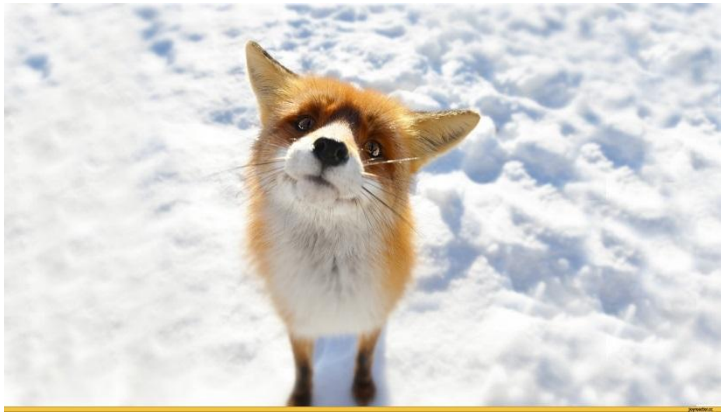
Java tools for beginners

Сергей Немчинский, FoxmindEd,
2019

Знакомимся

- ☐ Тренинг
- ☐ Группа
- ☐ Про меня



Расписание

- ❑19:00 – 20:15 тренинг
- ❑20:15 - 20:30 перерыв
- ❑20:30 – 22:00 тренинг

Организационное

- Доступ к видео
- Канал slack
- Задания
- Команда

О тренинге

- О чем курс
- Зачем курс
- Дальнейшие планы

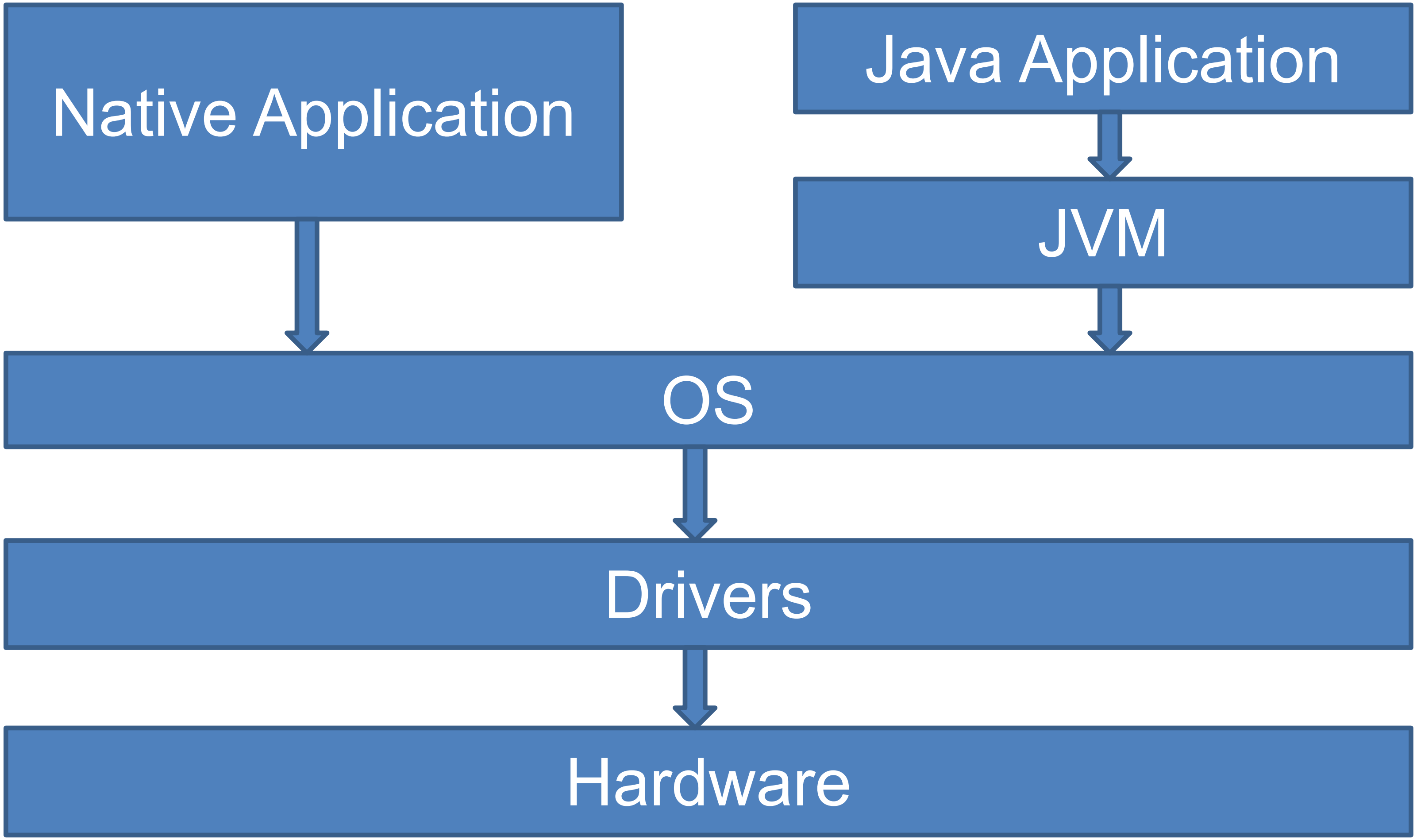
Итак,

Давайте знакомиться

Обзорное

Виртуальная машина, байткод

Что такое JVM


Native Application

Java Application

JVM

OS

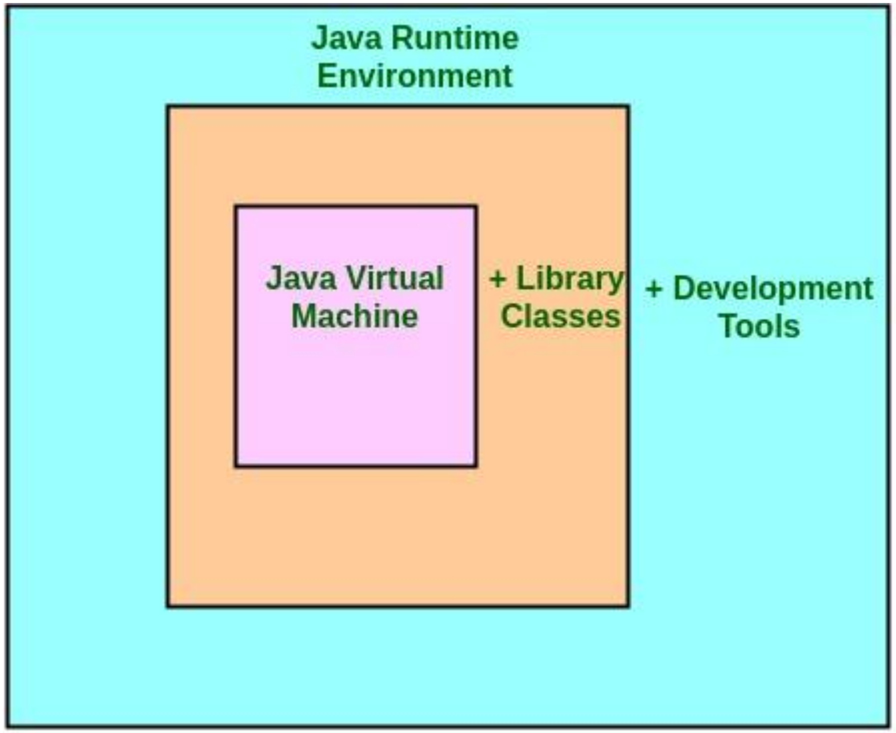
Drivers

Hardware

В чем же

Отличия JDK и JRE

JVM, JRE, JDK



Java Runtime Environment

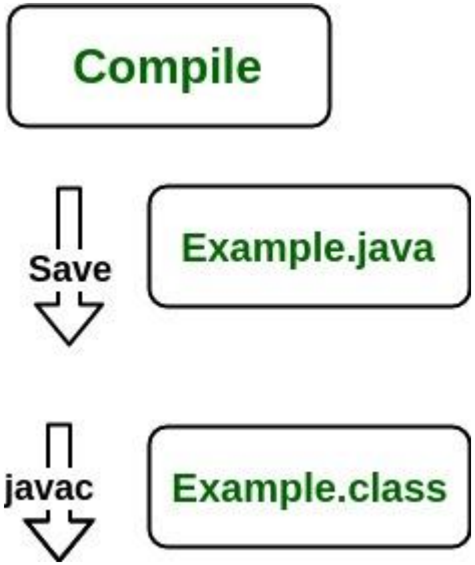
Java Virtual Machine

+ Library Classes

+ Development Tools

JDK = JRE + Development Tool
JRE = JVM + Library Classes

Compile



Compile

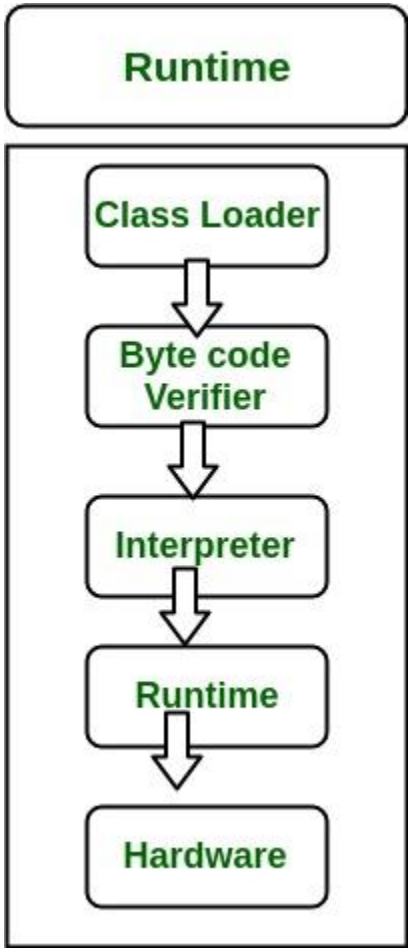
Save

Example.java

javac

Example.class

Runtime



Runtime

Class Loader

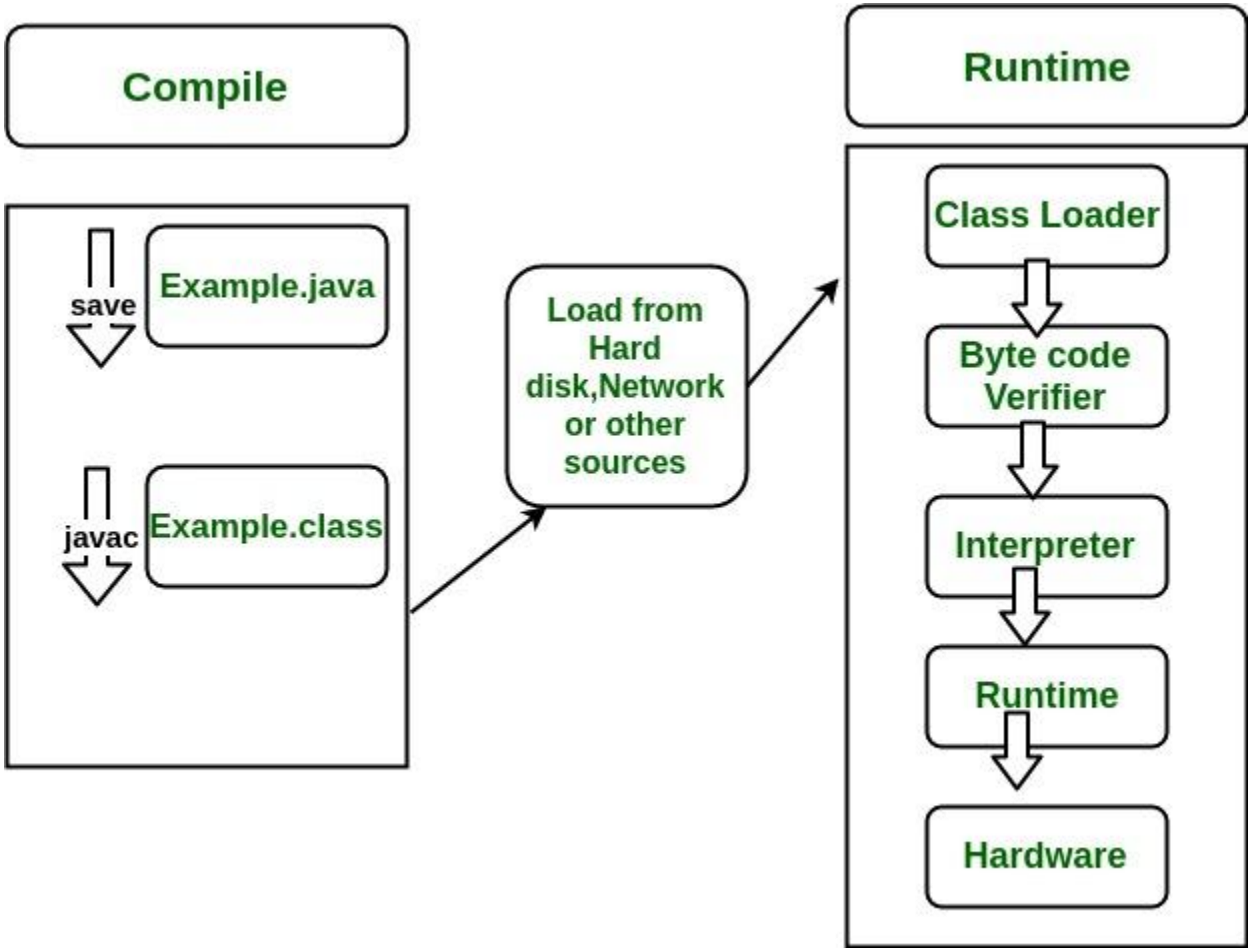
Byte code Verifier

Interpreter

Runtime

Hardware

Compile & Runtime



Compile

save

Example.java

javac

Example.class

Load from Hard disk,Network or other sources

Runtime

Class Loader

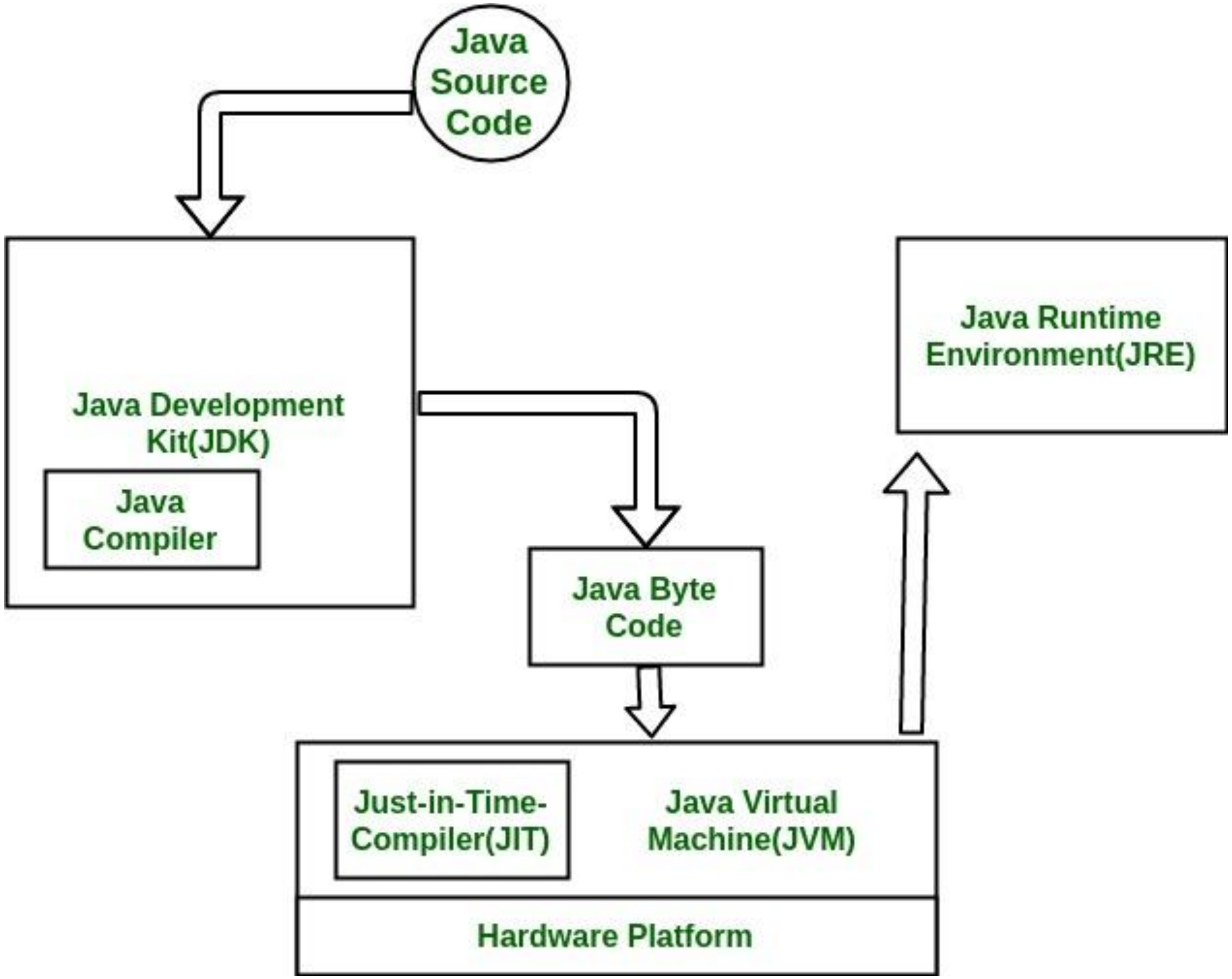
Byte code Verifier

Interpreter

Runtime

Hardware

JDK + JRE



Java Source Code

Java Development Kit(JDK)

Java Compiler

Java Byte Code

Java Runtime Environment(JRE)

Just-in-Time-Compiler(JIT)

Java Virtual Machine(JVM)

Hardware Platform

Какие бывают

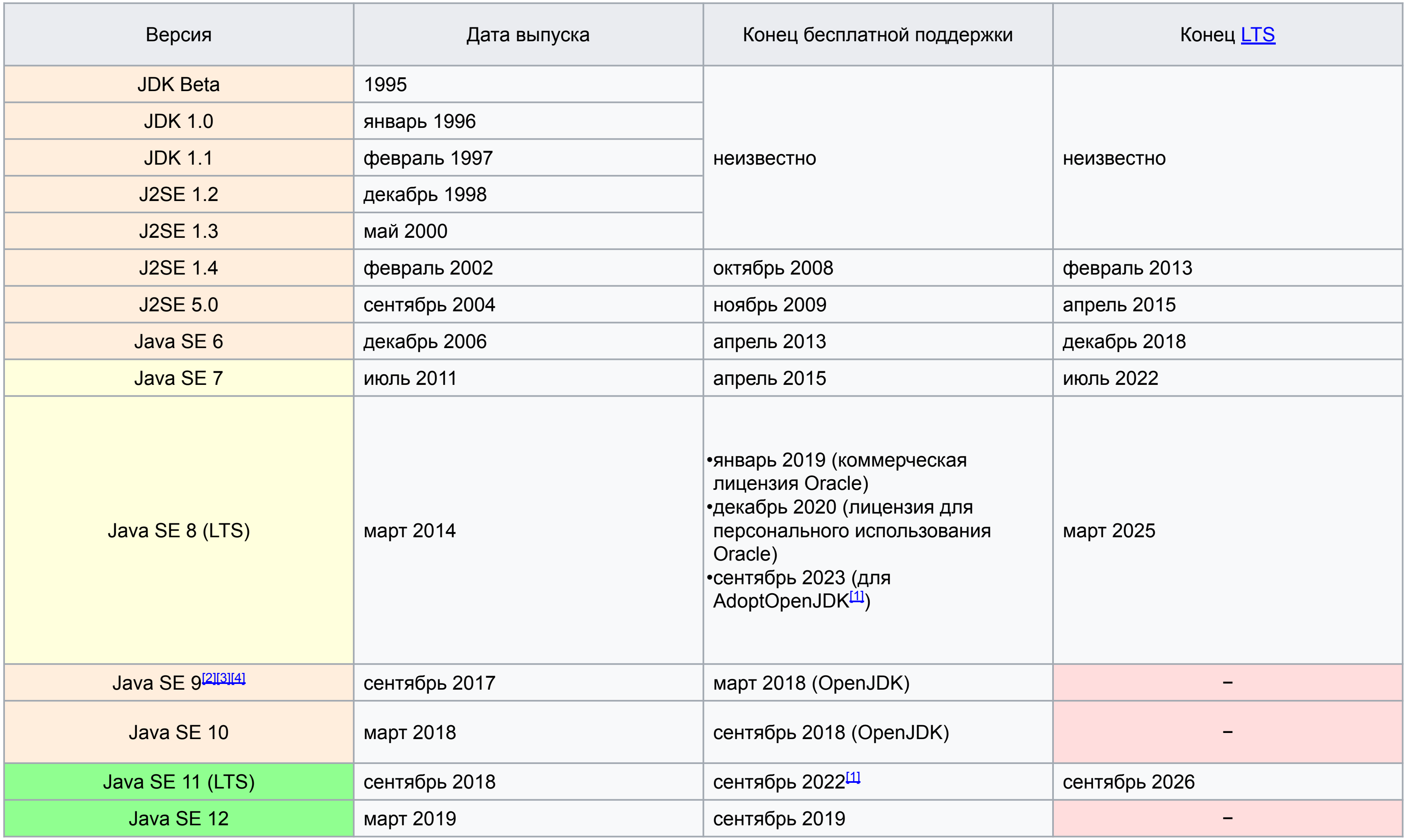
Версии Java

Варианты поставки Java

- Java 2

- J2ME (micro edition)
- J2SE (standard edition)
- J2EE (enterprise edition)

Java SE

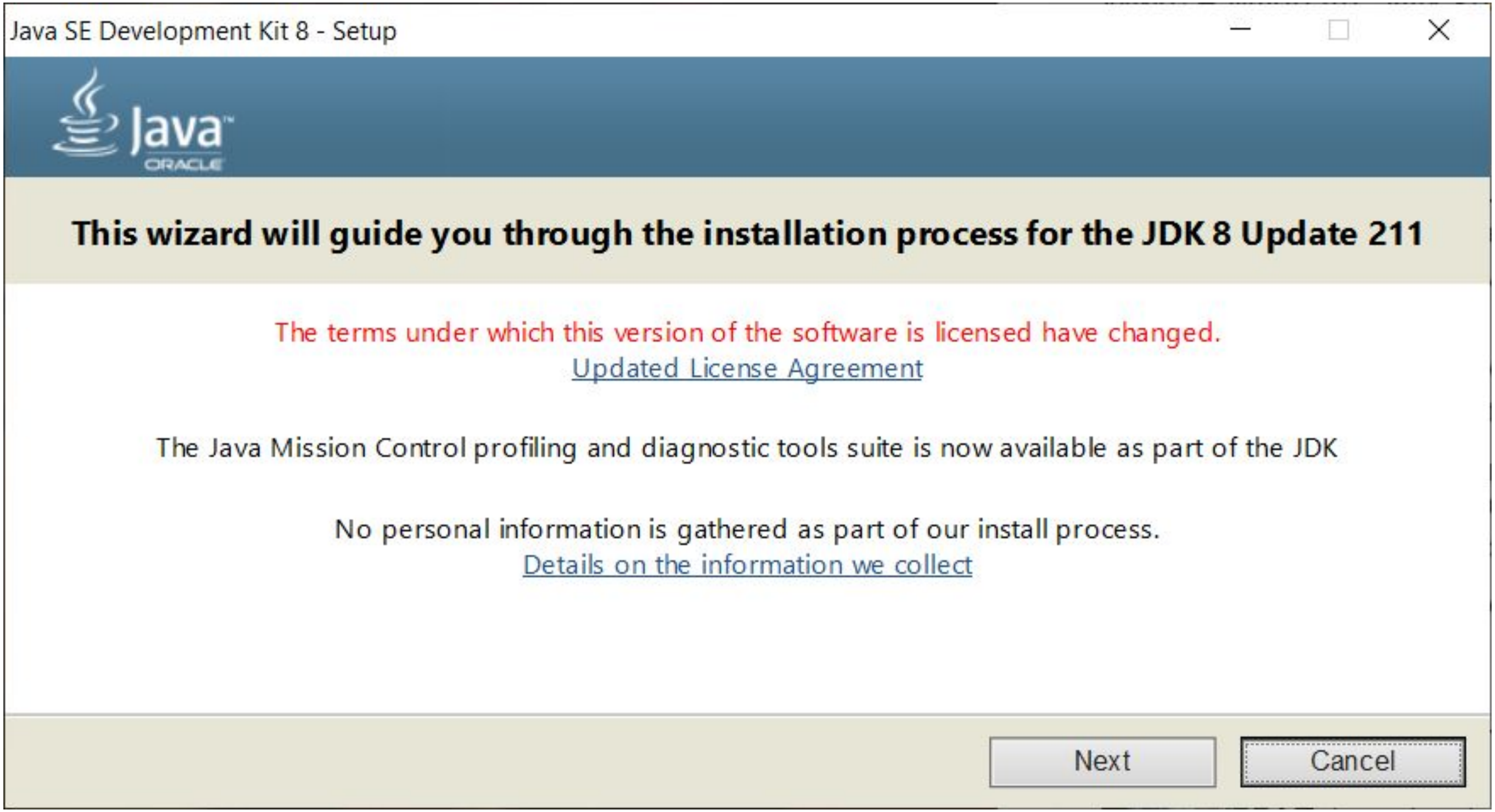


Версия	Дата выпуска	Конец бесплатной поддержки	Конец LTS
JDK Beta	1995	неизвестно	неизвестно
JDK 1.0	январь 1996		
JDK 1.1	февраль 1997		
J2SE 1.2	декабрь 1998		
J2SE 1.3	май 2000		
J2SE 1.4	февраль 2002	октябрь 2008	февраль 2013
J2SE 5.0	сентябрь 2004	ноябрь 2009	апрель 2015
Java SE 6	декабрь 2006	апрель 2013	декабрь 2018
Java SE 7	июль 2011	апрель 2015	июль 2022
Java SE 8 (LTS)	март 2014	•январь 2019 (коммерческая лицензия Oracle) •декабрь 2020 (лицензия для персонального использования Oracle) •сентябрь 2023 (для AdoptOpenJDK[1])	март 2025
Java SE 9[2][3][4]	сентябрь 2017	март 2018 (OpenJDK)	–
Java SE 10	март 2018	сентябрь 2018 (OpenJDK)	–
Java SE 11 (LTS)	сентябрь 2018	сентябрь 2022[1]	сентябрь 2026
Java SE 12	март 2019	сентябрь 2019	–

Практика

1. Установить JDK 8
2. В каталог c:\Java\jdk8

Практика


Java SE Development Kit 8 - Setup
Java
ORACLE

This wizard will guide you through the installation process for the JDK 8 Update 211

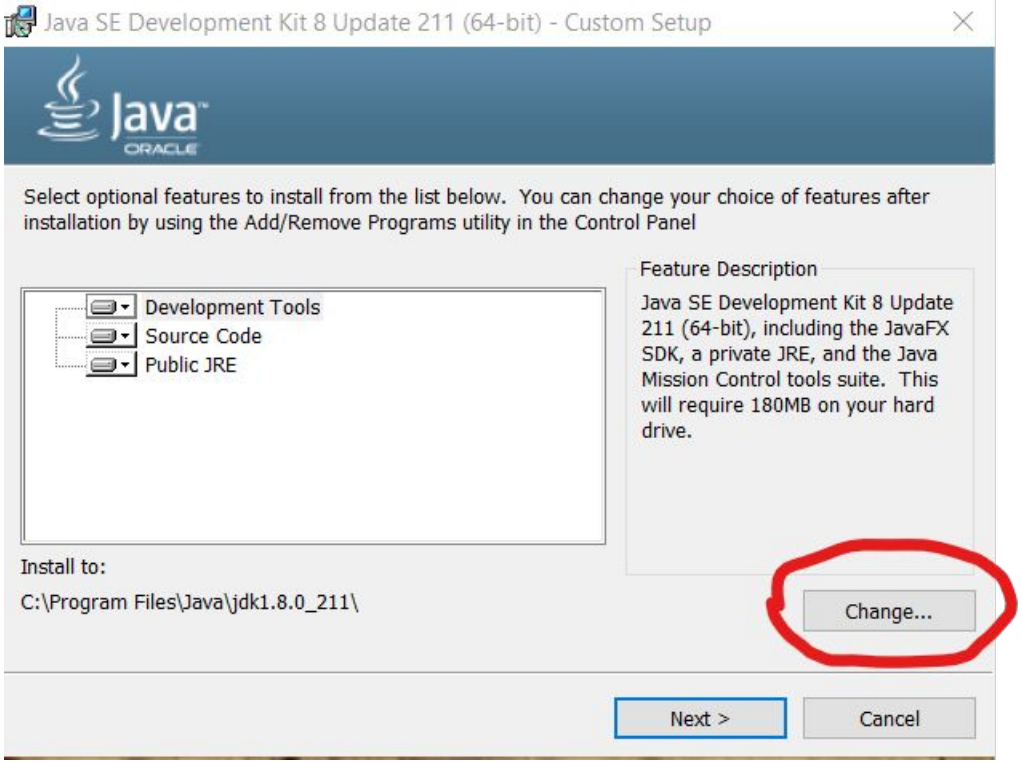
The terms under which this version of the software is licensed have changed.
Updated License Agreement

The Java Mission Control profiling and diagnostic tools suite is now available as part of the JDK

No personal information is gathered as part of our install process.
Details on the information we collect

Next
Cancel

Практика



Java SE Development Kit 8 Update 211 (64-bit) - Custom Setup

Select optional features to install from the list below. You can change your choice of features after installation by using the Add/Remove Programs utility in the Control Panel

Feature Description

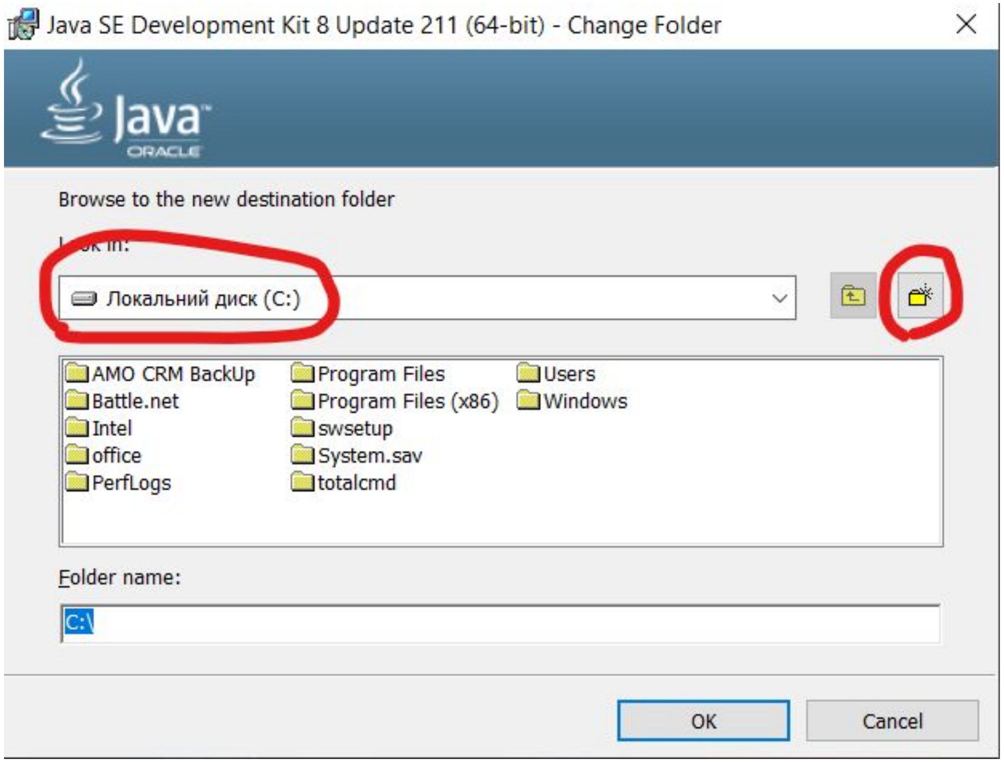
Java SE Development Kit 8 Update 211 (64-bit), including the JavaFX SDK, a private JRE, and the Java Mission Control tools suite. This will require 180MB on your hard drive.

Install to:

C:\Program Files\Java\jdk1.8.0_211\

Java
ORACLE
Development Tools
Source Code
Public JRE
Change...
Next >
Cancel

Практика



Java SE Development Kit 8 Update 211 (64-bit) - Change Folder

Browse to the new destination folder

Look in:

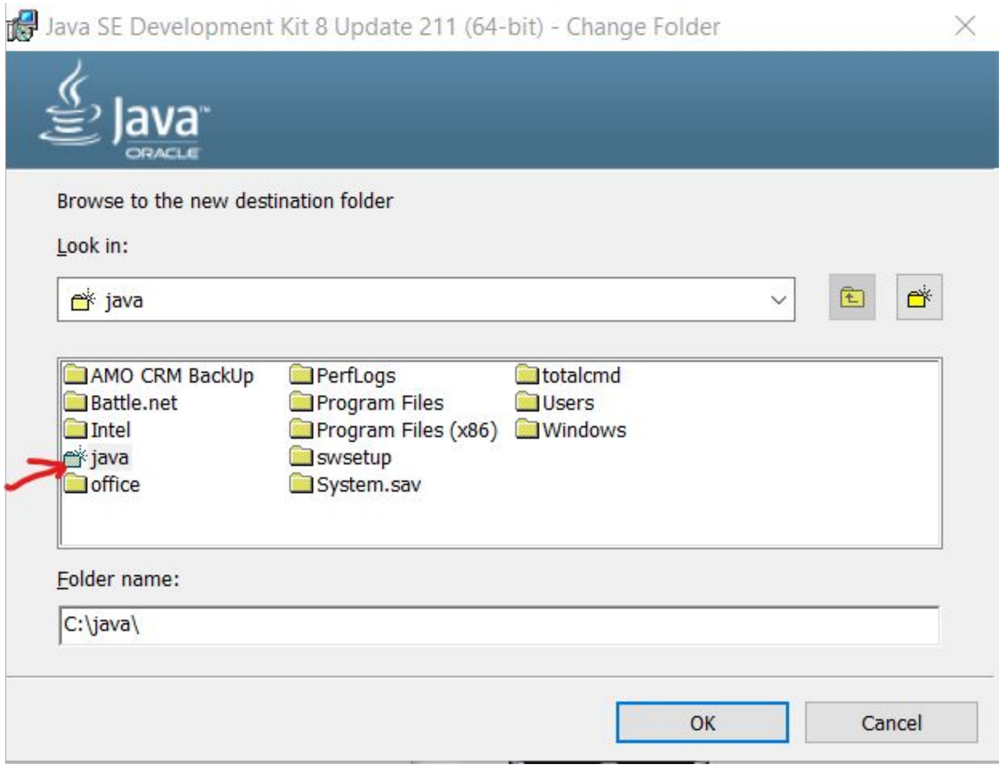
Локальний диск (C:)

AMO CRM BackUp
Battle.net
Intel
office
PerfLogs
Program Files
Program Files (x86)
swsetup
System.sav
totalcmd
Users
Windows

Folder name:

C:\

Практика



Java SE Development Kit 8 Update 211 (64-bit) - Change Folder

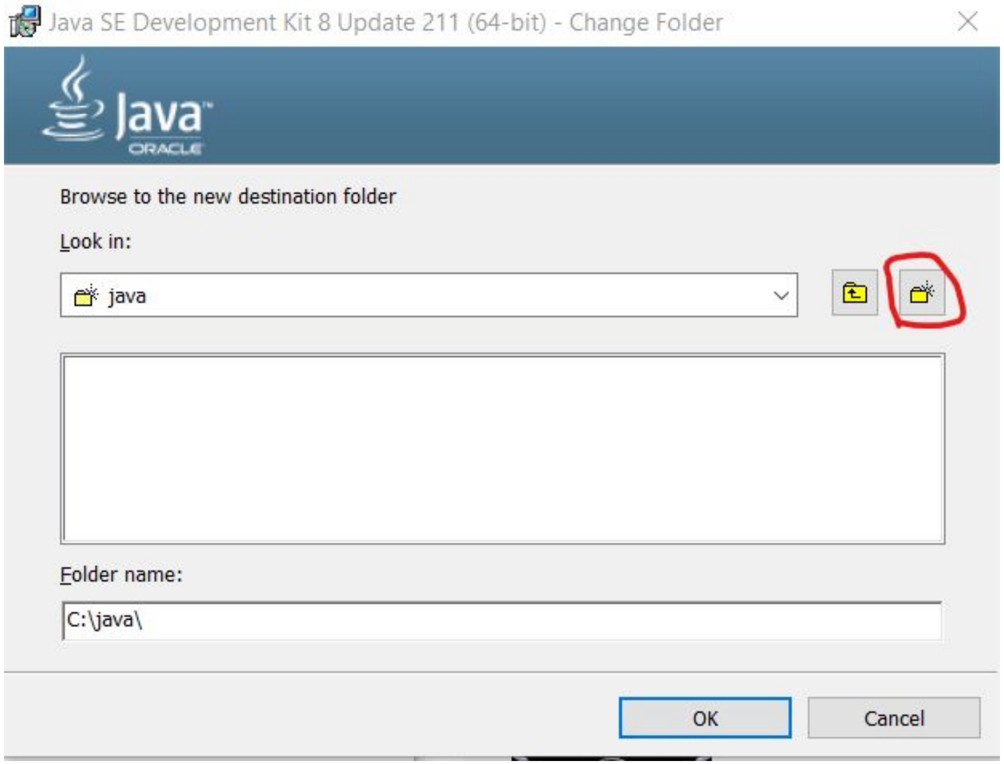
Browse to the new destination folder

Look in: java

Folder name: C:\java\

Java
ORACLE
AMO CRM BackUp
Battle.net
Intel
java
office
PerfLogs
Program Files
Program Files (x86)
swsetup
System.sav
totalcmd
Users
Windows
OK
Cancel

Практика



Java SE Development Kit 8 Update 211 (64-bit) - Change Folder

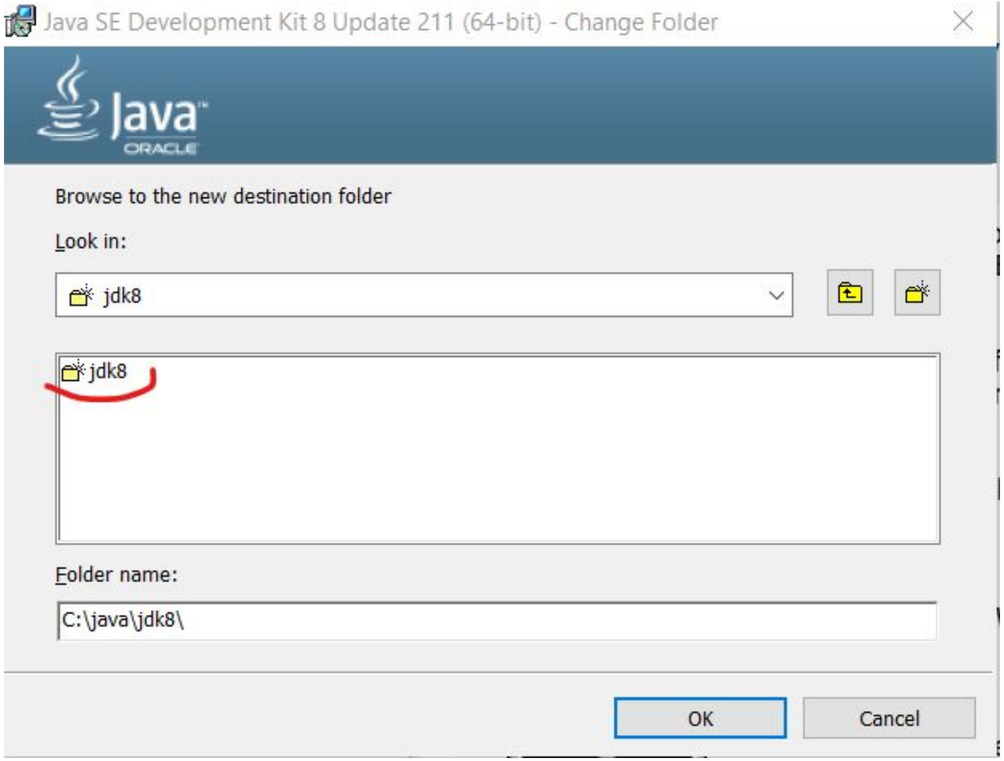
Browse to the new destination folder

Look in: java

Folder name: C:\java\

Java
ORACLE
OK
Cancel

Практика



Java SE Development Kit 8 Update 211 (64-bit) - Change Folder
Java
ORACLE

Browse to the new destination folder

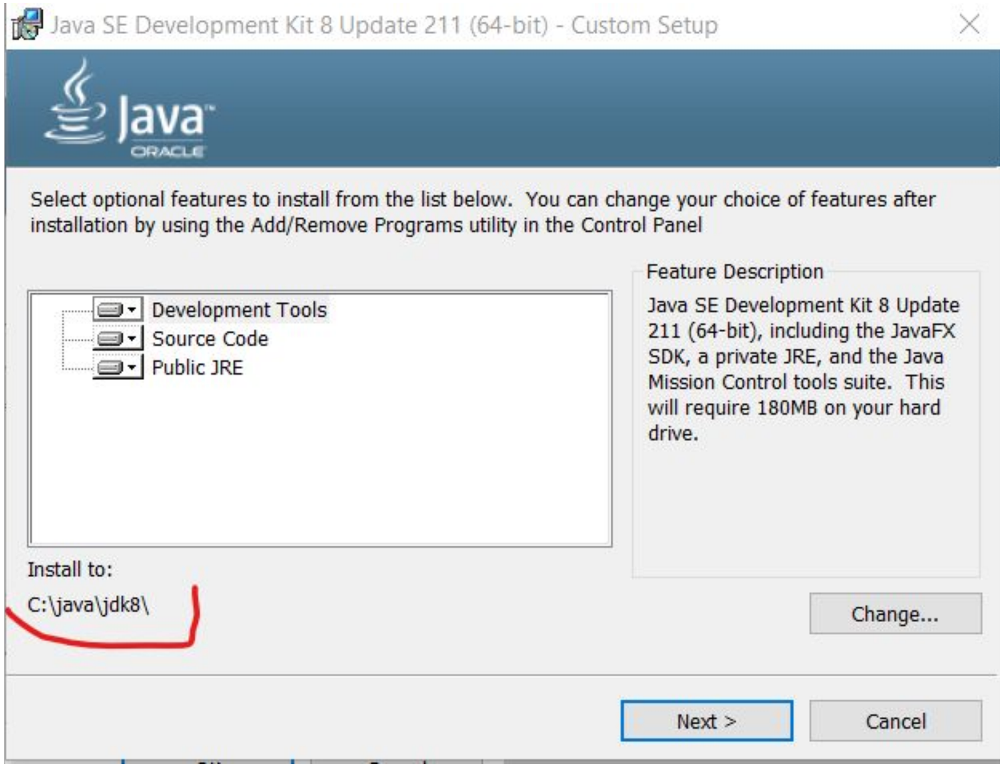
Look in: jdk8

jdk8

Folder name: C:\java\jdk8\

OK
Cancel

Практика



Java SE Development Kit 8 Update 211 (64-bit) - Custom Setup

Select optional features to install from the list below. You can change your choice of features after installation by using the Add/Remove Programs utility in the Control Panel

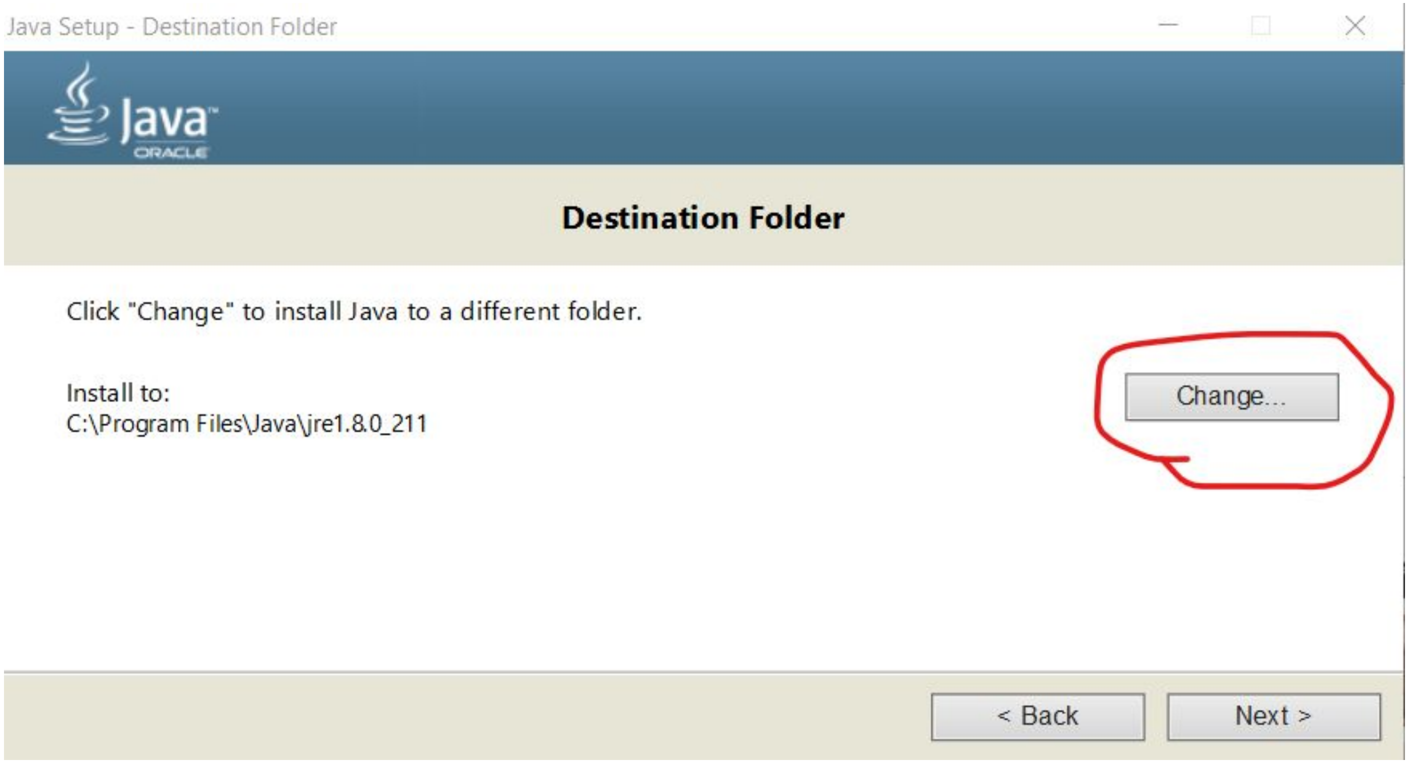
- Development Tools
- Source Code
- Public JRE

Feature Description

Java SE Development Kit 8 Update 211 (64-bit), including the JavaFX SDK, a private JRE, and the Java Mission Control tools suite. This will require 180MB on your hard drive.

Install to:
C:\java\jdk8\

Практика



Java Setup - Destination Folder

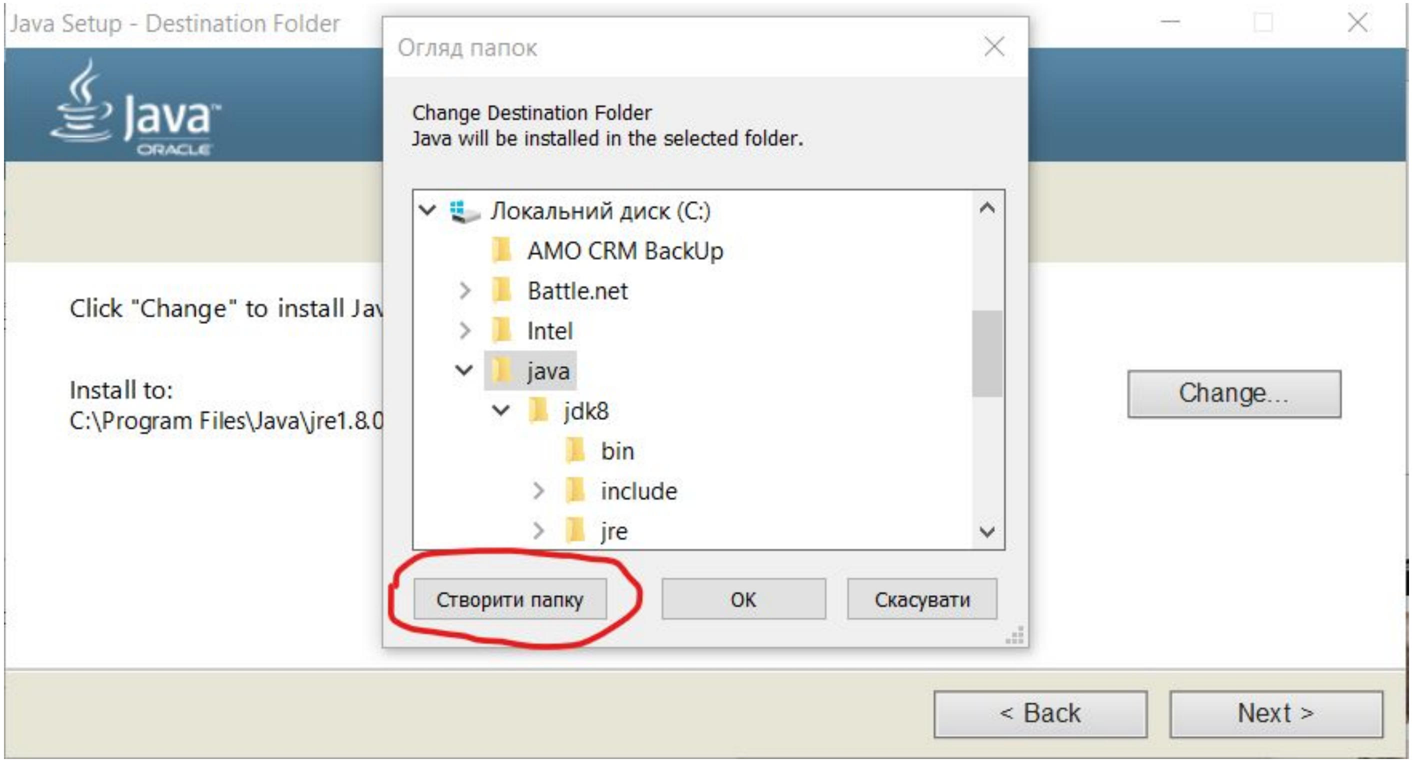
Destination Folder

Click "Change" to install Java to a different folder.

Install to:
C:\Program Files\Java\jre1.8.0_211

Java
ORACLE
Change...
< Back
Next >

Практика



Java Setup - Destination Folder

Click "Change" to install Jav

Install to:
C:\Program Files\Java\jre1.8.0

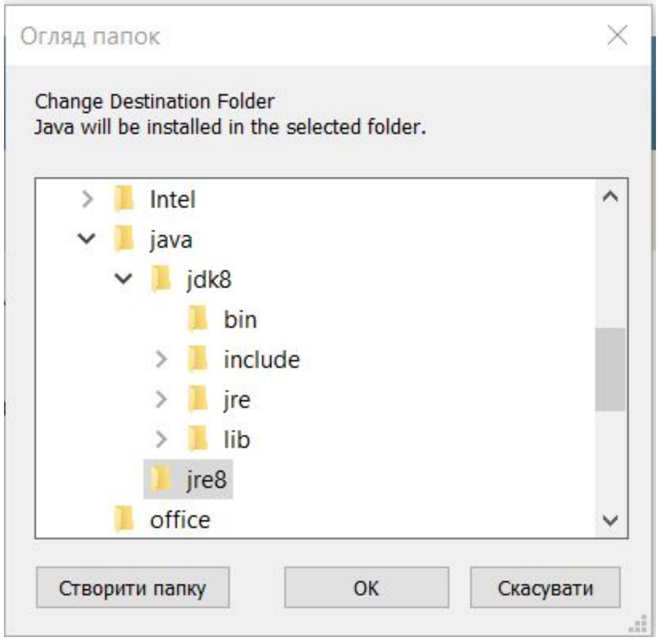
Огляд папок

Change Destination Folder
Java will be installed in the selected folder.

- Локальний диск (C:)
  - AMO CRM BackUp
  - Battle.net
  - Intel
  - java
    - jdk8
      - bin
      - include
      - jre

Java
ORACLE
Створити папку
OK
Скасувати
Change...
< Back
Next >

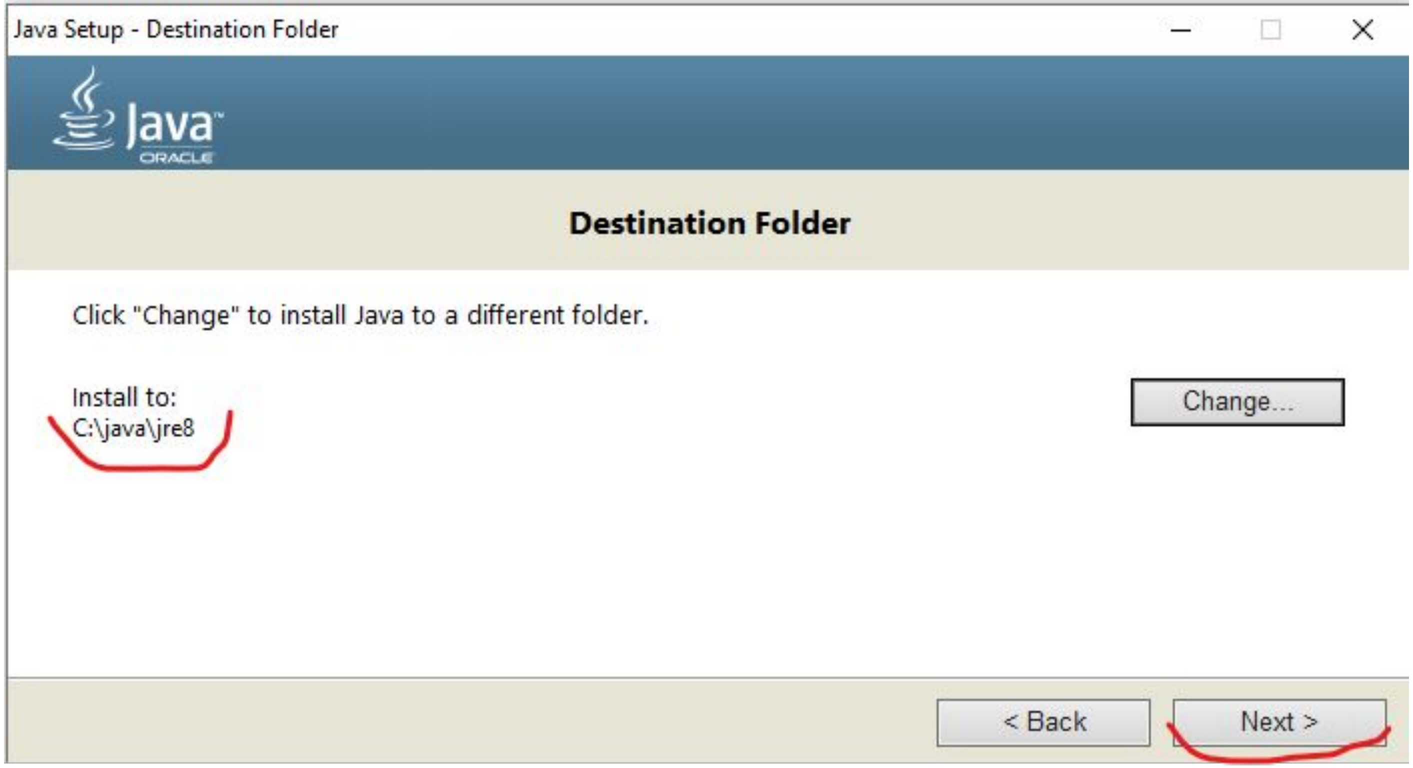
Практика



Change Destination Folder
Java will be installed in the selected folder.

Огляд папок
Intel
java
jdk8
bin
include
jre
lib
jre8
office
Створити папку
OK
Скасувати

Практика


Java Setup - Destination Folder
Java
ORACLE

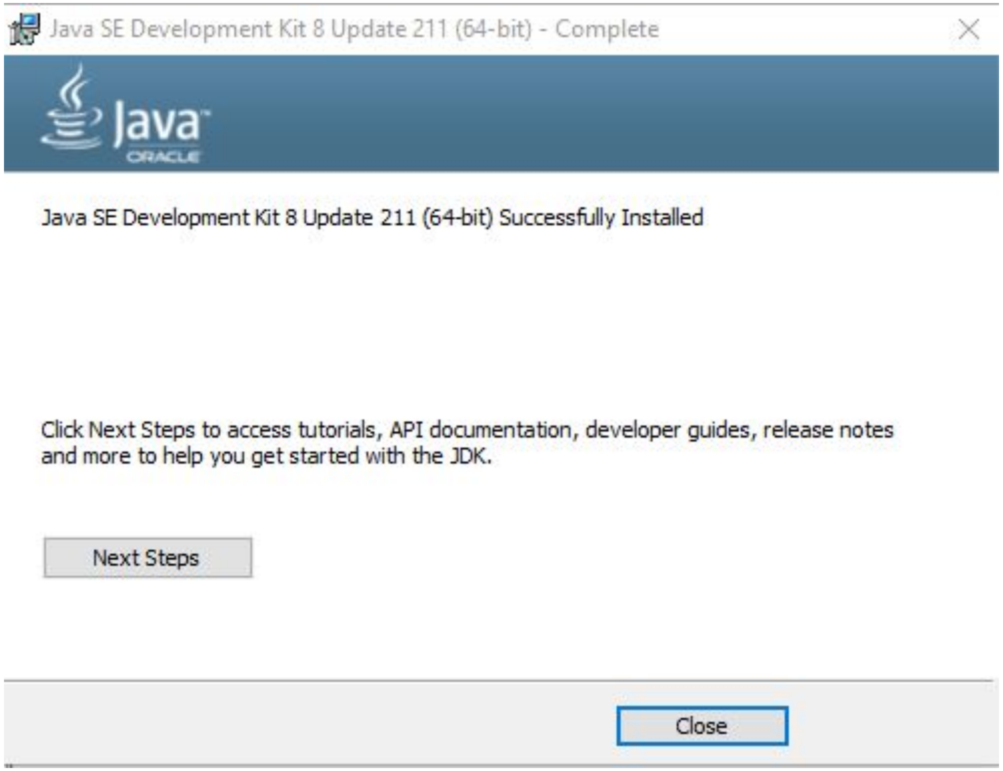
Destination Folder

Click "Change" to install Java to a different folder.

Install to:
C:\java\jre8

Change...
< Back
Next >

Практика


Java SE Development Kit 8 Update 211 (64-bit) - Complete
Java
ORACLE

Java SE Development Kit 8 Update 211 (64-bit) Successfully Installed

Click Next Steps to access tutorials, API documentation, developer guides, release notes and more to help you get started with the JDK.

Next Steps
Close

Инструментарий

Что такое IDE

IDE

Интегри́рованная среда́ разрабо́тки, ИСР (англ. Integrated development environment — IDE), также единая среда разработки, ЕСР — комплекс программных средств, используемый программистами для разработки программного обеспечения (ПО).

Среда разработки включает в себя:

- текстовый редактор,
- компилятор и/или интерпретатор,
- средства автоматизации сборки,
- отладчик.

Редактор исходного кода

- подсветка синтаксиса,
- автодополнение,
- отступы,
- проверка правильности расстановки скобок,
- контекстная помощь по коду
- и многие другие.

Инструментарий

Какие бывают IDE

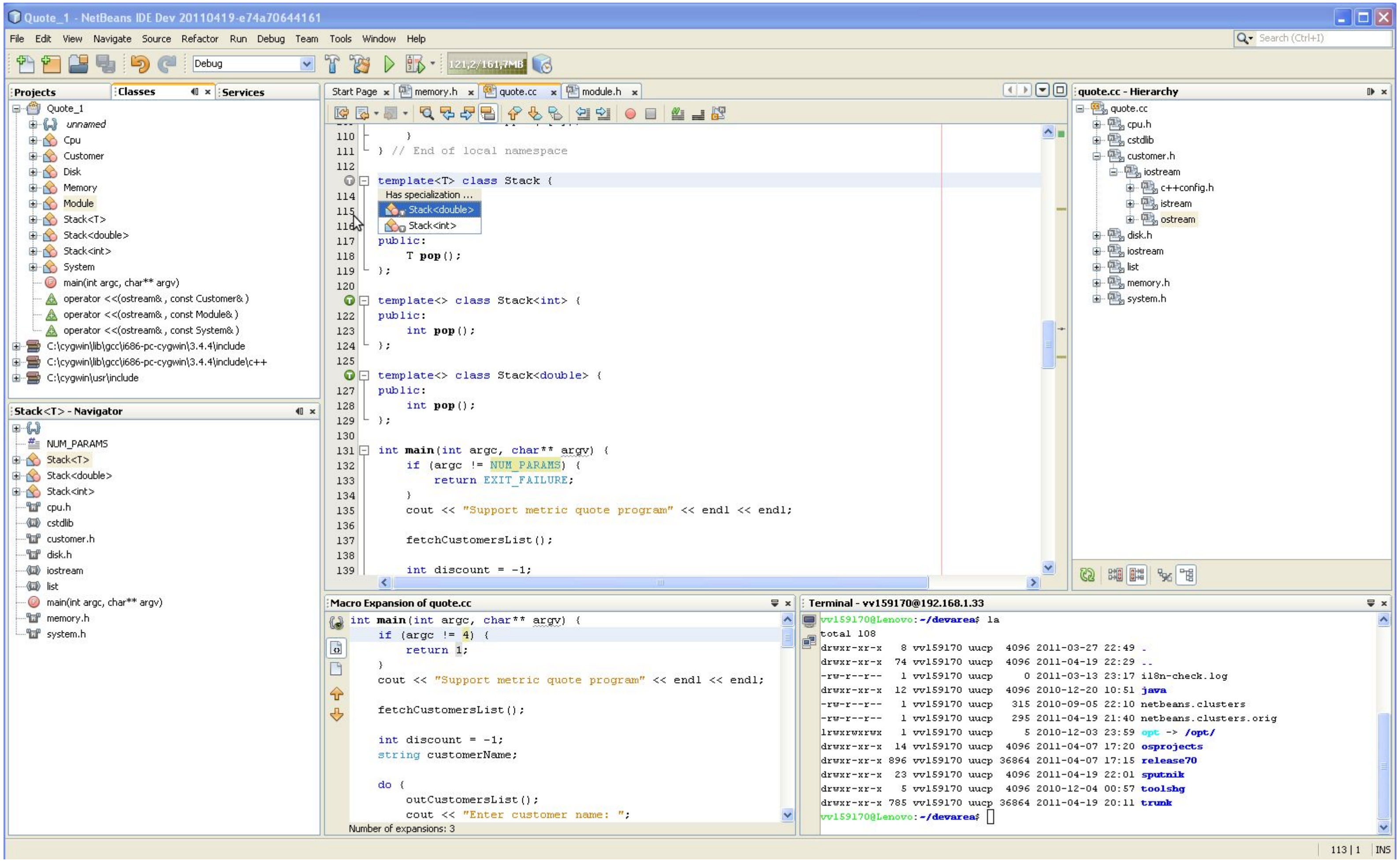
Big three

- ☐ NetBeans
- ☐ IntelliJ IDEA
- ☐ Eclipse

NetBeans

- IDE на языках программирования Java, Python, PHP, JavaScript, C, C++, Ада и ряда других
- поддерживается и спонсируется компанией Oracle, однако разработка NetBeans ведётся независимым сообществом разработчиков-энтузиастов (NetBeans Community) и компанией NetBeans Org
- В сентябре 2016 года Oracle передала интегрированную среду разработки NetBeans в руки фонда Apache

NetBeans


Quote_1 - NetBeans IDE Dev 20110419-e74a70644161
File Edit View Navigate Source Refactor Run Debug Team Tools Window Help
Search (Ctrl+I)
Debug
121,2/161,7MB
Projects
Classes
Services
Quote_1
unnamed
Cpu
Customer
Disk
Memory
Module
Stack<T>
Stack<double>
Stack<int>
System
main(int argc, char** argv)
operator <<(ostream& , const Customer&)
operator <<(ostream& , const Module&)
operator <<(ostream& , const System&)
C:\cygwin\lib\gcc\i686-pc-cygwin\3.4.4\include
C:\cygwin\lib\gcc\i686-pc-cygwin\3.4.4\include\c++
C:\cygwin\usr\include
Stack<T> - Navigator
NUM_PARAMS
Stack<T>
Stack<double>
Stack<int>
cpu.h
cstdlib
customer.h
disk.h
iostream
list
main(int argc, char** argv)
memory.h
system.h
Start Page
memory.h
quote.cc
module.h
Has specialization ...
Stack<double>
Stack<int>
quote.cc - Hierarchy
quote.cc
cpu.h
cstdlib
customer.h
iostream
c++config.h
istream
ostream
disk.h
iostream
list
memory.h
system.h
Macro Expansion of quote.cc
Number of expansions: 3
Terminal - vv159170@192.168.1.33
113 | 1
INS

```
        }
} // End of local namespace

template<T> class Stack {

public:
    T pop();
};

template<> class Stack<int> {
public:
    int pop();
};

template<> class Stack<double> {
public:
    int pop();
};

int main(int argc, char** argv) {
    if (argc != NUM_PARAMS) {
        return EXIT_FAILURE;
    }
    cout << "Support metric quote program" << endl << endl;

    fetchCustomersList();

    int discount = -1;
```

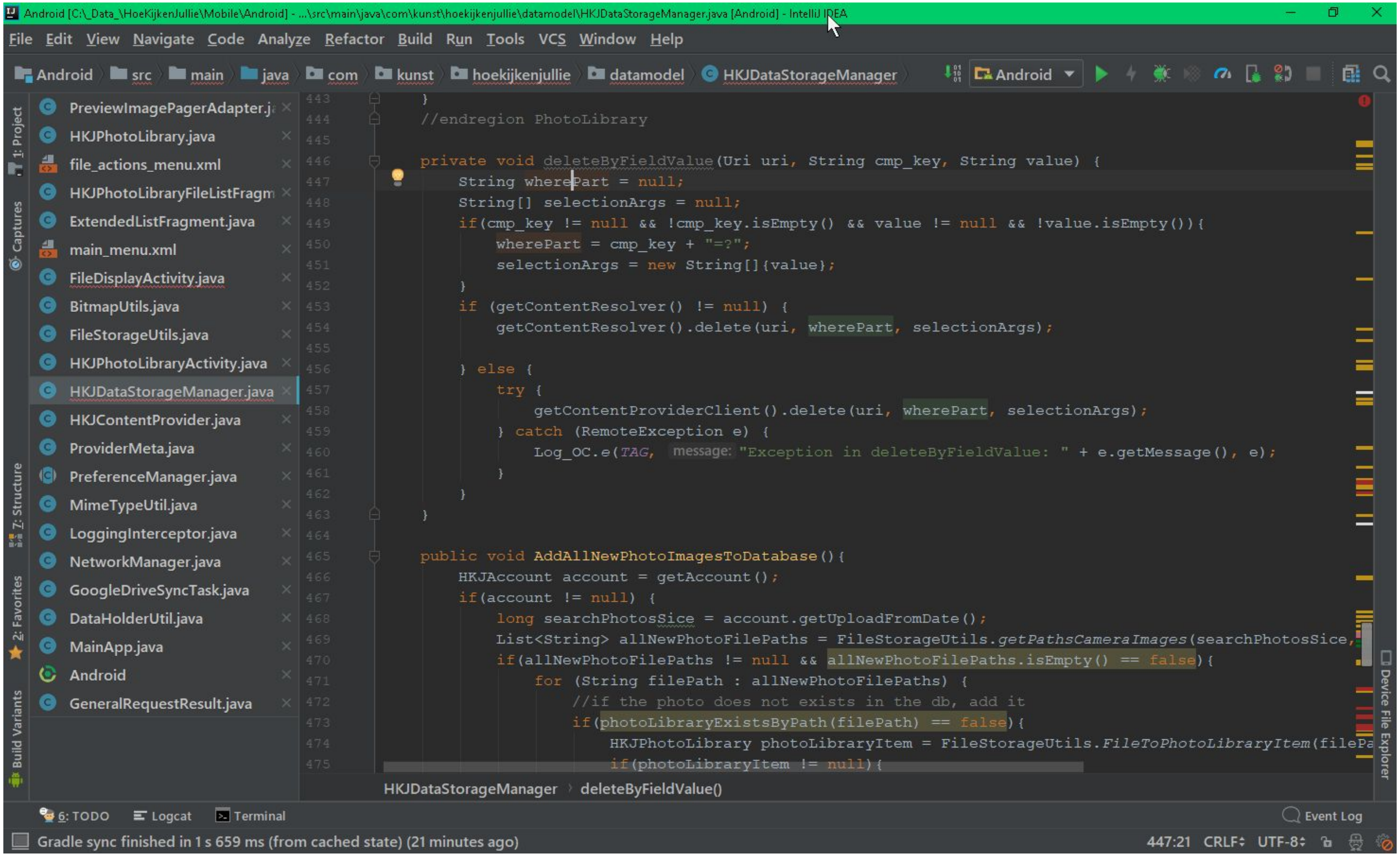
```
int main(int argc, char** argv) {
    if (argc != 4) {
        return 1;
    }
    cout << "Support metric quote program" << endl << endl;

    fetchCustomersList();

    int discount = -1;
    string customerName;

    do {
        outCustomersList();
        cout << "Enter customer name: ";
```

```
vv159170@Lenovo:~/devarea$ la
total 108
drwxr-xr-x   8 vv159170 uucp  4096 2011-03-27 22:49 .
drwxr-xr-x  74 vv159170 uucp  4096 2011-04-19 22:29 ..
-rw-r--r--   1 vv159170 uucp     0 2011-03-13 23:17 i18n-check.log
drwxr-xr-x  12 vv159170 uucp  4096 2010-12-20 10:51 java
-rw-r--r--   1 vv159170 uucp   315 2010-09-05 22:10 netbeans.clusters
-rw-r--r--   1 vv159170 uucp   295 2011-04-19 21:40 netbeans.clusters.orig
lrwxrwxrwx   1 vv159170 uucp     5 2010-12-03 23:59 opt -> /opt/
drwxr-xr-x  14 vv159170 uucp  4096 2011-04-07 17:20 osprojects
drwxr-xr-x 896 vv159170 uucp 36864 2011-04-07 17:15 release70
drwxr-xr-x  23 vv159170 uucp  4096 2011-04-19 22:01 sputnik
drwxr-xr-x   5 vv159170 uucp  4096 2010-12-04 00:57 toolshg
drwxr-xr-x 785 vv159170 uucp 36864 2011-04-19 20:11 trunk
vv159170@Lenovo:~/devarea$ 
```

IntelliJ IDEA

- интегрированная среда разработки программного обеспечения для многих языков программирования, в частности Java, JavaScript, Python, разработанная компанией JetBrains.
- Бесплатная Community Edition и платная Ultimate Edition
- Android Studio

NetBeans


Android [C:_Data_\HoeKijkenJullie\Mobile\Android] - ...\src\main\java\com\kunst\hoekijkenjullie\datamodel\HKJDataStorageManager.java [Android] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
Android src main java com kunst hoekijkenjullie datamodel HKJDataStorageManager
Android
1: Project
Captures
7: Structure
2: Favorites
Build Variants
PreviewImagePagerAdapter.j
HKJPhotoLibrary.java
file_actions_menu.xml
HKJPhotoLibraryFileListFragm
ExtendedListFragment.java
main_menu.xml
FileDisplayActivity.java
BitmapUtils.java
FileStorageUtils.java
HKJPhotoLibraryActivity.java
HKJDataStorageManager.java
HKJContentProvider.java
ProviderMeta.java
PreferenceManager.java
MimeTypeUtil.java
LoggingInterceptor.java
NetworkManager.java
GoogleDriveSyncTask.java
DataHolderUtil.java
MainApp.java
Android
GeneralRequestResult.java
HKJDataStorageManager deleteByFieldValue()
6: TODO
Logcat
Terminal
Event Log
Device File Explorer
447:21 CRLF÷ UTF-8÷

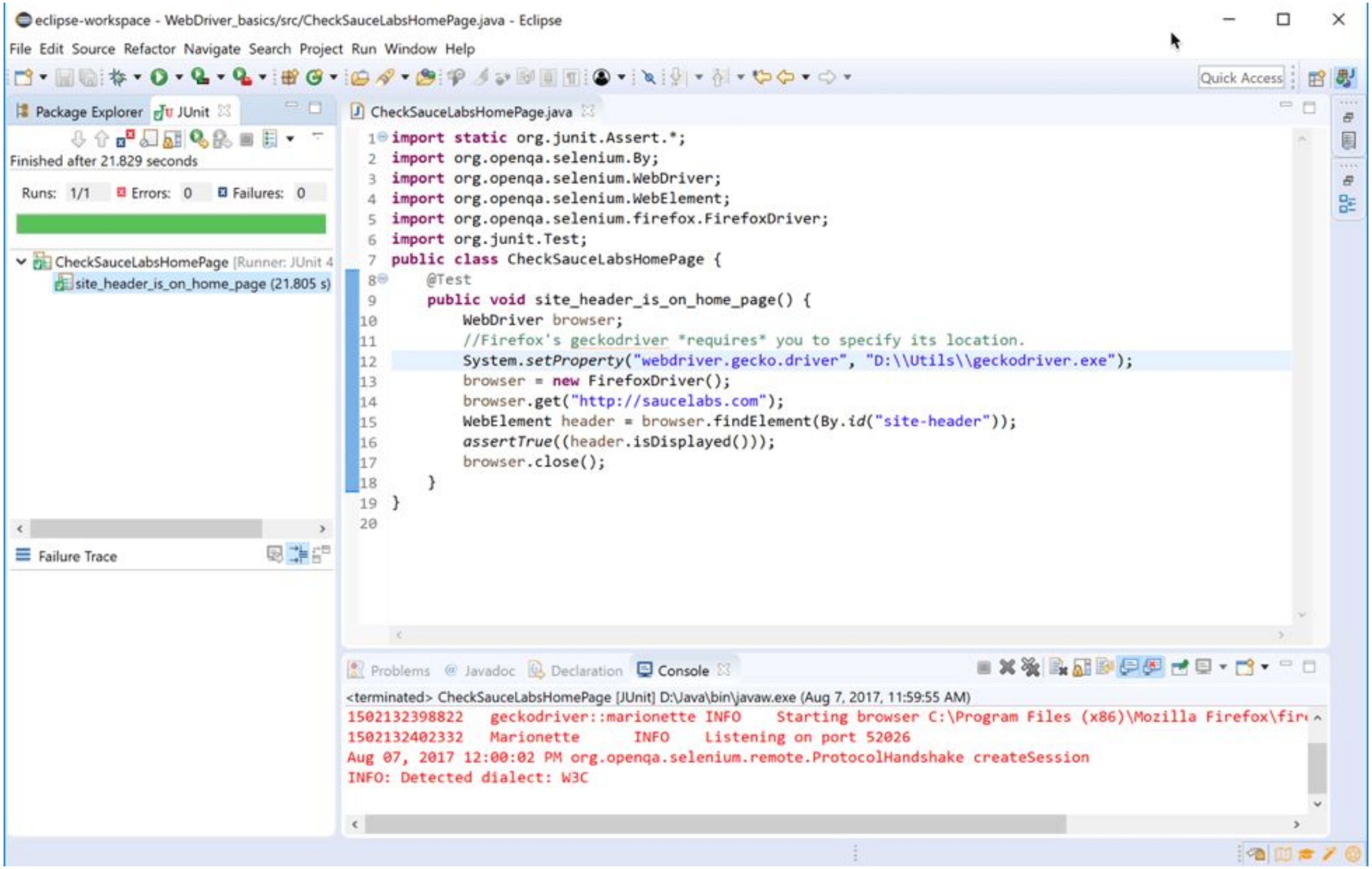
```java
    }
    //endregion PhotoLibrary

    private void deleteByFieldValue(Uri uri, String cmp_key, String value) {
        String wherePart = null;
        String[] selectionArgs = null;
        if(cmp_key != null && !cmp_key.isEmpty() && value != null && !value.isEmpty()){
            wherePart = cmp_key + "=?";
            selectionArgs = new String[]{value};
        }
        if (getContentResolver() != null) {
            getContentResolver().delete(uri, wherePart, selectionArgs);

        } else {
            try {
                getContentProviderClient().delete(uri, wherePart, selectionArgs);
            } catch (RemoteException e) {
                Log_OC.e(TAG, message: "Exception in deleteByFieldValue: " + e.getMessage(), e);
            }
        }
    }

    public void AddAllNewPhotoImagesToDatabase(){
        HKJAccount account = getAccount();
        if(account != null) {
            long searchPhotosSice = account.getUploadFromDate();
            List<String> allNewPhotoFilePaths = FileStorageUtils.getPathsCameraImages(searchPhotosSice,
            if(allNewPhotoFilePaths != null && allNewPhotoFilePaths.isEmpty() == false){
                for (String filePath : allNewPhotoFilePaths) {
                    //if the photo does not exists in the db, add it
                    if(photoLibraryExistsByPath(filePath) == false){
                        HKJPhotoLibrary photoLibraryItem = FileStorageUtils.FileToPhotoLibraryItem(filePa
                        if(photoLibraryItem != null){
```

Gradle sync finished in 1 s 659 ms (from cached state) (21 minutes ago)

Eclipse

- Eclipse (МФА: [ɪˈklɪps], с англ. — «затмение»[2]) — свободная интегрированная среда разработки модульных кроссплатформенных приложений. Развивается и поддерживается Eclipse Foundation.
- Первоначально Eclipse разрабатывалась фирмой IBM как преемник среды разработки IBM VisualAge, в качестве корпоративного стандарта IDE для разработки на разных языках под платформы IBM. По сведениям IBM, проектирование и разработка стоили 40 миллионов долларов.
- Исходный код был полностью открыт и сделан доступным после того, как Eclipse был передан для дальнейшего развития независимому от IBM сообществу.

Eclipse


eclipse-workspace - WebDriver_basics/src/CheckSauceLabsHomePage.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Package Explorer
JUnit
CheckSauceLabsHomePage.java
Failure Trace
Problems
Javadoc
Declaration
Console

Finished after 21.829 seconds

Runs: 1/1 Errors: 0 Failures: 0

- CheckSauceLabsHomePage [Runner: JUnit 4
  - site_header_is_on_home_page (21.805 s)

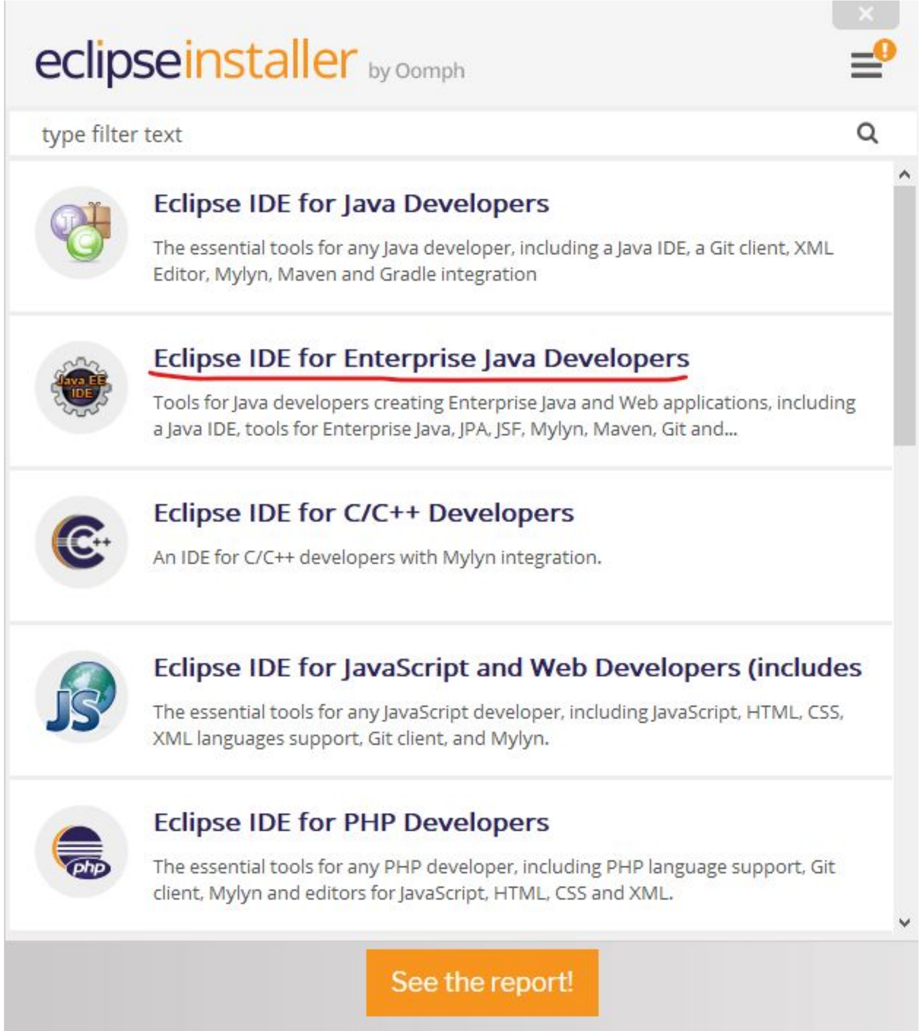
```java
import static org.junit.Assert.*;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.junit.Test;
public class CheckSauceLabsHomePage {
    @Test
    public void site_header_is_on_home_page() {
        WebDriver browser;
        //Firefox's geckodriver *requires* you to specify its location.
        System.setProperty("webdriver.gecko.driver", "D:\\Utils\\geckodriver.exe");
        browser = new FirefoxDriver();
        browser.get("http://saucelabs.com");
        WebElement header = browser.findElement(By.id("site-header"));
        assertTrue((header.isDisplayed()));
        browser.close();
    }
}
```

```
<terminated> CheckSauceLabsHomePage [JUnit] D:\Java\bin\javaw.exe (Aug 7, 2017, 11:59:55 AM)
1502132398822   geckodriver::marionette INFO    Starting browser C:\Program Files (x86)\Mozilla Firefox\fir
1502132402332   Marionette      INFO    Listening on port 52026
Aug 07, 2017 12:00:02 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
```

Практика

1. Установить Eclipse
2. В каталог c:\Java\eclipse

Eclipse



Eclipse IDE for Java Developers

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

Eclipse IDE for Enterprise Java Developers

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

Eclipse IDE for C/C++ Developers

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

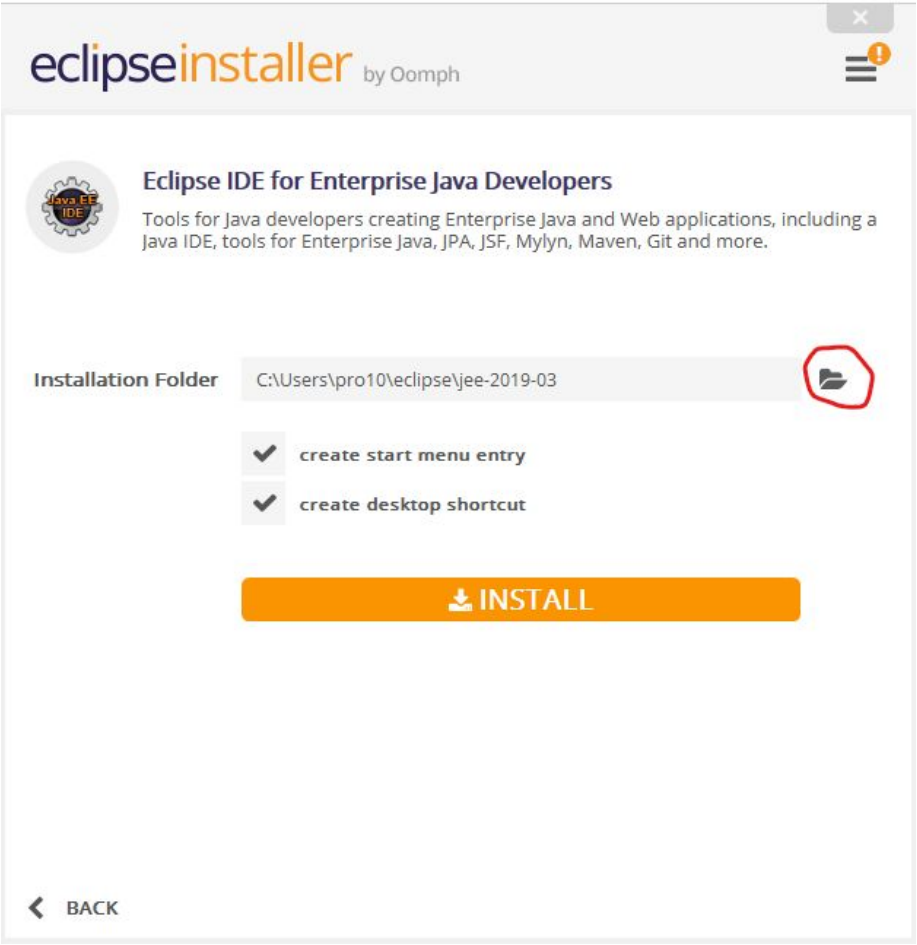
Eclipse IDE for JavaScript and Web Developers (includes

The essential tools for any JavaScript developer, including JavaScript, HTML, CSS, XML languages support, Git client, and Mylyn.

Eclipse IDE for PHP Developers

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

Eclipse


eclipseinstaller by Oomph
Java EE IDE

Eclipse IDE for Enterprise Java Developers

Tools for Java developers creating Enterprise Java and Web applications, including a Java IDE, tools for Enterprise Java, JPA, JSF, Mylyn, Maven, Git and more.

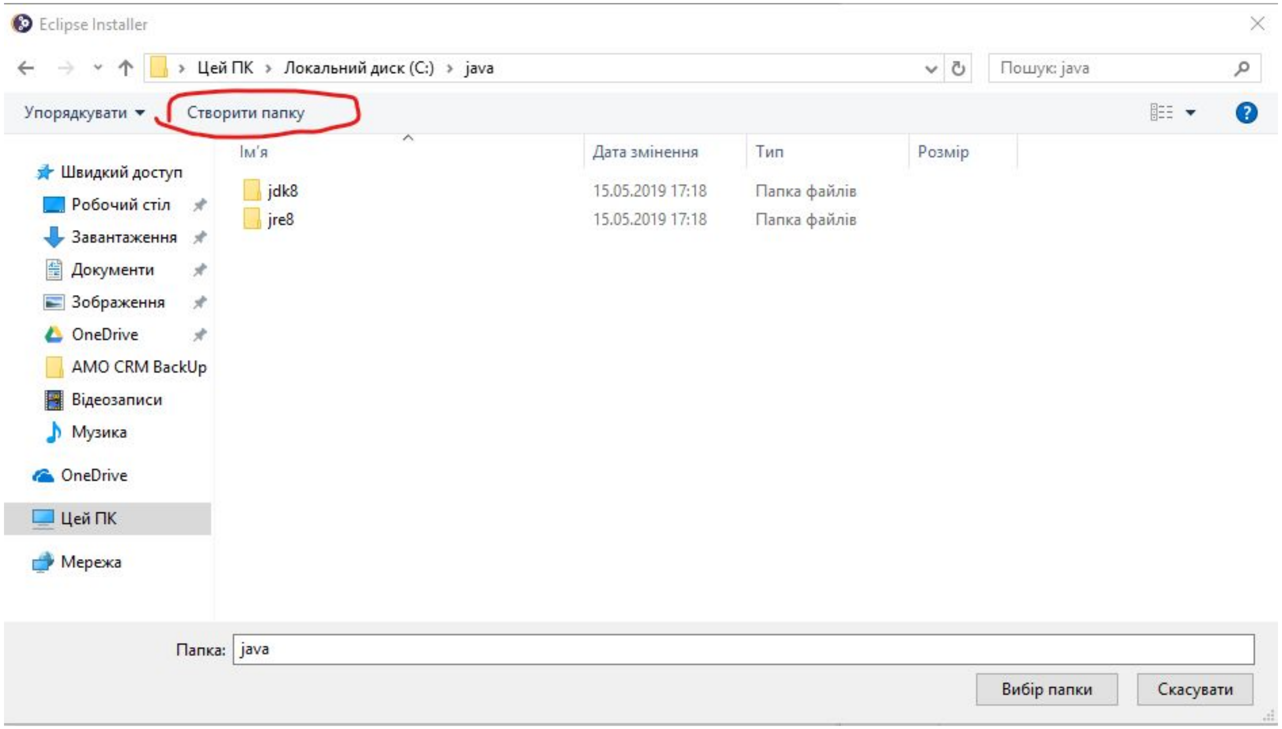
Installation Folder: C:\Users\pro10\eclipse\jee-2019-03

☑ create start menu entry

☑ create desktop shortcut

INSTALL
BACK

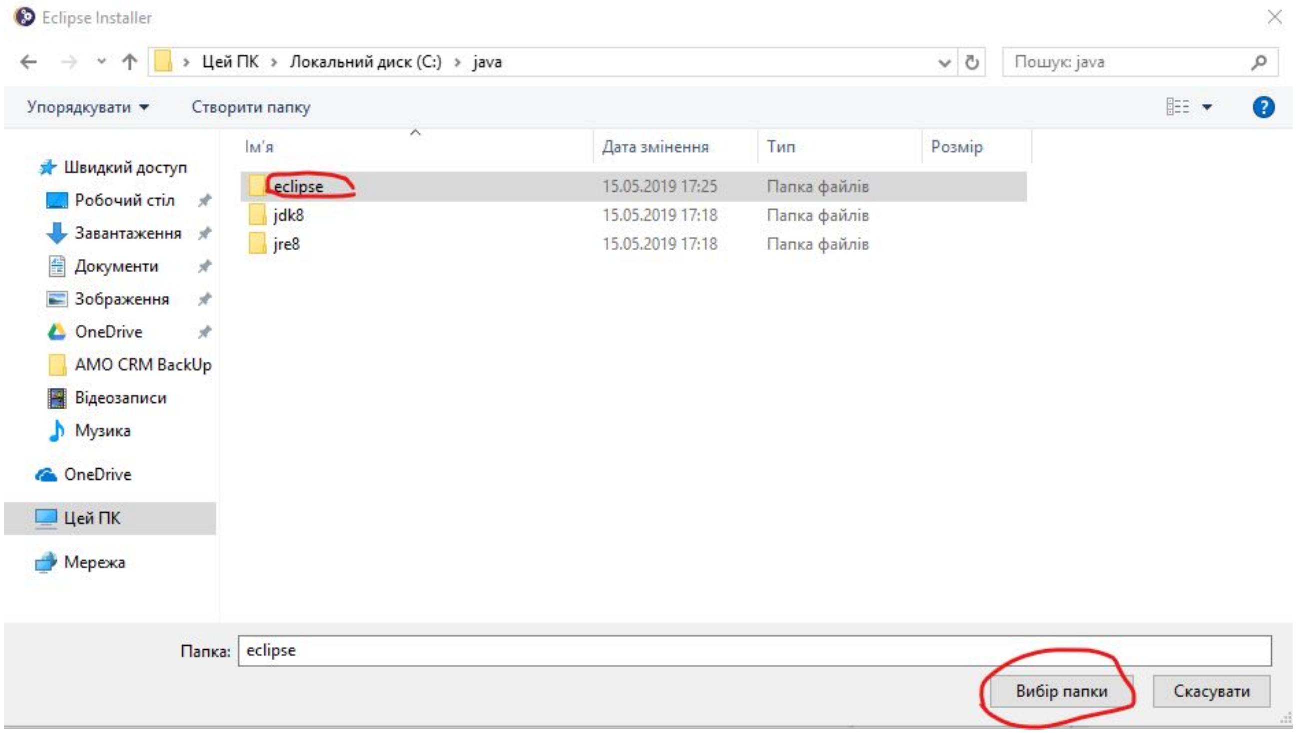
Eclipse


Eclipse Installer
Цей ПК › Локальний диск (C:) › java
Пошук: java
Упорядкувати ▾
Створити папку
Швидкий доступ
Робочий стіл
Завантаження
Документи
Зображення
OneDrive
AMO CRM BackUp
Відеозаписи
Музика
OneDrive
Цей ПК
Мережа
Вибір папки
Скасувати

Ім'я	Дата змінення	Тип	Розмір
jdk8	15.05.2019 17:18	Папка файлів	
jre8	15.05.2019 17:18	Папка файлів	

Папка: java

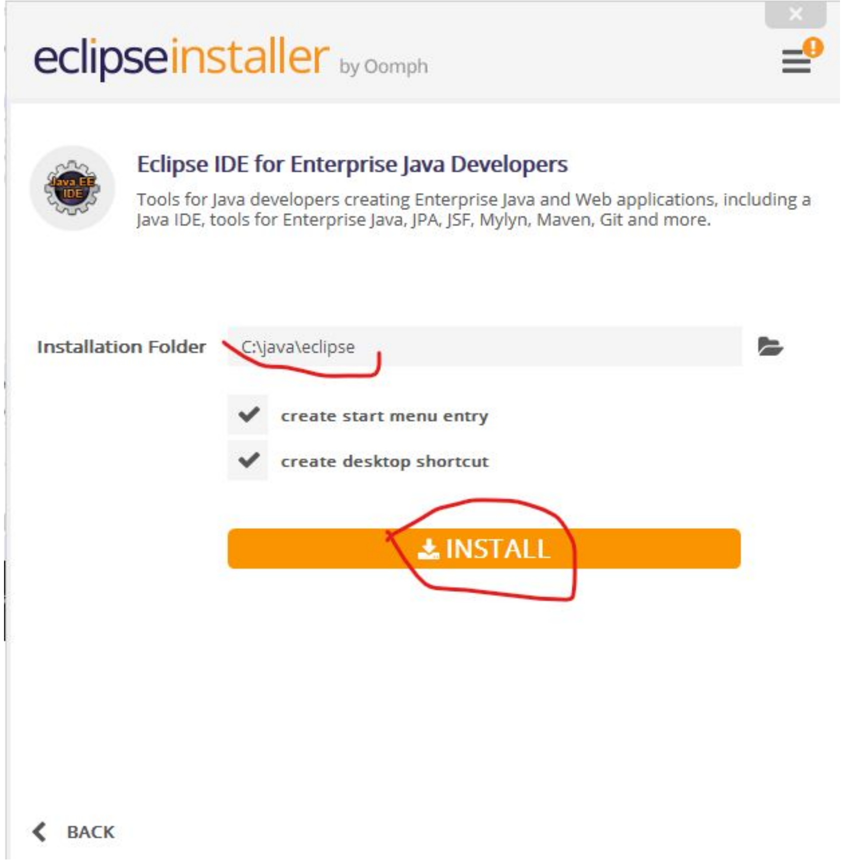
Eclipse


Eclipse Installer
Цей ПК › Локальний диск (C:) › java
Пошук: java
Упорядкувати
Створити папку
Швидкий доступ
Робочий стіл
Завантаження
Документи
Зображення
OneDrive
AMO CRM BackUp
Відеозаписи
Музика
OneDrive
Цей ПК
Мережа
Вибір папки
Скасувати

Ім'я	Дата змінення	Тип	Розмір
eclipse	15.05.2019 17:25	Папка файлів	
jdk8	15.05.2019 17:18	Папка файлів	
jre8	15.05.2019 17:18	Папка файлів	

Папка: eclipse

Eclipse



eclipseinstaller by Oomph

Eclipse IDE for Enterprise Java Developers

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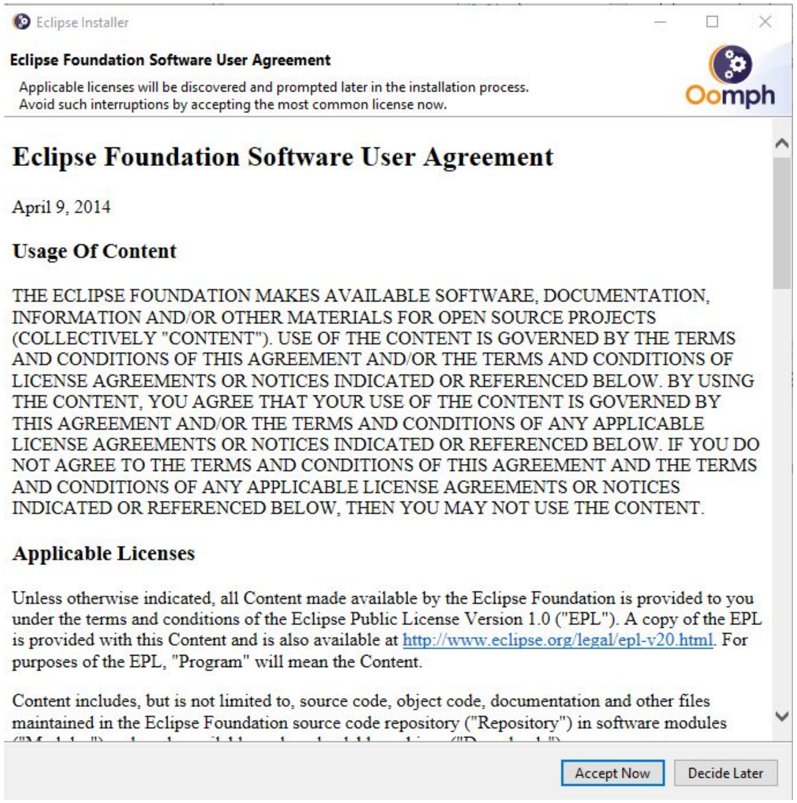
Installation Folder C:\java\eclipse

☑ create start menu entry

☑ create desktop shortcut

INSTALL
BACK

Eclipse



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April 9, 2014

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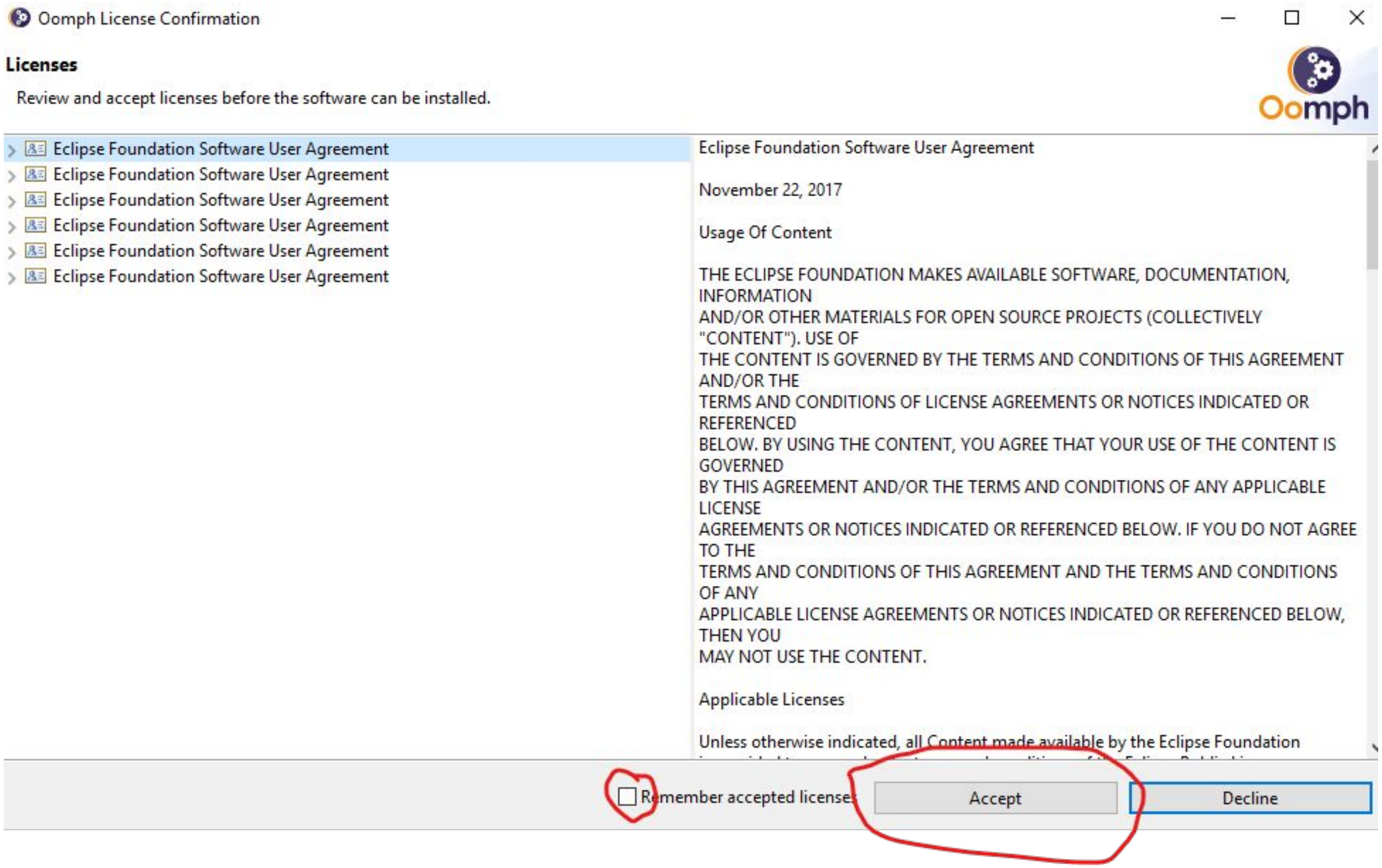
Eclipse



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Eclipse Foundation Software User Agreement

November 22, 2017

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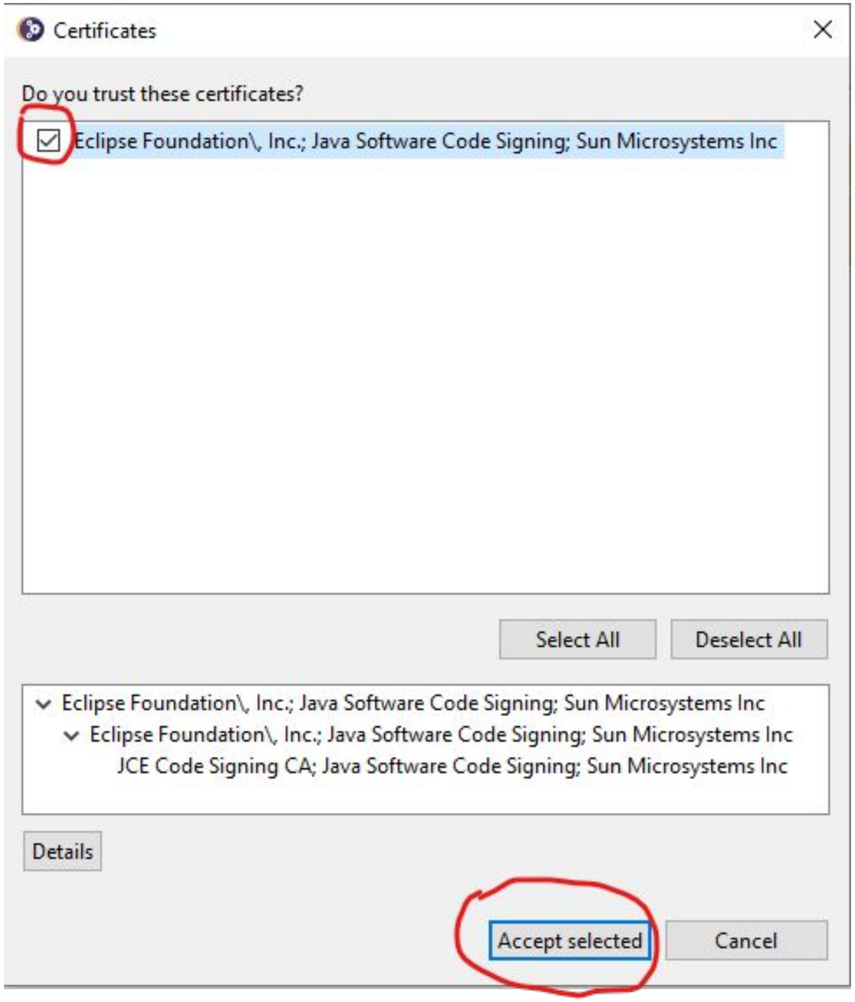
Eclipse



Certificates

Do you trust these certificates?

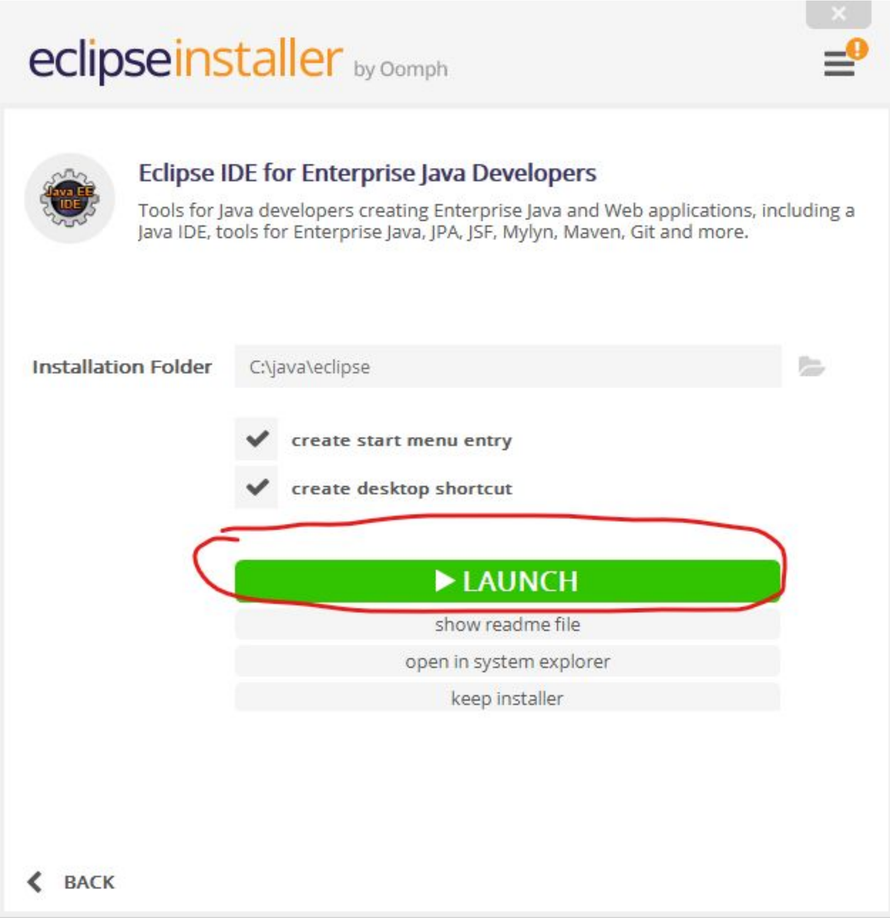
☑ Eclipse Foundation\, Inc.; Java Software Code Signing; Sun Microsystems Inc

Select All
Deselect All

- Eclipse Foundation\, Inc.; Java Software Code Signing; Sun Microsystems Inc
  - Eclipse Foundation\, Inc.; Java Software Code Signing; Sun Microsystems Inc
    - JCE Code Signing CA; Java Software Code Signing; Sun Microsystems Inc

Details
Accept selected
Cancel

Eclipse



Eclipse IDE for Enterprise Java Developers

Tools for Java developers creating Enterprise Java and Web applications, including a Java IDE, tools for Enterprise Java, JPA, JSF, Mylyn, Maven, Git and more.

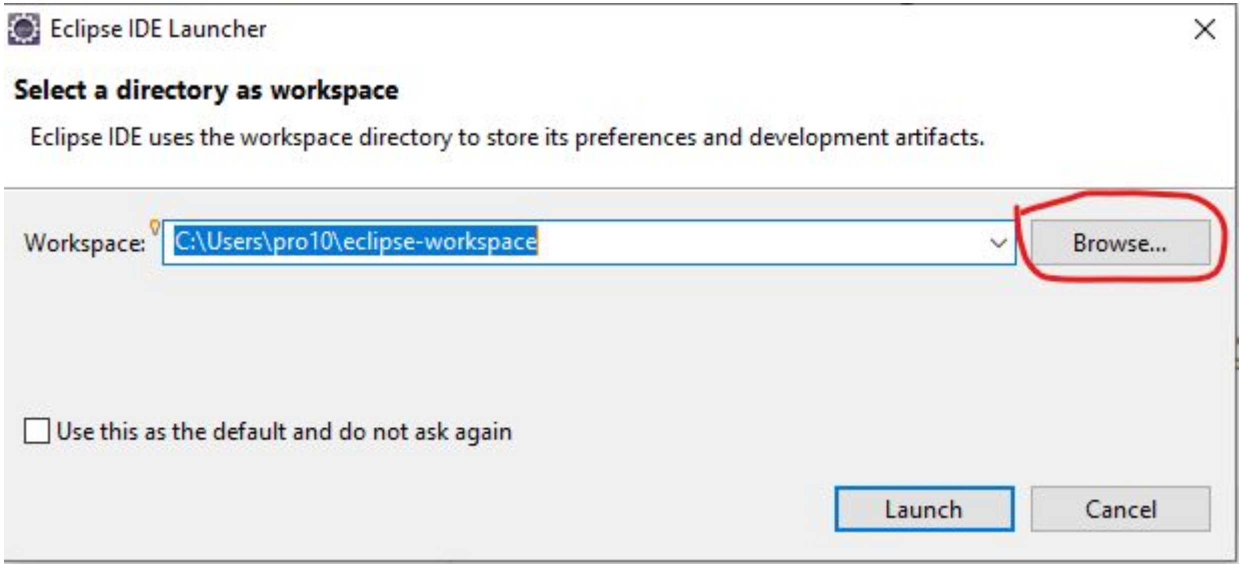
Installation Folder C:\java\eclipse

☑ create start menu entry

☑ create desktop shortcut

eclipseinstaller by Oomph
Java EE IDE
▶ LAUNCH
show readme file
open in system explorer
keep installer
BACK

Eclipse



Eclipse IDE Launcher

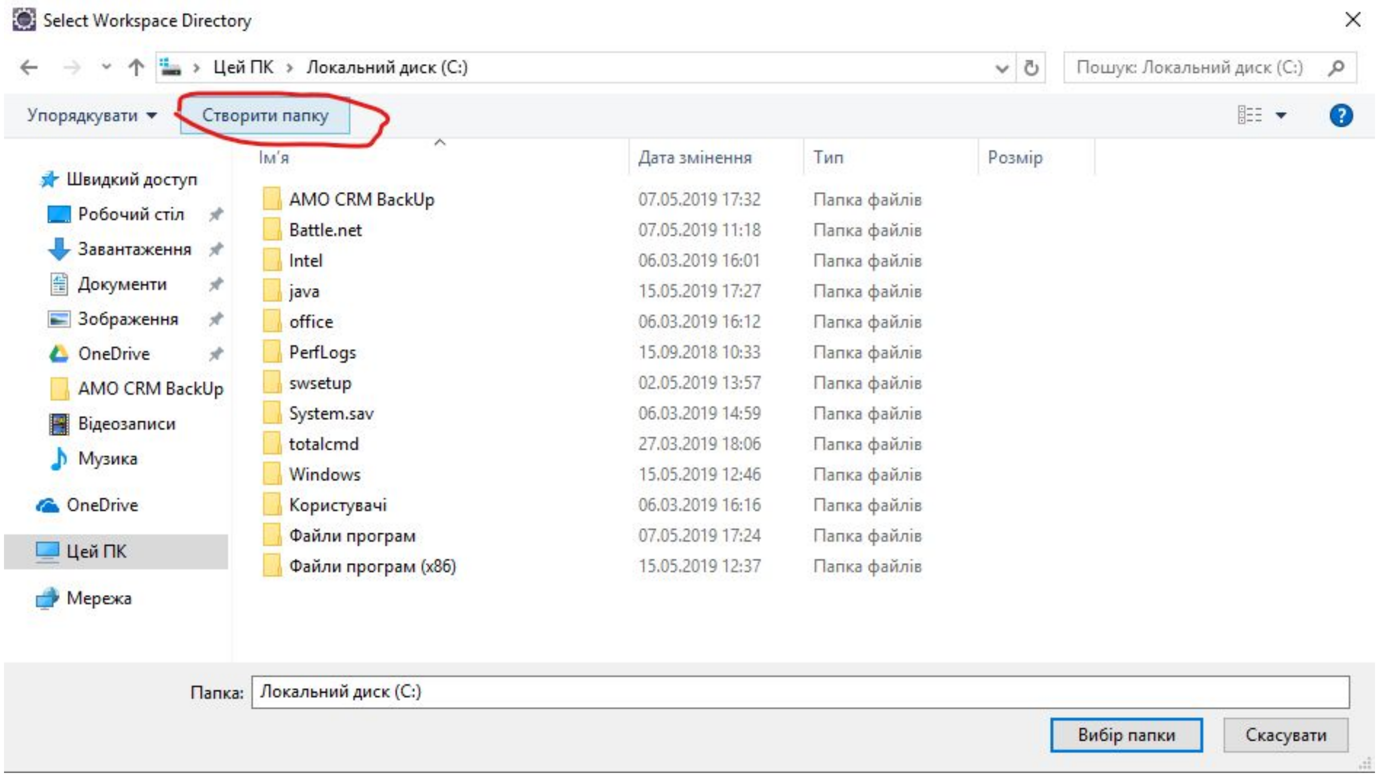
Select a directory as workspace

Eclipse IDE uses the workspace directory to store its preferences and development artifacts.

Workspace: C:\Users\pro10\eclipse-workspace

☐ Use this as the default and do not ask again

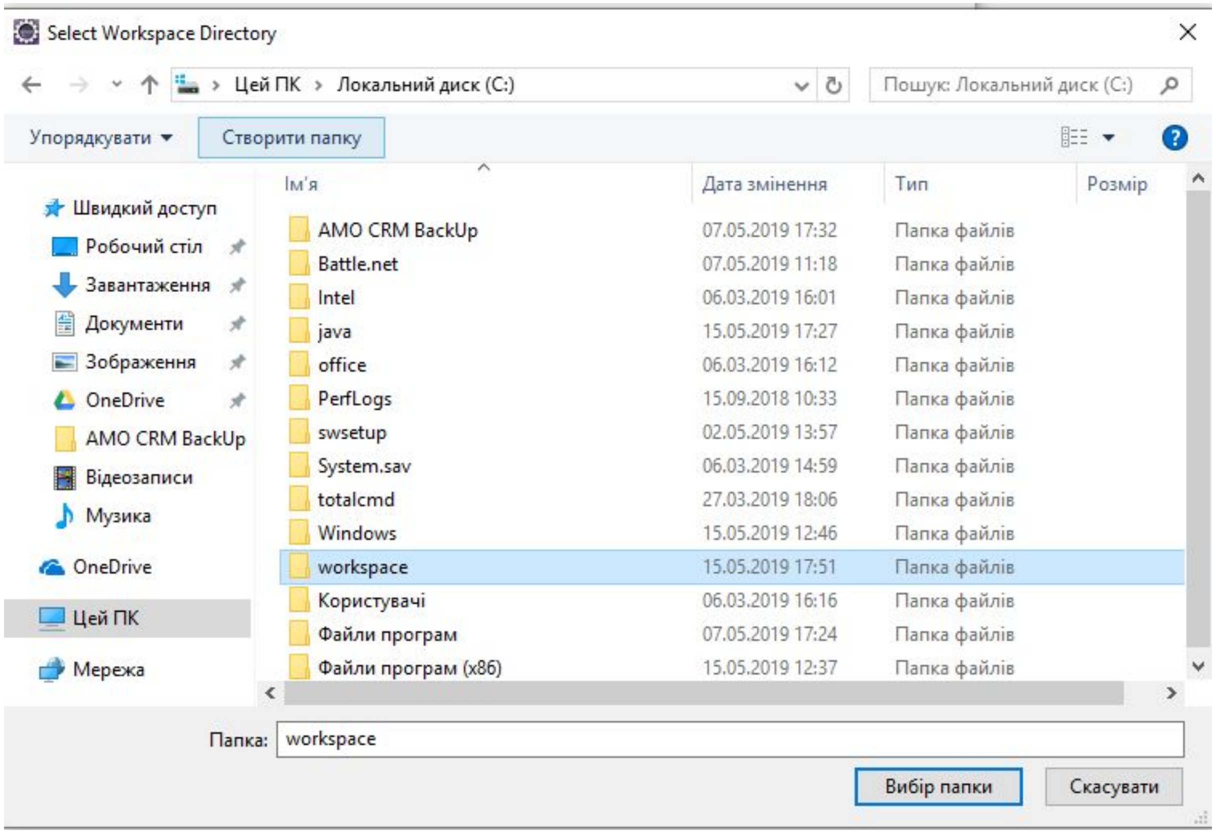
Eclipse


Select Workspace Directory
Цей ПК › Локальний диск (C:)
Пошук: Локальний диск (C:)
Упорядкувати ▾
Створити папку
Швидкий доступ
Робочий стіл
Завантаження
Документи
Зображення
OneDrive
AMO CRM BackUp
Відеозаписи
Музика
OneDrive
Цей ПК
Мережа
Вибір папки
Скасувати

Ім'я	Дата змінення	Тип	Розмір
AMO CRM BackUp	07.05.2019 17:32	Папка файлів	
Battle.net	07.05.2019 11:18	Папка файлів	
Intel	06.03.2019 16:01	Папка файлів	
java	15.05.2019 17:27	Папка файлів	
office	06.03.2019 16:12	Папка файлів	
PerfLogs	15.09.2018 10:33	Папка файлів	
swsetup	02.05.2019 13:57	Папка файлів	
System.sav	06.03.2019 14:59	Папка файлів	
totalcmd	27.03.2019 18:06	Папка файлів	
Windows	15.05.2019 12:46	Папка файлів	
Користувачі	06.03.2019 16:16	Папка файлів	
Файли програм	07.05.2019 17:24	Папка файлів	
Файли програм (x86)	15.05.2019 12:37	Папка файлів	

Папка: Локальний диск (C:)

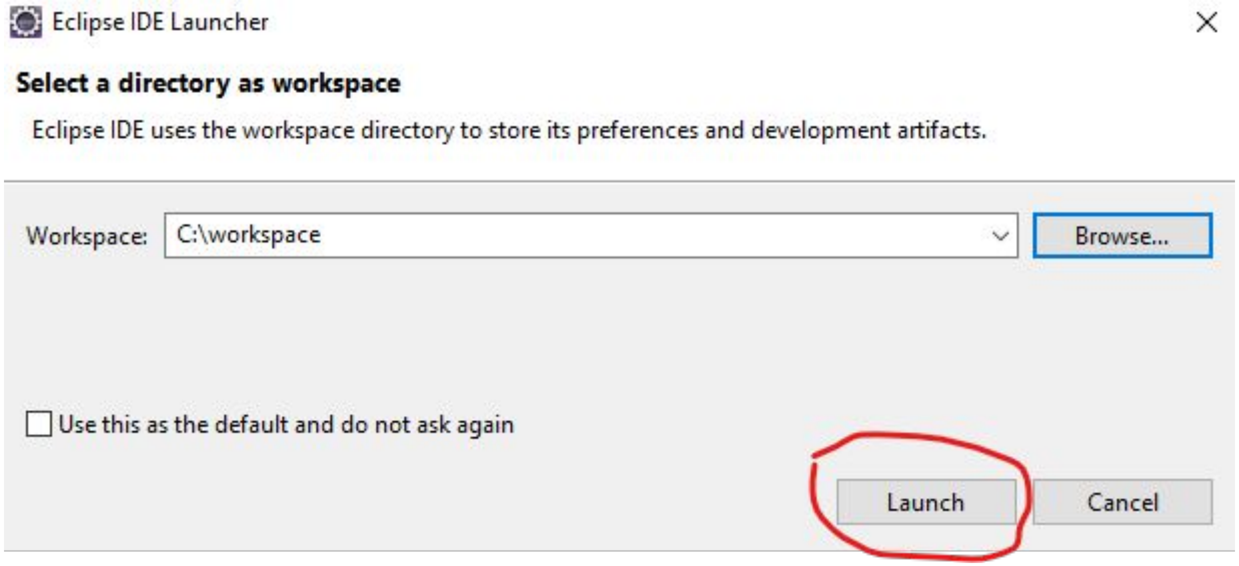
Eclipse


Select Workspace Directory
Цей ПК › Локальний диск (C:)
Пошук: Локальний диск (C:)
Упорядкувати
Створити папку
Швидкий доступ
Робочий стіл
Завантаження
Документи
Зображення
OneDrive
AMO CRM BackUp
Відеозаписи
Музика
OneDrive
Цей ПК
Мережа
Вибір папки
Скасувати

Ім'я	Дата змінення	Тип	Розмір
AMO CRM BackUp	07.05.2019 17:32	Папка файлів	
Battle.net	07.05.2019 11:18	Папка файлів	
Intel	06.03.2019 16:01	Папка файлів	
java	15.05.2019 17:27	Папка файлів	
office	06.03.2019 16:12	Папка файлів	
PerfLogs	15.09.2018 10:33	Папка файлів	
swsetup	02.05.2019 13:57	Папка файлів	
System.sav	06.03.2019 14:59	Папка файлів	
totalcmd	27.03.2019 18:06	Папка файлів	
Windows	15.05.2019 12:46	Папка файлів	
workspace	15.05.2019 17:51	Папка файлів	
Користувачі	06.03.2019 16:16	Папка файлів	
Файли програм	07.05.2019 17:24	Папка файлів	
Файли програм (x86)	15.05.2019 12:37	Папка файлів	

Папка: workspace

Eclipse



Eclipse IDE Launcher

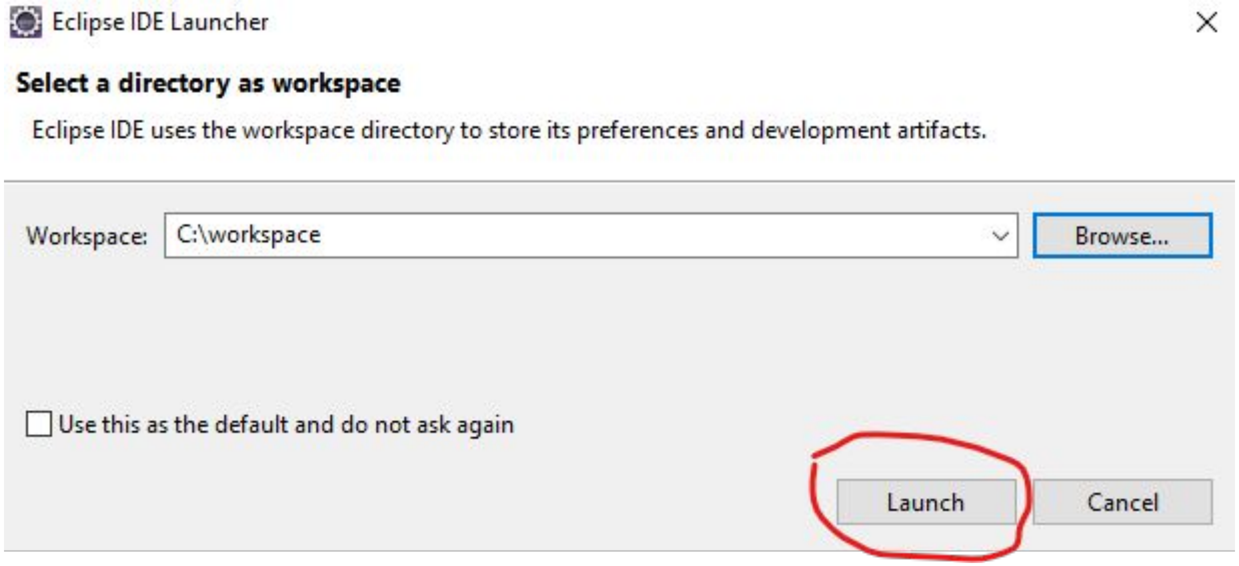
Select a directory as workspace

Eclipse IDE uses the workspace directory to store its preferences and development artifacts.

Workspace: C:\workspace

☐ Use this as the default and do not ask again

Eclipse



Eclipse IDE Launcher

Select a directory as workspace

Eclipse IDE uses the workspace directory to store its preferences and development artifacts.

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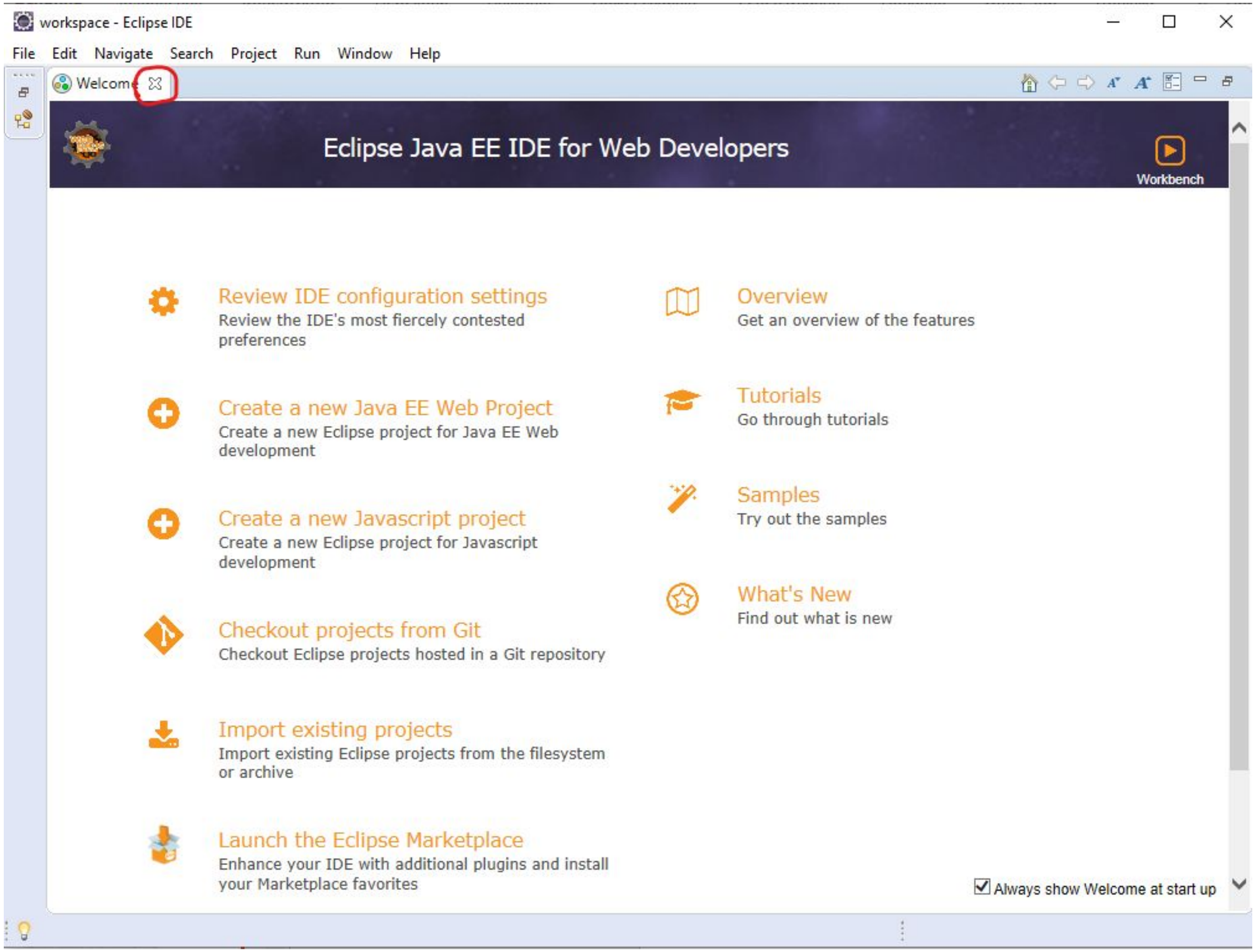
Eclipse



workspace - Eclipse IDE
File Edit Navigate Search Project Run Window Help
Welcome
Eclipse Java EE IDE for Web Developers
Workbench

Review IDE configuration settings
Review the IDE's most fiercely contested preferences

Create a new Java EE Web Project
Create a new Eclipse project for Java EE Web development

Create a new Javascript project
Create a new Eclipse project for Javascript development

Checkout projects from Git
Checkout Eclipse projects hosted in a Git repository

Import existing projects
Import existing Eclipse projects from the filesystem or archive

Launch the Eclipse Marketplace
Enhance your IDE with additional plugins and install your Marketplace favorites

Overview
Get an overview of the features

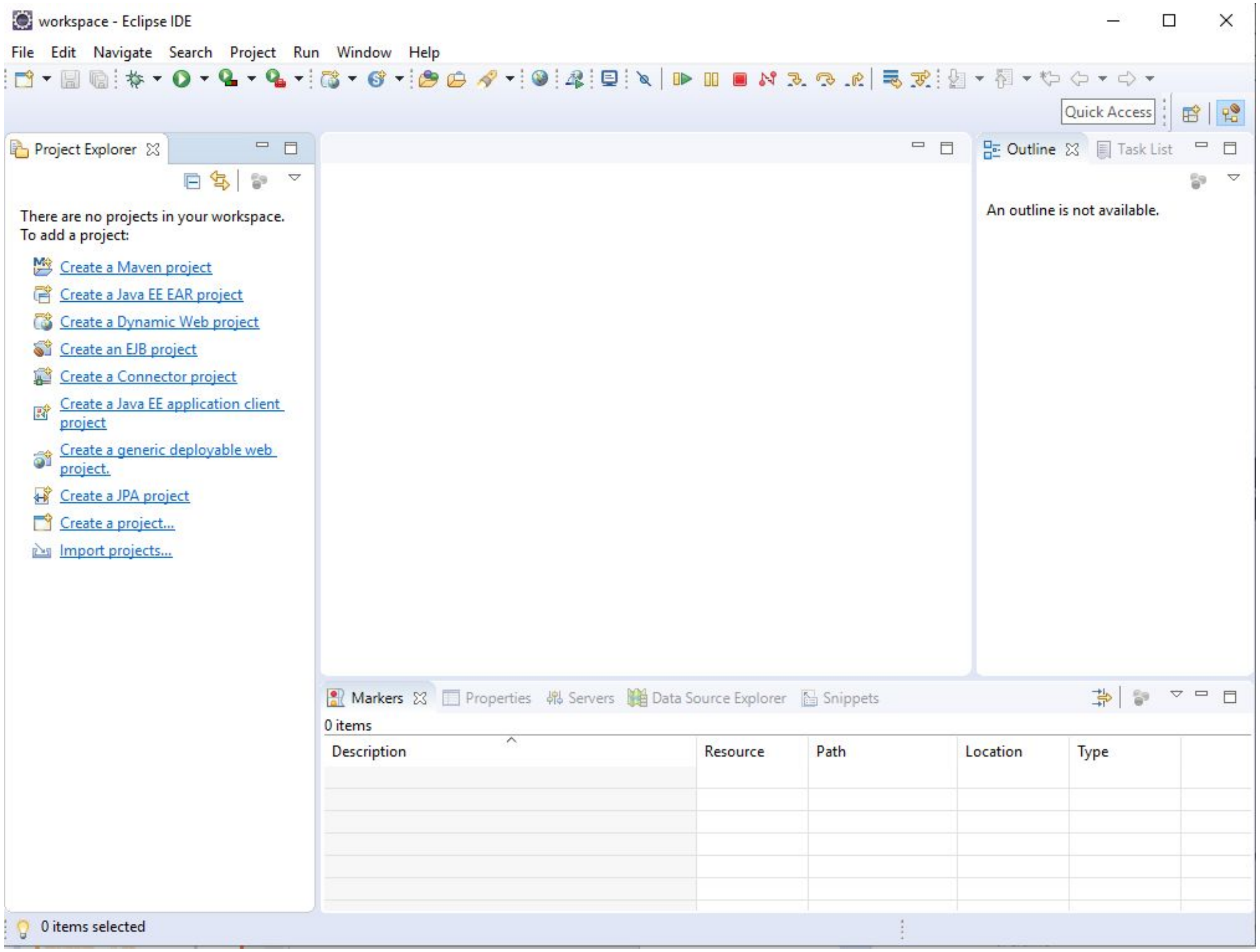
Tutorials
Go through tutorials

Samples
Try out the samples

What's New
Find out what is new

☑ Always show Welcome at start up

Eclipse


workspace - Eclipse IDE
File
Edit
Navigate
Search
Project
Run
Window
Help
Quick Access
Project Explorer
Outline
Task List
Markers
Properties
Servers
Data Source Explorer
Snippets

There are no projects in your workspace.
To add a project:

- Create a Maven project
- Create a Java EE EAR project
- Create a Dynamic Web project
- Create an EJB project
- Create a Connector project
- Create a Java EE application client project
- Create a generic deployable web project.
- Create a JPA project
- Create a project...
- Import projects...

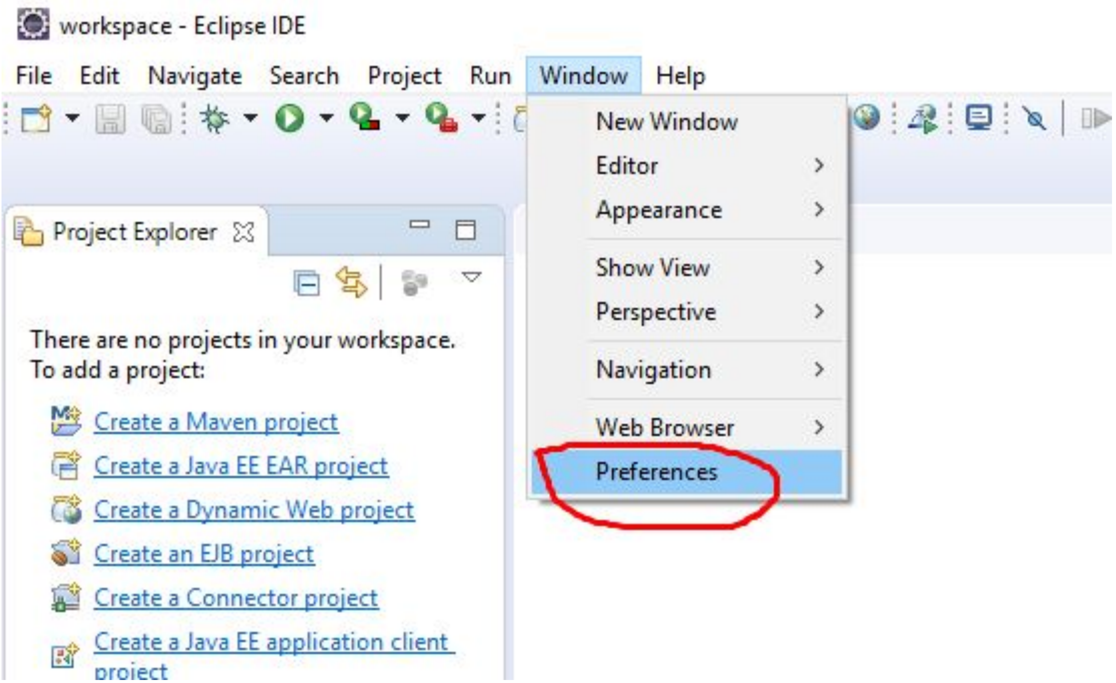
An outline is not available.

0 items

Description	Resource	Path	Location	Type

0 items selected

Eclipse


workspace - Eclipse IDE
File
Edit
Navigate
Search
Project
Run
Window
Help
New Window
Editor
Appearance
Show View
Perspective
Navigation
Web Browser
Preferences
Project Explorer

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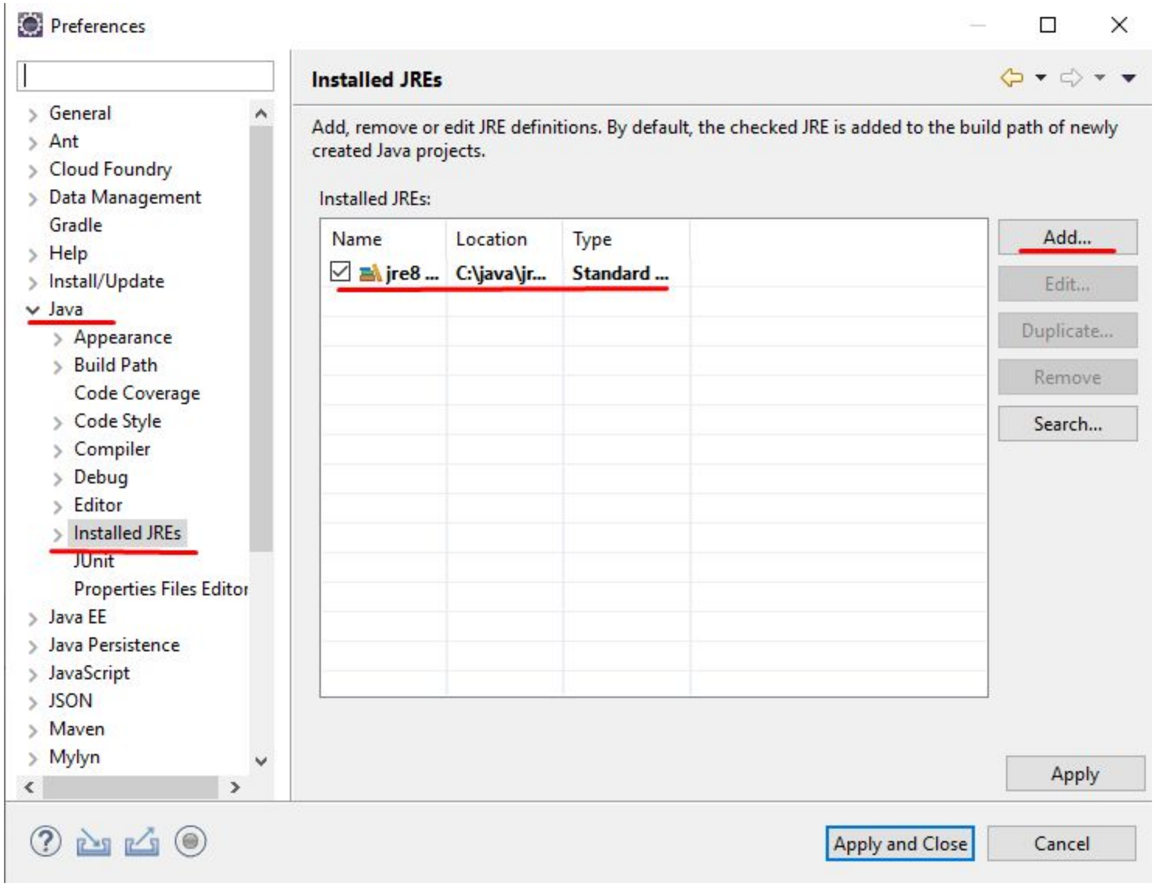
- Create a Maven project
- Create a Java EE EAR project
- Create a Dynamic Web project
- Create an EJB project
- Create a Connector project
- Create a Java EE application client project

Eclipse



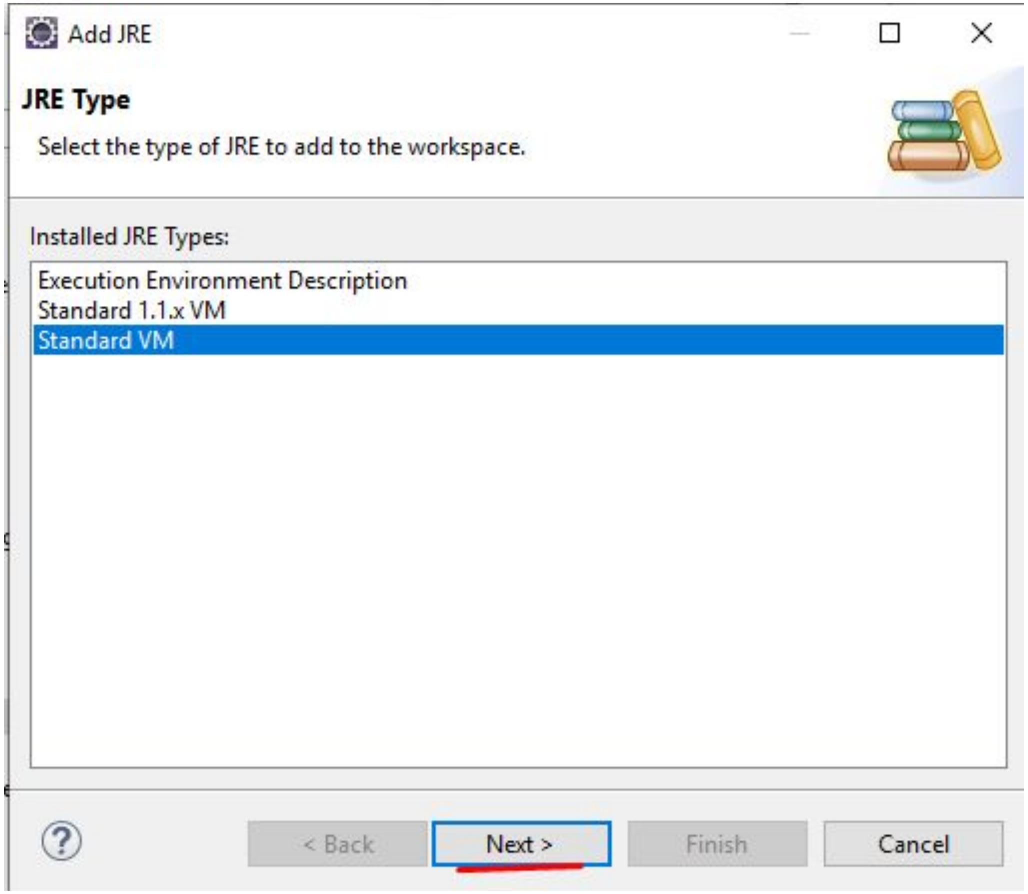
Preferences
General
Ant
Cloud Foundry
Data Management
Gradle
Help
Install/Update
Java
Appearance
Build Path
Code Coverage
Code Style
Compiler
Debug
Editor
Installed JREs
JUnit
Properties Files Editor
Java EE
Java Persistence
JavaScript
JSON
Maven
Mylyn
Installed JREs
Add...
Edit...
Duplicate...
Remove
Search...
Apply
Apply and Close
Cancel

Add, remove or edit JRE definitions. By default, the checked JRE is added to the build path of newly created Java projects.

Installed JREs:

Name	Location	Type
☑ jre8 ...	C:\java\jr...	Standard ...

Eclipse



Add JRE

JRE Type

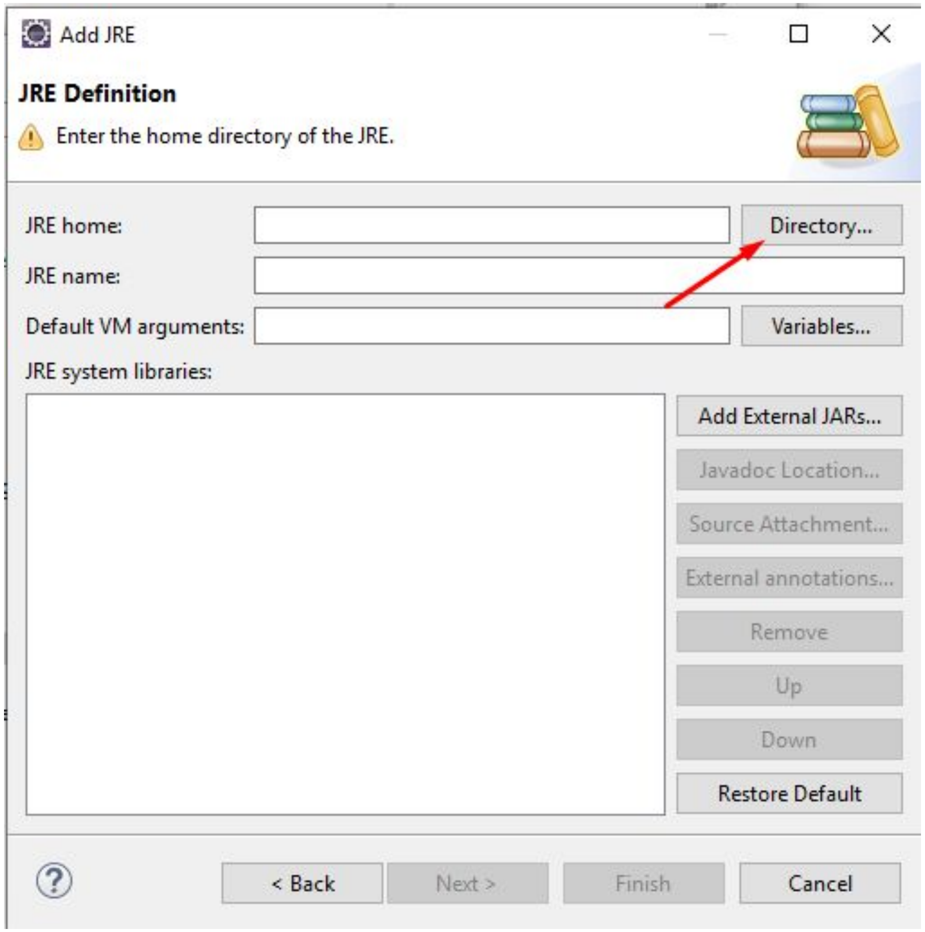
Select the type of JRE to add to the workspace.

Installed JRE Types:

Execution Environment Description
Standard 1.1.x VM
Standard VM

< Back
Next >
Finish
Cancel

Eclipse



Add JRE

JRE Definition

Enter the home directory of the JRE.

JRE home:

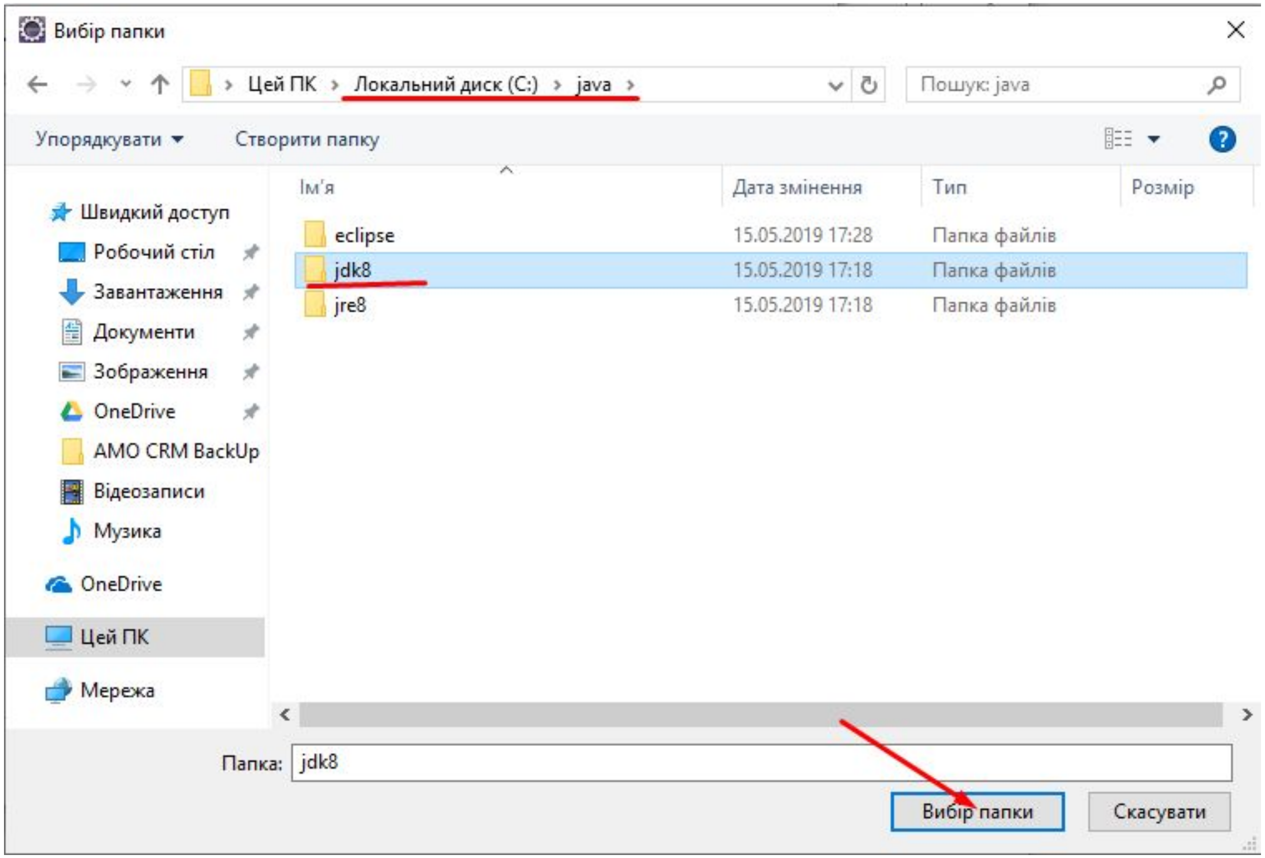
JRE name:

Default VM arguments:

JRE system libraries:

Directory...
Variables...
Add External JARs...
Javadoc Location...
Source Attachment...
External annotations...
Remove
Up
Down
Restore Default
< Back
Next >
Finish
Cancel

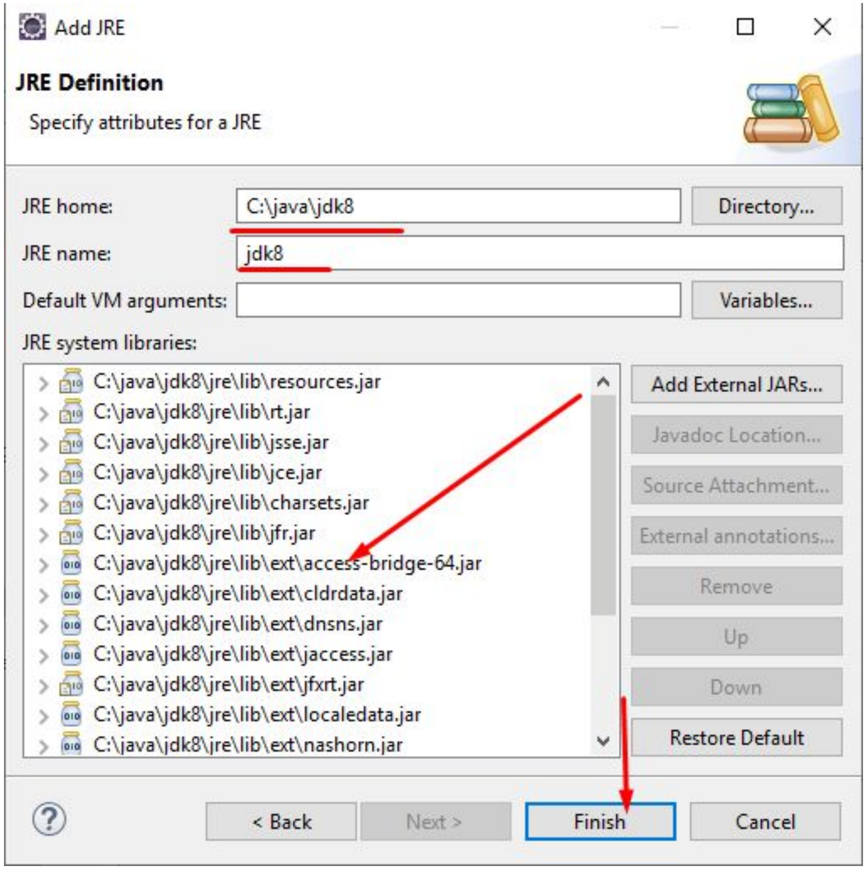
Eclipse


Вибір папки
Цей ПК › Локальний диск (C:) › java ›
Пошук: java
Упорядкувати ▾
Створити папку
Швидкий доступ
Робочий стіл
Завантаження
Документи
Зображення
OneDrive
AMO CRM BackUp
Відеозаписи
Музика
OneDrive
Цей ПК
Мережа
Вибір папки
Скасувати

Ім'я	Дата змінення	Тип	Розмір
eclipse	15.05.2019 17:28	Папка файлів	
jdk8	15.05.2019 17:18	Папка файлів	
jre8	15.05.2019 17:18	Папка файлів	

Папка: jdk8

Eclipse



Add JRE

JRE Definition

Specify attributes for a JRE

JRE home: C:\java\jdk8

JRE name: jdk8

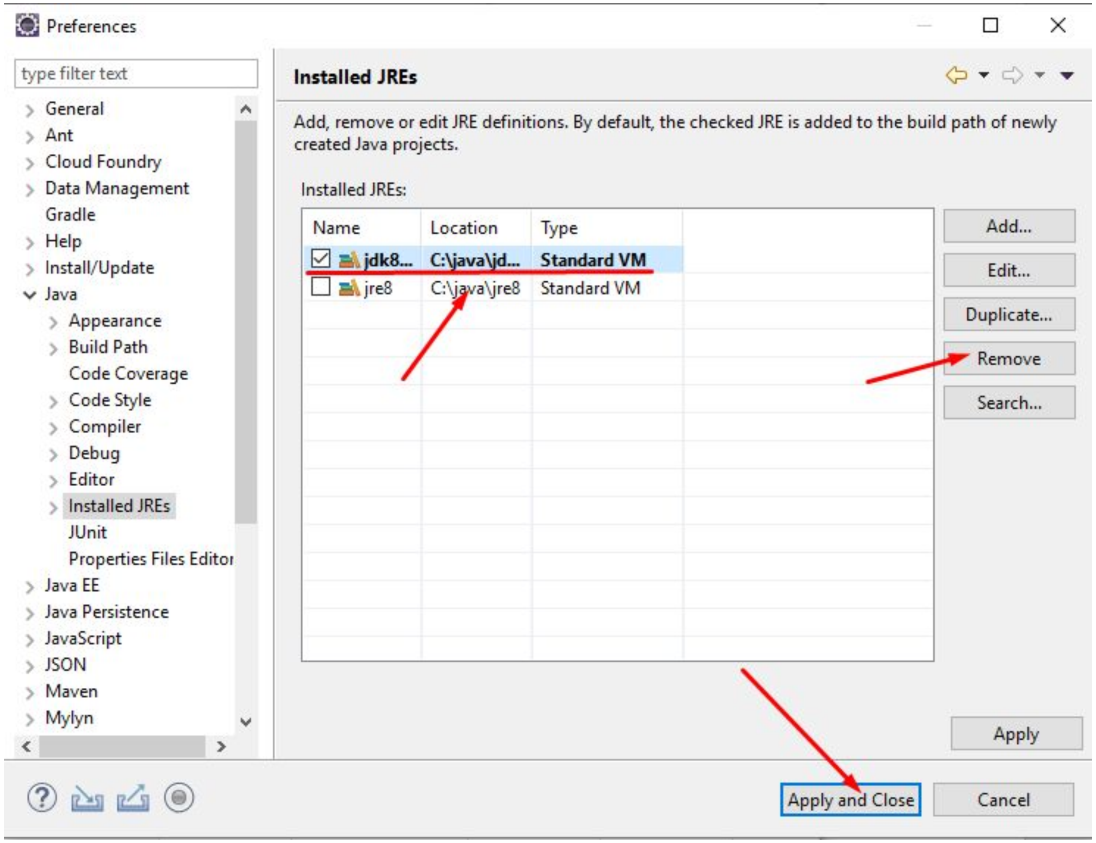
Default VM arguments:

JRE system libraries:

- C:\java\jdk8\jre\lib\resources.jar
- C:\java\jdk8\jre\lib\rt.jar
- C:\java\jdk8\jre\lib\jsse.jar
- C:\java\jdk8\jre\lib\jce.jar
- C:\java\jdk8\jre\lib\charsets.jar
- C:\java\jdk8\jre\lib\jfr.jar
- C:\java\jdk8\jre\lib\ext\access-bridge-64.jar
- C:\java\jdk8\jre\lib\ext\cldrdata.jar
- C:\java\jdk8\jre\lib\ext\dnsns.jar
- C:\java\jdk8\jre\lib\ext\jaccess.jar
- C:\java\jdk8\jre\lib\ext\jfxrt.jar
- C:\java\jdk8\jre\lib\ext\localedata.jar
- C:\java\jdk8\jre\lib\ext\nashorn.jar

Directory...
Variables...
Add External JARs...
Javadoc Location...
Source Attachment...
External annotations...
Remove
Up
Down
Restore Default
< Back
Next >
Finish
Cancel

Eclipse



Preferences
type filter text
General
Ant
Cloud Foundry
Data Management
Gradle
Help
Install/Update
Java
Appearance
Build Path
Code Coverage
Code Style
Compiler
Debug
Editor
Installed JREs
JUnit
Properties Files Editor
Java EE
Java Persistence
JavaScript
JSON
Maven
Mylyn
Add...
Edit...
Duplicate...
Remove
Search...
Apply
Apply and Close
Cancel

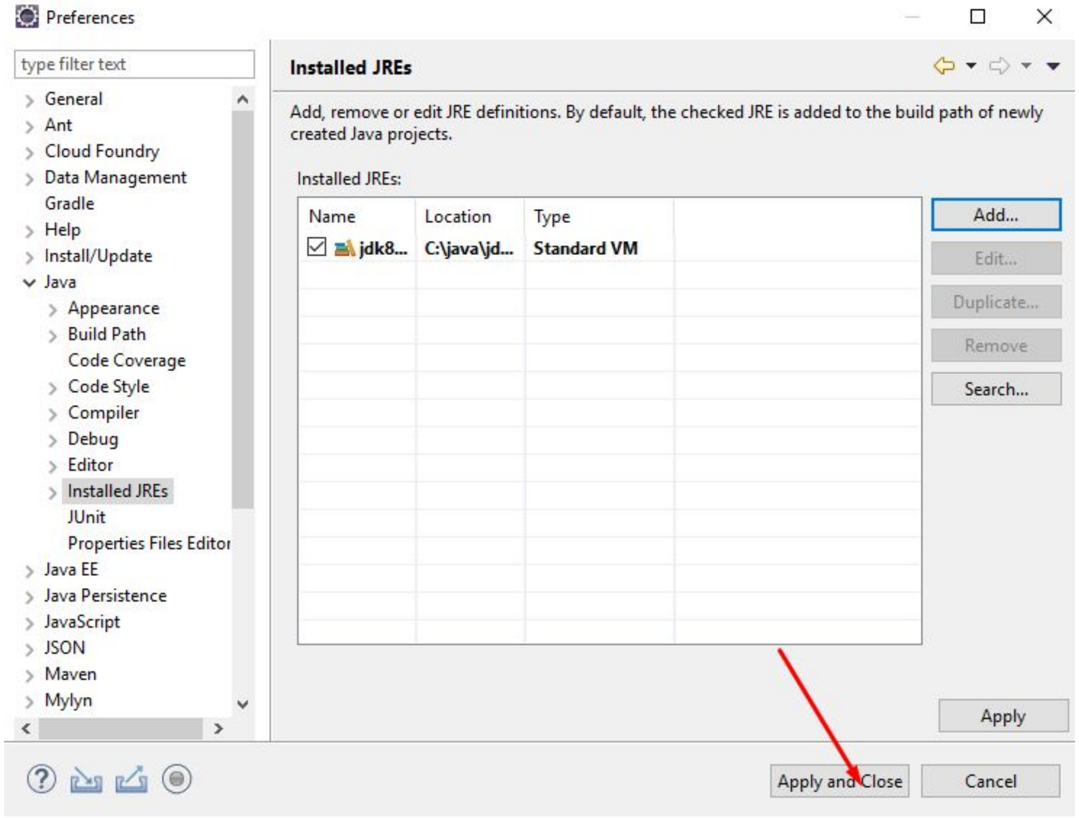
Installed JREs

Add, remove or edit JRE definitions. By default, the checked JRE is added to the build path of newly created Java projects.

Installed JREs:

	Name	Location	Type
☑	**jdk8...**	**C:\java\jd...**	**Standard VM**
☐	jre8	C:\java\jre8	Standard VM

Eclipse


Preferences
type filter text
General
Ant
Cloud Foundry
Data Management
Gradle
Help
Install/Update
Java
Appearance
Build Path
Code Coverage
Code Style
Compiler
Debug
Editor
Installed JREs
JUnit
Properties Files Editor
Java EE
Java Persistence
JavaScript
JSON
Maven
Mylyn
Add...
Edit...
Duplicate...
Remove
Search...
Apply
Apply and Close
Cancel

Installed JREs

Add, remove or edit JRE definitions. By default, the checked JRE is added to the build path of newly created Java projects.

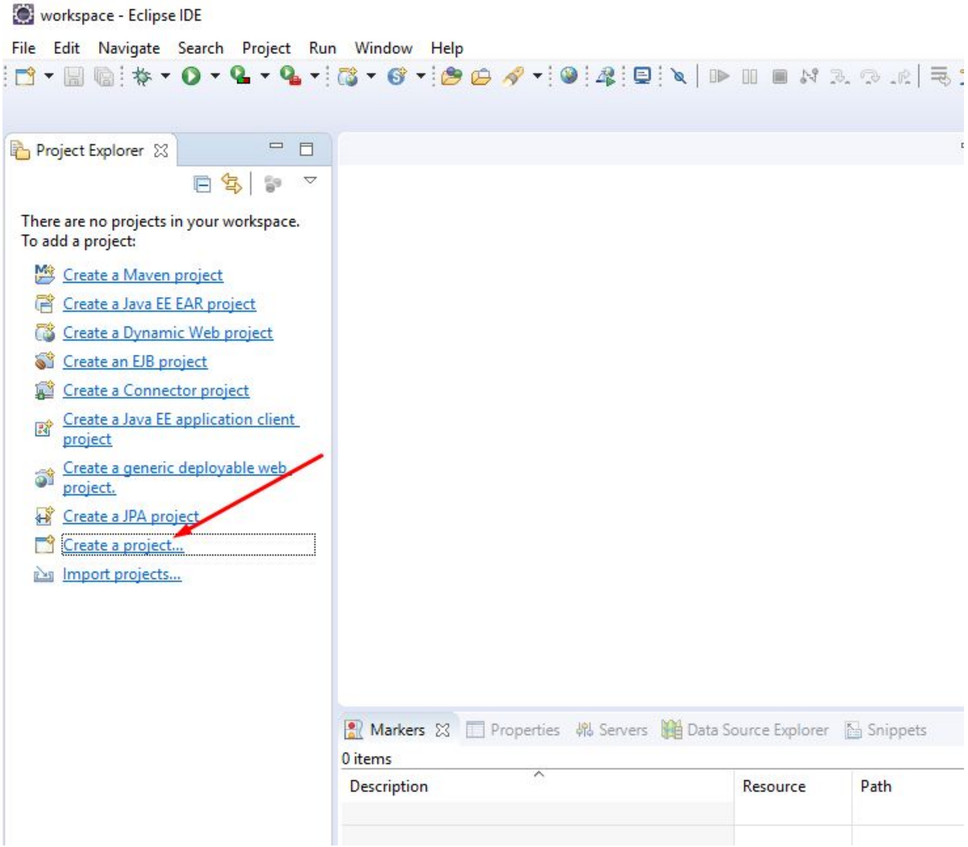
Installed JREs:

Name	Location	Type
☑ **jdk8...**	**C:\java\jd...**	**Standard VM**

Практика

1. Пишем Hello World
2. Запускаем его на выполнение

Eclipse


workspace - Eclipse IDE
File
Edit
Navigate
Search
Project
Run
Window
Help
Project Explorer
Markers
Properties
Servers
Data Source Explorer
Snippets
0 items
Description
Resource
Path

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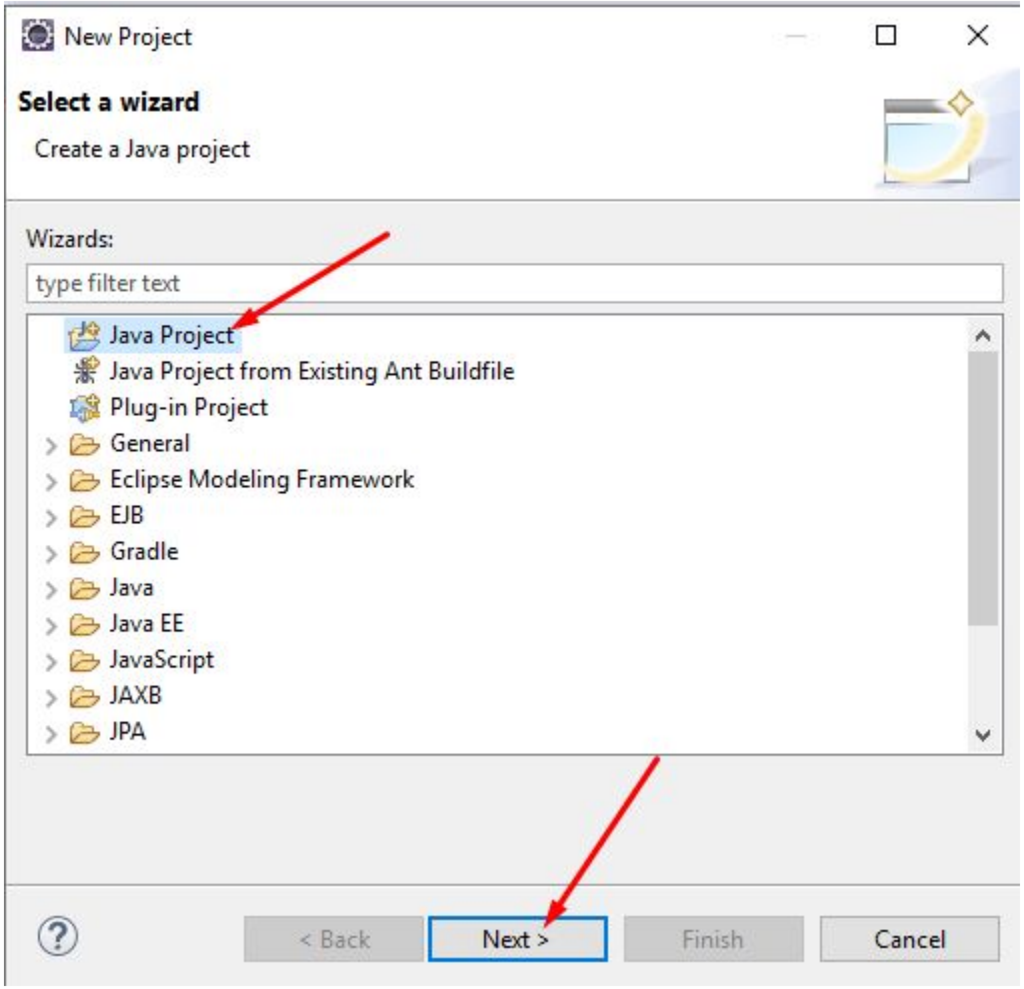
- Create a Dynamic Web project
- Create an EJB project
- Create a Connector project
- Create a Java EE application client project
- Create a generic deployable web project.
- Create a JPA project
- Create a project...
- Import projects...

Eclipse



New Project

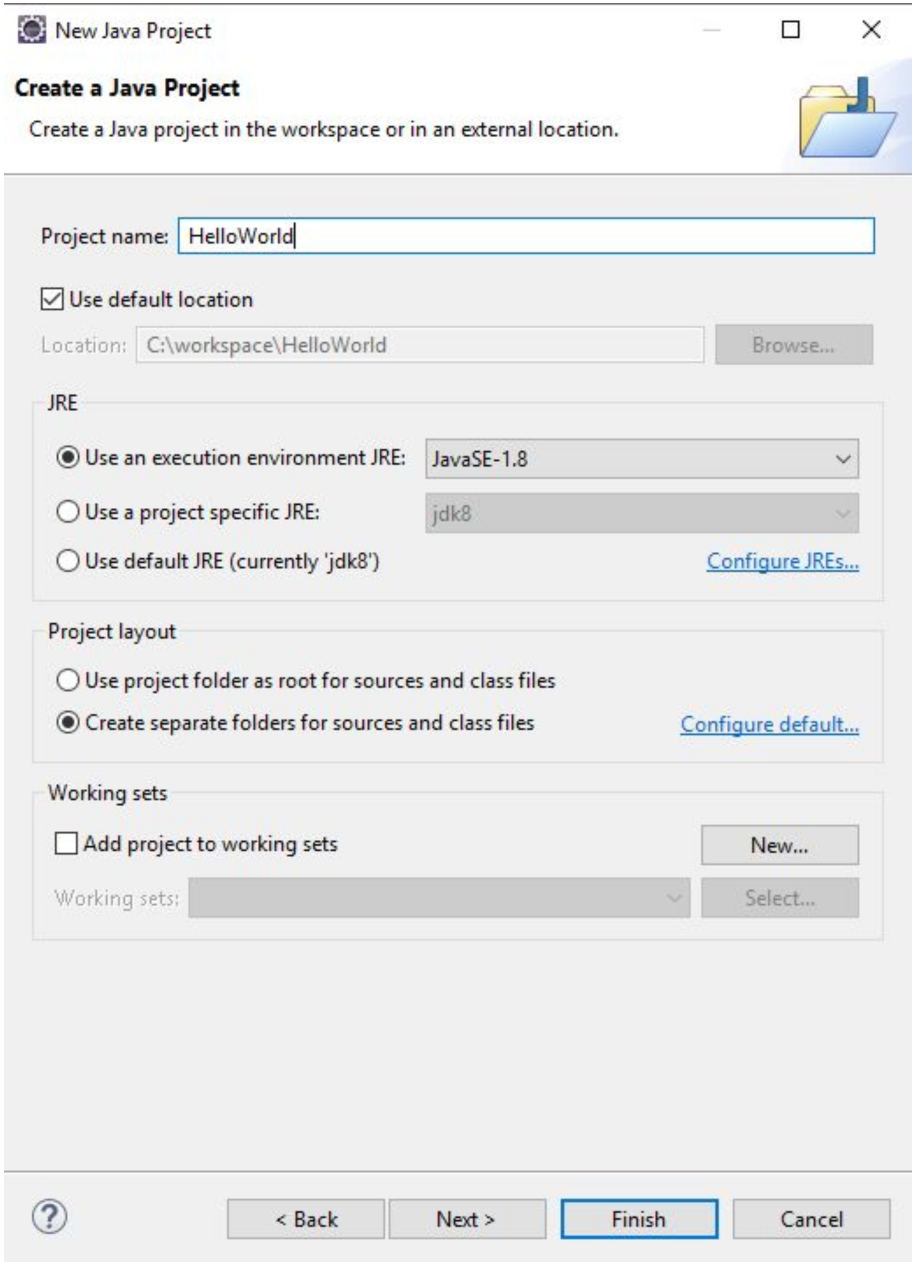
Select a wizard

Create a Java project

Wizards:

type filter text

Java Project
Java Project from Existing Ant Buildfile
Plug-in Project
General
Eclipse Modeling Framework
EJB
Gradle
Java
Java EE
JavaScript
JAXB
JPA
< Back
Next >
Finish
Cancel



New Java Project

Create a Java Project

Create a Java project in the workspace or in an external location.

Project name: HelloWorld

☑ Use default location

Location: C:\workspace\HelloWorld

JRE

● Use an execution environment JRE: JavaSE-1.8

○ Use a project specific JRE: jdk8

○ Use default JRE (currently 'jdk8')

Project layout

○ Use project folder as root for sources and class files

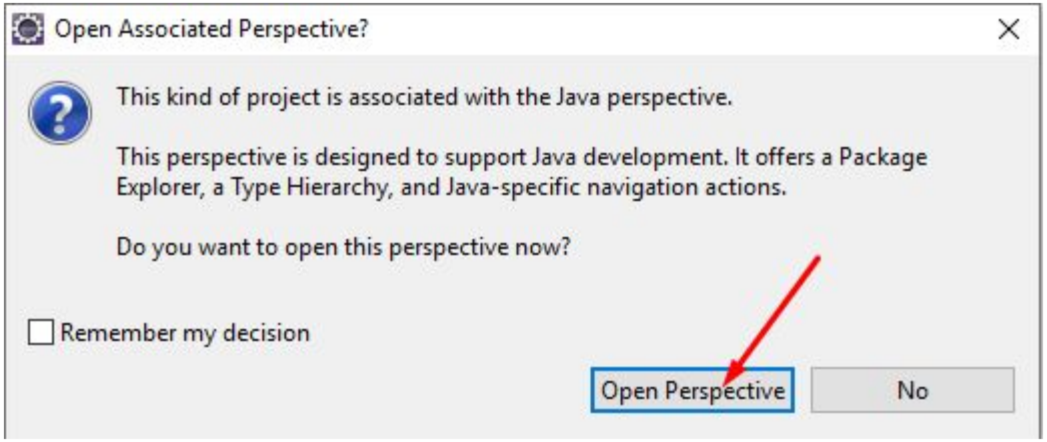
● Create separate folders for sources and class files

Working sets

☐ Add project to working sets

Working sets:

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



Open Associated Perspective?

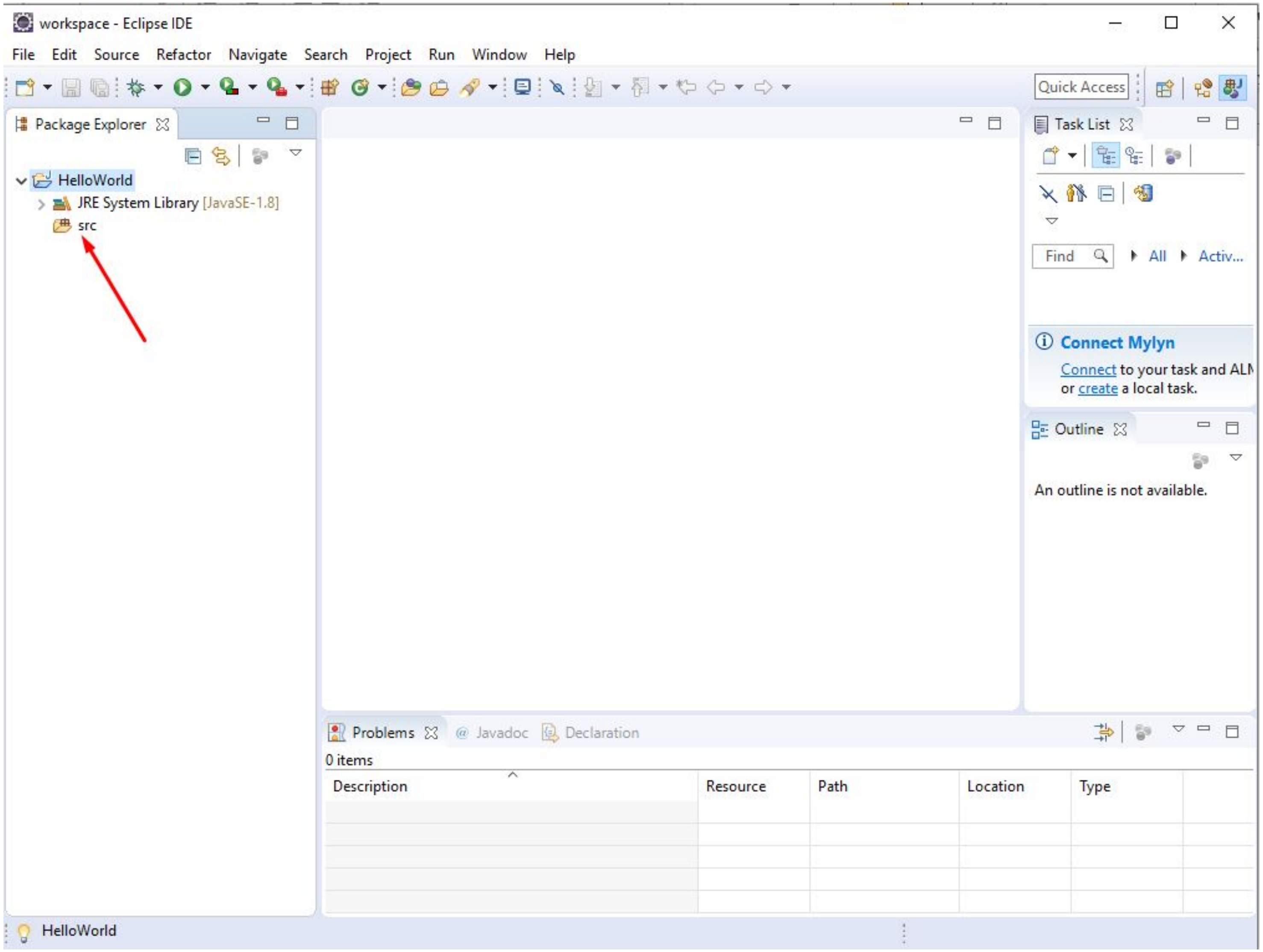
This kind of project is associated with the Java perspective.

This perspective is designed to support Java development. It offers a Package Explorer, a Type Hierarchy, and Java-specific navigation actions.

Do you want to open this perspective now?

☐ Remember my decision

Open Perspective
No

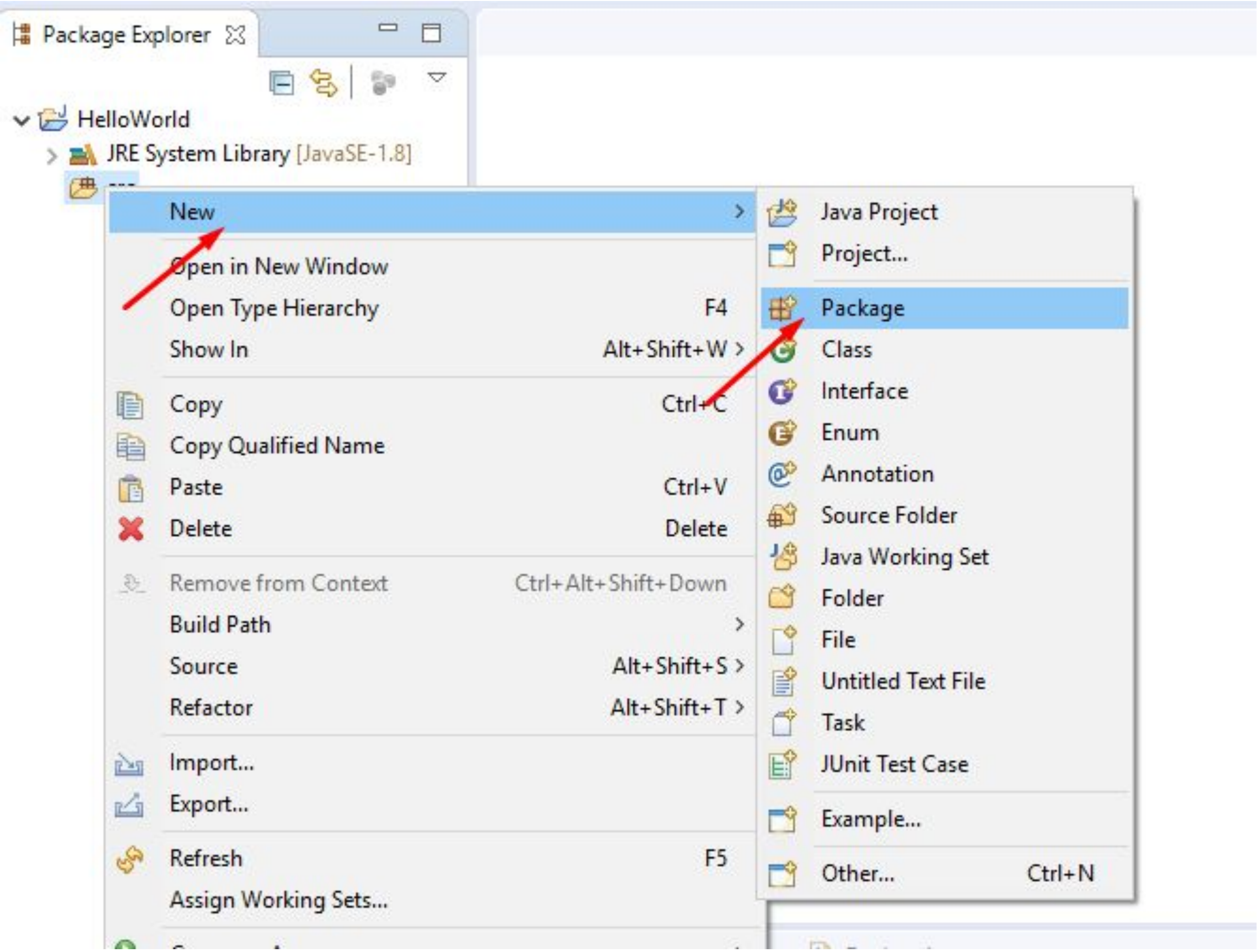

workspace - Eclipse IDE
File
Edit
Source
Refactor
Navigate
Search
Project
Run
Window
Help
Quick Access
Package Explorer
HelloWorld
JRE System Library [JavaSE-1.8]
src
Task List
Find
All
Activ...
Outline
Problems
Javadoc
Declaration
HelloWorld

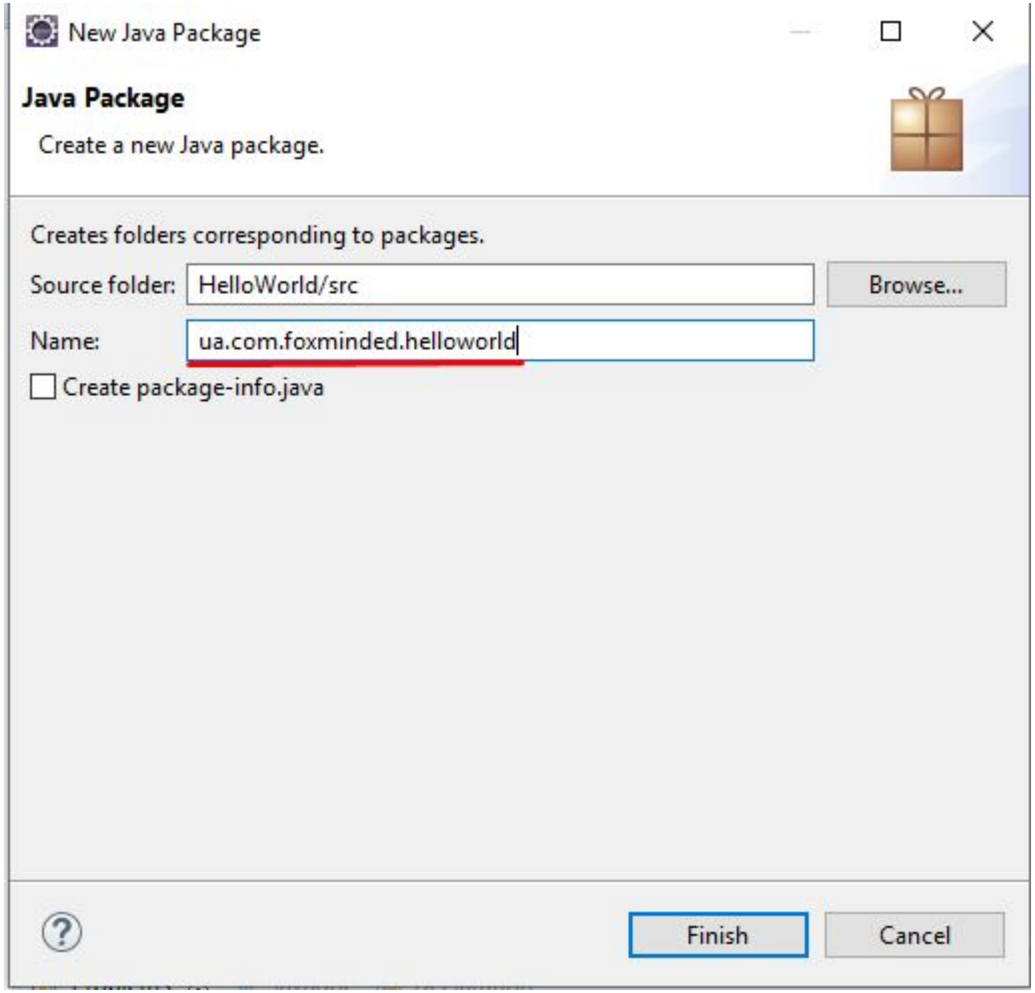
Connect Mylyn
Connect to your task and ALM or create a local task.

An outline is not available.

0 items

Description	Resource	Path	Location	Type


Package Explorer
HelloWorld
JRE System Library [JavaSE-1.8]
New
Open in New Window
Open Type Hierarchy F4
Show In Alt+Shift+W
Copy Ctrl+C
Copy Qualified Name
Paste Ctrl+V
Delete Delete
Remove from Context Ctrl+Alt+Shift+Down
Build Path
Source Alt+Shift+S
Refactor Alt+Shift+T
Import...
Export...
Refresh F5
Assign Working Sets...
Java Project
Project...
Package
Class
Interface
Enum
Annotation
Source Folder
Java Working Set
Folder
File
Untitled Text File
Task
JUnit Test Case
Example...
Other... Ctrl+N



New Java Package

Java Package

Create a new Java package.

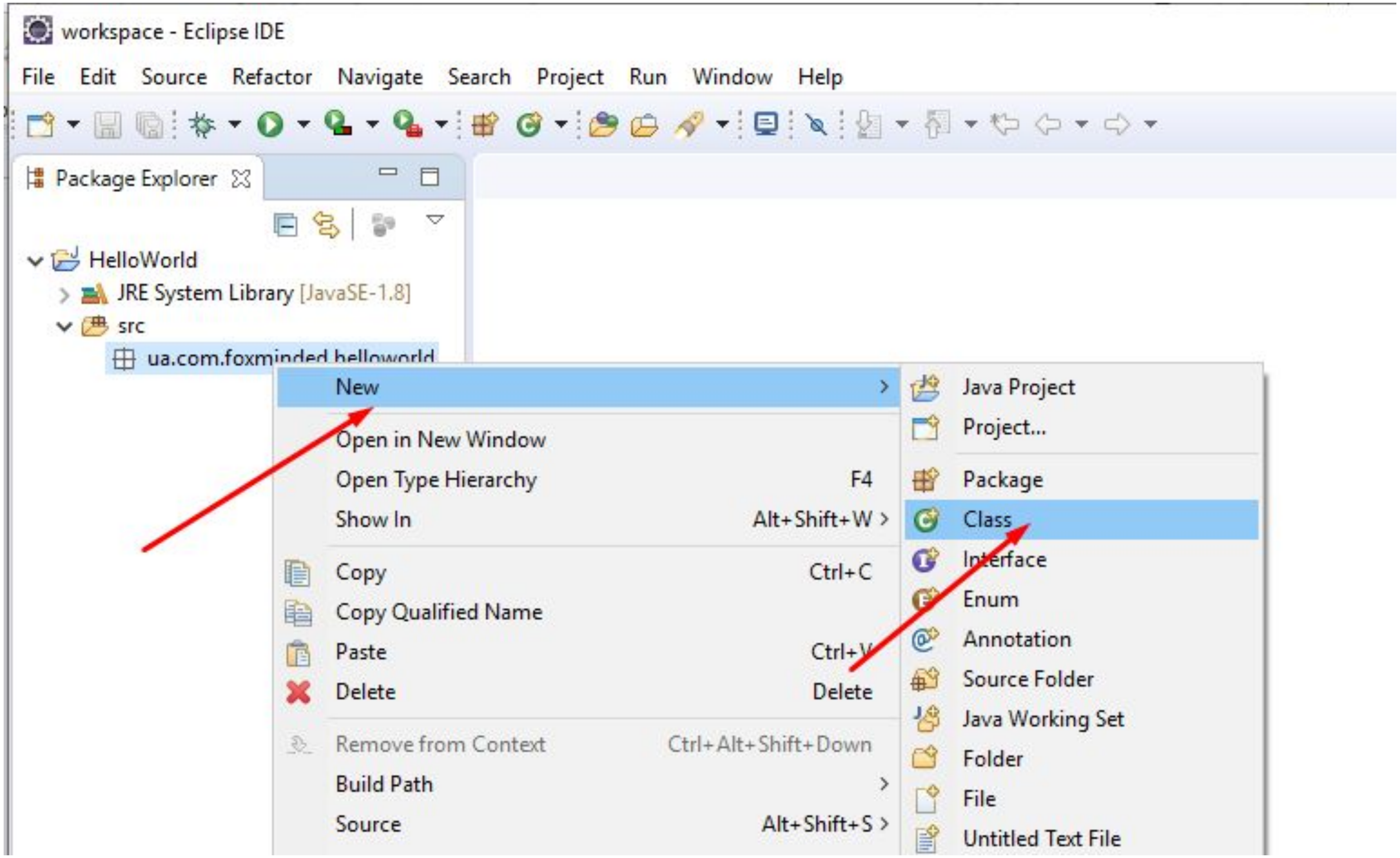
Creates folders corresponding to packages.

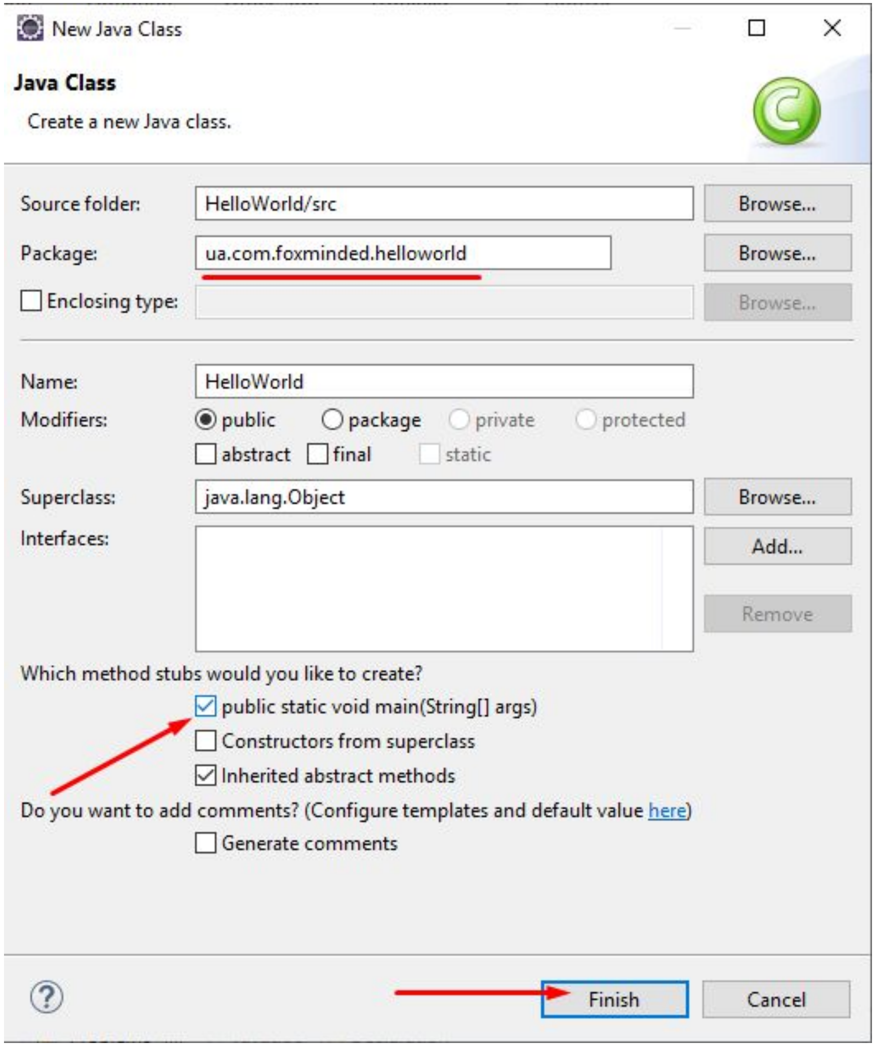
Source folder: HelloWorld/src

Name: ua.com.foxminded.helloworld

☐ Create package-info.java

Browse...
Finish
Cancel


workspace - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
HelloWorld
JRE System Library [JavaSE-1.8]
src
ua.com.foxminded.helloworld
New
Open in New Window
Open Type Hierarchy F4
Show In Alt+Shift+W
Copy Ctrl+C
Copy Qualified Name
Paste Ctrl+V
Delete Delete
Remove from Context Ctrl+Alt+Shift+Down
Build Path
Source Alt+Shift+S
Java Project
Project...
Package
Class
Interface
Enum
Annotation
Source Folder
Java Working Set
Folder
File
Untitled Text File



New Java Class

Java Class

Create a new Java class.

Source folder: HelloWorld/src [Browse...]

Package: ua.com.foxminded.helloworld [Browse...]

☐ Enclosing type: [Browse...]

Name: HelloWorld

Modifiers: ● public ○ package ○ private ○ protected

☐ abstract ☐ final ☐ static

Superclass: java.lang.Object [Browse...]

Interfaces: [Add...] [Remove]

Which method stubs would you like to create?

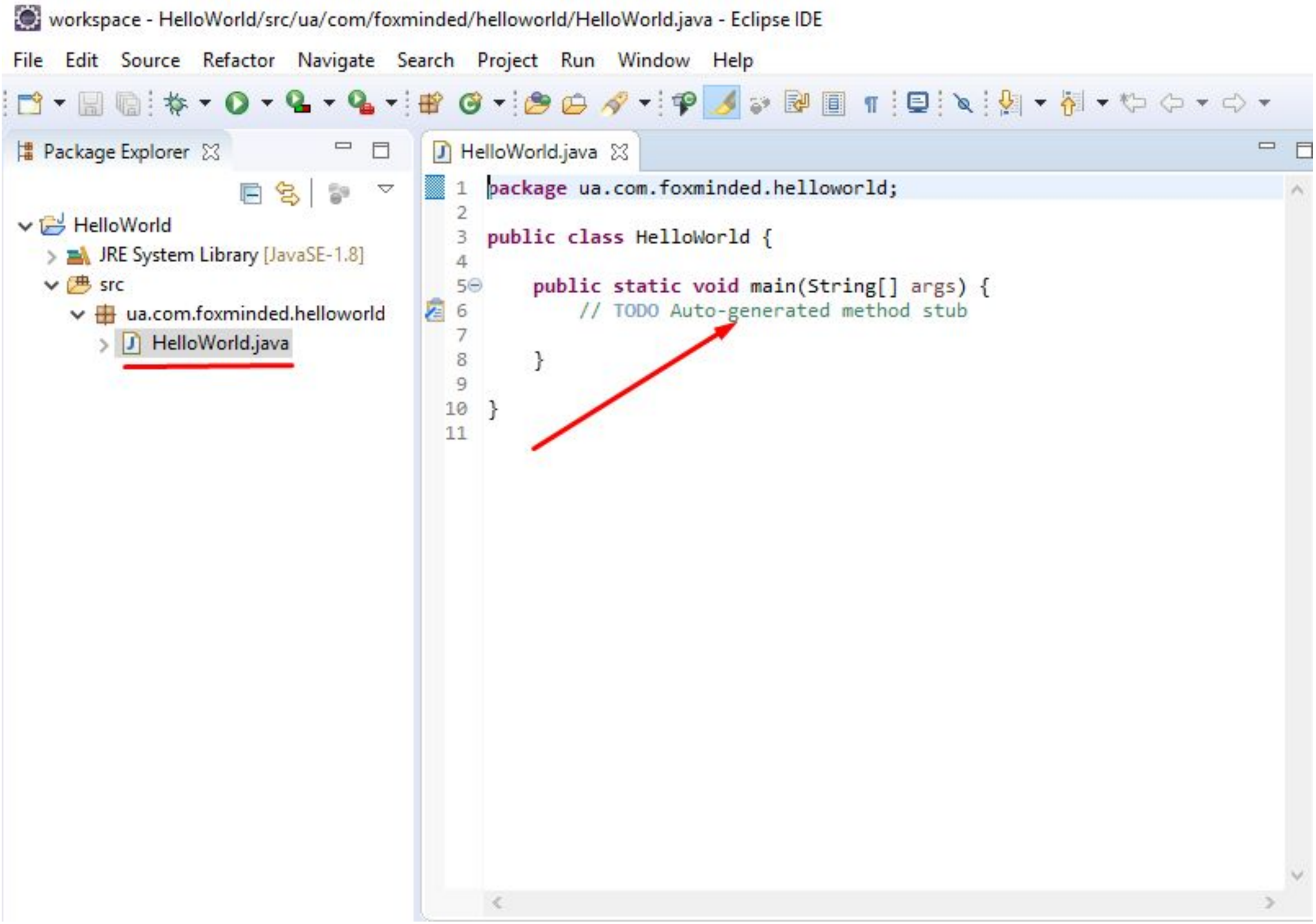
☑ public static void main(String[] args)

☐ Constructors from superclass

☑ Inherited abstract methods

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

☐ Generate comments


workspace - HelloWorld/src/ua/com/foxminded/helloworld/HelloWorld.java - Eclipse IDE
File
Edit
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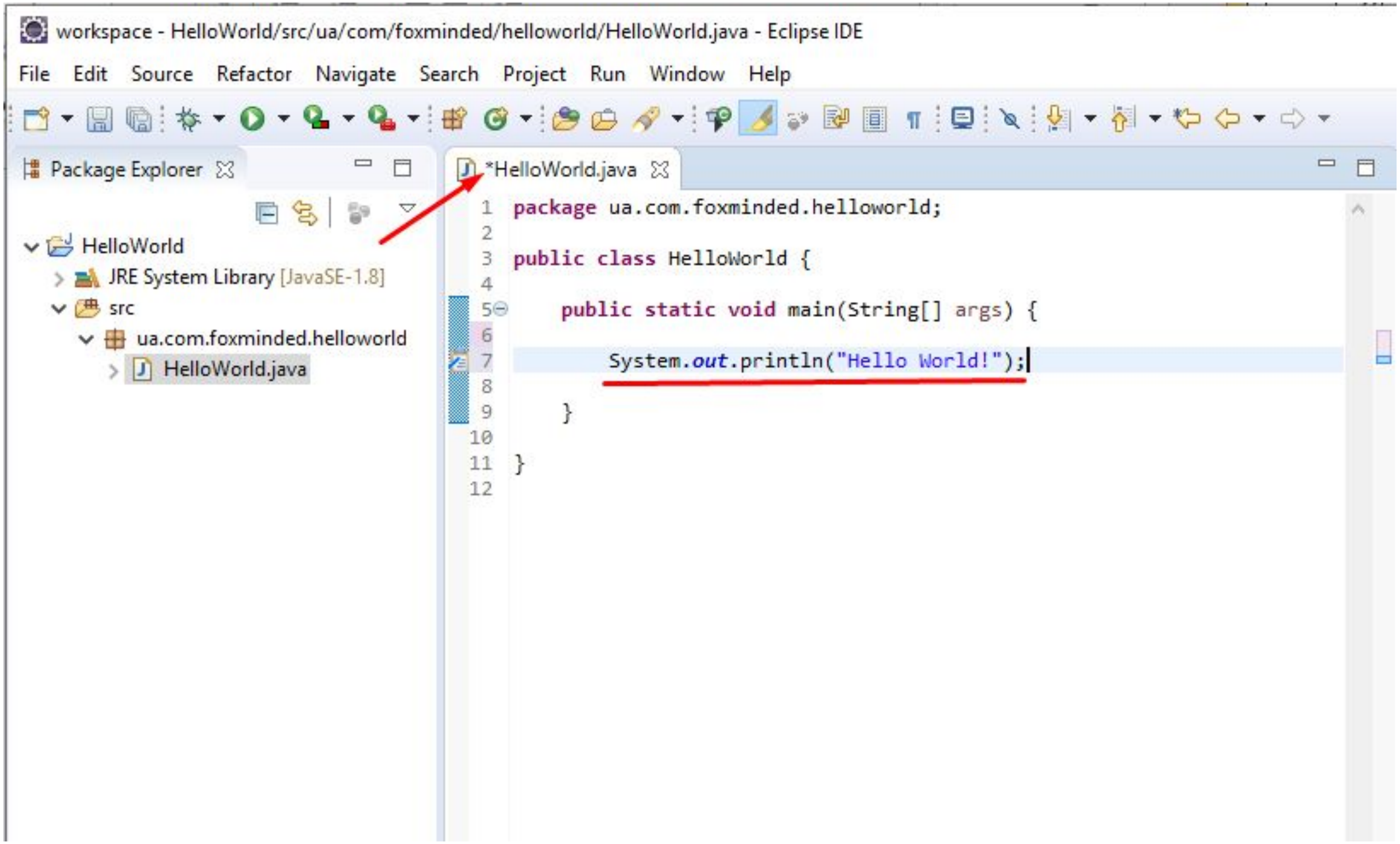
Refactor
Navigate
Search
Project
Run
Window
Help
Package Explorer
HelloWorld
JRE System Library [JavaSE-1.8]
src
ua.com.foxminded.helloworld
HelloWorld.java
HelloWorld.java

```java
package ua.com.foxminded.helloworld;

public class HelloWorld {

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

    }

}

```


workspace - HelloWorld/src/ua/com/foxminded/helloworld/HelloWorld.java - Eclipse IDE
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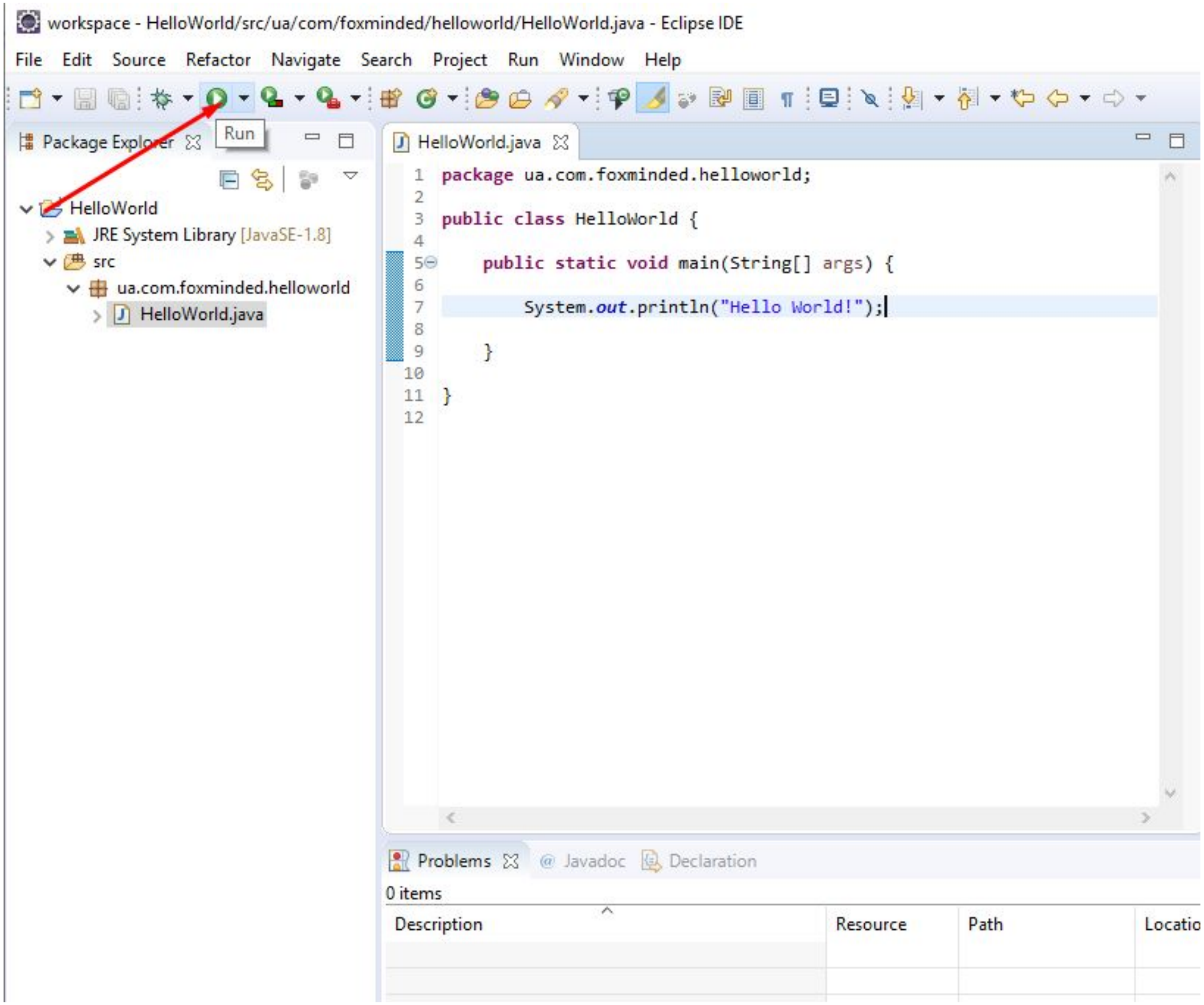
Package Explorer
HelloWorld
JRE System Library [JavaSE-1.8]
src
ua.com.foxminded.helloworld
HelloWorld.java
*HelloWorld.java

```java
package ua.com.foxminded.helloworld;

public class HelloWorld {

    public static void main(String[] args) {

        System.out.println("Hello World!");

    }

}

```


workspace - HelloWorld/src/ua/com/foxminded/helloworld/HelloWorld.java - Eclipse IDE
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Package Explorer
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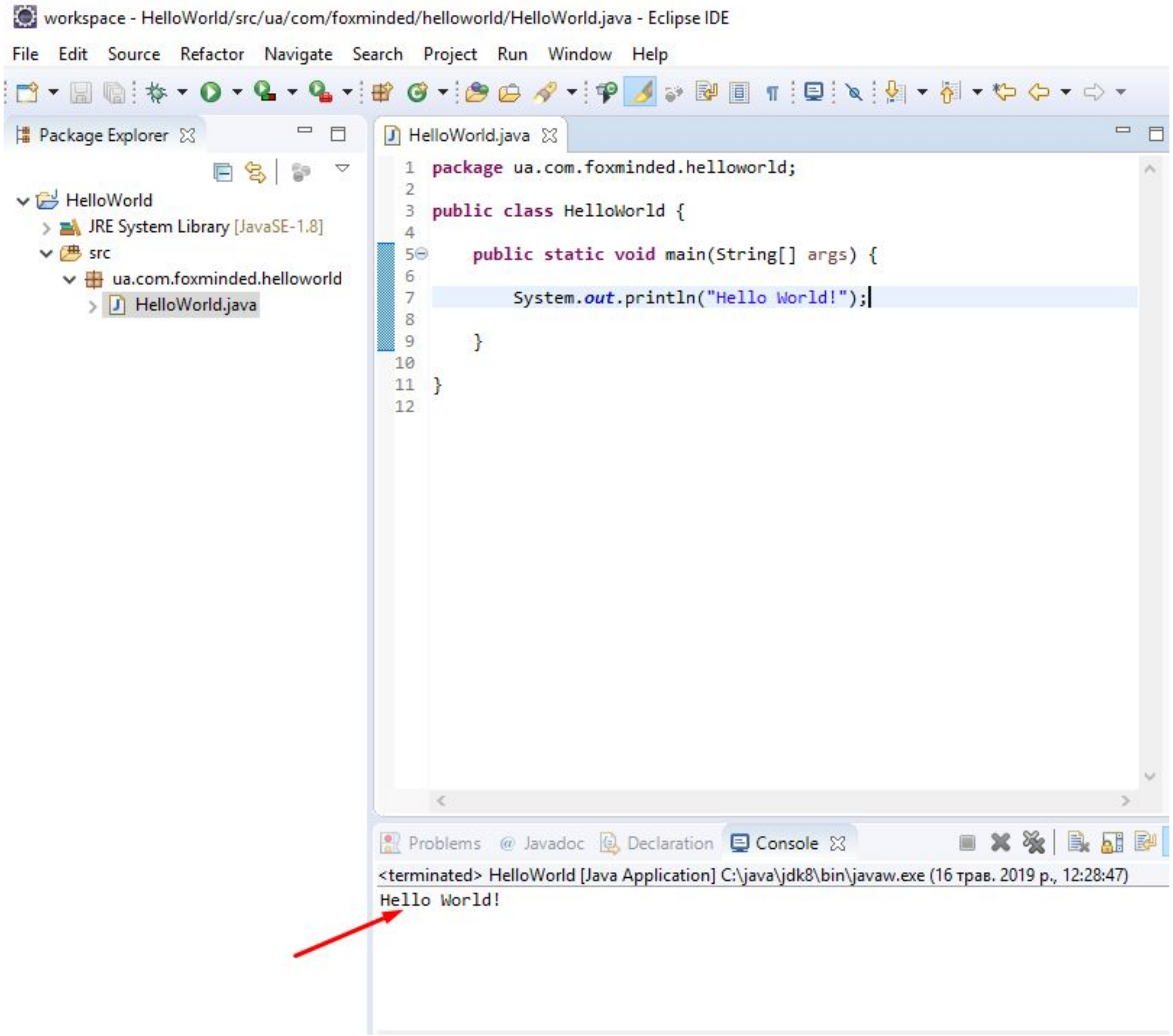
src
ua.com.foxminded.helloworld
HelloWorld.java
HelloWorld.java
Problems
Javadoc
Declaration
0 items
Description
Resource
Path
Locatio

```
package ua.com.foxminded.helloworld;

public class HelloWorld {

    public static void main(String[] args) {

        System.out.println("Hello World!");

    }

}

```


File
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Project
Run
Window
Help
Package Explorer
HelloWorld
JRE System Library [JavaSE-1.8]
src
ua.com.foxminded.helloworld
HelloWorld.java
Problems
@ Javadoc
Declaration
Console

workspace - HelloWorld/src/ua/com/foxminded/helloworld/HelloWorld.java - Eclipse IDE

HelloWorld.java

```java
package ua.com.foxminded.helloworld;

public class HelloWorld {

    public static void main(String[] args) {

        System.out.println("Hello World!");

    }

}

```

```
<terminated> HelloWorld [Java Application] C:\java\jdk8\bin\javaw.exe (16 трав. 2019 р., 12:28:47)
Hello World!
```

Ваши вопросы

demotivation.me

http://foxmindEd.com