

## MICROSOFT EXCEL BY EXAMPLE I

### Learning Objectives:

- Working with Workbook and Sheets (Exercise 1)
- Using formulas in Excel – operators, order of operations (Exercise 2)
- Relative and absolute references, writing equations (Exercise 2)

### Exercise 1

1. Create a new Workbook named **ExcelExample.xlsx** and save it in **Lab05** folder.
2. Rename the sheets of the **ExcelExample.xlsx** file as follows: Example (Sheet 1), Data (Sheet 2), File (Sheet 3).
3. Insert a background (whatever you want) to the sheet named Example.
4. Hide the sheet named Example.
5. Insert a red tab to the sheet named Data.
6. Create on the Data sheet a table with three columns (A1 = No; B1 = Category; C1 = Example) as in the example bellow:

No	Category	Example
1	Number	
2	Date	
3	Time	
4	Text	
5	Scientific	

7. Formatting the cells from the column *Example* according with column *Category* and fill in these cells some examples (e.g. for Date category insert in the example column after proper formatting you birth date).
8. Delete the sheet named File.

### Exercise 2

1. Create in Lab05 folder a new Excel file named **Formulas.xlsx**.
2. Rename the first sheet as Data, and delete all other sheets.
3. Introduce in the Data sheet the following structure of a table:

	A	B	C	D	E	F	G	H	I	J	K
1	Cost of hispitalization			550 lei							
2											
3	No.	Sex (F/M)	Age (years)	Obesity (yes/no)	Alcohol (yes/no)	Smoking (yes/no)	Weight (kg)	Height (cm)	SBP (mmHg)	DBP (mmHg)	Duration of Hospitalization
4	1										
5	2										
6	3										
7	4										
8	5										
9	6										
10	7										
11	8										
12	9										
13	10										

(SBP = Systolic Blood Pressure; DBP = Diastolic Blood Pressure)

4. Formatting the columns according with the type of variables as **Text OR Number without decimals**.
5. Include information of all variables for 10 patients.

6. Insert to the right of the column Height a new column named BMI ( $\text{kg}/\text{m}^2$ ) (BMI = Body Mass Index).
7. Compute for each patient the BMI using the following formula (**Building formula by using Relative References**):
$$\text{BMI} = \text{Weight (Kg)}/\text{Height (m}^2)$$
8. Insert to the right of DBP column a new column named MAP (Mean Arterial Pressure).
9. Compute for each patient the MAP using the following formula (**Building formula by using Relative References**):
$$\text{MAP} = \text{DBP (mmHg)} + 1/3 * (\text{SBP(mmHg)} - \text{DBP(mmHg)})$$
MAP is considered to be the perfusion pressure seen by organs in the body and takes normal values between 70 to 110 mmHg.
10. Insert to the right of MAP column a new column named PP (Pulse Pressure).
11. Compute for each patient the PP using the following formula (**Building formula by using Relative References**):
$$\text{PP} = \text{SBP(mmHg)} - \text{DBP(mmHg)}$$
12. Insert a new column named CH (lei) to the right of the Duration of Hospitalization. (CH = Cost of Hospitalization).
13. Compute for each patient the CH using the following formula (**Building formula using Absolute References**):
$$\text{CH} = (\text{Duration of Hospital Stay}) * (\text{Cost of one hospitalization day})$$
14. Save the file and close all applications!