

An Introduction to IntelliJ

IntelliJ IDE for Java Developers

Produced Dr. Siobhán Drohan
by: Mr. Colm Dunphy
 Mr. Diarmuid O'Connor
 Dr. Frank Walsh



Waterford Institute *of* Technology
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

Department of Computing and Mathematics
<http://www.wit.ie/>



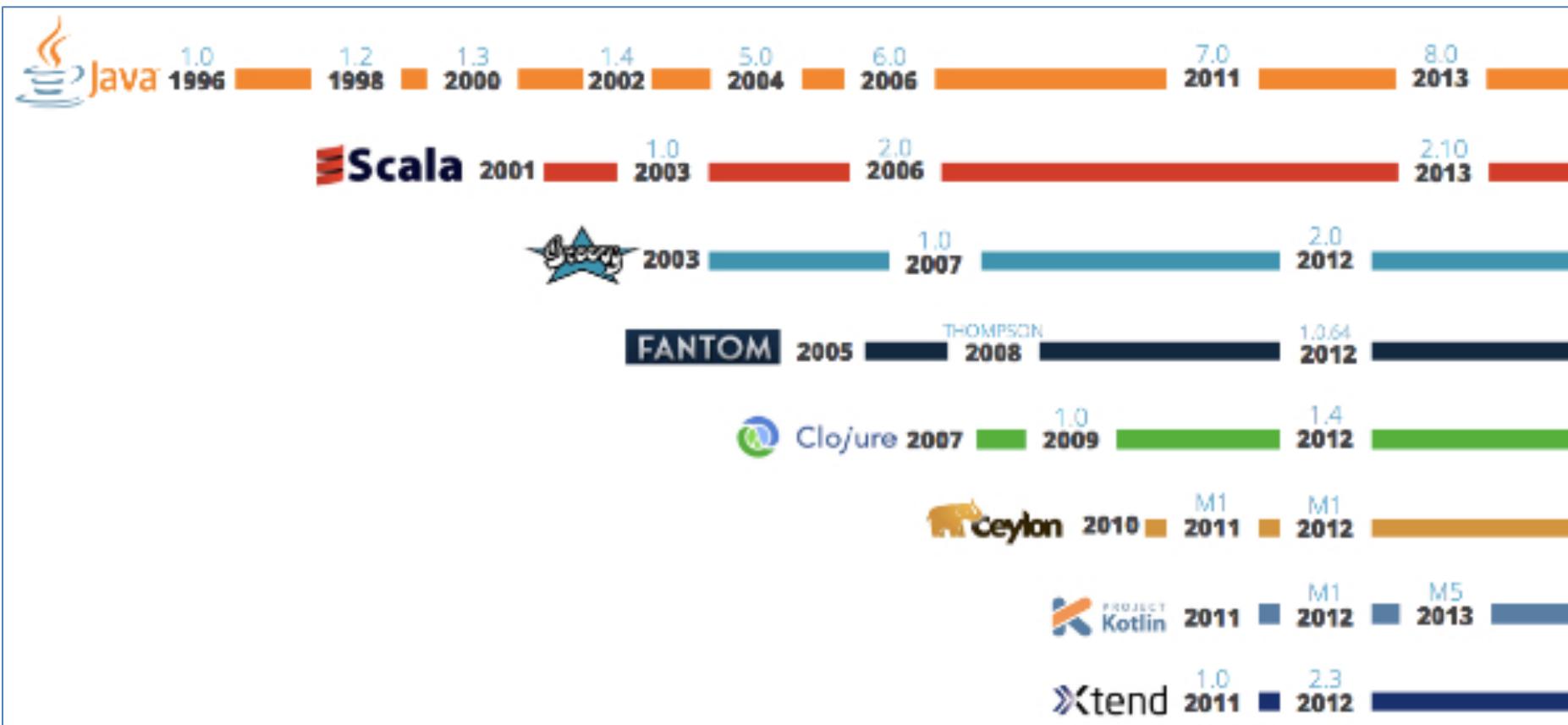
" Most people talk about Java the language, and this may sound odd coming from me, but I could hardly care less. At the core of the Java ecosystem is the JVM. "

James Gosling,

Creator of the Java Programming Language(2011, TheServerSide)

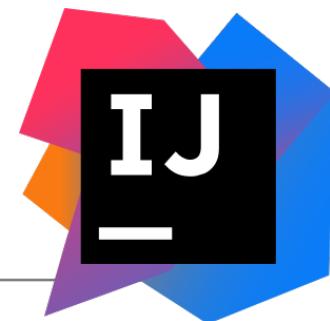


JVM Language History



[Source](#)

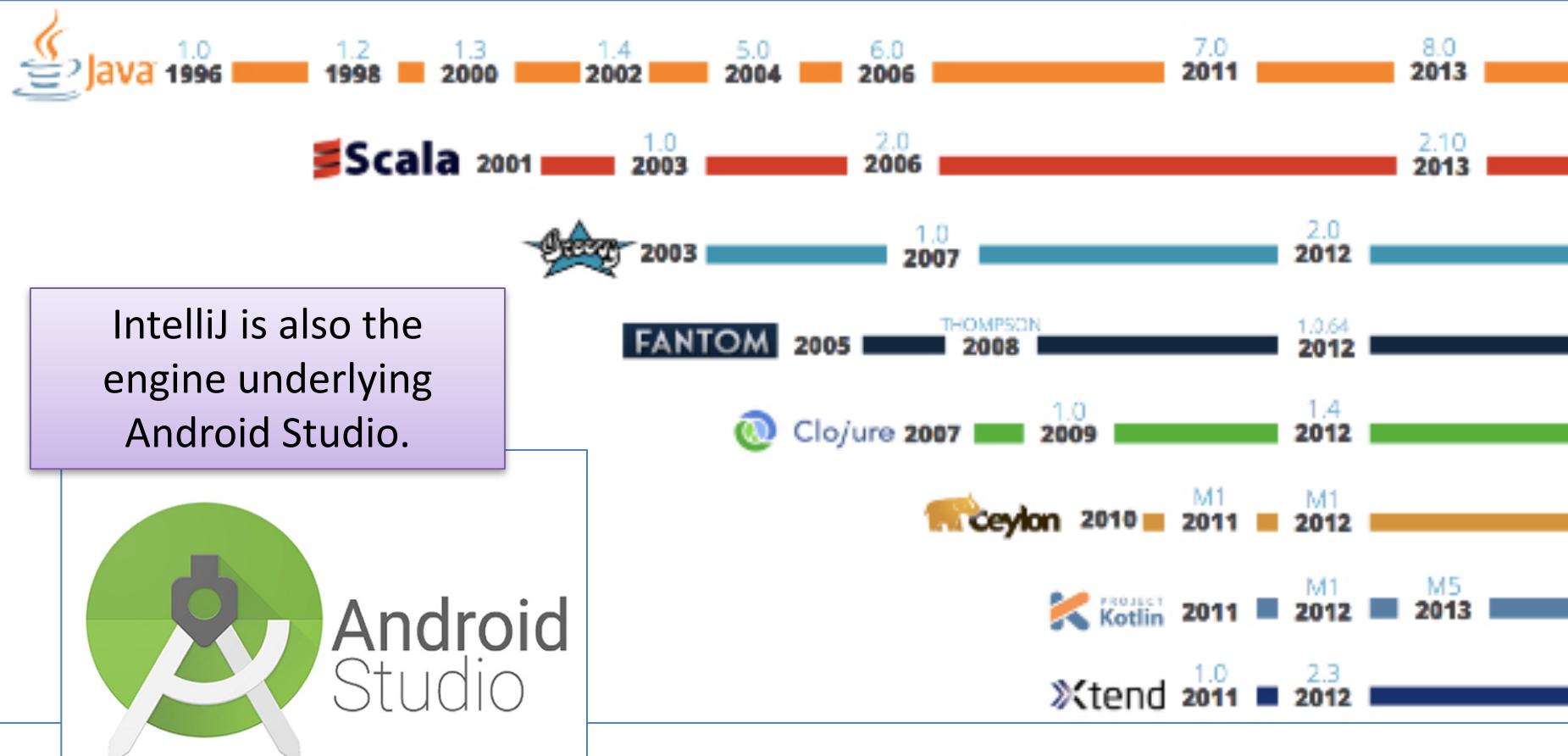
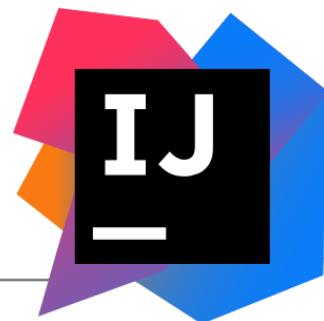
IntelliJ and the JVM



The diagram illustrates the evolution of JVM languages over time, starting from Java in 1996 and extending to Scala, Groovy, Fantom, Clojure, Ceylon, Project Kotlin, and Xtend by 2013.

Language	Logo	First Release	Latest Version	Last Update
Java	Java logo	1.0 (1996)	8.0 (2013)	2013
Scala	Scala logo	1.0 (2001)	2.10 (2013)	2013
Groovy	Groovy logo	2003	1.0 (2006)	2012
Fantom	Fantom logo	2005	THOMPSON (2008)	1.0.64 (2012)
Clojure	Clojure logo	2007	1.0 (2009)	1.4 (2012)
Ceylon	Ceylon logo	2010	M1 (2011)	M1 (2012)
Project Kotlin	Project Kotlin logo	2011	M1 (2012)	M5 (2013)
Xtend	Xtend logo	1.0 (2011)	2.3 (2012)	2012

IntelliJ and the JVM



IntelliJ is also the engine underlying Android Studio.



Installing IntelliJ

BEFORE you install IntelliJ
Download and Install the **JDK** first using
IE on windows or Safari on OSX!



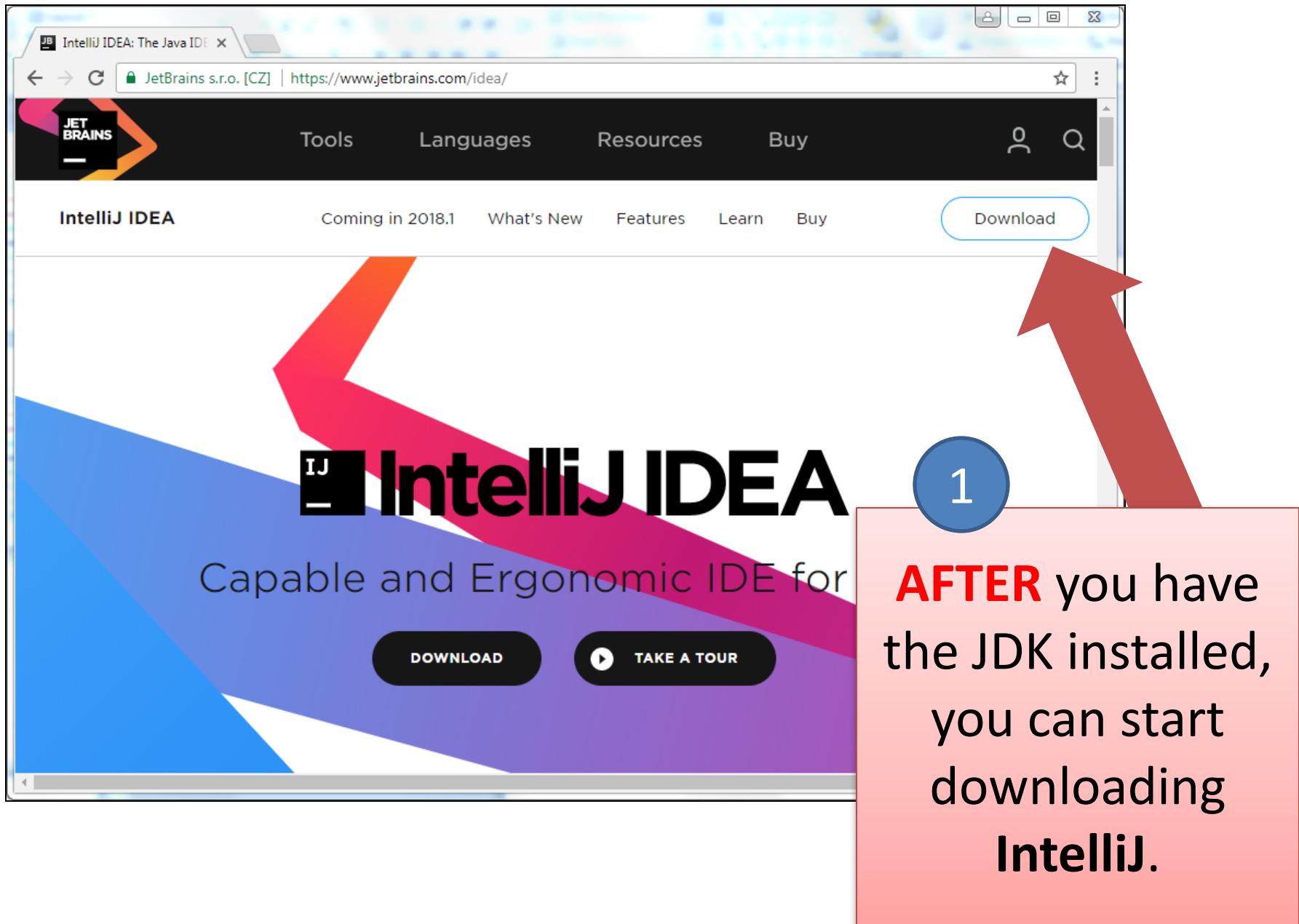
- 2 IntelliJ Editions:**
- **Community** (free) is a subset of
 - **Ultimate** (paid)



As a WIT student you can use **ULTIMATE**

The following slides show how to install Community Edition.

[Lab 07a](#) demonstrates similar steps to install Ultimate instead. Use Ultimate!



The screenshot shows the official IntelliJ IDEA website. At the top, there's a navigation bar with links for Tools, Languages, Resources, Buy, and a user icon. Below this, a secondary navigation bar includes links for Coming in 2018.1, What's New, Features, Learn, Buy, and a prominent blue 'Download' button. The main content area features a large, stylized 'IJ' logo followed by the text 'IntelliJ IDEA'. Below this, it says 'Capable and Ergonomic IDE for' and provides two buttons: 'DOWNLOAD' and 'TAKE A TOUR'. To the right of the website screenshot, a large red arrow points upwards towards the 'Download' button. A blue circle containing the number '1' is positioned near the arrow, indicating the first step in a process. A pink callout box contains the text: 'AFTER you have the JDK installed, you can start downloading IntelliJ.'

JB IntelliJ IDEA: The Java IDE

JetBrains s.r.o. [CZ] | <https://www.jetbrains.com/idea/>

JET BRAINS

Tools Languages Resources Buy

IntelliJ IDEA Coming in 2018.1 What's New Features Learn Buy Download

IJ IntelliJ IDEA

Capable and Ergonomic IDE for

DOWNLOAD TAKE A TOUR

1

AFTER you have the JDK installed, you can start downloading IntelliJ.

JB Download IntelliJ IDEA: T X

← → C JetBrains s.r.o. [CZ] | https://www.jetbrains.com/idea/download/#section=windows

JET BRAINS Tools Languages Resources Buy 0 Q

IntelliJ IDEA Coming in 2018.1 What's New Features Learn Buy Download

2

Choose the Ultimate download (.exe)

Download IntelliJ IDEA

Windows macOS Linux

Ultimate

Web, mobile and enterprise development

DOWNLOAD .EXE

Free trial

Version: 2017.3.4
Build: 173.4548.28
Released: January 30, 2018
[Release notes](#)

[System requirements](#)
[Installation Instructions](#)
[Previous versions](#)

License Commercial Open-source, Apache 2.0 ?

Java, Kotlin, Groovy, Scala ✓ ✓

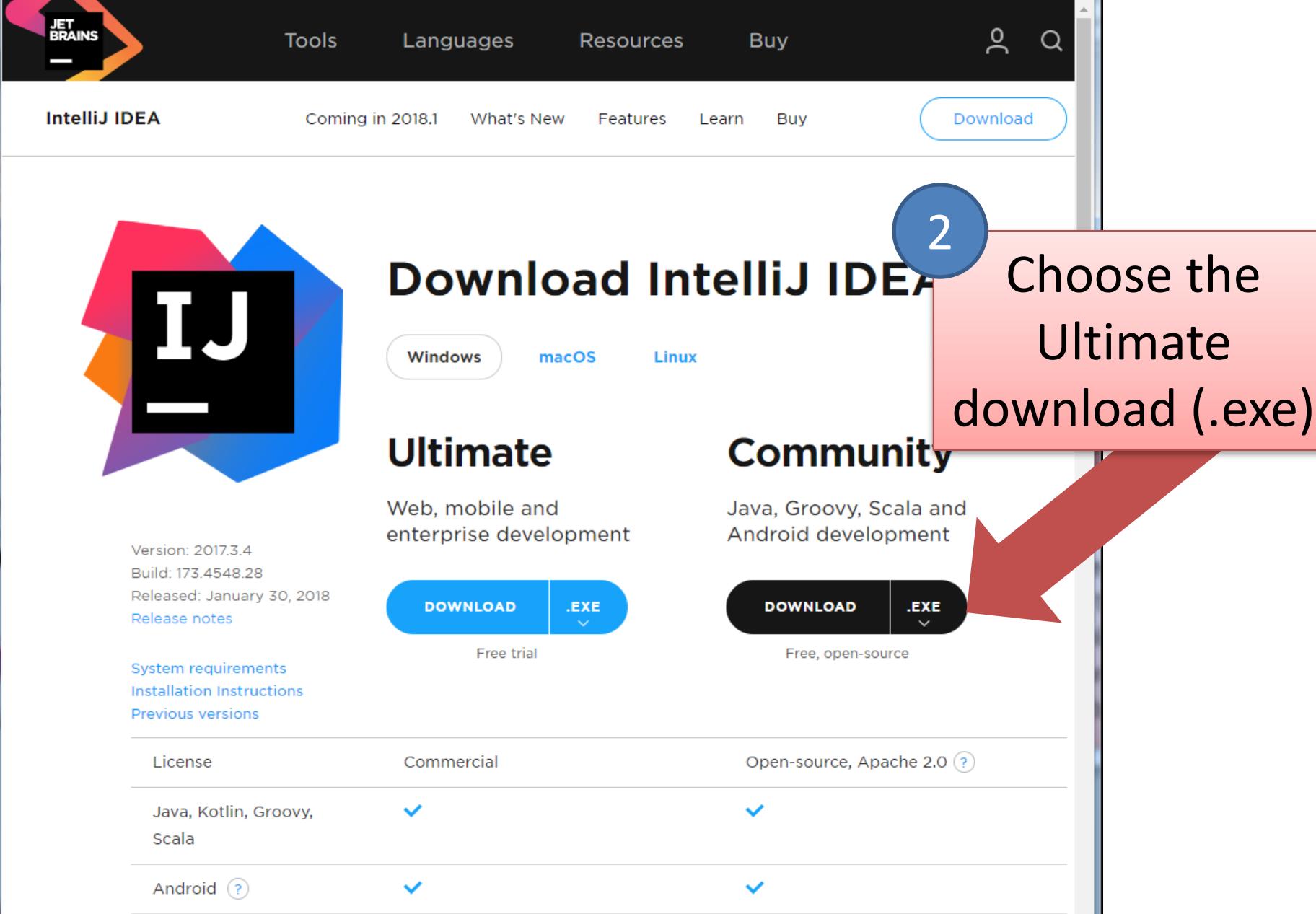
Android ? ✓ ✓

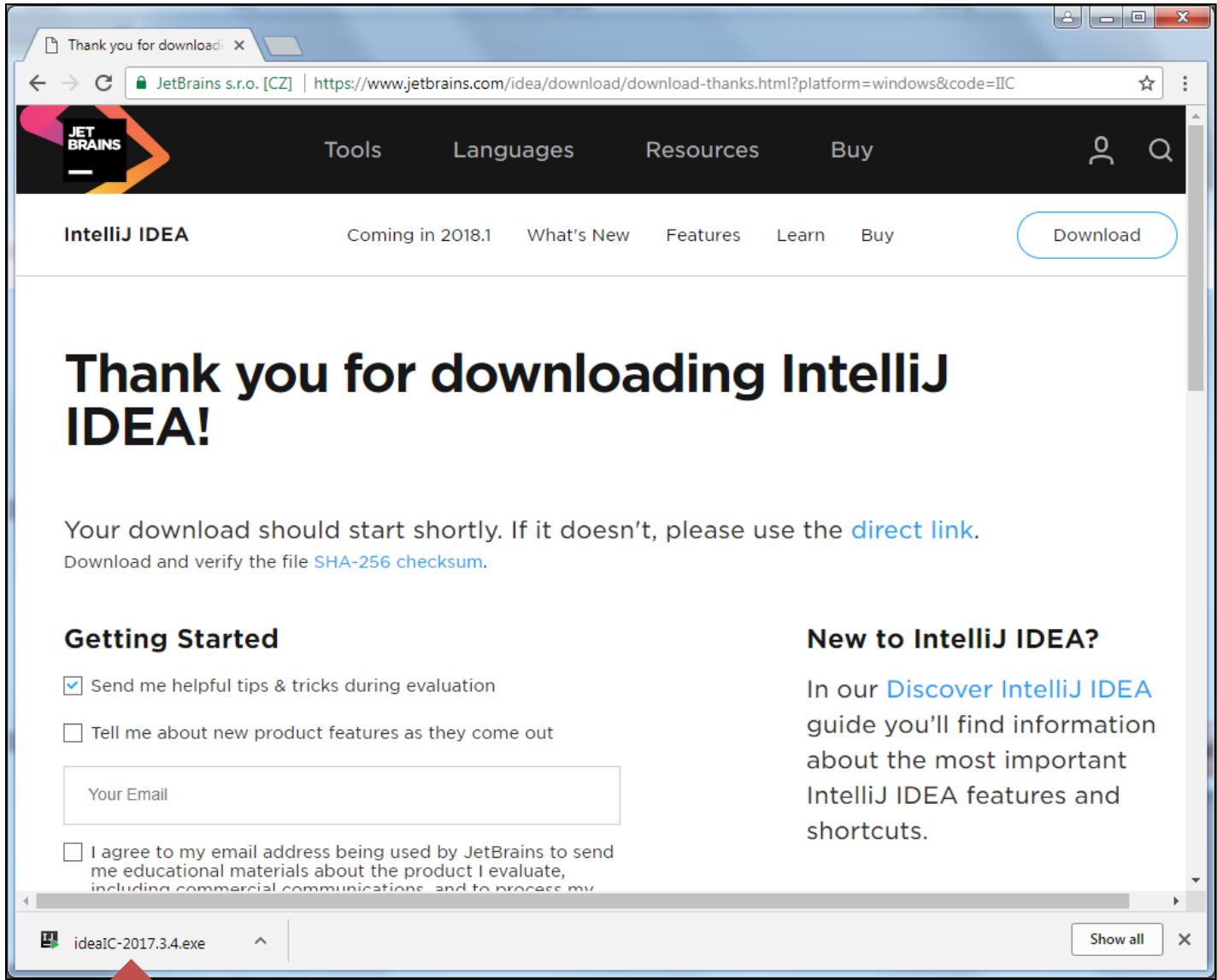
Community

Java, Groovy, Scala and Android development

DOWNLOAD .EXE

Free, open-source

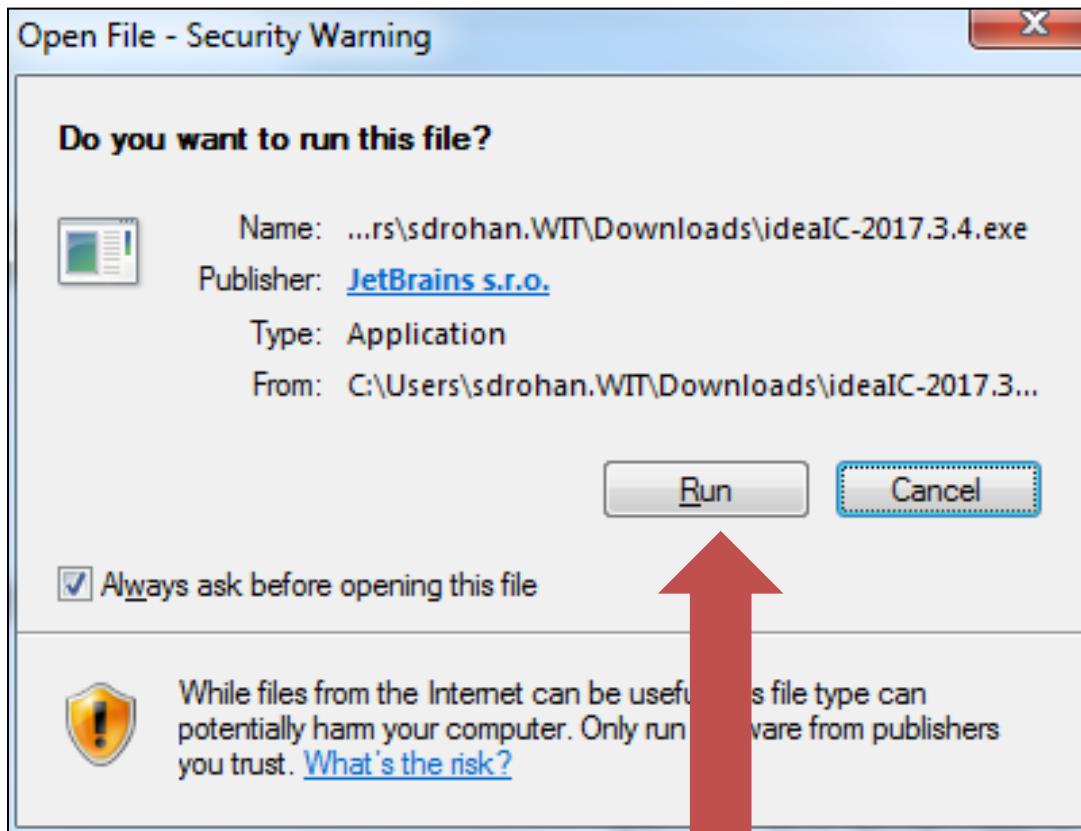




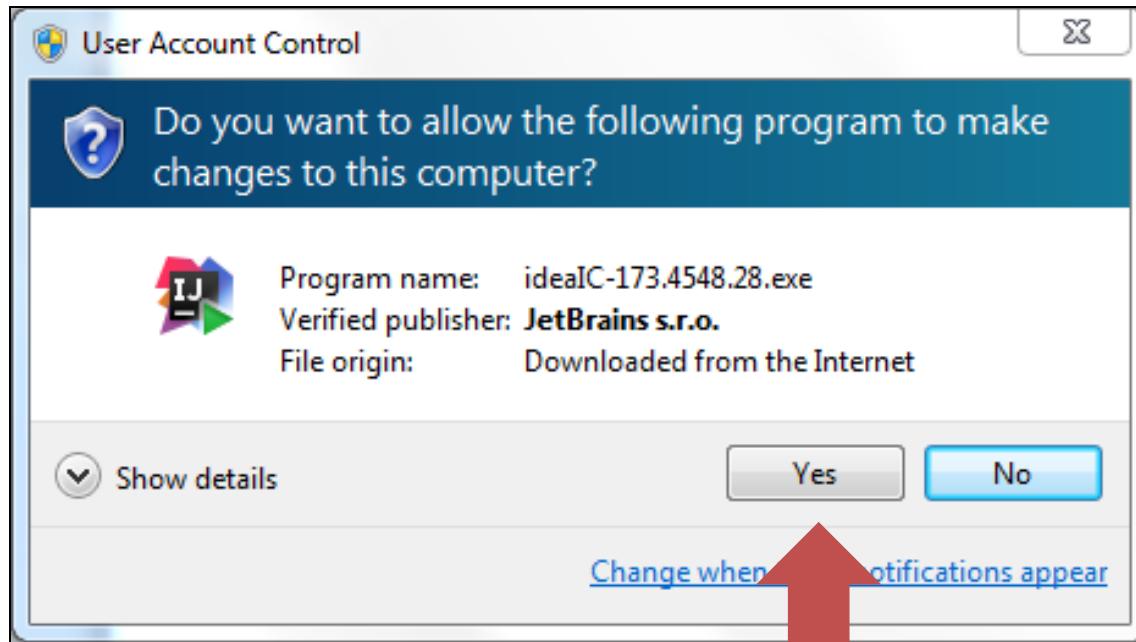
3

Click on the downloaded file to start the installation.

4



If you are presented with a security warning, click Run.



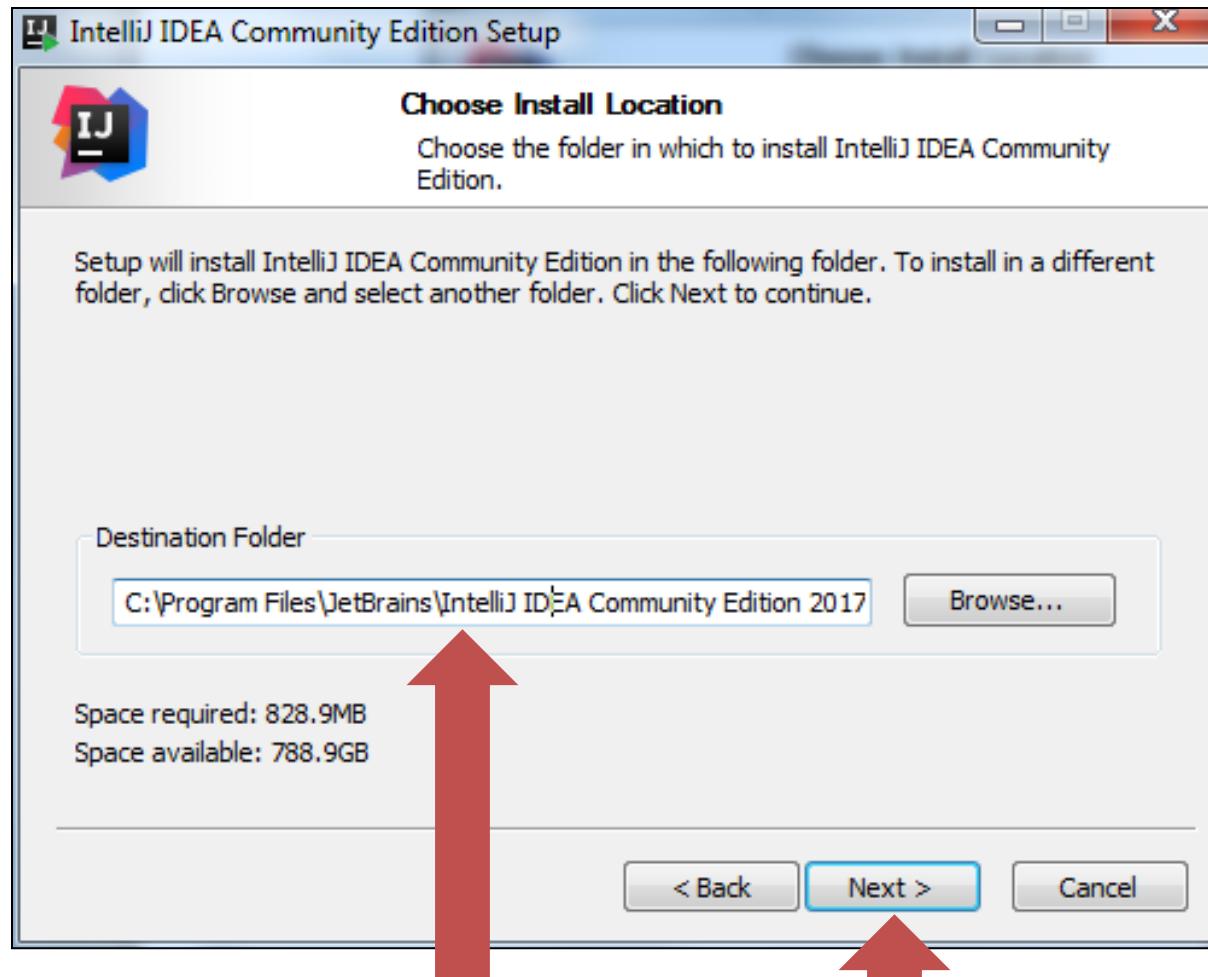
5

If you are presented with this warning, click **Yes**.



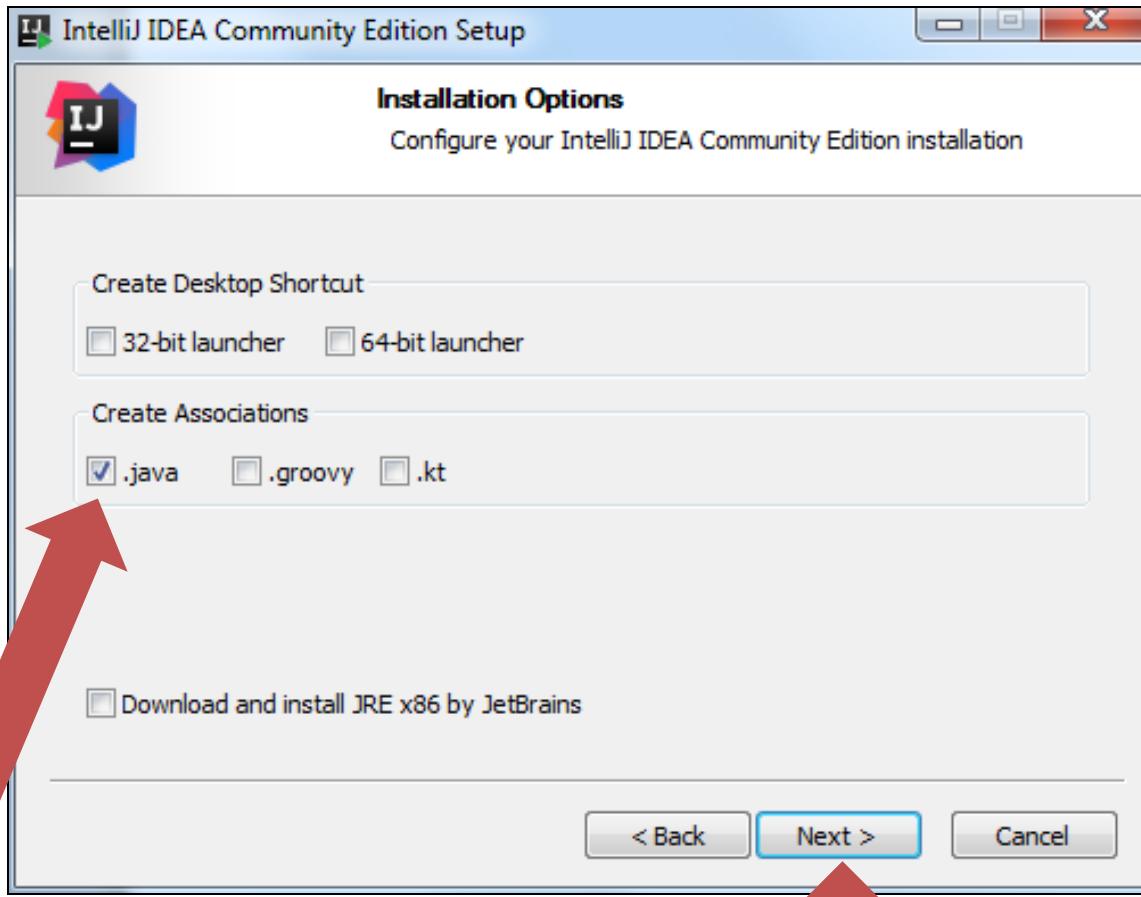
6

Click **Next** to continue...



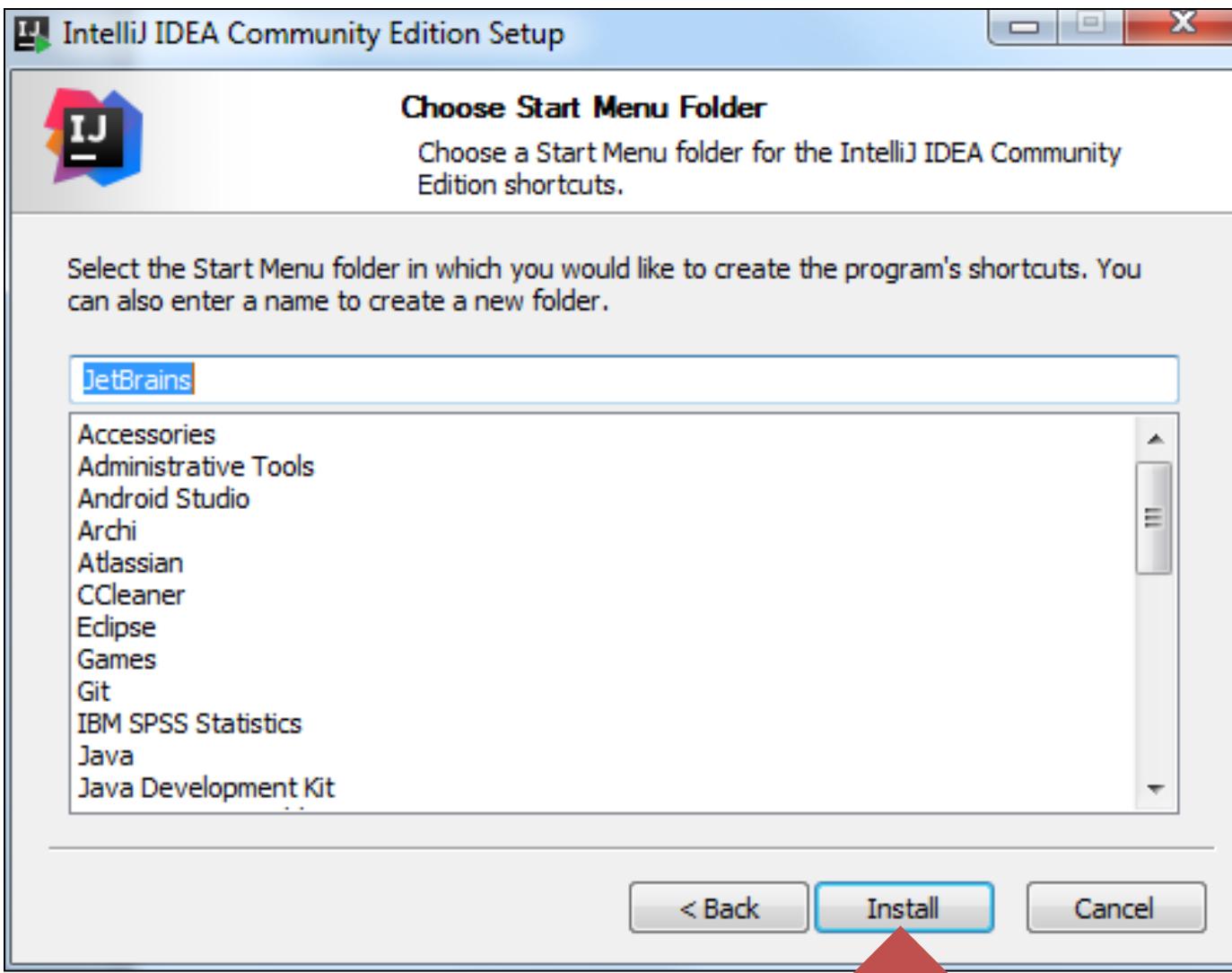
7

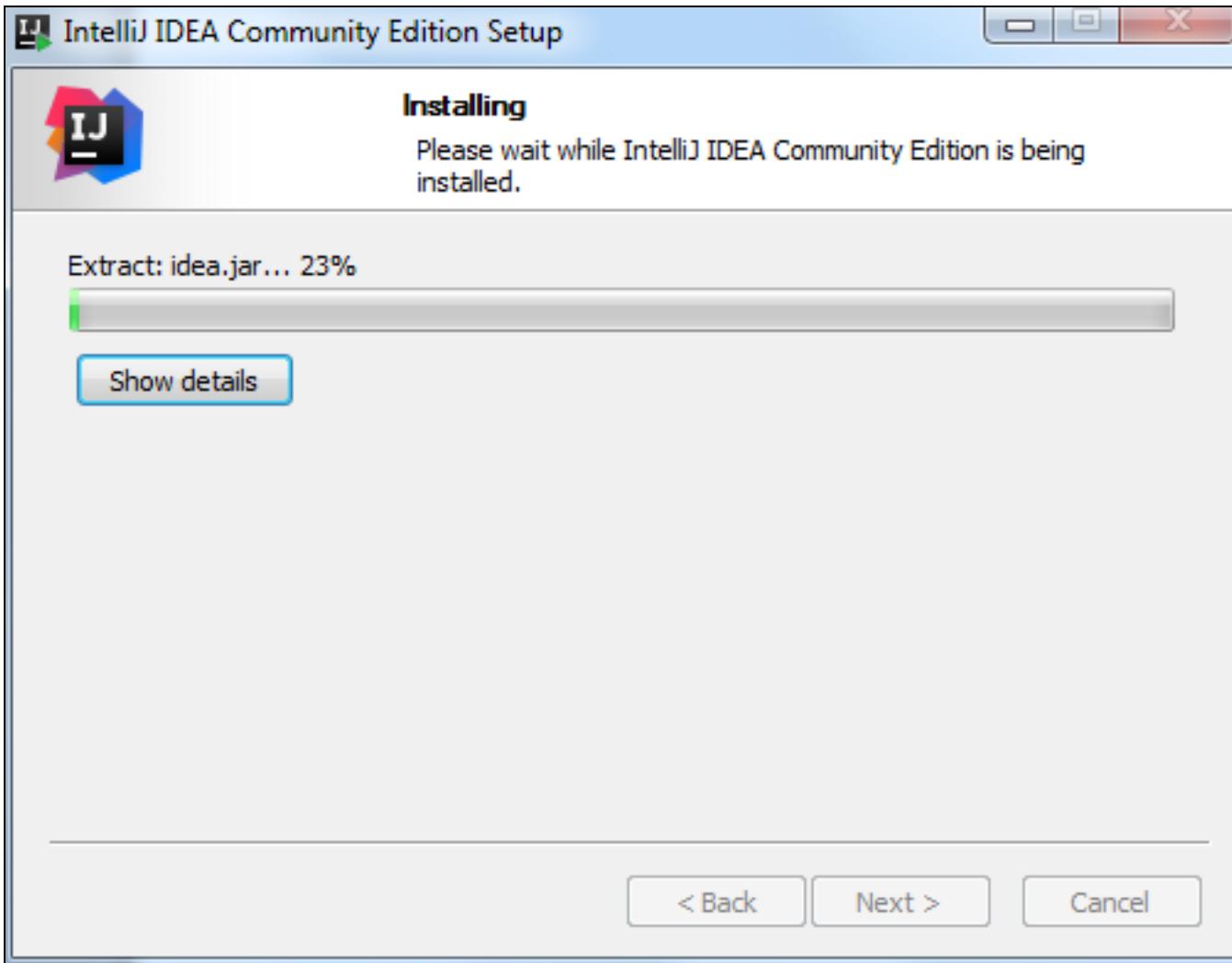
Accept the default destination folder
(you can change this if you prefer) and click **Next**.



8

Tick the **.java** box to create a file association.
Click the **Next** button.





10

The installation is in progress...

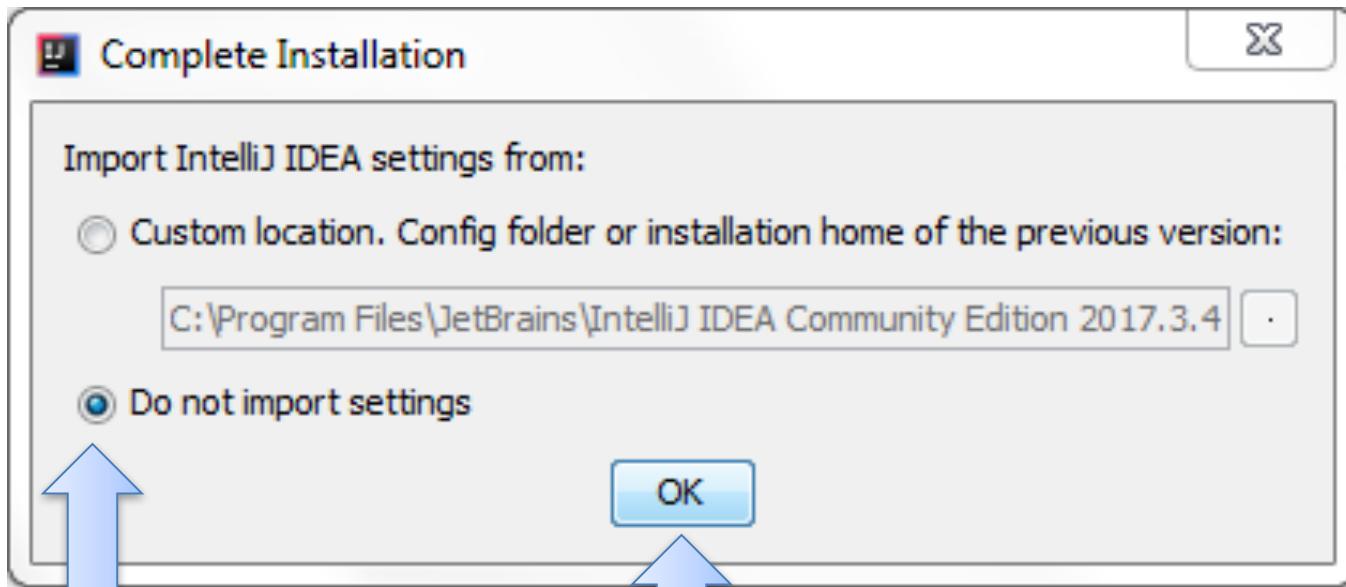


11

The installation is done...click the **Finish** button

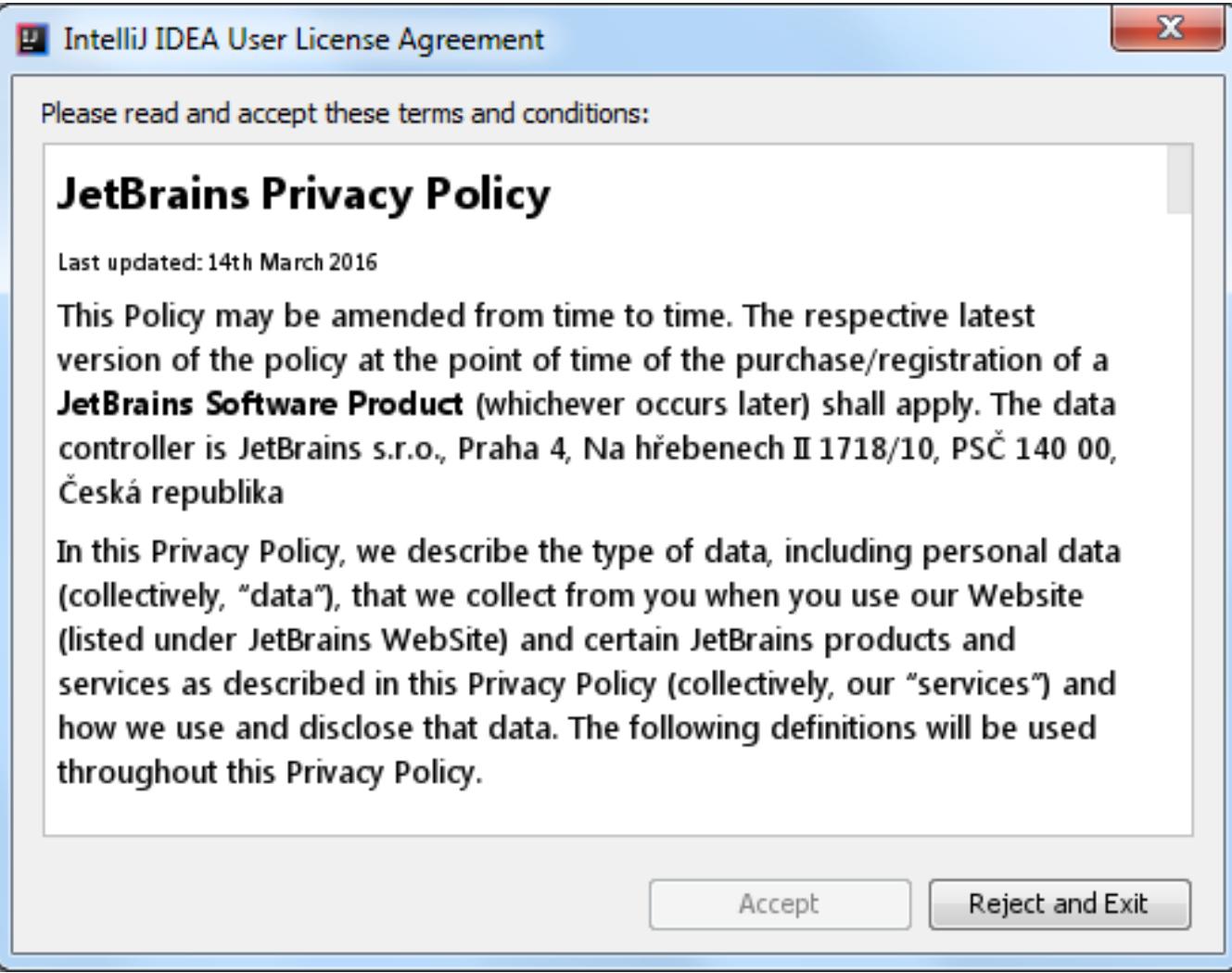
*Now that you have installed the
JDK and IntelliJ,
let's create and run our first
project.*

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



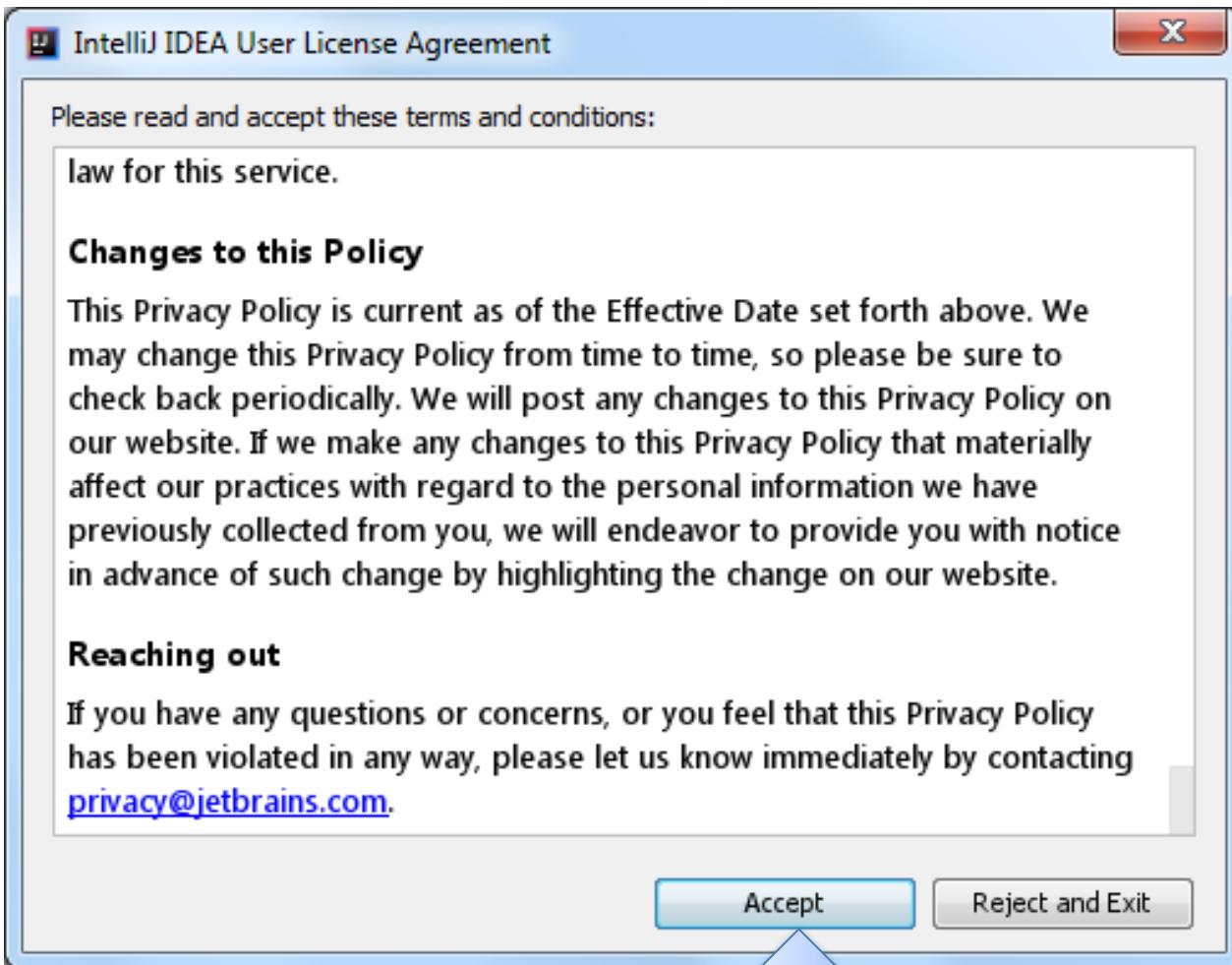
1

Appears when you first start IntelliJ.
Don't import the settings. Click OK.



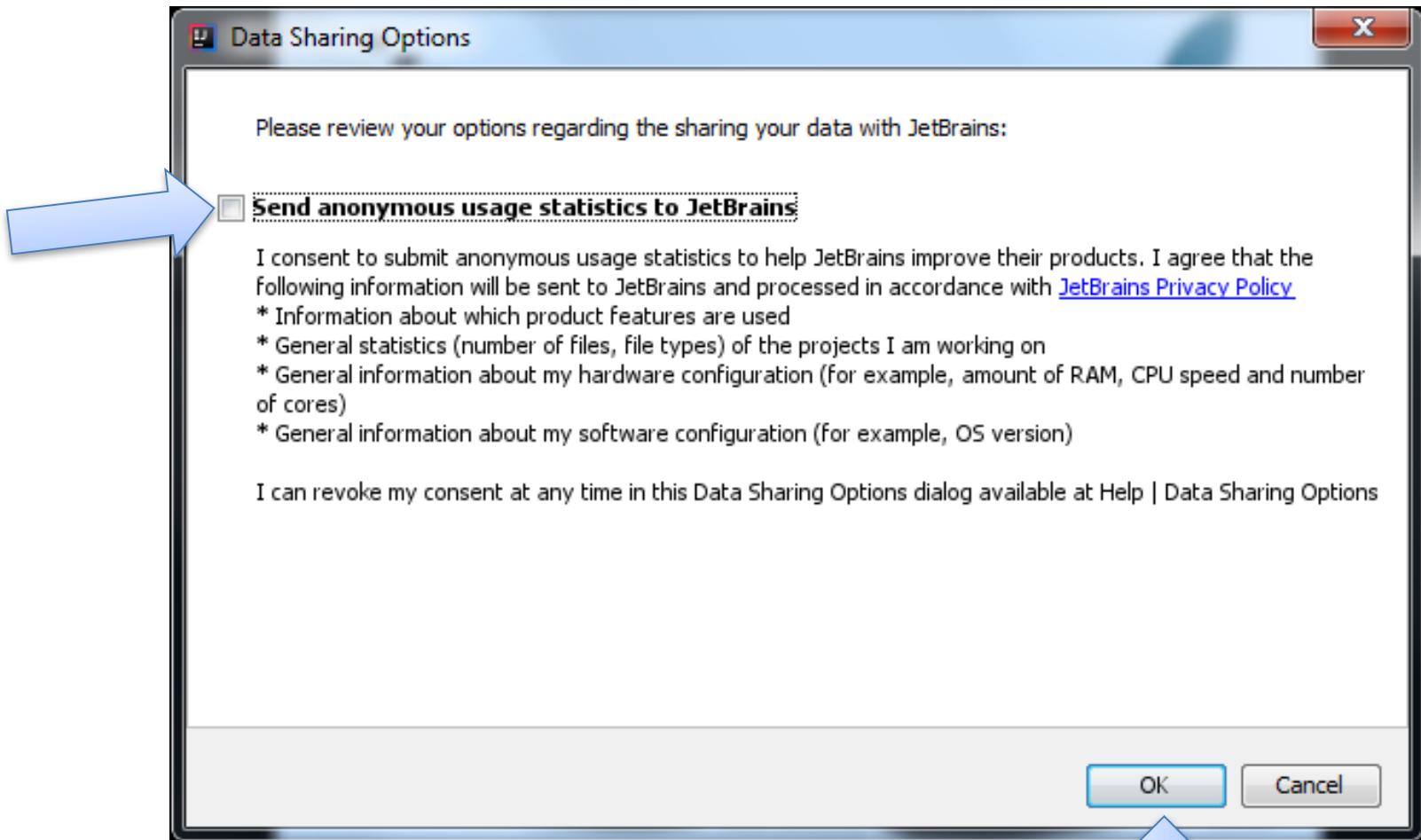
2

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



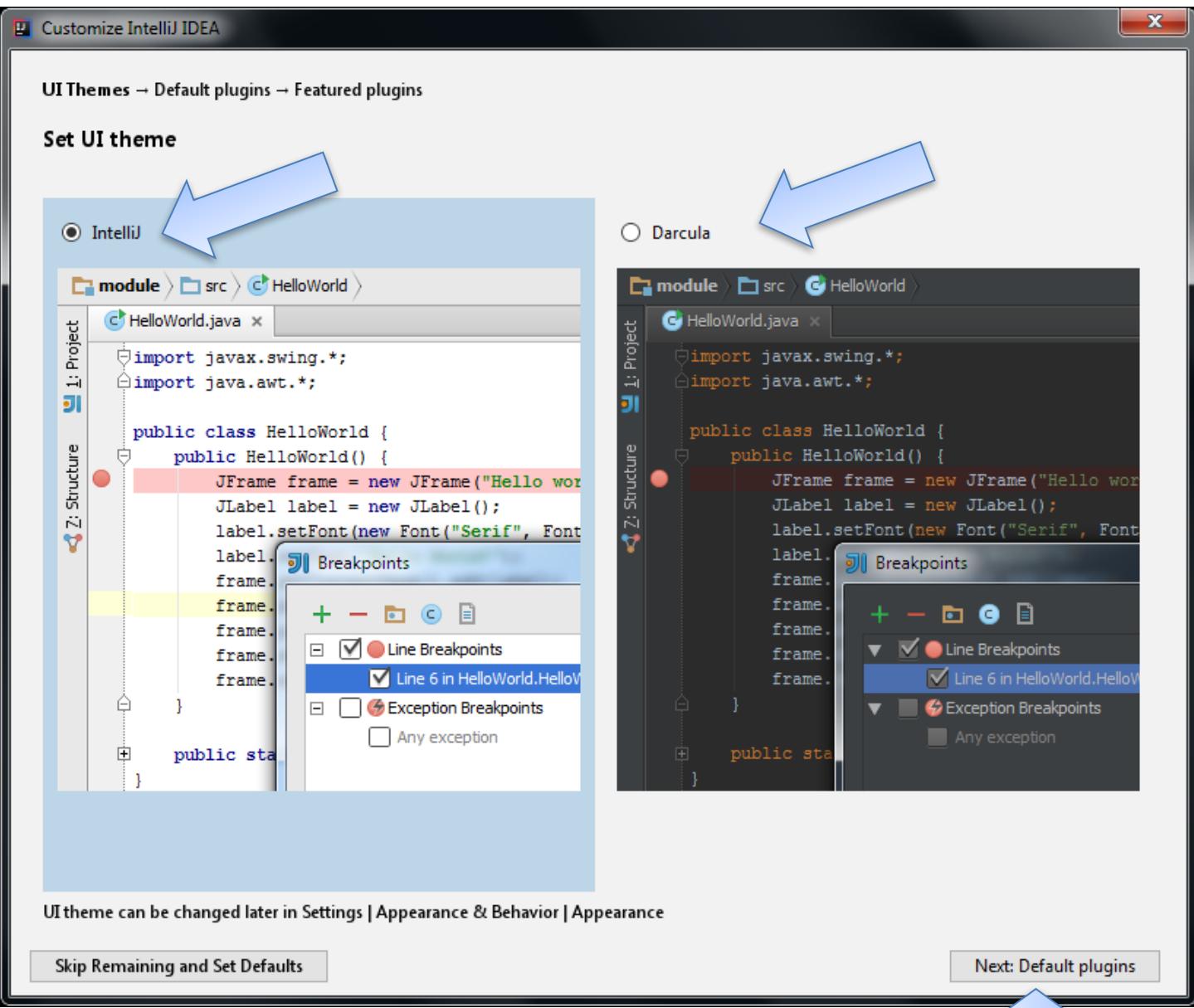
3

When the Accept button appears, click it.



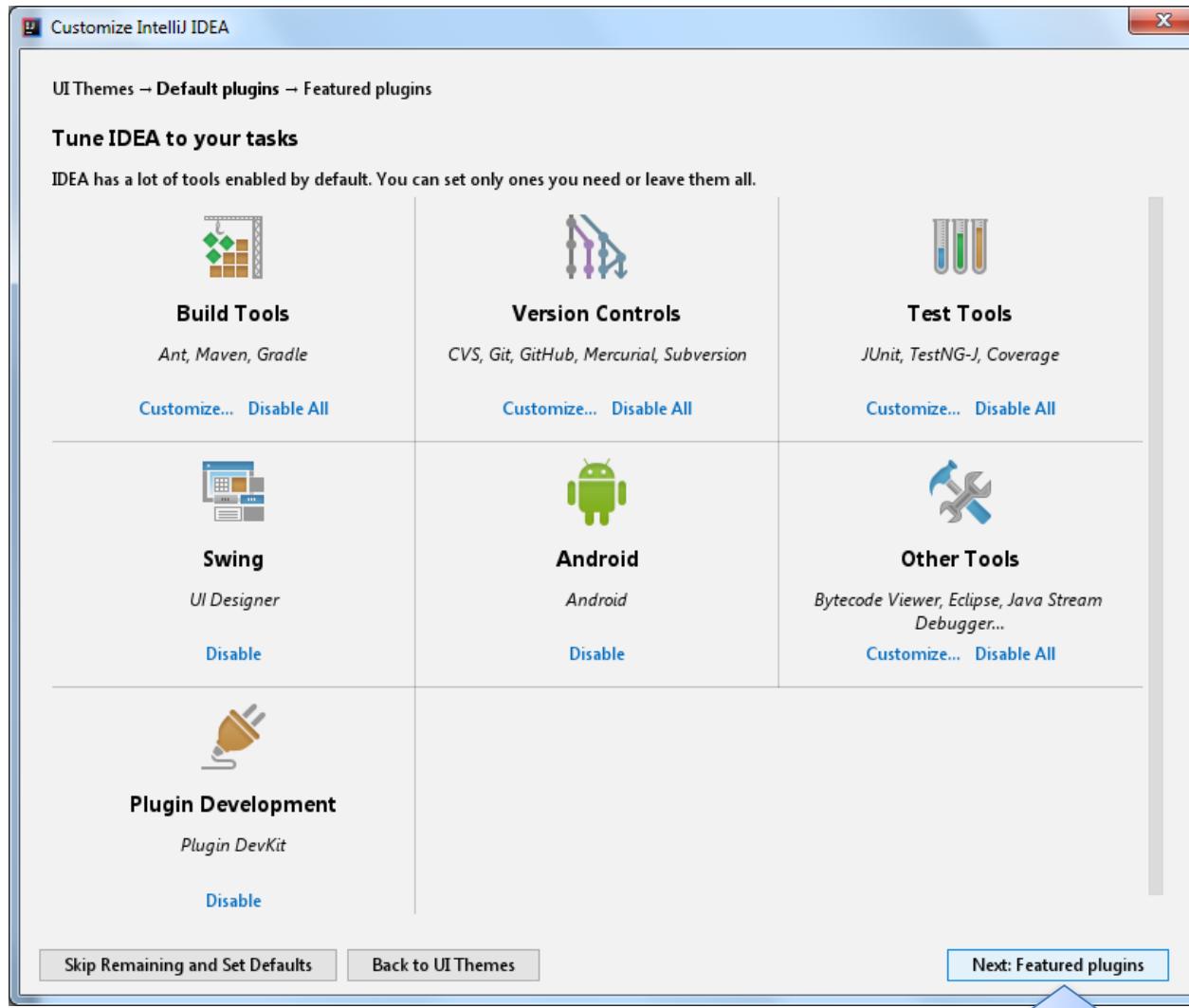
4

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



5

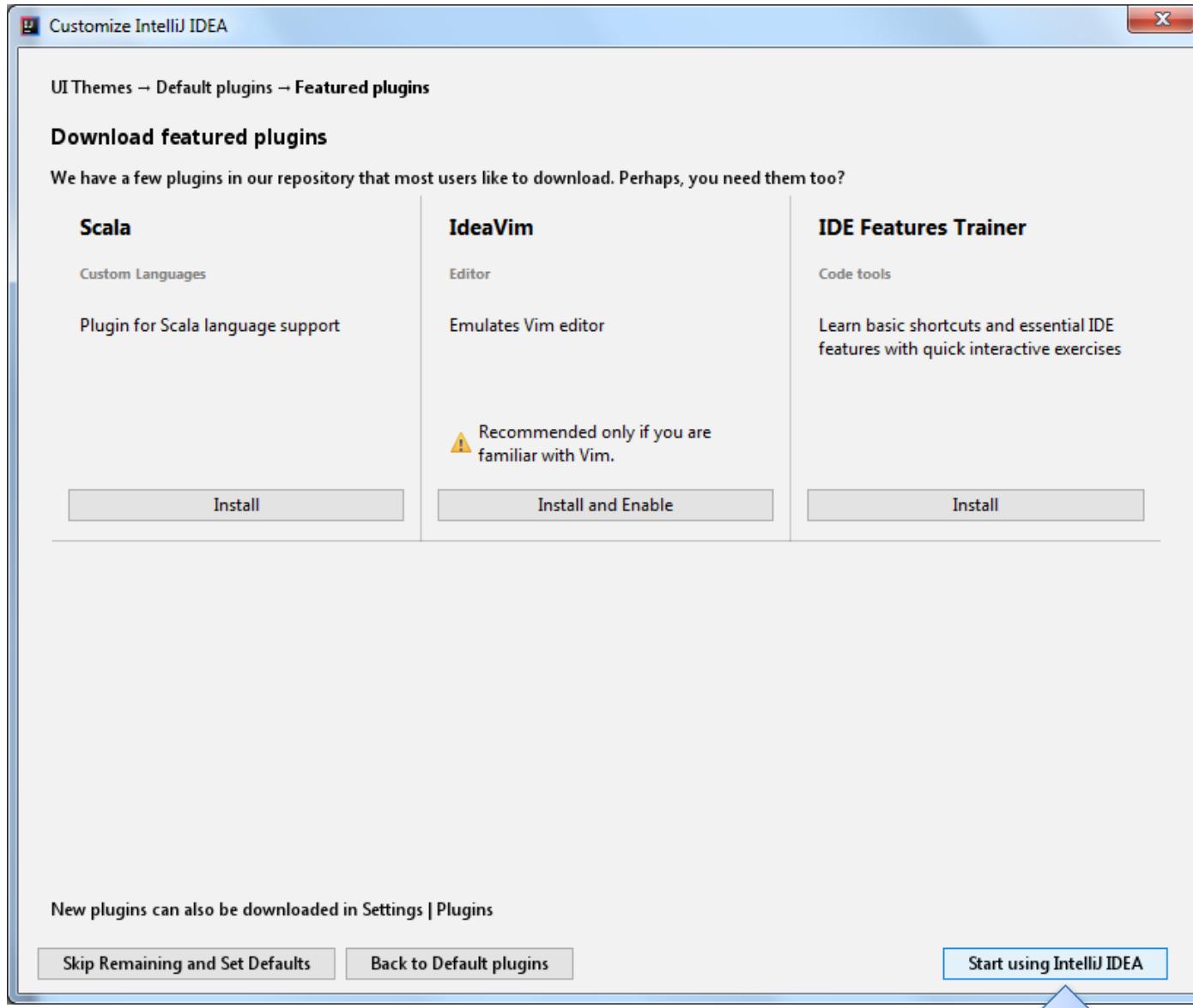
Choose your preferred theme and click Next.



6

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

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



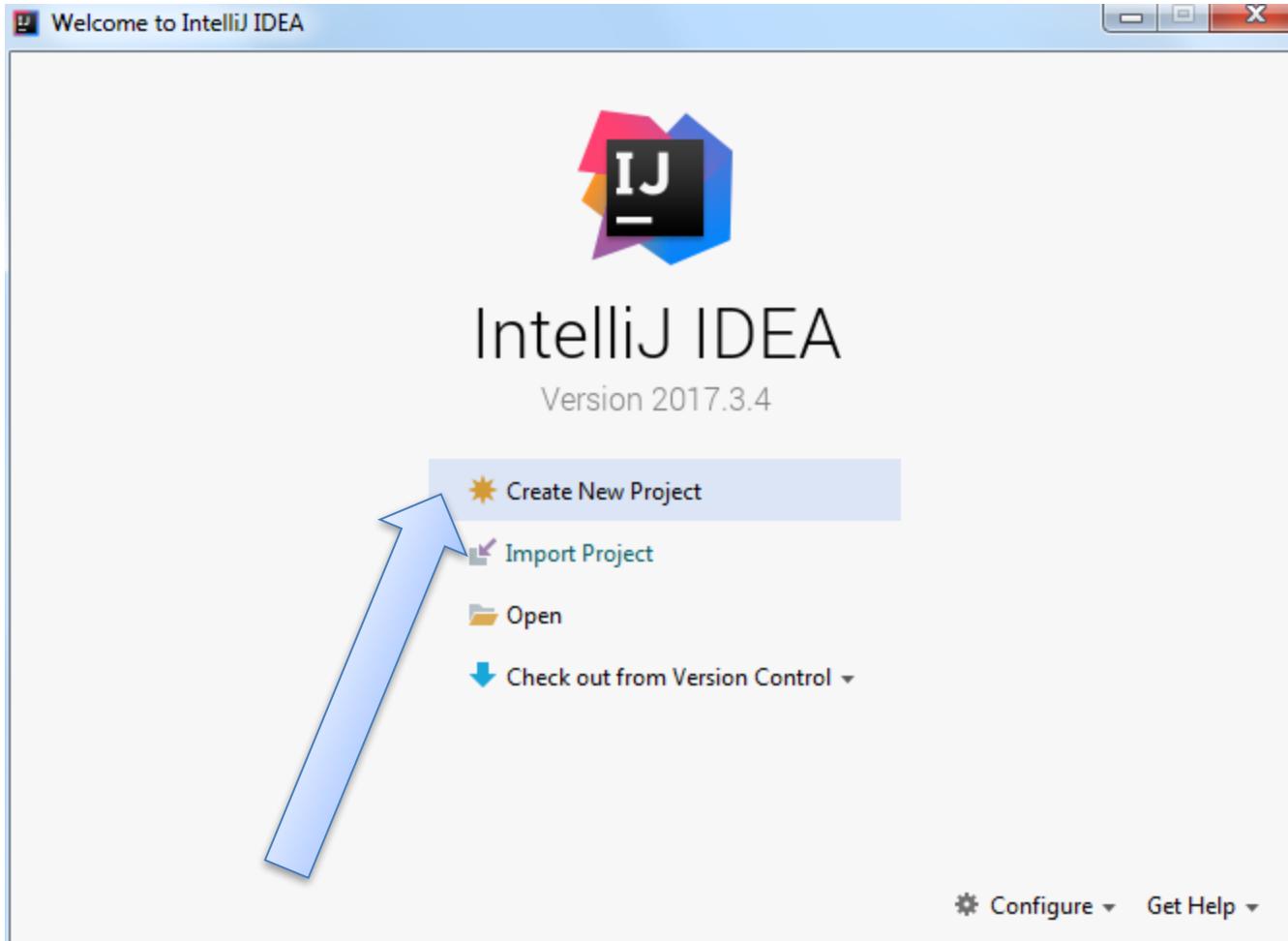
7

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



8

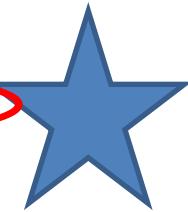
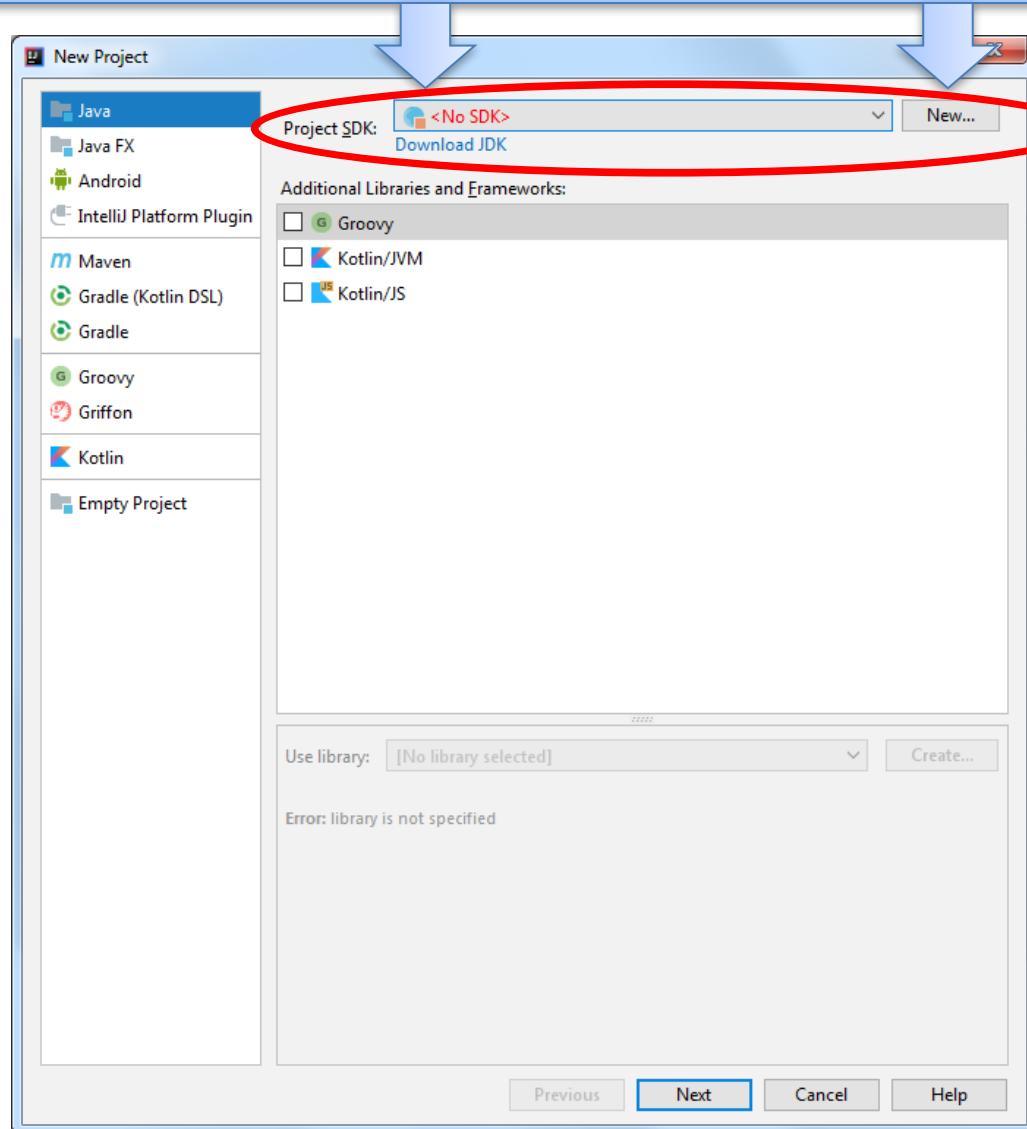
You will see this splash screen and then...

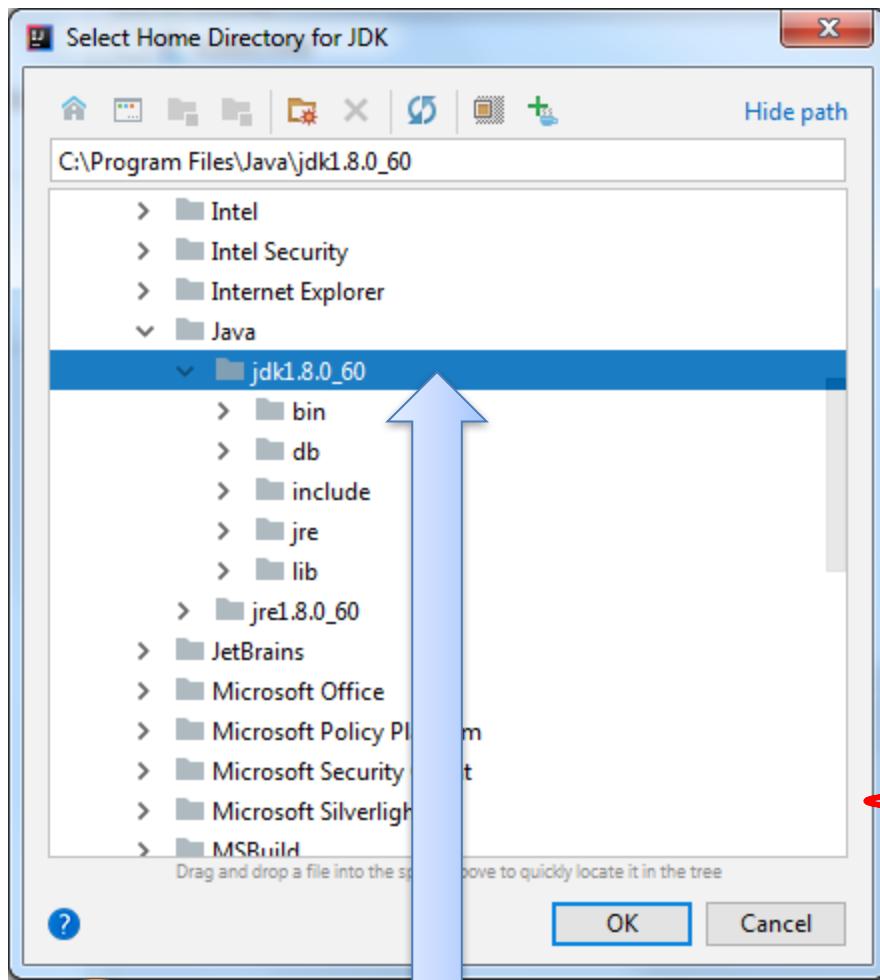


9

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

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





11

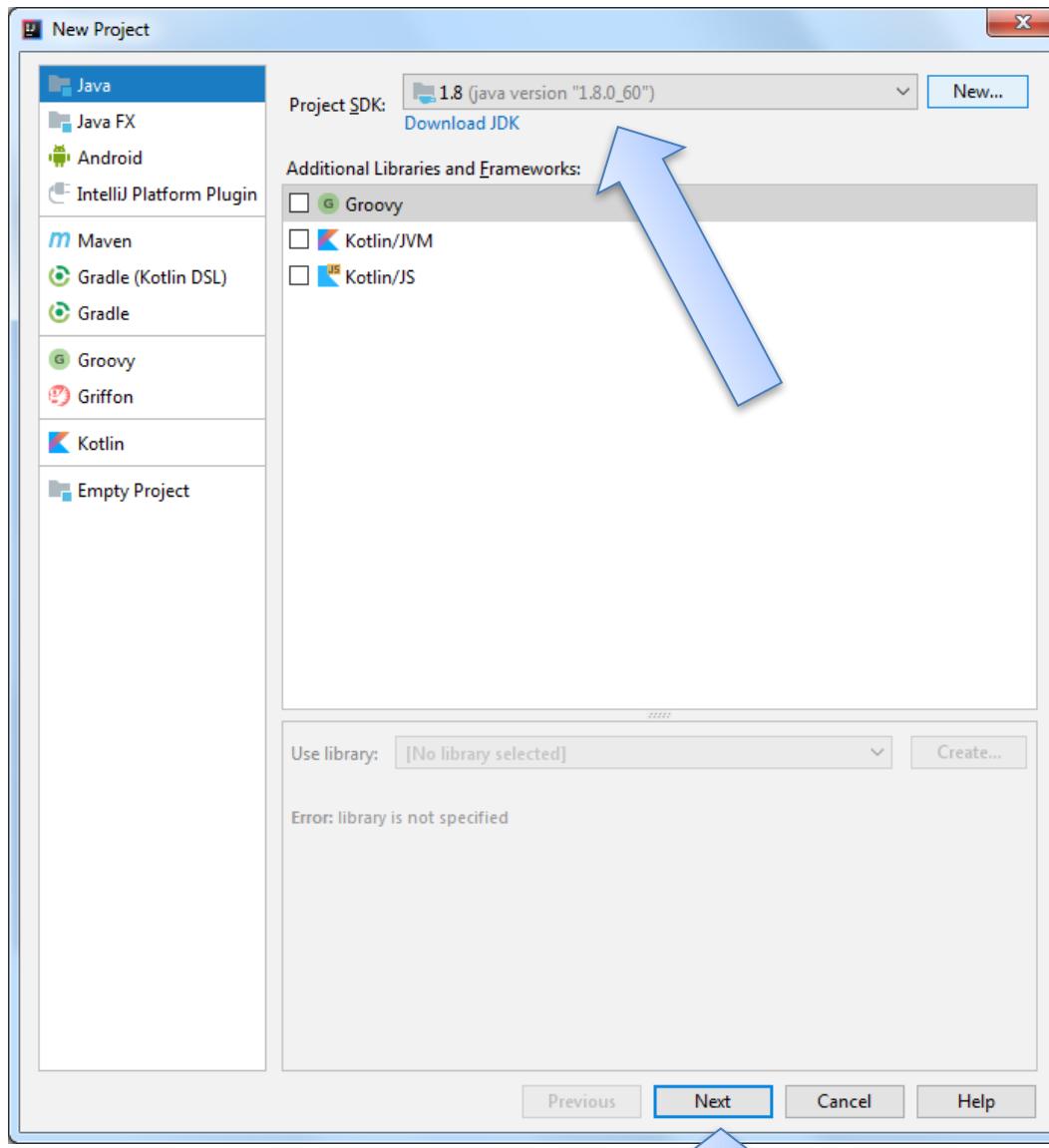
...and **locate** the version of java you previously installed. Click **Ok**

On OSX,
run a terminal window
and enter the following command

Echo \$(/usr/libexec/java_home)

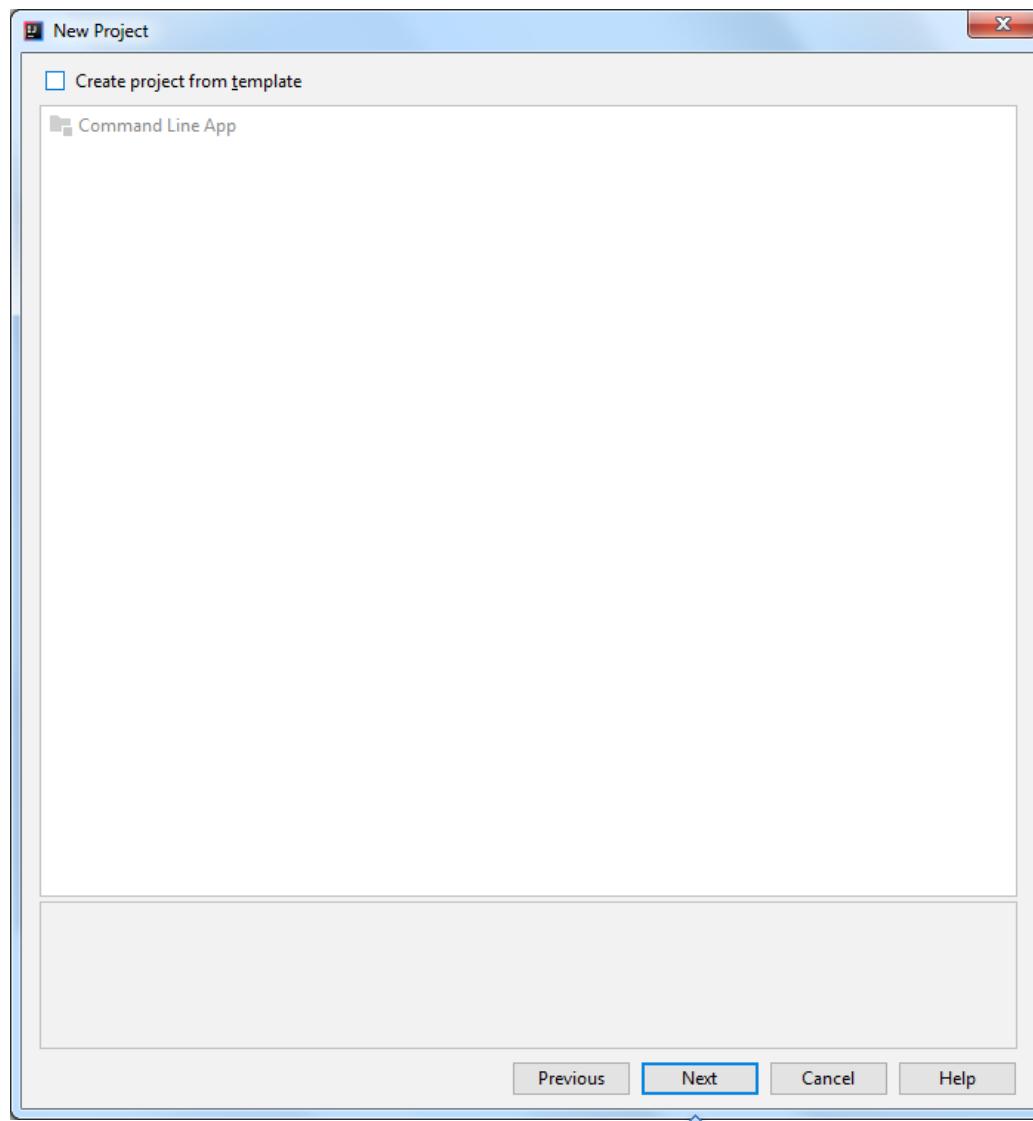
```
colmdunphy ~ bash 80x24
Last login: Sun Feb 18 15:47:12 on ttys000
[Colms-MacBook-Pro-i7-2:~ colmdunphy$ echo $(/usr/libexec/java_home)
/Library/Java/JavaVirtualMachines/jdk-9.0.4.jdk/Contents/Home
Colms-MacBook-Pro-i7-2:~ colmdunphy$ ]
```

(IntelliJ already comes with JDK v8 labelled 1.8)



12

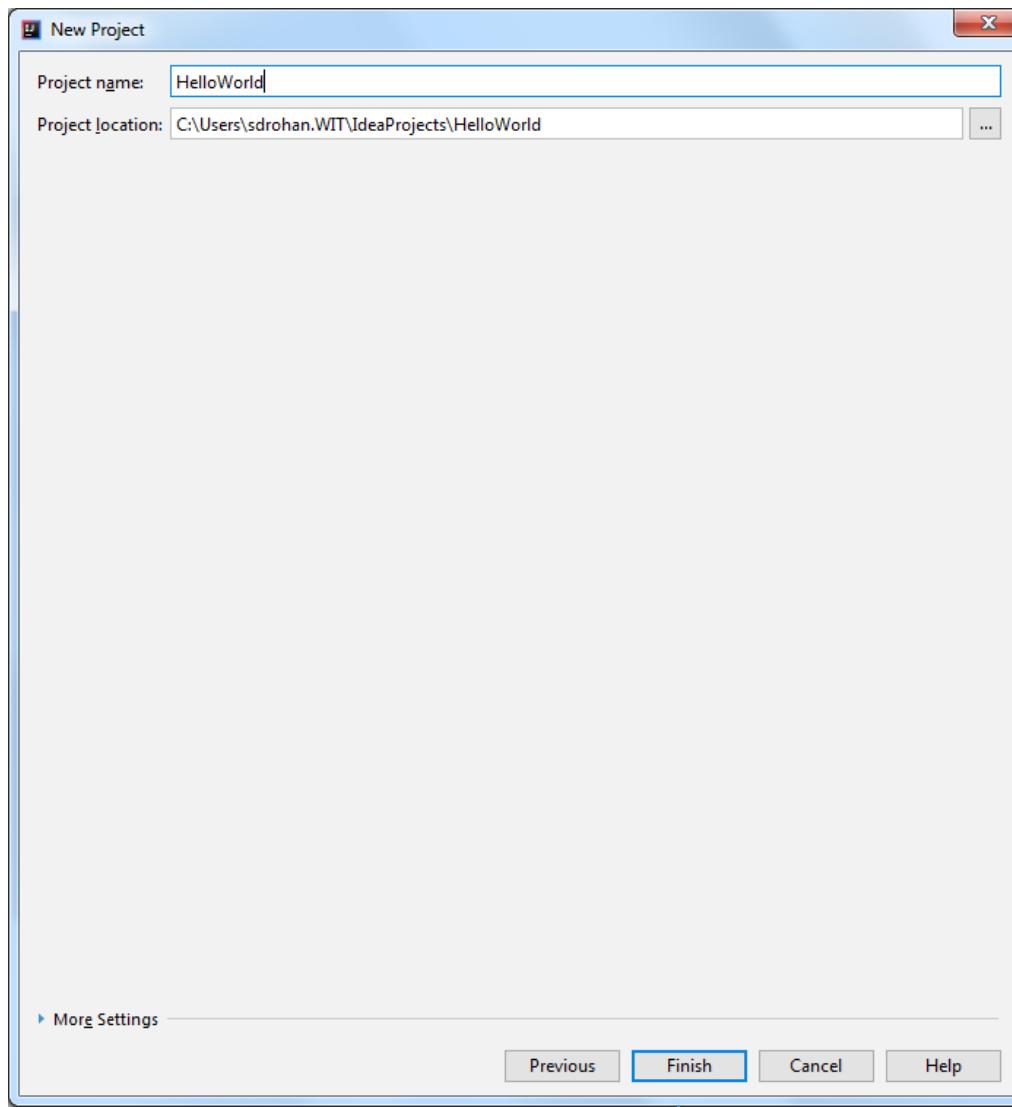
Now that Java is located, click Next.



13

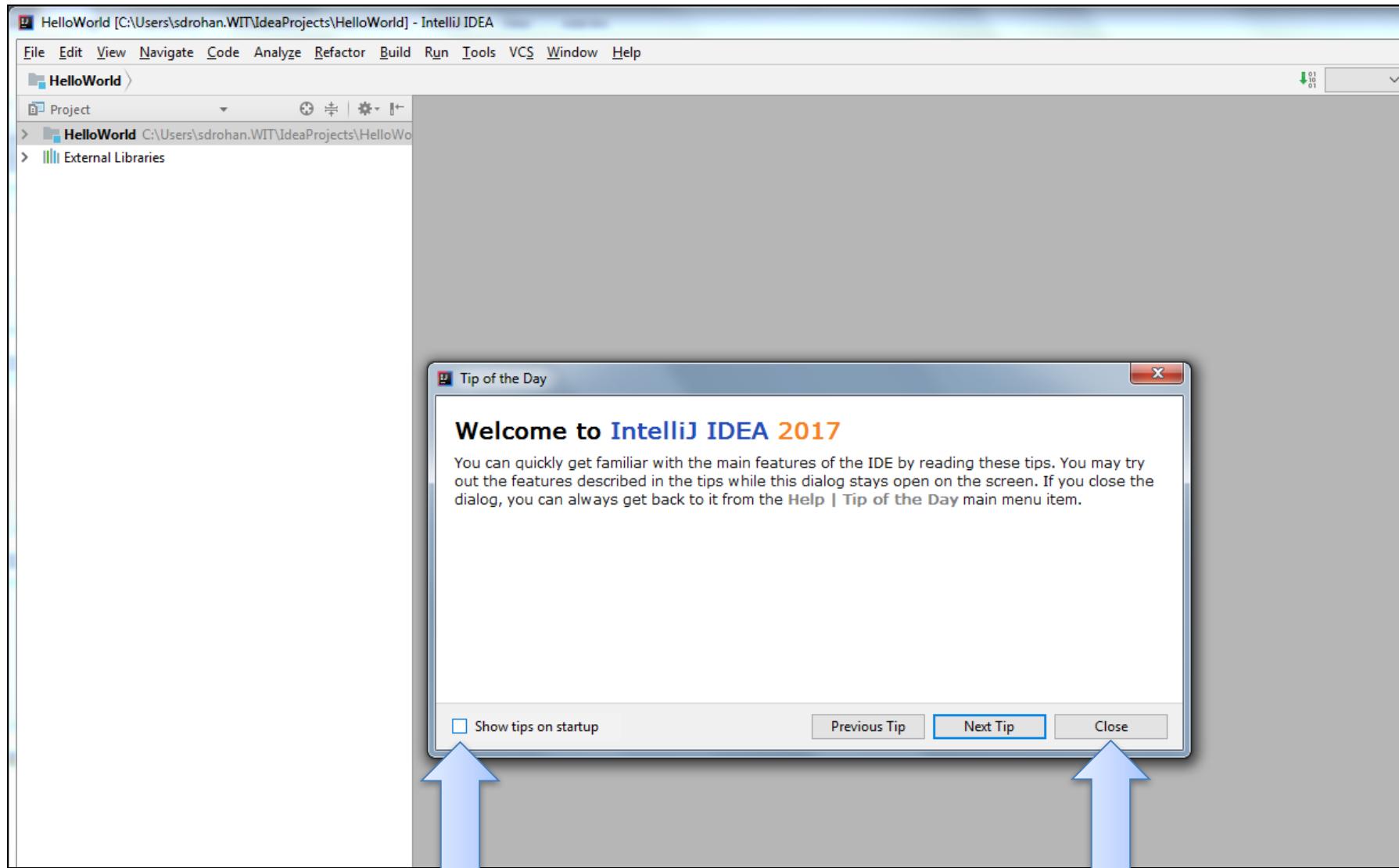


Accept the default settings by clicking Next



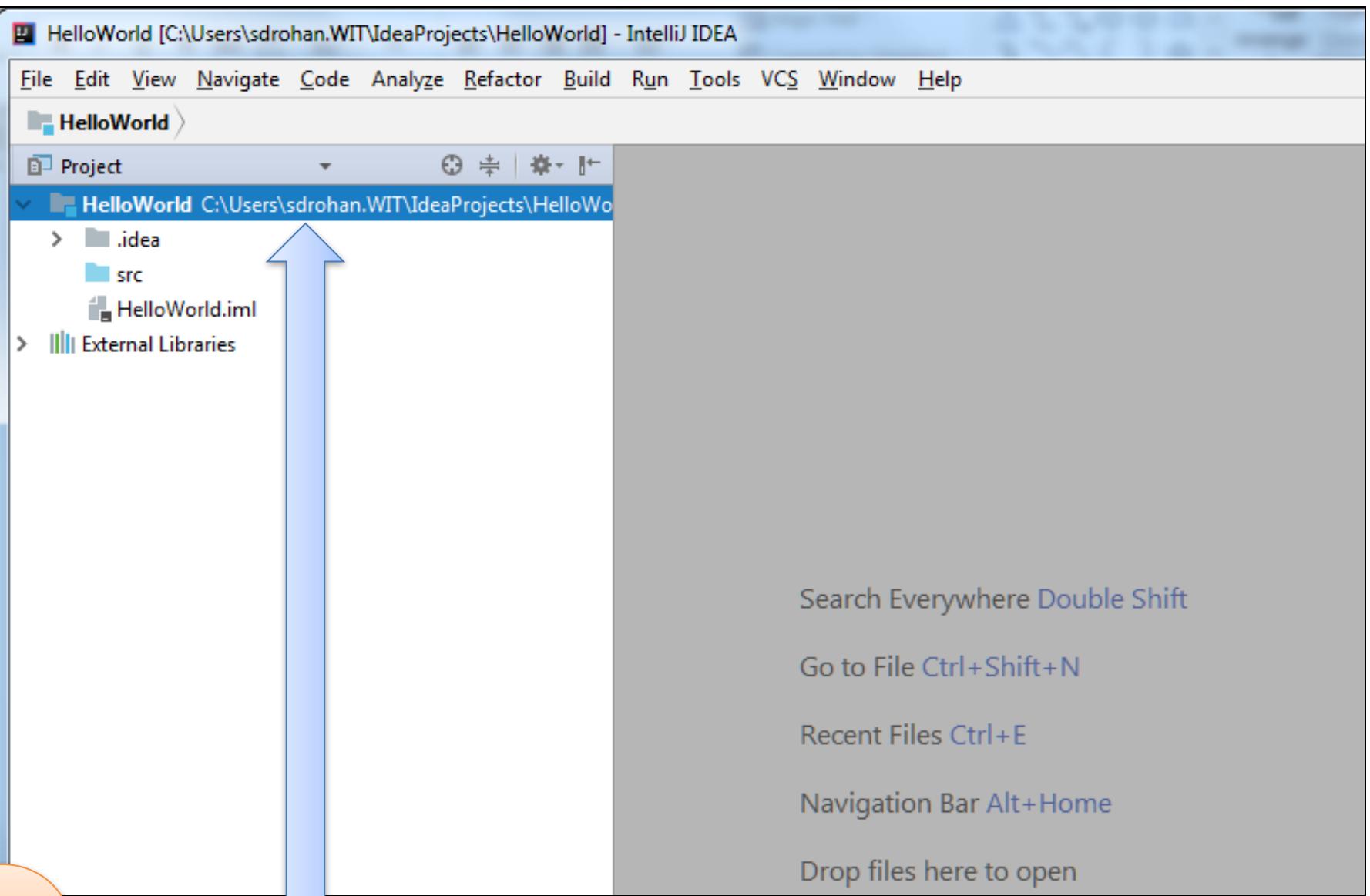
14

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



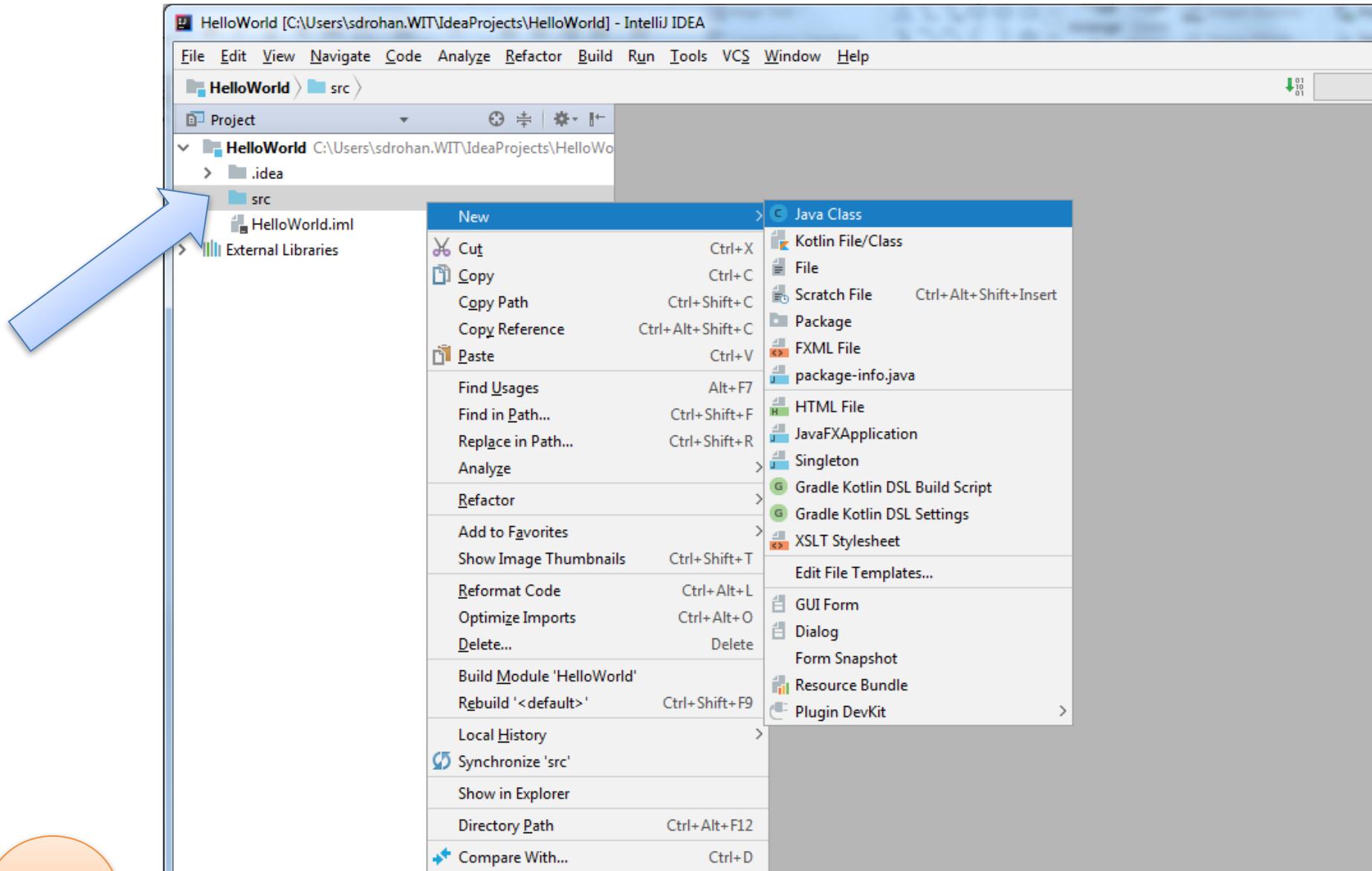
15

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



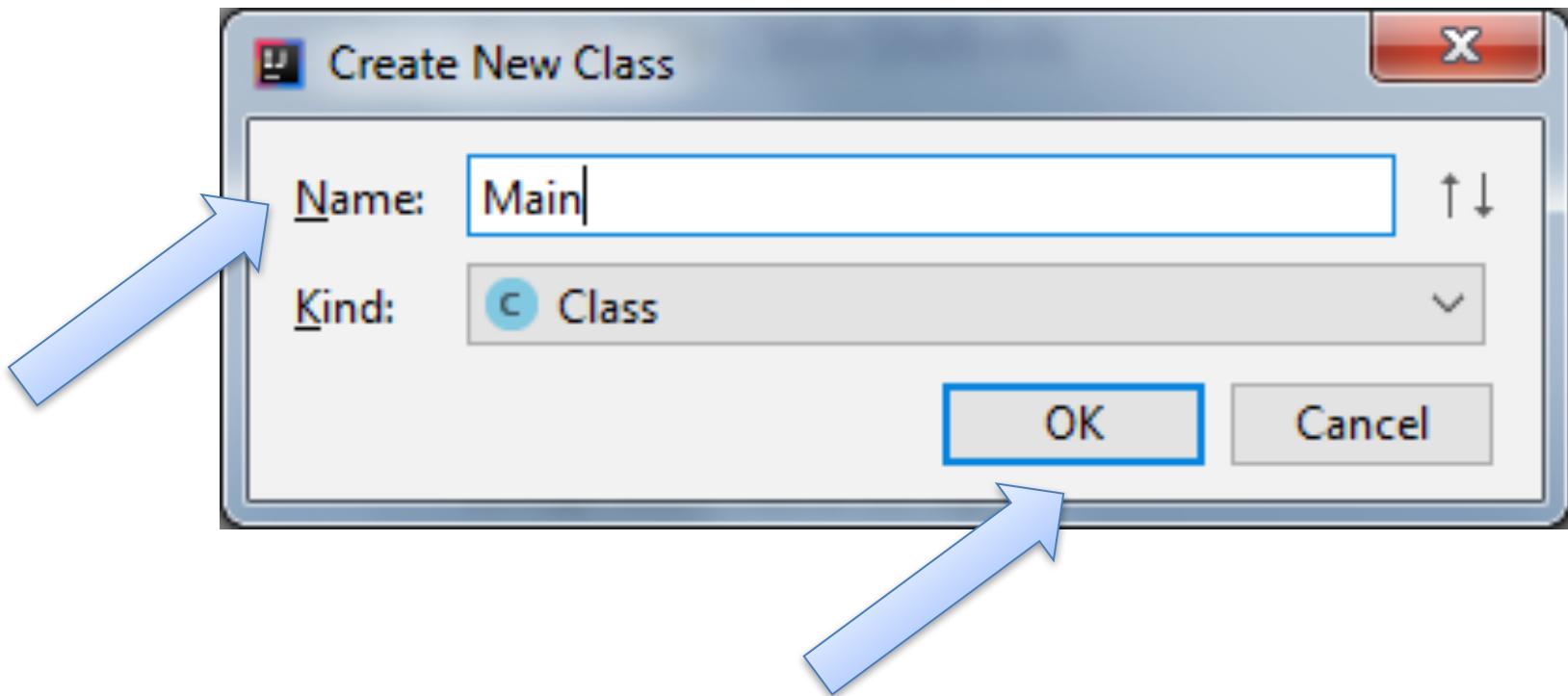
16

An empty HelloWorld project is created.



17

Right click on **src** folder....select **New → Java Class**



18

Enter the class name **Main** and click **OK**

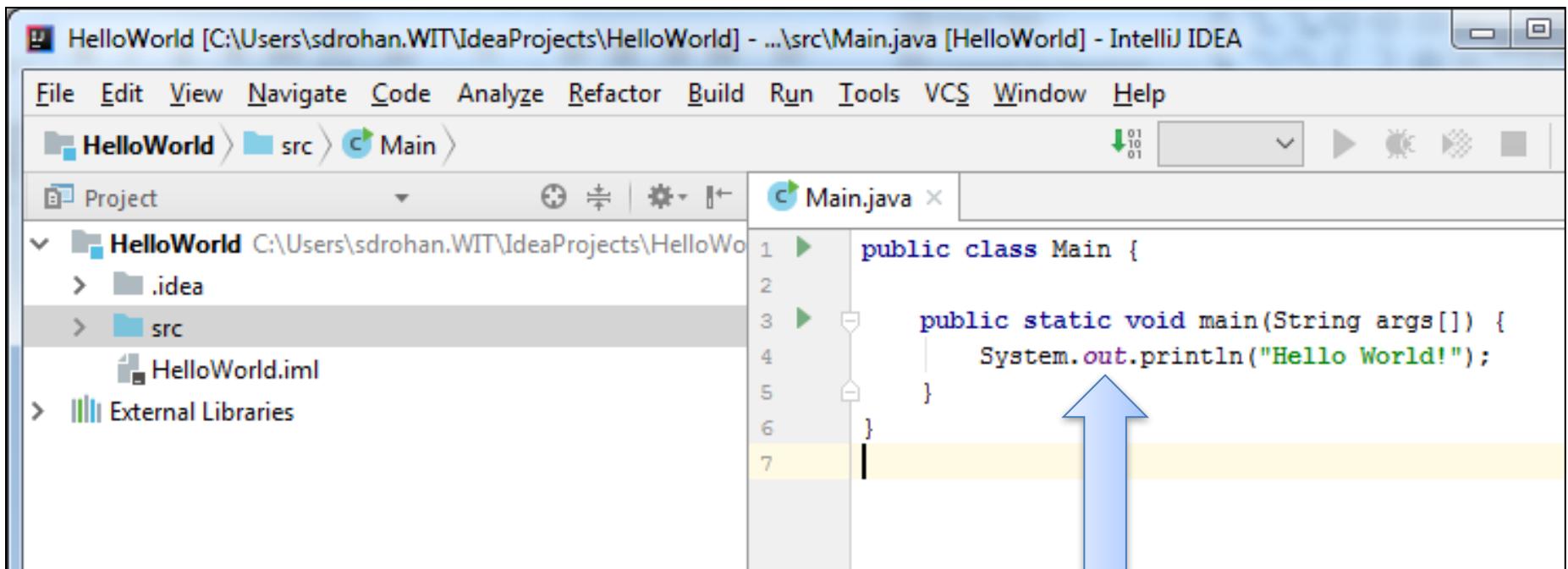
The screenshot shows the IntelliJ IDEA interface with a project named "HelloWorld". The project structure on the left includes ".idea", "src" (which contains "Main.java"), and "External Libraries". The code editor on the right displays the "Main.java" file, which contains the following code:

```
public class Main {
```

A large blue arrow points from the text "A new Main class has been created." at the bottom of the slide towards the "Main.java" file in the code editor.

19

A new **Main** class has been created.



>HelloWorld [C:\Users\sdrohan.WIT\IdeaProjects\HelloWorld] - ...\\src\\Main.java [HelloWorld] - IntelliJ IDEA

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

HelloWorld > src > Main

Project

HelloWorld C:\Users\sdrohan.WIT\IdeaProjects\HelloWorld

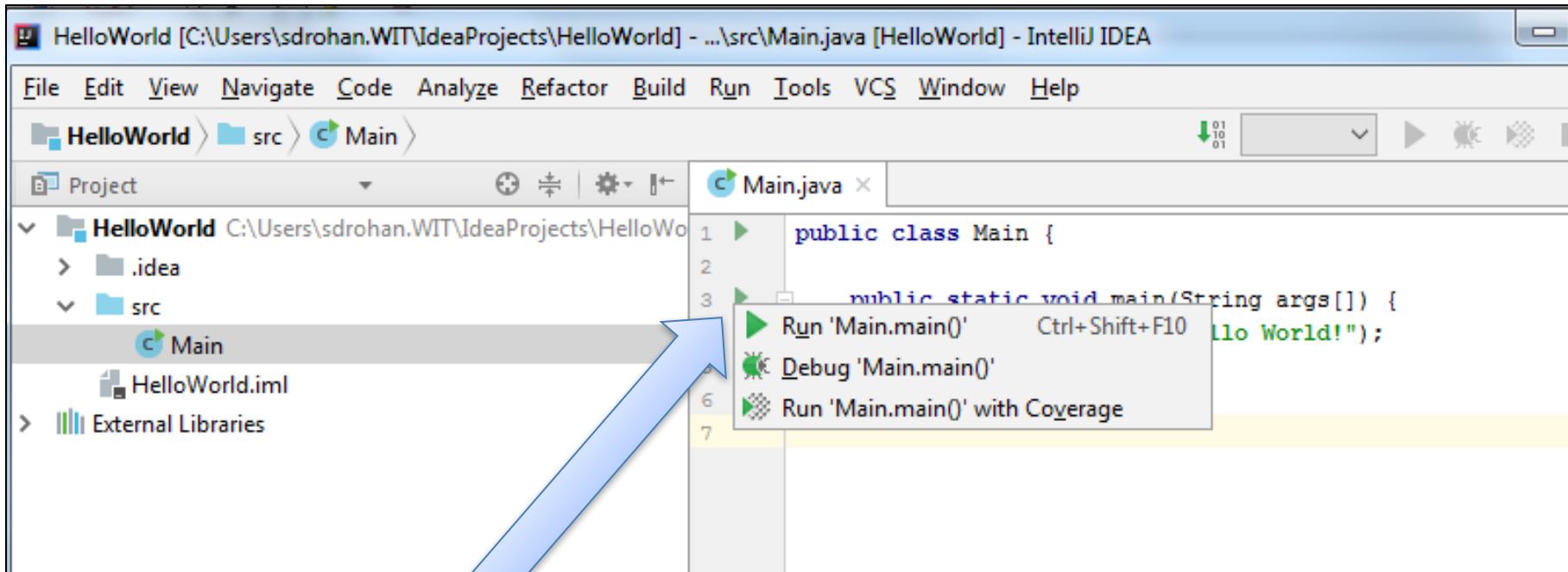
- .idea
- src
- HelloWorld.iml
- External Libraries

Main.java

```
1 public class Main {  
2  
3     public static void main(String args[]) {  
4         System.out.println("Hello World!");  
5     }  
6 }  
7 }
```

20

Enter this code into the **Main** class.



21

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

The screenshot shows the IntelliJ IDEA IDE interface. The title bar reads "HelloWorld [C:\Users\sdrohan.WIT\IdeaProjects\HelloWorld] - ...\\src\\Main.java [HelloWorld] - IntelliJ IDEA". The menu bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The toolbar has icons for Project, Main, Run, Stop, Refresh, and Search. The Project tool window on the left shows a tree structure with a yellow highlight on the "src" folder, which contains "Main.java". The Main.java editor tab is open, displaying the following code:

```
public class Main {  
    public static void main(String args[]) {  
        System.out.println("Hello World!");  
    }  
}
```

A large blue arrow points from the bottom of the code editor down to the Run tool window. The Run tool window shows the command "C:\Program Files\Java\jdk1.8.0_60\bin\java" and the output "Hello World!". Below the output, it says "Process finished with exit code 0". At the bottom of the Run window, a message says "Compilation completed successfully in 6s 305ms (moments ago)".

22

Hello World! is printed to console.

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

HelloWorld' folder in the project tree."/>

```
public class Main {  
    public static void main(String args[]) {  
        System.out.println("Hello World!");  
    }  
}
```

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

Questions?

