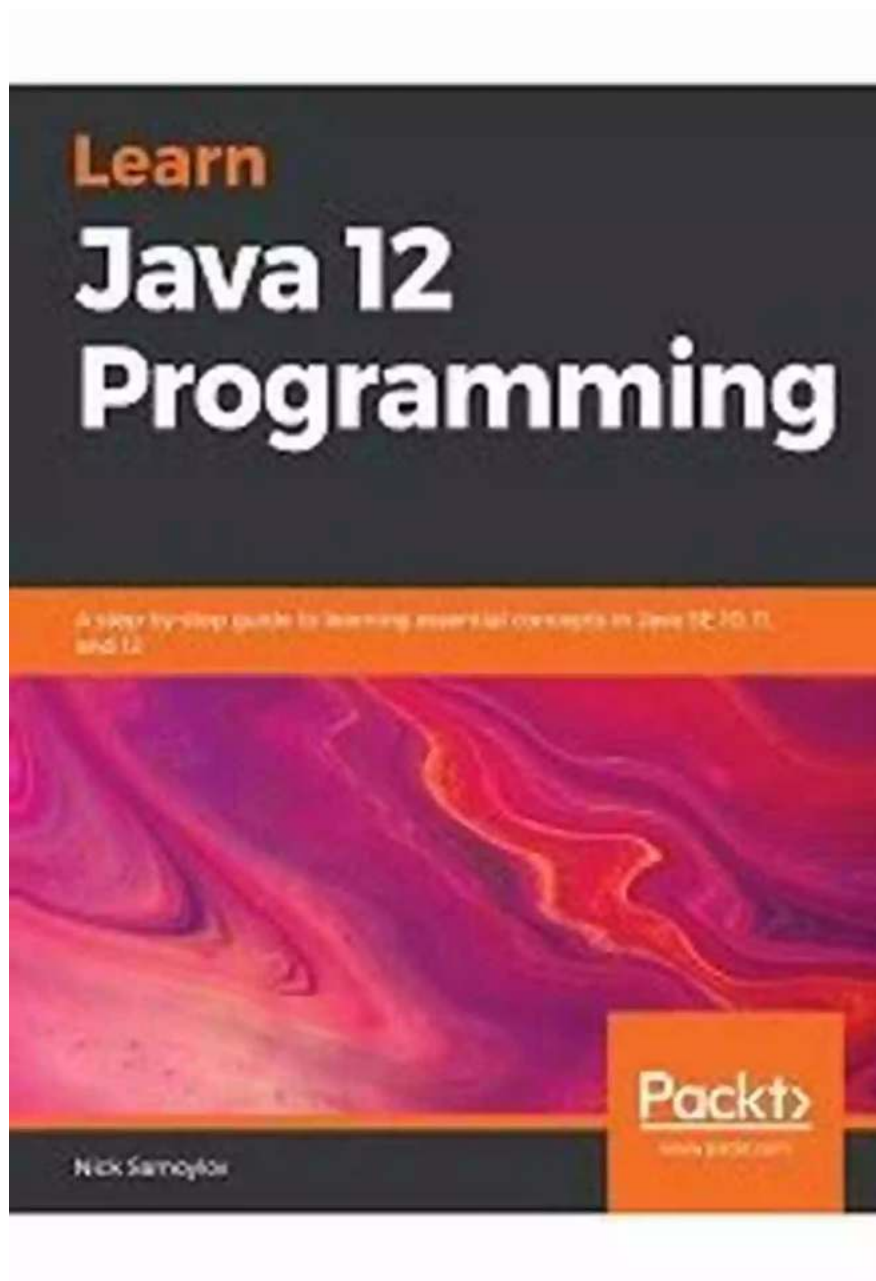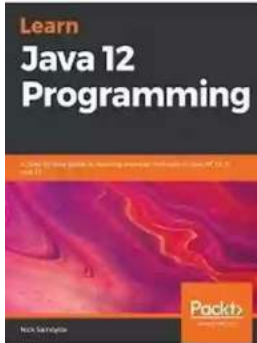# Step By Step Guide To Learning Essential Concepts In Java Se 10 11 And 12

Java is a popular and powerful programming language used by millions of developers around the world. With each new version, Java introduces exciting updates and improvements, enabling developers to build robust and efficient applications.

In this comprehensive guide, we will take you through the essential concepts of Java SE 10, 11, and 12, providing step by step instructions and examples to help you understand and apply these concepts in your own projects.

Learn Java 12 Programming: A step-by-step guide to learning essential concepts in Java SE 10, 11, and 12 by Nick Samoylov(1st Edition, Kindle Edition)

★★★★☆   4.3 out of 5

Language	: English
File size	: 18203 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 692 pages

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Chapter 1: Java SE 10

1.1 to Java SE 10

Java SE 10, released in March 2018, introduced several key features that enhance the developer experience and code readability. Some of the notable features of Java SE 10 include:

- Local variable type inference

- Application class-data sharing

- Garbage-Collector interface

- Time-based release versioning

1.2 Example: Local Variable Type Inference

One of the most significant changes in Java SE 10 is the of local variable type inference. This feature allows developers to declare variables without explicitly specifying their types, reducing boilerplate code and improving code readability. Here's an example:

```
var message = "Hello, World!";
```

In the above example, the type of the variable "message" is inferred to be a String based on the assigned value.

Chapter 2: Java SE 11

2.1 to Java SE 11

Java SE 11, released in September 2018, brought significant updates and improvements to the Java platform. Some of the key features introduced in Java SE 11 include:

- Local-variable syntax for lambda parameters

- HTTP Client API

- Dynamic class-file constants

- Nested-based access control

2.2 Example: HTTP Client API

The new HTTP Client API introduced in Java SE 11 provides a more modern and flexible way of interacting with HTTP services. Here's an example:

```
import java.net.http.HttpClient; import java.net.http.HttpRequest;
```

In the above example, we create a new HttpClient, send an HTTP request to an API endpoint, and print the response body.

Chapter 3: Java SE 12

3.1 to Java SE 12

Java SE 12, released in March 2019, introduced several new features and improvements to the Java platform. Some of the key features in Java SE 12 include:

- Switch expressions

- Compact Number Format

- Teardown Methods for default methods

- Microbenchmark Suite

3.2 Example: Switch Expressions

The new switch expressions in Java SE 12 make it easier and more concise to handle multiple cases within a switch statement. Here's an example:

```
public class SwitchExample { public static void main(String[] args
```

In the above example, the result of the switch expression is assigned to the variable "dayType" based on the value of the "day" variable.

By following this step-by-step guide, you have learned the essential concepts of Java SE 10, 11, and 12. With each new version of Java, exciting features and improvements are introduced, providing developers with powerful tools to create efficient and scalable applications.

Remember to practice and experiment with the examples provided to deepen your understanding and ensure a strong foundation in Java programming.

Now it's time to unleash your creativity and start building amazing Java applications!

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A comprehensive guide to get started with Java and gain insights into major concepts such as object-oriented, functional, and reactive programming

Key Features

- Strengthen your knowledge of important programming concepts and the latest features in Java

- Explore core programming topics including GUI programming, concurrency, and error handling

- Learn the idioms and best practices for writing high-quality Java code

Book Description

Java is one of the preferred languages among developers, used in everything right from smartphones, and game consoles to even supercomputers, and its new features simply add to the richness of the language. This book on Java programming begins by helping you learn how to install the Java Development Kit. You will then focus on understanding object-oriented programming (OOP),with exclusive insights into concepts like abstraction, encapsulation, inheritance, and polymorphism, which will help you when programming for real-world apps. Next, you'll cover fundamental programming structures of Java such as data structures and algorithms that will serve as the building blocks for your apps. You will also delve into core programming topics that will assist you with error handling, debugging, and testing your apps. As you progress, you'll move on to advanced topics such as Java libraries, database management, and network programming, which will hone your skills in building professional-grade apps.

Further on, you'll understand how to create a graphic user interface using JavaFX and learn to build scalable apps by taking advantage of reactive and functional programming.

By the end of this book, you'll not only be well versed with Java 10, 11, and 12, but also gain a perspective into the future of this language and software development in general.

What you will learn

- Learn and apply object-oriented principles

- Gain insights into data structures and understand how they are used in Java

- Explore multithreaded, asynchronous, functional, and reactive programming

- Add a user-friendly graphic interface to your application

- Find out what streams are and how they can help in data processing

- Discover the importance of microservices and use them to make your apps robust and scalable

- Explore Java design patterns and best practices to solve everyday problems

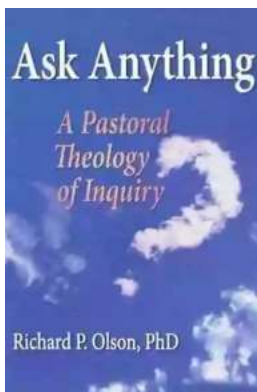- Learn techniques and idioms for writing high-quality Java code

Who this book is for

Students, software developers, or anyone looking to learn new skills or even a language will find this book useful. Although this book is for beginners, professional programmers can benefit from it too. Previous knowledge of Java or any programming language is not required.
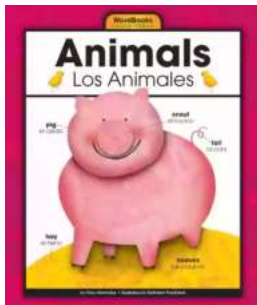
Table of Contents

12. Java GUI programming

13. Java standard streams

14. Functional programming

15. Reactive programming

16. Microservices

17. Java Microbenchmark Harness

18. Best practices for writing high-quality code

19. Java getting new features

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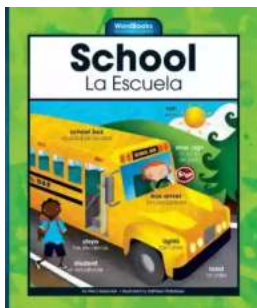
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