Creating your First Java Projects in NetBeans

Introduction

About Java Packages

- Java Packages are used to easily identify classes without name conflicts, and to keep related .java files together
- There are many packages available in the Java API
- The Java API is a library of pre-written classes that are free to use and are available in the Java Runtime Environment
- You will also create your own classes that are best kept in a package that you create
- If you do not create a package for your classes, the default package will be used by NetBeans, Eclipse, or other IDEs
- **For the examples in this course, you will often use the default package to test coding examples using the instructions in Part 1**
- For **Part** 2, you will create a .java file inside a package called **mysecondproject**
- When you create a .java file inside a package called **mysecondproject**, you need to have the package declaration as your first line of code:
    - package mysecondproject;
- If you prefer to use the default package, a package declaration is not used.

Part 1: Create a Java Project and Add an Existing .java File

Overview

In this section, you will download the reference material HelloWorld.zip, Create a new project in NetBeans, and add an existing java file to the project

Tasks

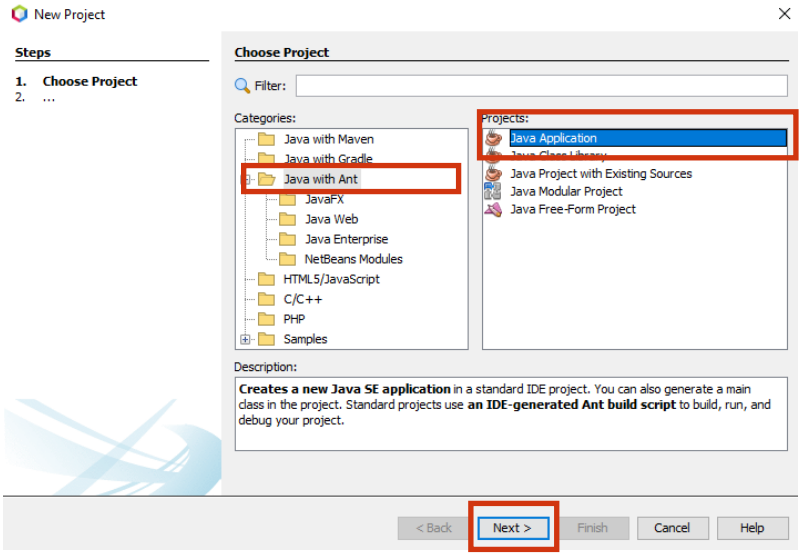
1. Download the file HelloWorld.zip from the reference materials for this practice

2. Extract the zip file HelloWorld.zip, noting the location

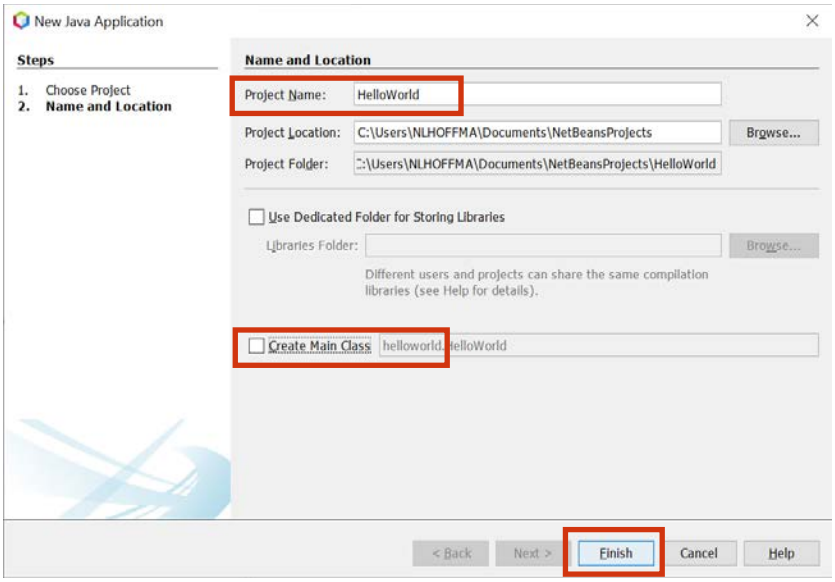
3. Launch NetBeans

4. Go to **File> New Project** and select the following:
    a. Categories: **Java with Ant**
    b. Projects: **Java Application**

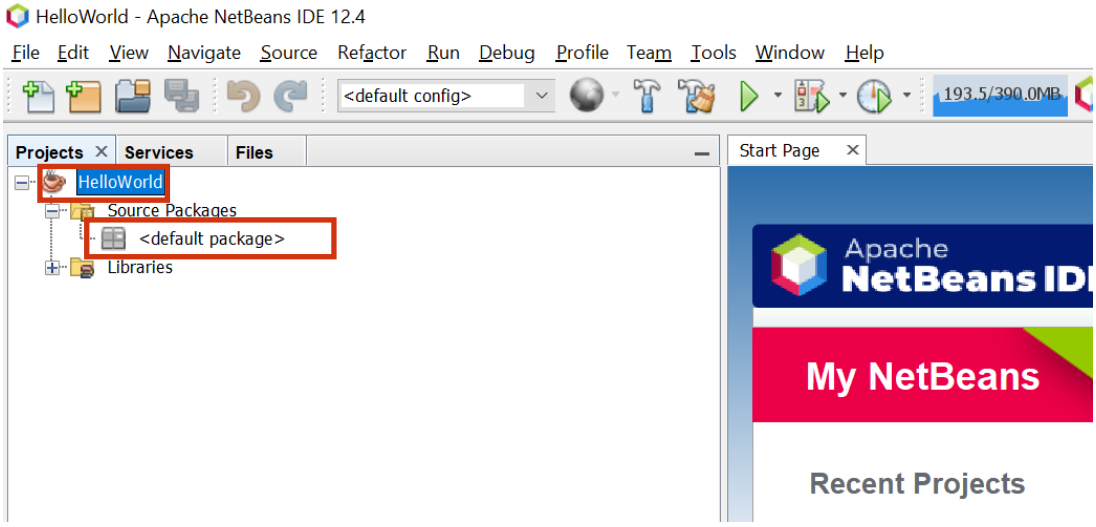
5. Click **Next**



6. **Name the project HelloWorld**, **uncheck** the box to create a main class, and then click **Finish**
    a. For this course, it is recommended that you name your projects the same as the .java file

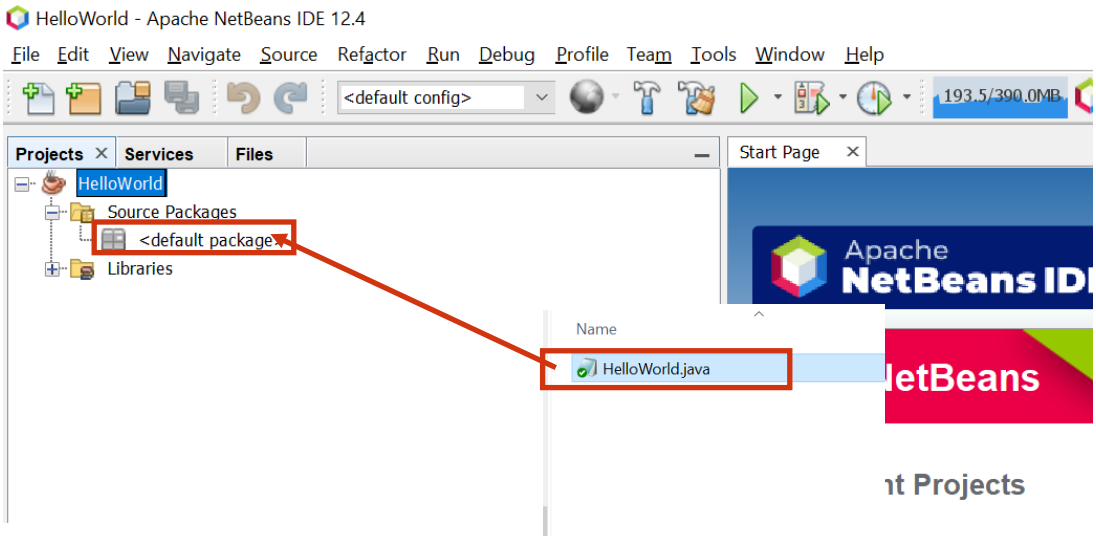


7. In the Projects window, **click the plus sign** to expand the project, and **click the plus sign** to expand Source Packages to show the <default package>



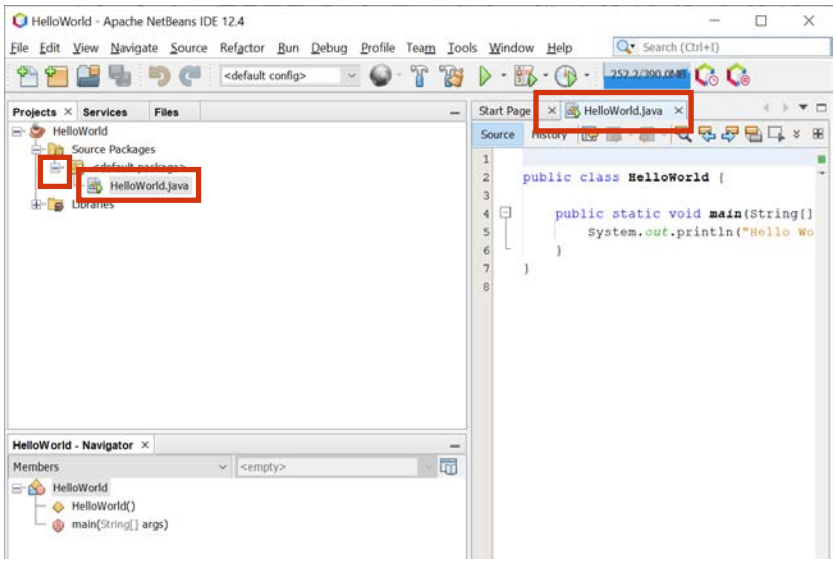
8. **Navigate** to the folder in which you extracted the HelloWorld.java file in step 1

9. **Drag** the HelloWorld.java file from the folder on your device and **drop** it on the <default package>

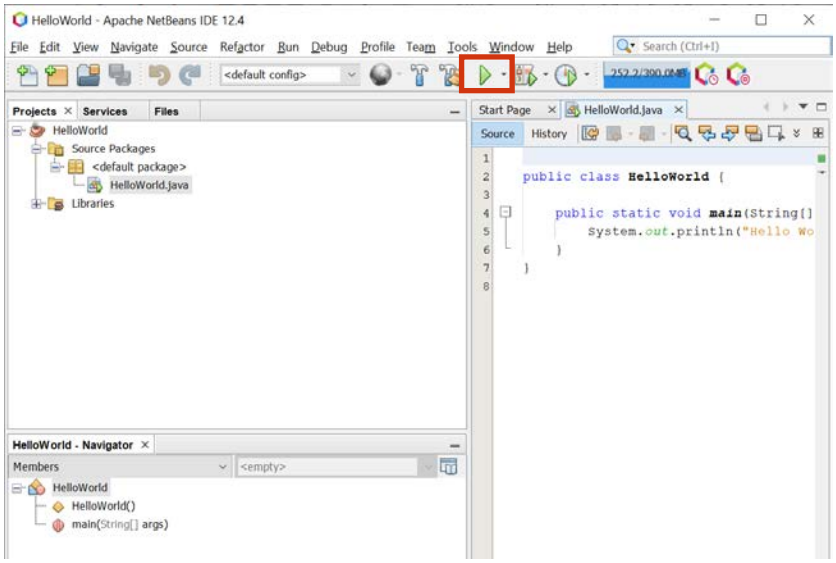


10. **Click the plus sign** next to <default package> and you will see the HelloWorld.java file in the package

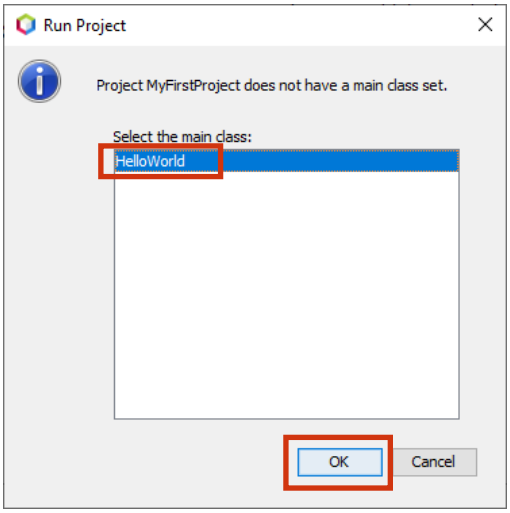
11. **Double click** the .java file and it will open in a new tab in the code editor window



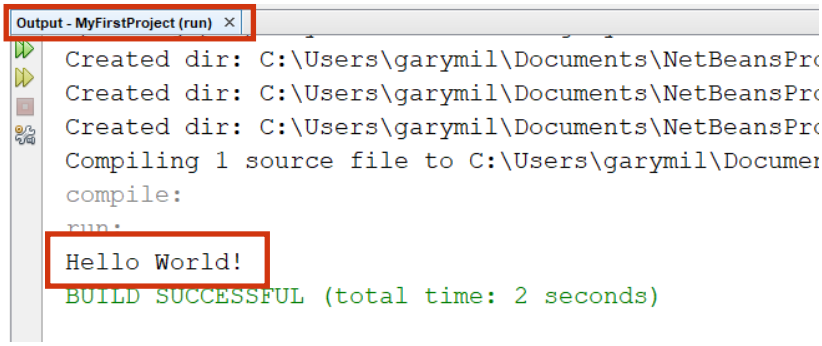
12. **Click** the Run button to test



13. If prompted to select a main class, select the default HelloWorld and **click OK**



14. In the Output window below the Code Editor, you will see the message “Hello World”



Part 2: Create a Package and Project in NetBeans with a main class

Overview

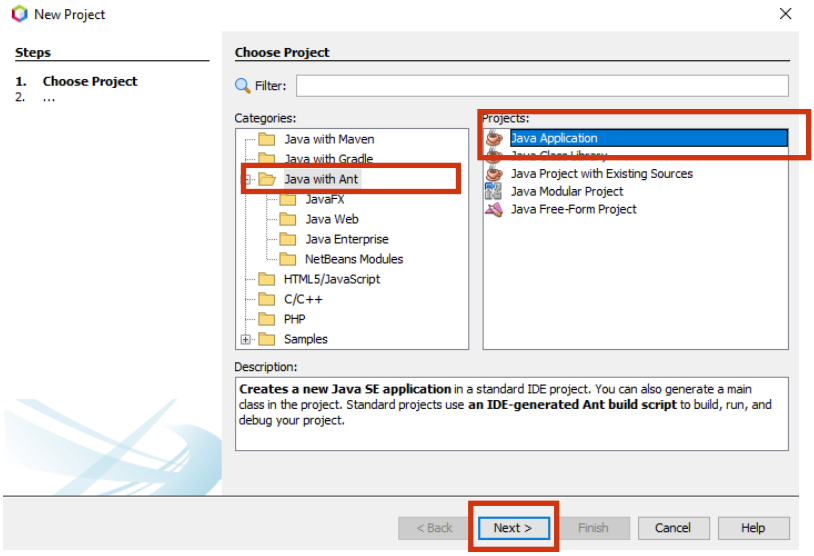
In this section, you will create and run a NetBeans java project with a main Java class

Tasks

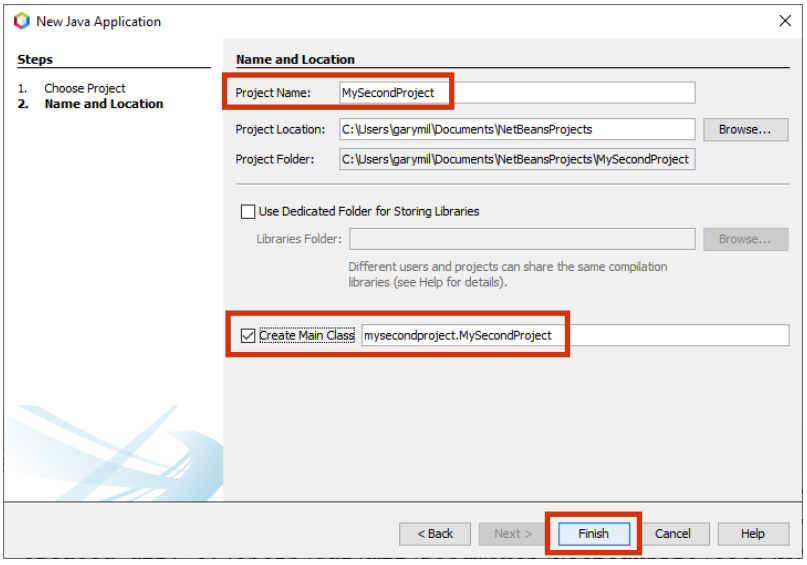
1. Launch NetBeans if not opened

2. Go to **File>New Project** and select the following:
   a. Categories: **Java with Ant**
   b. Projects: **Java Application**

3. Click **Next**

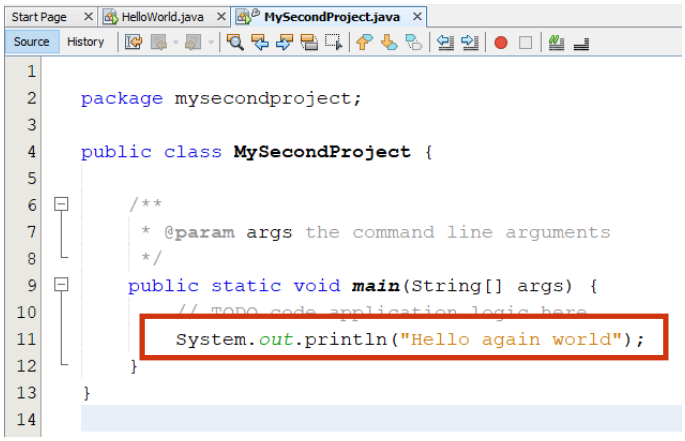


4. **Name the project MySecondProject**, this time **check the box** to create a main class, and then click **Finish**

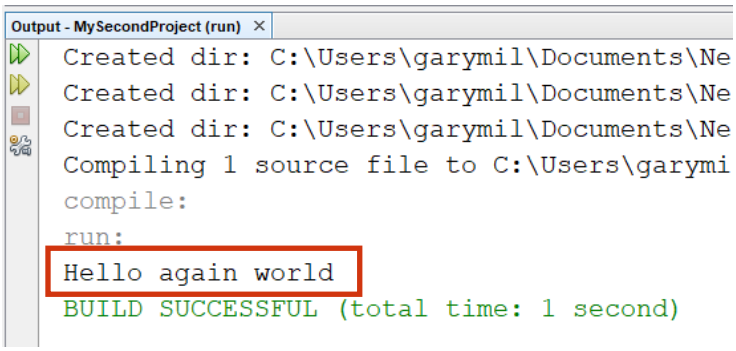


5. In the Code Editor, locate the main method of the MySecondProject class and **enter the line of code** as shown below:

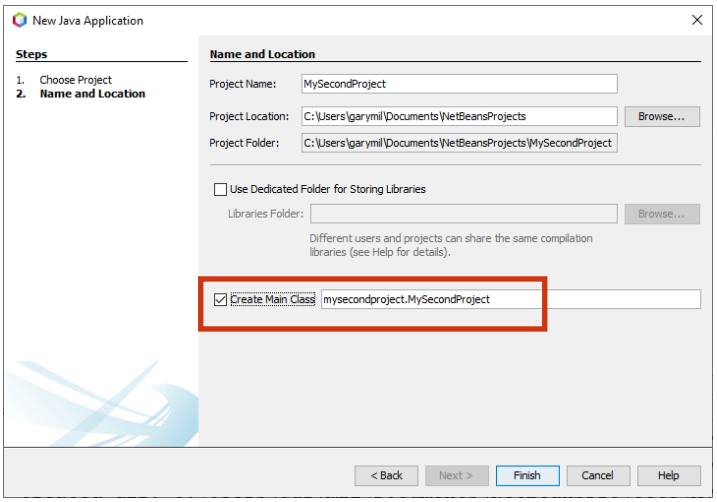
System.out.println("Hello again world");



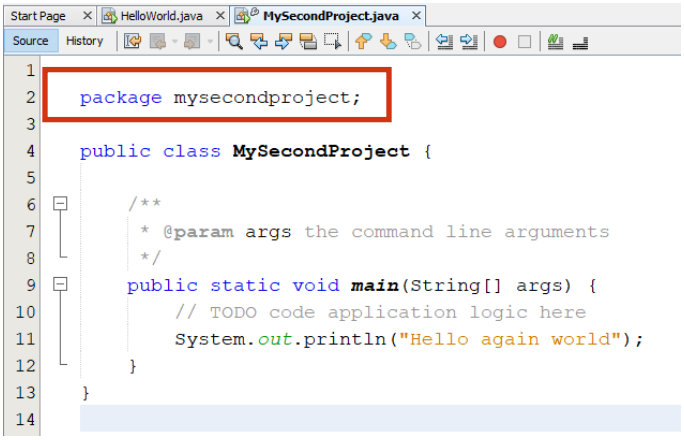
6. **Click** the run button to test
   a. You should see the message Hello World displayed in the Output console at the bottom of the IDE



- Note an important difference between the first project and the second project
- In MySecondProject, **when the Create main class box is checked in task 4, a named package is also created**
- NetBeans adds a suggested package and class name based on the name of the project



- The format of the suggested name is packagename.MainClassName, you can edit the names at this point if you want something other than the suggested naming format
- In Part 1, as you did not create a Main Class, the package was named <default package>
- If a package has a name other than <default package>, it is important to note that a package declaration must be included as the first line of code in the Java file
- If you create a class in an existing package, NetBeans will automatically add the package declaration for you
- In the code editor for your second project, scroll to the top of the code and you will see the package declaration



- Observe that in your first project, as the package was <default package>, if you scroll to the top of the java file in the code editor, you will see that there is no package declaration

- If you add an existing Java file to a package that has been named, you need to add the package declaration manually as the first line of code in the java file using the format:
    - **package packagename;**