HowToDoInJava

Reading a File Line by Line in Java

📅 Last Updated: April 11, 2022   👤 By: Lokesh Gupta   📁 Java 8   🏷️ Files IO, Read a File

In this Java tutorial, we will learn to **read a file line by line** using various methods. We will also learn to iterate through lines and filter the file content based on some conditions.

1. Reading with Stream of Lines

In this example, we will read the file contents one line at a time using Java Stream API and fetch each line one at a time and check it for word `"password"`.

```
Path filePath = Paths.get("c:/temp", "data.txt");

//try-with-resources
try (Stream<String> lines = Files.lines( filePath ))
{
  lines.forEach(System.out::println);
}
catch (IOException e)
{
  e.printStackTrace();
}
```

We can also use the *Files.readAllLines()* method that reads all lines from a file into a *List*. By default, bytes from the file are decoded into characters using the `UTF-8 charset`.

```
Path filePath = Paths.get("c:/temp", "data.txt");

List<String> lines = Files.readAllLines(filePath);
```

2. Reading and Filtering the Content

In this example, we will read the file content as a stream of lines as. Then we will filter all lines which have the word "*password*" in them.

For filtering, we are passing a lambda expression, that is an instance of a Predicate, to the filter() method.

```java
Path filePath = Paths.get("c:/temp", "data.txt");

try (Stream<String> lines = Files.lines(filePath))
{

    List<String> filteredLines = lines
            .filter(s -> s.contains("password"))
            .collect(Collectors.toList());

    filteredLines.forEach(System.out::println);

}
catch (IOException e) {

    e.printStackTrace();
}
```

We are reading the content of the given file and checking if any line contains word `"password"` then print it.

3. Reading a File Line by Line using FileReader

Till Java 7, we could read a file using `FileReader` in various ways.

```java
File file = new File("c:/temp/data.txt");

try (FileReader fr = new FileReader(file);
  BufferedReader br = new BufferedReader(fr);) {
  String line;
  while ((line = br.readLine()) != null) {
    System.out.println(line);
  }
} catch (IOException e) {
  e.printStackTrace();
}
```

4. Guava *Files.readLines()*

One of the simplest solutions is to use the Google Guava's *Files* class its method *readLines()*.

```
try {
  List<String> lines = com.google.common.io.Files.readLines(file,
    Charset.defaultCharset());
} catch (IOException e) {
  e.printStackTrace();
}
```

If we want to process the lines as they are read, we can use a *LineProcessor*. For example, in the below code, we are capitalizing the lines as they are read.

```
// With LineProcessor
LineProcessor<List<String>> lineProcessor = new LineProcessor<>() {
  final List<String> result = new ArrayList<>();

  @Override
  public boolean processLine(final String line) throws IOException {
    result.add(StringUtils.capitalize(line));
    return true; // keep reading
  }

  @Override
  public List<String> getResult() {
    return result;
  }
};

try {
  List<String> lines = com.google.common.io.Files
    .asCharSource(file, Charset.defaultCharset())
    .readLines(lineProcessor);
} catch (IOException e) {
  e.printStackTrace();
}
```

5. Commons IO's *FileUtils.readLines()*

Similar to Guava, Apache Commons IO library has *FileUtils* class that provides a single statement solution for reading the file content in lines. The file is always closed at the end of the operation.

```
try {
  List<String> lines = FileUtils.readLines(file, Charset.defaultCharset());
} catch (IOException e) {
  e.printStackTrace();
}
```

That's all for *Java example to read a file line by line.* Please put your questions in the comments section.

Happy Learning !!

[Source Code on Github](#)

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6 thoughts on "Reading a File Line by Line in Java"

Raj

June 28, 2016 at 6:30 pm

Hi ,

I want read certain word like " Result " . I need to print all line after result line.

please share me code.

Thanks in advance

Reply

Saravana

July 18, 2014 at 1:29 am

Hi,

Have assigned with a task to create a Data Collector using NIO and TFTP.
From the Network Elements i have to get large files using TFTP and Java NIO.

Could you please help me to do this.

Reply

Lokesh Gupta

July 18, 2014 at 8:05 am

> You must try yourself first, if struck anywhere then let me know.
>
> Reply

Muzzammil Ayyubi

May 6, 2014 at 2:21 pm

> Awesome Lokesh…really nice article.
>
> Reply

Neha Kanojia

May 6, 2014 at 11:01 am

> Hi,
> I am student of MTech.I have to do thesis work,where I have to read text and find the maximum probability of a particular Indian languages with Java.Suggest me how would I do that….
>
> Reply

prathap

May 6, 2014 at 5:13 am

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