University of Biskra Mathematics Department Module: Algorithmics and Data Structures 2 1st year

TP N° : 02

Exercise 1:

Write the recursive function that calculates the power of a positive integer.

Exercise 2:

Write Euclid's program (PGCD) in the form of a recursive function.

Exercise 3:

Write a recursive function that calculates and displays the number of digits of a strictly positive integer given by the user. *Execution example:* Give a positive integer: 28579 This number has 5 digits.

Exercise 4:

Consider T an array of integers:

- 1- Write the procedures that display the elements of the T (increasing and decreasing mode).
- 2- Write a recursive function which allows to search a given element in T.

Exercise 5:

Write a recursive function to check if a character string is a palindrome (A palindrome is a character string that can be read in both directions).

Exp: Madam, Radar, Refer ... etc