

OBJECT ORIENTED PRINCIPLES.

Lab01: Java Installation and Basic Syntax.

This lab consist of the following sections:

- Install Java Development Kit (JDK)
- Install an Integrated Development Environment (IDE) for Java
- Complete some exercises related to the lecture L02_04: Java Basic Syntax.

INSTALL JAVA JDK.

Please download the Java Development Kit (JDK) for the most recent Java version (Java 18) by using the following link: <https://www.oracle.com/java/technologies/downloads/>

For Windows users, we recommend downloading the MSI installer, as it will guide you through the installation of Java.

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JDK 18 will receive updates under these terms, until September 2022 when it will be superseded by JDK 19

JDK 17 will receive updates under these terms, until at least September 2024.

Java 18 Java 17

Java SE Development Kit 18.0.2.1 downloads

Thank you for downloading this release of the Java™ Platform, Standard Edition Development Kit (JDK™). The JDK is a development environment for building applications using the Java programming language.

The JDK includes tools for developing and testing programs written in the Java programming language and running on the Java platform.

Linux macOS Windows

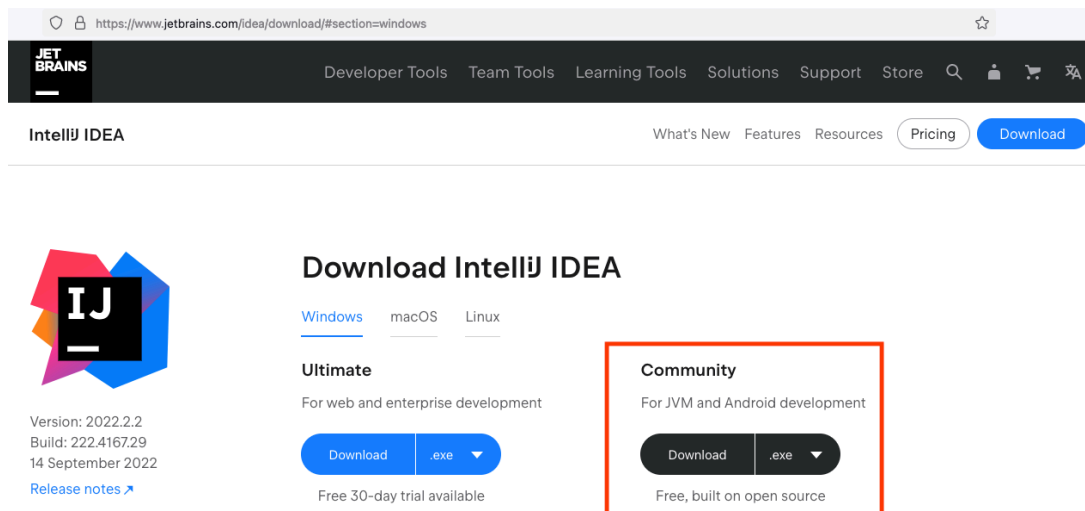
Product/file description	File size	Download
x64 Compressed Archive	172.93 MB	https://download.oracle.com/java/18/latest/jdk-18_windows-x64_bin.zip (sha256 ↗)
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x64 MSI Installer	152.33 MB	https://download.oracle.com/java/18/latest/jdk-18_windows-x64_bin.msi (sha256 ↗)

INSTALL JAVA IDE.

Please download one of the following two Integrated Development Environment (IDE) for developing Java applications: JetBrains IntelliJ or Eclipse.

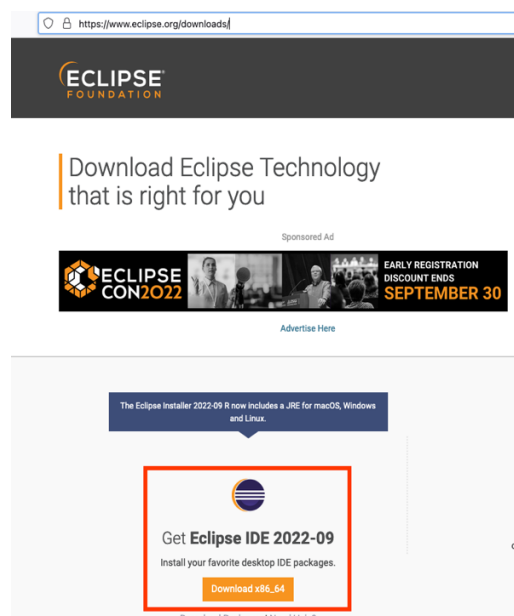
- JetBrains IntelliJ (Community Edition) will be the one we will be using in the lectures. It follows the same layout as PyCharm for programming in Python. It can be downloaded it by using the following link: <https://www.jetbrains.com/idea/download/>

For Windows users, we recommend downloading the EXE installer, as it will provide guidance through the installation of IntelliJ.



The screenshot shows the JetBrains IntelliJ IDEA download page for Windows. The page has a dark header with the JetBrains logo and navigation links. Below the header, the 'IntelliJ IDEA' title is followed by links for 'What's New', 'Features', 'Resources', 'Pricing', and a 'Download' button. The main content area features the IntelliJ logo on the left, which includes version information: 'Version: 2022.2.2', 'Build: 222.4167.29', '14 September 2022', and a link to 'Release notes'. To the right, under the heading 'Download IntelliJ IDEA', there are tabs for 'Windows', 'macOS', and 'Linux'. Under the 'Windows' tab, two options are listed: 'Ultimate' (for web and enterprise development) and 'Community' (for JVM and Android development). The 'Community' option is highlighted with a red box. Both options have a 'Download' button and a '.exe' dropdown menu. Below the 'Ultimate' button, it says 'Free 30-day trial available'. Below the 'Community' button, it says 'Free, built on open source'.

- Alternatively, Eclipse is another popular IDE for programming in Java. We might use it sometimes in the lectures. It can be downloaded by using the following link: <https://www.eclipse.org/downloads/>



The screenshot shows the Eclipse Foundation download page. The page has a dark header with the Eclipse Foundation logo. Below the header, the text 'Download Eclipse Technology that is right for you' is displayed. A sponsored advertisement for 'Eclipse Con 2022' is shown, with the text 'EARLY REGISTRATION DISCOUNT ENDS SEPTEMBER 30'. Below the advertisement, a section titled 'The Eclipse Installer 2022-09 R now includes a .JRE for macOS, Windows and Linux.' is shown. This section contains a box with the Eclipse logo and the text 'Get Eclipse IDE 2022-09' and 'Install your favorite desktop IDE packages.' Below this box is a 'Download x86_64' button, which is highlighted with a red box. At the bottom of the page, there are links for 'Download Packages' and 'Need Help?'.

COMPLETE SOME EXERCISES REGARDING => L02_04. JAVA BASIC SYNTAX

On this section 8 simple Java exercises, related to the content presented in the lecture L02_04. Java Basic Syntax are proposed. Complete the exercises and check if you are obtaining the correct results.

- The folder **src** contains the code of the Java application.
 - o MyMain.java => This file contains the class MyMain and the 8 exercises to be completed.
- The folder **javadoc** contains the documentation of the Java code.
 - o MyMain.html => This file contains the description of the class MyMain, including the description of each of the 8 exercises to be completed.
- The folder **results** contains the expected results of the Java exercises.
 - o results.txt => This file contains the output obtained from running the lecturer's solution to the 8 exercises proposed.

Actions:

1. Create a new project using the IDE and import the file MyMain.java into it.
2. Complete the 8 exercises proposed. For each exercise, do not modify the signature of the method, just program your code in the body of the method, as required.
3. Use the file results.txt to compare the results to the expected ones. Obviously, exercise 1 will print a different name for each student, but exercises 2-8 should provide the same output as in results.txt.