

MICROSOFT EXCEL BY EXAMPLE II

Learning Objectives:

- Working with predefined formulas – descriptive statistics functions [Insert – Functions ...].
- Creating graphical representations of qualitative variables (one and two variables).
- Creating $r \times n$ contingency table [Data - Pivot Table and PivotChart Reports]

1. Save the **PA2-1.xls** file on your computer. Name the sheet as Data.
2. Insert a new sheet named *Predefined Functions*.
3. Display the Hypertensive status (HT column) of each patient using the following criteria:

A patient is considering to be hypertensive (yes to be displayed on the HT column) IF the SBP is ≥ 140 mmHg OR DBP ≥ 90 mmHg. Otherwise, the patient is considered normotensive.

4. Display the Diabetes status of each patient using the following criterion:

A patient is considering to be with diabetes (yes in the column) IF glycemias is ≥ 100 .

5. Display the Cardiac risk status of each patient using the following criteria:

A person has a cardiac risk if the age of the person is greater than 30 year AND the person smoke AND the person has hypertension AND the person has diabetes.

6. Copy all data from Data sheet in Predefined Functions sheet by using [**Home – Paste – Paste Special – Values and Numbers Format**].
7. Move the column as follows: A = Sex; B = OBESITY; C = SMOKING; D = HT (yes/no); E = DIABETES (yes/no); F = CARDIAC RISK (yes/no).
8. Create in the Predefined Functions sheet a table with the structure presented in the image bellow and compute for each variable the measures of centrality, spread, symmetry and localization:

	N	O	P	Q	R
		AGE (years)	SBP (mmHg)	DBP (mmHg)	GLYCEMIA (mg/dl)
Measures of centrality					
Mean					
Median					
Mode					
Minimum					
Maximum					
Central value					
Measures of spread					
Range					
Variance					
Standard deviation					
Standard error					
Coefficient of variance (CV)					
Interpretation of CV					
Measures of symmetry					
Skewness					
Kurtosis					
Measures of localization					
Quartile 1					
Quartile 2					
Quartile 3					

9. Compute for each variable all descriptive statistics.
10. Copy the values from Predefined Functions in a new sheet named Descriptive statistics. Preliminary analysis identify that none of the investigated variable is normal distributed. Using this information, leave in this table just the values of those parameters that properly fit according to distribution analysis.

11. Create PIE graphical representation for SEX and OBESITY.
12. Create BAR/COLUMN charts for Year of Diagnosis.
13. Insert a new sheet named *Contingency table*. Copy in this sheet the SMOKING and HT variables.
14. Create a contingency table for SMOKING (as row variable) and HT (as column variable). Based on this table create a column chart.