Reading and Writing Characters

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Agenda

Introducing Reader and Writer implementations

- Creating readers and writers on files

- Opening and closing resources

- Dealing with exceptions

- Buffering and flushing the content

Reading Characters

Demo

Discovering concrete Reader:

FileReader

CharArrayReader

StringReader

Reader key points:

- a reader must be closed

- exceptions will be thrown

- it can read characters

- it may support marking

- chars can be skipped

Writing Characters

Demo

Discovering concrete Writer:

FileWriter

CharArrayWriter

StringWriter

Writer key points:

- a writer must be **closed**

- it can be **flushed**

- it can write **characters**

Buffering Read and Write Operations

Reader and Writer can be buffered

- which adds some features

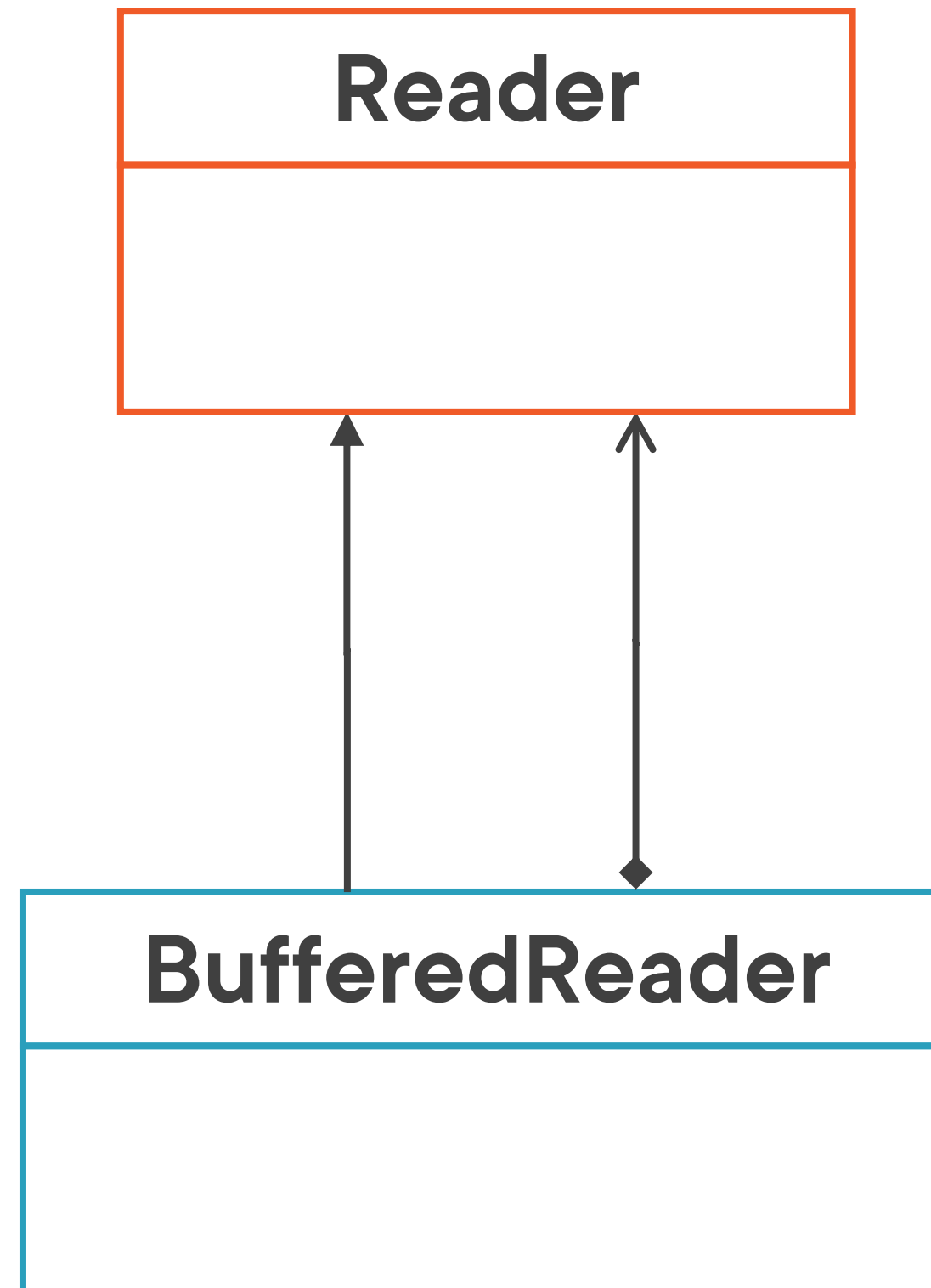- and some constraints: flushing

Demo

Buffering Reader and Writer

Reading line by line

Openning for write with options

Flushing a buffer
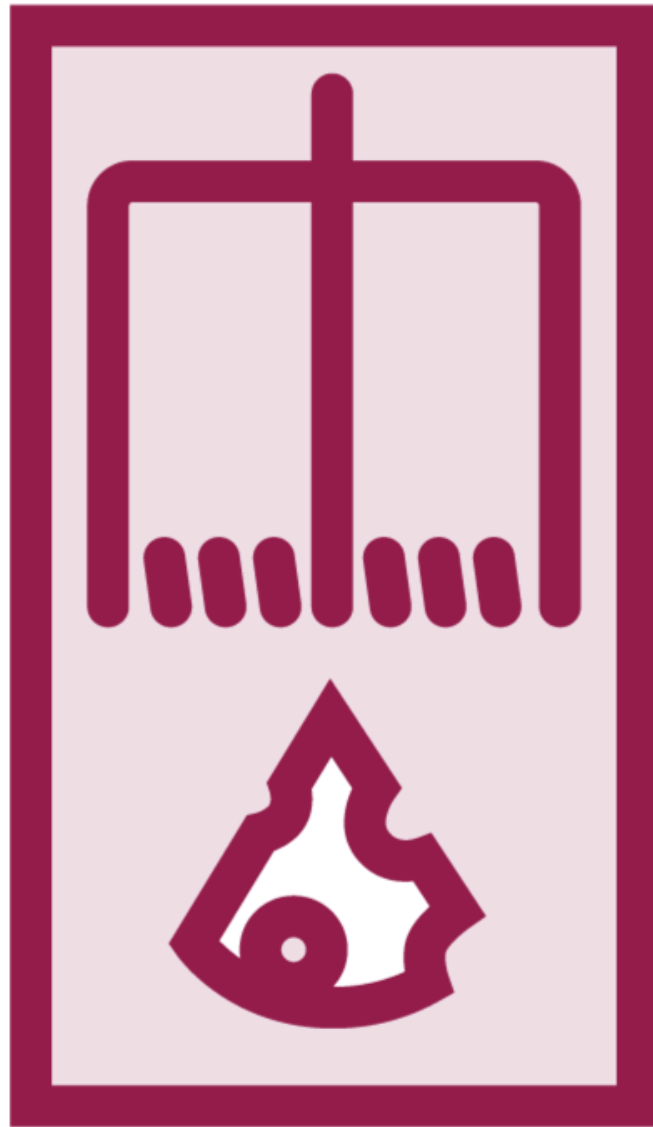
Reader / BufferedReader relationship

Reader

BufferedReader

Java I/O is built on the Decorator pattern

Buffering key points:

- **BufferedReader is a decorator of Reader**

- **read and write lines**

- **writer supports charset**

- **writer support opening options**

Beware of flushing!

Module Wrap Up

What did you learn?

Readers and writers!

Two ways of creating them

Buffering using a decorator

Closing and flushing

Up Next: Reading and Writing Bytes