Sheet 3 (*Functions*)

Class Work

1- a) Write a function that gets two numbers (as parameters) and returns their maximum value.
b) Write a program that reads 5 numbers from the user and uses the above function to find their maximum.

2- a) Write a function that gets a number (as parameter) and returns its double.
b) Write a program that reads two numbers from the user (x , y) and evaluates the equation: 2 x + 4 y . (Use the above function)

Home Work

1- a) Write a function that gets two numbers (as parameters) and returns their sum.
b) Write a program that uses the above function to find the sum of the elements in an array contains 10 numbers.

2- a) Write a function that gets a number (as a parameter) and returns **"1"** if the number is odd and **"0"** if the number is even.
b) Write a program that uses the above function to count the number of even values in an array of 10 elements.

3- a) Write a function that gets two numbers (x , y - as parameters) and returns the value of: x^y.
b) Write a program that reads 3 values from the used (a , b , c) and uses the above function to evaluate the equation: (a + b)^c.

4- a) Write a function that gets a number (as parameters) and returns all its divisors (assume not more than 10).
b) Write a program that reads 2 values from the used and prints their common divisors.

5- a) Write a function that gets a number and returns its absolute value.
b) Write a program that reads 2 vectors from the used (each contains 3 elements) and evaluates the sum of absolute differences of its elements.

$$SAD = Sum\ (\ Absolute\ (a_i - b_i)\ ) \qquad , SAD = \sum\ |\ a_i - b_i\ |$$