

The FileCount Case Study: FileCounterForkJoinTask

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Learning Objectives in this Part of the Lesson

- Understand the design of the FileCounter case study
- Walkthrough the program implementation
 - Main driver & associated helper classes
- FileCounterForkJoinTask
 - Applies the Java fork-join framework & Java 7

```
List<ForkJoinTask<Long>> forks =
    new ArrayList<>();

for (File file : mFile.listFiles())
    forks.add(new FileCounterForkJoinTask
        (file,
         mDocumentCount,
         mFolderCount)
        .fork());

long sum = 0;

for (ForkJoinTask<Long> task : forks)
    sum += task.join();

return sum;
```

Walkthrough of the FileCounterForkJoinTask

Walkthrough of the FileCounterForkJoinTask

```
11  * This task uses the Java fork-join framework and Java 7 features to
12  * compute the size in bytes of a given file, as well as all the files
13  * in folders reachable from this file.
14  */
15  public class FileCounterForkJoinTask
16      extends AbstractFileCounter {
17      /**
18       * Constructor initializes the fields.
19       */
20      public FileCounterForkJoinTask(File file) { super(file); }
21
22
23
24      /**
25       * Constructor initializes the fields (used internally).
26       */
27      private FileCounterForkJoinTask(File file,
28                                       AtomicLong documentCount,
29                                       AtomicLong folderCount) {
```

The screenshot shows an IDE window titled "ForkJoin - FileCounterForkJoinTask.java [ForkJoin.main]". The left sidebar displays a project structure for "ForkJoin" with a tree view showing folders like ".gradle", ".idea", ".run", "build", "gradle", "src", "main", "java", "counters", "utils", "resources", and "works". The "counters" folder is expanded, showing "AbstractFileCounter", "FileCounterForkJoinTask", "FileCounterParallelStream", and "FileCounterSequentialStreamTask". The "FileCounterForkJoinTask" file is selected and its content is displayed in the main editor. The code is a Java class that extends "AbstractFileCounter" and implements methods for counting files and folders using the ForkJoinTask framework. The code is annotated with comments explaining its purpose and usage. The IDE interface includes a top toolbar with icons for navigation and development, and a bottom status bar with information about the daemon, AWS credentials, and code quality tools.

See [Folders/ForkJoin/src/main/java/counters/FileCounterForkJoinTask.java](#)

End of the FileCount Case Study: FileCounterForkJoinTask