

COURSE 1 OF 3 · JAVA FULLSTACK DEVELOPER SPECIALIZATION

Fundamentals of Java Programming

Full course syllabus - every module, video lesson, reading, lab and assignment, from your first Hello World to full object-oriented Java.



Board Infinity

Instructor · Offered on Coursera

3

Modules

69

Video lessons

10

Assignments

2 weeks

At 10 hours a week

INSIDE THE COURSE

01

Java Fundamentals

4 hours to complete

02

Core Java

6 hours to complete

03

OOPS and Other Essential Concepts

9 hours to complete

Enroll on Coursera

<https://www.coursera.org/learn/fundamentals-of-java-programming>

From Hello World to object-oriented Java.

Fundamentals of Java Programming gives you the core Java skills that software development and Java developer roles demand. Across three modules you set up your environment and learn how the JVM, JRE and JDK work together, master core Java - variables, operators, arrays, strings and control statements - and then build object-oriented programs with classes, inheritance, polymorphism, interfaces and abstract classes.

Everything is delivered through short video lectures, readings, hands-on labs and graded quizzes - 69 videos, 12 readings, 2 labs and 10 assignments in all. The course is at beginner level, and Coursera learners rate it 4.4 out of 5 from 640 reviews.

WHO IT'S FOR

Complete beginners

Learning Java from scratch, with no prior coding experience.

CS students

Building the Java foundation for exams, projects and certification.

Developers switching to Java

Bringing experience from another language to Java.

Aspiring full stack developers

Starting the path to a Java full stack career.

WHAT YOU'LL LEARN

01

Build Java programs from scratch

Modules 1-2

Use the JVM, JDK, variables, data types, operators and core Java syntax

02

Solve logic problems

Module 2

Apply arrays, strings, control statements and loops to real-world logic problems

03

Design object-oriented applications

Module 3

Use encapsulation, inheritance, polymorphism and abstract classes

04

Develop scalable Java programs

Module 3

Work with constructors, interfaces, method overloading and full OOP architecture

Three modules, one solid Java foundation.

2 weeks to complete at 10 hours a week. Flexible schedule - learn at your own pace.

01

Java Fundamentals

4 hours

9 videos

What Java is, the JVM, JRE and JDK, and your first program

BY THE END OF THIS MODULE YOU CAN

- ✓ Explain what Java is, its features and how it compares with C++
- ✓ Set up a Java development environment
- ✓ Describe how the JVM, JRE and JDK work together
- ✓ Write a Hello World program and trace how Java code executes

CONTENTS 9 videos (36 min) · 3 readings (55 min) · 1 assignment (60 min) · 1 ungraded lab (60 min)

LAB Understanding Java Program Execution and Output (60 min)

TOPICS

[What is Java?](#)[Java Components: JVM, JRE & JDK](#)[Java Program Execution](#)

You'll leave with: a working Java setup and a clear picture of how your code runs on the JVM.

02

Core Java

6 hours

29 videos

Variables, operators, arrays, strings and control statements

BY THE END OF THIS MODULE YOU CAN

- ✓ Use variables, data types, user input and type casting
- ✓ Apply arithmetic, relational, logical and ternary operators
- ✓ Work with arrays, strings, StringBuffer and StringBuilder
- ✓ Control flow with conditionals, switch, loops and jump statements

CONTENTS 29 videos (138 min) · 3 readings (90 min) · 4 assignments (135 min)

TOPICS

[Variables and Data Types](#)[Operators](#)[Arrays & Strings](#)[Control Statements](#)

You'll leave with: a strong foundation in core Java syntax - enough to solve logic problems like FizzBuzz on your own.

03

OOPS and Other Essential Concepts

Classes, constructors, inheritance, polymorphism and interfaces

9 hours

31 videos

BY THE END OF THIS MODULE YOU CAN

- ✓ Build classes and objects with access modifiers, encapsulation and getters/setters
- ✓ Use default, parameterized and overloaded constructors, and constructor chaining
- ✓ Apply inheritance, upcasting, downcasting, overloading and overriding
- ✓ Design with abstract classes and interfaces

CONTENTS 31 videos (142 min) · 6 readings (160 min) · 5 assignments (180 min) · 1 ungraded lab (60 min)

LAB Constructors and Inheritance in Java (60 min)

TOPICS

OOPS

Constructors

Inheritance

Overloading and Overriding

Abstract Classes and Interfaces

You'll leave with: the OOP skills to design scalable, maintainable Java applications - the core of every Java developer interview.

The themes that run through the course.



Java & the JVM

Core platform

The JDK, JRE and Java Virtual Machine, and how Java code gets executed.

In this course: Module 1, with a hands-on lab on program execution and output.



Eclipse & IntelliJ IDEA

IDEs

Free development environments that Java developers use every day.

In this course: A step-by-step setup in module 1 gets you coding fast.



Core Java syntax

Language

Variables, operators, arrays, strings, conditionals, loops and jump statements.

In this course: Module 2, including the FizzBuzz exercise.



Object-oriented programming

Design

Classes, constructors, inheritance, polymorphism, abstract classes and interfaces.

In this course: Module 3, with a lab on constructors and inheritance.

SKILLS YOU LEAVE WITH

Java platform

- ✓ Java
- ✓ Java programming
- ✓ Virtual machines
- ✓ Development environment

Programming

- ✓ Computer programming
- ✓ Programming principles
- ✓ Algorithms
- ✓ Computer programming tools

OOP & tools

- ✓ Object-oriented programming
- ✓ Object-oriented design
- ✓ Eclipse (software)
- ✓ Integrated development environments

Finish with a shareable certificate.



Add it to LinkedIn

Add this credential to your LinkedIn profile, resume, or CV.



Share it anywhere

Share it on social media and in your performance review.



Earned, not attended

Awarded on completion of the graded quizzes and assessments in all three modules.



Course 1 of 3

The first course of the Java FullStack Developer Specialization by Board Infinity.

ROLES THE COURSE PREPARES YOU FOR

Junior Java Developer

Core Java Developer

Java Trainee

Software Engineer (Java)

Backend Developer

Full Stack Java Developer



Board Infinity

Instructor · Offered on Coursera

Beginner level · Taught in English · 24 languages available · Flexible schedule

Ready to write your first Java program?

Enrollment, lessons, grading and the certificate all happen on Coursera.

[Enroll on Coursera](#)

Course page:
coursera.org/learn/fundamentals-of-java-programming

Want a coach alongside the course?

Board Infinity 1:1 coaching is a separate, optional Board Infinity offering - it is not part of the Coursera course. Details: <https://www.boardinfinity.com/career-coaching/>

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