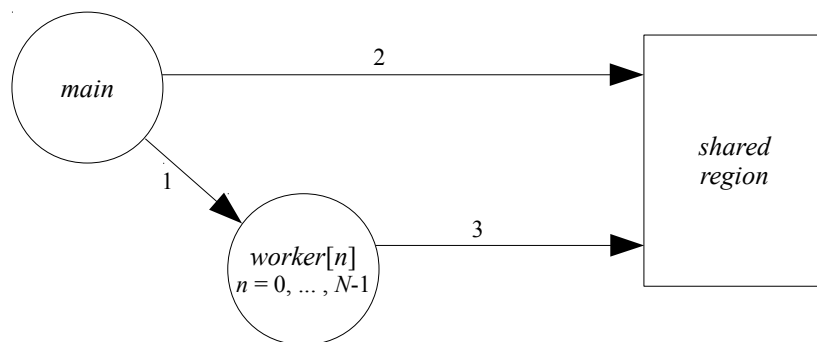


## Assignment 1

Take the general problems, which have been discussed in the lab classes and for which you have developed a single-threaded solution. The aim now is to convert them into a multithreaded application running under Linux.

The decomposition in both cases can be described by the following diagram.



### OPERATIONS

1. create *worker* threads, wait for them to terminate
2. present the data file names for processing, print results
3. get a piece of data and process it, save partial results.

So, the role of thread *main* will be getting the data file names by processing the command line and storing them in the shared region, creating the *worker* threads and waiting for their termination, and printing the results of the processing. On the other hand, the role of threads *worker* will be carrying out the processing itself: they request in succession pieces of data to process, process it and deliver the results of their processing. They terminate when there are no more data pieces to process.

### GRADING

- development and validation of a multithreaded version of general problem 1 according to specification – 14 valores
- development and validation of a multithreaded version of general problem 2 according to specification – 20 valores.

### DELIVARABLES

- an archive, named CLE1\_T\$G#.zip (where \$, equal to 1 or 2, means the lab number, and #, equal to 1, ..., 10, means the group number) of the source files of your solution
- a pdf file, up to 6 presentation pages (power point like), where the main ideas of the design are discussed (it should be included in the zip file).

### DEADLINE

- April, 5, at midnight.