

1Z0-829: Java SE 17 Developer

Master modern Java SE 17 in depth and prepare for the rigorous 1Z0-829 Developer exam.

DURATION

5 days · 40 hours

LEVEL

Intermediate

CURRICULUM

16 modules · 10 labs

DELIVERY

Live online, Onsite,
Corporate

Course overview

The Java SE 17 Developer exam is known for precise questions that test exactly how the language behaves, not just whether code looks right. This five-day course builds that precision while teaching the modern Java features you will use in real projects.

Day one covers data types, operators, text handling with String and StringBuilder, text blocks, and date and time APIs. Day two focuses on controlling program flow, including switch expressions and pattern matching, and on object-oriented design: classes, constructors, initialisation order, inheritance, interfaces, records, enums, sealed classes and nested types.

Day three covers exceptions and try-with-resources, arrays and the Collections framework, generics and comparators. Day four is dedicated to functional programming — lambdas, functional interfaces, method references and the Streams API, including collectors and parallel streams — and to concurrency with threads, executors, locks and concurrent collections.

Day five covers I/O and NIO.2, JDBC, localisation, the Java Platform Module System and packaging, finishing with exam readiness: timed practice on tricky code samples and a review of common traps.

This course is aligned to the Java SE 17 Developer exam, 1Z0-829. Oracle also offers a Java SE 21 Developer exam (1Z0-830); speak to an advisor about which suits you. Ace Skills is not an Oracle partner and does not use official courseware.

Highlights

- 40 hours of live, trainer-led sessions
- Coding labs every day in a modern IDE
- Records, sealed classes, switch expressions and text blocks
- Streams, lambdas, concurrency and modules
- Tricky-code practice in the style of the exam

What's included

- Daily coding labs in IntelliJ IDEA or VS Code
- Modern Java features from records to sealed classes
- Streams and collectors in depth
- Concurrency with executors and locks
- Module system and packaging labs
- Exam-style code-reading drills
- Course completion certificate from Ace Skills Consulting
- Post-training doubt support

Who this course is for

Who should attend

- Java developers upgrading from Java 8 or 11
- Graduates and junior developers building a Java career
- Developers from other languages moving to Java
- Technical leads reviewing modern Java code

Prerequisites

- Programming experience in Java or another object-oriented language
- Comfort using an IDE
- A laptop with JDK 17 (setup guidance provided)

Detailed curriculum — 5 days, 40 hours, 16 modules, 10 hands-on labs

Day 1 Data, Operators, Text and Dates

8 hours

1.1 Java building blocks

- Primitive and reference types
- Wrapper classes and autoboxing
- var and local variable type inference
- Scope and garbage collection

1.2 Operators

- Operator precedence
- Equality and identity
- Casting and numeric promotion

LAB Predict and verify output for tricky expressions · 40 min

1.3 Text and dates

- String and StringBuilder
- Math API
- Text blocks
- Date and time API: LocalDate, Duration, Period, time zones

LAB Build a scheduling utility with the date-time API · 45 min

Day 2 Program Flow and Object-Oriented Java

8 hours

2.1 Controlling flow

- if, loops and labels
- Pattern matching for instanceof
- Switch statements and expressions

LAB Refactor legacy code with switch expressions and pattern matching · 40 min

2.2 Classes and objects

- Constructors and initialisation order
- Static and instance members
- Access modifiers and encapsulation
- Overloading

2.3 Inheritance and types

- Inheritance and overriding
- Records
- Sealed classes
- Abstract classes and interfaces
- Enums
- Nested and anonymous classes

LAB Model a domain with records, sealed interfaces and enums · 55 min

Day 3 Exceptions, Arrays, Collections and Generics

8 hours

3.1 Exceptions

- Checked and unchecked exceptions
- try, catch, finally
- try-with-resources
- Custom exceptions

LAB Robust file processing with try-with-resources · 35 min

3.2 Arrays and collections

- Arrays and the Arrays class
- List, Set, Map and Deque
- Immutable collections
- Sorting with Comparable and Comparator

LAB Implement an inventory with collections and comparators · 45 min

3.3 Generics

- Generic classes and methods
- Bounded types and wildcards
- Type erasure

Day 4 Functional Programming and Concurrency

8 hours

4.1 Lambdas and functional interfaces

- Lambda syntax
- Built-in functional interfaces
- Method references
- Optional

4.2 Streams

- Creating streams
- Intermediate and terminal operations
- Collectors: grouping, partitioning, mapping
- Primitive streams
- Parallel streams

LAB Analyse sales data with streams and collectors · 55 min

4.3 Concurrency

- Threads and Runnable
- ExecutorService and Callable
- Synchronisation and locks
- Concurrent collections
- Thread-safety pitfalls

LAB Process tasks concurrently with an executor · 45 min

Day 5 I/O, JDBC, Modules and Exam Readiness

8 hours

5.1 I/O and NIO.2

- Streams, readers and writers
- Serialisation
- Path and Files
- Walking and searching directories

LAB File utility with NIO.2 · 35 min

5.2 JDBC and localisation

- Connections and PreparedStatement
- ResultSet processing
- Transactions
- Locales, resource bundles and formatting

5.3 Modules and packaging

- module-info.java
- requires, exports and services
- Migrating to modules
- jar, jdeps and jlink

LAB Modularise a small application · 35 min

5.4 Exam readiness

- Common traps
- Timed practice on code samples
- Review and next steps

Skills and tools

Skills you will build

Java SE 17

Object-oriented programming

Records

Sealed classes

Pattern matching

Exceptions

Collections

Generics

Lambdas

Streams API

Concurrency

NIO.2

JDBC

Java Platform Module System

Tools used in class

JDK 17

IntelliJ IDEA

Visual Studio Code

Maven

JShell

Certification exam

This course is aligned to the exam below and prepares you for it. The exam itself is booked and taken with the vendor.

Exam Oracle Certified Professional: Java SE 17 Developer

Exam code 1Z0-829

Official page <https://education.oracle.com/certification>

Exam skill areas covered

Identifying and using numeric and boolean values

Exam details are pending verification. Confirm the current exam code, format and fee on the official vendor page before booking.

Frequently asked questions

Should I take Java SE 17 or Java SE 21?

Oracle also offers the Java SE 21 Developer exam (1Z0-830), which covers newer features. Speak to an advisor about which exam better fits your projects and goals.

Is this suitable for beginners?

You should already program in Java or another object-oriented language; this is not a first programming course.

How hard is the exam?

It is detailed and focuses on exact language behaviour, so the course includes regular code-reading drills.

Is this an official Oracle course?

No. It is an independent Ace Skills course aligned to the 1Z0-829 exam topics.

Which IDE will we use?

IntelliJ IDEA Community or VS Code; we also practise reading code without an IDE, as in the exam.

Book a batch or talk to an advisor

Course page: aceskillsconsulting.com/course/1z0-829-java-se-17-developer · Email: info@aceskillsconsulting.com

Chennai office

Guindy, Chennai, Tamil Nadu

Delhi office

B-95, Old Post Office Street, Shakarpur

New Delhi 110092

Office: 98180 12523

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