Introduction to Labs

JDK and IntelliJ

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Topics list

1. Installing **JDK**.

2. Integrated Development Environment (IntelliJ)

What is a **JDK**?

- Java Development Kit (JDK).
- It includes **tools** for developing Java applications.
- It also includes a Runtime Environment (**JRE**)
  - **JRE** is the implementation of the JVM.

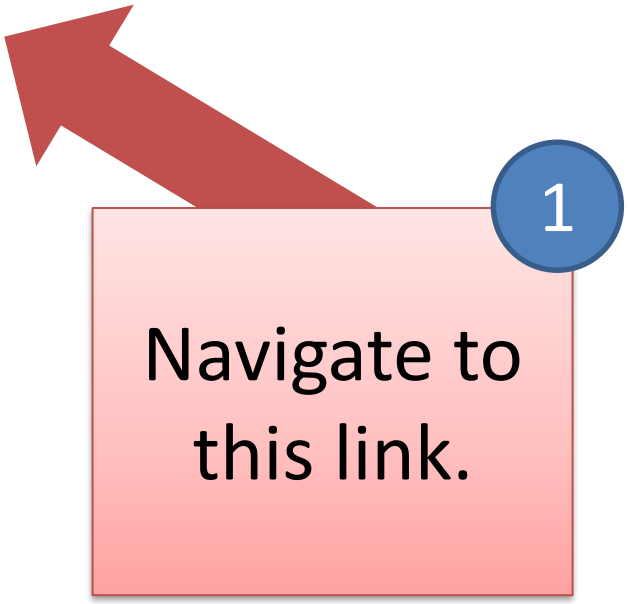
- Free from **Oracle** website.

Do I need to do an install?

Using College Computers only..

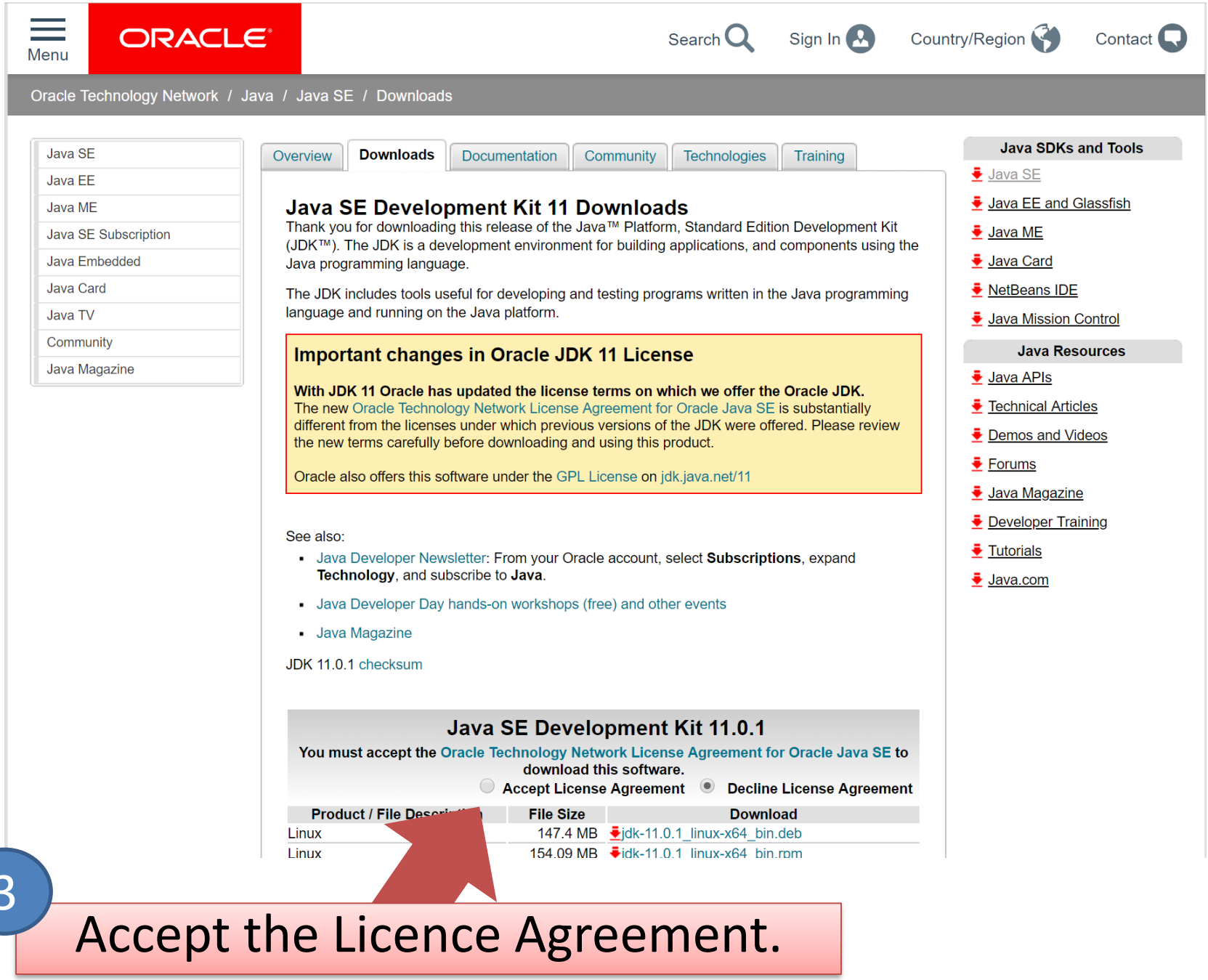
Using Personal Machine…

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



2

The following page is displayed. Click to Download.



3

Accept the Licence Agreement.

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 11.0.1 checksum

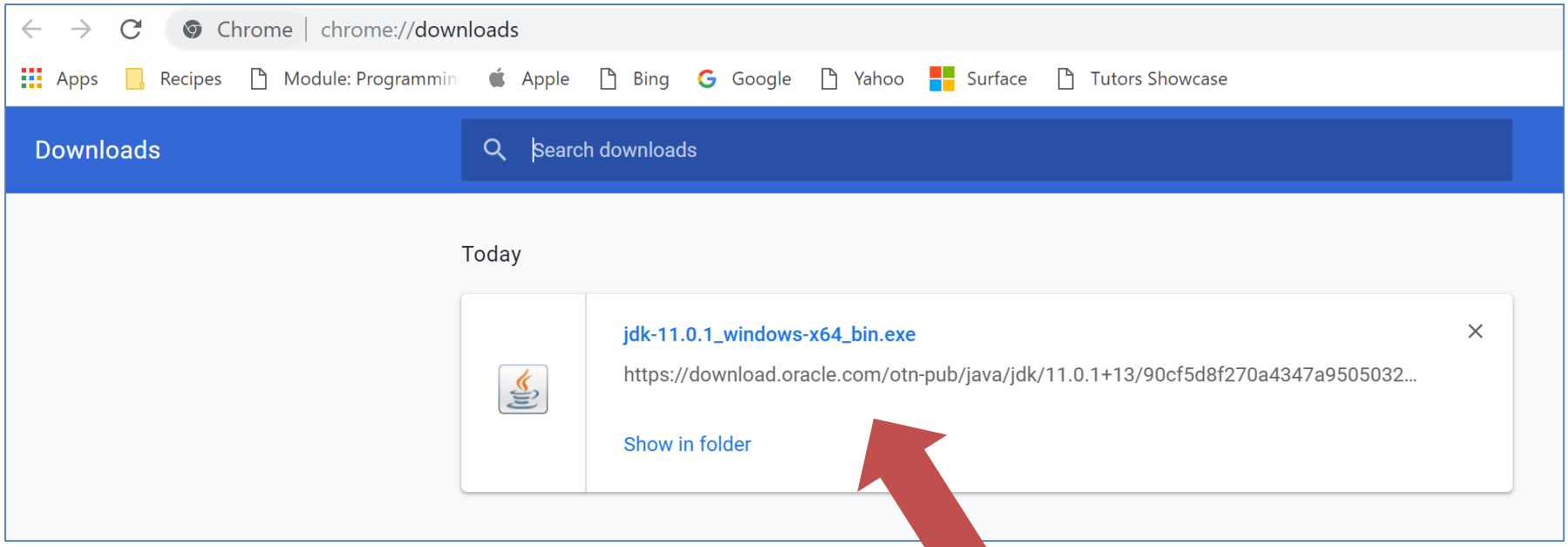
Java SE Development Kit 11.0.1

You must accept the Oracle Technology Network License Agreement for Oracle Java SE to download this software.
Thank you for accepting the Oracle Technology Network License Agreement for Oracle Java SE; you may now download this software.

Product / File Description	File Size	Download
Linux	147.4 MB	jdk-11.0.1_linux-x64_bin.deb
Linux	154.09 MB	jdk-11.0.1_linux-x64_bin.rpm
Linux	171.43 MB	jdk-11.0.1_linux-x64_bin.tar.gz
macOS	166.2 MB	jdk-11.0.1_osx-x64_bin.dmg
macOS	166.55 MB	jdk-11.0.1_osx-x64_bin.tar.gz
Solaris SPARC	186.8 MB	jdk-11.0.1_solaris-sparcv9_bin.tar.gz
Windows	150.98 MB	jdk-11.0.1_windows-x64_bin.exe
Windows	170.99 MB	jdk-11.0.1_windows-x64_bin.zip

4

Download the Kit for your operating system.

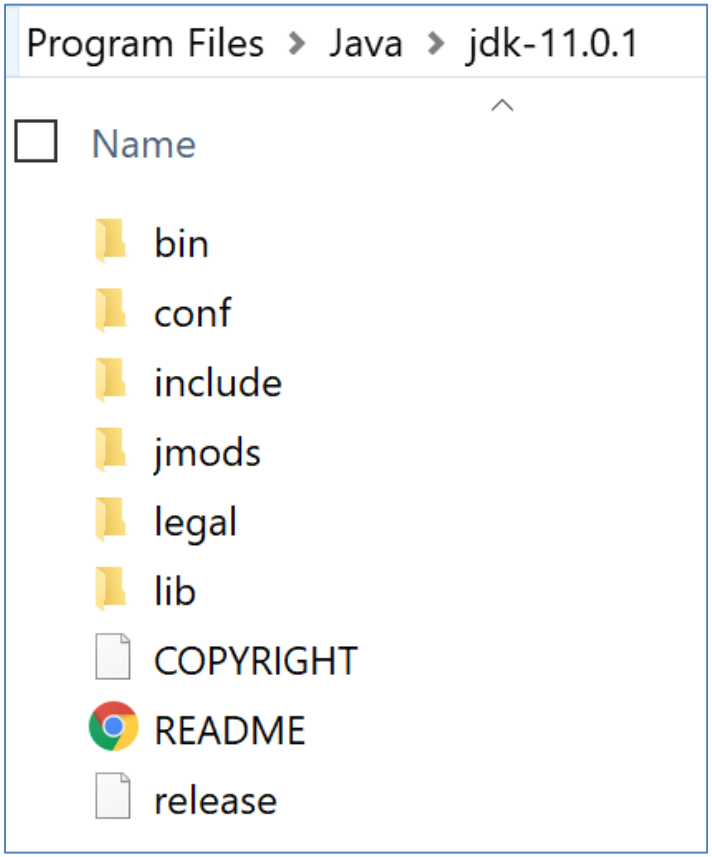


Click on the downloaded file to start the JDK installation.

5

6

Once your JDK is installed,
you should have a folder structure
similar to this one:



Topics list

1. Installing **JDK**.

2. Integrated Development Environment (IntelliJ)

” Most people talk about Java the language, and this may sound odd coming from me, but I could hardly care less. At the core of the Java ecosystem is the JVM. “

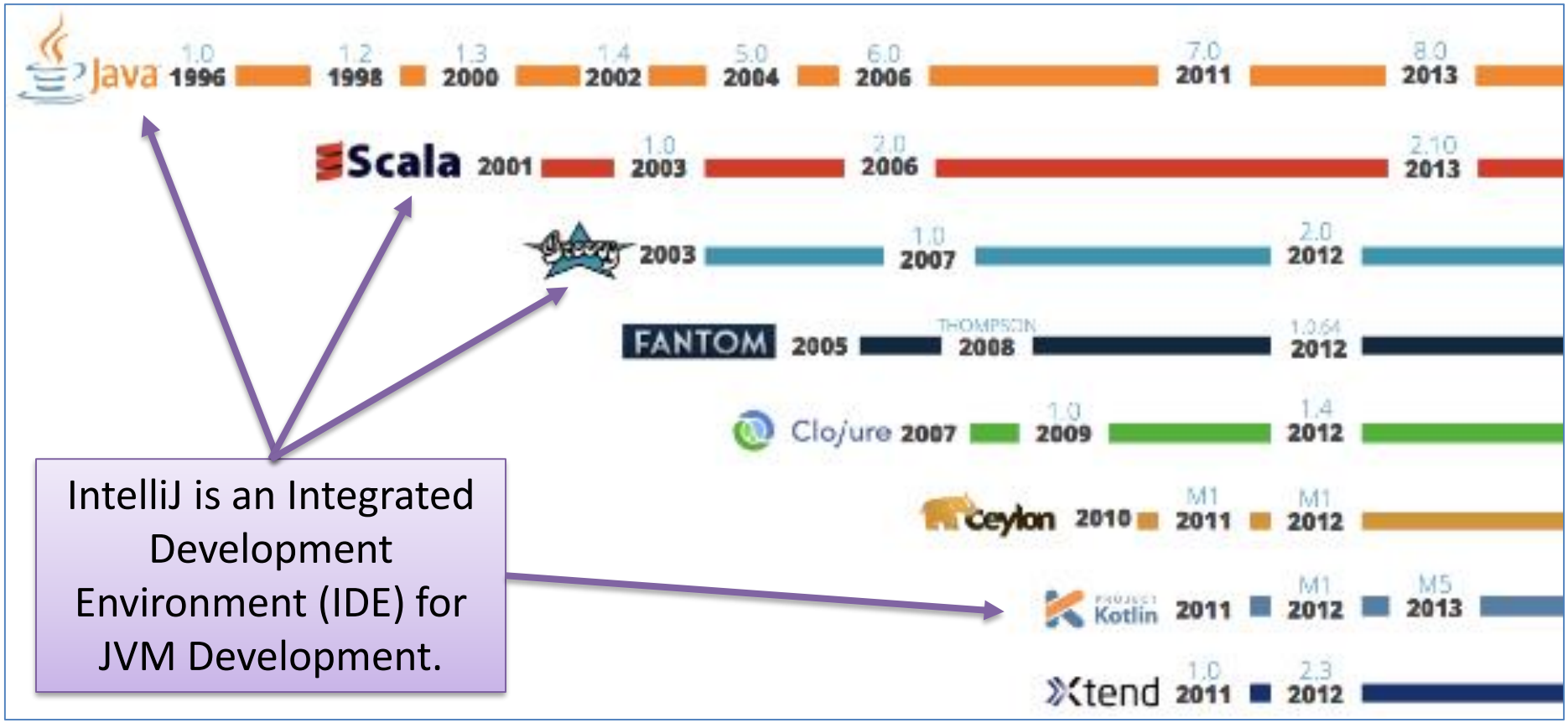
James Gosling,

Creator of the Java Programming Language(2011, TheServerSide)

JVM Language History

Source

IntelliJ and the JVM



IntelliJ and the JVM

IntelliJ is also the engine underlying Android Studio.

Android Studio

Do I need to do an install?

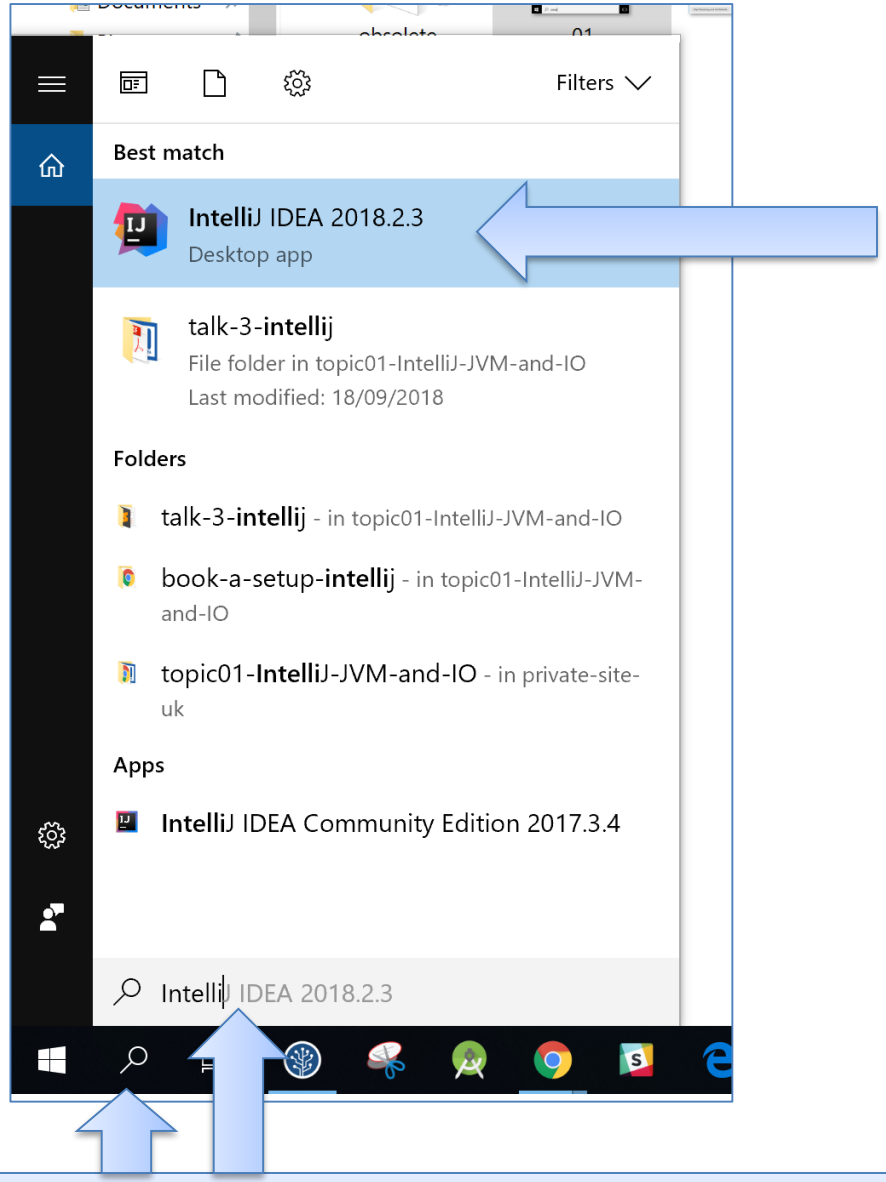
Using College Computers only..

Using Personal Machine…

(see lab01a for instructions)

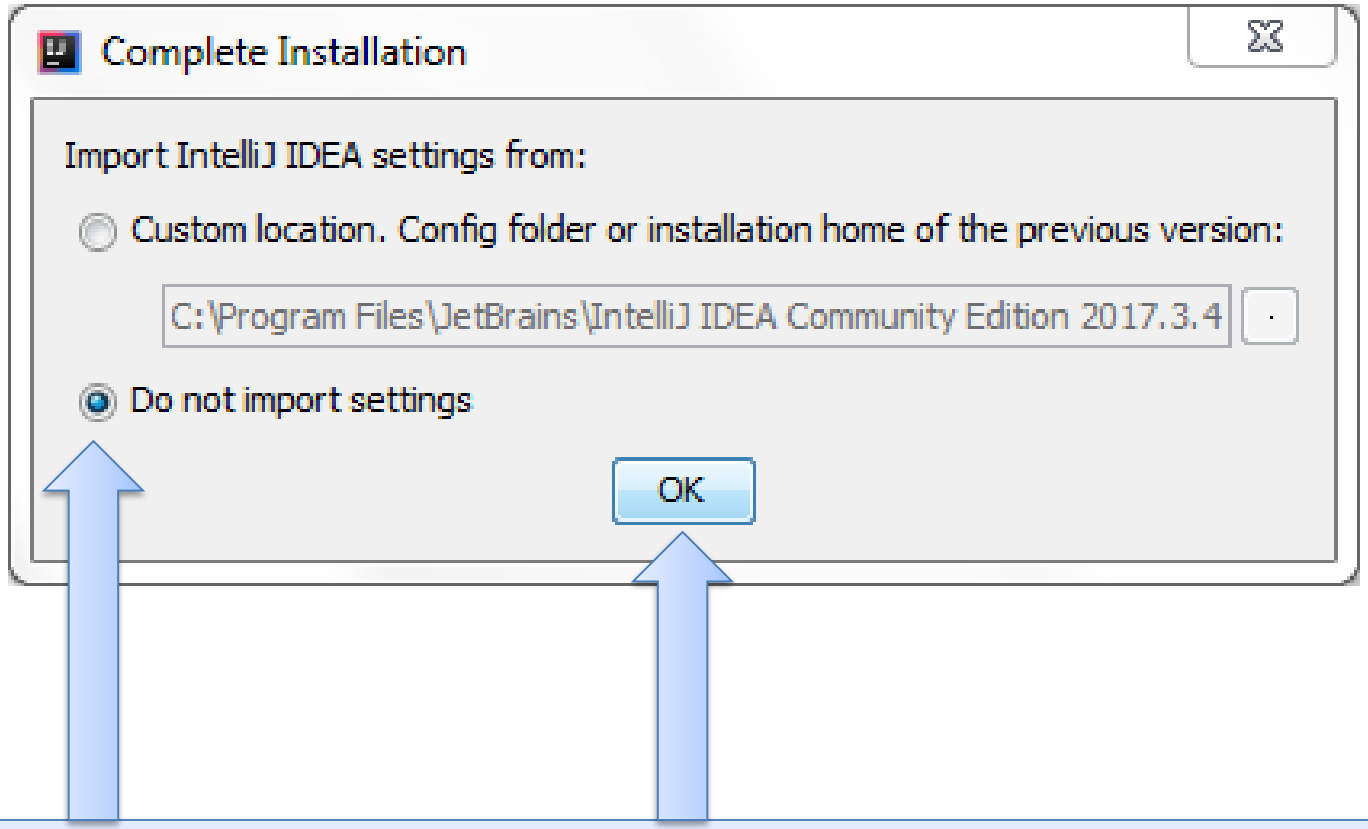
Using a computer that has the JDK and IntelliJ installed, let's create and run our first project!

We will print ***HelloWorld!*** *to the console.*



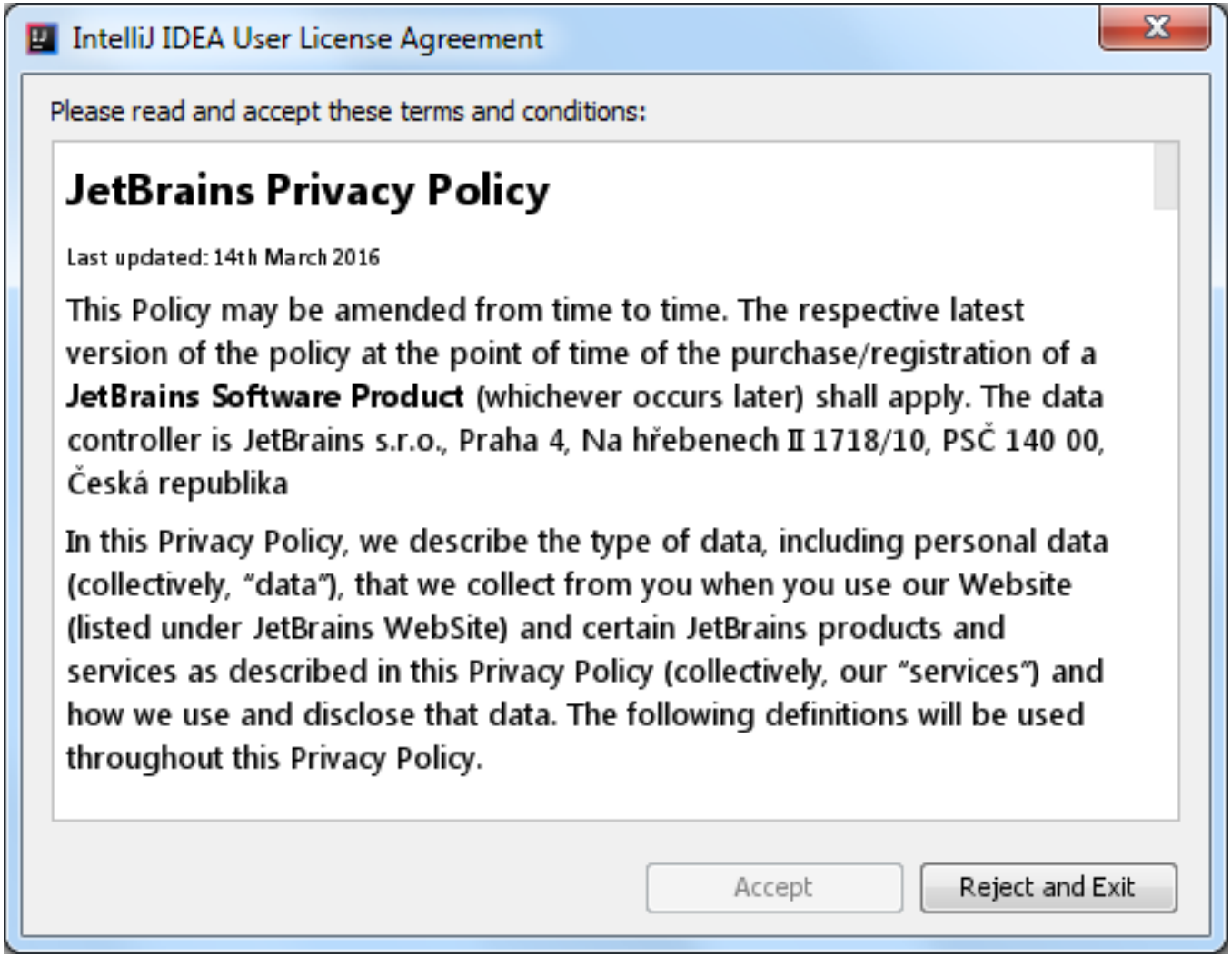
1

Start IntelliJ by clicking on the search icon on your taskbar, typing IntelliJ into the search box and launching the desktop app.



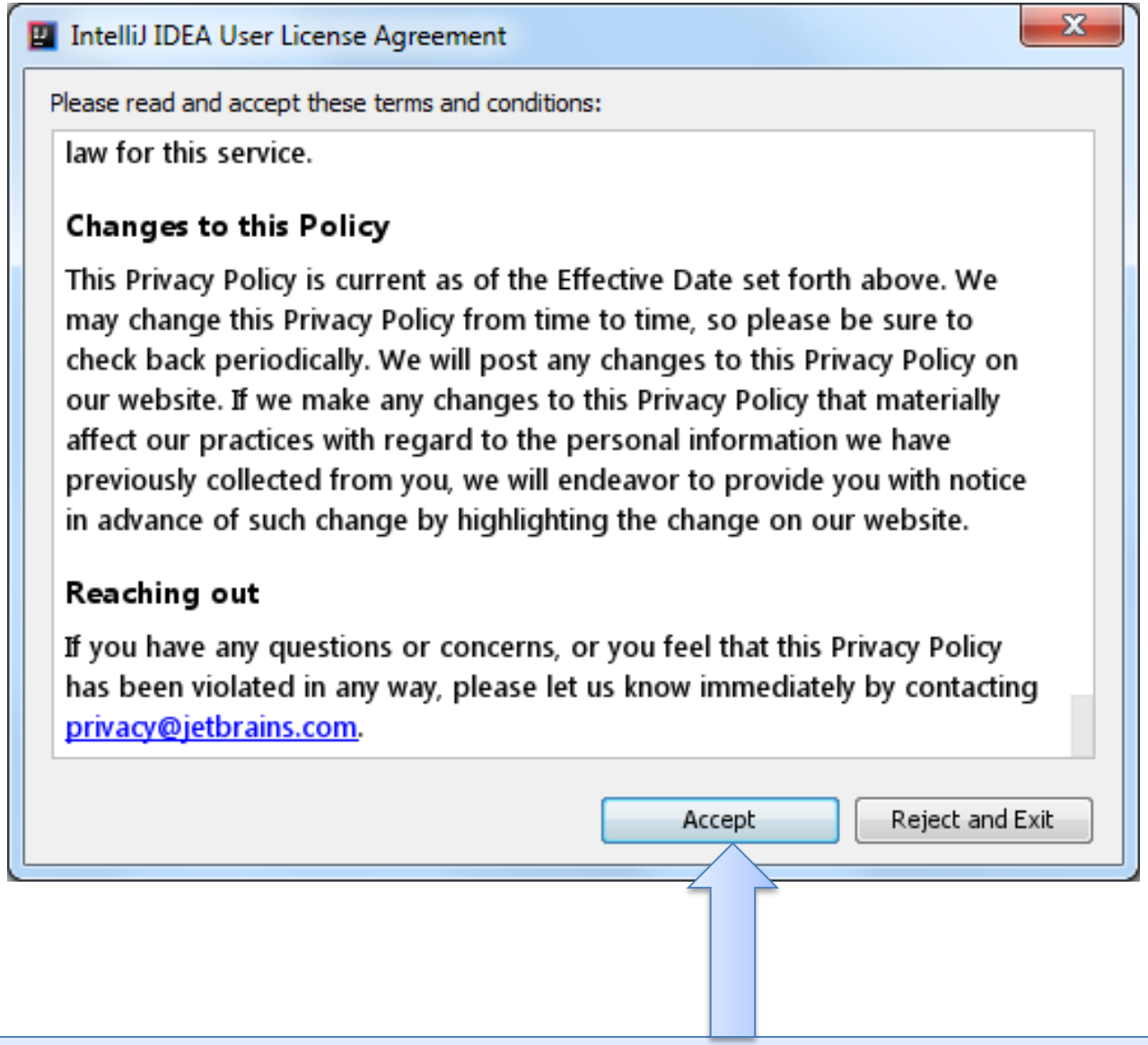
2

This window typically appears when you first start IntelliJ.
Don't import the settings. Click OK.



3

Scroll down to the end of the User Licence Agreement (ULA)…



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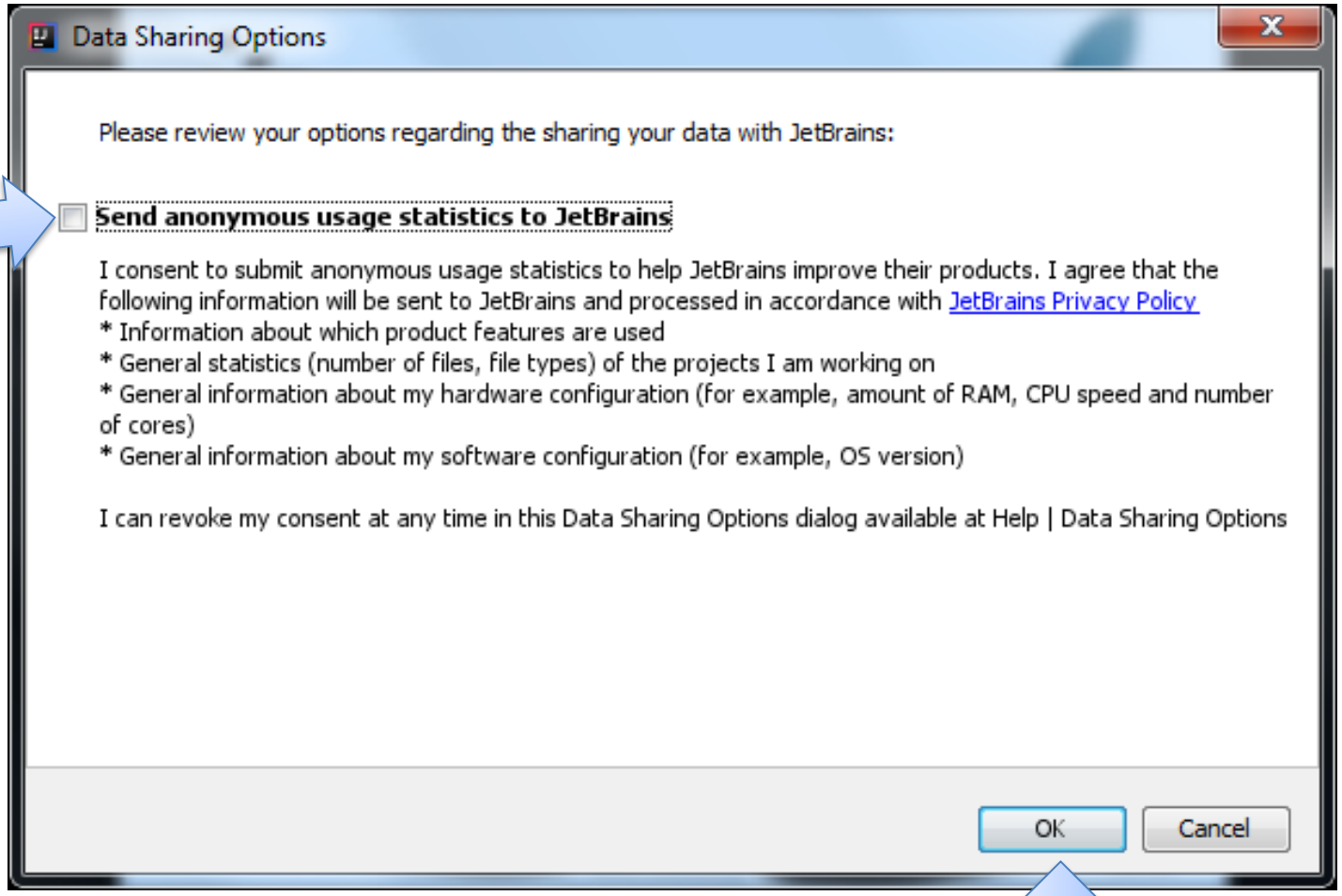
When the Accept button appears, click it.



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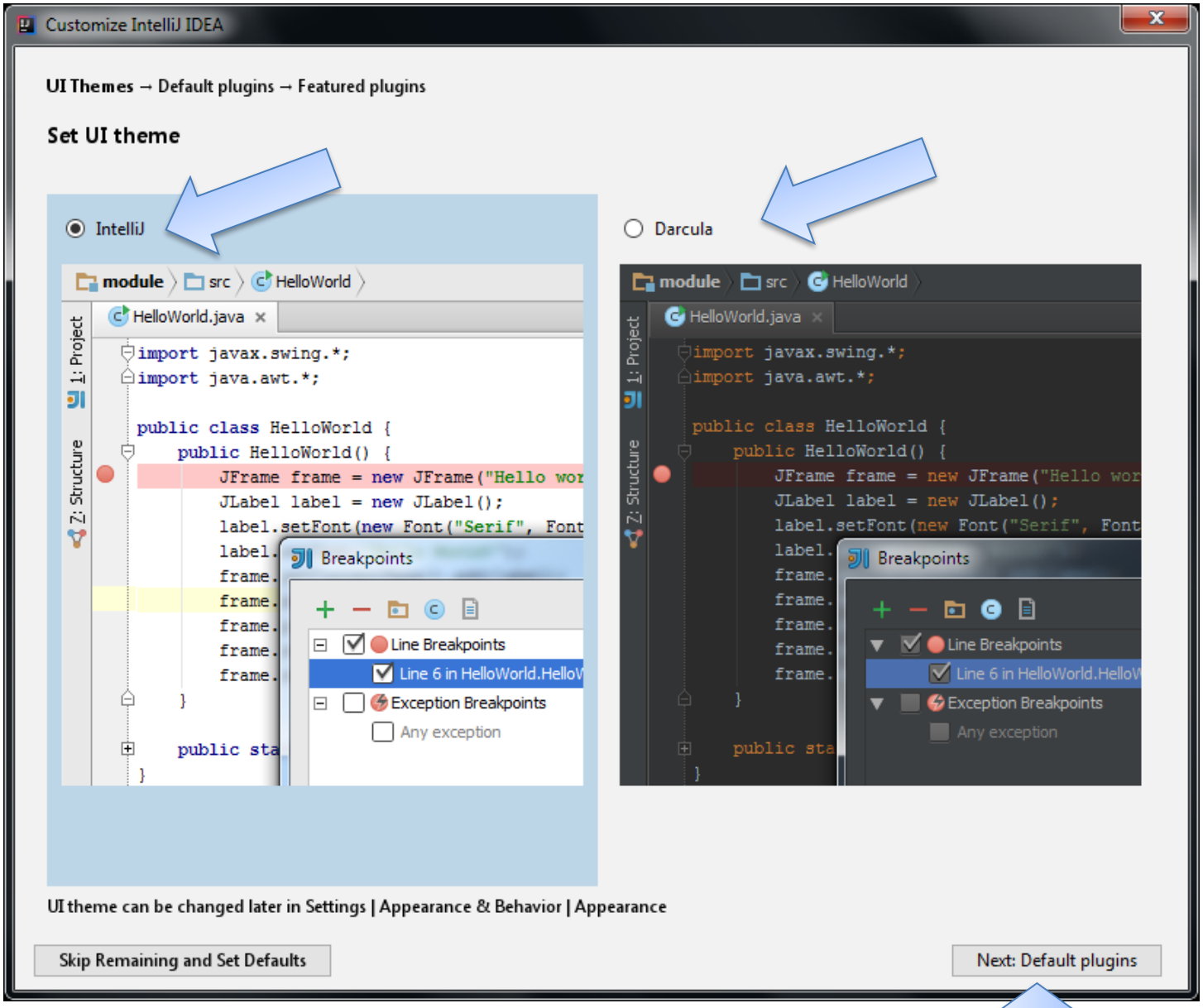
Decide if you want to share anonymous data with Jetbrains and click the OK button.



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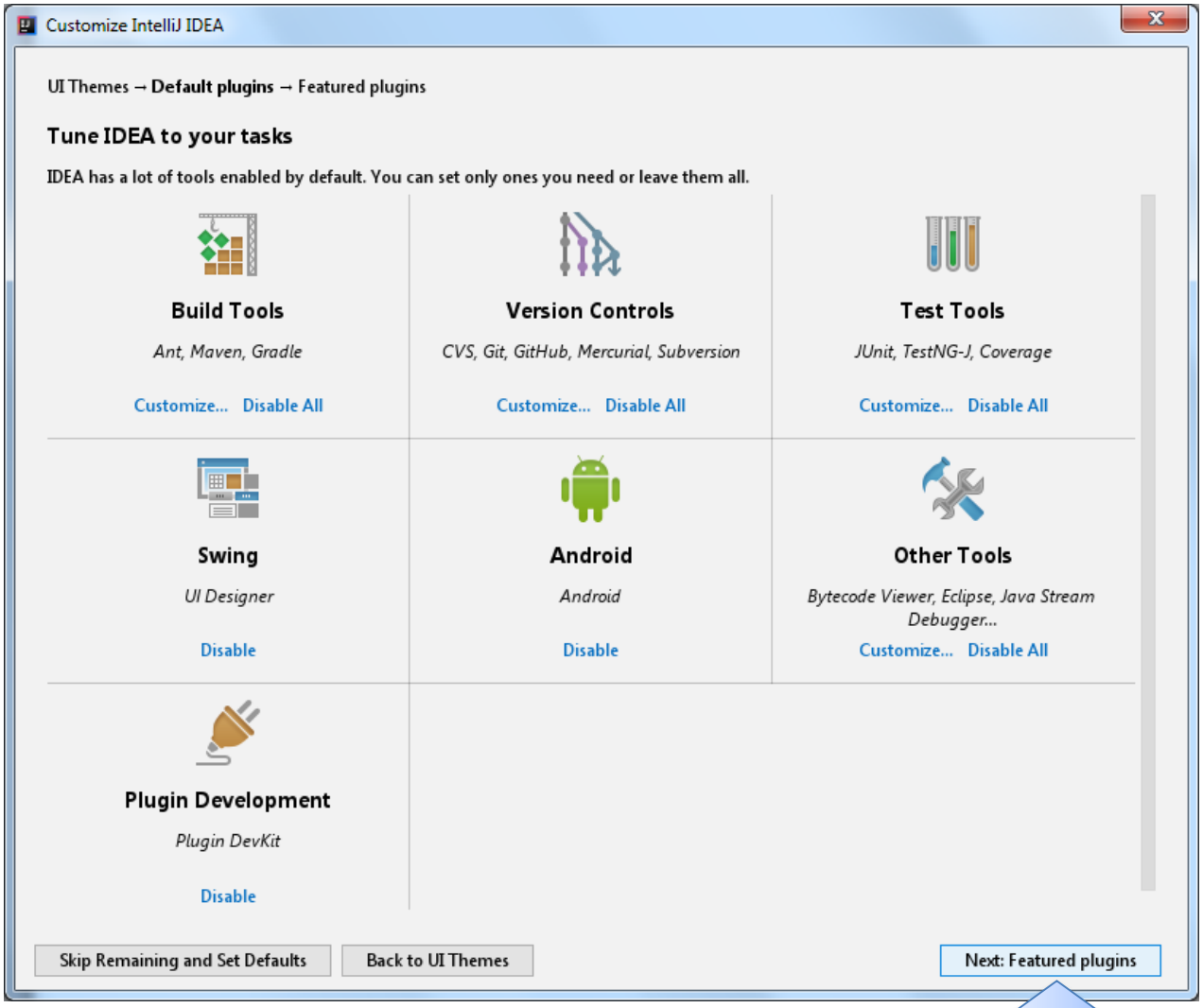
Choose your preferred theme and click Next.



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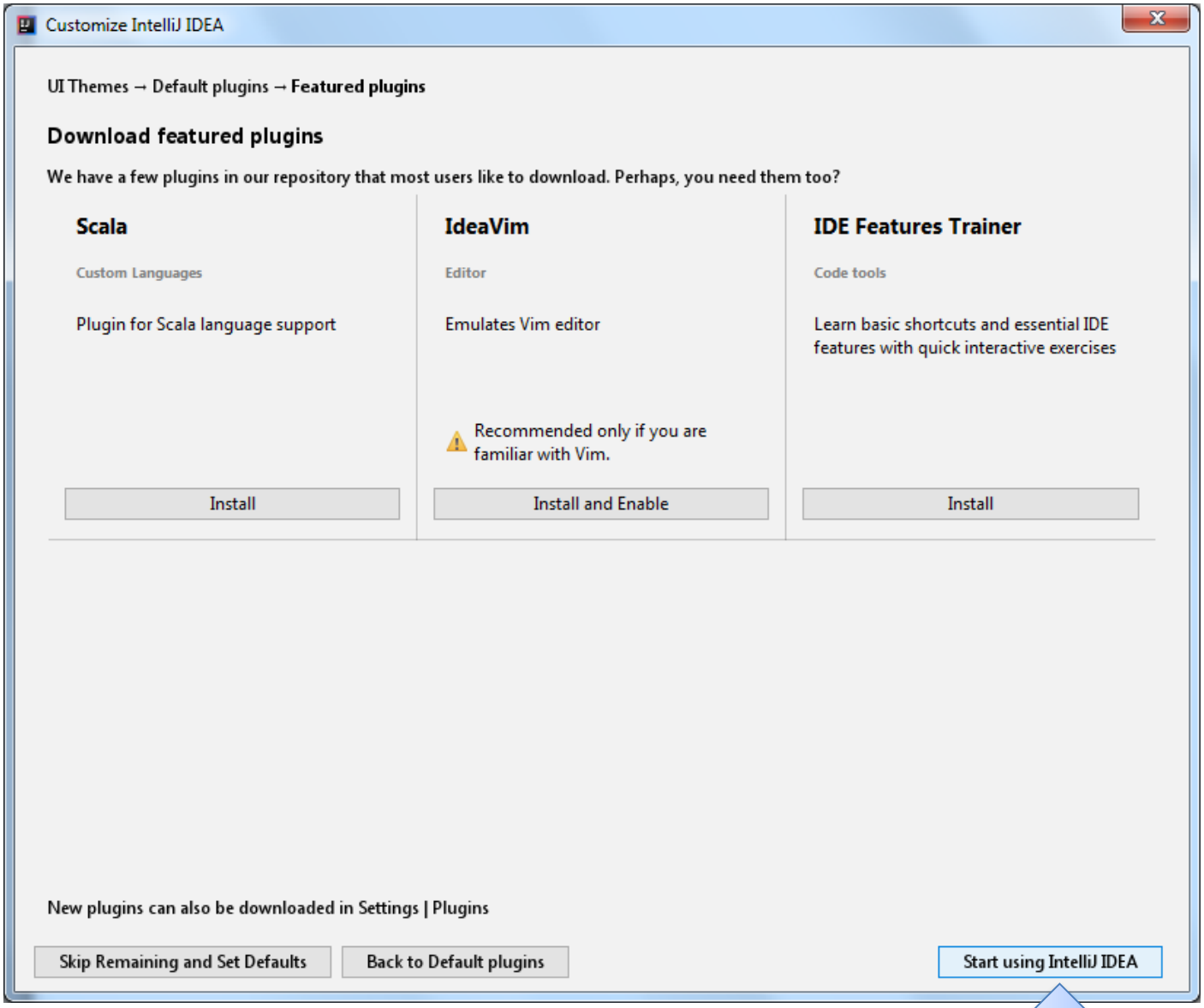
You will come across a lot of these plugins, in some form or other, during your degree course.

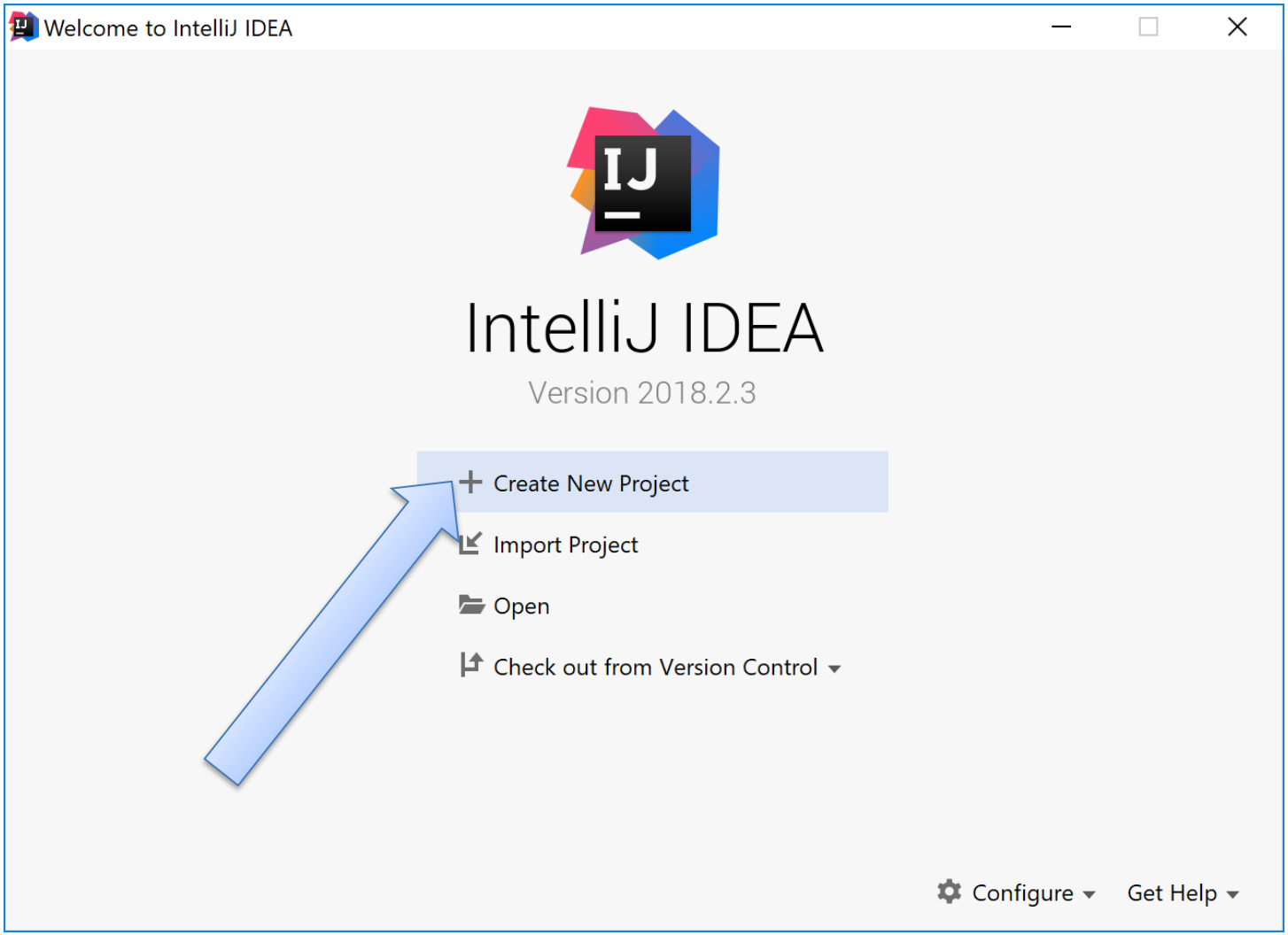
At the moment, we won't be using them, so click **Next**.



8

Same again here…we aren't using these plugins, so click Start…

You will see this splash screen and then…



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IntelliJ is now running…
click on the **Create New Project** link

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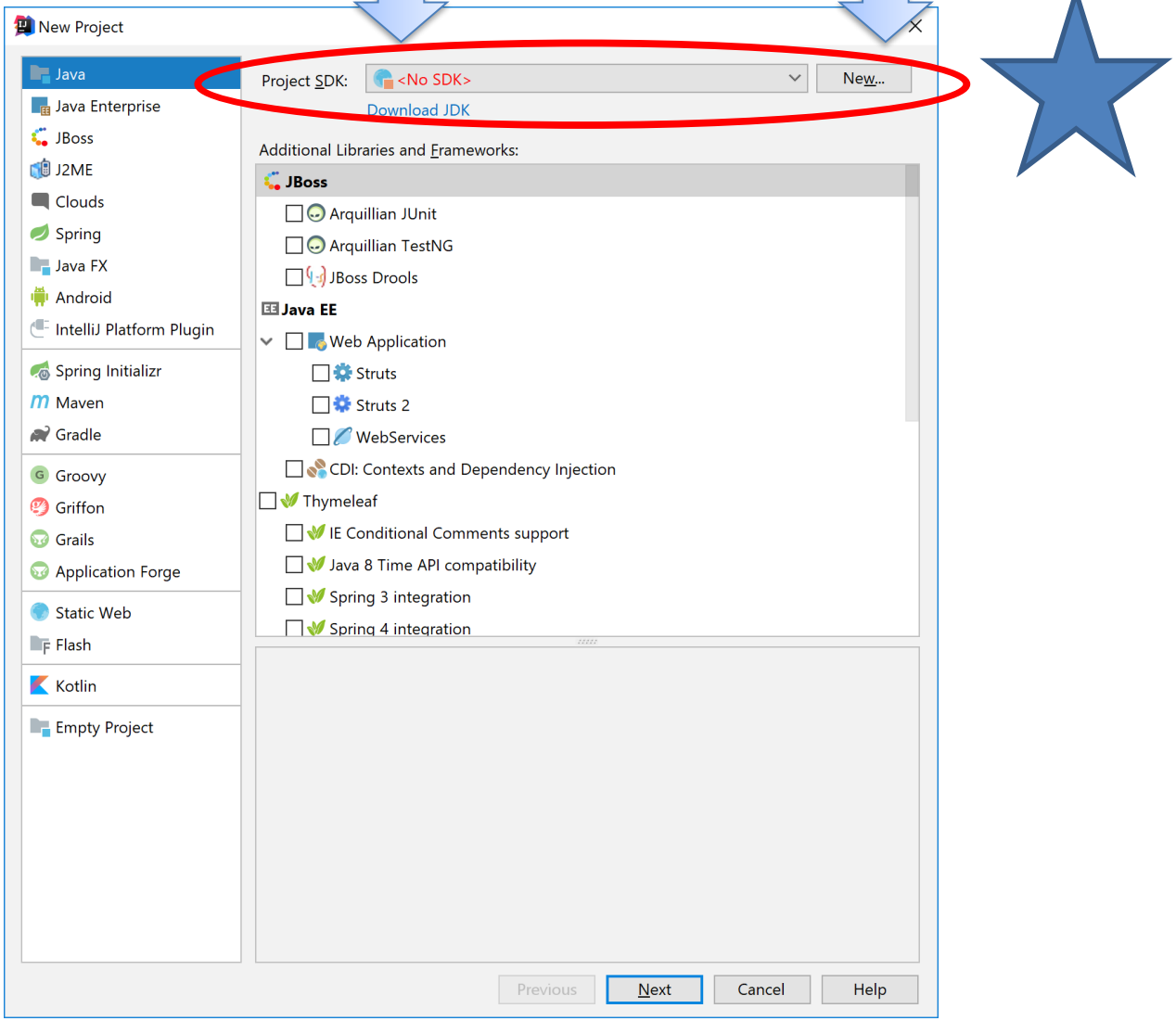
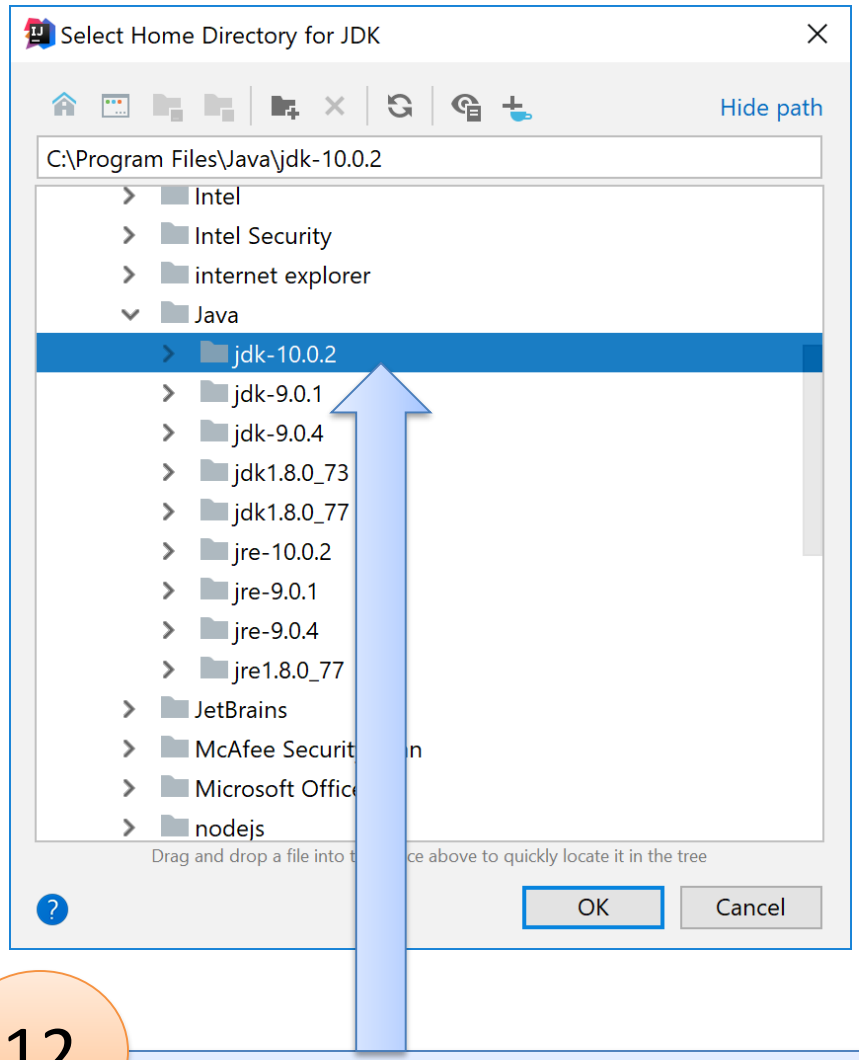
You may get this…no SDK. If so, click on the “New…” button





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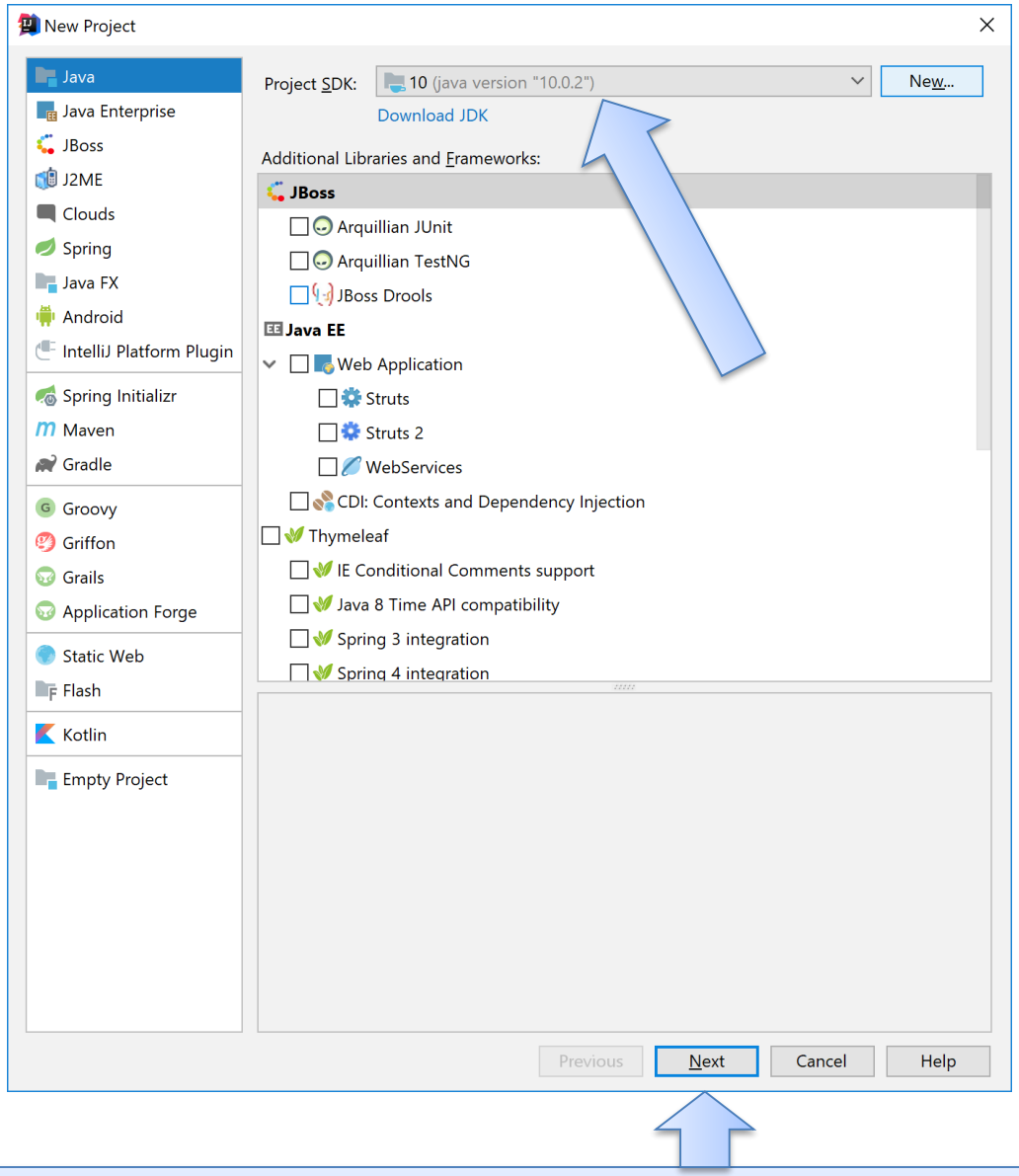
…and **locate** the JDK10 or JDK11 version. Click **OK.**



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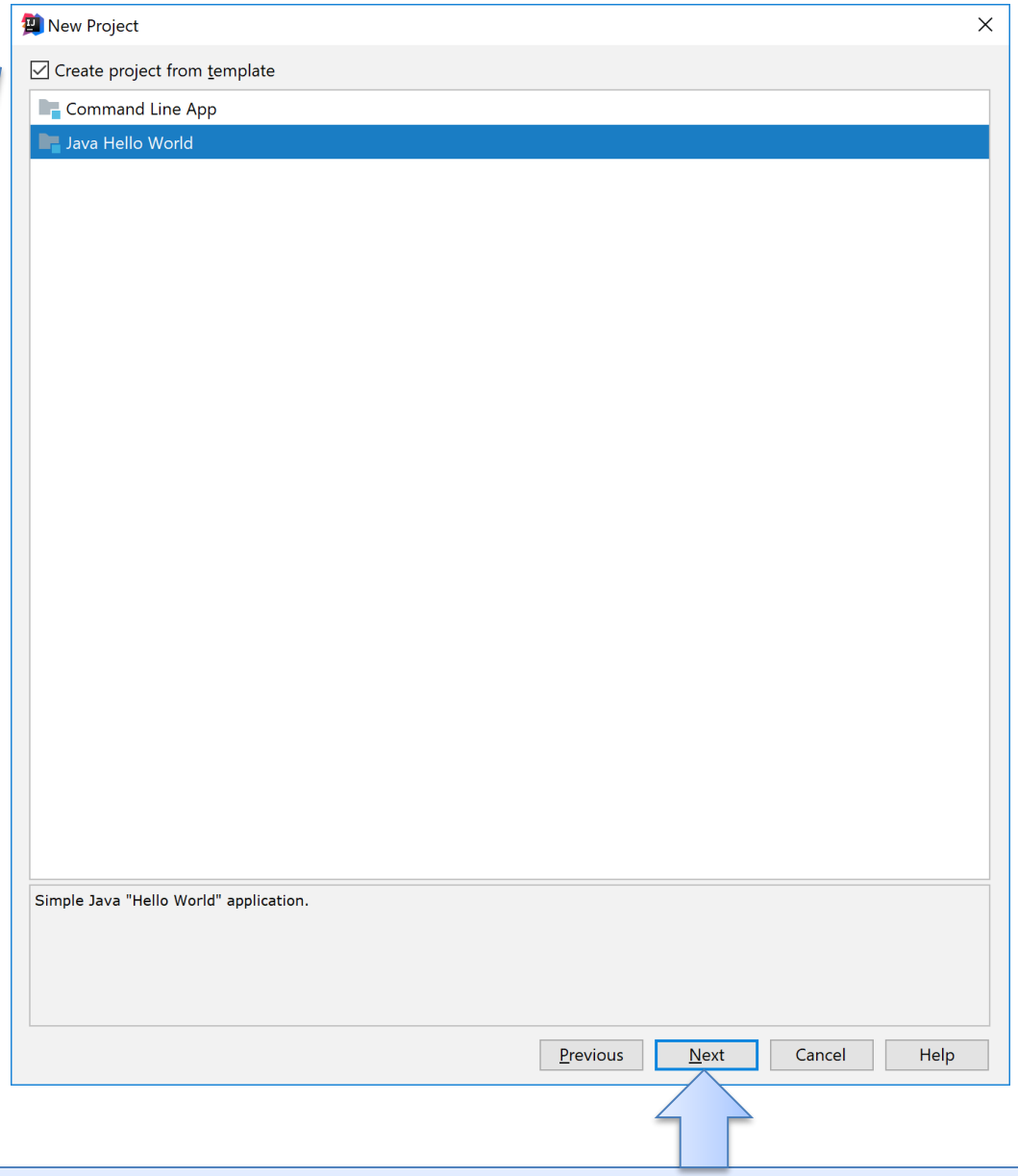
Now that Java is located, click Next.



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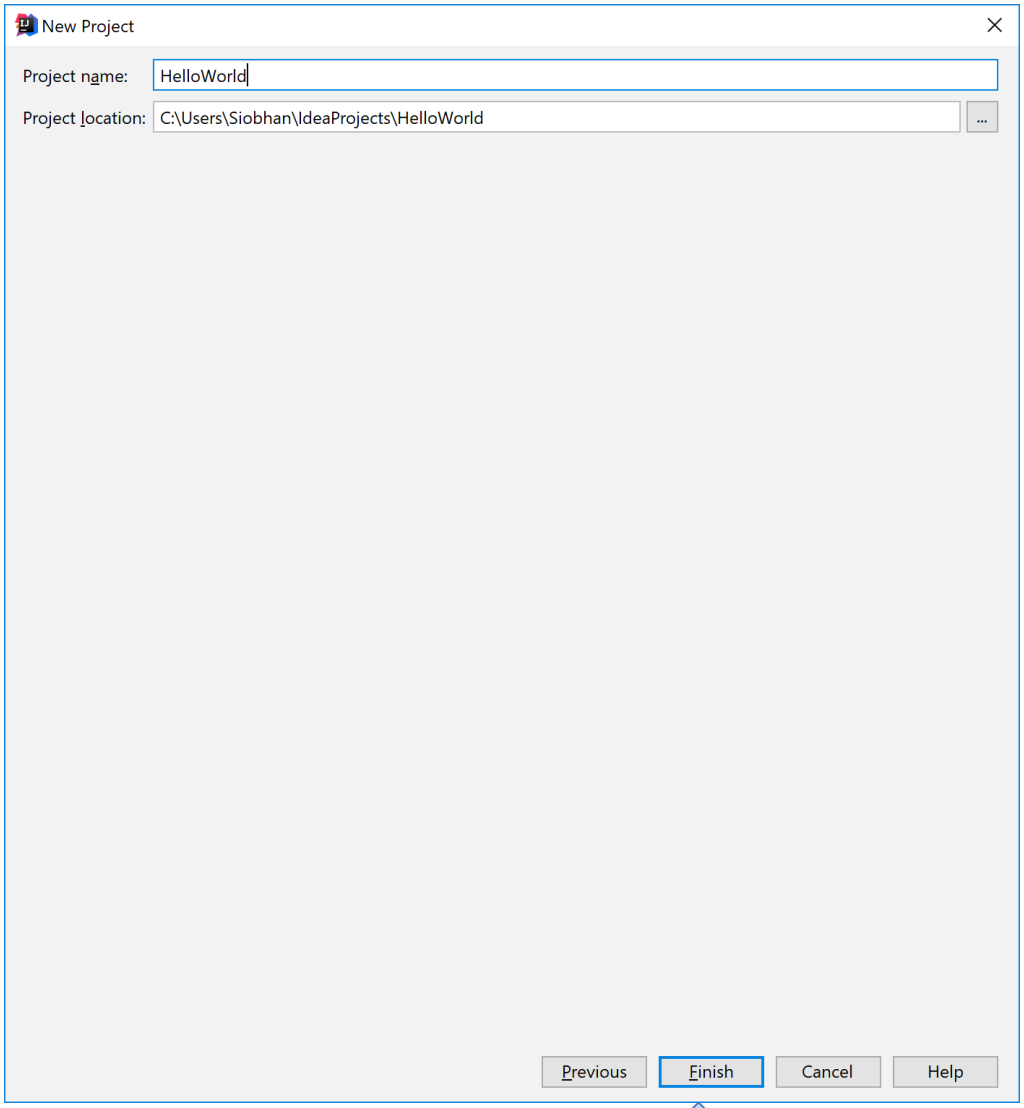
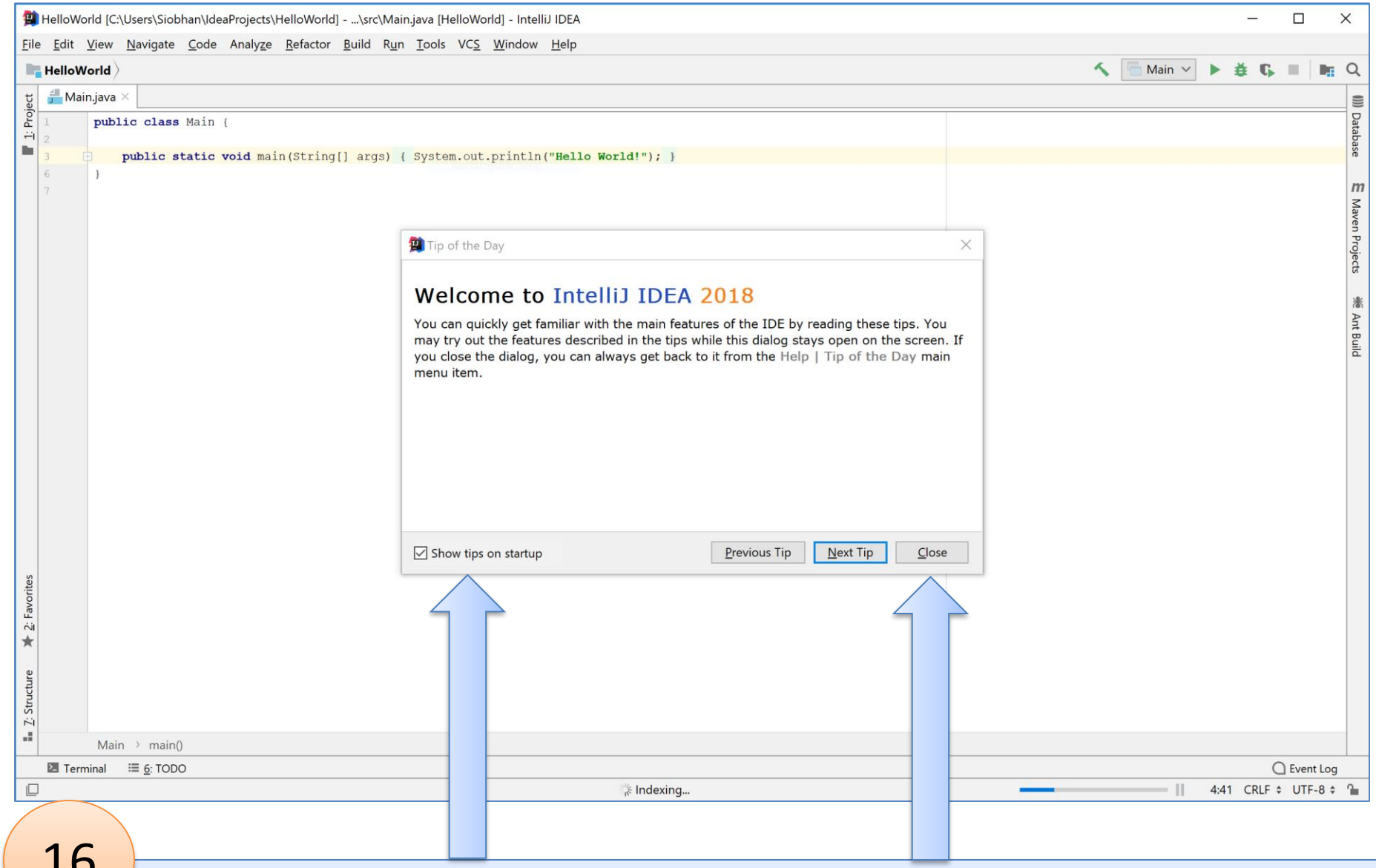
Tick the box to create a project from a template. Select **Java Hello World** and click the Next button.



15

Enter project name (**HelloWorld**) and if you are happy with the default location, click Finish.



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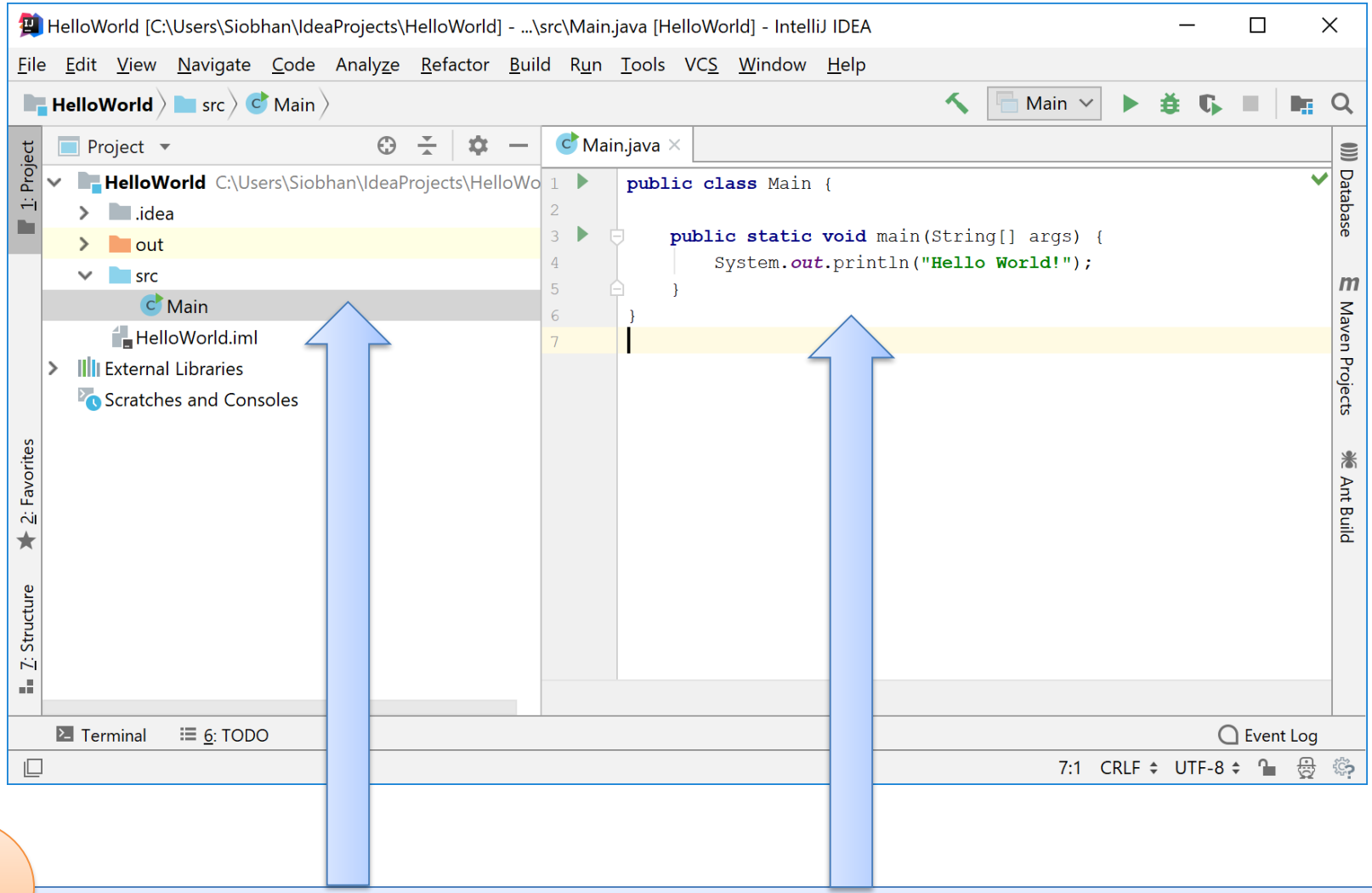
Decide whether you want to see tips each time you start IntelliJ. Then close the tip window.



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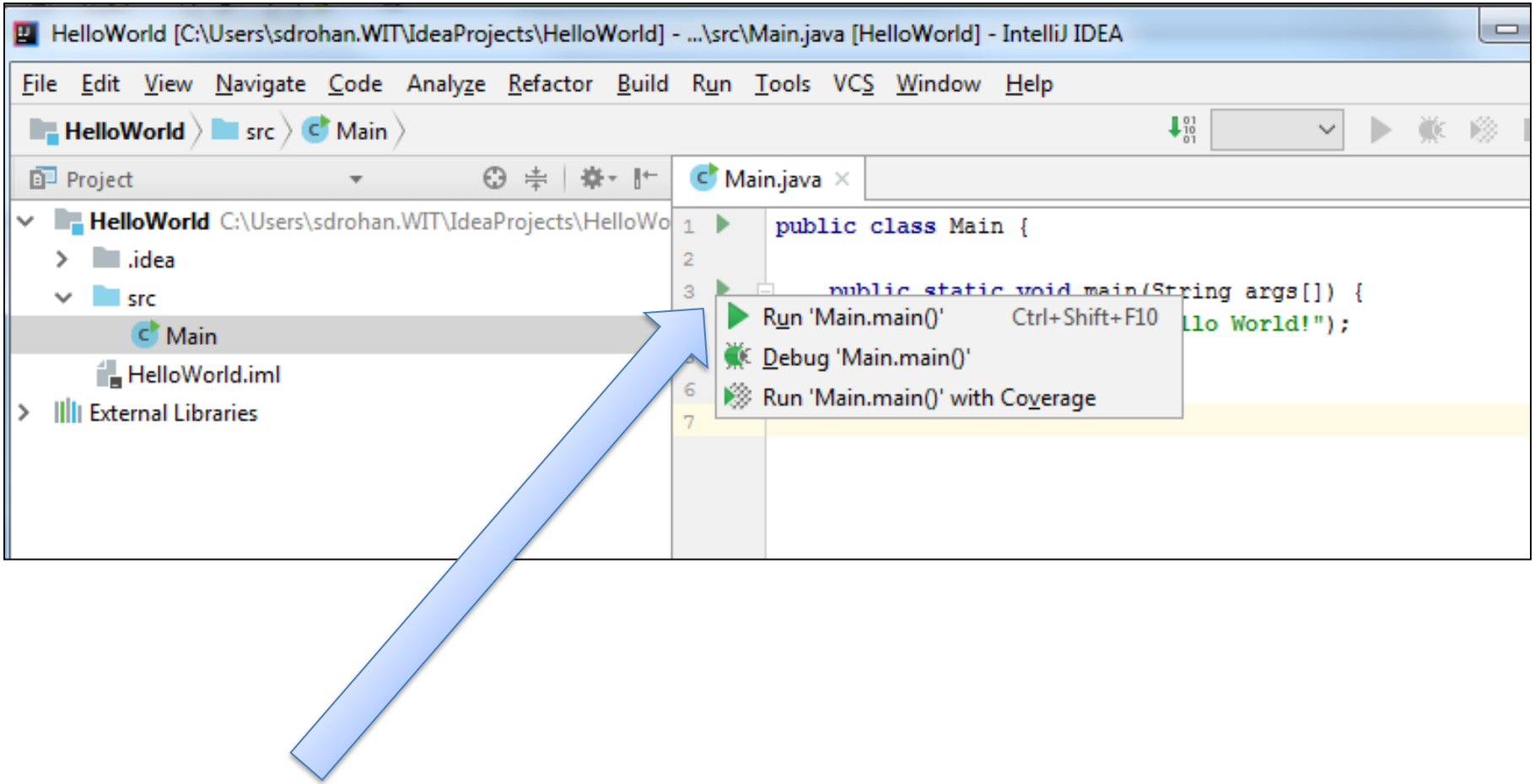
The above **Main** class, complete with the **main** method code is generated.



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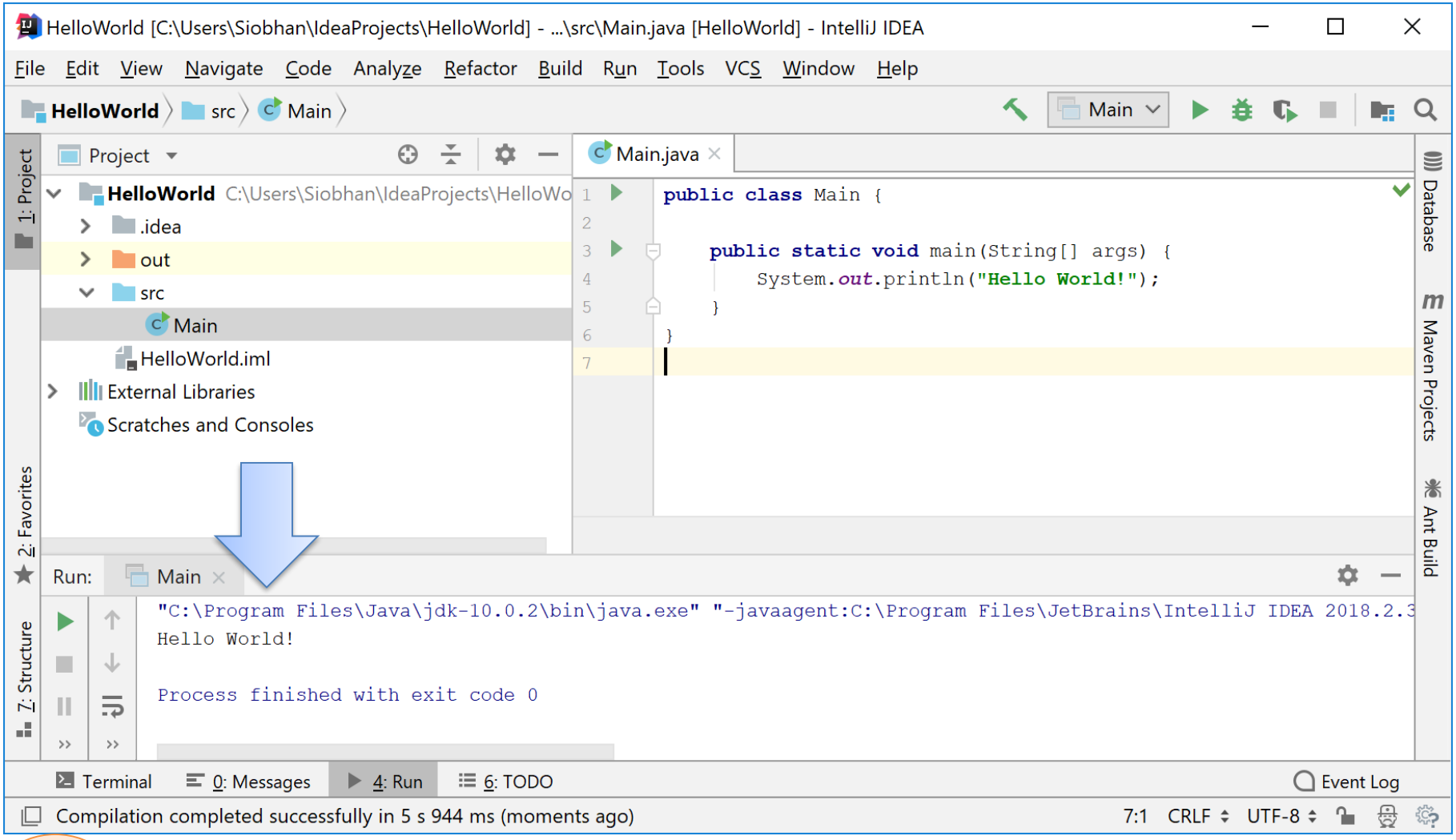
Click on the green triangle beside the main method.
Then select **Run 'Main.main()'**



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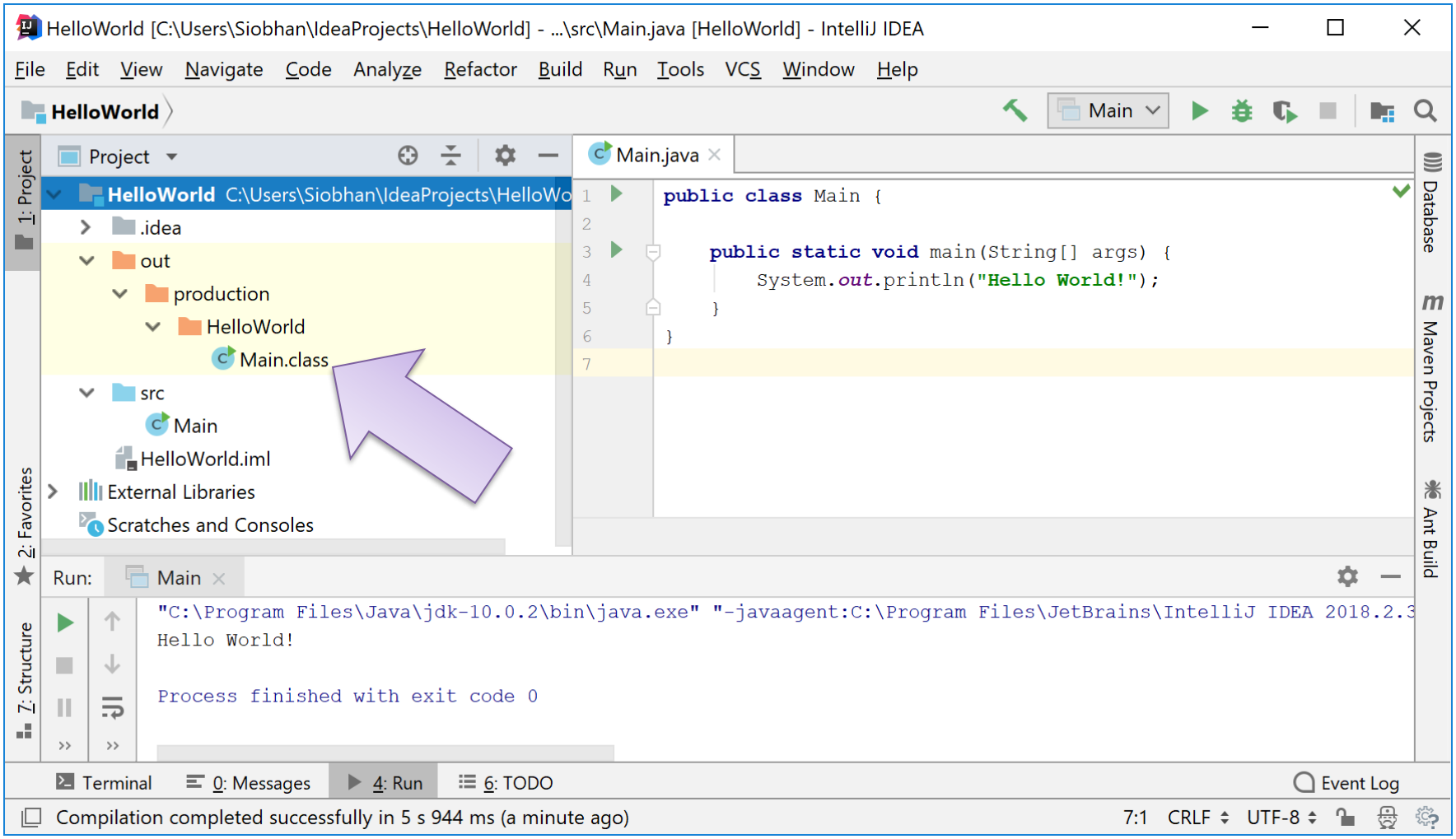
Hello World! is printed to console.

Let's look at where our
Main.class
file lives…



Main.class is the **bytecode** of **Main.Java**

Questions?