

## Map/Reduce Program

The goal of this exercise is to write a program using the C language that computes the number of occurrence of words in a given file.

The synopsis of the program is the following:

```
$ ./mapred file N
```

- `file`: a file name containing words (can be generated here: <http://www.lipsum.com/feed/html> )
- `N`: a number of threads.

The program will launch `N` threads (using pthreads) to share the work as equally as possible (map phase).

The program will then collect the results of all the threads (reduce phase), aggregate all the results, and display them, sorted by word.

A word is a sequence of characters between 2 separators. These separators are start and end of file, tabulations, spaces, punctuation, and end of line.

E.g. if the file is the following:

```
foo bar qux  
bar bar baz
```

And we launch the program with e.g. `N=2`, the program shall display:

```
bar=3  
baz=1  
foo=1  
qux=1
```

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