

# 15 Files, Input/Output Streams, NIO and XML Serialization

## Objectives

In this chapter you'll:

- Create, read, write and update files.
- Retrieve information about files and directories using features of the NIO.2 APIs.
- Learn the differences between text files and binary files.
- Use class `Formatter` to output text to a file.
- Use class `Scanner` to input text from a file.
- Use sequential file processing to develop a real-world credit-inquiry program.
- Write objects to and read objects from a file using XML serialization and the JAXB (Java Architecture for XML Binding) APIs.
- Use a `JFileChooser` dialog to allow users to select files or directories on disk.
- Optionally use `java.io` interfaces and classes to perform byte-based and character-based input and output.

# Outline

1. 15.1 Introduction
2. 15.2 Files and Streams
3. 15.3 Using NIO Classes and Interfaces to Get File and Directory Information
4. 15.4 Sequential Text Files
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  2. 15.4.2 Reading Data from a Sequential Text File
  3. 15.4.3 Case Study: A Credit-Inquiry Program
  4. 15.4.4 Updating Sequential Files
5. 15.5 XML Serialization
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  2. 15.5.2 Reading and Deserializing Data from a Sequential File
6. 15.6 FileChooser and DirectoryChooser dialogs
7. 15.7 (Optional) Additional java.io Classes
  1. 15.7.1 Interfaces and Classes for Byte-Based Input and Output
  2. 15.7.2 Interfaces and Classes for Character-Based Input and Output
8. 15.8 Wrap-Up
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  2. Self-Review Exercises
  3. Answers to Self-Review Exercises
  4. Exercises

## 5. Making a Difference