Important Java books

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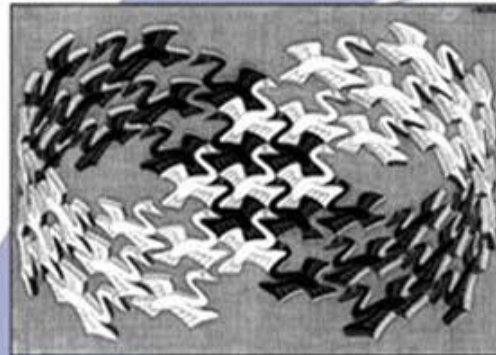+ **More than 250 electronic flashcards**

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Elements of Reusable Object-Oriented Software

Erich Gamma
Richard Helm
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Foreword by Grady Booch

ADDISON-WESLEY PROFESSIONAL COMPUTING SERIES
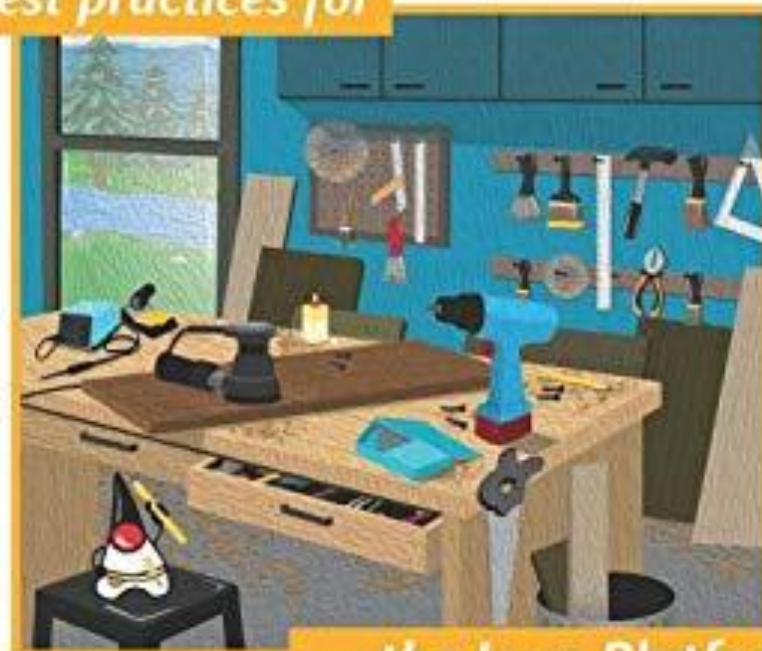
Joshua Bloch

Updated
for
Java 9

Effective Java
Third Edition

Best practices for

...the Java Platform

What's important to understand

Chapter 1

Advanced Class Design

THE OCP EXAM TOPICS COVERED IN THIS CHAPTER INCLUDE THE FOLLOWING:

✓ **Java Class Design**

- Implement inheritance including visibility modifiers and composition
- Implement polymorphism
- Override hashCode, equals, and toString methods from Object class
- Develop code that uses the static keyword on initialize blocks, variables, methods, and classes

✓ **Advanced Java Class Design**

- Develop code that uses abstract classes and methods
- Develop code that uses final keyword
- Create inner classes including static inner class, local class, nested class, and anonymous inner class
- Use enumerated types including methods, and constructors in an enum type
- Develop code that declares, implements, and/or extends interface and use the @Override annotation

Chapter

3

Generics and Collections

THE OCP EXAM TOPICS COVERED IN THIS CHAPTER INCLUDE THE FOLLOWING:

✓ **Generics and Collections**

- Create and use a generic class

- Create and use ArrayList, TreeSet, TreeMap and ArrayDeque objects

- Use java.util.Comparator and java.lang.Comparable interfaces

- Iterate using forEach methods on Streams and List

- Use method references with Streams

✓ **Advanced Java Class Design**

- Create and use lambda expressions

✓ **Generics and Collections**

- Filter a collection using lambda expressions

✓ **Java Stream API**

- Use of merge()and flatMap()methods of the Stream API

Chapter 6

Exceptions and Assertions

THE OCP EXAM TOPICS COVERED IN THIS CHAPTER INCLUDE THE FOLLOWING:

✓ **Exceptions and Assertions**

- Use try-catch and throw statements
- Use catch, multi-catch, and finally clauses
- Use Autoclose resources with a try-with-resources statement
- Create custom exceptions and Auto-closeable resources
- Test invariants by using assertions

Chapter

7

Concurrency

THE OCP EXAM TOPICS COVERED IN THIS CHAPTER INCLUDE THE FOLLOWING:

✓ **Java Concurrency**

- Create worker threads using Runnable, Callable, and use an ExecutorService to concurrently execute tasks

- Identify potential threading problems among deadlock, starvation, livelock, and race conditions

- Use synchronized keyword and java.util.concurrent.atomic package to control the order of thread execution

- Use java.util.concurrent collections and classes including CyclicBarrier and CopyOnWriteArrayList

- Use parallel Fork/Join Framework

- Use parallel Streams including reduction, decomposition, merging processes, pipelines, and performance.

Chapter 8

IO

THE OCP EXAM TOPICS COVERED IN THIS CHAPTER INCLUDE THE FOLLOWING:

✓ **Java I/O Fundamentals**

- Read and write data from the console

- Use BufferedReader, BufferedWriter, File, FileReader, FileWriter, FileInputStream, FileOutputStream, ObjectOutputStream, ObjectInputStream, and PrintWriter in the java.io.package.

Chapter 9

NIO.2

THE OCP EXAM TOPICS COVERED IN THIS CHAPTER INCLUDE THE FOLLOWING:

✓ Java File I/O (NIO.2)

- Use Path interface to operate on file and directory paths
- Use Files class to check, read, delete, copy, move, manage metadata of a file or directory
- Use Stream API with NIO.2

Chapter

10

JDBC

THE OCP EXAM TOPICS COVERED IN THIS CHAPTER INCLUDE THE FOLLOWING:

✓ **Building Database Applications with JDBC**

- Describe the interfaces that make up the core of the JDBC API including the Driver, Connection, Statement, and ResultSet interfaces and their relationship to provider implementations

- Identify the components required to connect to a database using the DriverManager class including the JDBC URL

- Submit queries and read results from the database including creating statements, returning result sets, iterating through the results, and properly closing result sets, statements, and connections