

Openet High Performance Java

Practical Exercise

Java 8 Streams

1. The method

`listFiles()`

defined on the type

`java.io.File`

generates a List of the contents of the current directory (or whatever directory path is supplied in the call) as instances of the type `java.io.File`.

Use this as the starting point for the following questions, each of which should be answered by constructing a Stream, and using a chain of processing calls.

- a. Generate a list of the names of all the *files* in the current directory (ie. not subdirectories). Exclude hidden files (files whose names start with the '.' character).
- b. Generate a Map, where the keys are the names of files and the corresponding values are the appropriate size in bytes.
- c. Generate a list of the 10 smallest files in the directory, in order, together with their sizes. Do the same for the 10 largest files.
- d. Generate a data structure that arranges the contents of the directory according to the first letter of their name. In other words, for the letter 'a' there should be a list of the entries whose names start with 'a', and so on...