وزارة التعليم العالي والبحث العلمي

جامعة المستقبل

كلية التقنيات الصحية والطبية

قسم تقنيات البصريات

محاضرات تطبيقات الإحصائية 1 العلمي

اعداد

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مدخل الى برنامج SPSS V22

المحاضرة الأولى

1. Definition of the statistical system SPSS:

Abbreviation (Statistical Package for Social Sciences) is one of the statistical applications that operates under the Windows umbrella. It is a set of lists and tools through which the data obtained by the scientific researcher through questionnaires, interviews, or observations can be entered, and then carried out. By analyzing it (statistical analysis), the statistical system (SPSS) relies on digital information. The program is distinguished by its great ability to process the data that is provided to it, and it can be used in all scientific research methods.

2. The importance of SPSS:

The statistical analysis program (SPSS) is one of the most important programs used in statistical analysis, especially since it is a number of comprehensive packages that can perform the data analysis process. It is worth noting that this program is used in research that contains calculations, numbers, and statistical and digital data, as it can The statistical analysis program (SPSS) reads all the data in various files and thus analyzes it in order to produce the results as well as a statistical report on them. The statistical analysis program (SPSS) allows the user to enter data, modify data in the form of variables, especially new data using equations.

In addition, the statistical analysis program (SPSS) allows the user to save data of various types in specific files and then name them. It undoubtedly allows the user to modify the names that he has placed in the data file. The best feature of the statistical analysis program (SPSS) is that it allows the user to retrieve data, files, and views. The user of the statistical analysis program (SPSS) can do the above by controlling a list of commands and options available in the program. It includes all stages related to data analysis by the SPSS user performing four steps:
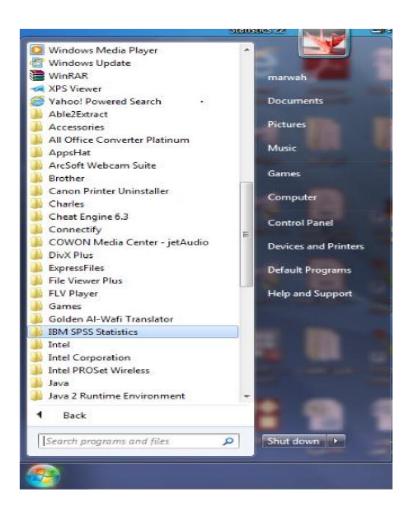
1. Data encoding.

2. Put the data into the program.

3. Selecting the appropriate scale for data testing and analyses.

4. Identify the variable data to be analyzed, and achieve the statistical process.
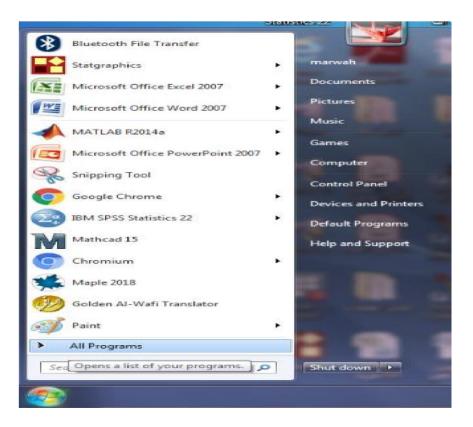
3. Features of SPSS:

1. Very easy to handle and use and suitable for all levels of users.

2. Analysis can be performed using menus without the need to write commands.

3. It can handle almost all types of files.

4. He excels in descriptive statistics, regression analysis, and analysis of variance.

5. Due to its great global importance, the principles of statistical analysis are taught in most international universities through it.
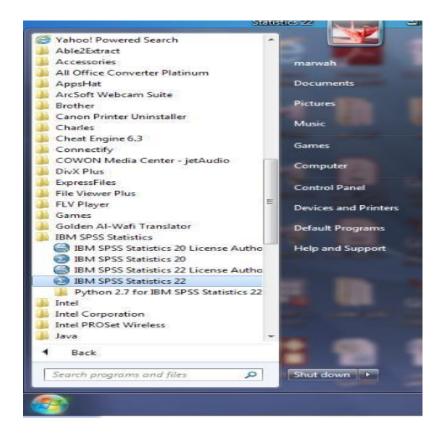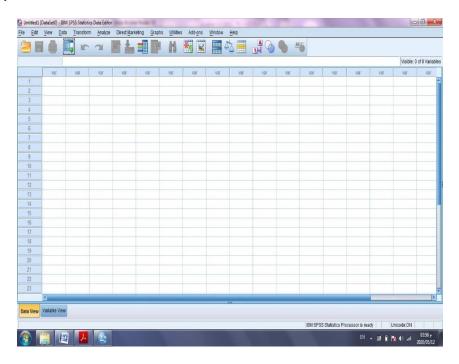
Then we choose 22 IBM SPSS Statistics as shown in the figure below:

3. The main window of the program will appear as shown in the figure below:

6. SPSS components:

1- Command Function list:

It is the command bar (menu bar) for this program, through which the program user can choose the command he wants in order to help him in statistical analysis, when the program user clicks on the desired icon in the program, the menu bar or the list of commands that includes a number It is one of the main menus, which, when pressed, have several subcommands other than the Help menu.

2. Data View environment:

It is an environment in which the user controls the addition or deletion of data related to each variable. The user deposits any independent variable in a column on the data screen. The user can also switch to display and view the variables by clicking and moving between the two

commands (Data View) and (Variable). View) located at the bottom left of the variables screen.

3. Variables screen:

The variable data definition screen, which contains parallel columns, where each column contains data for each variable. To view the definition of each variable, the user presses the mouse button twice (Double Click), or he can click on the command (Variable View) located at the bottom left of the variables screen.

4. List of reports and results of statistical analysis:

It is a display screen through which all results and reports are shown, and it also allows the user to move between both the data screen and the results screen.

7. SPSS menus :

1. File menu: This is the menu responsible for adding new files or extracting old files.

2. Edit menu: This is the menu responsible for a number of features such as copying, moving, and searching for specific data.

3. View menu: This is the menu responsible for modifying the appearance of the display, such as showing or hiding the taskbar and tools, or hiding specific titles, as well as changing the font type and a number of other tasks.

4. Data menu: This is the menu responsible for modifying, sorting, transforming, and merging the data that has been entered.

5. Transform menu: This is the menu responsible for performing complex calculations provided by the program.

6. Statistical Procedures List (Analyze): This is the list responsible for analyzing data statistically, such as calculating averages, standard deviations, etc.

7. Graphs menu: This is the menu responsible for creating graphs.

8. Utilities menu: This is the menu responsible for providing accurate data about the file being worked on.

9. Window menu: This is the menu responsible for determining both window sizes.

10. By zooming in or out, you can navigate between the windows of the SPSS statistical system.

11. Help menu: This is the menu responsible for providing additional information if the user requests it, and he may resort to it while facing any problem.

8. SPSS windows:

The statistical program (SPSS) includes many windows, including:

The data editor window is a window that appears automatically when the program starts, through which data is entered into the program. Each type of data entered is defined through a separate worksheet that is somewhat similar to the Excel worksheet. It consists of The data editor window in SPSS consists of the following parts:

1. Title bar: It contains the name of the file in which the data is stored, followed by the phrase SPSS data editor

2. Menu bar: It contains commands for the data editor window to manipulate data in terms of modifying or changing it, and it also contains other commands for statistical analysis.

3. Standard tool bar: It represents a quick shortcut to access the most important commands in the menu bar.

4. Cell editor bar: It is a bar consisting of two parts. The first represents the cell name, i.e. the row number and column symbol (variable name), and the second part through which we can enter data into the cell.
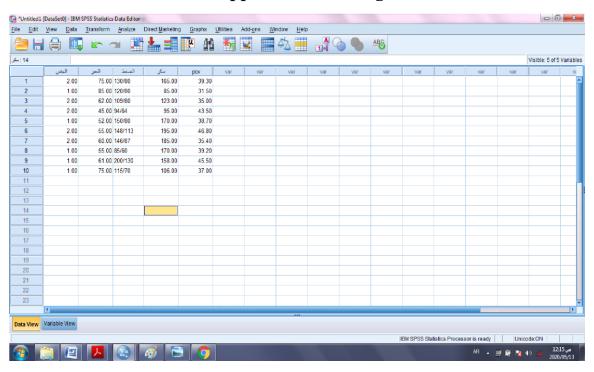
The data editor window consists of two sheets, the first is called the data view and the second is called the variable view, which is as follows:

First: The data view sheet. This sheet consists of lines called cases and columns called variables. The line where the line meets the column is called a cell. Through the table cells, data can be entered via the keyboard.
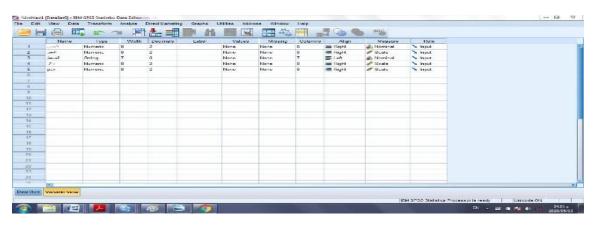
Data can be entered in this sheet either according to variables or according to cases by pausing with the mouse on the cell in one of the variables so that the cell becomes active, then entering the values, pressing the enter key or the mouse keys, moving to the other cell, and so on.

Thus, the data view sheet appears as in the figure below

Second: The variable view sheet, which is a page divided into ten columns and more than fifty rows for variables. As for the columns, each one of them represents a specific description of the type and name of the variable and the nature of the data related to that variable, which we will enter in the data view sheet. These columns are as follows.

. Name of the variable: The first column in this sheet bears the name (Name) and is private by writing a name for the variable, since each cell in this column belongs to one of the variables, it is important to consider:

The following points when choosing a name for the variable are:

☐ The length of the name should not exceed 8 characters.

☐ The name must start with a letter, while the rest of the name can contain letters or numbers, dots, @, #, -, $.

☐ Variable names must not end in a period.

☐ The name must not contain a space or signs such as an exclamation mark or question mark.

☐ The name must not end with this sign (_).

☐ Variable names can be written in upper or lower case letters in English, and variable names can also be written in Arabic, taking into account the previous conditions, in some versions of SPSS. It is preferable not to use them because the program may not recognize them, especially when showing results for graphs.