

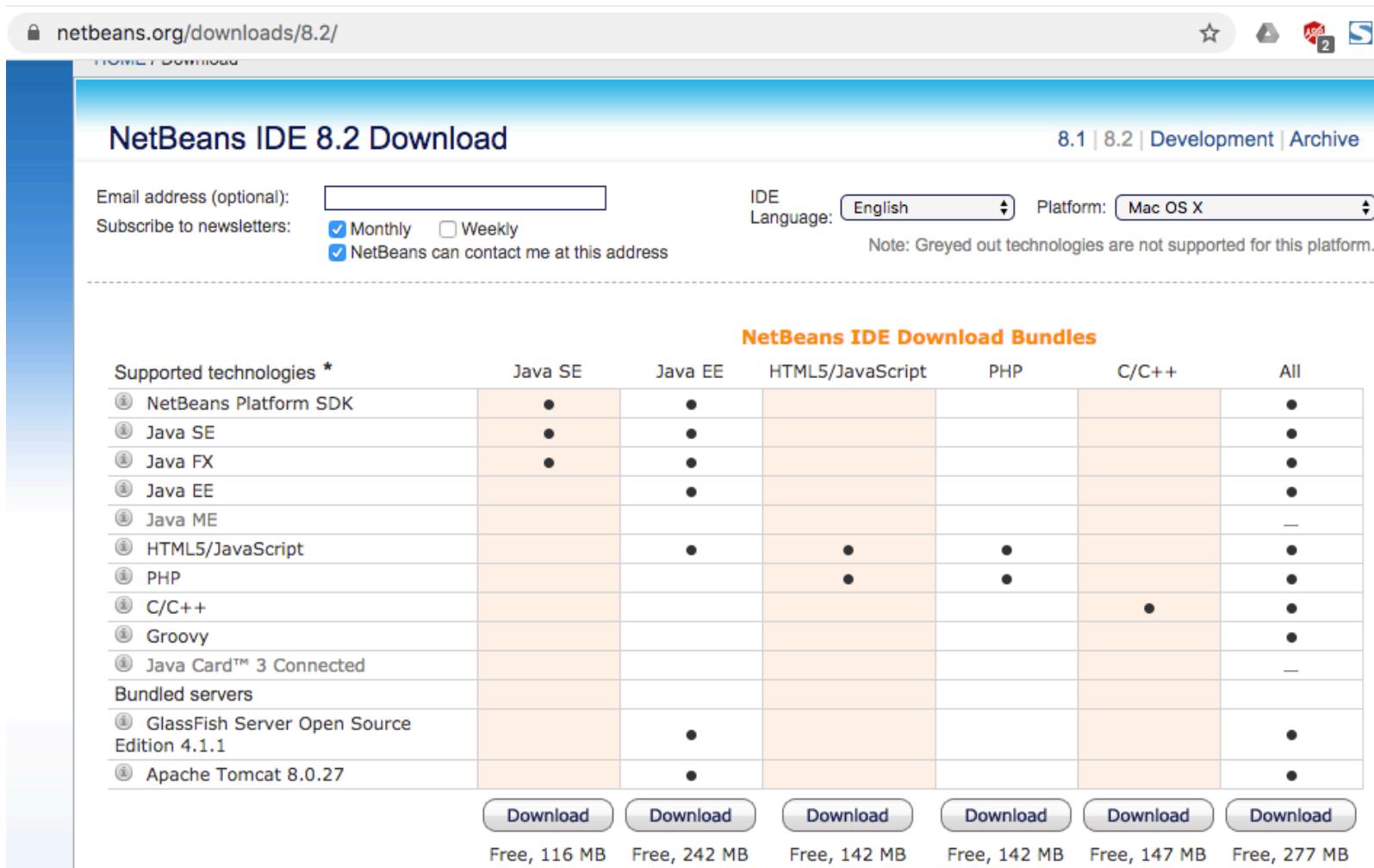
Linguaggi di Programmazione

mod.1

Prima esercitazione 2020

Prerequisito:

- Dovete avere con voi il vostro Laptop
- Dovete avere già scaricato NetBeans 8.2 (la versione Java SE è sufficiente)



The screenshot shows the NetBeans IDE 8.2 Download page. At the top, there is a search bar with the URL "netbeans.org/downloads/8.2/", a star icon, a refresh icon, and a "2" icon indicating notifications. Below the header, there are links for "HOME", "Download", "8.1 | 8.2 | Development | Archive". The main title is "NetBeans IDE 8.2 Download". On the left, there are input fields for "Email address (optional)" and checkboxes for "Subscribe to newsletters" (Monthly, Weekly, NetBeans can contact me at this address). On the right, there are dropdown menus for "IDE Language: English" and "Platform: Mac OS X". A note states: "Note: Greyed out technologies are not supported for this platform." Below this, there is a table titled "NetBeans IDE Download Bundles" showing supported technologies across various platforms. The table includes rows for NetBeans Platform SDK, Java SE, Java FX, Java EE, Java ME, HTML5/JavaScript, PHP, C/C++, and All. The "HTML5/JavaScript" row has a note: "Note: Greyed out technologies are not supported for this platform." At the bottom, there are "Download" buttons for each technology, with file sizes listed below them: Free, 116 MB; Free, 242 MB; Free, 142 MB; Free, 142 MB; Free, 147 MB; Free, 277 MB.

| Supported technologies * | Java SE | Java EE | HTML5/JavaScript | PHP | C/C++ | All |
|--|---------|---------|------------------|-----|-------|-----|
| NetBeans Platform SDK | ● | ● | | | | ● |
| Java SE | ● | ● | | | | ● |
| Java FX | ● | ● | | | | ● |
| Java EE | | ● | | | | ● |
| Java ME | | | | | | — |
| HTML5/JavaScript | | ● | ● | ● | | ● |
| PHP | | | ● | ● | | ● |
| C/C++ | | | | | ● | ● |
| Groovy | | | | | | ● |
| Java Card™ 3 Connected | | | | | | — |
| Bundled servers | | | | | | |
| GlassFish Server Open Source Edition 4.1.1 | | ● | | | | ● |
| Apache Tomcat 8.0.27 | | ● | | | | ● |

Download Download Download Download Download Download
Free, 116 MB Free, 242 MB Free, 142 MB Free, 142 MB Free, 147 MB Free, 277 MB

Obiettivi dell'esercitazione

- Installare Netbeans
- Familiarizzare con il tool
- Creare un primo progetto Java elementare

Che differenza c'è tra Lab e Classe?

- DOVETE ESSERE ATTIVI
- HANDS-ON!
- POTETE COMUNICARE CON COMPAGNI
(incoraggiato!)
- CHIEDETE AIUTO – NESSUNA DOMANDA E'
STUPIDA!
 - Chiedete **soprattutto** ai compagni!

HelloWorld vers. 1

```
package it.unitn.prog2;
public class HelloWorldApp {
    public static void main(String[] args) {
        System.out.println("Hello, world!");
    }
}
```



Business Logic

HelloWorld vers. 2

```
package it.unitn.prog2;
public class HelloWorldApp {
    public HelloWorldApp() {
        System.out.println("Hello, world!");
    }
    public static void main(String[] args) {
        HelloWorldApp app = new HelloWorldApp();
    }
}
```

Business Logic

Perché si fa così?

Lo capiremo in dettaglio più avanti a lezione.

Il nostro IDE: Netbeans

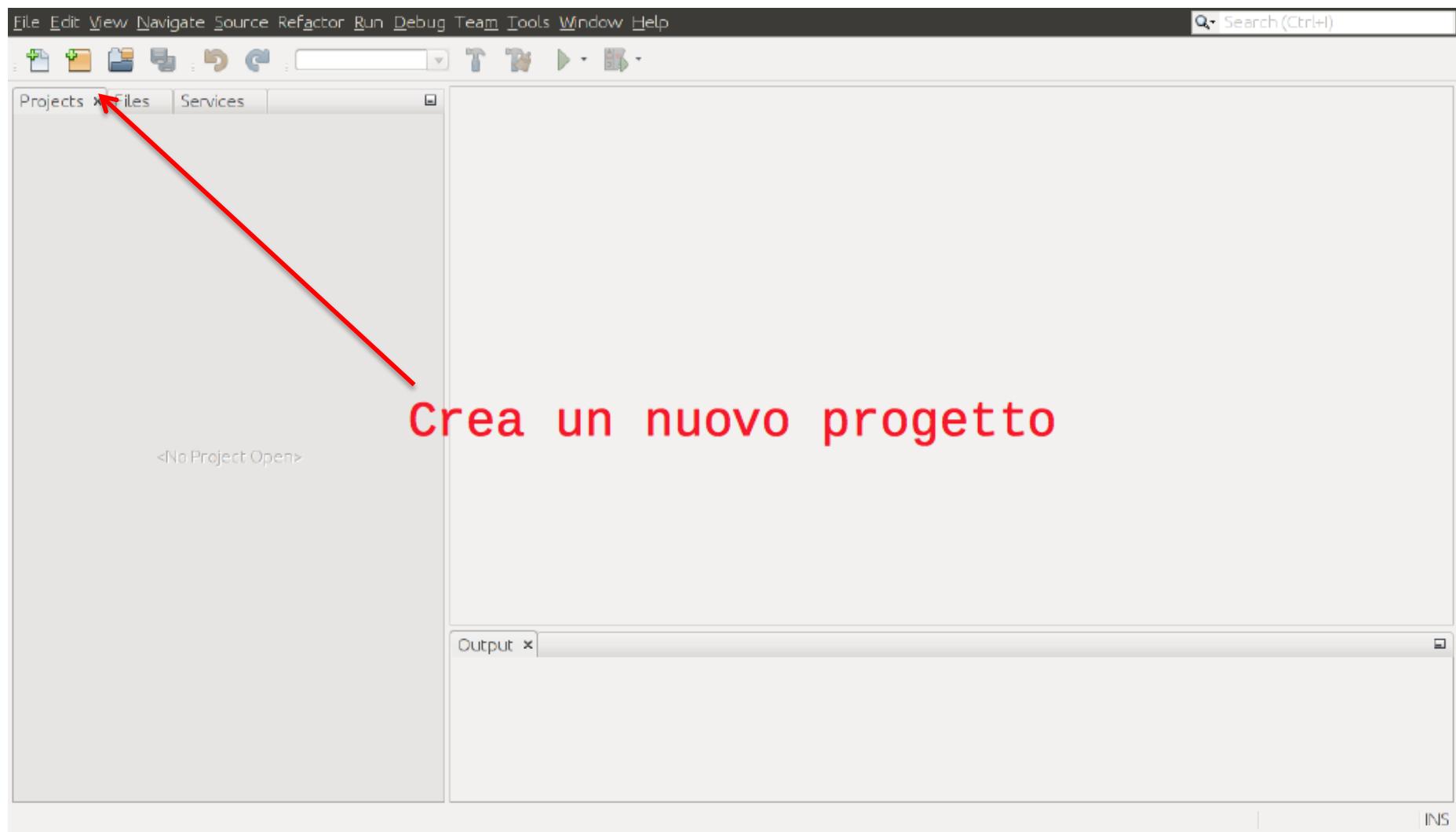
IDE: Integrated Development Environment

- scritto in Java
- Opensource
- Non solo per Java
- Era Sun/Oracle, ora è Apache

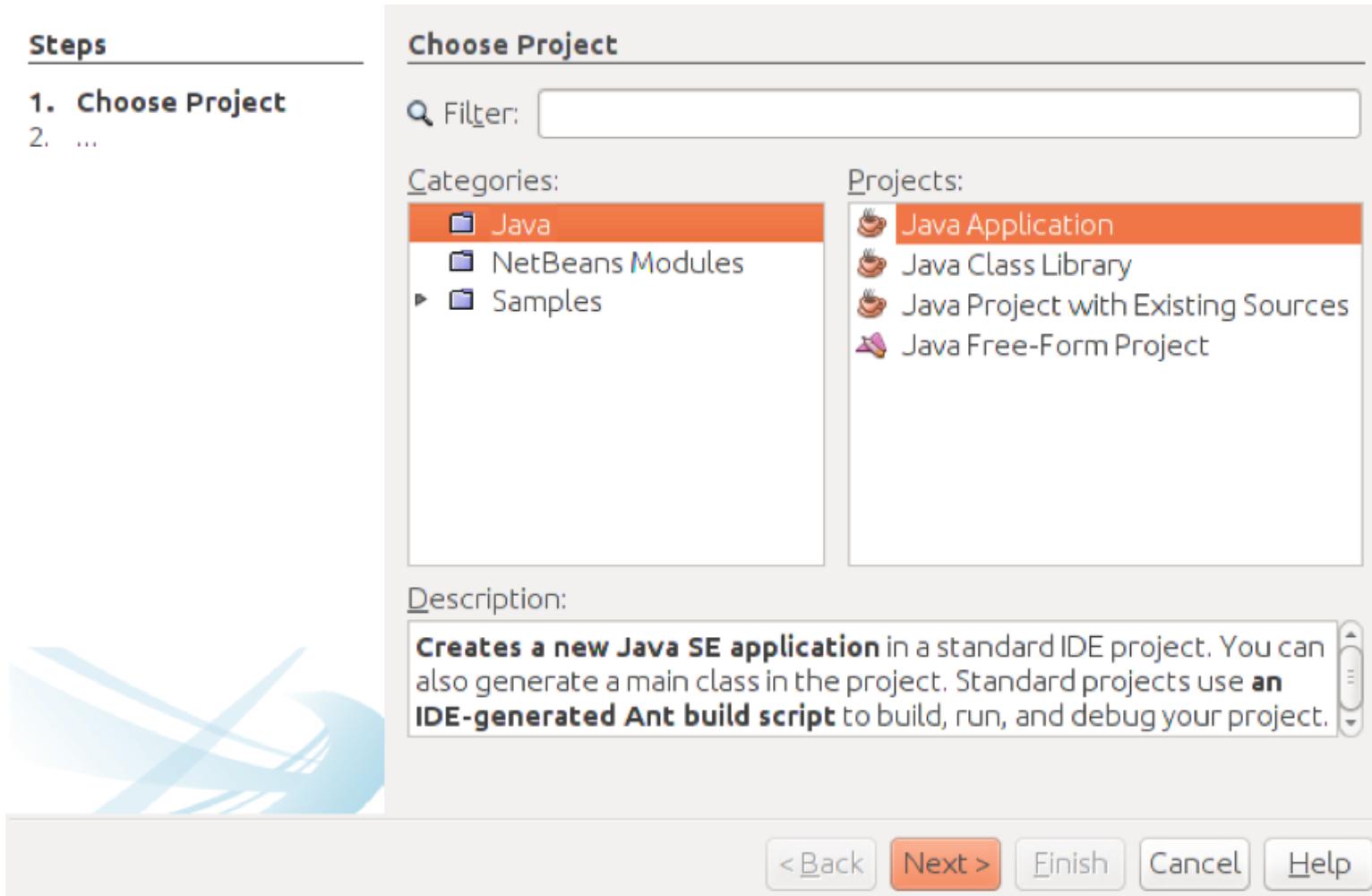


<https://netbeans.org/>

Uso di Netbeans



Uso di Netbeans



The image shows the 'Choose Project' screen of the Netbeans IDE. On the left, there's a sidebar with the title 'Steps' and two items: '1. Choose Project' and '2. ...'. Below this is a decorative graphic of blue and white abstract shapes.

The main area has a title 'Choose Project' and a search bar labeled 'Filter:'. It includes sections for 'Categories' and 'Projects'.

- Categories:** A tree view with 'Java' selected (indicated by an orange highlight), and other options like 'NetBeans Modules' and 'Samples'.
- Projects:** A list of project types with icons:
 - Java Application
 - Java Class Library
 - Java Project with Existing Sources
 - Java Free-Form Project

Below these sections is a 'Description:' box containing the following text:

Creates a new Java SE application in a standard IDE project. You can also generate a main class in the project. Standard projects use **an IDE-generated Ant build script** to build, run, and debug your project.

At the bottom are buttons: '< Back' (disabled), 'Next >', 'Finish' (disabled), 'Cancel', and 'Help'.

Scegli: Java -> Java Application, poi premi NEXT

Uso di Netbeans

Steps

1. Choose Project
2. Name and Location

Name and Location

Project Name:

Project Location:

Project Folder:

Use Dedicated Folder for Storing Libraries
Libraries Folder:
Different users and projects can share
the same compilation libraries (see Help
for details).

Create Main Class

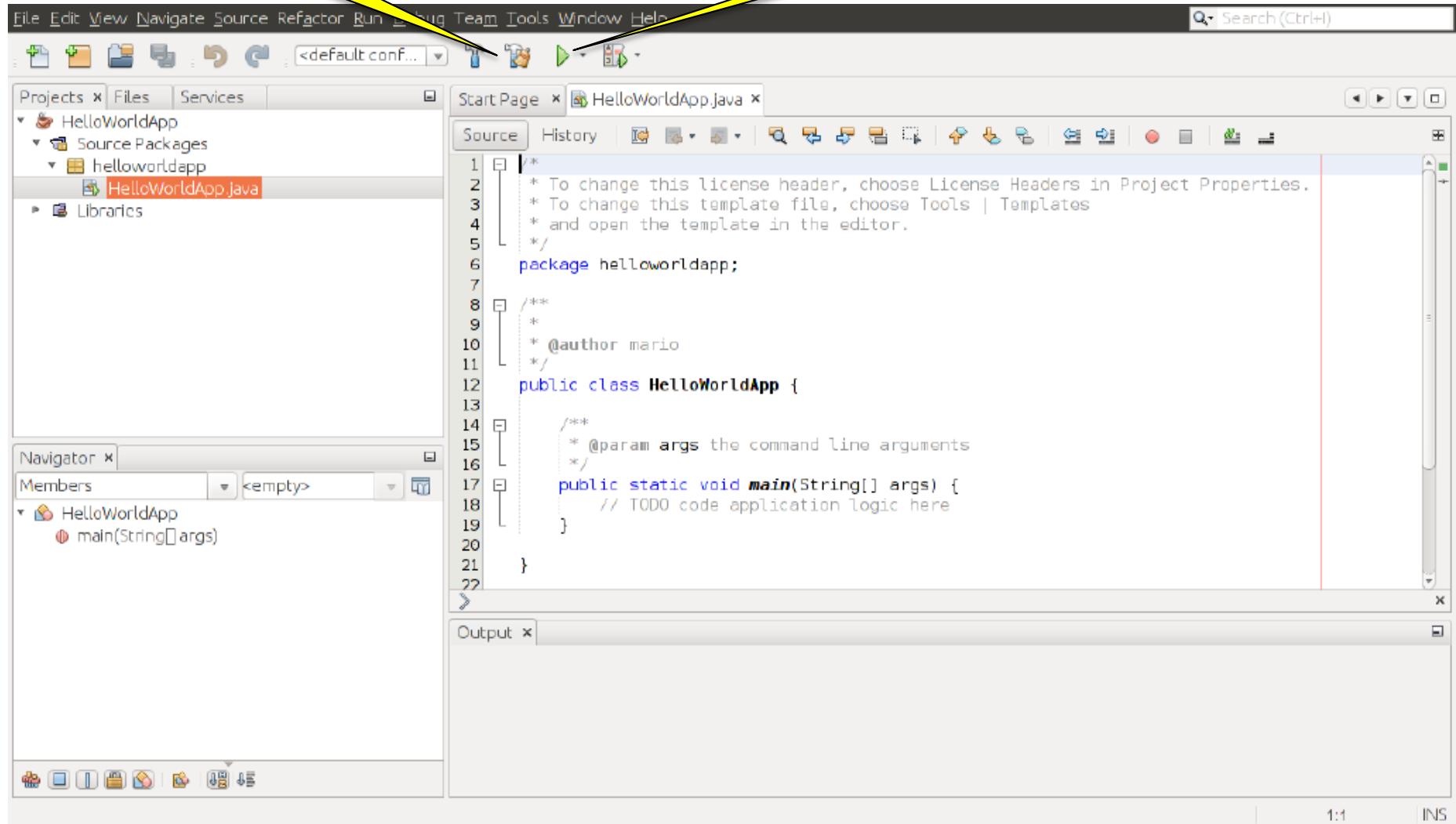


Dai un nome al progetto
Verifica/scegli dove verrà creato
Verifica/scegli il nome della main class
Premi Finish

Compila

Esegui

Uso di Netbeans

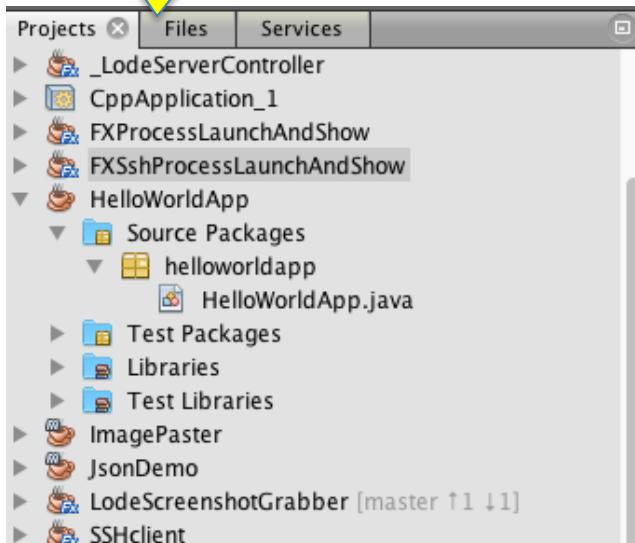


Edita la classe, poi compila ed esegui

File Editor

Uso di Netbeans

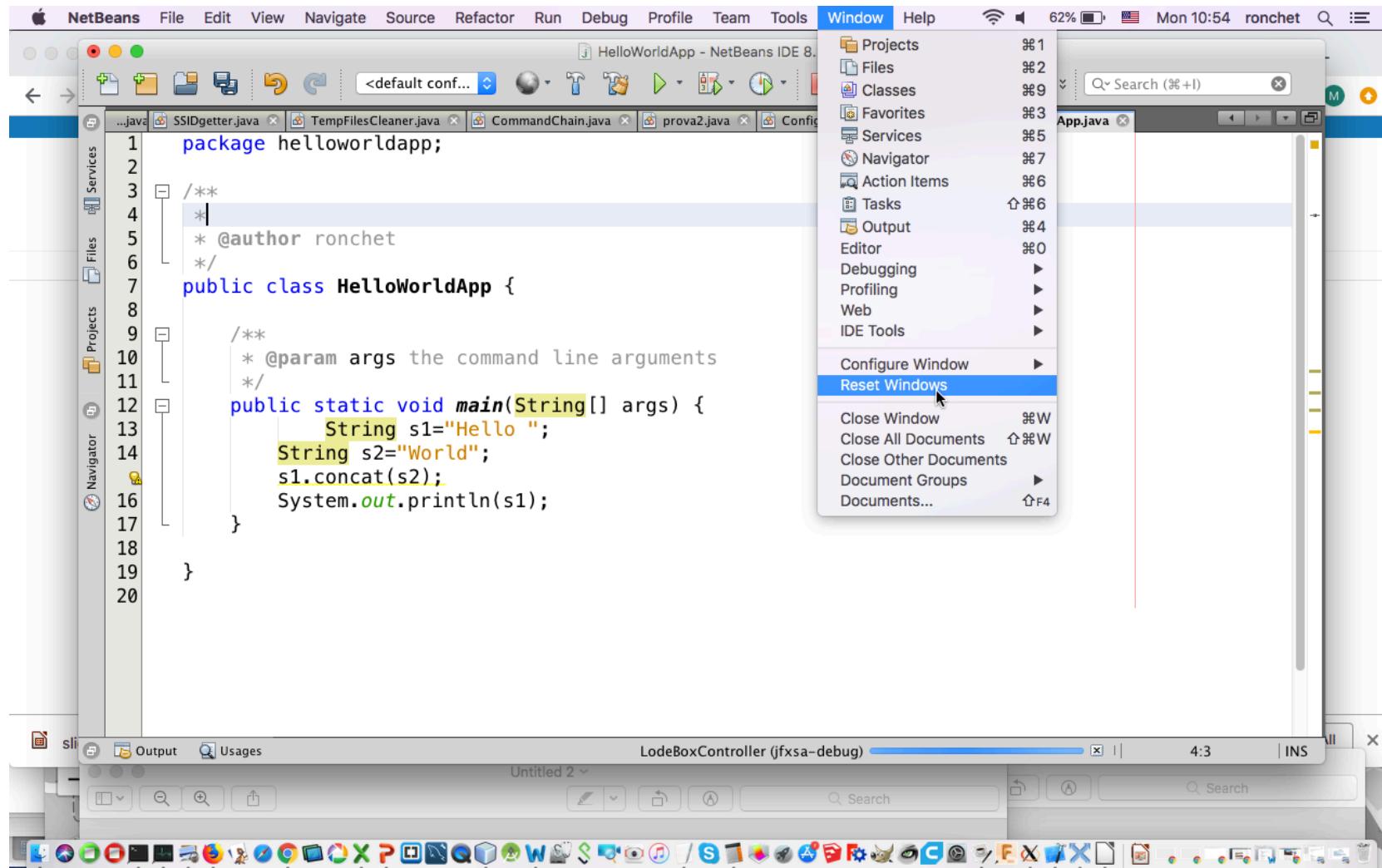
Project Browser



Output Console

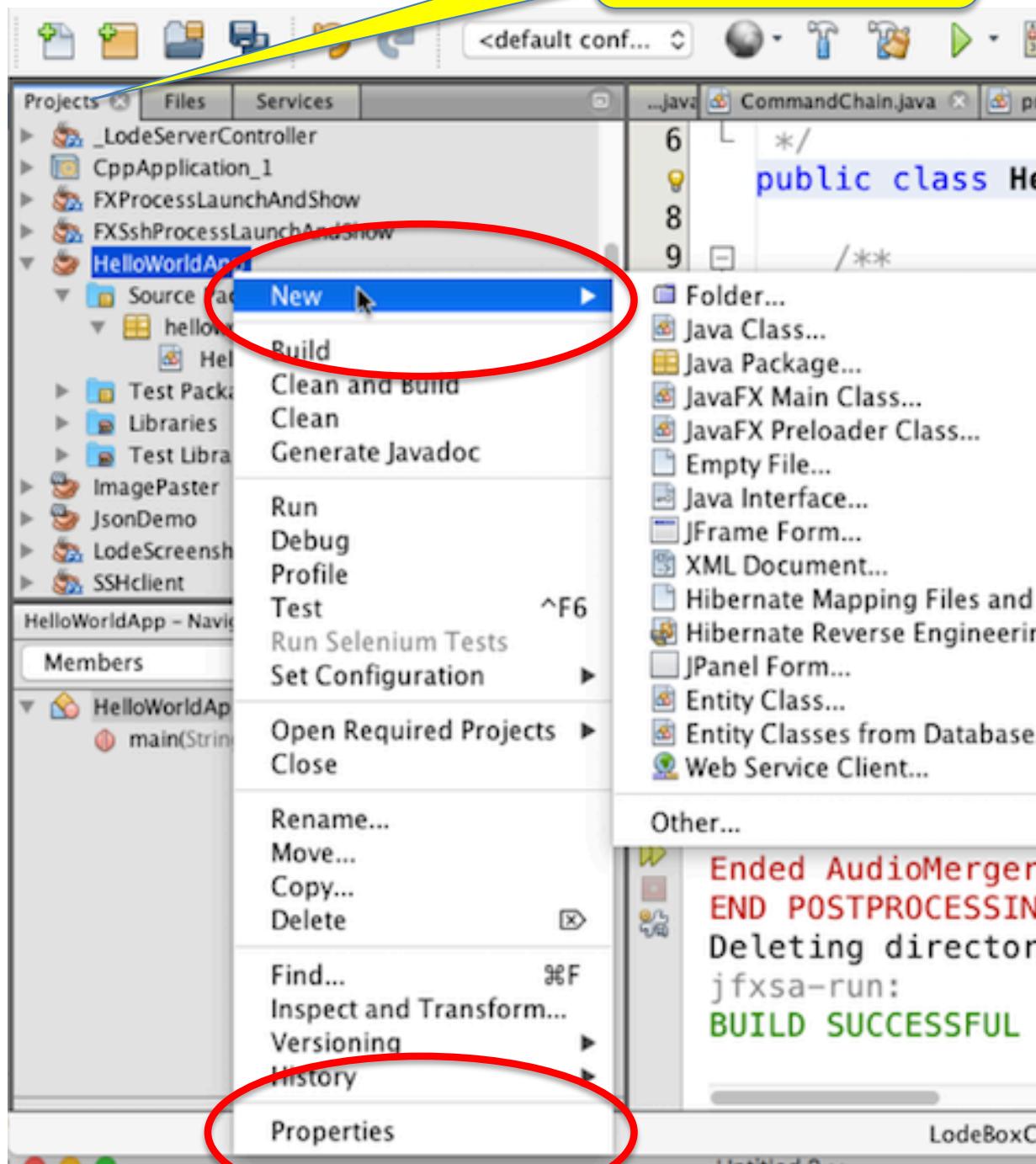
```
==> COMMAND IS : /bin/bash -lc ffmpeg -i /Users/ronchet/LB/packages/Ended AudioMerger  
END POSTPROCESSING /Users/ronchet/LB/packages/lode3pkg-19-02-21-12-  
Deleting directory /Users/ronchet/LB/dev/_LodeBoxController/dist/run/jfxsa-run:  
BUILD SUCCESSFUL (total time: 1 minute 25 seconds)
```

Uso di Netbeans

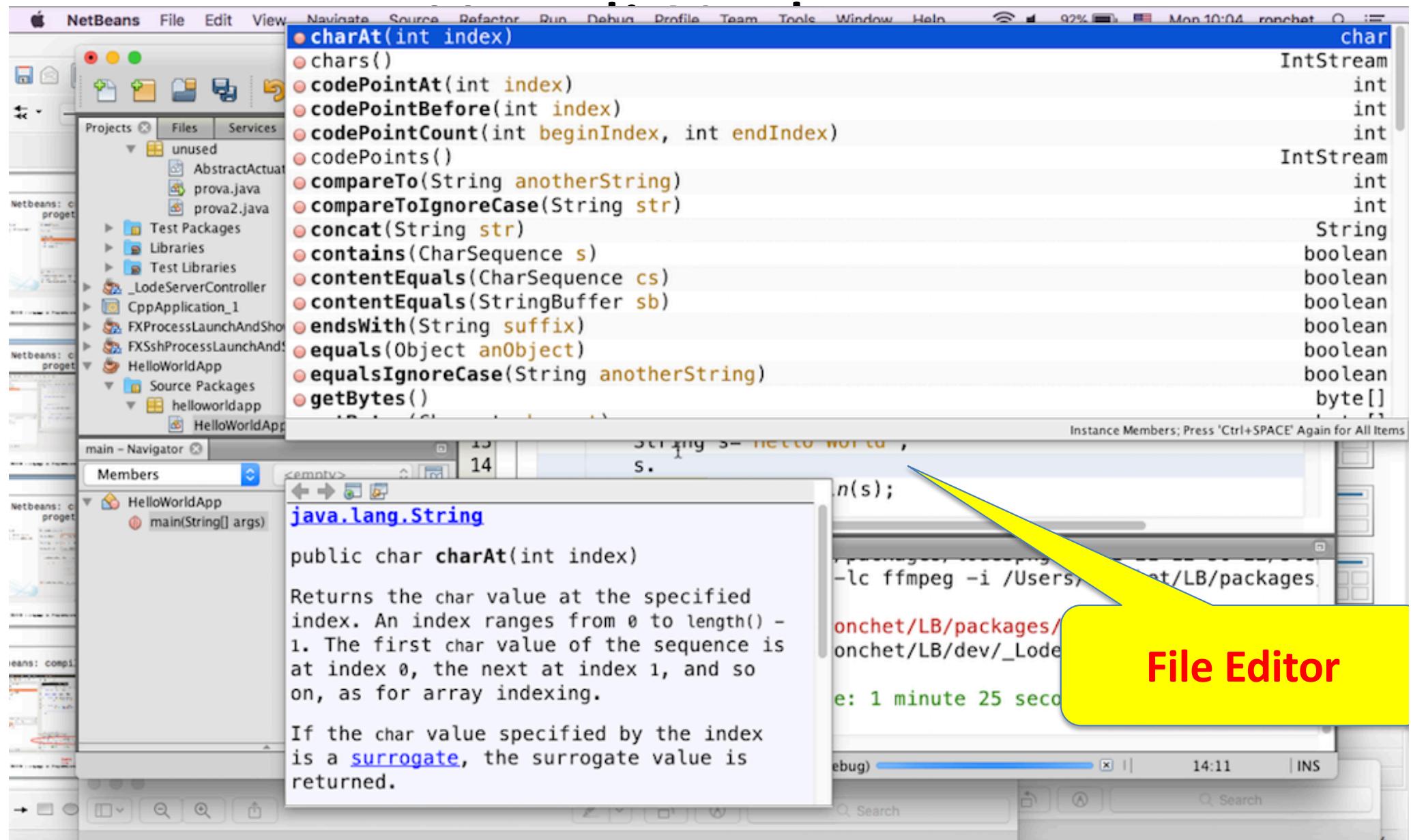


Se chiudi accidentalmente una o più delle tre sezioni,
fai: "Reset Windows"

Project Browser



Uso di Netbeans



HELP ON LINE: premi “punto” dopo il nome di una variabile

Multiple tabs (files)

Uso di Netbeans

File Editor

The screenshot shows the Netbeans IDE interface. At the top, there is a tab bar with several tabs: "...java", "CommandChain.java", "prova2.java", "ConfigurationChecker.java", and "HelloWorldApp.java". The "HelloWorldApp.java" tab is currently selected. Below the tabs, the code editor displays the following Java code:

```
1 package netelloworldapp;
2
3 /**
4 * @author ronchet
5 */
6 public class HelloWorldApp {
7
8
9     /**
10      * @param args the command line arguments
11      *';' expected
12      *----- (Alt-Enter shows hints)
13     static void main(String[] args) {
14         String s1="Hello "
15         String s2="World";
16         s1.concat(s2);
17         System.out.println(s1);
```

The code editor highlights several errors and suggestions:

- Line 11: A yellow box highlights the missing semicolon after the parameter list, with the text "';' expected" and a note "(Alt-Enter shows hints)".
- Line 13: The word "main" is highlighted in blue, indicating it is a keyword.
- Line 14: The variable "s1" is underlined with a red error line, and a red exclamation mark icon is shown on the left margin.
- Line 16: The method call "concat" is underlined with a yellow suggestion line, and a yellow lightbulb icon is shown on the left margin.

SUGGERIMENTI: SEGNALAZIONE E CORREZIONE DI ERRORI

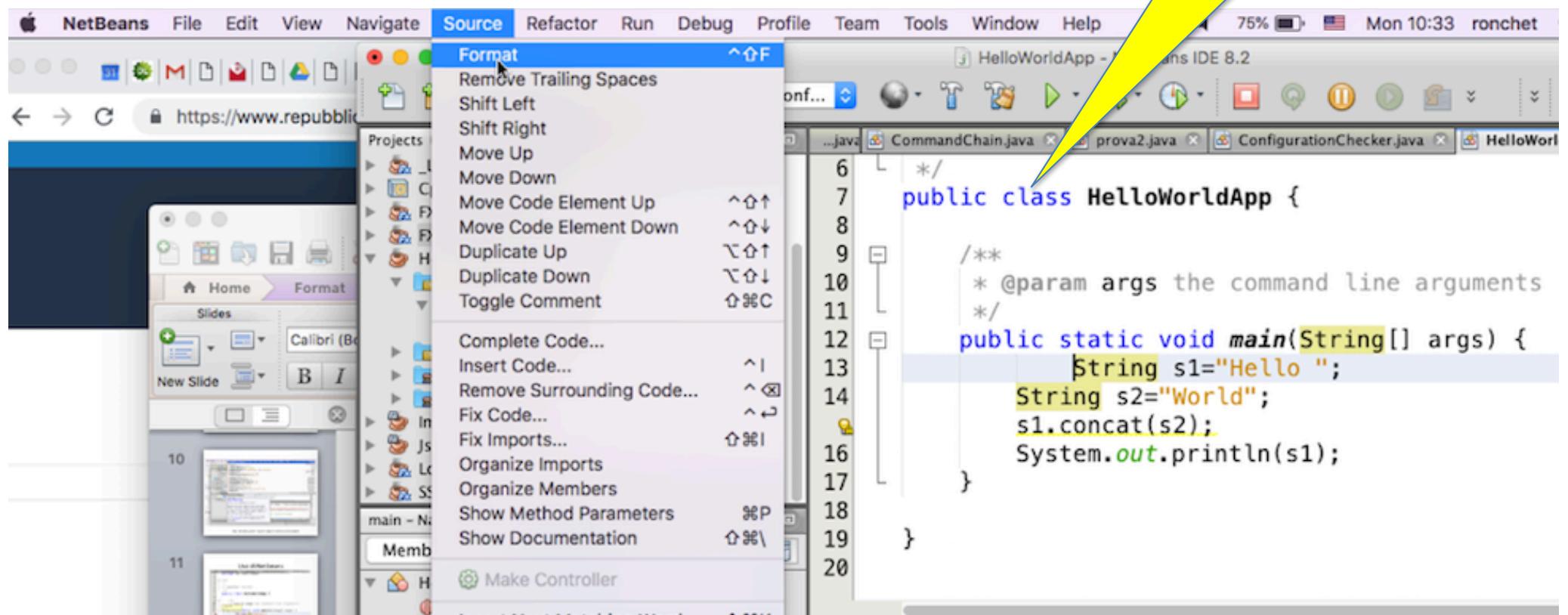
HelloWorld vers. 3

```
package it.unitn.prog2;
public class HelloWorldApp {
    public HelloWorldApp() {
        String s1="Hello ";
        String s2="World";
        s1=s1.concat(s2);
        System.out.println(s1);
    }
    public static void main(String[] args) {
        HelloWorldApp app = new HelloWorldApp();
    }
}
```

Business Logic

Uso di Netbeans

File Editor



RIFORMATTAZIONE AUTOMATICA

Uso di Netbeans

File Editor



REFACTOR: cambia nomi a classi/variabili

Dove sono i files?

Cercateli...

(suggerimento: guardate le proprietà del progetto)

I packages diventano directories!

Ci sono due files speciali:

Manifest

jar

Jar e manifesto

Il Jar può essere unzippato:

unzip -ap HelloWorldApp.jar

Contiene:

- META-INF
- META-INF/MANIFEST.MF
- it/unitn/prog2>HelloWorldApp.class

Il file “MANIFEST.MF” dichiara quale classe con il main eseguire:

Main-Class: it.unitn.prog2.HelloWorldApp

Esercizio

- Creare un progetto
- Scrivere un programma che conti da 1 a 10 e stampi i valori in console
- Eseguire il codice da dentro netbeans
- Eseguire il codice da terminale

Nota: output nella console di Netbeans quando facciamo il build del progetto

Building jar:

/Users/ronchet/Documents/ArchivioLavoro/Didattica/NetbeansProjectsDidattica/Demos/Zero/dist/Zero.jar

To run this application from the command line without Ant, try:

java -jar

"/Users/ronchet/Documents/ArchivioLavoro/Didattica/NetbeansProjectsDidattica/Demos/Zero/dist/Zero.jar"

Esercizio – soluzione proposta

```
package it.unitn.prog2;

public class CounterApp2 {
    public CounterApp2() {
        int i=1;
        //print statement
        System.out.println("Output is : ");
        //loop to print 1 to 10.
        while(i<=10)
        {
            System.out.println(i);
            i++;
        }
    }
    public static void main(String[] args) {
        CounterApp2 app = new CounterApp2();
    }
}
```