

MSC - INF101B

C Programming Language

Travaux Pratiques (TP) 4

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1 Introduction

The practical session TP 4 proposes coding exercises that will allow you to strengthen your understanding of the notions presented during Course 4. In the beginning of each TP, you should create a separate folder that will contain your work. For the fourth TP 4, create a folder named TP4 from a terminal and go into this directory.

2 Exercises

2.1

Write a program that can retrieve a web-page containing information about the price of stocks and present to the user the list of stocks ordered depending on their properties (Name - *Company*, last price - *Last*, absolute price change - *Chg*, relative price change - *Chg %* and volume of stocks exchanged - *Volume*). You may use the **wget** utility which allows to retrieve the content of a web-page by the linux command line. By the following example, you can save the content of a web-page into a text file:

```
wget --quiet --output-document stocks.txt http://www.site.com
```

For this exercise, you should retrieve the stock market information from the site <http://www.reuters.com/finance/markets/index?symbol=.FCHI>. NOTE1: the file that you will retrieve contains HTML (HyperText Markup Language) code, which is formatted human-readable web site code. The information related to each stock is preceded by a line containing `"/finance/stocks/overview/"`. For every appearance of that word in the file, you should associate a stock (you may use the function `strtok`, `strstr` and `strcmp`). NOTE2: you should define an appropriate C *structure* that will hold each stock and its properties/fields. NOTE3: you will need to use the `qsort` function and define new functions for comparing the different fields of the stock C structure.

2.2

Separate your code to a main source file and a functions source and header file. Create a makefile that can build (compile and link) 2 versions of your program, one for debugging and the other for normal (optimized) execution.

GENERAL NOTE: Ask for help for whatever you do not understand and whenever you feel blocked.

2.3

Repeat Exercise 2 for all exercises of the previous TPs.