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×n contingency table [Data - Pivot Table and PivotChart Reports]

1. Copy the data from **DB.xls** file into a new Microsoft Excel file named **data06.xlsx** and save it in the in **Lab06** folder. Name the sheet as <u>Data</u>.
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 glycemia is >=100.

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

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

6. Copy all data from <u>Data</u> sheet in <u>Predefined Functions</u> 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 <u>Predefined Functions</u> 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 <u>Predefined Functions</u> in a new seet named <u>Descriptive statistics</u>. 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.