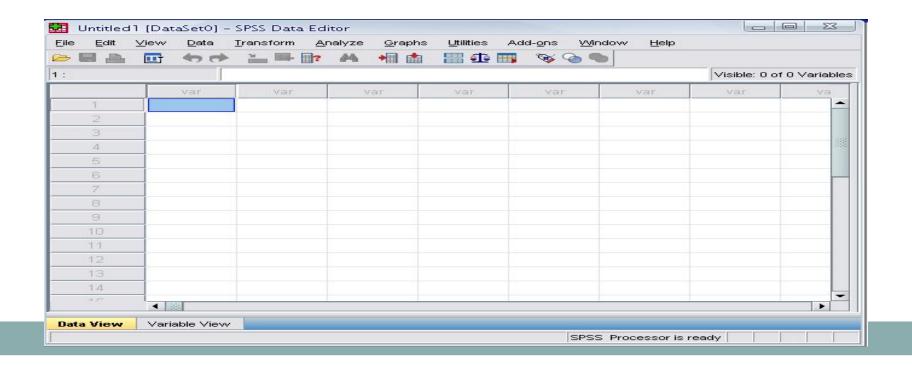
Opening SPSS

- Start → All Programs → SPSS Inc→ SPSS 16.0
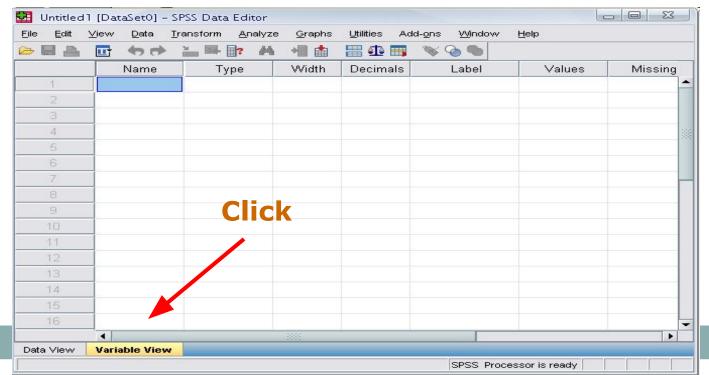 →
    SPSS 16.0

Opening SPSS

- The default window will have the data editor
- There are two sheets in the window:
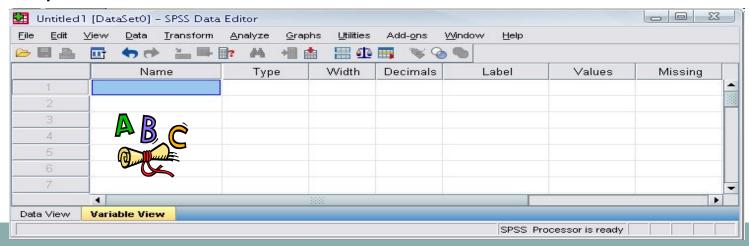 1. Data view   2. Variable view

Data View window

- The Data View window

  This sheet is visible when you first open the Data Editor and this sheet contains the data

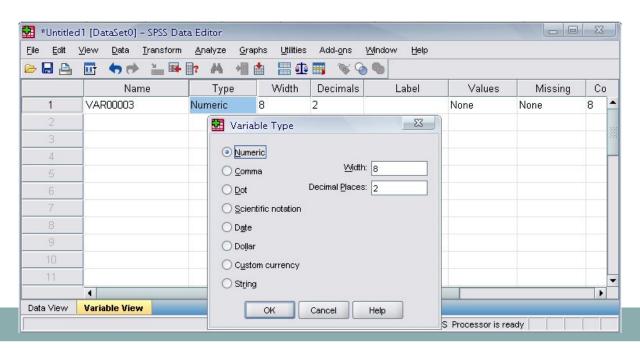- Click on the tab labeled Variable View

Variable View window

- This sheet contains information about the data set that is stored with the dataset
- Name
  - The first character of the variable name must be alphabetic
  - Variable names must be unique, and have to be less than 64 characters.
  - Spaces are NOT allowed.

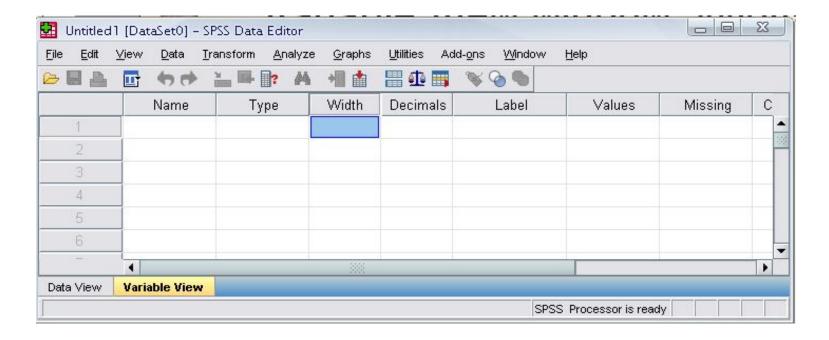# Variable View window: Type

- Type
  - Click on the 'type' box. The two basic types of variables that you will use are numeric and string. This column enables you to specify the type of variable.
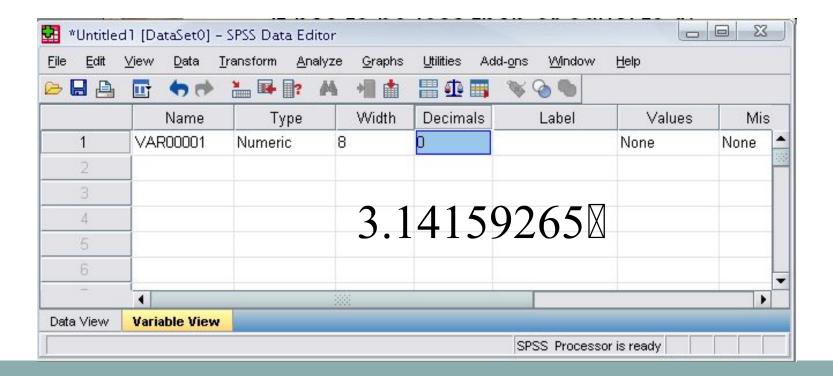
Variable View window: Width

- Width
  - Width allows you to determine the number of characters SPSS will allow to be entered for the variable
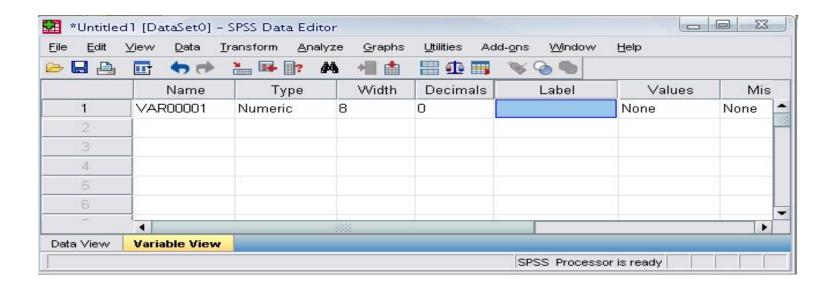
Variable View window: Decimals

- Decimals
  - Number of decimals
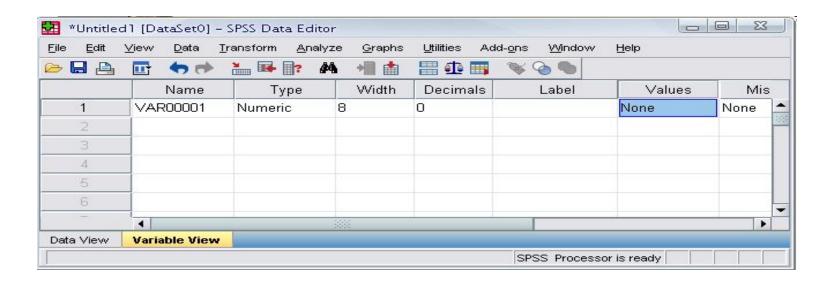 - It has to be less than or equal to 16

Variable View window: Label

- Label
  - You can specify the details of the variable
  - You can write characters with spaces up to 256 characters
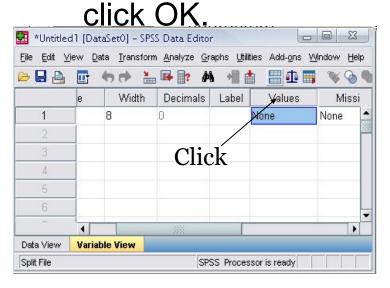
Variable View window: Values

- Values
  - This is used and to suggest which numbers represent which categories when the variable represents a category

Defining the value labels

- Click the cell in the values column as shown below
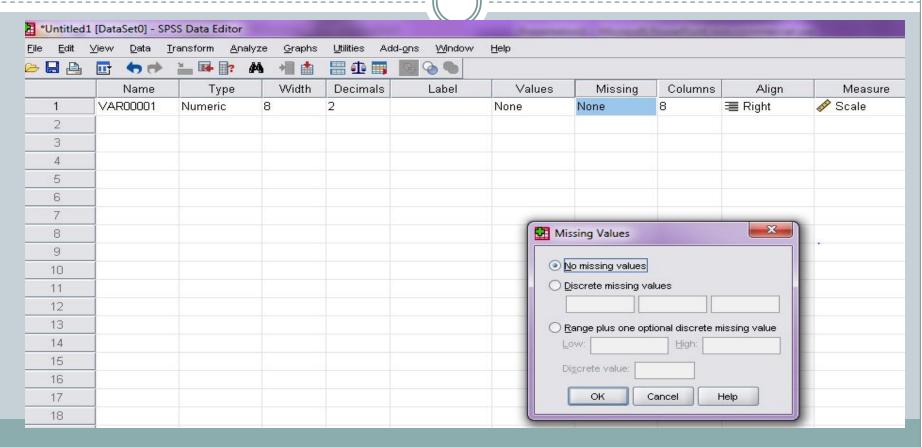- For the value, and the label, you can put up to 60 characters.
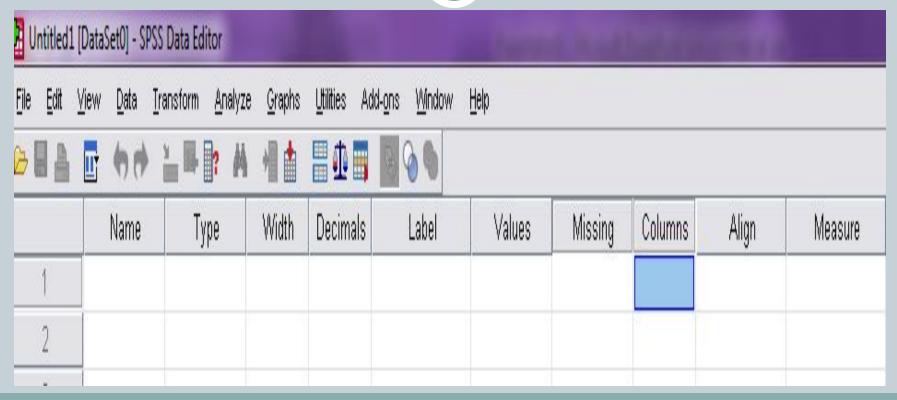- After defining the values click add and then click OK.

Click

Variable View window: Missing

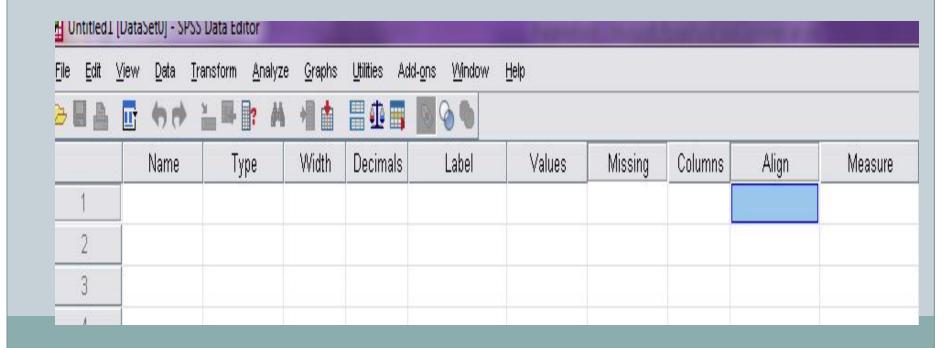- **WANT TO SIGNAL TO SPSS THAT DATA SHOULD BE TREATED AS MISSING.**

Variable View window: Columns

- **THE COLUMN SIZE INDICATES HOW MUCH SPACE IS ALLOCATED RATHER THAN THE DEGREE TO WHICH IT IS FILLED.**

Variable View window: Align

- **THE ALIGNMENT PROPERTY INDICATES WHETHER THE INFORMATION IN THE DATA VIEW SHOULD BE LEFT-JUSTIFIED, RIGHT-JUSTIFIED, OR CENTERED.**

Variable View window: Measure

- **THE MEASURE PROPERTY INDICATES THE LEVEL OF MEASUREMENT.**

- **SPSS DOES NOT DIFFERENTIATE BETWEEN INTERVAL AND RATIO LEVELS OF MEASUREMENT, BOTH OF THESE QUANTITATIVE VARIABLE TYPES ARE LUMPED TOGETHER AS "SCALE".**

- **NOMINAL AND ORDINAL LEVELS OF MEASUREMENT, ARE DIFFERENTIATED.**

Rules for Defining Variable Names

- The name must begin with a letter.

- Maximum of 8 characters and no spaces.

- Names must be unique.

- @ # _ or $ allowed.

- A full stop can be used but not as the last character, so best avoided.

- The space character and others such as * ! ? And ' are not allowed.

- Names are not case sensitive so ID, id and Id are identical.

Rules for Defining Variables

- Certain SPSS keywords are not allowed as variable names they are:

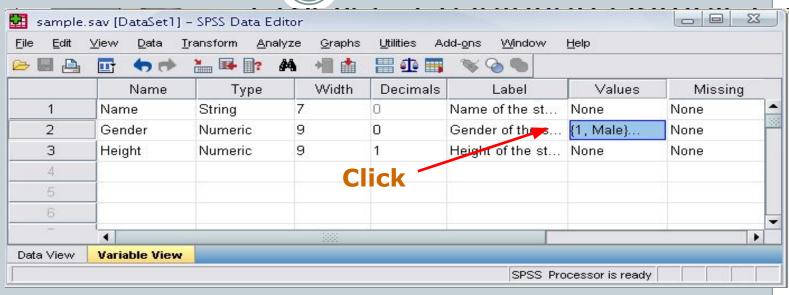ALL   TO   WITH BY AND
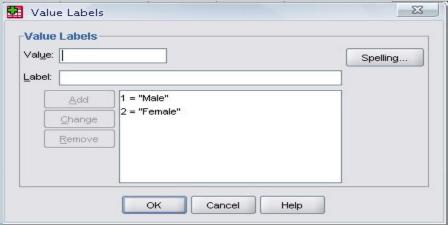
OR   NO   EQ   NE LE

LT   GE   GT

Example
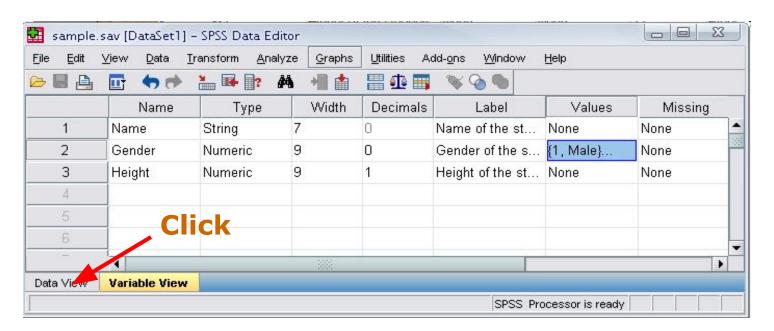
● How would you put the following information into SPSS?

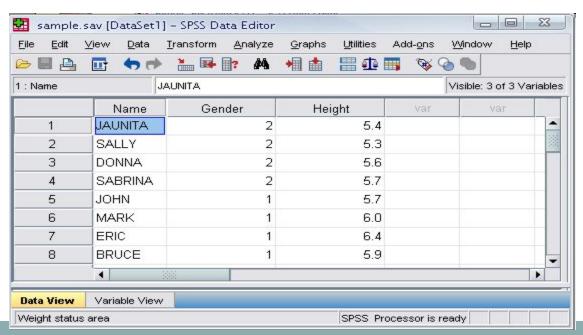| Name	Gender	Height
JAUNITA	2	5.4
SALLY	2	5.3
DONNA	2	5.6
SABRINA	2	5.7
JOHN	1	5.7
MARK	1	6
ERIC	1	6.4
BRUCE	1	5.9

Value = 1 represents Male and Value = 2 represents Female
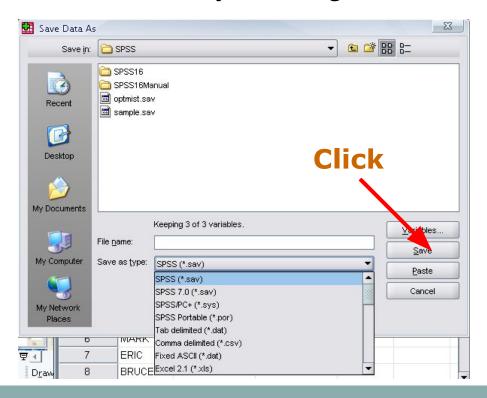
Solution

Saving the data

● To save the data file you created simply click 'file' and click 'save as.' You can save the file in different forms by clicking "Save as type."

Conclusion

- **SPSS IS A COMPREHENSIVE AND FLEXIBLE STATISTICAL ANALYSIS AND DATA MANAGEMENT SYSTEM.**

- **SPSS CAN TAKE DATA FROM ALMOST ANY TYPE OF FILE AND USE THEM TO GENERATE TABULATED REPORTS, CHARTS, AND PLOTS OF DISTRIBUTIONS AND TRENDS, DESCRIPTIVE STATISTICS, AND CONDUCT COMPLEX STATISTICAL ANALYSES.**

- **SPSS IS AVAILABLE FROM SEVERAL PLATFORMS; WINDOWS, MACINTOSH, AND THE UNIX SYSTEMS.**

THANK YOU