CSCI1530 Computer Principles and Java Programming

Tutorial 1

Zheng Qingqing
SHB 911
qqzheng@cse.cuhk.edu.hk

Outline

- How to
  - Install JDK and NetBeans
  - Start the first program to print “Hello world!”
  - Be familiar to method for output
  - Appendix: Configure JDK Environment variables

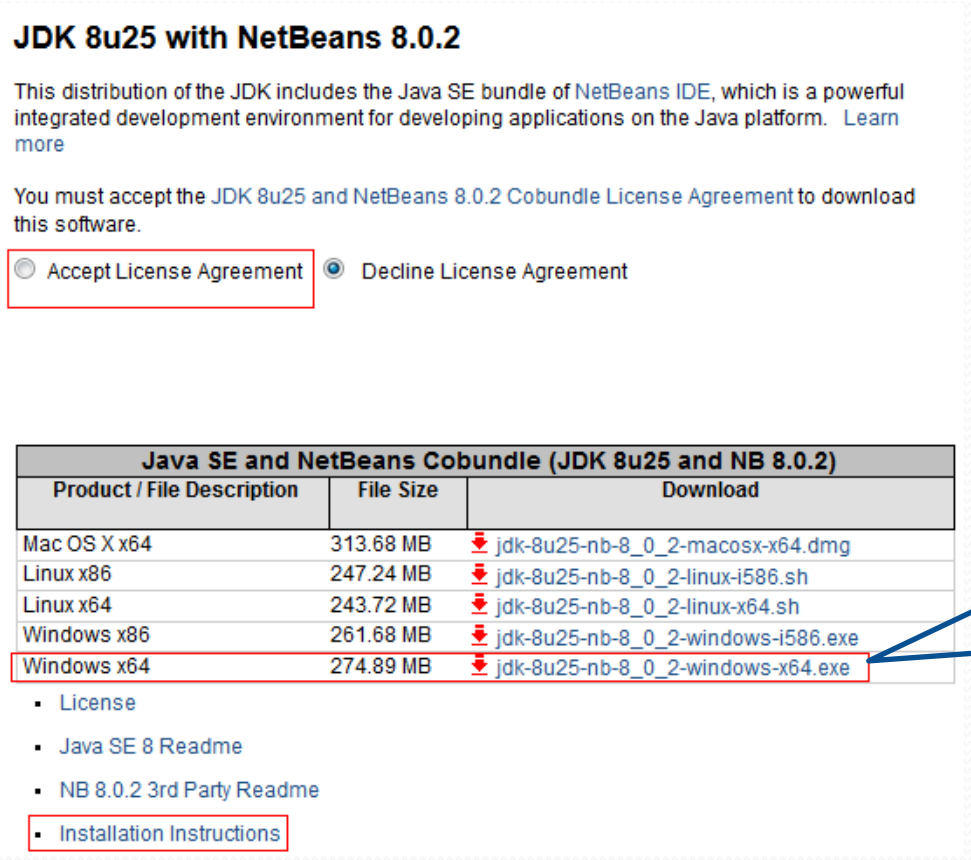
Install JDK and NetBeans

Install JDK and NetBeans

- Step 1: Download
  - http://www.oracle.com/technetwork/java/javase/downloads/index.html

Install JDK and NetBeans

- Step 1: Download
  - Accept license Agreement and Download what you want



JDK 8u25 with NetBeans 8.0.2

This distribution of the JDK includes the Java SE bundle of NetBeans IDE, which is a powerful integrated development environment for developing applications on the Java platform. Learn more

You must accept the JDK 8u25 and NetBeans 8.0.2 Cobundle License Agreement to download this software.

Accept License Agreement | Decline License Agreement

Java SE and NetBeans Cobundle (JDK 8u25 and NB 8.0.2)		
Product / File Description	File Size	Download
Mac OS X x64	313.68 MB	jdk-8u25-nb-8_0_2-macosx-x64.dmg
Linux x86	247.24 MB	jdk-8u25-nb-8_0_2-linux-i586.sh
Linux x64	243.72 MB	jdk-8u25-nb-8_0_2-linux-x64.sh
Windows x86	261.68 MB	jdk-8u25-nb-8_0_2-windows-i586.exe
Windows x64	274.89 MB	jdk-8u25-nb-8_0_2-windows-x64.exe

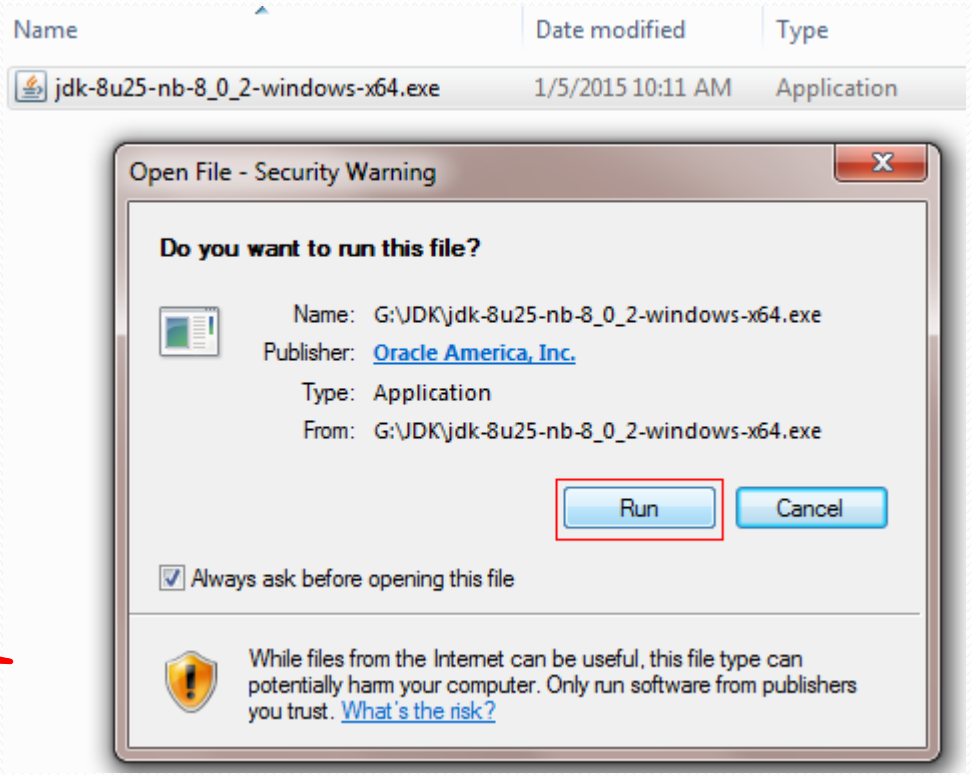
- License
- Java SE 8 Readme
- NB 8.0.2 3rd Party Readme
- Installation Instructions

For Mac and Linux, please see installation instructions

Download it according to your OS!

Install JDK and NetBeans

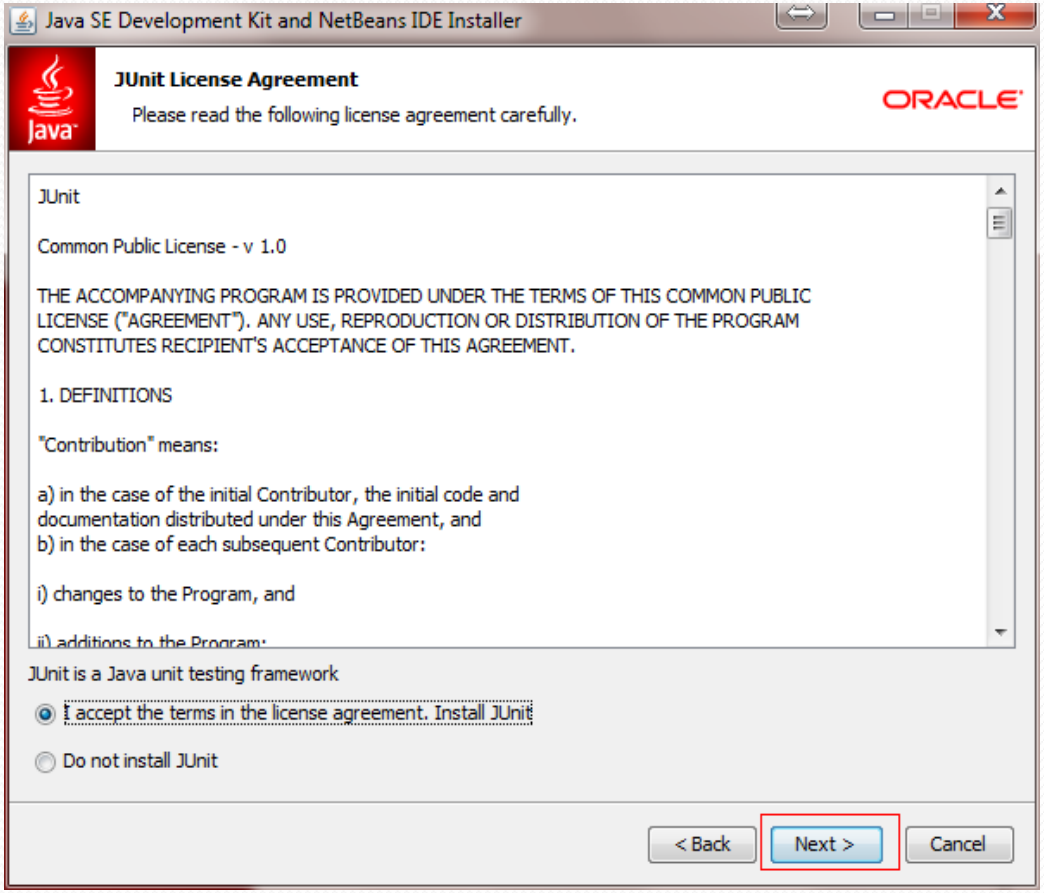
- Step 2: Installation
  - Double Click "jdk-8u25-nb-8_0_2-windows-x64.exe"
  - Run the file



The demo is in windows 7

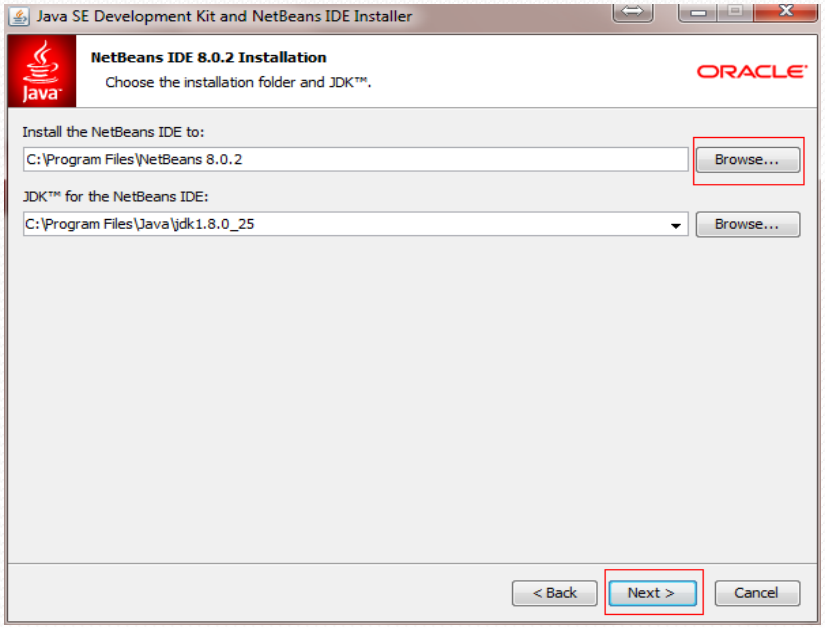
Install JDK and NetBeans

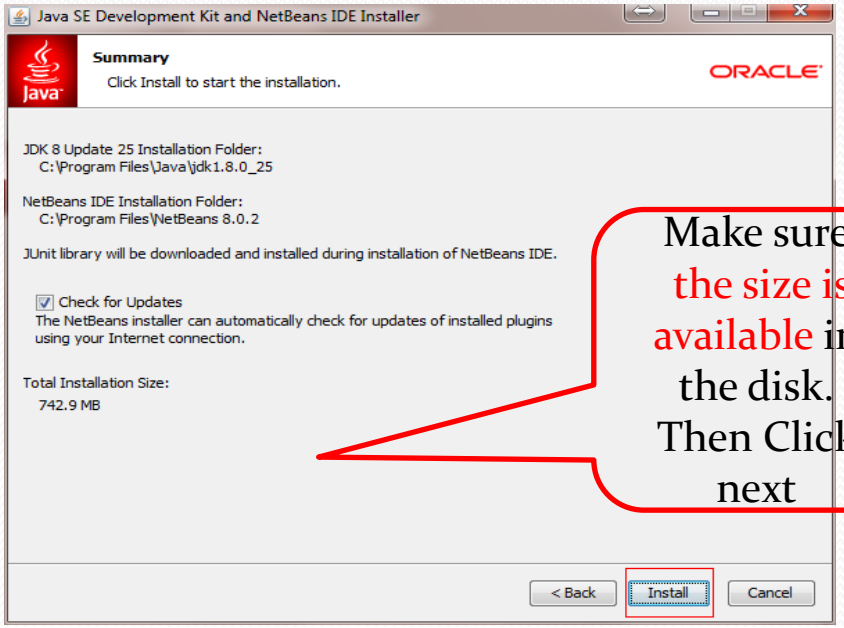
- Step 2: Installation
  - Accept Junit License Agreement
  - Press “Next”



Install JDK and NetBeans

- Step 2: Installation
  - Select installation path or keep default
  - Press “install”

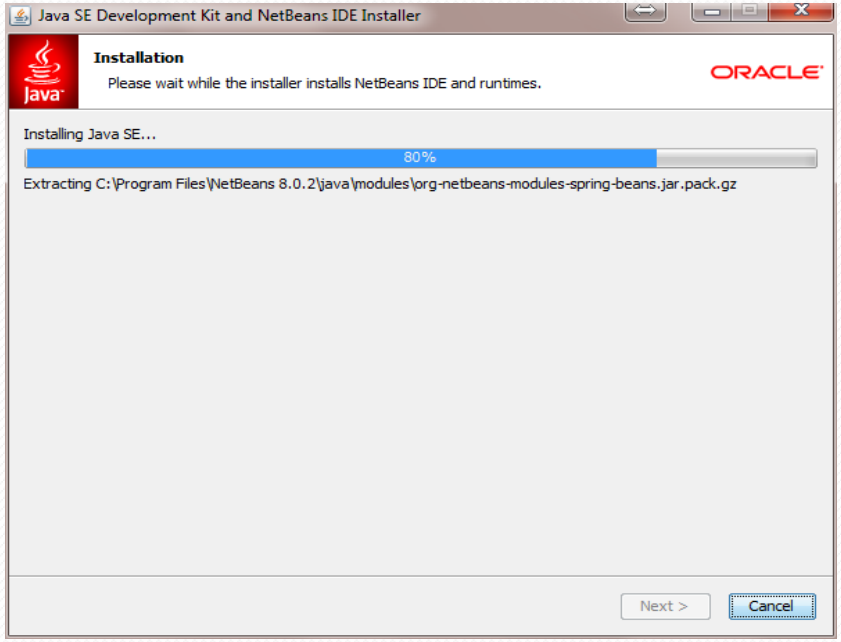


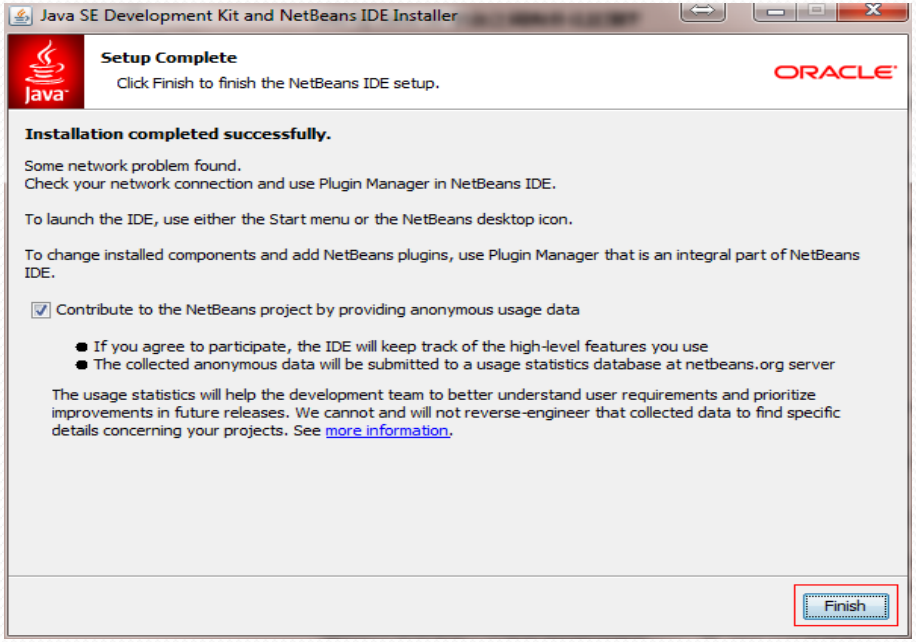


Make sure the size is available in the disk. Then Click next

Install JDK and NetBeans

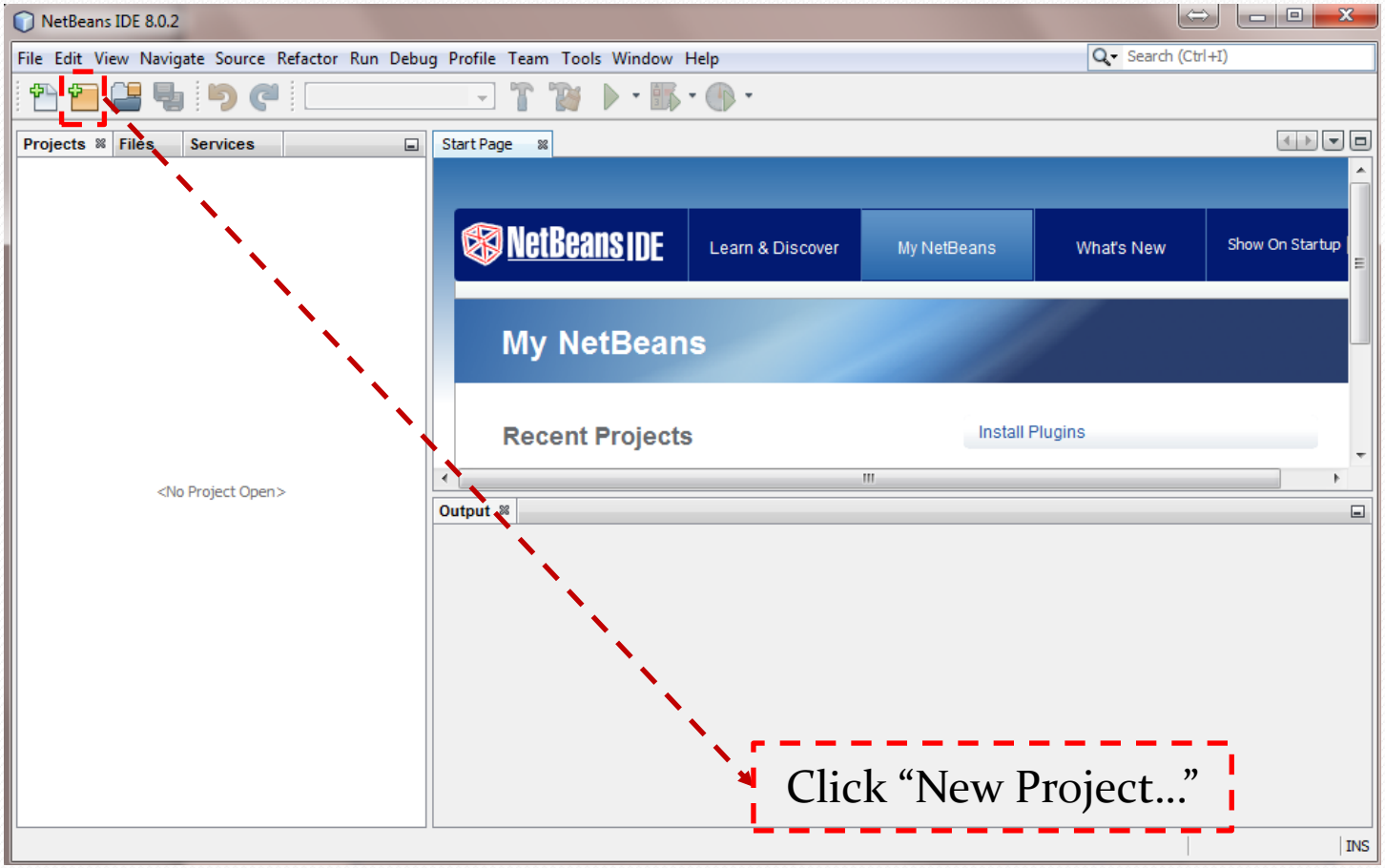
- Step 2: Installation
  - Just wait
  - Press finish



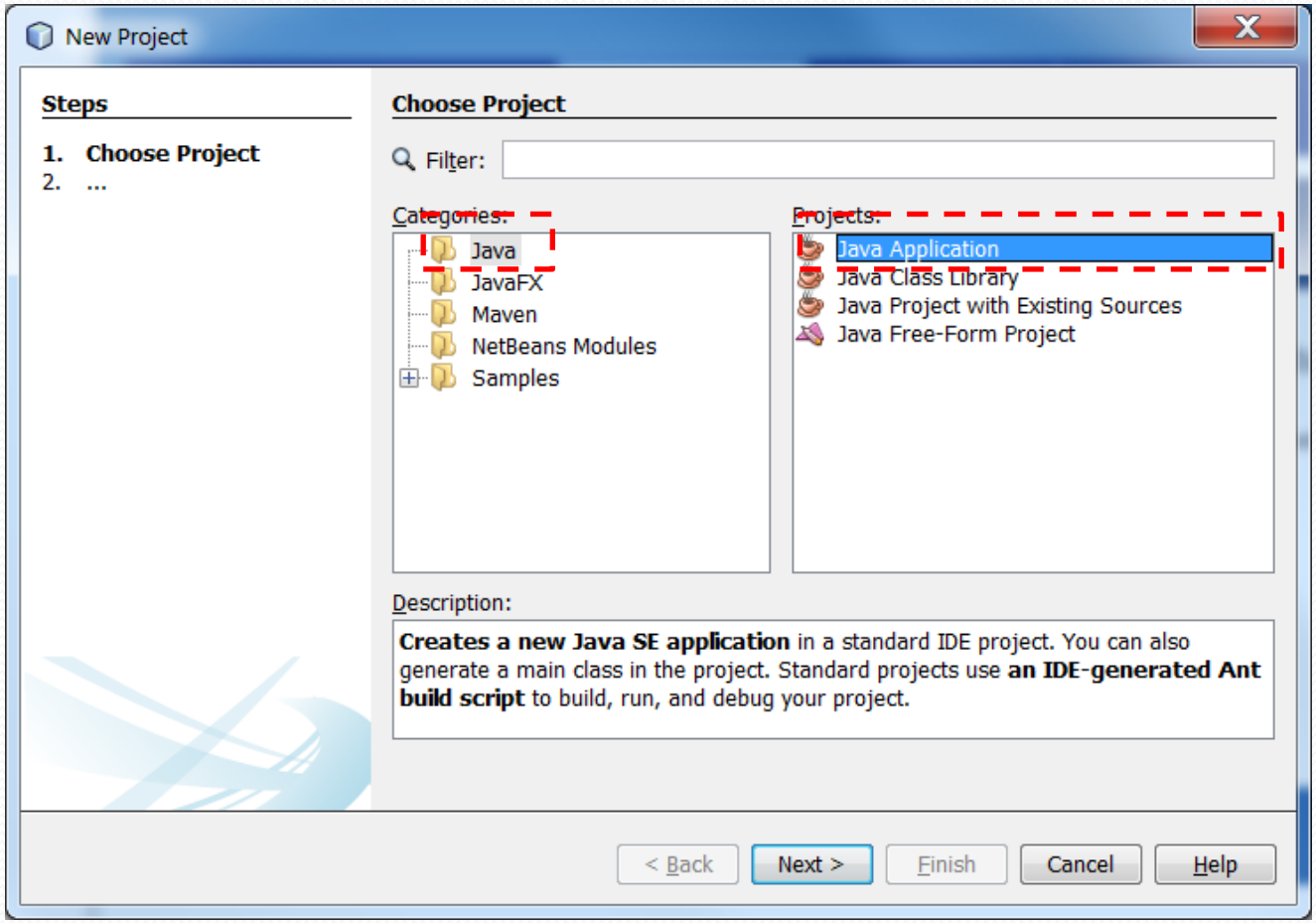


Start the first program to print "Hello world!"

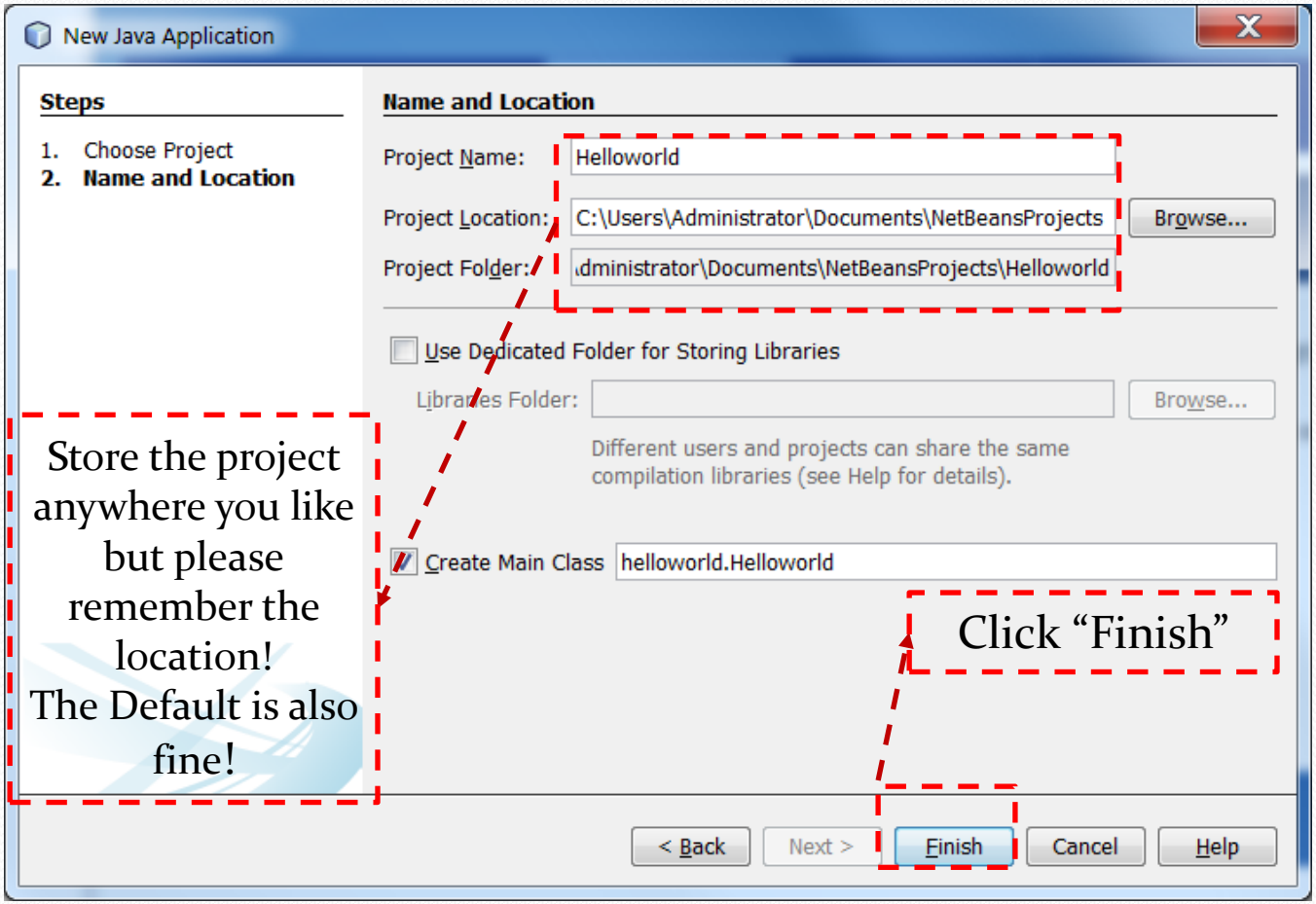
Create a New Project



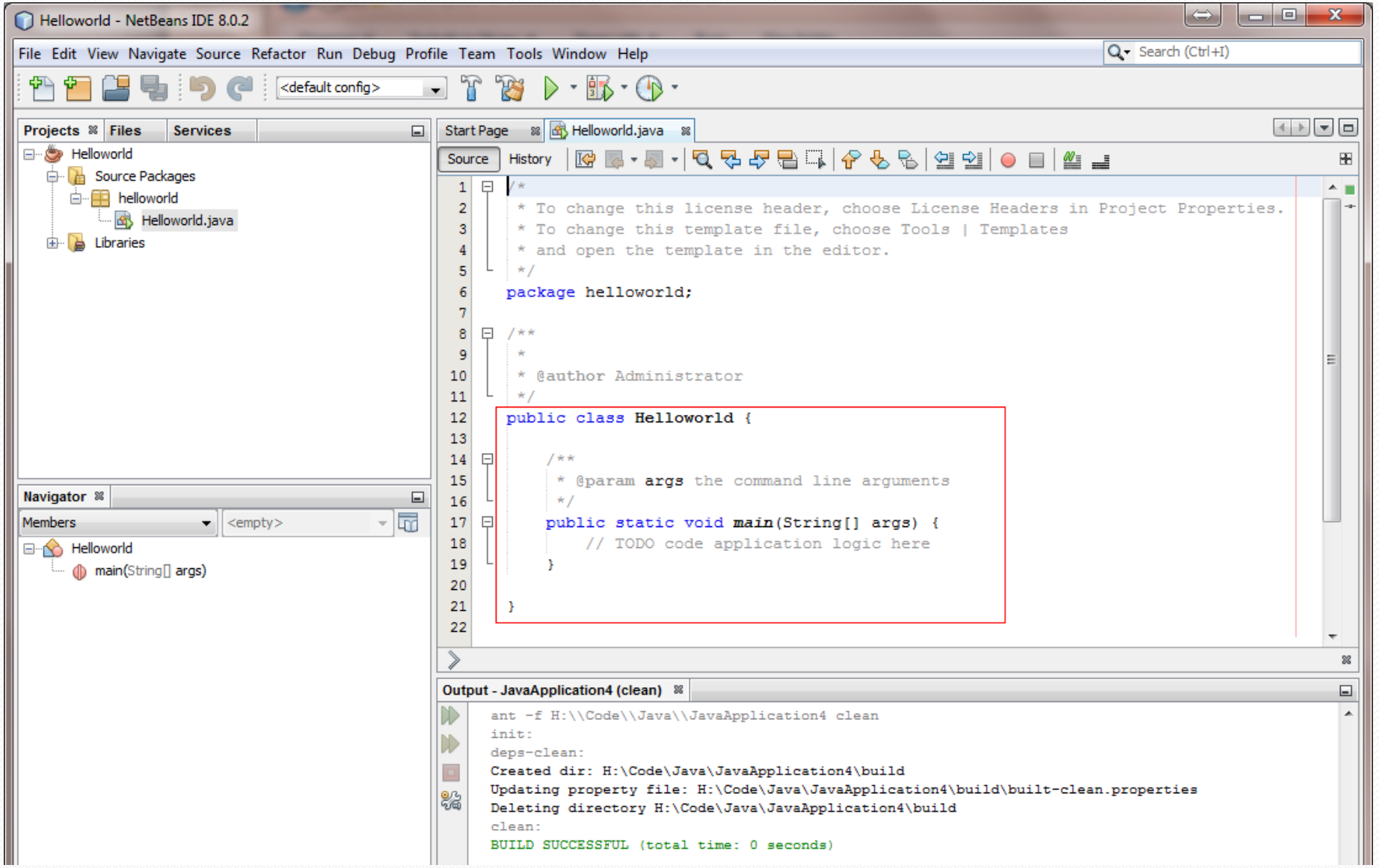
Java → Java Application



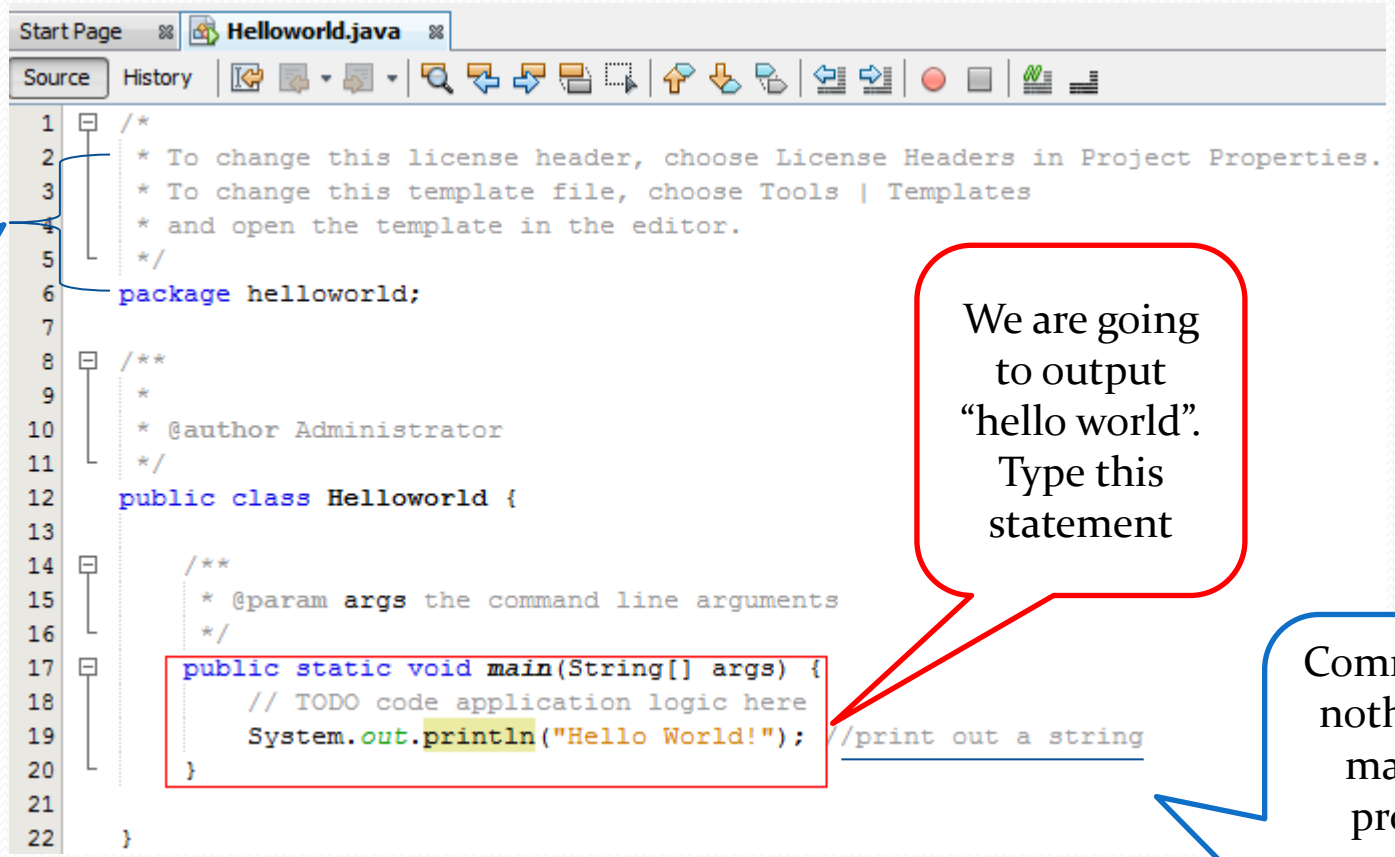
Give Project Name and Location



Make a new class



Output the “Hello World!”

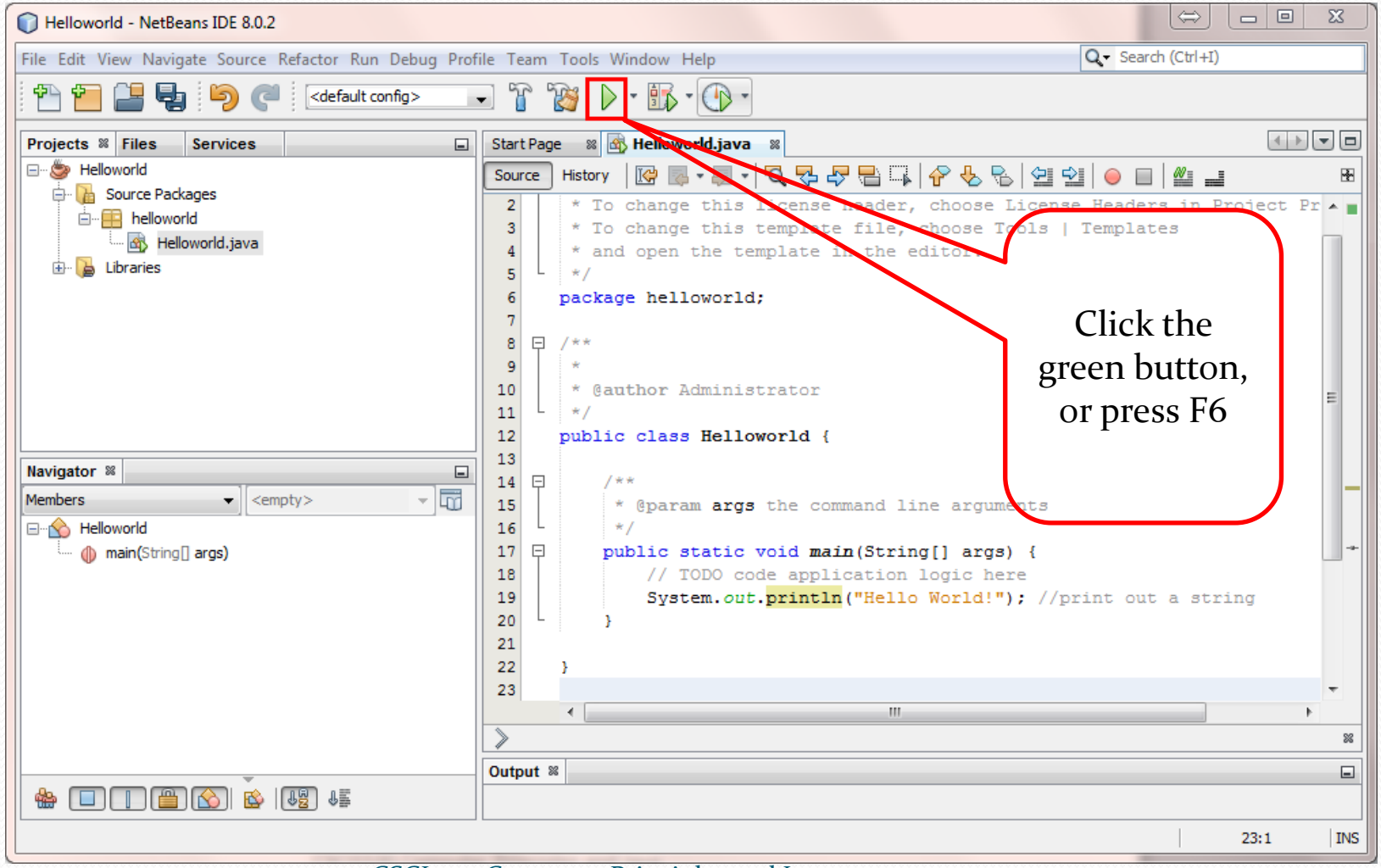


Comment

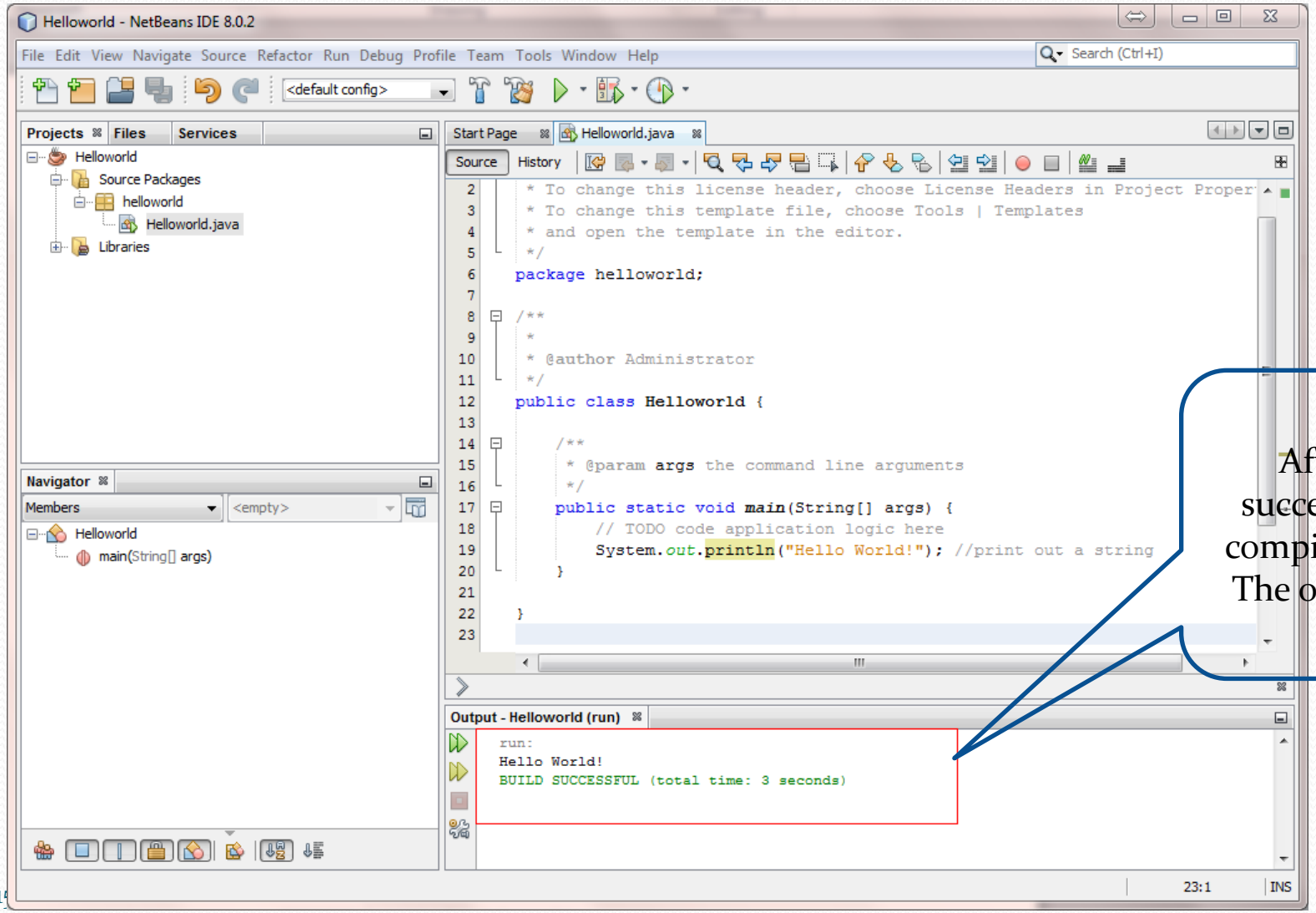
We are going to output “hello world”. Type this statement

Comment, do nothing but make the program more readable

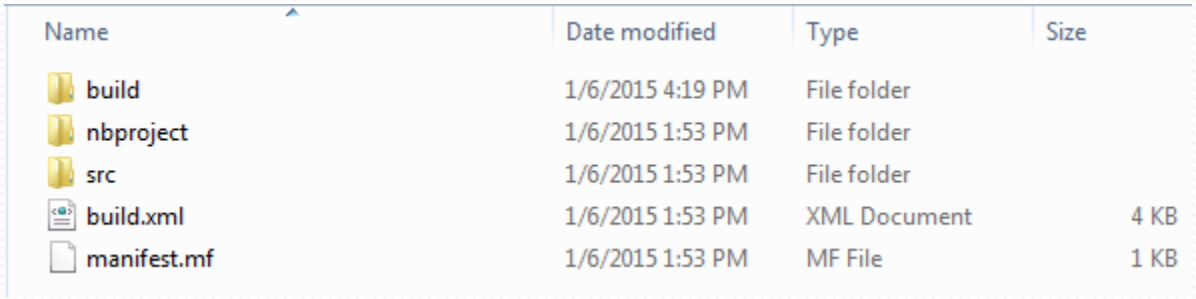
Run your program



Run your program



What is in the project folder



Name	Date modified	Type	Size
build	1/6/2015 4:19 PM	File folder	
nbproject	1/6/2015 1:53 PM	File folder	
src	1/6/2015 1:53 PM	File folder	
build.xml	1/6/2015 1:53 PM	XML Document	4 KB
manifest.mf	1/6/2015 1:53 PM	MF File	1 KB

- Important files

build ---- java bytecode file after program compilation
src ---- java source code

Be familiar to method for output

Output Methods

Java provides system methods to output information for use.
Very useful to debug your program.

System.out.println ("天氣"); ---- output things and new a line
System.out.print("it's csci "+ 1530 +"!"); ---- output things

Use Parentheses () to include the parameter for this methods
Use a semicolon in the end of every statement (Grammar).
Use " to define a String, a data type consisting of characters.
Use a "+" to connect what you want to output together

Output Methods

- Exercise:
  - Use System.out.print() to write code to print your name and Student ID.
  - System.out.print("My name is : Xiao Ming\n");
  - System.out.print("My student ID is : 10101010\n");

"System.out.println("");" is equivalent to "System.out.print("\n")";

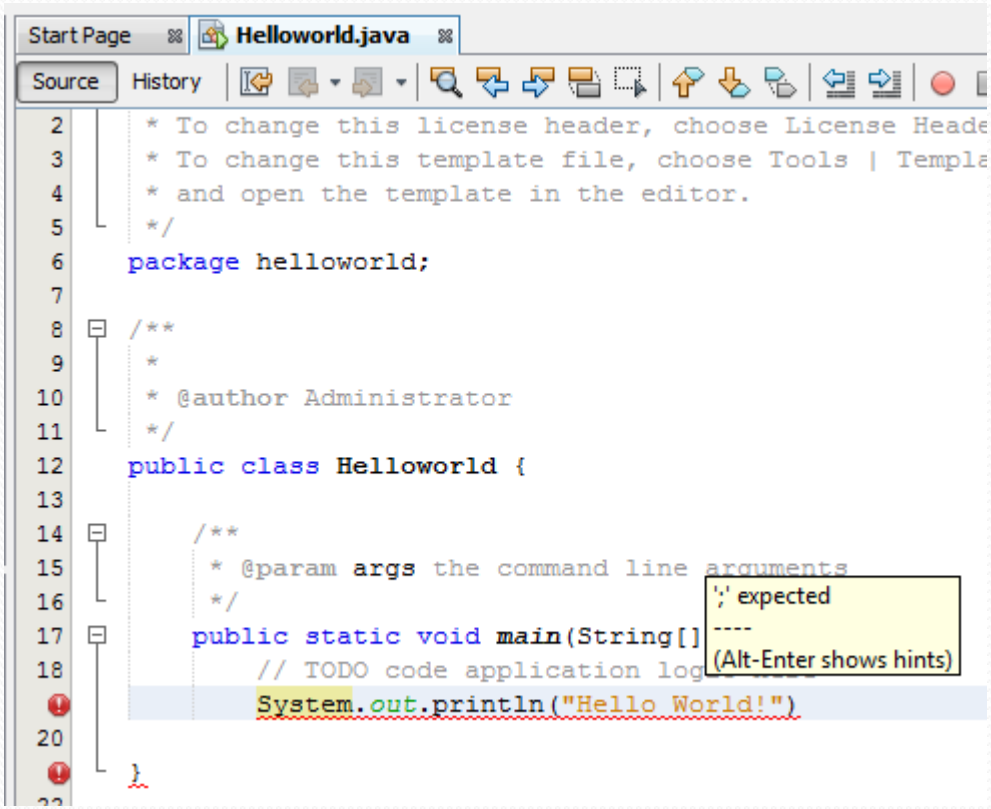
```
public class Helloworld {
    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
        System.out.println("Hello World!");
        System.out.print("My name is Zheng Qingqing\n");
        System.out.print("My SID is : 1155058553\n");
    }
}
```

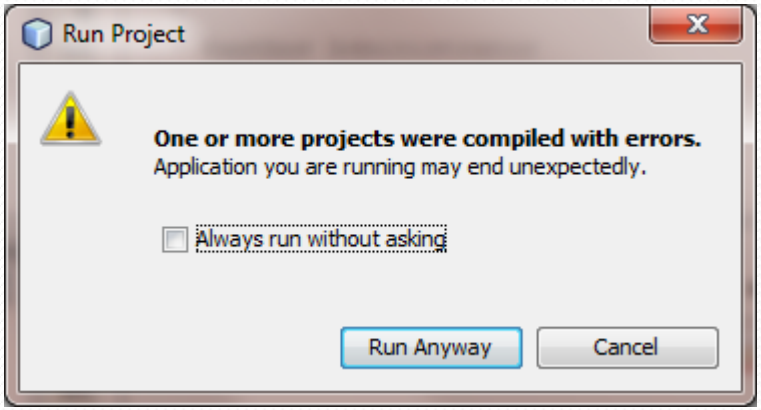
Java Call Hierarchy | Output - Helloworld (run)

```
run:
Hello World!
My name is Zheng Qingqing
My SID is : 1155058553
BUILD SUCCESSFUL (total time: 0 seconds)
```

Error info

Java provides error information when there is grammar errors, which is very helpful. In the following example, there lack a semicolon. When having error, you cannot compile codes.





Appendix

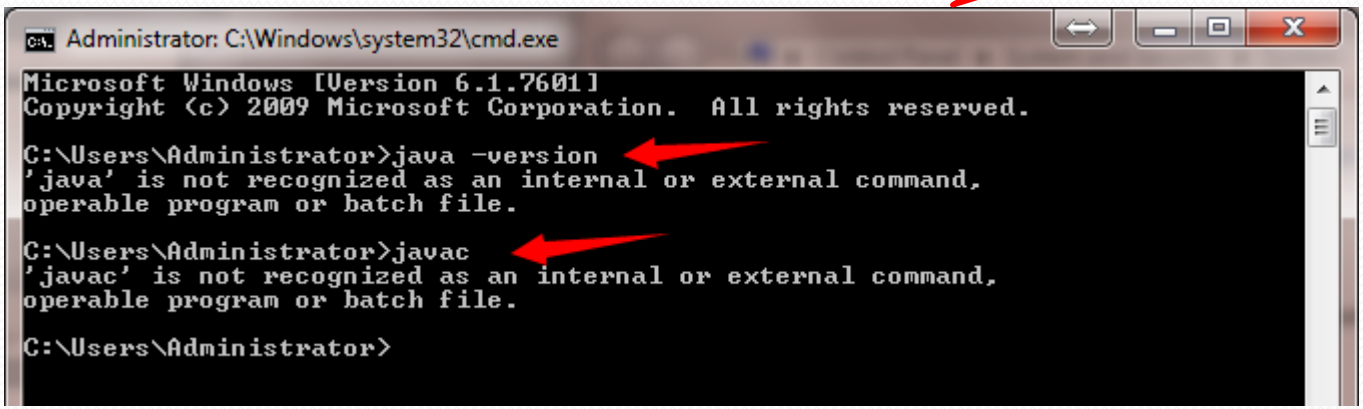
Configure JDK Environment variables

Note: It is a advanced stuff. This step is not necessary for using NetBeans; if you are interested in using command line, just read it for reference.

Configure JDK Environment variables

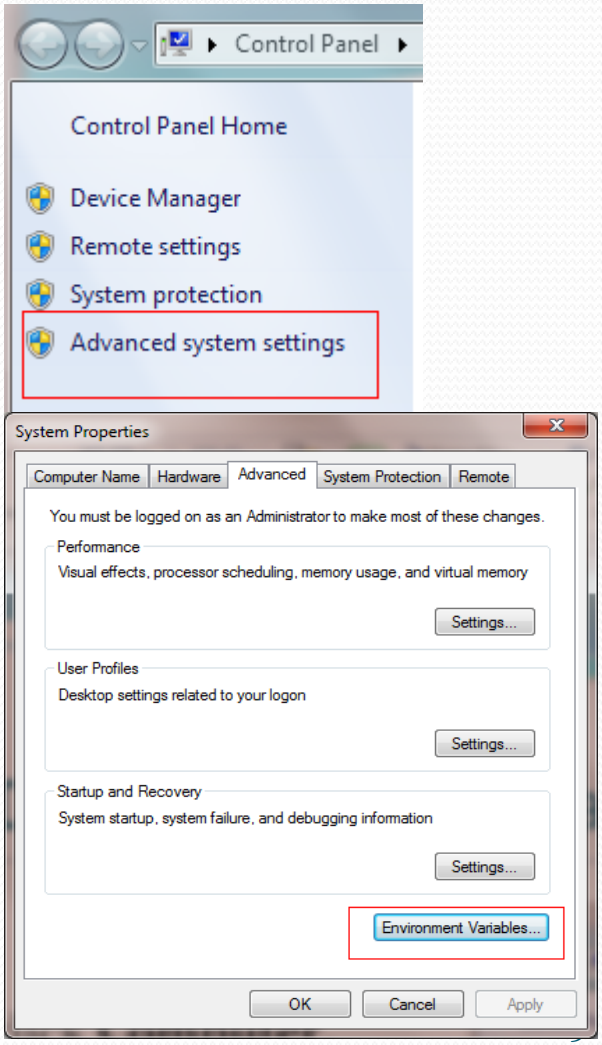
- Check whether you need to configure the JDK Environment variables or not.
  - Execute “cmd”
  - Type “java -version” and “javac”

JDK Environment variables haven’t been configured.



Configure JDK Environment Variables

- Step 1:
  - Click **Start**,
  - Then Right click **Computer**,
  - Click **Properties**.
- Step 2:
  - Click **Advanced system settings**
  - Click **Environment Variables**



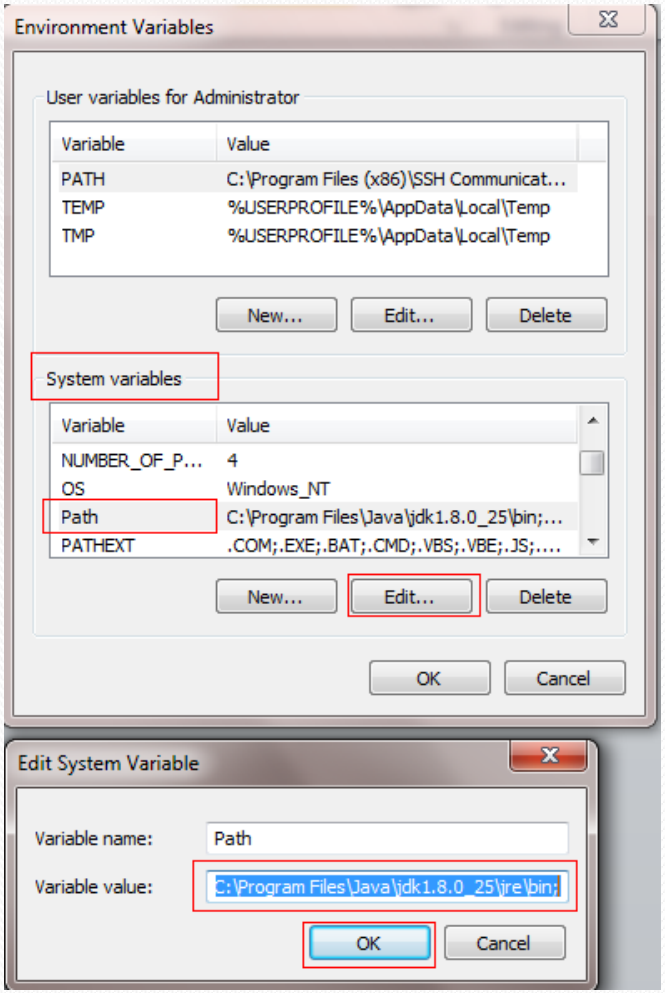
Configure JDK Environment Variables

- Step 3:
  - Add the location of the **bin** folder of the JDK installation for the **PATH** variable in **System Variables.**

  For example:

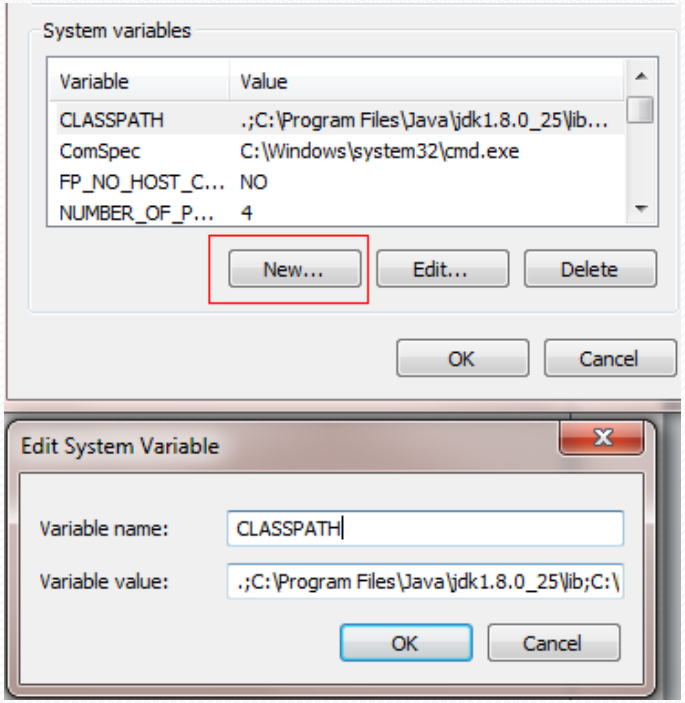
  C:\Program Files\Java\jdk1.8.0_25\bin;

NOTE: The **PATH** environment variable is a series of directories separated by semicolons (;)



Configure JDK Environment Variables

- Step 4:
  - New a System Variables name: **CLASSPATH,**
  - Add the location of the **lib** folder of the JDK installation and **lib\tools.jar** for the **CLASSPATH** variable in **System Variables.**



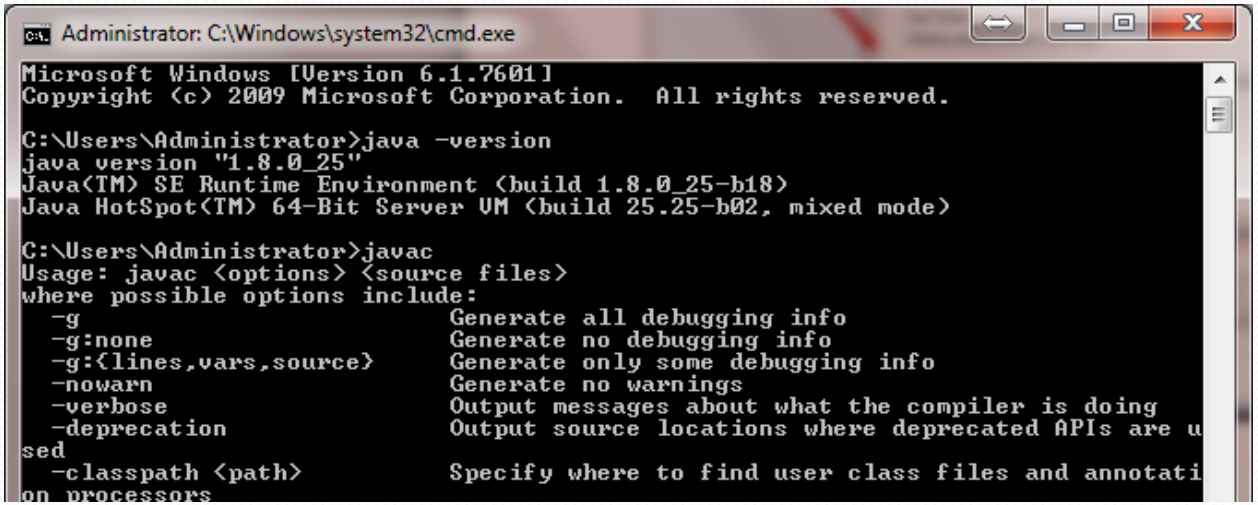
For example:

.;C:\Program Files\Java\jdk1.8.0_25\lib;C:\Program Files\Java\jdk1.8.0_25\lib\tools.jar

Note: don't forget the dot before first semicolon

Configure JDK Environment Variables

- Step 5: Check
  - Execute **cmd**
  - Check **java version**
  - Check **javac**



Thank you!