University of Biskra
Mathematics Department
Module: Algorithmics and Data Structures 1
1st year   2023/2024

TP N° : 01

Remark. For the practical works, we edit, compile and execute on the IDE, Code::blocks.

Understanding:

- What is Computer Science?
- What is a computer (Von Neumann Architecture)?
- What ere the Components of a computer (Processor/Memory…)?
- What is the deference between of a program and software?
- Distinction between different types of programs: Application/Development environment/operating system/device drivers.
- What are Source Code and Programming Language?
- What is the deference between a compiler and an interpreter?

Exercice 1 :

Create a new folder with the name **<student name_groupe >**. After that, write a program in C language that displays the following message **"Hello, this is my first TP "**. Save the code page as **TP1.c**

Exercice 2 :

Write a program in C language that asks the user to enter (enter) four integers,

1. Reads the four integers on the keyboard,
2. Calculates the average of these integers and,
3. Finally displays the result on screen.

Exercice 3 :

Consider two real numbers 'x' and 'y'. Write a C program that:

1. Read these two numbers,
2. Swaps between these two numbers and displays the new values

Exercice 4 :

Write a C program that displays a message asking the user to enter an integer (representing a number of months), calculates and displays its equivalent in number of years and months.

Remark. As the year is 12 months, we then have the following relationship between the data (input) and the result (output):

number_of_months = 12 * year + months

Exercice 5 :

Write a program in C, which for a sum of money less than 1000 DA, displays how to divide it into coins.

Example:

Input money: 825 DA

Result:

1 coin of 500 DA

1 coin of 200 DA

1 coin of 100 DA

1 coin of 20 DA

1 coin of 5 DA