

EXERCISE 04 PROCEDURES & FUNCTIONS PART 1

Purpose of classes

Implementation of simple procedures and functions.

Materials to be prepared

Materials placed on the course website: Lecture02.

Tasks

Write procedures and functions described below.

1.	Procedure length_1 calculates the length of the vector $v = (x, y)$, i.e.: $\ v\ = \sqrt{x^2 + y^2}$. The vector coordinates are input parameters of the procedure and the calculated length should be displayed as the message: <i>"The vector has length: □□□."</i> □□□ is the calculated length.
2.	Procedure calculate_1 uses procedure length_1 to calculate the length of the vector whose coordinates are entered in the cells A1 and B1.
3	Procedure calculate_2 uses procedure length_1 to calculate the length of the vector whose coordinates are entered in the active cell and in the cell to the right of the active cell.
4	Procedure calculate_3 uses procedure length_1 to calculate the length of the vector whose coordinates are given by user in windows created by InputBox function. First window should ask for the value of the x coordinate, second window for the value of y coordinate (exemplary messages: <i>"Enter x", "Enter y"</i>).
5	Procedure length_2 is a modified version of the procedure length_1. It calculates the length of the vector but does not display it, only returns it in the third parameter of the procedure (the first two parameters are the vector coordinates).
6	Procedure calculate_4 uses procedure length_2 to calculate the length of the vector whose coordinates are entered in the cells A1 and B1. The calculated length should be displayed as the message (see task 1).
7	Procedure calculate_5 uses procedure length_2 to calculate the length of the vector whose coordinates are entered in the cells A1 and B1, The calculated length should be should be written in cell C1 of the sheet.
8	Function length_3 is a modified version of the procedure length_1. Function calculates the length of the vector and returns it.
9	Procedure calculate_6 uses procedure length_3 to calculate the length of the vector whose coordinates are entered in the cells A1 and B1, The calculated length should be displayed as the message (see task 1).
10	Procedure calculate_7 uses procedure length_3 to calculate the length of the vector whose coordinates are entered in the cells A1 and B1, The calculated length should be should be written in cell C1 of the sheet.