

# Programming: Java

Materials & teaching in English



## Learn Java from the ground up and build the skills to work with data structures, algorithms and advanced application development.

Java has been one of the most in-demand programming languages for decades. It powers enterprise software, Android applications, backend systems and large-scale infrastructure across virtually every industry. If you want to work as a developer, Java is one of the most practical and widely recognised skills you can have.

The course starts at the very beginning. You learn what programming actually is, how to think logically and structure code, and how to work with the building blocks of Java: variables, classes, methods, arrays and control flow. Hands-on labs run throughout, so you practise what you learn as you go.

From there the course moves into object-oriented programming, string manipulation, debugging and two-dimensional arrays. These are the foundations that professional Java developers use every day, and the course builds them properly before moving on.

The middle section covers algorithms and data structures. You learn how to implement and use linked lists, queues, stacks, hash maps, trees and

graphs, all in Java. You also work with sorting and search algorithms and learn to analyse how efficient your code actually is. This is the content that takes a developer from writing code that works to writing code that scales.

The intermediate part of the course goes deeper into real-world Java development. You work with I/O operations, serialization, generics, threading and regular expressions. Testing is covered properly through JUnit, which is standard in professional development environments.

The final section covers advanced topics: parallel and concurrent programming, servlets, sockets, Java Native Interface and Java Database Connectivity. These are the skills that open the door to complex backend development and integration work.

Each section of the course ends with an assessment. The course concludes with an exam. Included is 1 certification attempt for the Java Coding Apprentice certification via Knowledge Pillars - a documented proof of your skills that carries weight in a job application.

## You will learn



### Programming Fundamentals

- Understand how code works and think like a programmer
- Learn variables, control flow and basic syntax from scratch
- Build a solid foundation before writing Java



### Java Core

- Work with classes, methods, objects and arrays
- Use loops, conditionals and string manipulation
- Apply object-oriented programming with inheritance



### Algorithms and Sorting

- Understand time and space complexity of algorithms
- Work with recursion, insertion sort and merge sort
- Analyse algorithmic efficiency with asymptotic notation



### Data Structures in Java

- Implement linked lists, queues, stacks and hash maps
- Work with trees and graphs in Java
- Understand how data structures affect performance



### Intermediate Java

- Handle I/O operations, serialization and generics
- Work with threading, collections and nested classes
- Write unit tests with JUnit



### Advanced Java

- Work with parallel and concurrent programming
- Build programs using servlets and sockets
- Connect Java to databases with JDBC

## The course is for you if you...

- ✓ You want to work as a developer and are ready to learn Java properly, from core syntax and object-oriented programming through to data structures, algorithms and advanced application development.
- ✓ You have some interest in or exposure to programming and want a structured, comprehensive path through Java that ends with skills and a certificate you can show to employers.

### Course structure

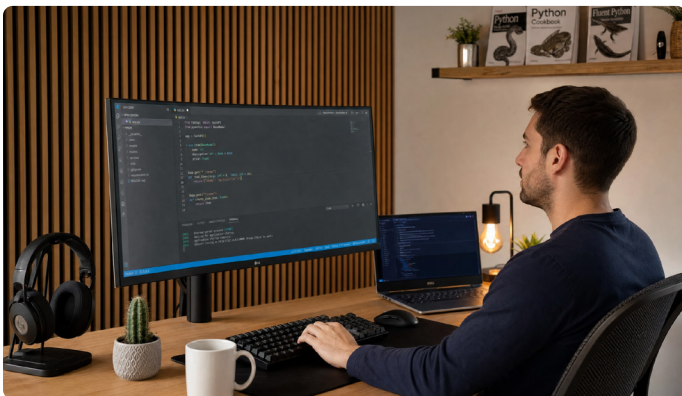
The course includes self-paced online sessions, Labs and a Final Exam assessment. You also get access to a library of e-books.

### Certification

The course concludes with an exam. Included is 1 certification attempt for the Java Coding Apprentice certification via Knowledge Pillars. The attempt must be used within 1 month of completing the course.

### Careercoach

You also can spar with Itucation's career coach regarding CV, application and job strategy. If you wish to take advantage of this offer, please send an email to [kurser@itucation.dk](mailto:kurser@itucation.dk)



## Upcoming courses

- Start every monday!

## Information & Pris

<b>Location</b>	E-learning, Selfstudy
<b>Classes</b>	5 days a week
<b>Duration</b>	6 weeks
<b>Price for applicants</b>	<b>Free for unemployed*</b>
<small>*Free, if you fulfil the criteria for 6-week job-oriented training programs via the Jobcenter</small>	
<b>Price for jobcenter:</b>	Kr. 19.600 (ex. moms)
<b>Sign-up</b>	<b><a href="http://www.itucation.dk">www.itucation.dk</a></b> Or contact us on 7027 2784

## Information til a-kasser og jobcentre

### Regional positivliste

E-learningkurset er godkendt.

Se vores hjemmeside for listetitel og

listenumre.

### Pris

Kr. 19.600 (ex. moms)

Ugepris: kr. 3.266,66 (ex. moms)

### Betalingstilsagn sendes til

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