

Department of Computer Science
University of BATNA 2
Sixth Practical Work
2023/2024
Sub-programs (procedures and functions)

Program 1

OBJECTIVE Understand the difference between procedure and function

1- Write in C a displayMessage procedure that takes "times" as its parameter, which indicates how many times the message "SAHA AIDKOUM" should be displayed.

2- Write in C a controlrepetitions function which controls the number of repetitions N, which must be strictly positive.

3- Using the previous sub-programs

➤ **write the main()function**

That calls the controlrepetitions function that controls the number of repetitions

And calls the displayMessage procedure by passing Numberofrepetitions as an argument.

Note: Numberofrepetitions is a variable that specifies the number of repetitions required.

4- Deduce the difference between procedure and function

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Program 2 :

OBJECTIVE Learn to write a sub- program in C and understand its usefulness

1 – Write in C a **control** sub-program which allows you to control the entry of a positive integer N and less than 50

2 - Write in C an **even** sub-program which allows you to check if an integer is even

3 – Write in C a **div** sub-program which displays all the divisors of an integer

4- Write in C a **reading** sub-program which allows you to enter an array T with positive integers of maximum size 50

5- Using the previous sub-programs

➤ **write the main()function which allows you**

To enter a table of integers TAB of maximum size 50

Then to display all the divisors of the even values

of the table TAB

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Program 3 :

OBJECTIVE Learn to differentiate between global and local variables

- 1 – Write in C a **control** function which allows you to control the entry of a positive integer N and less than 50
- 2- Write in C a **reading** procedure which allows you to enter an array T of maximum size 50
- 3-Write an **average** function in C that calculates the average of the elements in an array T of maximum size 50
- 4-Write a **sorted** sub-program in C that sorted an array T of maximum size 50
- 5-Write a **median** procedure in C that calculates the median of a sorted array T of maximum size 50
- 6-Write a c program that use all questions to calculate median and average of an array TAB of maximum size 50
- 7- Determine all the global variables and local variables of this program as well as the difference between them
- 8- What happens if we try to access to a local variable in a sub-program outside