Manipulating Files on a File System Using the Java NIO API

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Agenda

How to create, copy and delete files

How to find files in a set of directories

How to walk through a set of directories

Moving Files Around

It uses the Files factory class:

- create: file, directory, symbolic link
- delete
- copy: can copy an input / output stream
- move

Finding a File in a Set of Directories

```
Path dir = Paths.get("e:/images");
Path image = Paths.get("image.jpg");

Files.find(dir, 3,
           (path, attributes) -> path.endsWith(image));
```

From the Files.find factory method:

- dir is the starting point of the search

- 3 is the depth

- attributes gives access to various properties (size, creation time, ...)

```
Path dir = Paths.get("e:/images");

Instant twoHoursAgo =
                Instant.now().minus(Duration.ofHours(2));
Files.find(dir, 3,
           (path, attributes) -> {
              attributes.creationTime().toInstant()
                        .isAfter(twoHoursAgo));
           });
```

Finding images

that have been created between two hours ago and now

Walking through a Set of Directories

There are two patterns to visit directories

- walkFileTree: starts with a path and uses a FileVisitor

- walk: starts with a path and returns a Stream<Path> of all the files and directories

Demo

Let us write some code!

You will see how visit a hierarchy of directories

Using a FileVisitor

And using the Stream API

Module Wrap Up

What did you learn?

How to interact with a set of files and directories

How to move files around

How to look for information in a set of directories using the walk patterns

Course Wrap Up

What did you learn?

How to work with text files

Using the updated patterns from Java NIO and NIO2

How to create those files

How to analyze the content

How to move them around

And how to look for files in directories

Course Wrap Up

Thank you!

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