Клуб программистов Java

yuk746@gmail.com
Ксения

Структура занятий

- Теоретическая часть
    - Проверка ДЗ
    - Повторение
    - Изучение нового материала
- Кофе-брейк
- Практическая часть
- Домашнее задание

Нам пригодятся

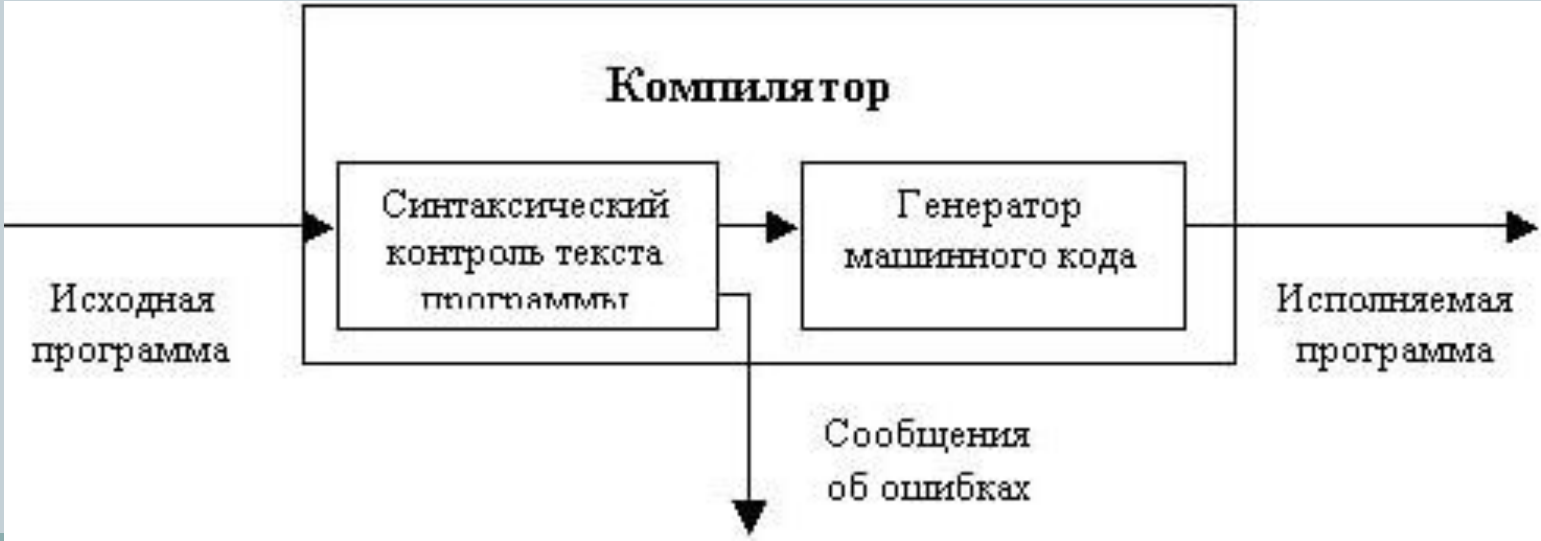
- Тетрадь
- Ручка
- Методичка
- Флешка (!!!)

История программирования

- Слово «компьютер» означает «вычислитель», т. е. устройство для вычислений
- Программа — инструкции и данные для компьютера

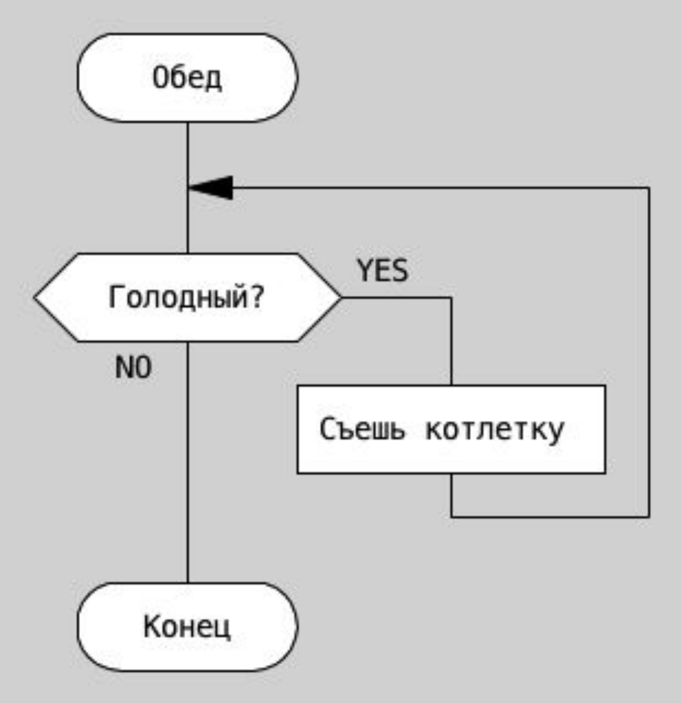
История программирования

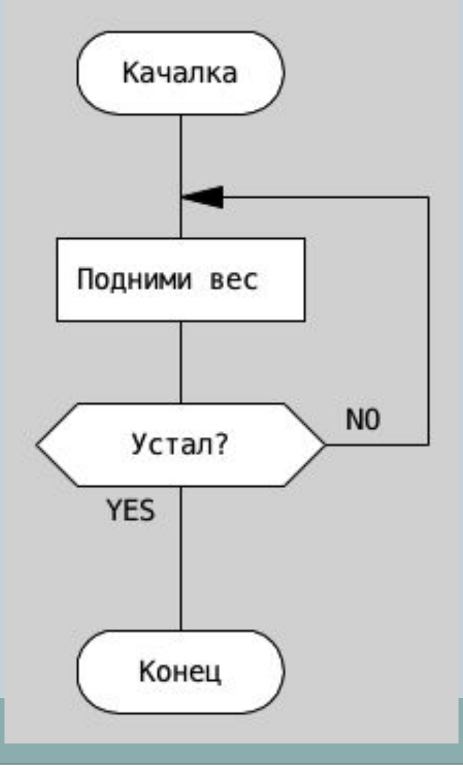
- Машинный язык — система команд (набор кодов операций) конкретной вычислительной машины, которая интерпретируется непосредственно процессором или микропрограммами этой вычислительной машины.


Компилятор
Синтаксический контроль текста программы
Генератор машинного кода
Исходная программа
Исполняемая программа
Сообщения об ошибках

Алгоритмы

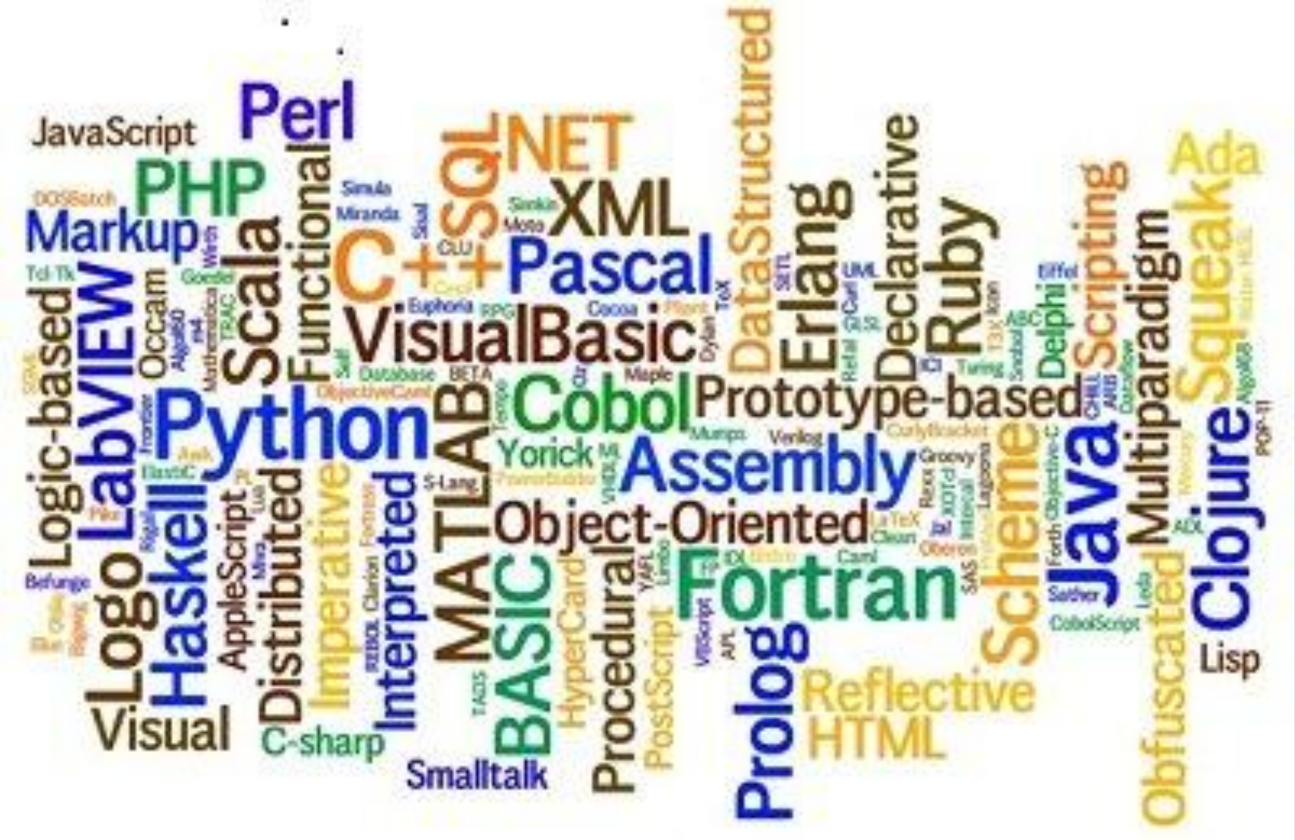
- Алгоритм — это точный набор инструкций, описывающих порядок действий некоторого исполнителя для достижения результата, решения некоторой задачи за конечное время


Обед
Голодный?
YES
NO
Съешь котлетку
Конец

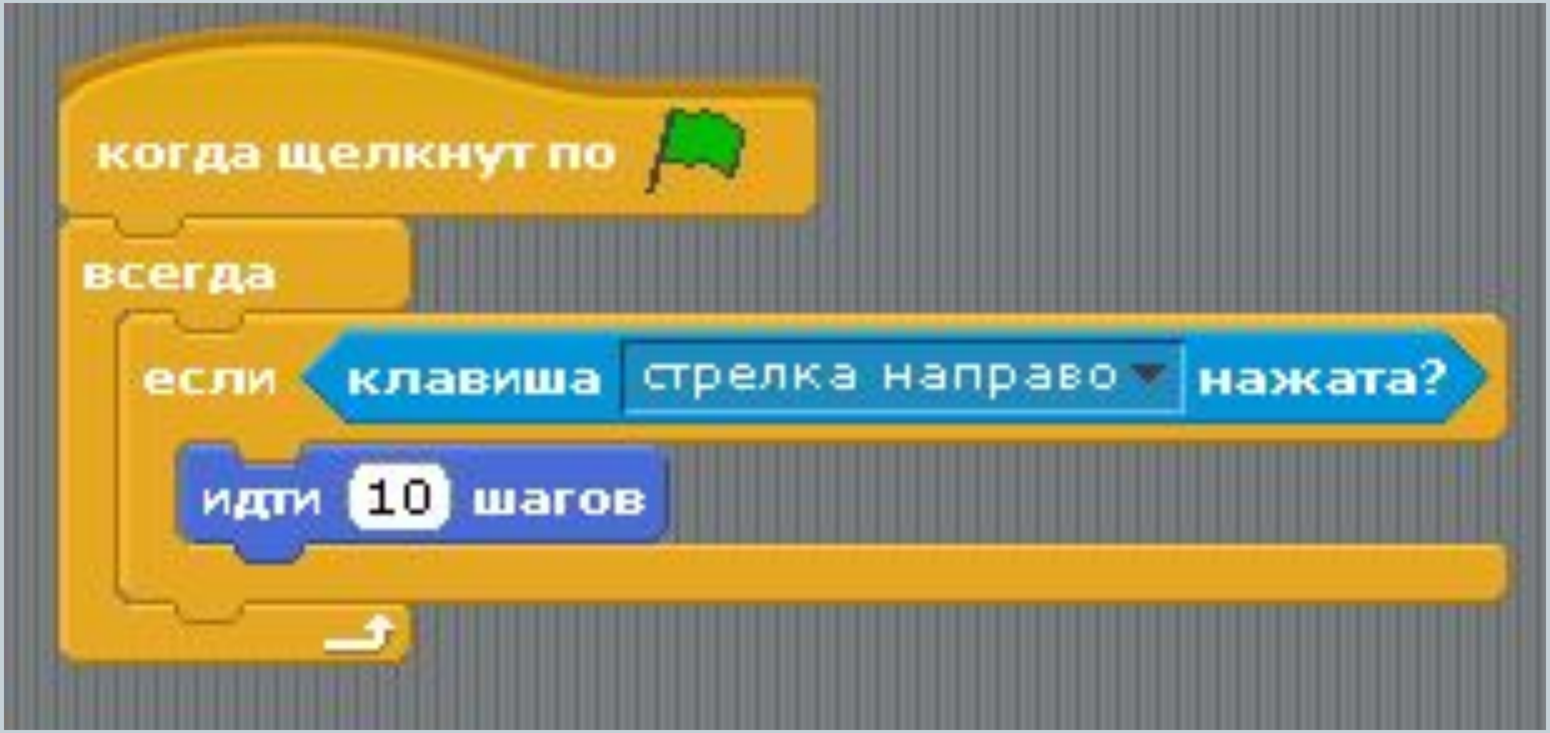

Качалка
Подними вес
Устал?
NO
YES
Конец

История программирования

- А какие языки программирования знаете Вы?


JavaScript
Perl
.NET
SQL
PHP
XML
Markup
C++
Pascal
DataStructured
Erlang
Declarative
Ruby
Ada
Scripting
Squeak
Multiparadigm
Delphi
Scala
Functional
VisualBasic
LabVIEW
Logic-based
Occam
Python
Cobol
Prototype-based
Assembly
Yorick
Object-Oriented
MATLAB
Haskell
Logo
Visual
AppleScript
Distributed
Imperative
Interpreted
BASIC
HyperCard
Procedural
PostScript
Fortran
Prolog
Reflective
HTML
Scheme
Java
Clojure
Lisp
Obfuscated
C-sharp
Smalltalk
Eiffel
Simula
Miranda
Euphoria
Cocoa
Groovy
Verilog
S-Lang
Befunge
Tcl-Tk
Sather
CobolScript

История программирования

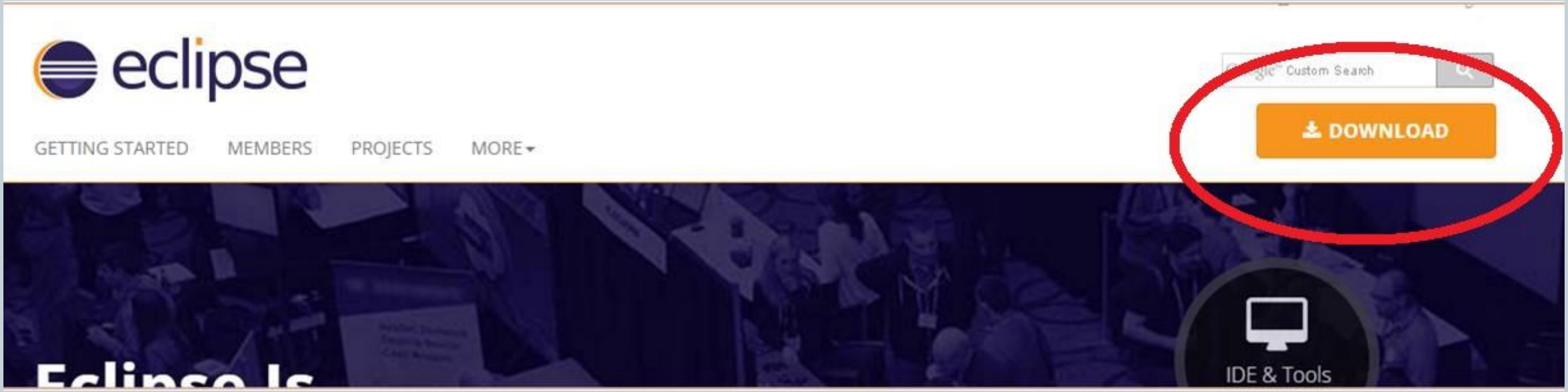


```
когда щелкнут по
всегда
  если клавиша стрелка направо нажата?
    идти 10 шагов
```

Нам пригодятся

- JDK — виртуальная машина для Java (www.oracle.com)
- Eclipse — пакет разработчика Java (www.eclipse.org)

Установка Eclipse


eclipse
GETTING STARTED
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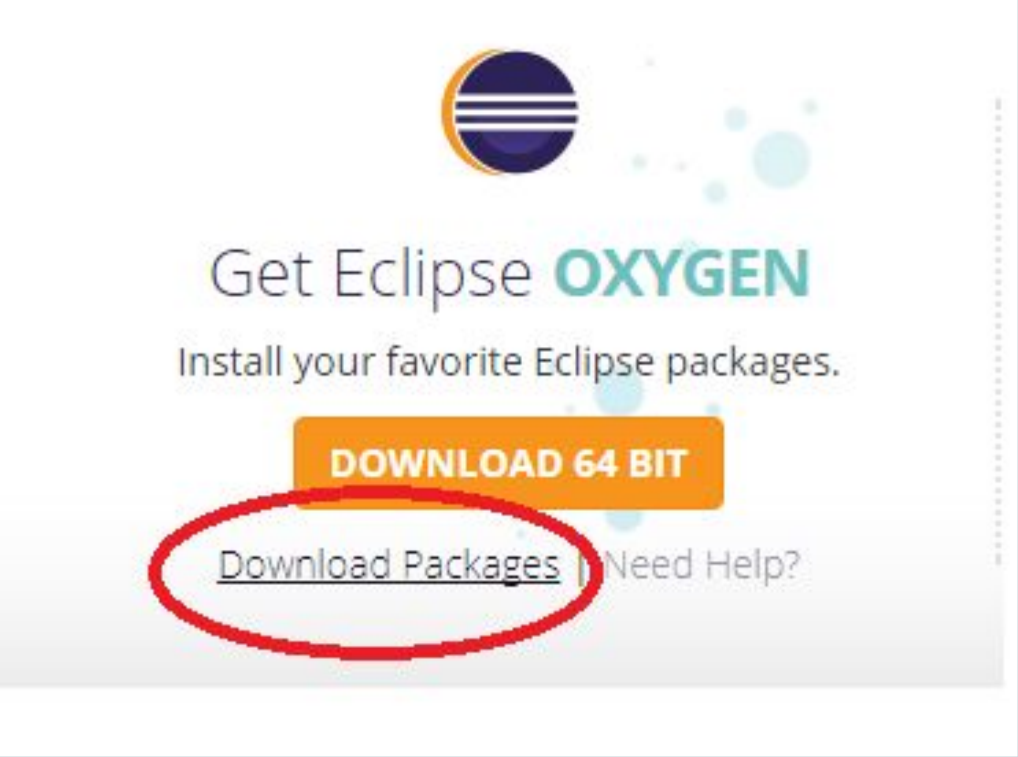
PROJECTS
MORE
Custom Search
DOWNLOAD
IDE & Tools

Установка Eclipse



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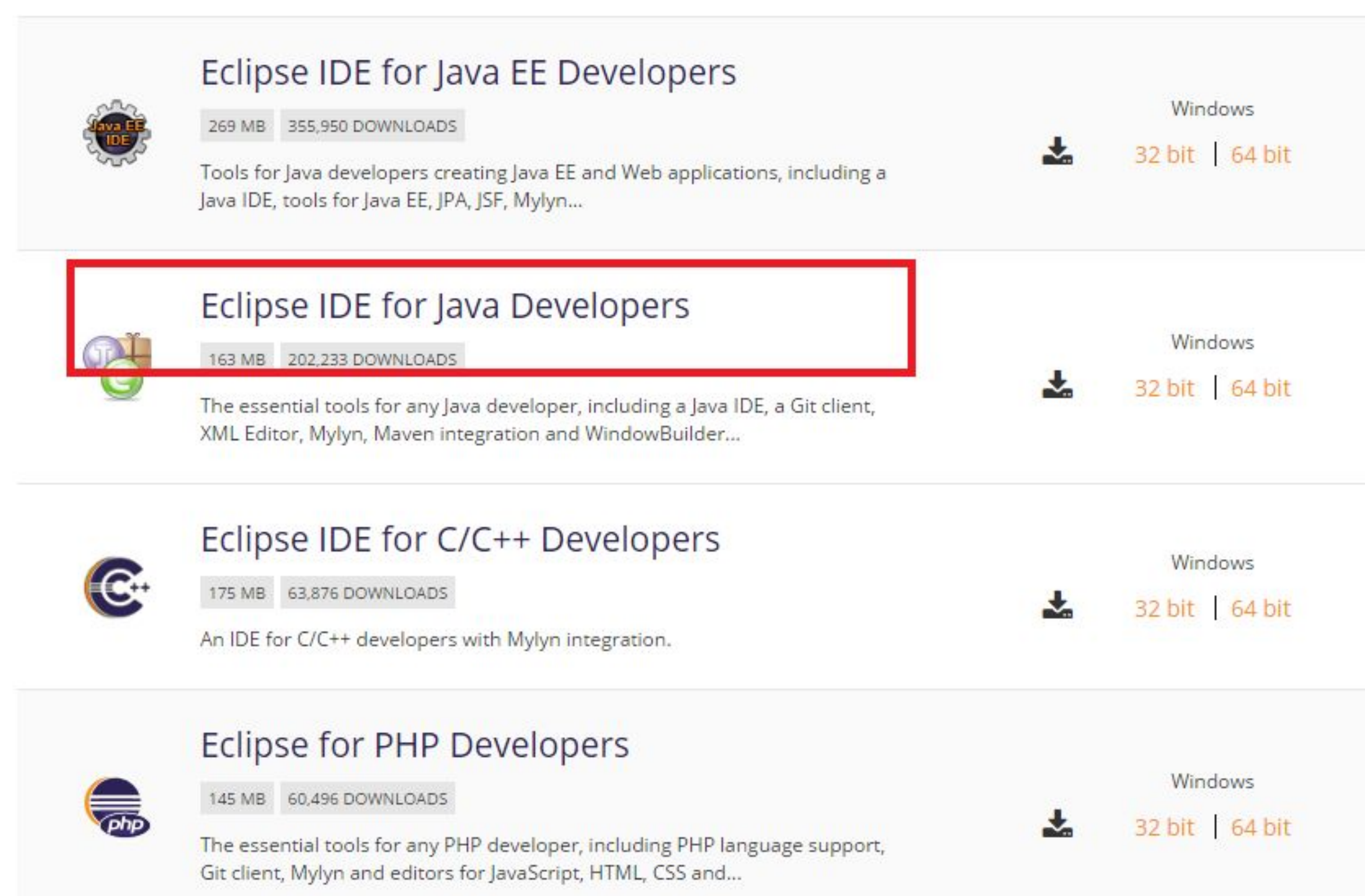
Установка Eclipse



Eclipse IDE for Java EE Developers

269 MB 355,950 DOWNLOADS

Tools for Java developers creating Java EE and Web applications, including a Java IDE, tools for Java EE, JPA, JSF, Mylyn...

Windows 32 bit | 64 bit

Eclipse IDE for Java Developers

163 MB 202,233 DOWNLOADS

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

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Eclipse IDE for C/C++ Developers

175 MB 63,876 DOWNLOADS

An IDE for C/C++ developers with Mylyn integration.

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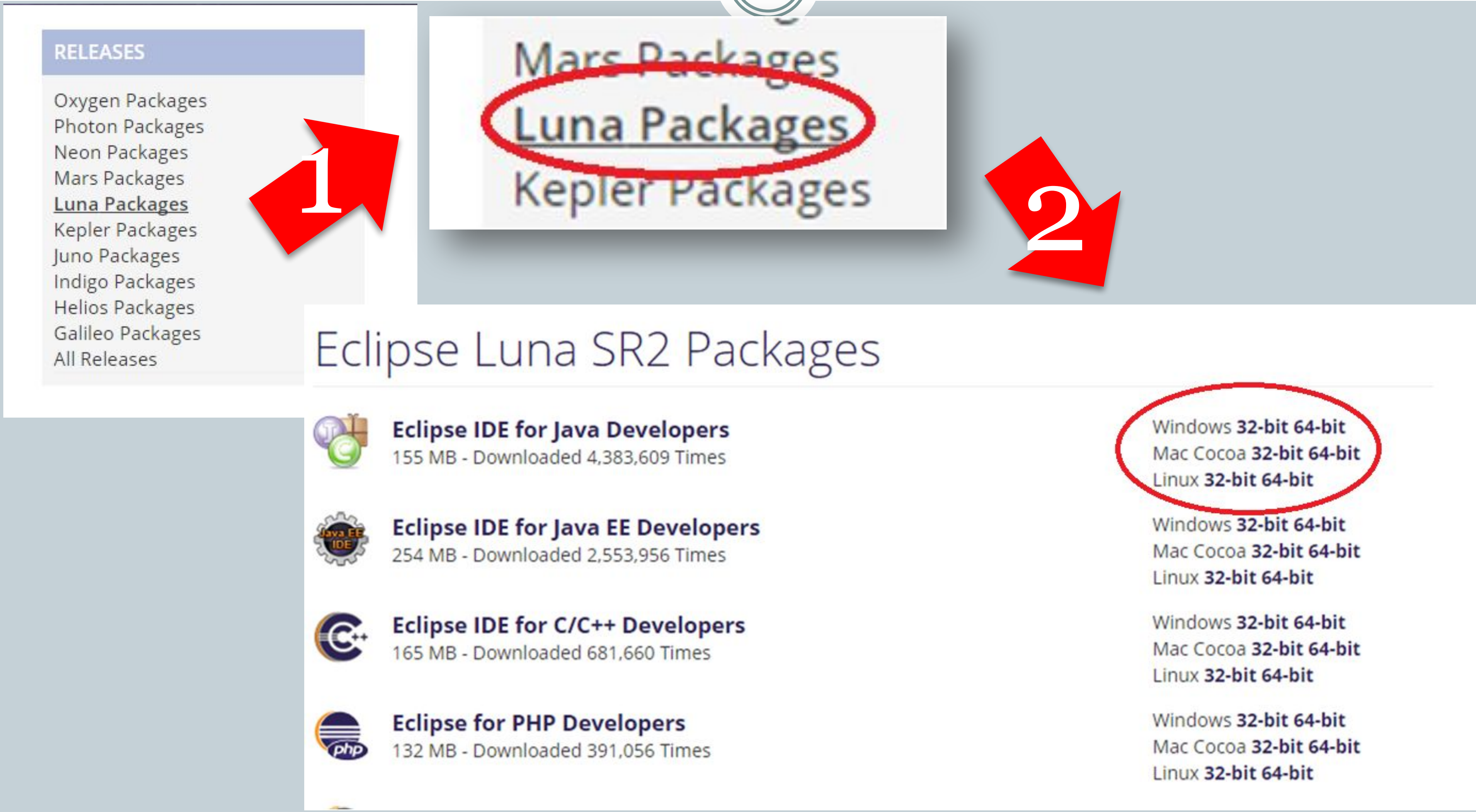
Eclipse for PHP Developers

145 MB 60,496 DOWNLOADS

The essential tools for any PHP developer, including PHP language support, Git client, Mylyn and editors for JavaScript, HTML, CSS and...

Windows 32 bit | 64 bit

Установка Eclipse



RELEASES

- Oxygen Packages
- Photon Packages
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Mars Packages
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Eclipse Luna SR2 Packages

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Linux **32-bit 64-bit**

Eclipse IDE for C/C++ Developers
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Linux **32-bit 64-bit**

Eclipse for PHP Developers
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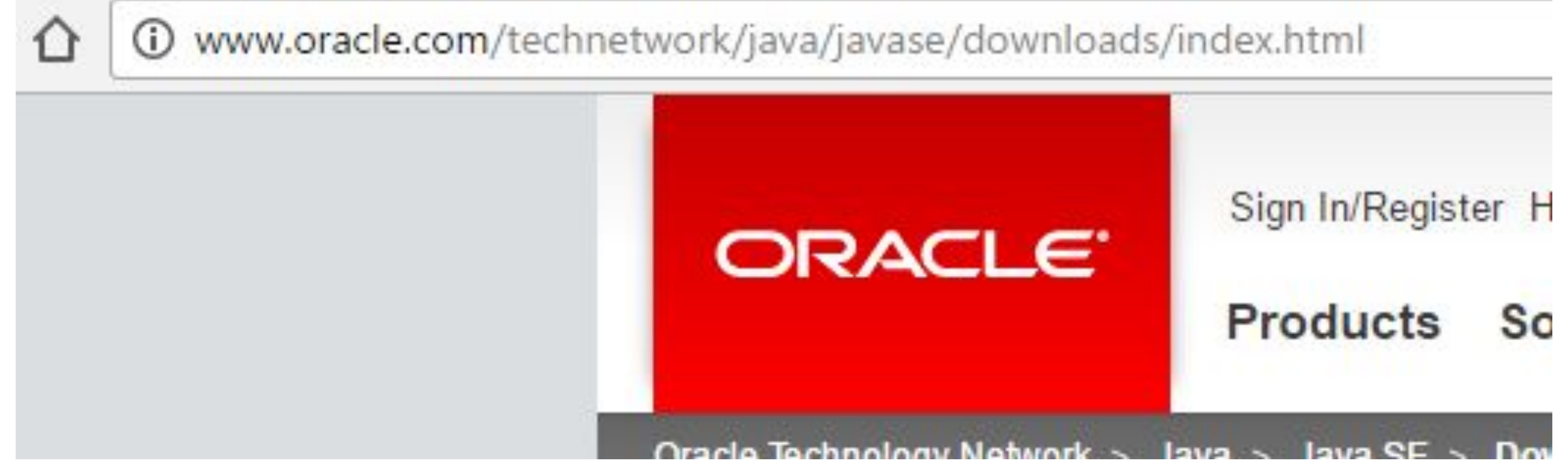
Linux **32-bit 64-bit**

Установка JDK



www.oracle.com/technetwork/java/javase/downloads/index.html

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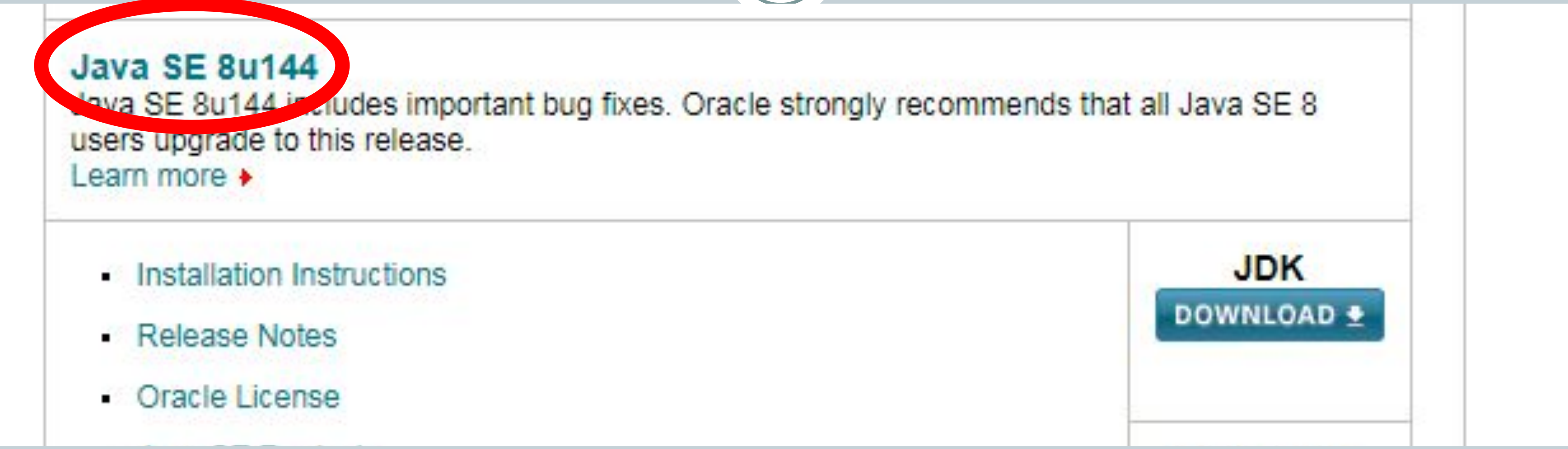
Установка JDK



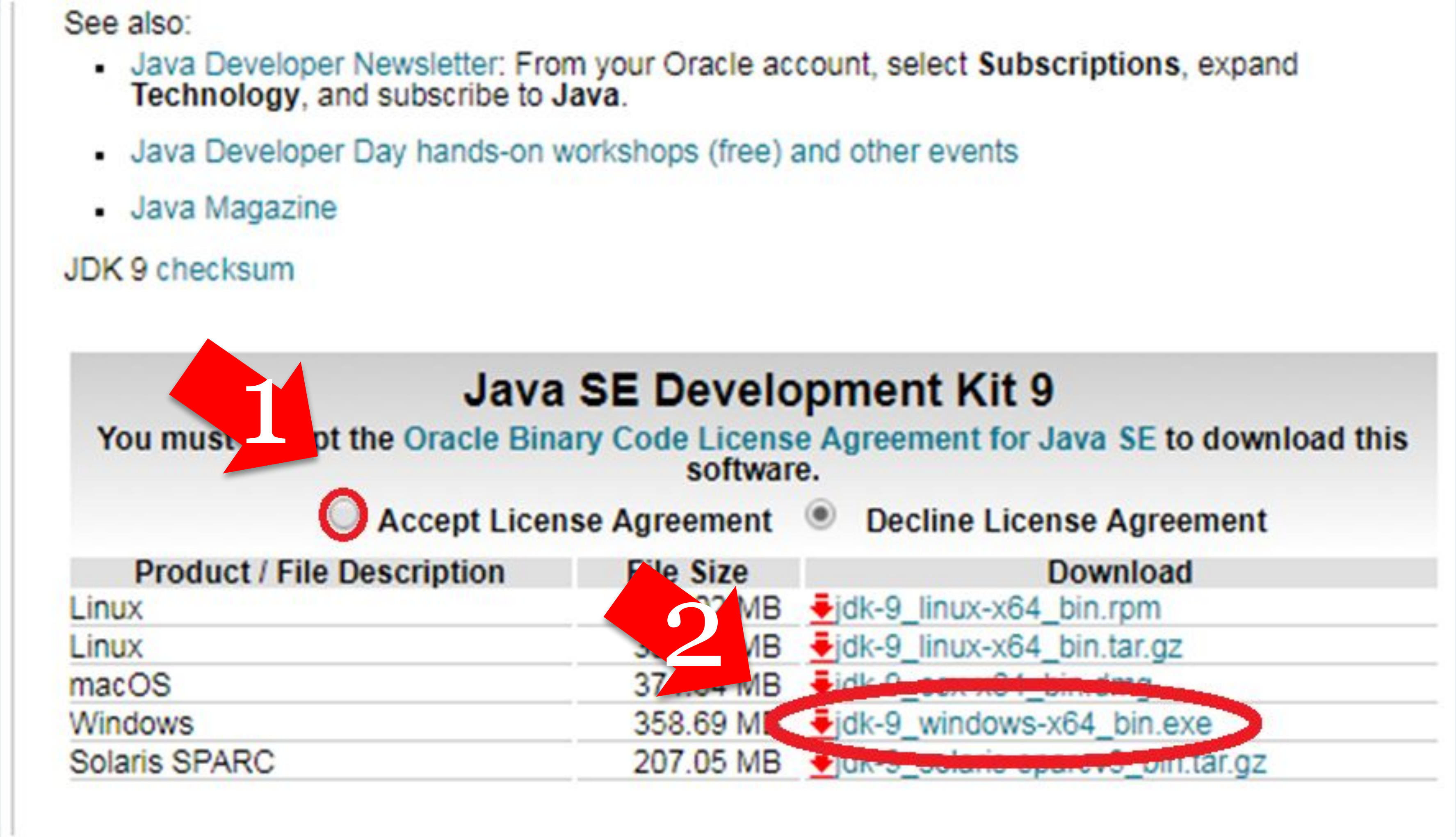
Java SE 8u144

Java SE 8u144 includes important bug fixes. Oracle strongly recommends that all Java SE 8 users upgrade to this release.

Learn more ➧

- Installation Instructions
- Release Notes
- Oracle License

Установка JDK



See also:

- Java Developer Newsletter: From your Oracle account, select **Subscriptions**, expand **Technology**, and subscribe to **Java**.
- Java Developer Day hands-on workshops (free) and other events
- Java Magazine

JDK 9 checksum

Java SE Development Kit 9

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Product / File Description	File Size	Download
Linux	[illegible] MB	jdk-9_linux-x64_bin.rpm
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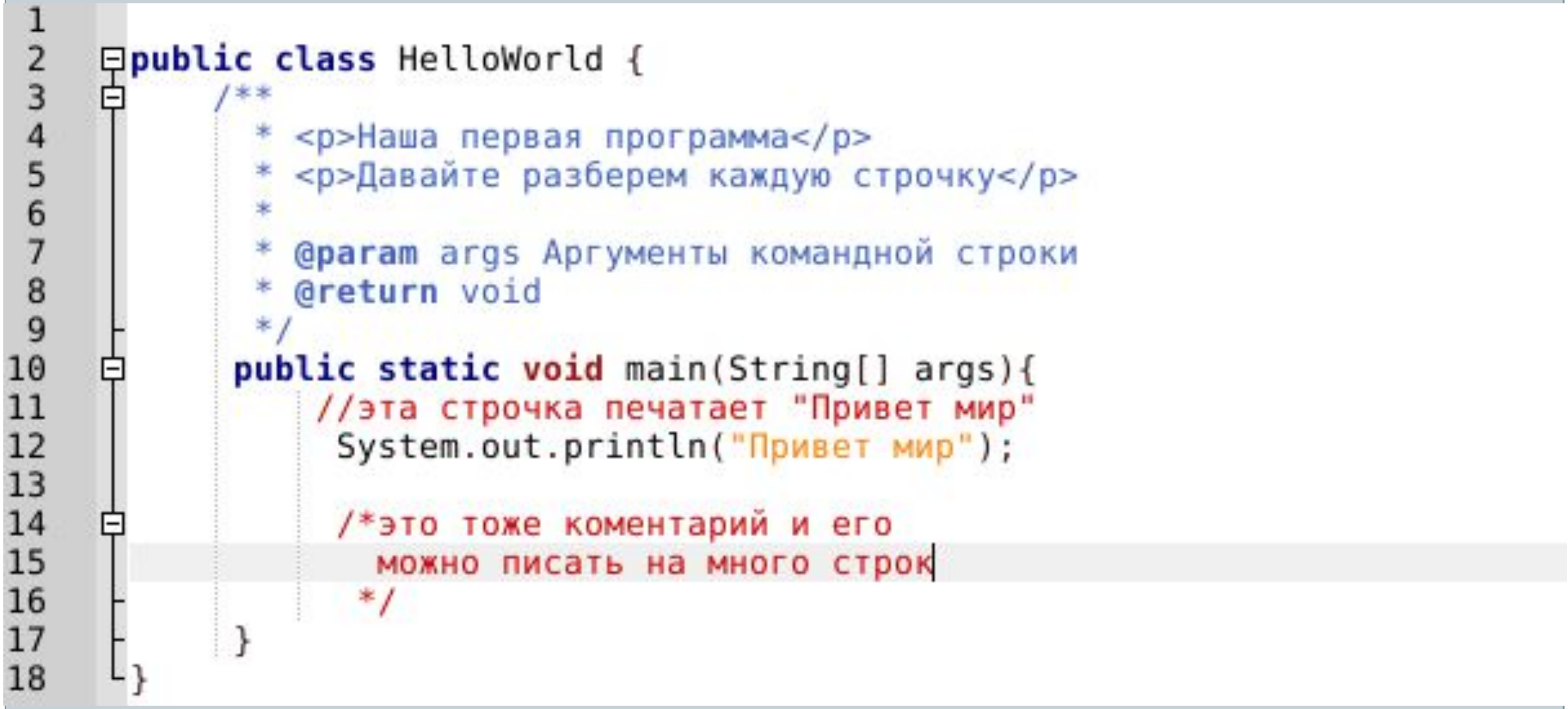
Windows	358.69 MB	jdk-9_windows-x64_bin.exe
Solaris SPARC	207.05 MB	jdk-9_solaris-sparcv9_bin.tar.gz

COFFEE
BREAK

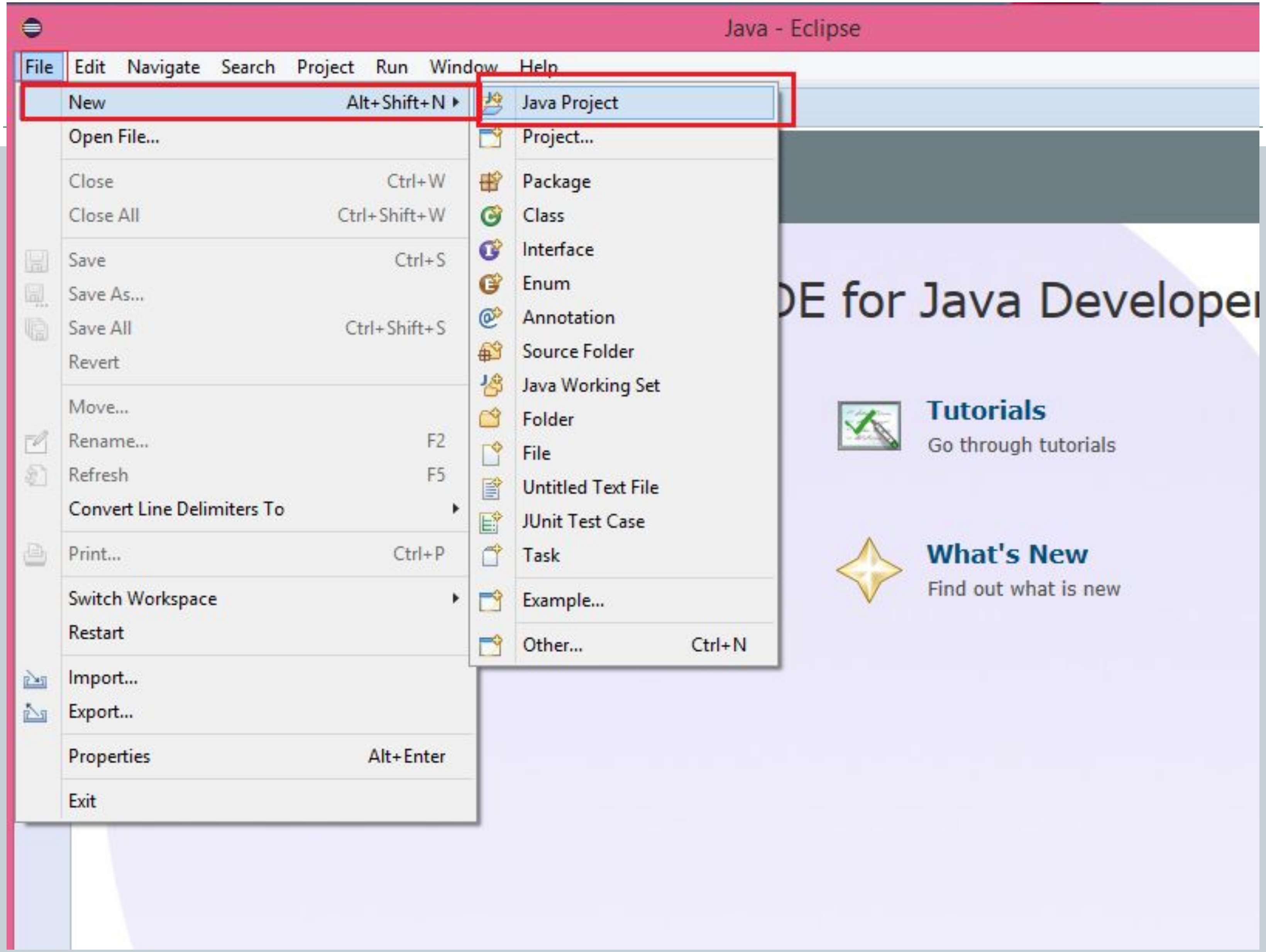
Договоренности

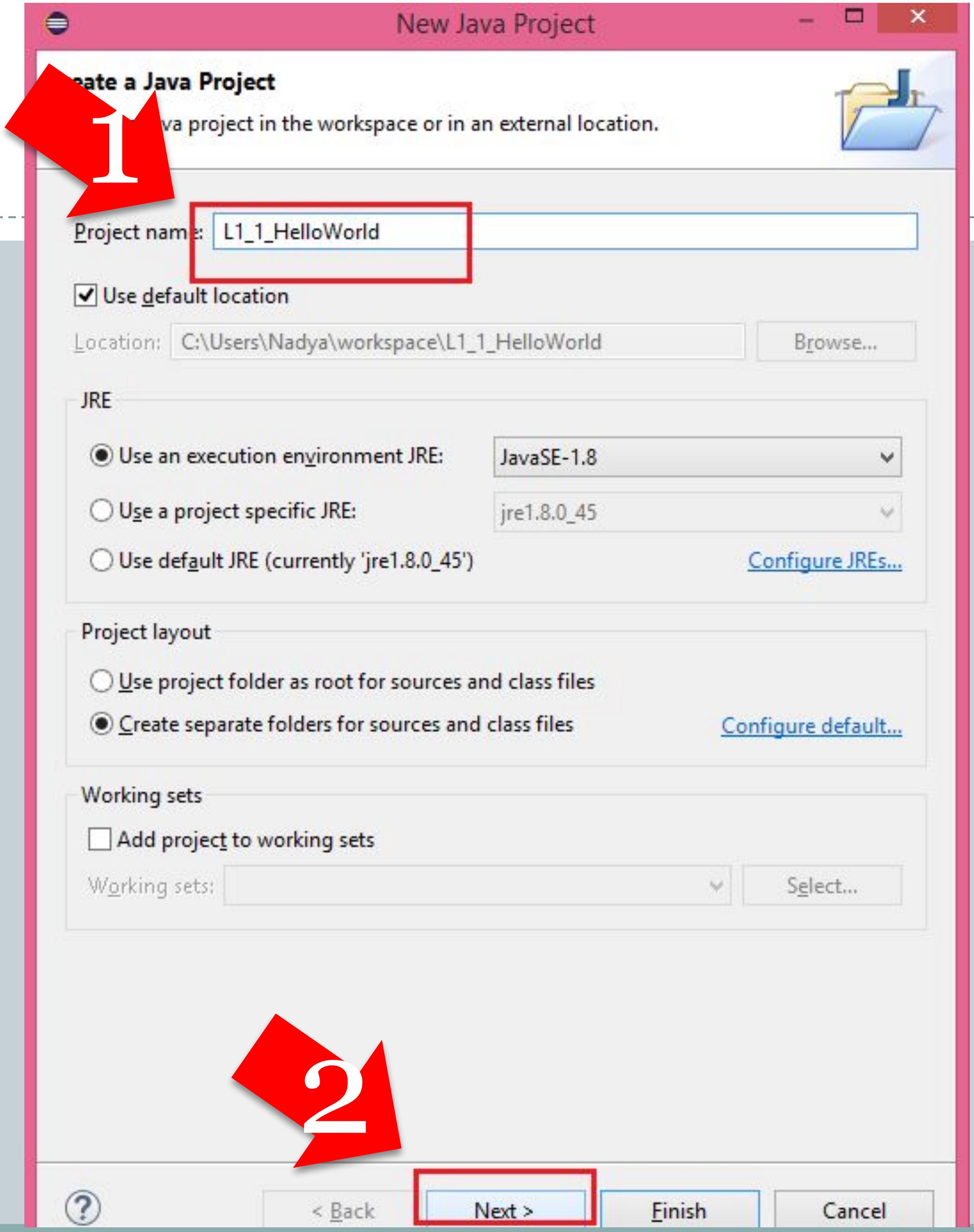
- Отступы
- Комментарии
- Одна строчка — одно действие
- Осмысленные имена проектов, классов и переменных

Виды комментариев



```

public class HelloWorld {
    /**
      * <p>Наша первая программа</p>
      * <p>Давайте разберем каждую строчку</p>
      *
      * @param args Аргументы командной строки
      * @return void
      */
     public static void main(String[] args){
         //эта строчка печатает "Привет мир"
          System.out.println("Привет мир");

          /*это тоже коментарий и его
            можно писать на много строк
           */
     }
}
```


Java - Eclipse
File
Edit
Navigate
Search
Project
Run
Window
Help
New Alt+Shift+N
Open File...
Close Ctrl+W
Close All Ctrl+Shift+W
Save Ctrl+S
Save As...
Save All Ctrl+Shift+S
Revert
Move...
Rename... F2
Refresh F5
Convert Line Delimiters To
Print... Ctrl+P
Switch Workspace
Restart
Import...
Export...
Properties Alt+Enter
Exit
Java Project
Project...
Package
Class
Interface
Enum
Annotation
Source Folder
Java Working Set
Folder
File
Untitled Text File
JUnit Test Case
Task
Example...
Other... Ctrl+N
DE for Java Develope
Tutorials
Go through tutorials
What's New
Find out what is new


1
2
Browse...
Configure JREs...
Configure default...
Select...
< Back
Next >
Finish
Cancel

New Java Project

eate a Java Project

va project in the workspace or in an external location.

Project nam: L1_1_HelloWorld

☑ Use default location

Location: C:\Users\Nadya\workspace\L1_1_HelloWorld

JRE

● Use an execution environment JRE: JavaSE-1.8

○ Use a project specific JRE: jre1.8.0_45

○ Use default JRE (currently 'jre1.8.0_45')

Project layout

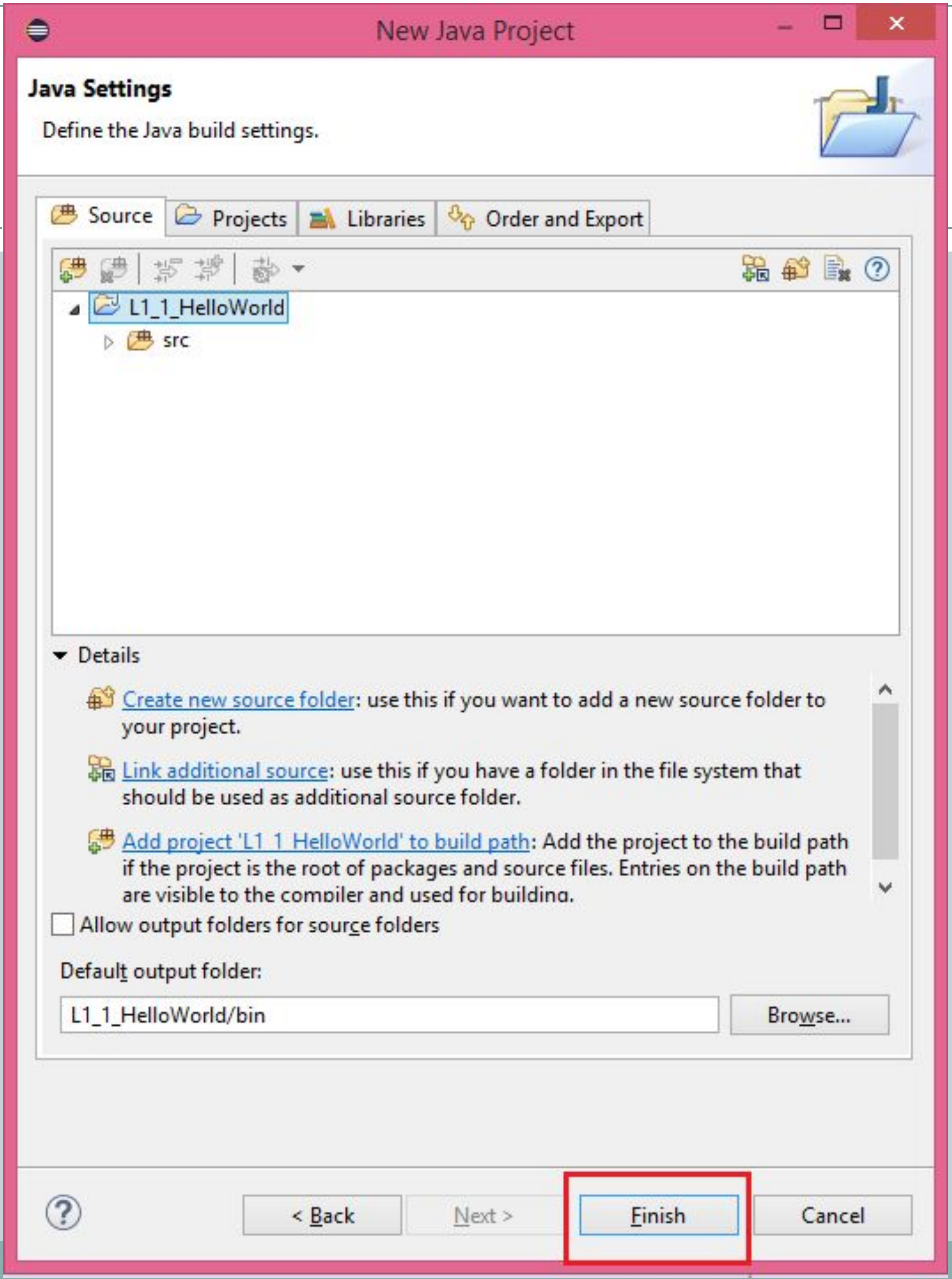
○ Use project folder as root for sources and class files

● Create separate folders for sources and class files

Working sets

☐ Add project to working sets

Working sets:


New Java Project
Source
Projects
Libraries
Order and Export
Details
Browse...
< Back
Next >
Finish
Cancel

Java Settings

Define the Java build settings.

L1_1_HelloWorld
src

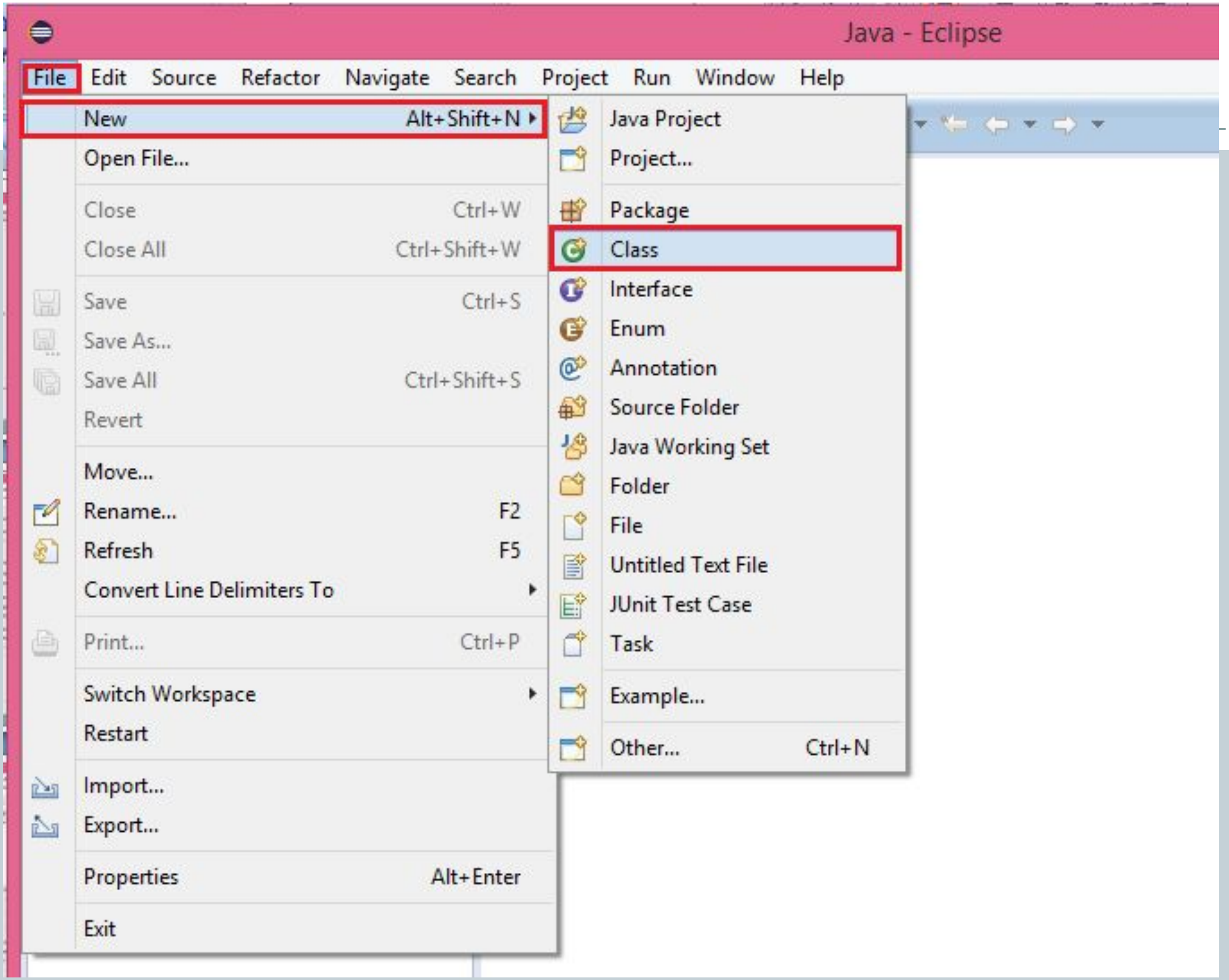
Create new source folder: use this if you want to add a new source folder to your project.

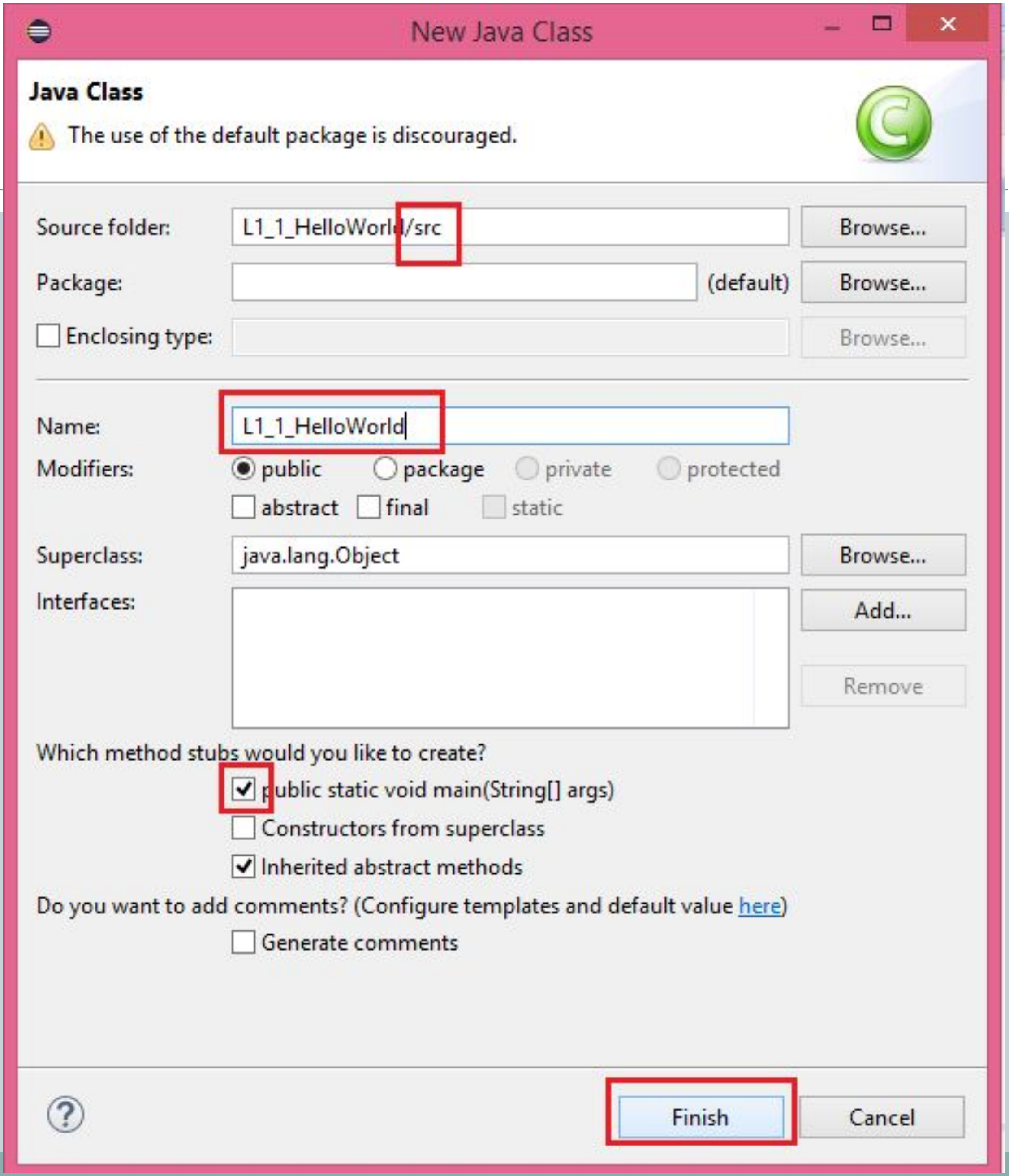
Link additional source: use this if you have a folder in the file system that should be used as additional source folder.

Add project 'L1_1_HelloWorld' to build path: Add the project to the build path if the project is the root of packages and source files. Entries on the build path are visible to the compiler and used for building.

☐ Allow output folders for source folders

Default output folder: L1_1_HelloWorld/bin


Java - Eclipse
File
Edit
Source
Refactor
Navigate
Search
Project
Run
Window
Help
New Alt+Shift+N
Open File...
Close Ctrl+W
Close All Ctrl+Shift+W
Save Ctrl+S
Save As...
Save All Ctrl+Shift+S
Revert
Move...
Rename... F2
Refresh F5
Convert Line Delimiters To
Print... Ctrl+P
Switch Workspace
Restart
Import...
Export...
Properties Alt+Enter
Exit
Java Project
Project...
Package
Class
Interface
Enum
Annotation
Source Folder
Java Working Set
Folder
File
Untitled Text File
JUnit Test Case
Task
Example...
Other... Ctrl+N



New Java Class

Java Class

The use of the default package is discouraged.

Source folder: L1_1_HelloWorld/src

Package: (default)

☐ Enclosing type:

Name: L1_1_HelloWorld

Modifiers: ● public ○ package ○ private ○ protected

☐ abstract ☐ final ☐ static

Superclass: java.lang.Object

Interfaces:

Which method stubs would you like to create?

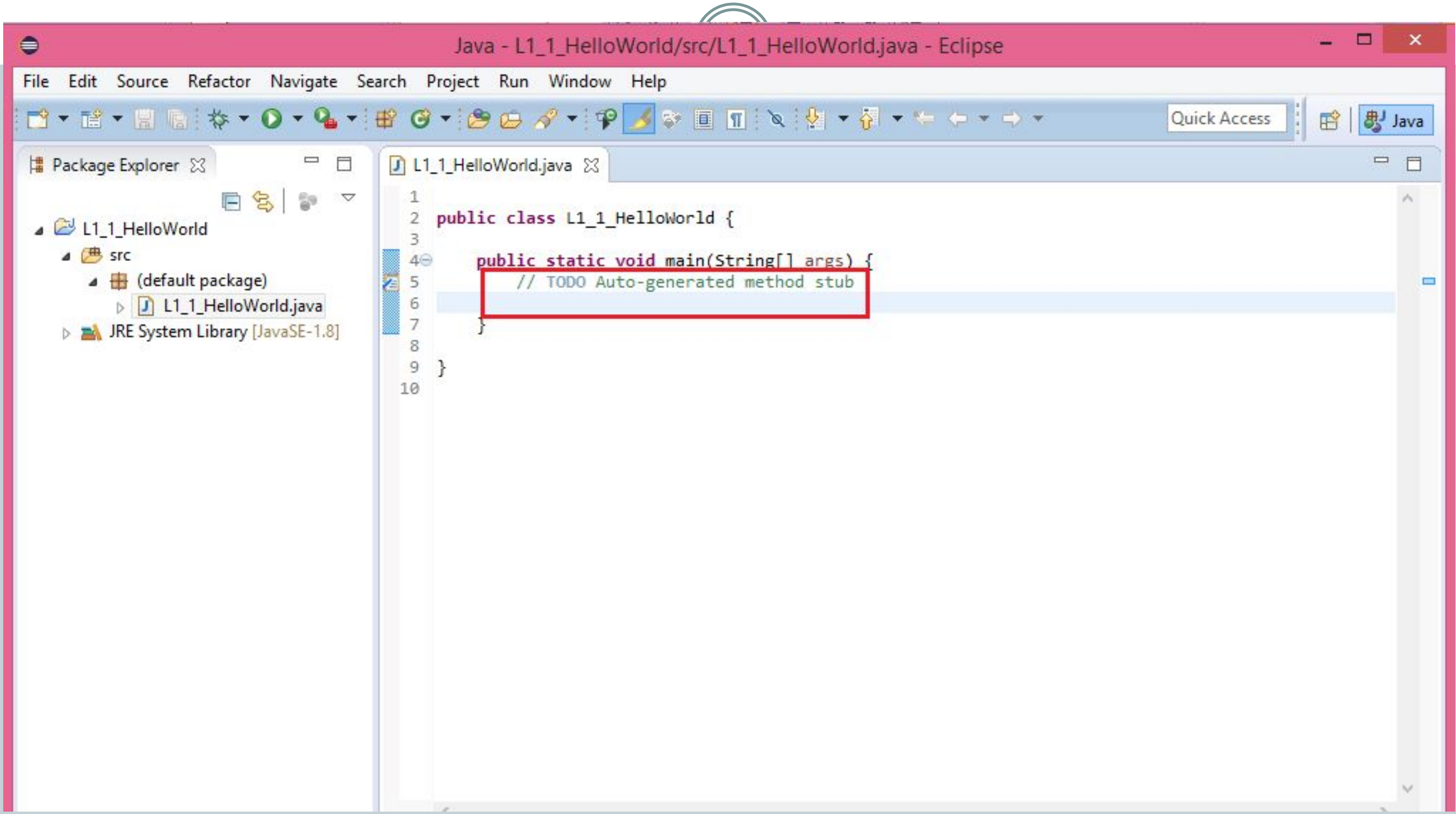
☑ public static void main(String[] args)

☐ Constructors from superclass

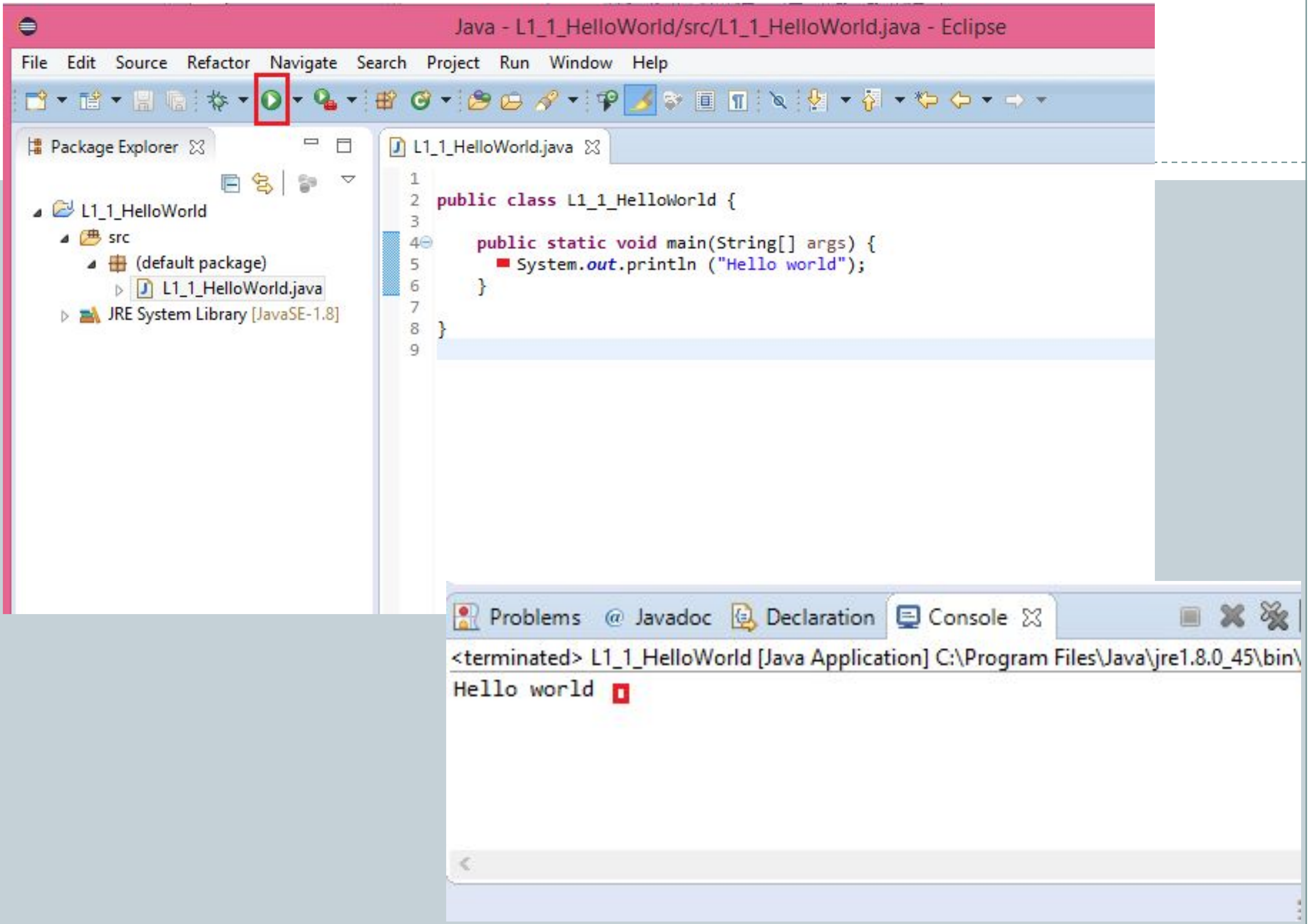
☑ Inherited abstract methods

Do you want to add comments? (Configure templates and default value here)

☐ Generate comments


Java - L1_1_HelloWorld/src/L1_1_HelloWorld.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Java
Package Explorer
L1_1_HelloWorld
src
(default package)
L1_1_HelloWorld.java
JRE System Library [JavaSE-1.8]
L1_1_HelloWorld.java

```

public class L1_1_HelloWorld {

    public static void main(String[] args) {
        // TODO Auto-generated method stub

    }

}

```

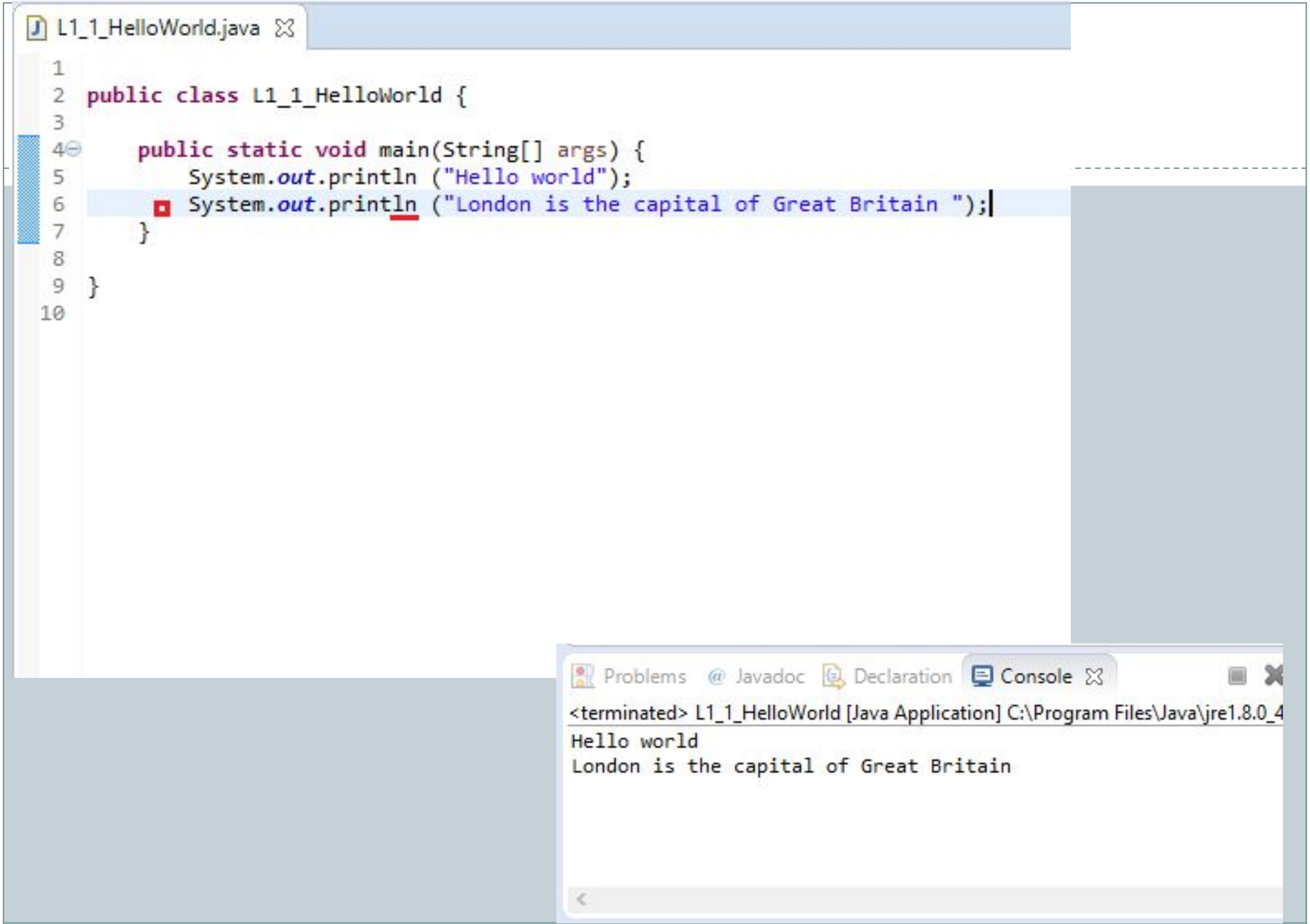

Java - L1_1_HelloWorld/src/L1_1_HelloWorld.java - Eclipse
File
Edit
Source
Refactor
Navigate
Search
Project
Run
Window
Help
Package Explorer
L1_1_HelloWorld
src
(default package)
L1_1_HelloWorld.java
JRE System Library [JavaSE-1.8]
L1_1_HelloWorld.java
Problems
@ Javadoc
Declaration
Console

```java

public class L1_1_HelloWorld {

    public static void main(String[] args) {
        System.out.println ("Hello world");
    }

}

```

```
<terminated> L1_1_HelloWorld [Java Application] C:\Program Files\Java\jre1.8.0_45\bin\
Hello world
```

Задание

- London is the capital of Great Britain


L1_1_HelloWorld.java
Problems
Javadoc
Declaration
Console

```java

public class L1_1_HelloWorld {

    public static void main(String[] args) {
        System.out.println ("Hello world");
        System.out.println ("London is the capital of Great Britain ");
    }

}

```

```
<terminated> L1_1_HelloWorld [Java Application] C:\Program Files\Java\jre1.8.0_4
Hello world
London is the capital of Great Britain
```

Задание

- London
- is
- the
- capital
- of
- Great
- Britain

Консольное окно

- import javax.swing.* - Использование команд для работы с окнами
- JFrame okno = new JFrame(); -Создание окна, которое будет вывдиться на экран
- okno.setTitle(“….”); - Строка задает текст в заголовке окна
- okno.setBounds(10,20,500,500); - расположение и размеры окна
- okno.setVisible(true); - Делает окно видимым, отображает

Домашнее задание

- Урок 1
- Установить JDK + Eclipse