SPSS STATISTICAL PACKAGE

Ismail SA

Learning Objectives:

Students to be able to:

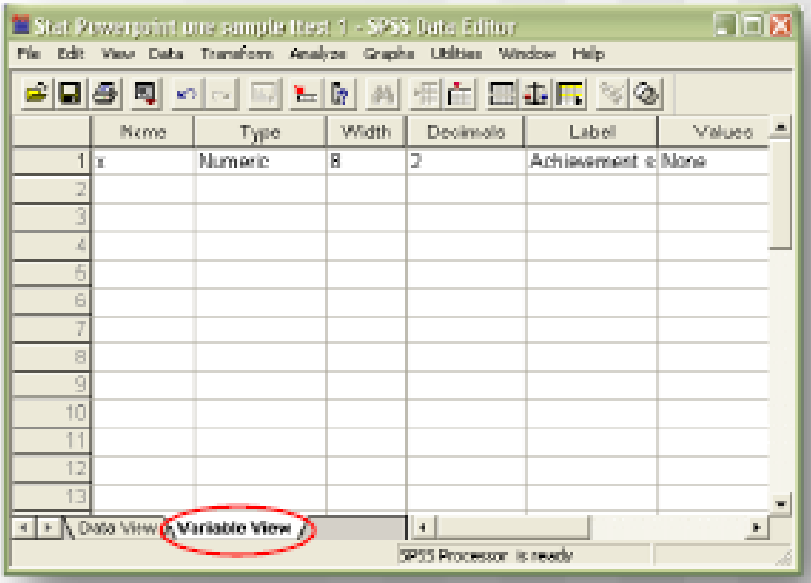
1. Understand three SPSS windows
2. Familiar with steps in data analysis
3. Define variable and enter data into Data Editor
4. Perform data editing and transformation
5. Run selected statistical procedures
6. Use SPSS coaches

SPSS

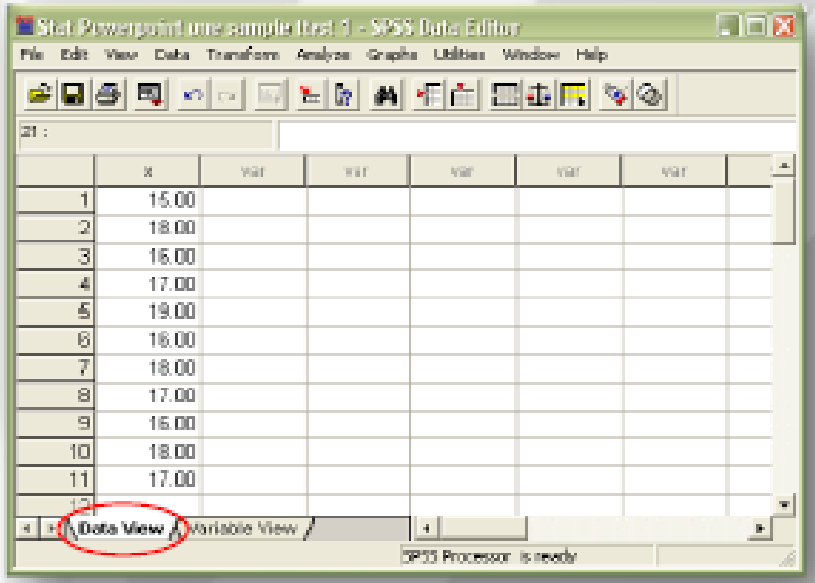
Windows

1 SPSS Data Editor:

Define and enter data



Variable view: to define variables



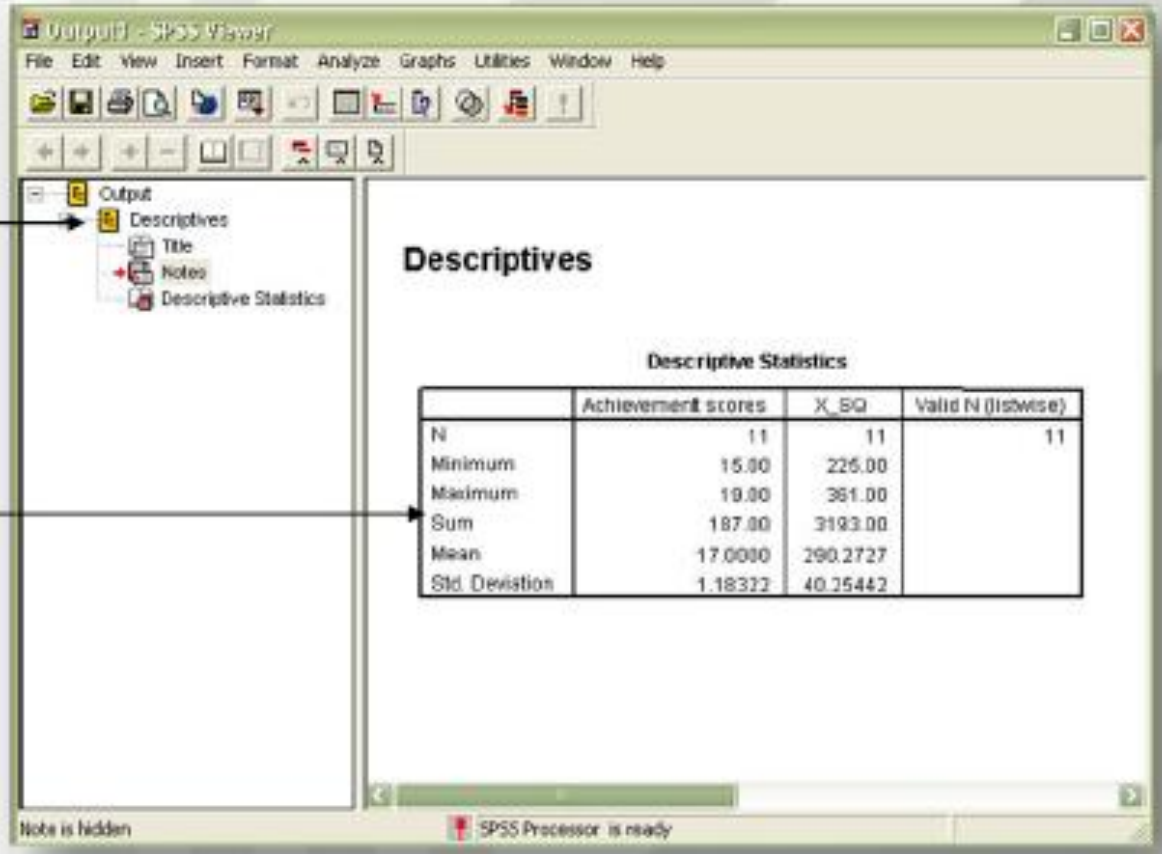
Data view: to enter data

2 SPSS Viewer:

Display results of data analyses

Navigator to help easy browsing

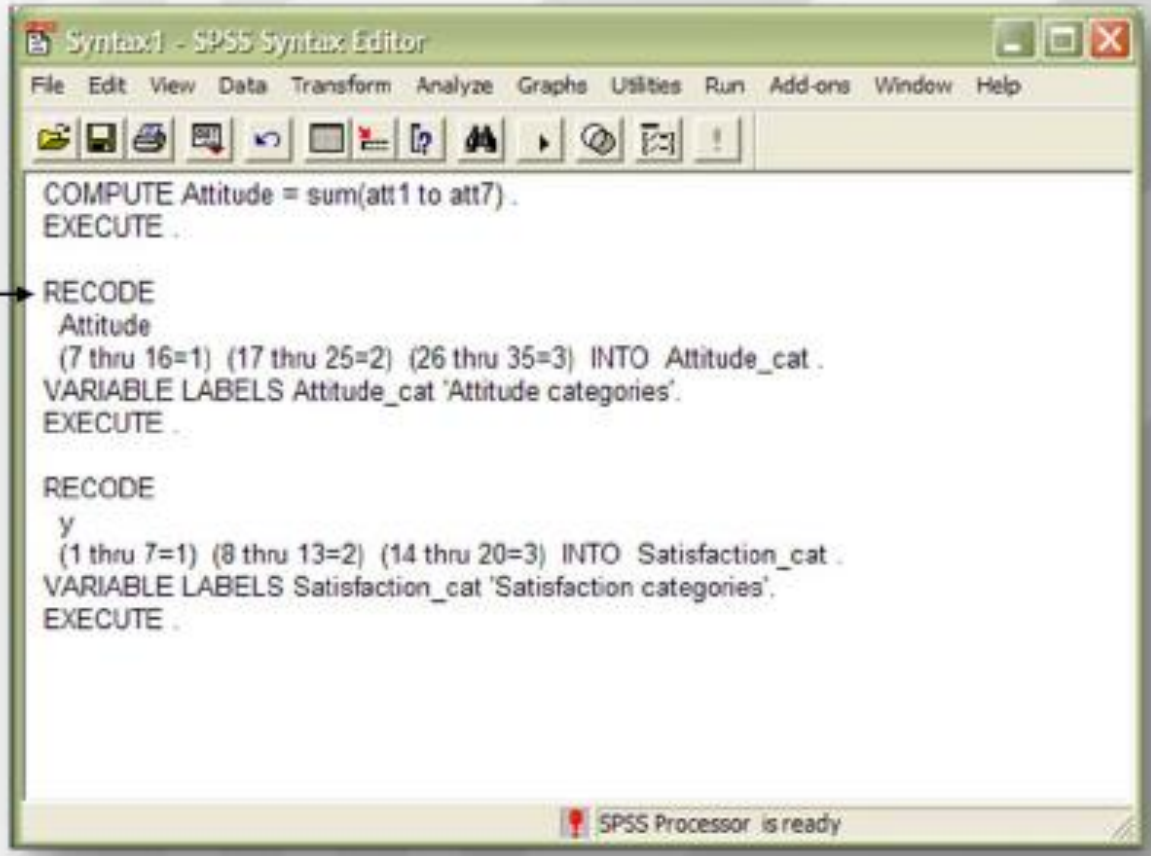
Results of data analyses



3 SPSS Syntax Editor:

Write, display, retrieve, run and save syntax/commands

Syntax or commands



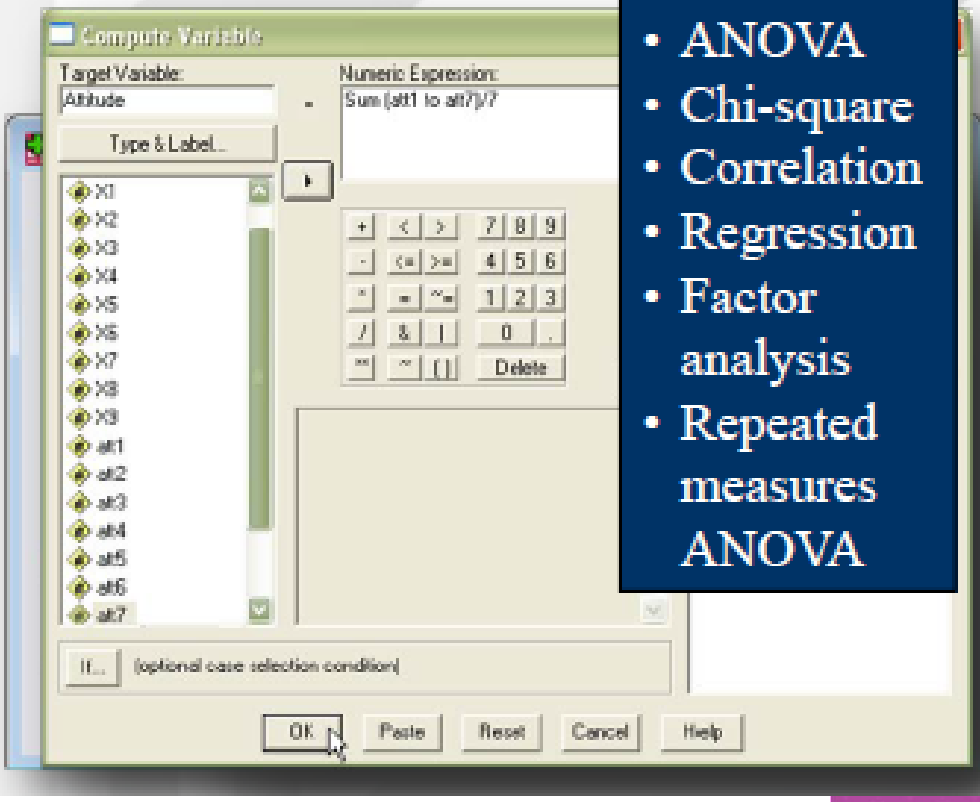
Steps in Data Analysis

Steps in Data Analysis:

1. Define Variables
2. Enter Data
3. Run Frequency
4. Data Editing
5. Reliability Test
6. Transformations
7. EDA Normality

Data Analyses

- Frequency
- t-test
- ANOVA
- Chi-square
- Correlation
- Regression
- Factor analysis
- Repeated measures ANOVA

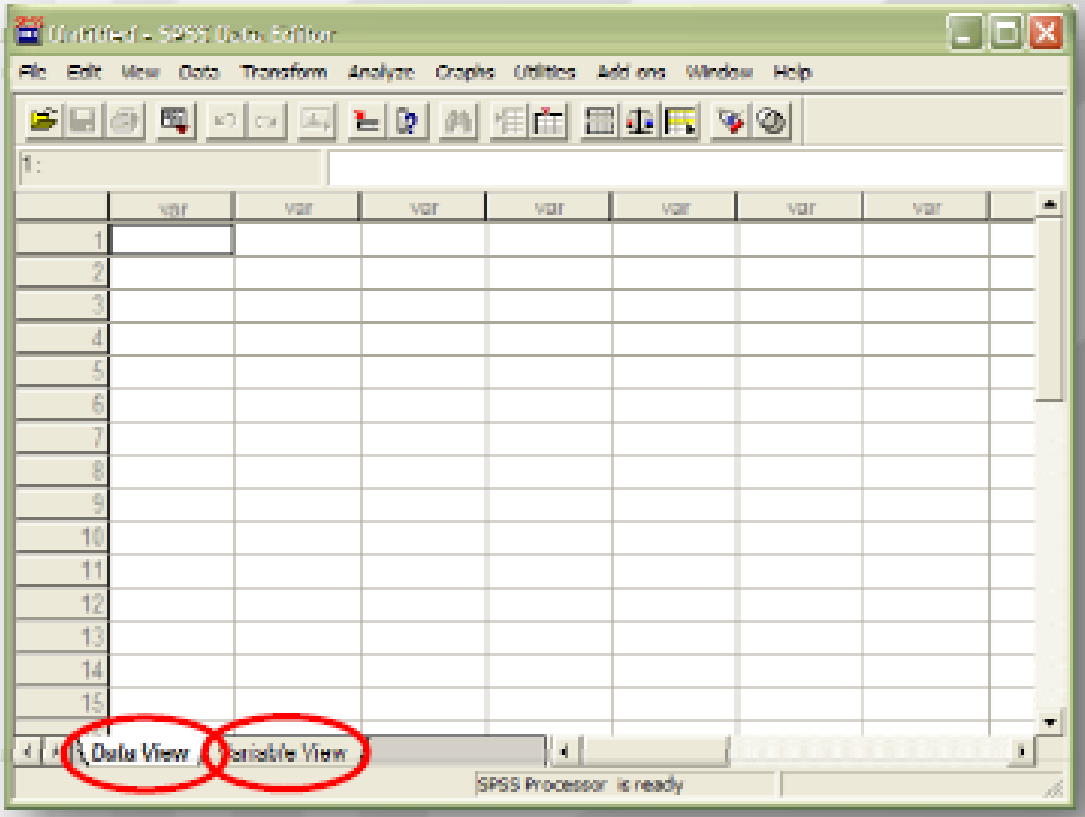


Define Variable *and* Enter Data

SPSS Data Editor:

In the Data Editor, you can:

1. Define variables in Variable View window
2. Enter data in Data View window

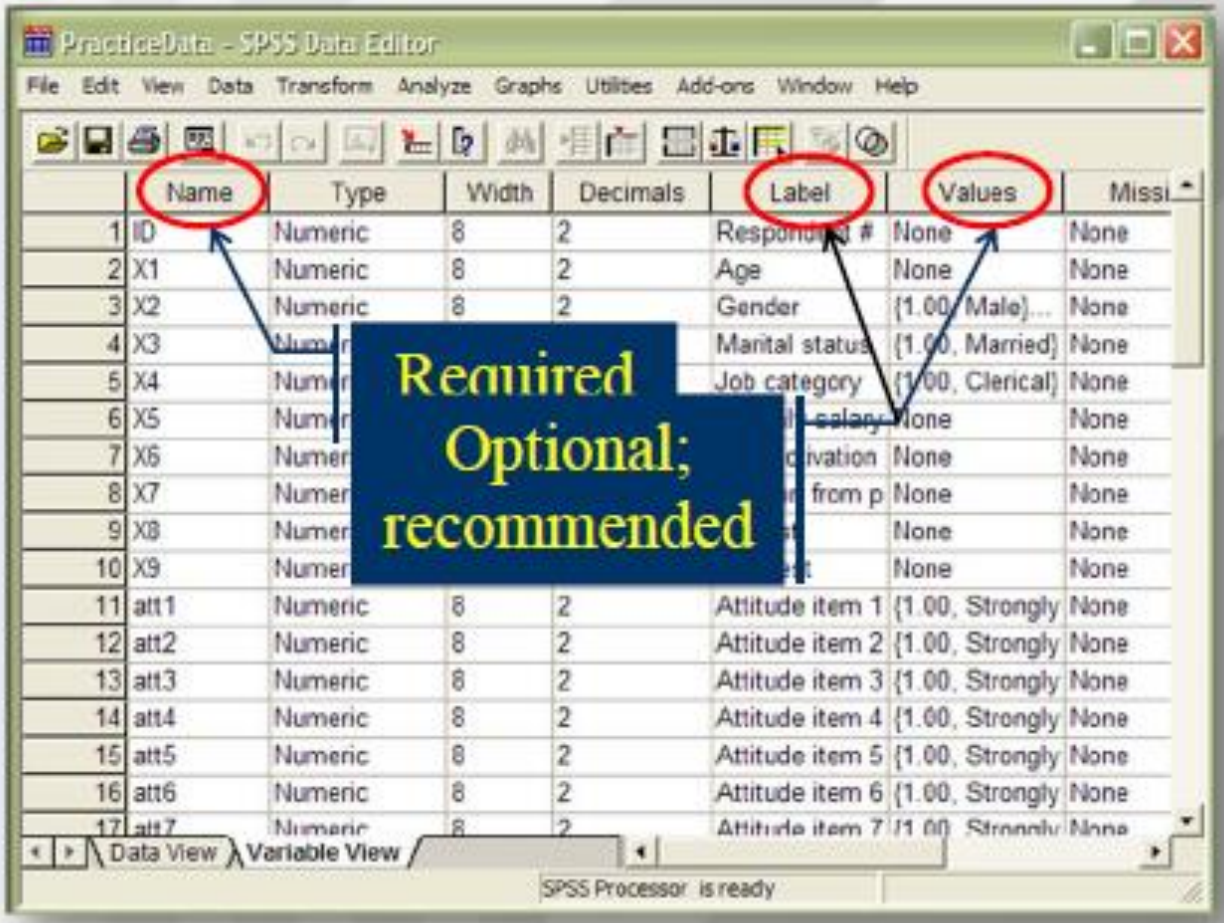


1 Define Variables

Click the *Variable View* tab

Define:

- Name
- Label
- Values

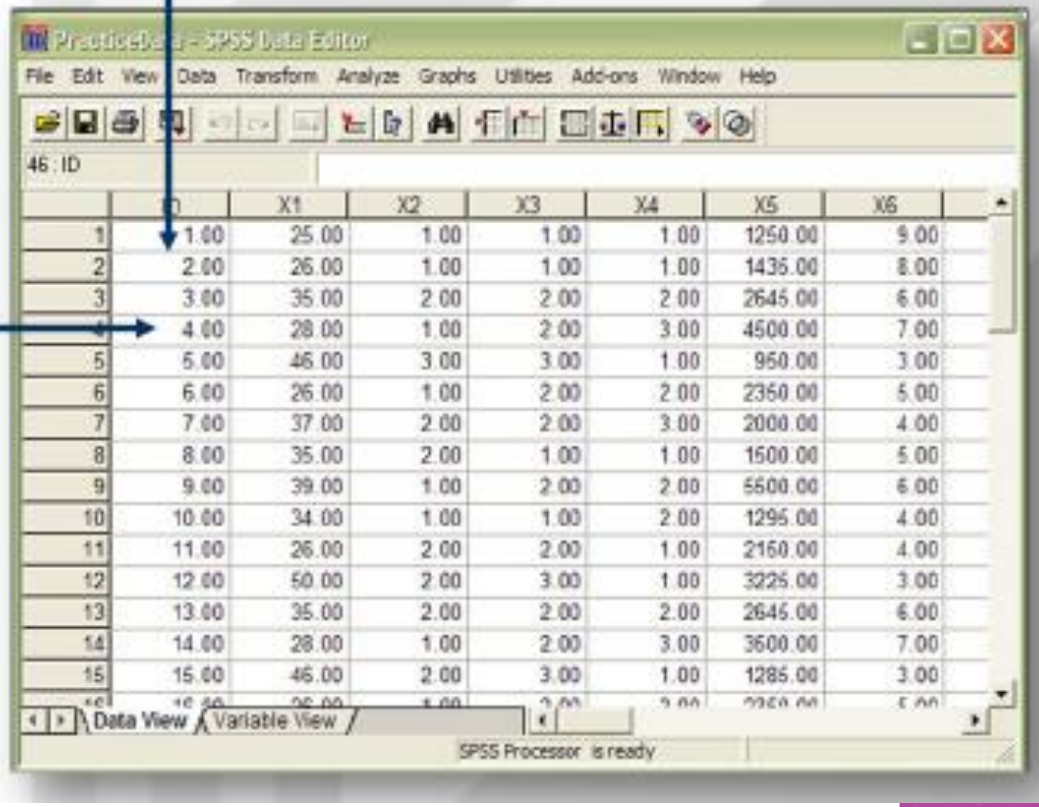


2 Enter Data

In *Data View* window

One column refers to one variable

One row refers to one case or observation

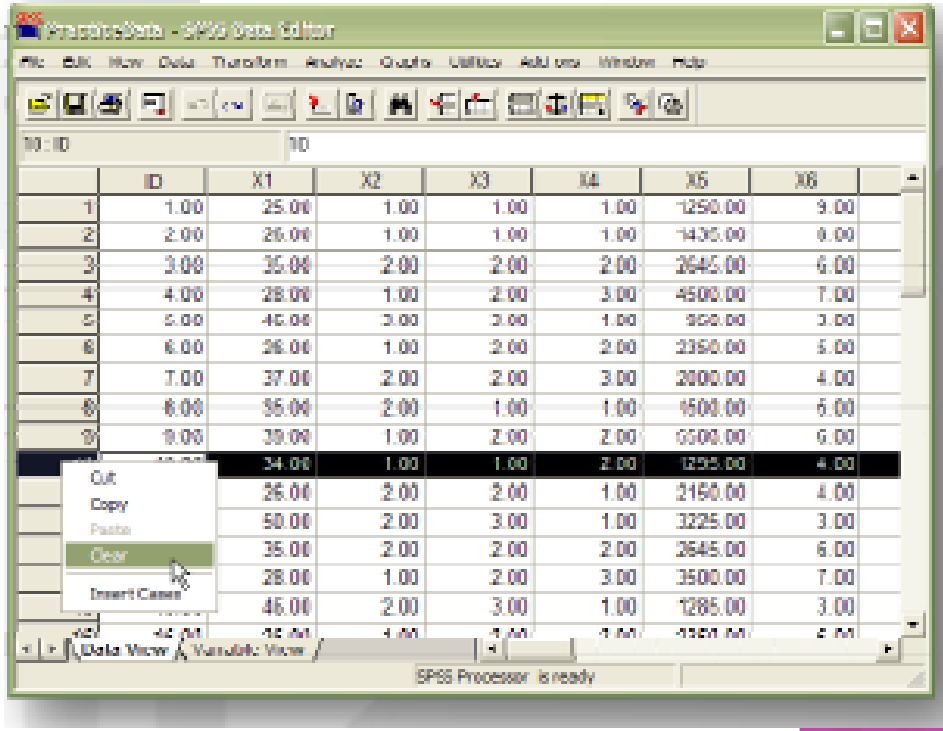


	ID	X1	X2	X3	X4	X5	X6
1	1.00	25.00	1.00	1.00	1.00	1250.00	9.00
2	2.00	26.00	1.00	1.00	1.00	1435.00	8.00
3	3.00	35.00	2.00	2.00	2.00	2645.00	6.00
4	4.00	28.00	1.00	2.00	3.00	4500.00	7.00
5	5.00	46.00	3.00	3.00	1.00	950.00	3.00
6	6.00	26.00	1.00	2.00	2.00	2350.00	5.00
7	7.00	37.00	2.00	2.00	3.00	2000.00	4.00
8	8.00	35.00	2.00	1.00	1.00	1500.00	5.00
9	9.00	39.00	1.00	2.00	2.00	5500.00	6.00
10	10.00	34.00	1.00	1.00	2.00	1295.00	4.00
11	11.00	26.00	2.00	2.00	1.00	2150.00	4.00
12	12.00	50.00	2.00	3.00	1.00	3225.00	3.00
13	13.00	35.00	2.00	2.00	2.00	2645.00	6.00
14	14.00	28.00	1.00	2.00	3.00	3600.00	7.00
15	15.00	46.00	2.00	3.00	1.00	1285.00	3.00

DATA EDITING & TRANSFORMATIONS

Data Editing:

- Change data value
- Cut, copy and paste data value
- Add or delete case
- Add or delete variable
- Change ordering of variables

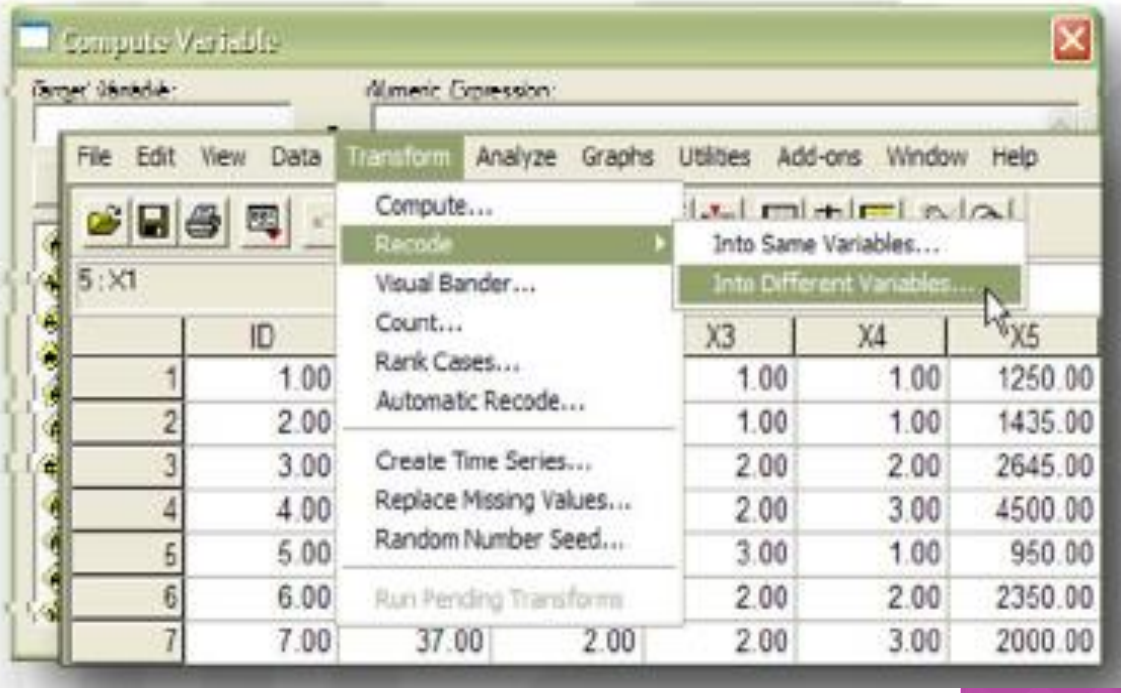


Data Transformations:

Two commonly used data transformations:

① **Compute**
– create new variable based on existing variable/s

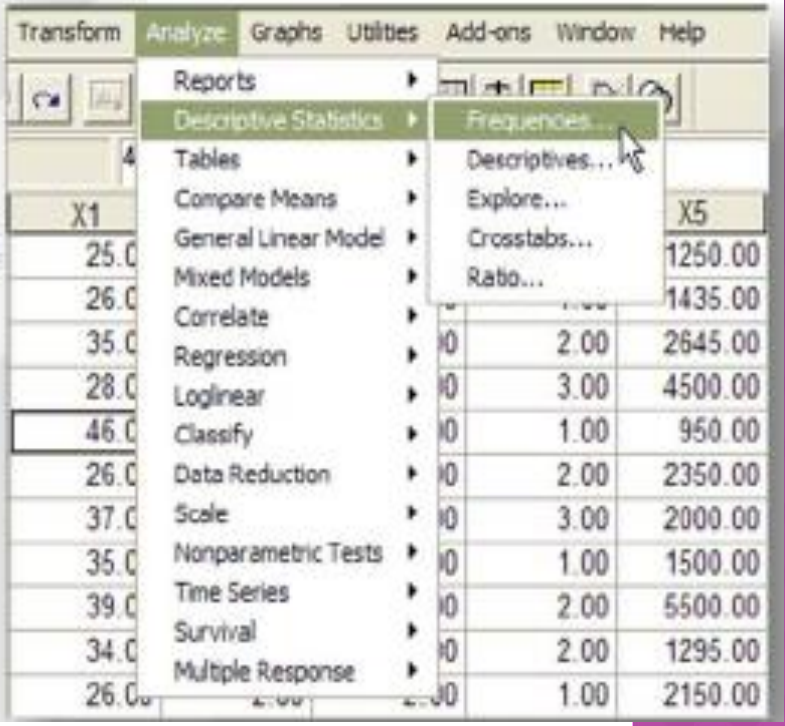
② **Recode**
used to:
- recategorize values
- create categories from continuous variable



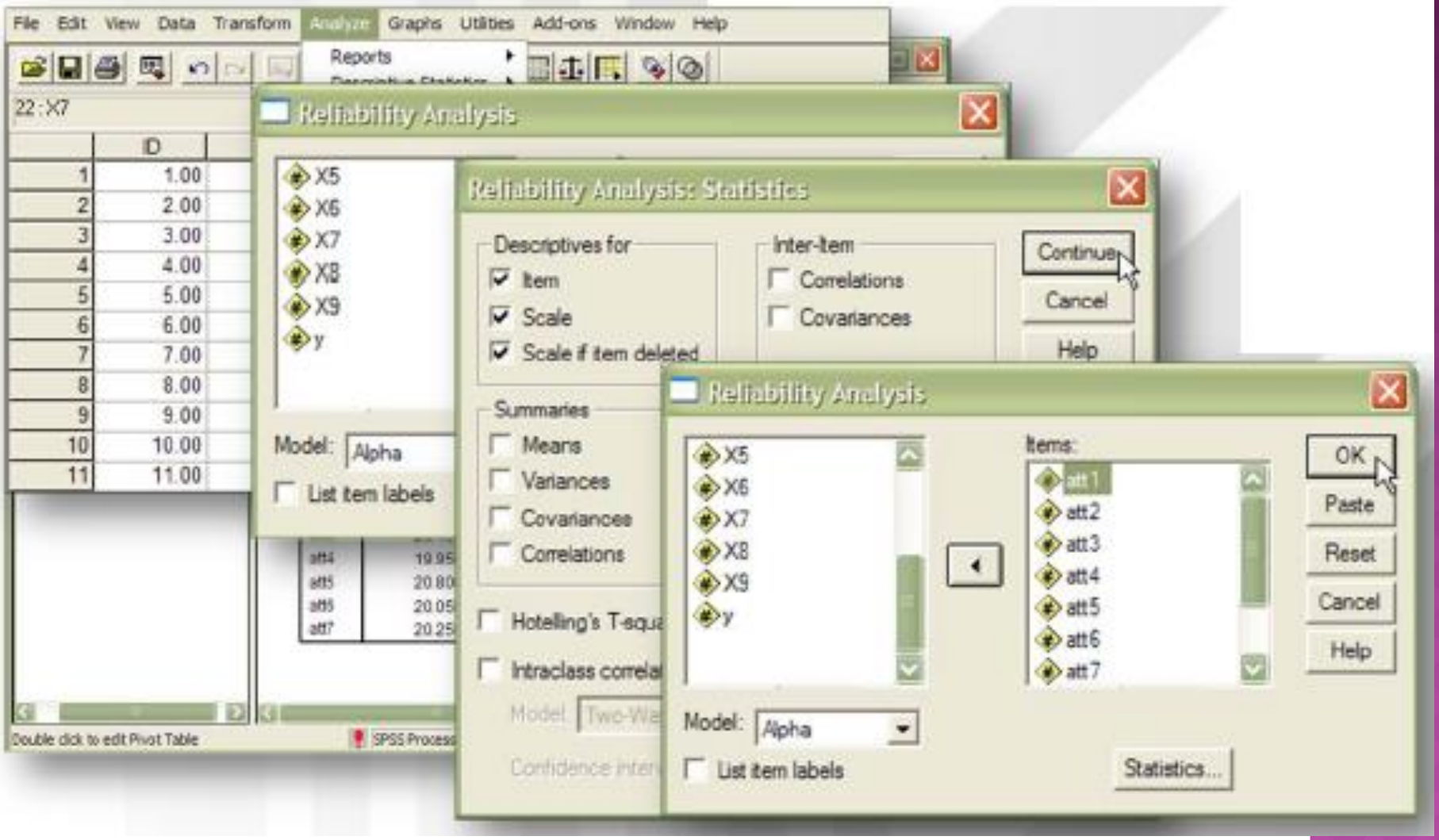
STATISTICAL PROCEDURES

Statistical Procedures:

- Reliability test
- Exploratory data analysis
- Descriptive Statistics
  - Frequencies, crosstabs
- Compare group means
  - t-test and ANOVA
- Relationship between variables
  - Chi-square, Spearman rho, Pearson PM correlation, and regression

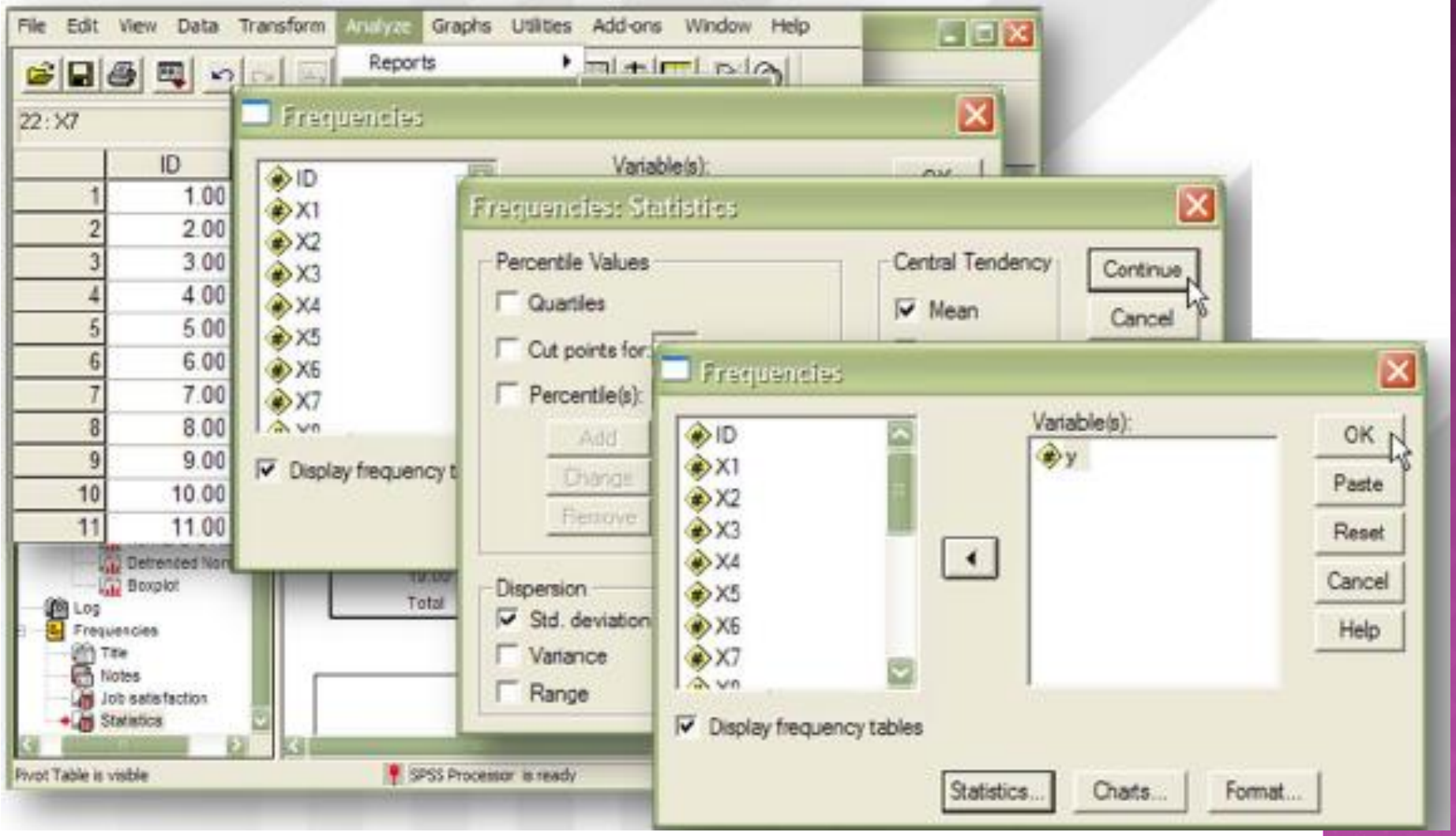


Reliability Test:

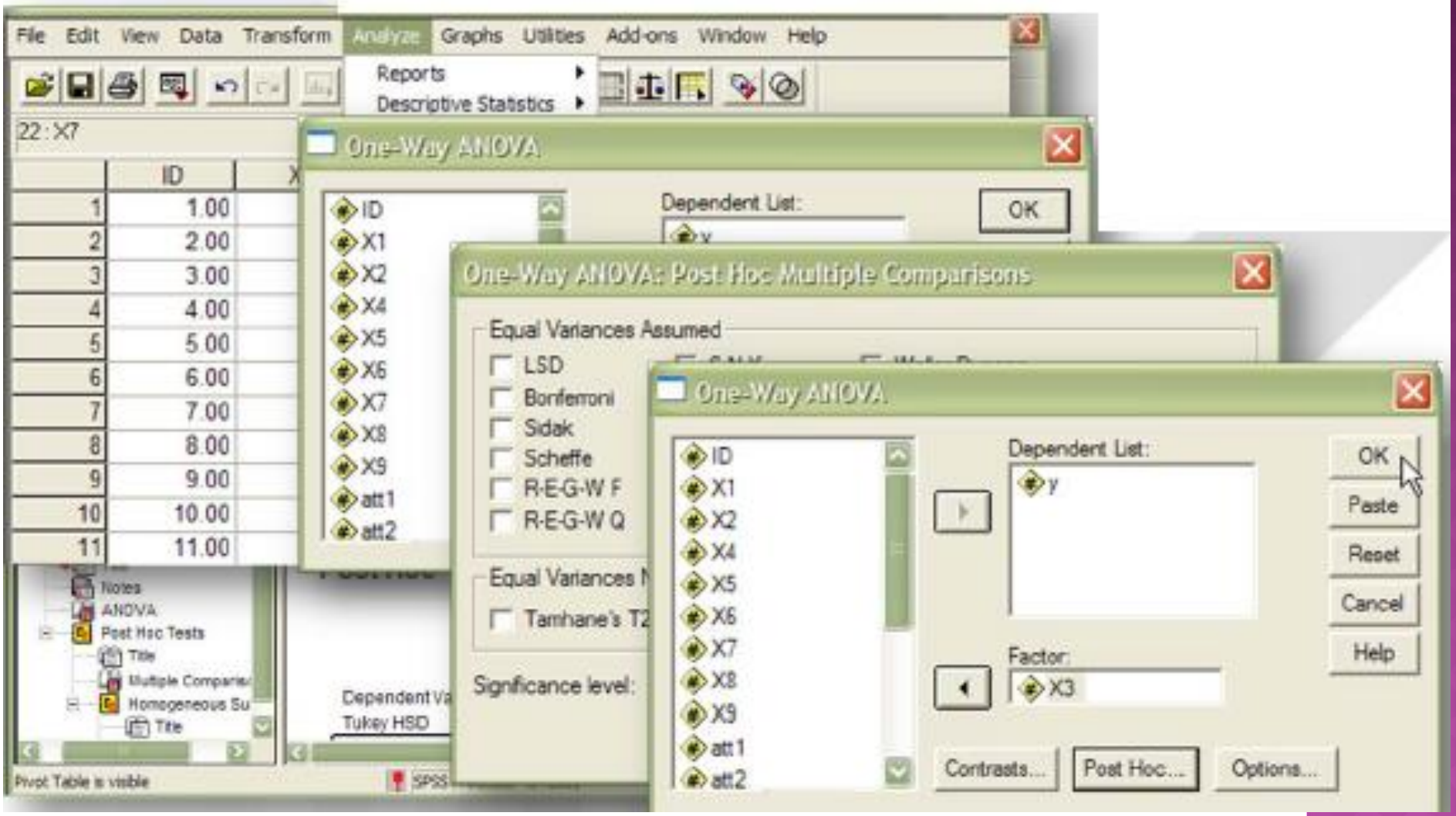


Exploratory Data Analysis:

Frequencies:



ANOVA:


File Edit View Data Transform Analyze Graphs Utilities Add-ons Window Help
Reports
Descriptive Statistics
22 : X7
ID
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
One-Way ANOVA
ID
X1
X2
X4
X5
X6
X7
X8
X9
att1
att2
Dependent List:
OK
One-Way ANOVA: Post Hoc Multiple Comparisons
Equal Variances Assumed
LSD
Bonferroni
Sidak
Scheffe
R-E-G-W F
R-E-G-W Q
Equal Variances N
Tamhane's T2
Significance level:
One-Way ANOVA
Dependent List:
y
Factor:
X3
OK
Paste
Reset
Cancel
Help
Contrasts...
Post Hoc...
Options...
Notes
ANOVA
Post Hoc Tests
Title
Homogeneous Su
Title
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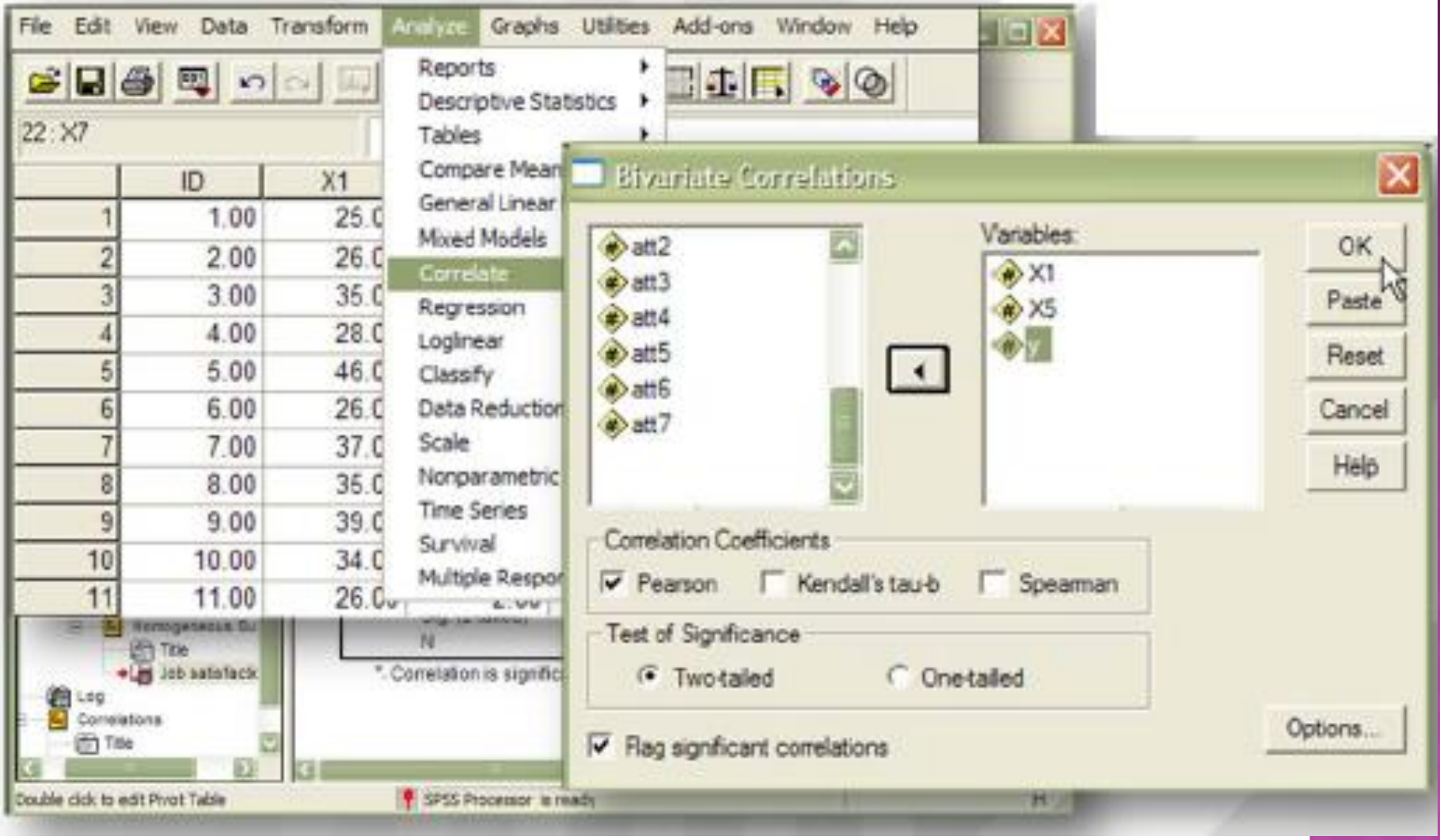
Tukey HSD
Pivot Table is visible
SPSS

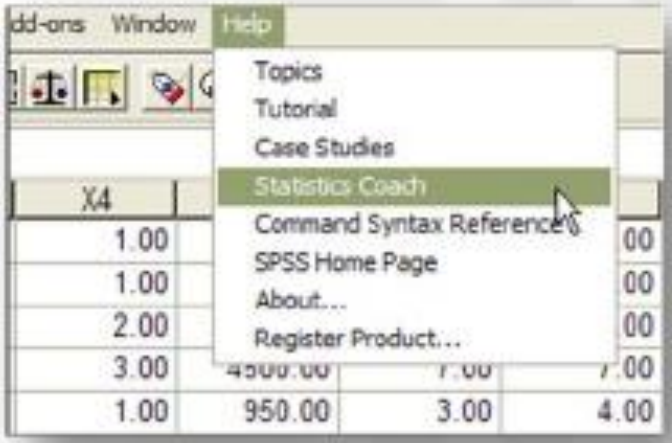
Correlation Analyses:

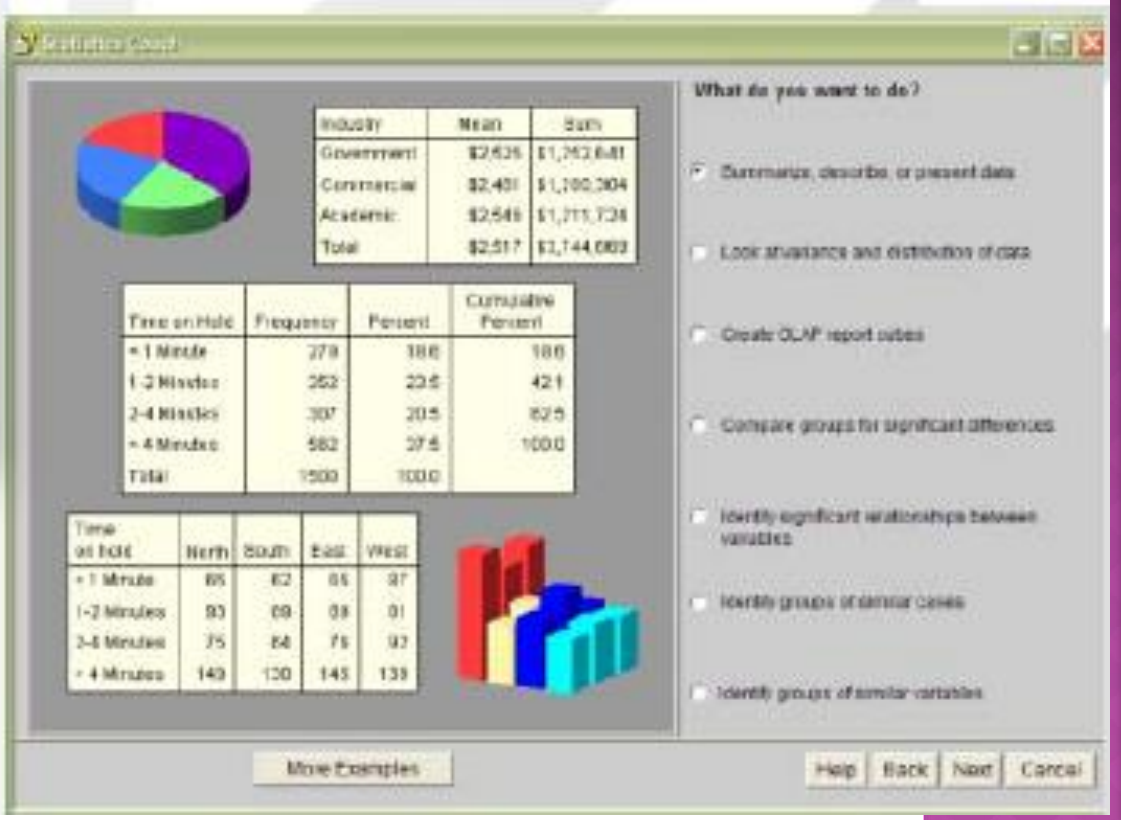


SPSS COACHES

1 Statistic Coach

Guide in selecting the most appropriate statistical analysis





2 Result Coach

Help to interpret statistical results