

هذه الشيت للطلاب والغرض منها:

- 1- ان يملأها بعد انتهاء البرنامج
- 2- ان تكون جاهزه دائما للاطلاع عليها من قِبل دكتور الماده والمعيدين والطلاب

**Lab sheet # 2**  
**(FUNCTIONS)**

**CALL BY VALUE AND REFERENCE-RECURSIVE FUNCTIONS**

Q1) Write a function named "GCD" that takes two positive integer arguments and returns the value of the Greatest Common Divisor of those two integers. If the function is passed an argument that is negative, then the function should return the value 0 to indicate that an error occurred. After using the arguments in computing the GCD, change their values by squaring them and use call by reference. Call the function in a loop using with the arguments' new values

Program Code:

**Q2)**

Write a program that uses a recursive function to calculate the factorial of a given number n. Use a default argument for n. For example: firstly call factorial() that uses a default value you determine to calculate its factorial and secondly call factorial(n) that will use a value of “n” to calculate its factorial  
-make another function that sums all the factorials from 1 upto a number k.

Program Code: