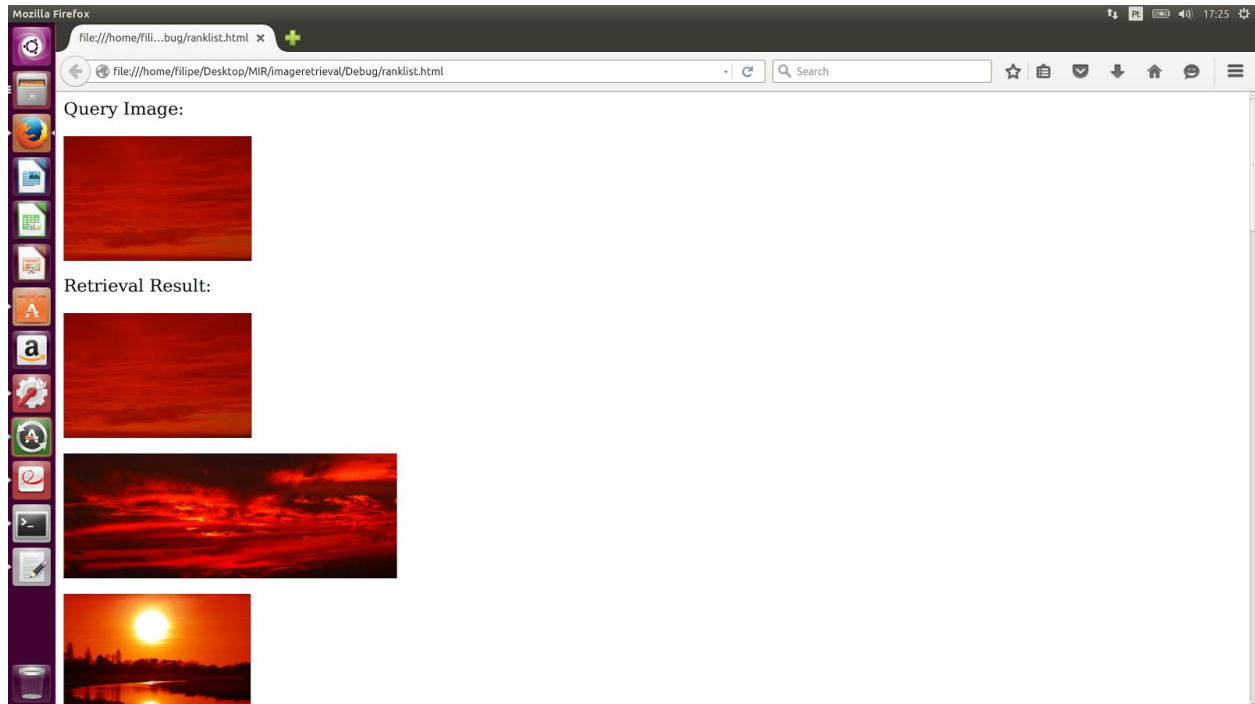# Multimedia Information Retrieval - Homework 2

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Answer 1 a)

Answer 1 b)

The program provided starts by receiving two arguments, a file origin and a file destination. The program then generates and normalizes the histogram of the origin file. Then, generates all the histograms of all the image files in the directory folder. Then compares the similarity between the histogram of the original file and all the others (generating a ranking score). In the end, the program generates the file destination with the ordered list of images regarding the similarity to the original photo in an html format.

As stated before, the program bases its ranking function on similarity between the histograms of the images. Once an histogram only takes in account color and not shape or texture, this type of evaluation can lead to some errors. For example if we would to randomize pieces of the image (rotating and changing places) the histogram would be identical to the original picture's. Using the index4.jpeg, I changed and rotated pieces of the images using an image editor:

Running the program as the index4.jpeg as the image to compare, the results where the following:
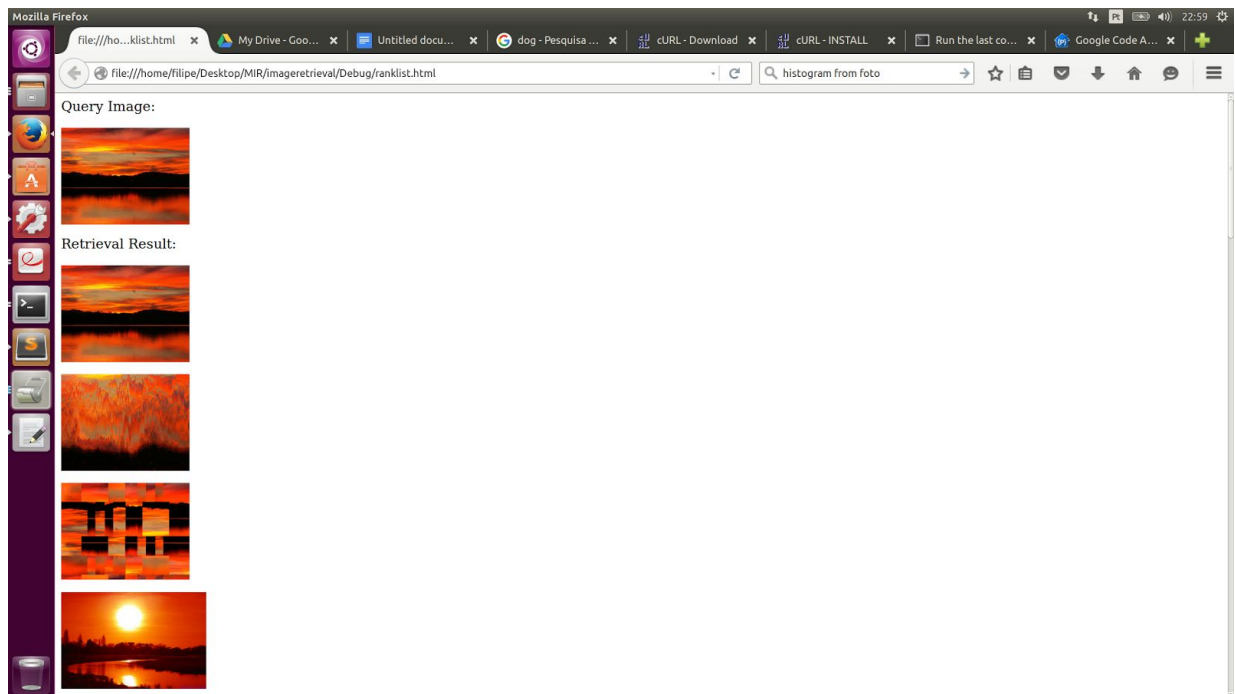
As we can see, the "random" images took second and third place, even then though the fourth is arguably more similar to the original photo. That is because the histograms from the original picture and random pictures are the same, because they all have "the same colors".

Using other pictures downloaded from the internet, we can verify that the program does not take into account the shapes and texture in a picture, where a dog with wings ranks first than other "sky and cloud " images:

Query Image:

Retrieval Result:
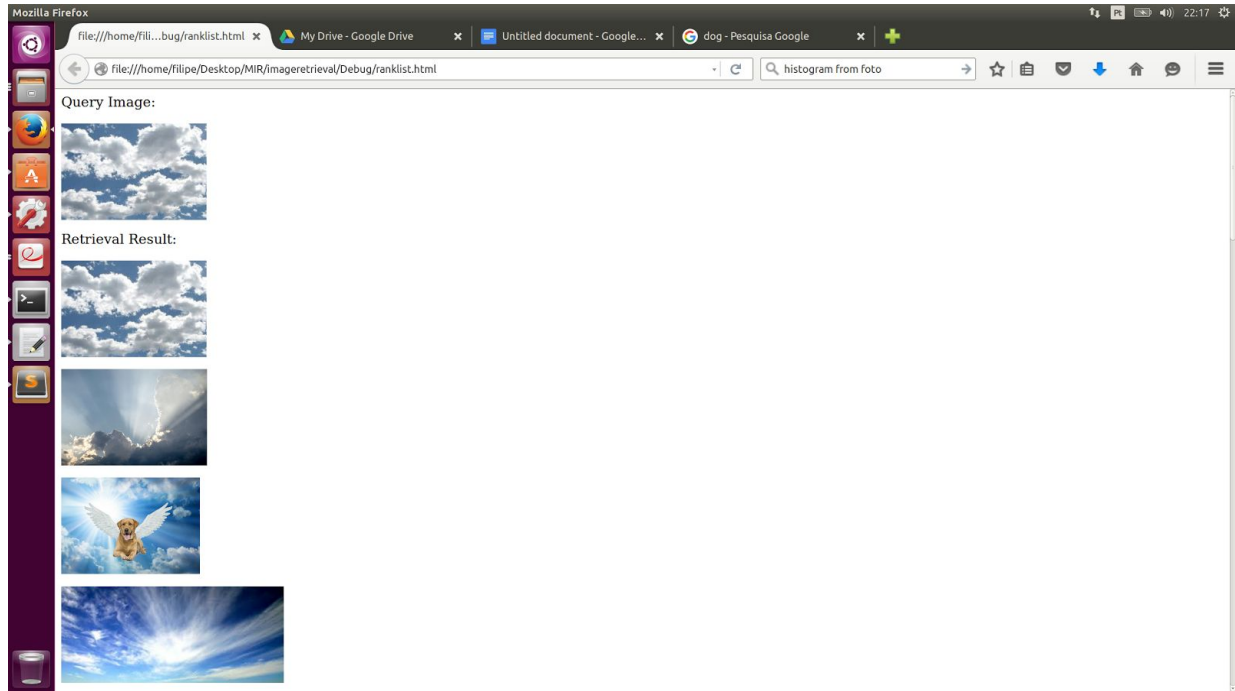
Answer 2 a)

To execute all the problem 2 you just have to be in the directory where the files of this problems are and write in the terminal this two sentences :

      gcc htmlstreamparser.c htmlprocess.c -o htmlprocess -lcurl

      ./htmlprocess www.liacs.nl
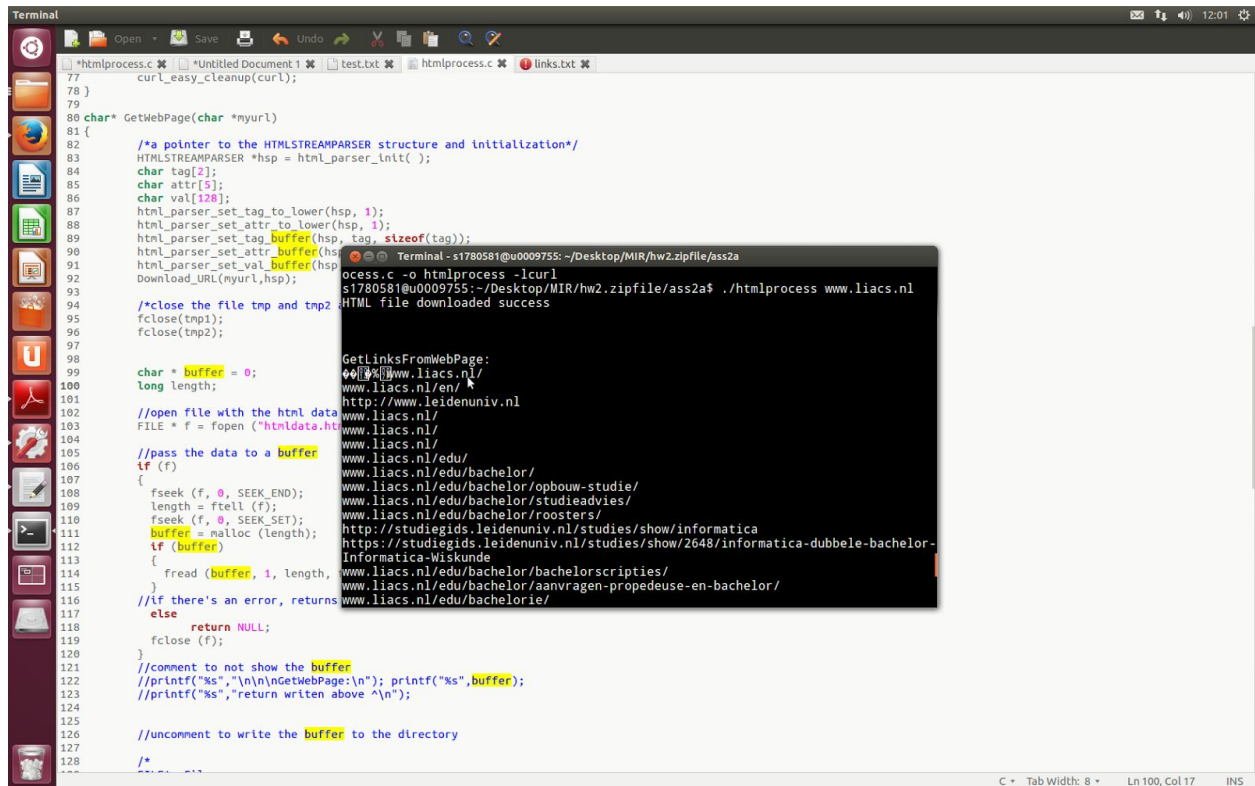
1. The function GetWebPage works as expected. The printing of the string is commented. If you would like to uncomment it to see the result, go to the line 122 and erase de "//".

2. The function GetLinksFromWebPage also works, although the first line of string has some kind of "spam" that I could not figure out what it was, but all the lines except that one present the full directory of the links.

Answer 2 b)

1. The function GetImageLinksFromWebPage works as expected. To execute, please go to the directions in Answer 2a).