

Additional information

a) The concept of "frequency of keywords" refers to the number of occurrences of the keywords, which is also the number of times the keywords are present somewhere.

b) This frequency is calculated:

- (1) per every page a miner visits and
- (2) for the total of all the pages visited by all the miners.

You need (1) to calculate (2) i.e. the total of keywords in all pages visited is the sum of the frequencies per page.

A miner accumulates/calculates the keywords it finds in every pages it visits (1). How and where do you calculate the total (2), is part of your solution.

c) At the end of the program execution, it is only required to present the total frequency of keywords for all the pages visited (2).

d) The timeout applies for all the miners, in practice when the timeout is due, the Manager sends a signal to all the miners, so they are aware they have to stop. Have in mind that the Manager only indicates (requests) the miners to stop, it does not necessarily means that the miners stop immediately.

e) At the start of the program, you can define any mechanism to provide the list of keywords, some examples include: define a list with the values as I did in the DemoUtils, read from a file, ask the user to enter these values when starting the program, etc..

f) I will be looking specially at the behaviour of the threads and how you manage the concurrency, e.g. how you create the threads and trigger the tasks, shared resources, the synchronization, locks, etc. I discourage you to spend time in extending/improving the functionality of the Utils class.

e) Besides the program output, I will check the source code of everyone individually,