

# Conception de logiciels intranet : intergiciels à objets répartis (NSY102)

## Introduction

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# Organisation

- ▶ NSY102 – Conception de logiciels intranet : intergiciels à objets répartis  
*Formation à distance planifiée (100% en ligne) - 1er semestre*
- ▶ Séances :
  - *12 leçons de Cours et TP corrigés* (vidéos)
  - *Regroupements* : certains mercredi soir à 18h en visio via l'ENF
- ▶ Supports et forum sur l'ENF
- ▶ Evaluation :
  - TP noté optionnel (1 ou 2) à rendre via l'ENF
  - Projet final

# Modalités d'évaluation

`note_de_TP = max` des notes de TP (si plusieurs TP notés rendus)

`note_finale =`

`si note_de_projet > 10 alors note_de_projet`

`sinon`

`si (2 x note_de_projet + note_de_TP) / 3 > 10 alors 10`

`sinon note_de_projet`

En seconde session, même formule (avec la même `note_de_TP`) et :

un *sujet différent* pour le projet

`ou`

le *même sujet* mais le barème prend en compte le temps supplémentaire.

# Conception de logiciels intranet : intergiciels à objets répartis

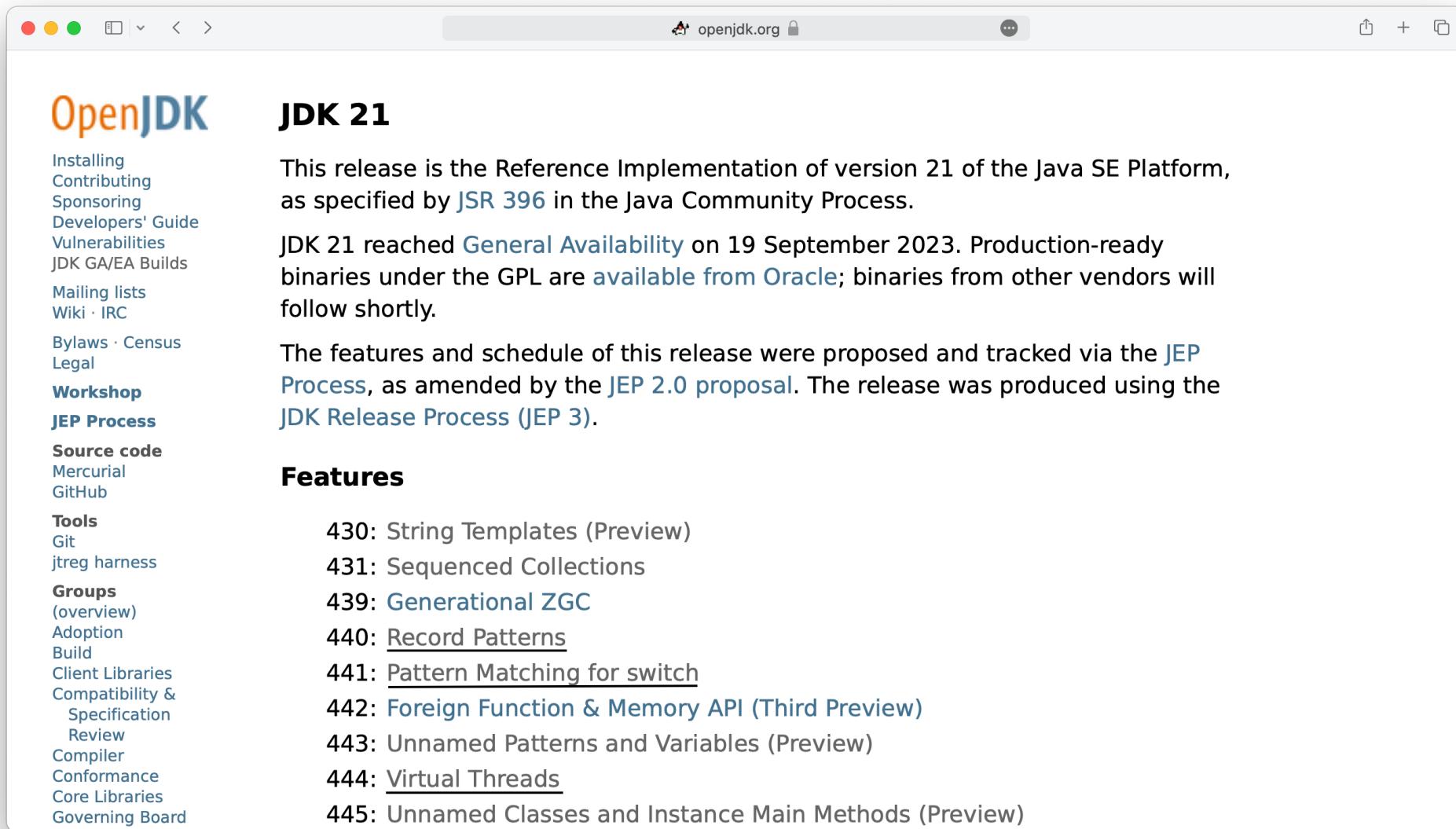
- ▶ **intergiciel** (*middleware*)
  - ... à objets répartis (RMI: Remote Object Invocation)
- ▶ **conception**
  - ... et implantation en Java

# Plan du cours (indicatif)

- ▶ Introduction
- ▶ Collections (rappels)
- ▶ Input/Output Streams
- ▶ Concurrence, Protocoles et Client-Serveur
- ▶ Partage, Sérialisation, Immutabilité et Persistance
- ▶ Invocation de méthode à distance (RMI)

# Environnement de développement

- ▶ JDK 21 (Java 21)
- ▶ Maven et JUnit 5
- ▶ Eclipse – version 2024-03 ou plus récente  
(*package* « Eclipse IDE for Java Developers » suffisant)
- ▶ *Alternatives* : Netbeans, VS Code ou IntelliJ IDEA



The screenshot shows a Mac OS X browser window displaying the OpenJDK website. The address bar shows 'openjdk.org'. The main content area is titled 'JDK 21' and discusses the release as the Reference Implementation of Java SE Platform version 21, with links to Oracle's binaries and the JEP Process. Below this, a 'Features' section lists several JEPs: 430, 431, 439, 440, 441, 442, 443, 444, and 445. The left sidebar contains a navigation menu with links to 'Installing', 'Contributing', 'Sponsoring', 'Developers' Guide', 'Vulnerabilities', 'JDK GA/EA Builds', 'Mailing lists', 'Wiki · IRC', 'Bylaws · Census', 'Legal', 'Workshop', 'JEP Process', 'Source code' (Mercurial, GitHub), 'Tools' (Git, jtreg harness), 'Groups' (overview, Adoption, Build, Client Libraries, Compatibility & Specification, Review, Compiler, Conformance, Core Libraries, Governing Board).

# JDK 21

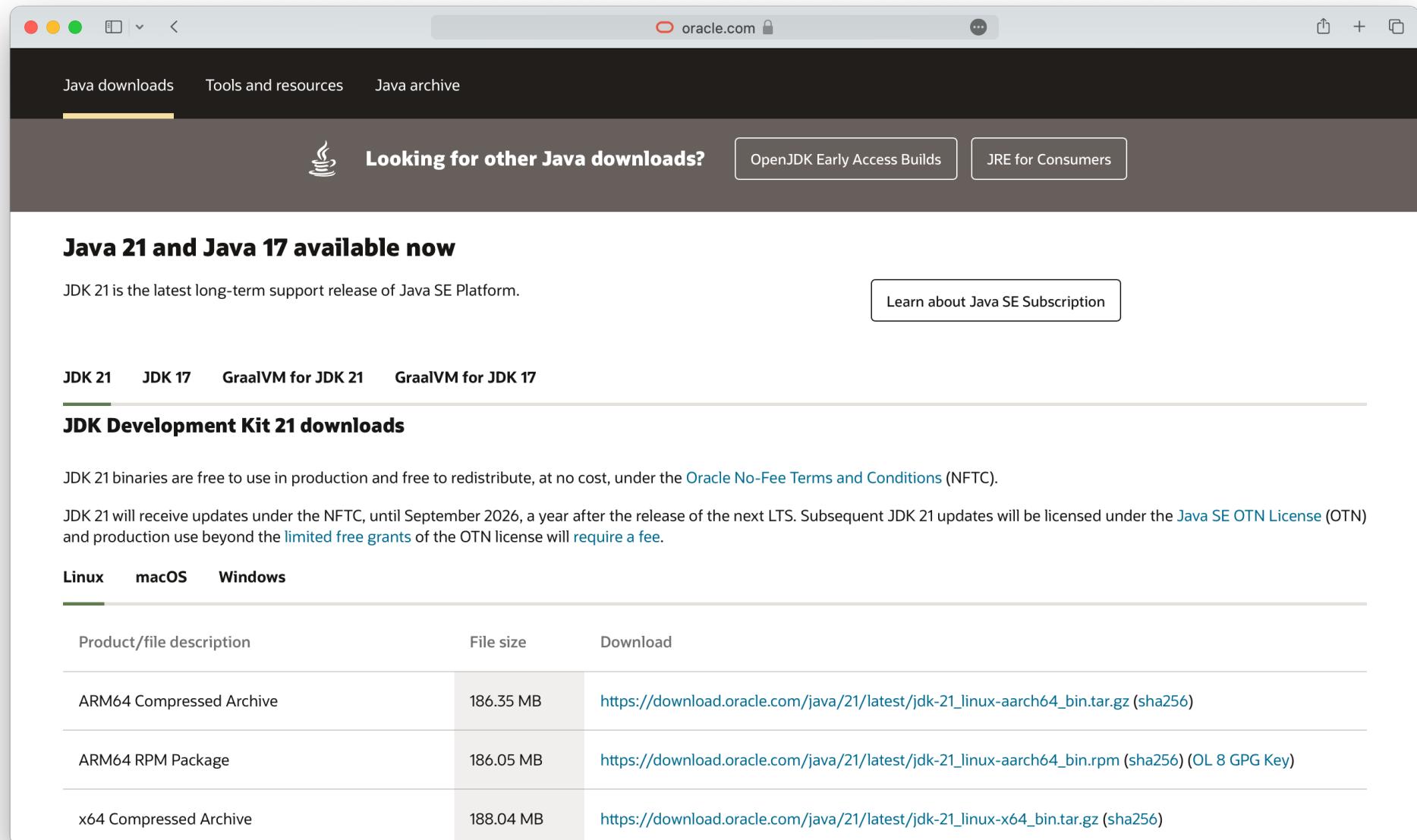
This release is the Reference Implementation of version 21 of the Java SE Platform, as specified by [JSR 396](#) in the Java Community Process.

JDK 21 reached [General Availability](#) on 19 September 2023. Production-ready binaries under the GPL are [available from Oracle](#); binaries from other vendors will follow shortly.

The features and schedule of this release were proposed and tracked via the [JEP Process](#), as amended by the [JEP 2.0 proposal](#). The release was produced using the [JDK Release Process \(JEP 3\)](#).

## Features

- 430: String Templates (Preview)
- 431: Sequenced Collections
- 439: [Generational ZGC](#)
- 440: [Record Patterns](#)
- 441: [Pattern Matching for switch](#)
- 442: [Foreign Function & Memory API \(Third Preview\)](#)
- 443: Unnamed Patterns and Variables (Preview)
- 444: [Virtual Threads](#)
- 445: Unnamed Classes and Instance Main Methods (Preview)



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## Java 21 and Java 17 available now

JDK 21 is the latest long-term support release of Java SE Platform. [Learn about Java SE Subscription](#)

[JDK 21](#) [JDK 17](#) [GraalVM for JDK 21](#) [GraalVM for JDK 17](#)

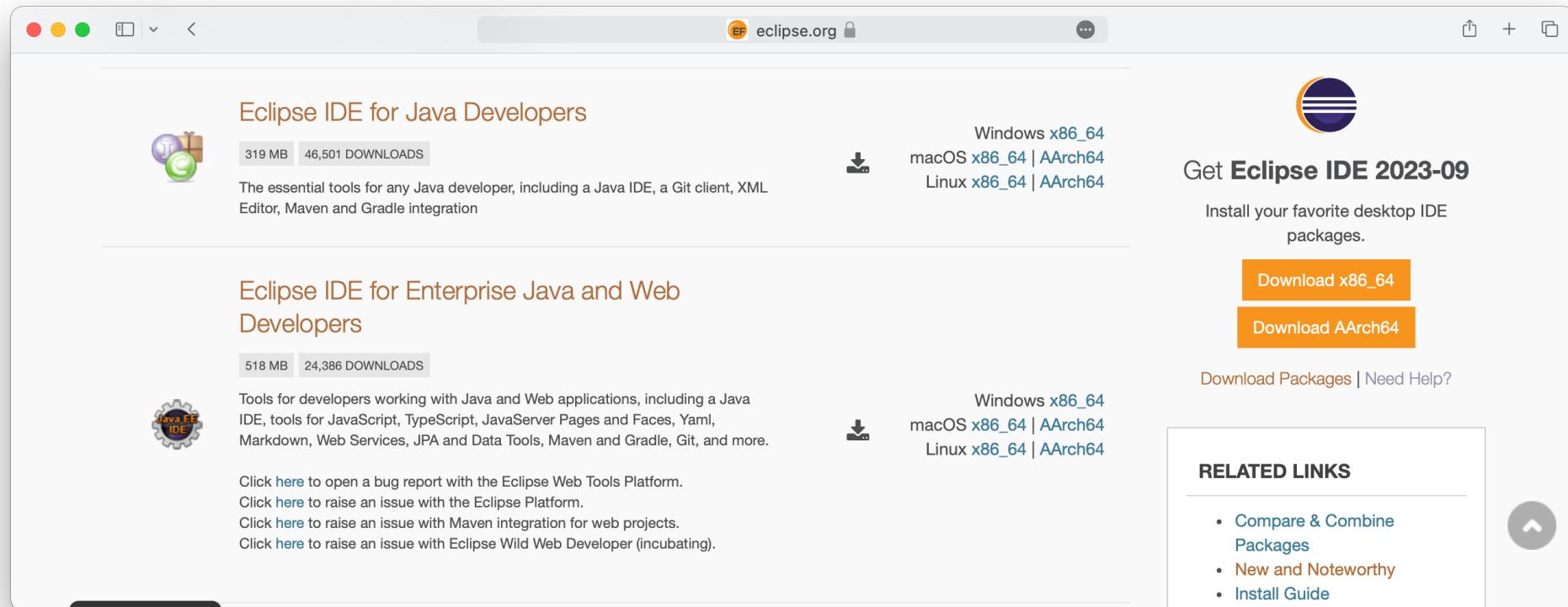
### JDK Development Kit 21 downloads

JDK 21 binaries are free to use in production and free to redistribute, at no cost, under the [Oracle No-Fee Terms and Conditions](#) (NFTC).

JDK 21 will receive updates under the NFTC, until September 2026, a year after the release of the next LTS. Subsequent JDK 21 updates will be licensed under the [Java SE OTN License](#) (OTN) and production use beyond the [limited free grants](#) of the OTN license will [require a fee](#).

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Product/file description	File size	Download
ARM64 Compressed Archive	186.35 MB	<a href="https://download.oracle.com/java/21/latest/jdk-21_linux-aarch64_bin.tar.gz">https://download.oracle.com/java/21/latest/jdk-21_linux-aarch64_bin.tar.gz</a> (sha256)
ARM64 RPM Package	186.05 MB	<a href="https://download.oracle.com/java/21/latest/jdk-21_linux-aarch64_bin.rpm">https://download.oracle.com/java/21/latest/jdk-21_linux-aarch64_bin.rpm</a> (sha256) (OL 8 GPG Key)
x64 Compressed Archive	188.04 MB	<a href="https://download.oracle.com/java/21/latest/jdk-21_linux-x64_bin.tar.gz">https://download.oracle.com/java/21/latest/jdk-21_linux-x64_bin.tar.gz</a> (sha256)



The screenshot shows the Eclipse IDE download page on the official website. The page is divided into two main sections: 'Eclipse IDE for Java Developers' and 'Eclipse IDE for Enterprise Java and Web Developers'. Each section includes a download link, file size, download count, and a brief description of the features. The 'Java Developers' section also includes links for reporting bugs and raising issues. The 'Enterprise Java and Web Developers' section includes links for Maven integration and Eclipse Wild Web Developer. On the right side, there is a prominent 'Get Eclipse IDE 2023-09' section with download links for Windows, macOS, and Linux in x86\_64 and AArch64 architectures. There are also buttons for 'Download x86\_64' and 'Download AArch64'. A 'RELATED LINKS' sidebar on the right lists 'Compare & Combine Packages', 'New and Noteworthy', and 'Install Guide'. The page has a clean, modern design with a light gray background and orange accents for the download links.

## Eclipse IDE for Java Developers

 319 MB 46,501 DOWNLOADS

The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Maven and Gradle integration

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Click [here](#) to raise an issue with the Eclipse Platform.  
Click [here](#) to raise an issue with Maven integration for web projects.  
Click [here](#) to raise an issue with Eclipse Wild Web Developer (incubating).

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