

Using Git in Eclipse

Lab #1

COMP3021 2022 Spring

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- **Objectives of this lab**

Learn What is Git and How to Use it in Eclipse.

In this course, all your labs are connected.

The task of each lab is based on your previous labs.

Therefore, we use **GitHub** to maintain our source codes.

Create Your GitHub Account

Your account information is required.

Since we will keep track of your source codes of your **labs**.

Create a Repository for Your Lab.

Name: comp3021lab

After each lab, remember to **push your changes to GitHub.**

INTRODUCTION



- It is a **version control system** mainly used for software development



- GitHub is a web-based **GIT** repository hosting service
- 14 million users (April 2016)

Why GitHub is useful?



- You won't lose your code by accident
- It allows you to **keep historical versions** of the code, for easy reverting, comparison and investigation
- It allows you to maintain independent line of development (called "**branches**") and it helps you to compare and merge them
- For each version of the software it helps you to know **who, why, what** and **when** a particular source was changed

Basic Git Commands

- **CLONE** Create a working copy of a local repository
- **INDEX** Add one or more files to staging (index)
- **COMMIT** Commit changes to head (but not yet to the remote repository)
- **PUSH** Send changes to the master branch of your remote repository
- **PULL** Fetch and merge changes on the remote server to your working copy

YOUR LAB TASK



GitHub



- **Create Account & Create A Repository**

Go to www.github.com



Personal

Open source

Business

Explore

Pricing

Blog

Support

Search GitHub

Sign in

Sign up


If you already have an account you can use that one if you want


- **Create Account & Create A Repository**


If you already have an account you can use that one if you want

Join GitHub

The best way to design, build, and ship software.

**Step 1:**
Set up a personal account

**Step 2:**
Choose your plan

**Step 3:**
Tailor your experience

Create your personal account

Username

This will be your username — you can enter your organization's username next.

Email Address

You will occasionally receive account related emails. We promise not to share your email with anyone.

Password

Use at least one lowercase letter, one numeral, and seven characters.

By clicking on "Create an account" below, you are agreeing to the [Terms of Service](#) and the [Privacy Policy](#).

Create an account

You'll love GitHub

Unlimited collaborators

Unlimited public repositories

✓

 Great communication

✓

 Frictionless development

✓

 Open source community

- ## Create a Repository

Create a new repository

A repository contains all the files for your project, including the revision history.

Owner



comp3021labta ▾

/

Repository name

comp3021lab



Great repository names are short and memorable. Need inspiration? How about **special-adventure**.

Description (optional)

The source codes of all the labs of comp3021 of HKUST



Public

Anyone can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.

Please open source your code😊



Initialize this repository with a README

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** ▾

Add a license: **None** ▾



Create repository

- ## Clone Your Code

Copy the URL of your remote repository

comp3021labta / comp3021lab

Unwatch 1 Star 0 Fork 0

Code Issues 0 Pull requests 0 Wiki Pulse Graphs Settings

The source codes of all the labs of comp3021 of HKUST — Edit

3 commits 1 branch 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find file Clone or download

comp3021labta committed on GitHub Delete HelloWorld.java

README.md Initial commit

README.md

comp3021lab

The source codes of all the labs of comp3021 of HKUST

Clone with HTTPS ? Use SSH

Use Git or checkout with SVN using the web URL.

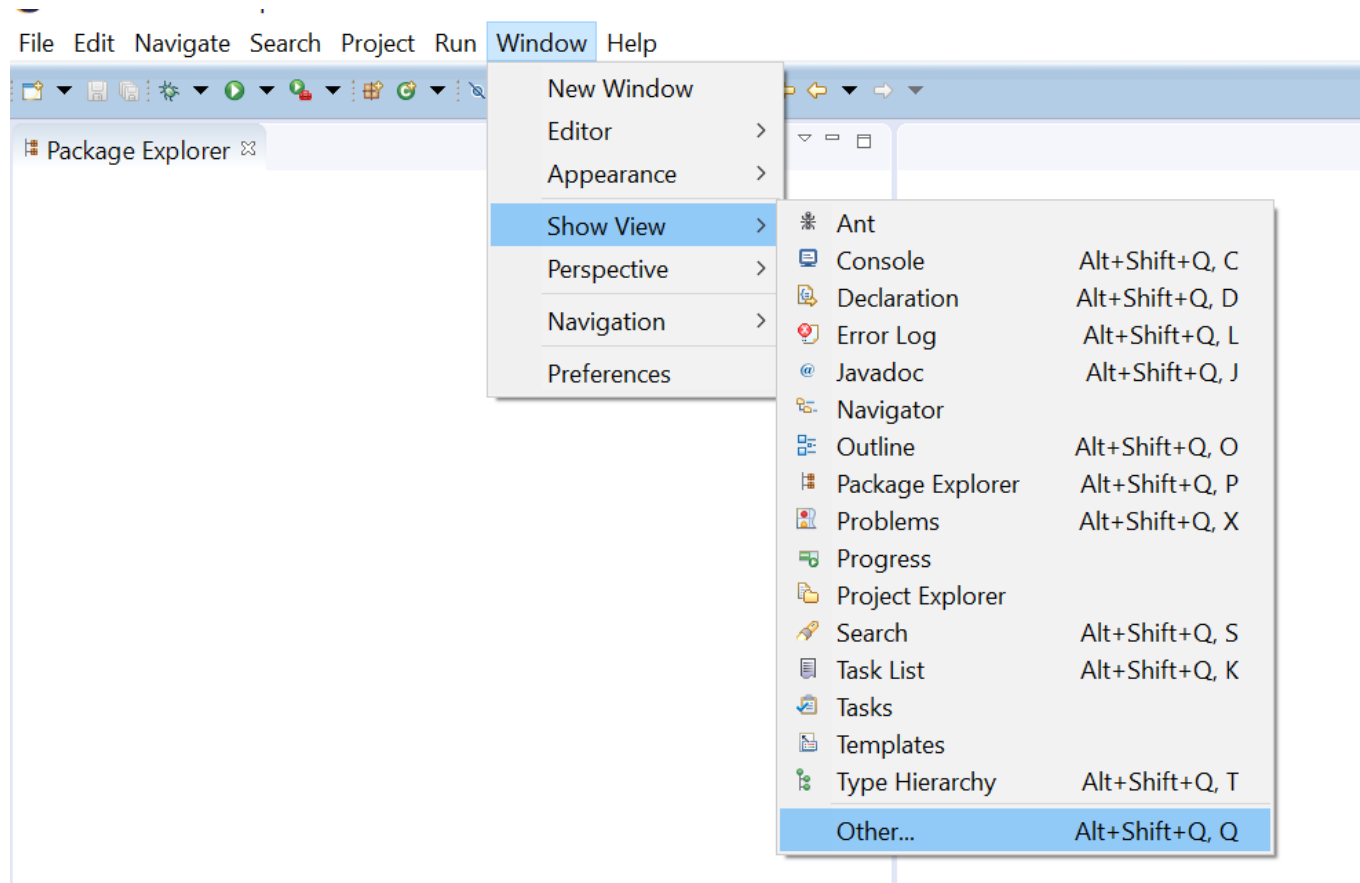
https://github.com/comp3021labta/comp3021lab Copy

Open in Desktop Download ZIP

Click Copy

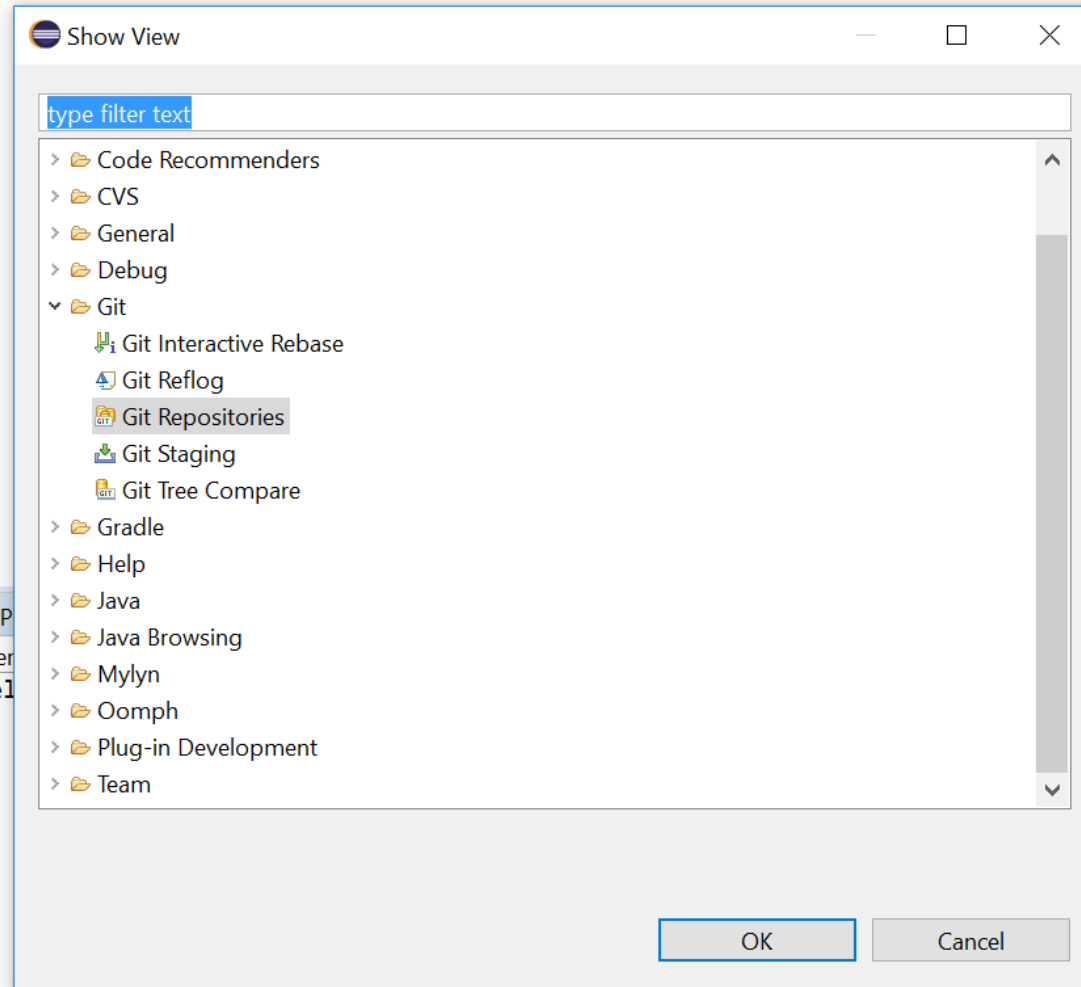
- **Open Eclipse and Enable Git View**

Click **Window > Show View > Other,**



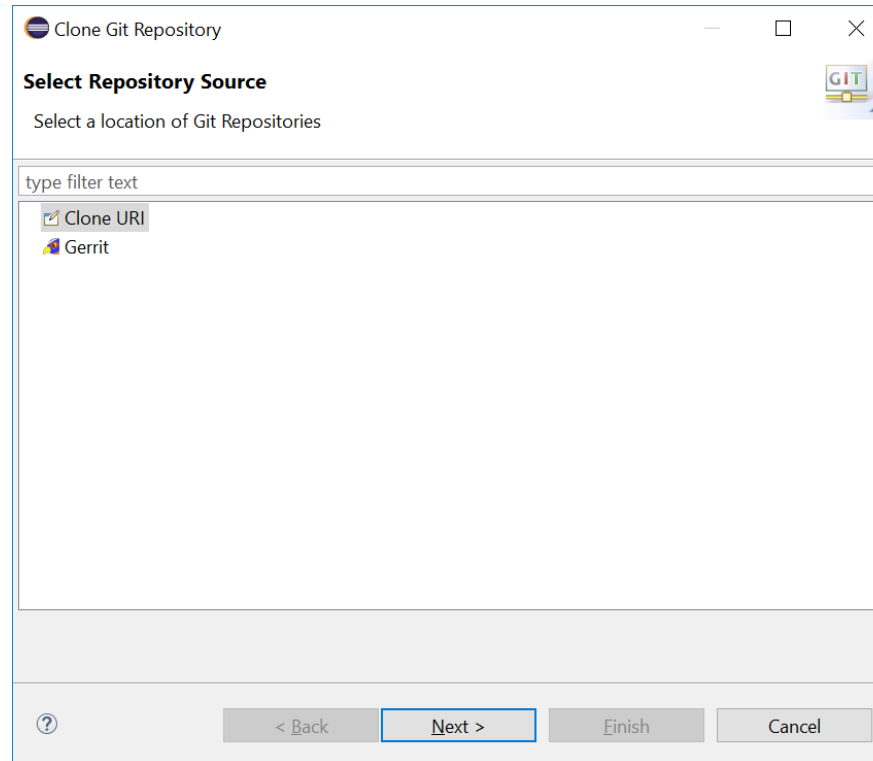
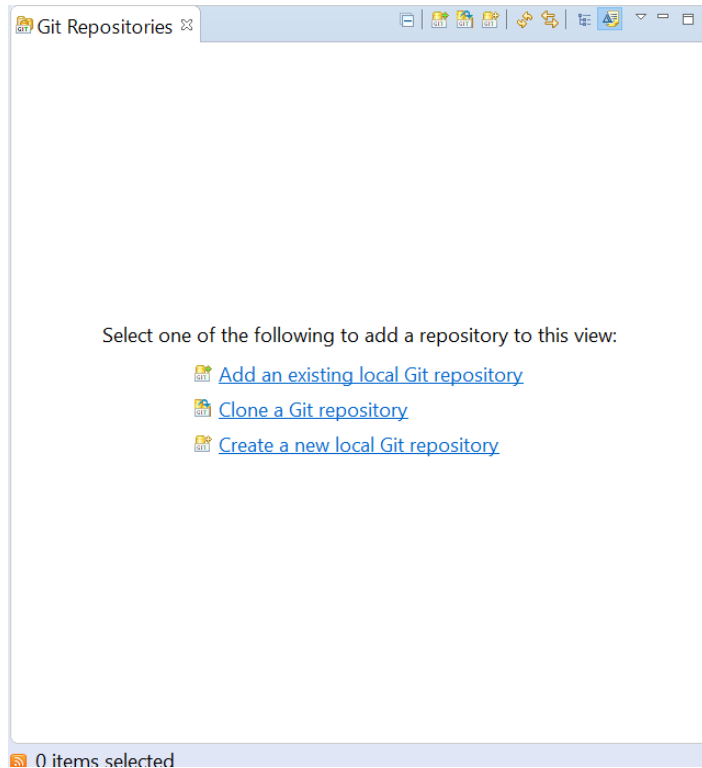
- **Open Eclipse and Enable Git View**

Click ***Git > Git Repository***



- # Clone Your Project

Click *Clone a Git repository*, choose *Clone URL*



- ## Clone Your Project

Paste the URL you just copied.

Clone Git Repository

Source Git Repository

Enter the location of the source repository.

Location

URI: Local File...

Host:

Repository path:

Connection

Protocol:

Port:

Authentication

User:

Password:

☒ Store in Secure Store

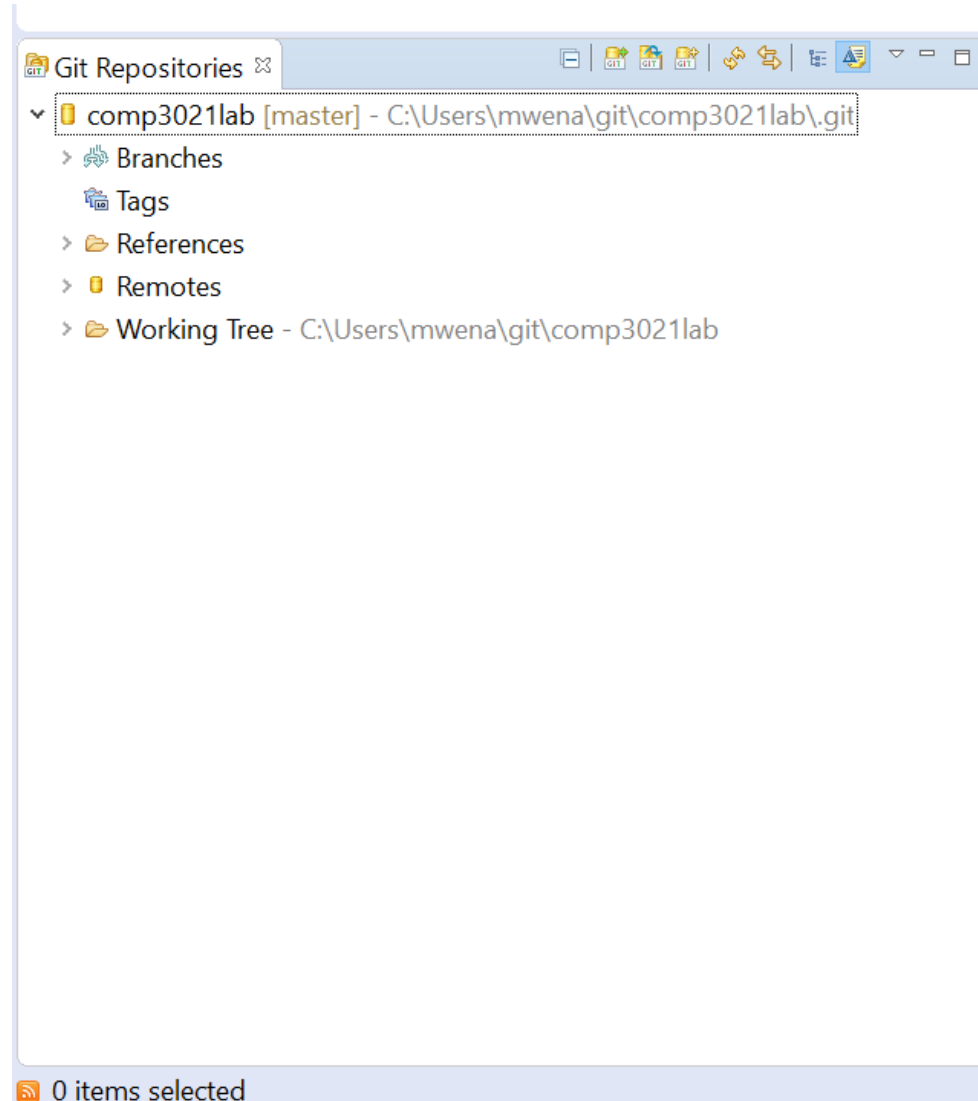
Should be filled in
with the information
of your repository

Should be filled in
with your account
information

- **Clone Your Project**

Keep click **Next** until **Finish**

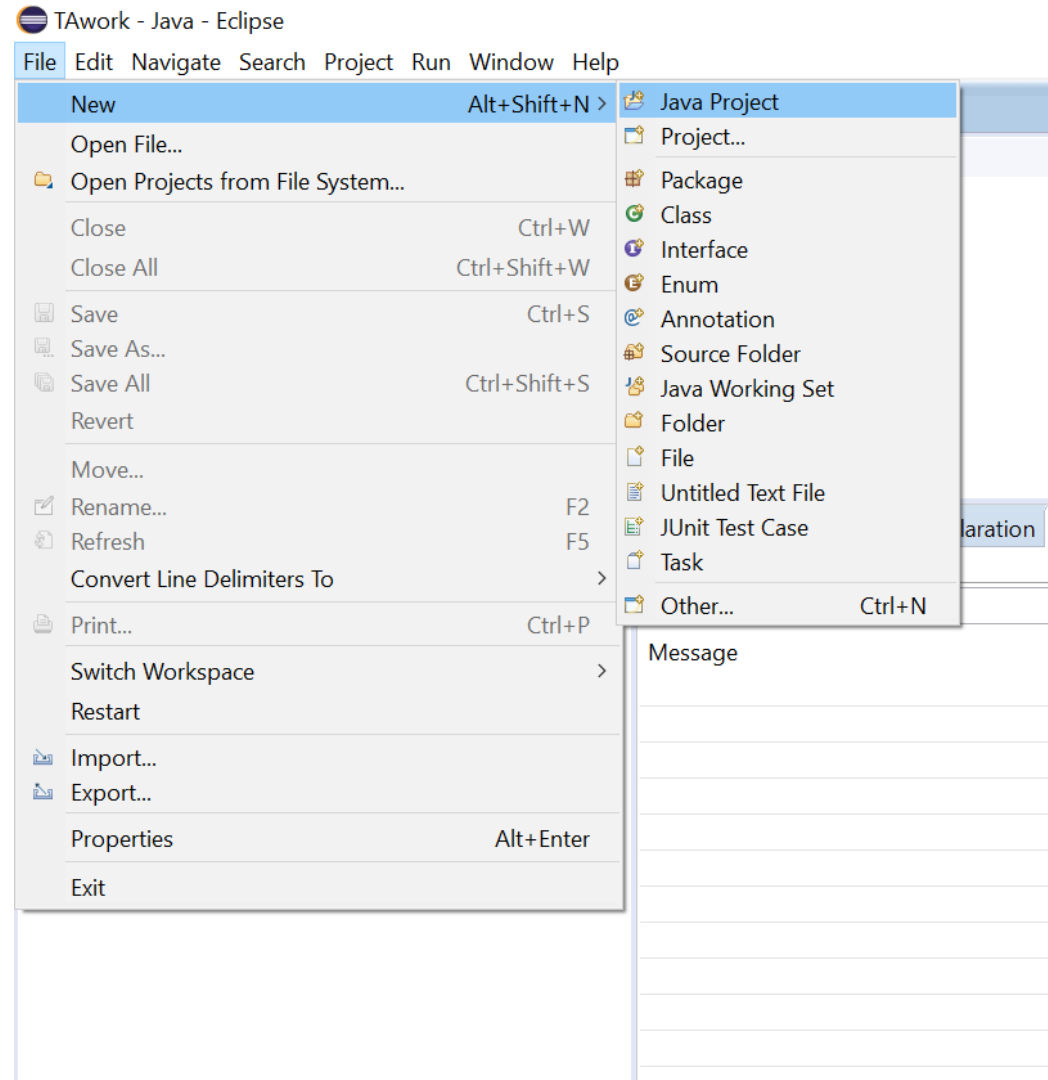
And you will see your repository on the left bottom



- **Import Your Project**

Click **File**

New a Java Project



- **Import Your Project**

New Java Project

Create a Java Project

Enter a location for the project.

Project name:

☐ Use default location

Location: [Browse...](#)

☒ Use an execution environment JRE:

☐ Use a project specific JRE:

☐ Use default JRE (currently 'jre1.8.0_91') [Configure JREs...](#)

[Configure default...](#)

[New...](#) [Select...](#)

Browse For Folder

Choose a directory for the project contents:

- > Downloads
- > Dropbox
- > eclipse
- > Favorites
- > git
 - > comp3021lab
 - > .git

Give the project a name

**Uncheck use default location
Instead, choose the Git
repository you just cloned.**

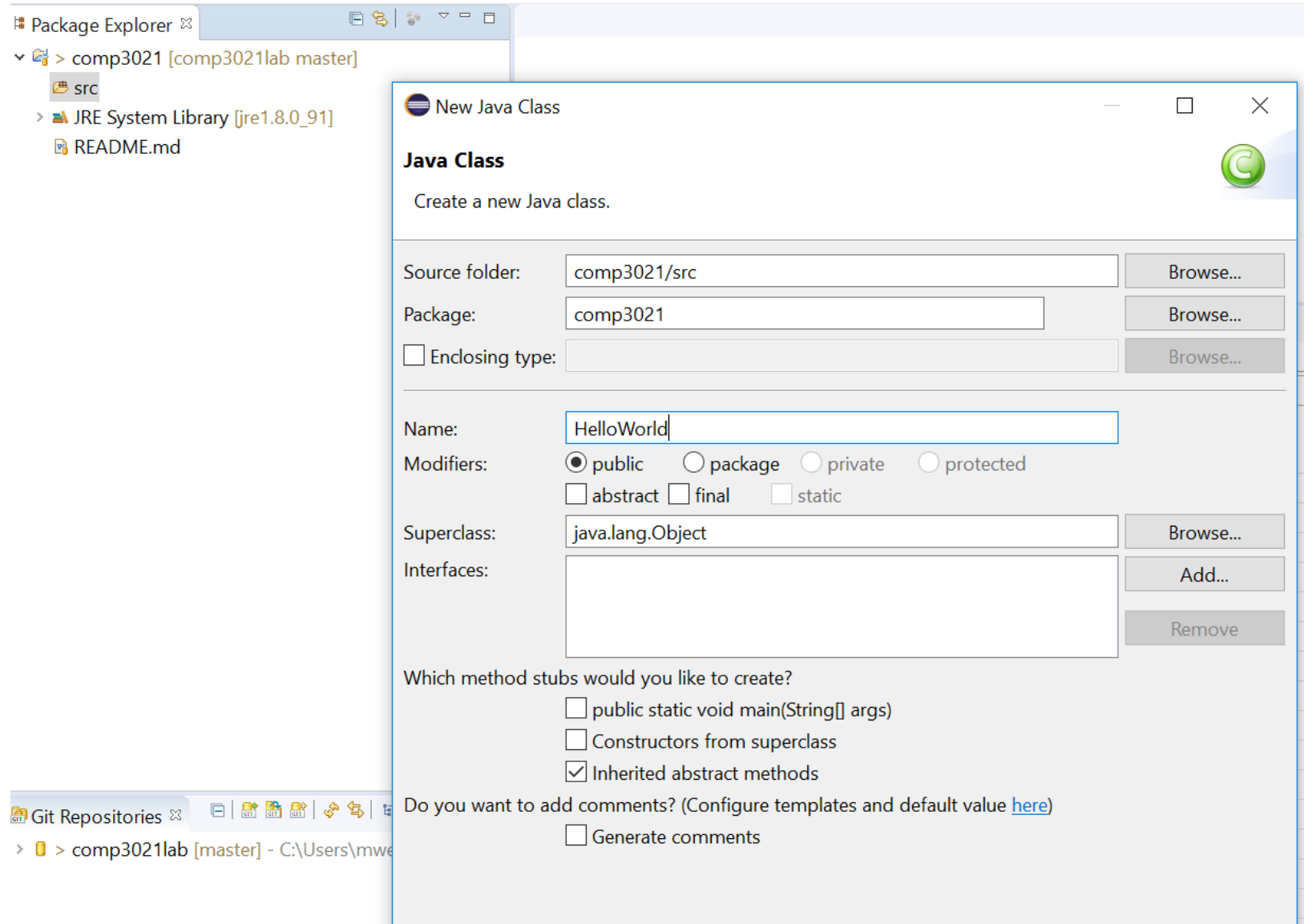
Make sure your are using Java 8

**Choose the location of your Git
repository**

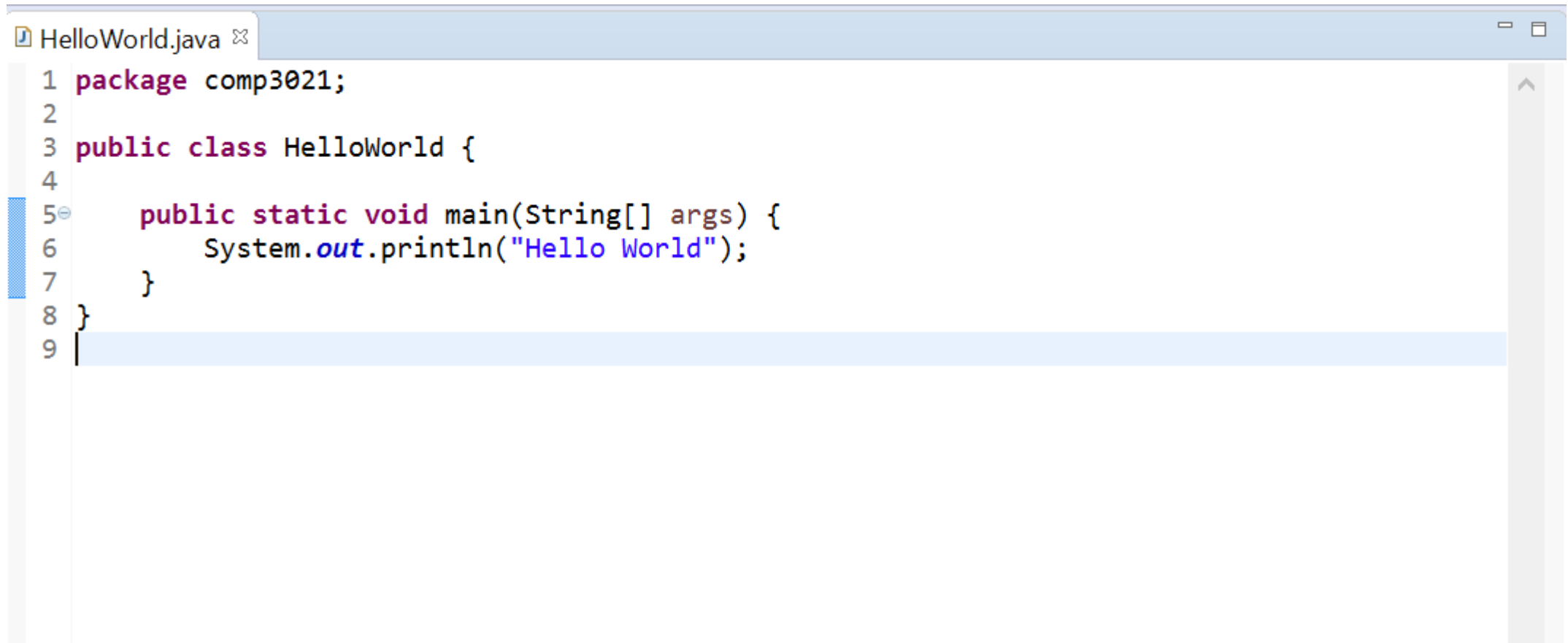
- **Write New Code**

Then we can work on this project.

We will create a file called HelloWorld in this lab.



- Write New Code

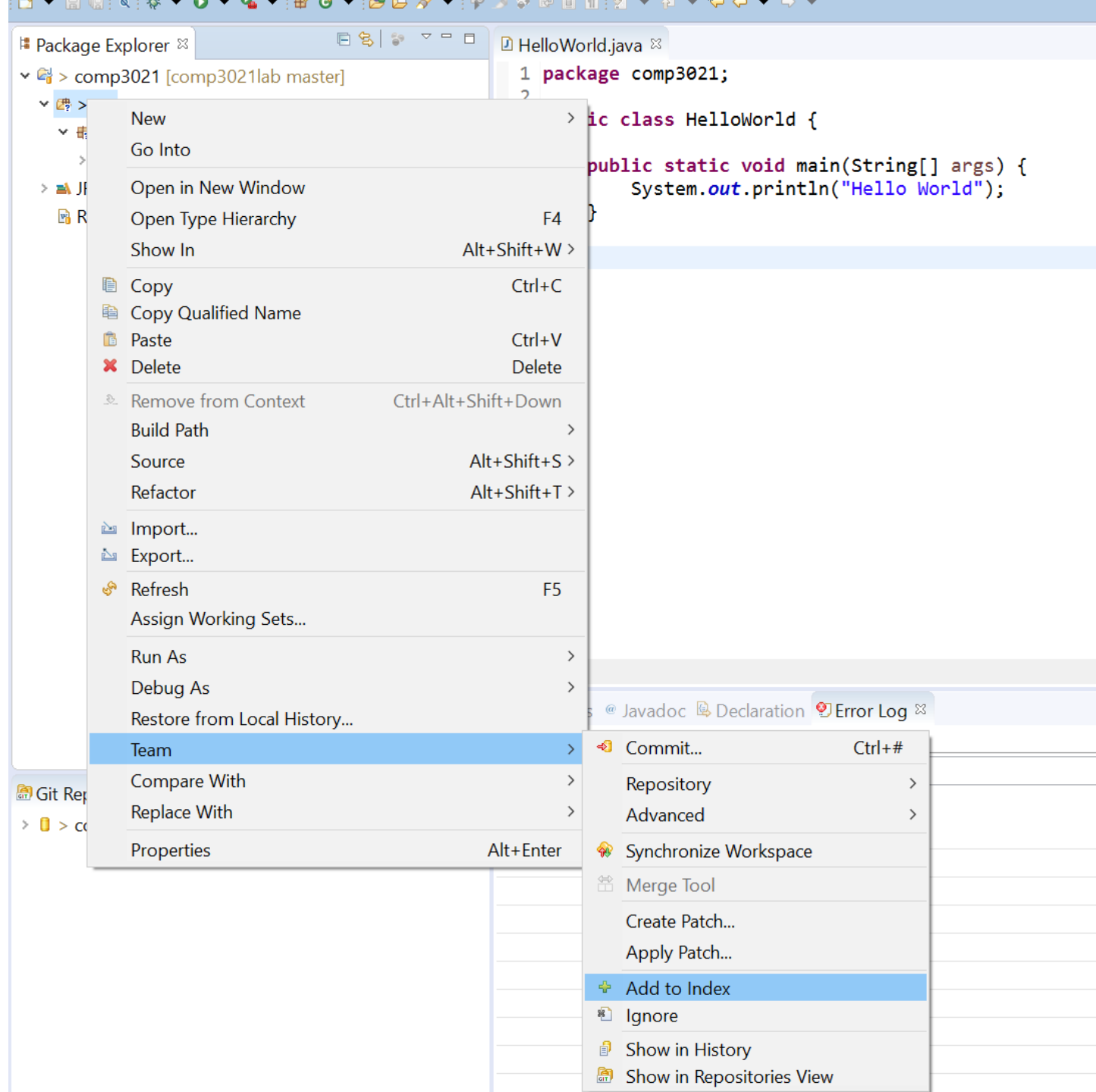


```
1 package comp3021;  
2  
3 public class HelloWorld {  
4  
5     public static void main(String[] args) {  
6         System.out.println("Hello World");  
7     }  
8 }  
9 |
```

The image shows a code editor window titled 'HelloWorld.java'. The code is a standard Java 'Hello World' program. It consists of a package declaration, a public class named 'HelloWorld', and a public static 'main' method. The 'main' method contains a single line of code: 'System.out.println("Hello World");'. The code is syntax-highlighted, with keywords in purple, strings in blue, and the 'out' property in blue. The cursor is positioned at the end of line 9.

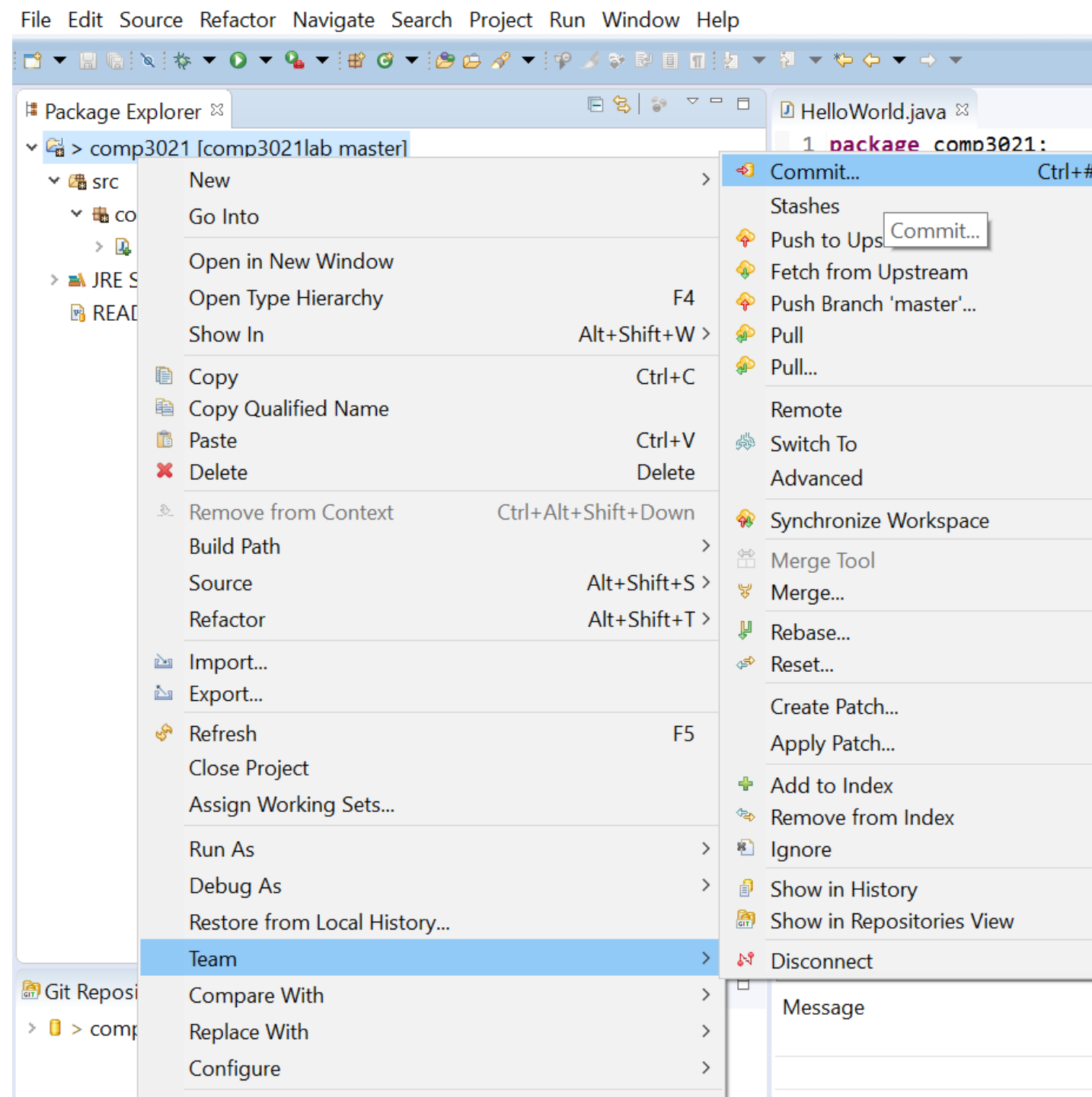
- **Add Your New Files into Index**

Right click your *src* folder
Choose **Team > Add to Index**
Then your new files will be indexed



- **Make Your First Commit**

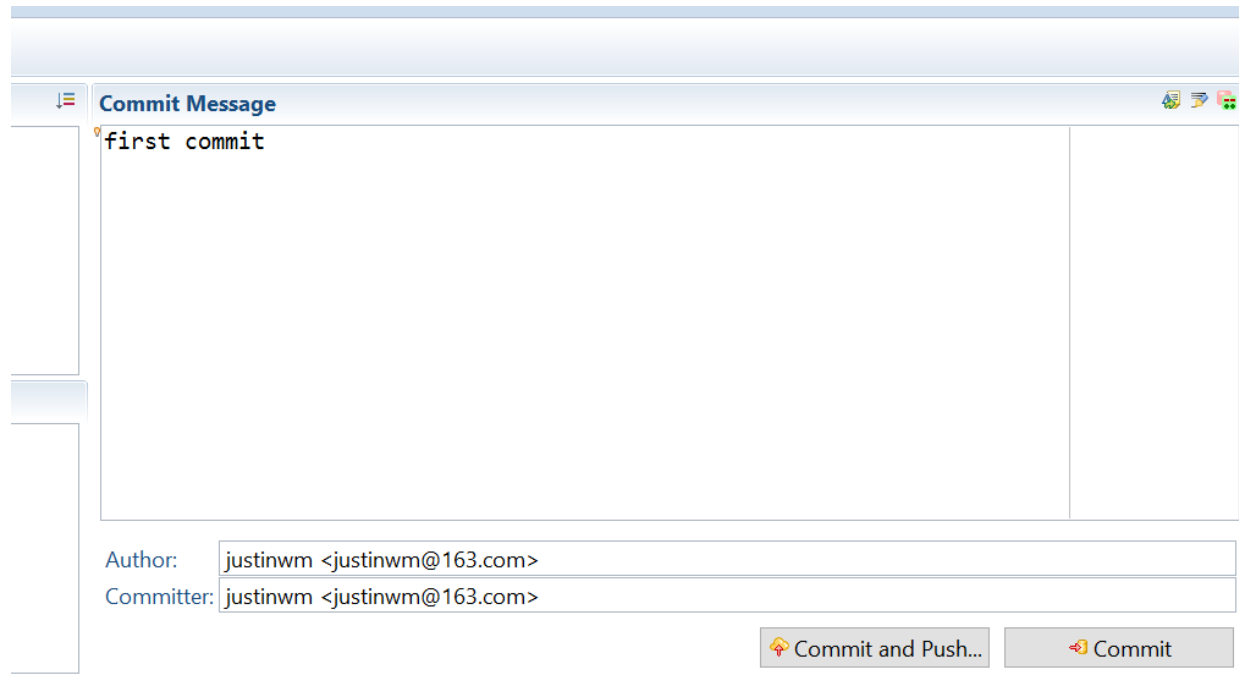
Right click your *project*
Choose *Team* > *Commit*



- ## Make Your First Commit

Fill in your commit message

Click ***Commit***



The screenshot shows a 'Commit Message' dialog box. The title bar reads 'Commit Message'. The main text area contains the message 'first commit'. Below the text area, there are two input fields: 'Author:' with the value 'justinwm <justinwm@163.com>' and 'Committer:' with the value 'justinwm <justinwm@163.com>'. At the bottom right, there are two buttons: 'Commit and Push...' and 'Commit'.

Commit Message

first commit

Author: justinwm <justinwm@163.com>

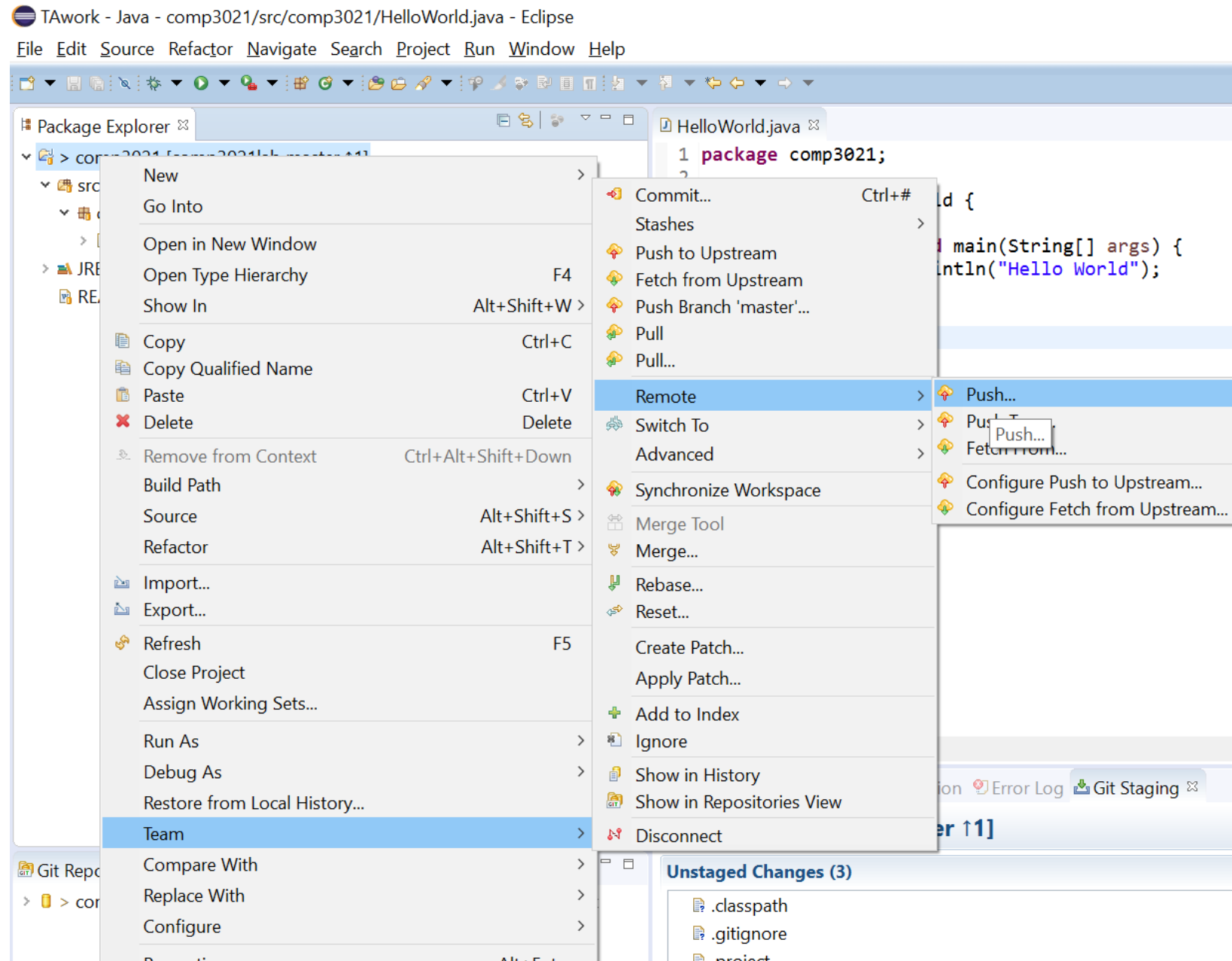
Committer: justinwm <justinwm@163.com>

Commit and Push... Commit

• Push Your Code

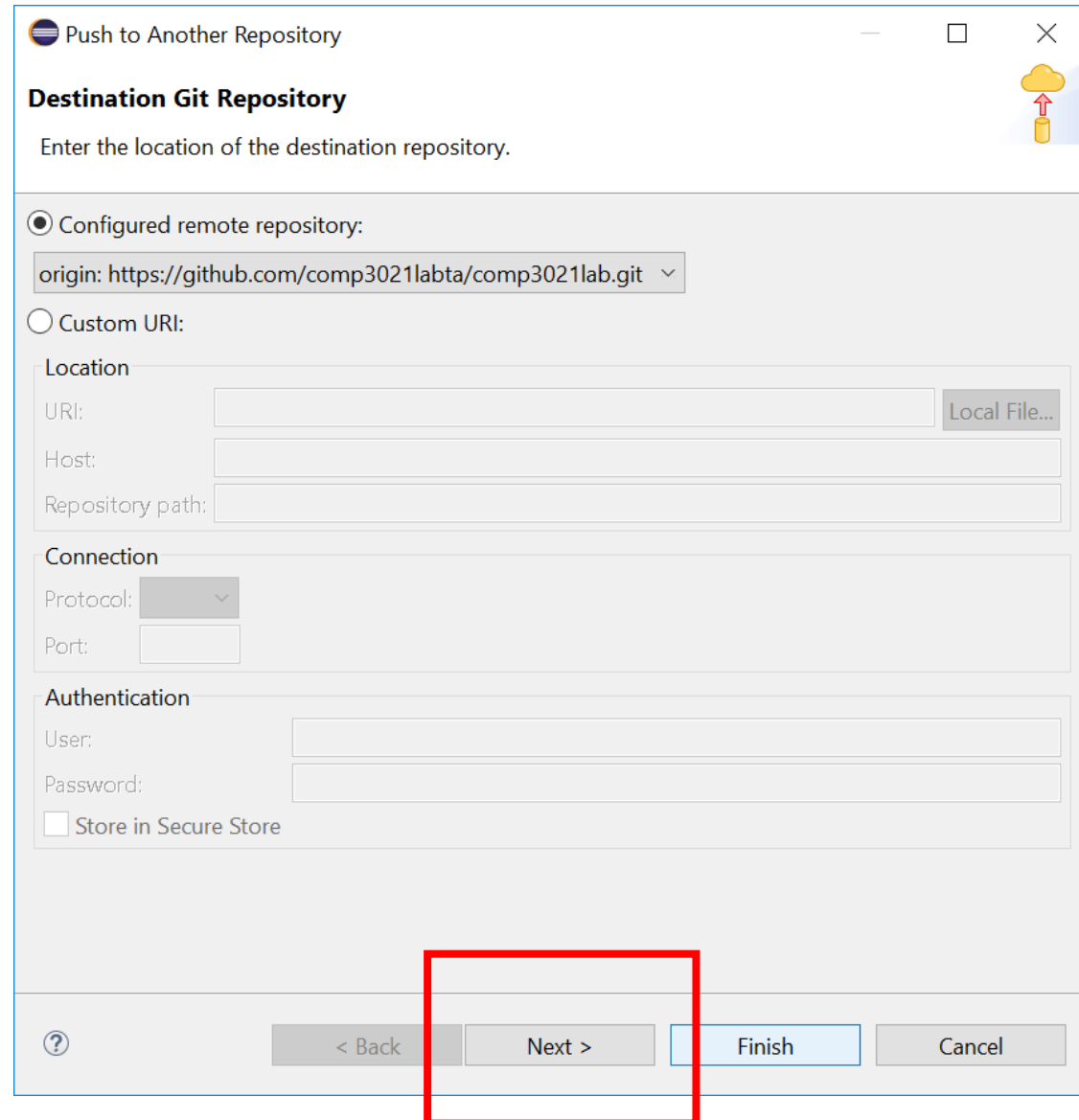
Right click your *project*

Choose *Team > Remote > Push*



- **Push Your Code**

Click *Next*



Push to Another Repository

Destination Git Repository

Enter the location of the destination repository.

☒ Configured remote repository:

origin: ▾

☐ Custom URI:

Location

URI:

Host:

Repository path:

Connection

Protocol:

Port:

Authentication

User:

Password:

☐ Store in Secure Store

- **Push Your Code**

Click **Add All Branches Spec**

Then click **Finish**

Push to: origin

Push Ref Specifications

Select refs to push.

Add create/update specification

Source ref:

Destination ref:

Add Spec

Add delete ref specification

Remote ref to delete:

Add Spec

Add predefined specification

Add Configured Push Specs

Add All Branches Spec

Add All Tags Spec

Specifications for push

Mode	Source Ref	Destination Ref	Force Update	Remove
+ Update	refs/heads/*	refs/heads/*	<input type="checkbox"/>	

Force Update All Specs

Remove All Specs

☐ Save specifications in 'origin' configuration

?

< Back

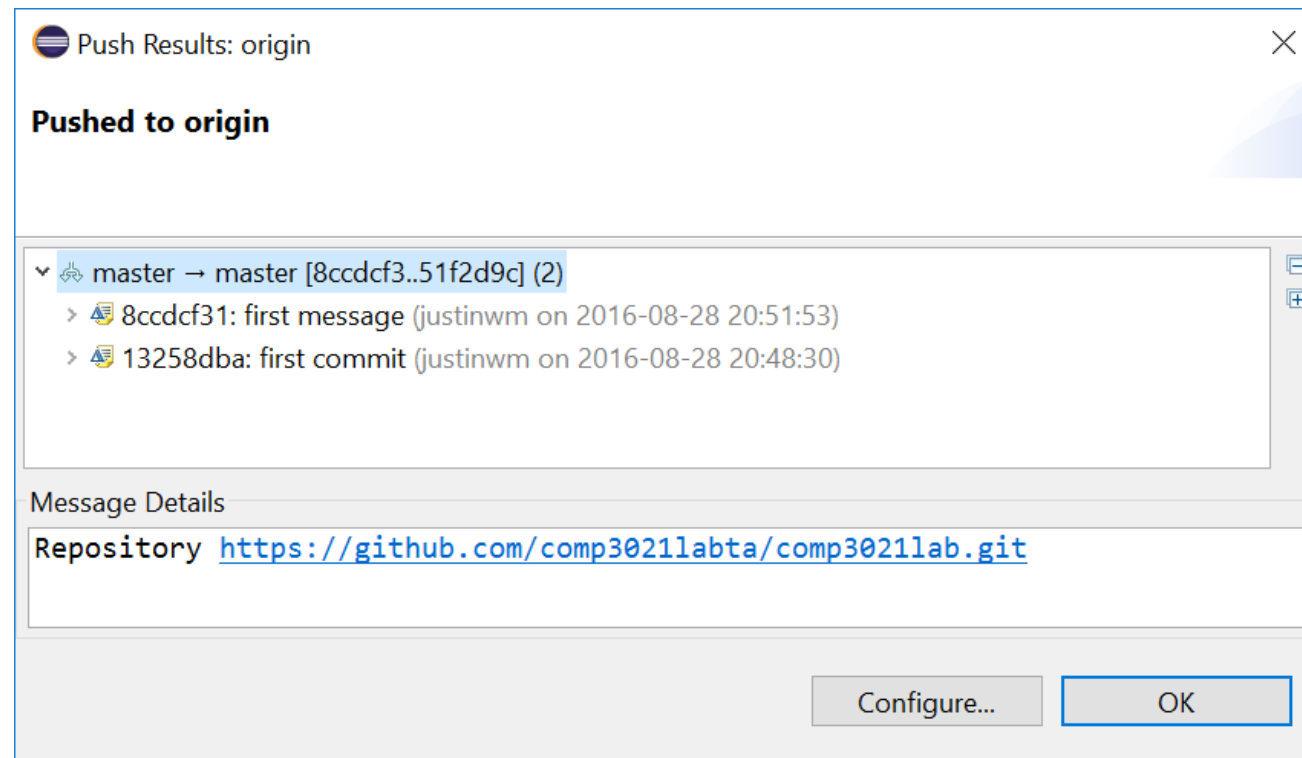
Next >

Finish

Cancel


- **Push Your Code**

Your code has been push to your remote repository😊



- ## Push Your Code

You can view your new code in your GitHub

 [comp3021labta](#) / [comp3021lab](#)

Unwatch ▾ 1

★ Star 0

🔗 Fork 0

<> Code

! Issues 0

🔗 Pull requests 0

📖 Wiki


📊 Pulse

📈 Graphs

⚙️ Settings

Branch: master ▾ [comp3021lab](#) / [src](#) / [comp3021](#) / [HelloWorld.java](#)

Find fileCopy path

 [justinwm](#) first commit 13258db 7 minutes ago

1 contributor

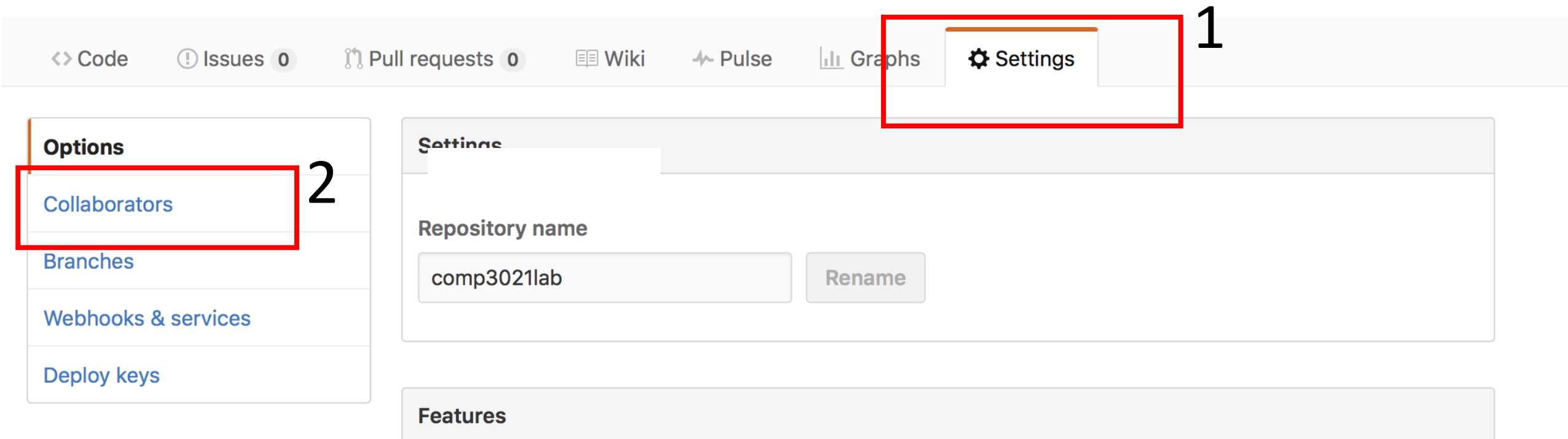
9 lines (6 sloc) | 139 Bytes

RawBlameHistory🖨️✎️🗑️


```
1 package comp3021;
2
3 public class HelloWorld {
4
5     public static void main(String[] args) {
6         System.out.println("Hello World");
7     }
8 }
```

- **Invite the account comp3021ta-2022 to complete the lab**

On GitHub, navigate to the main page of the repository, Under your repository name, click **Settings**. In the left sidebar, click **Collaborators**. Under "Collaborators", start typing **comp3021labta** and select it from the drop-down menu. Click **Add collaborator**.






- Put in the readme file your name and student ID

 src/comp3021	first commit	4 days ago
---	--------------	------------

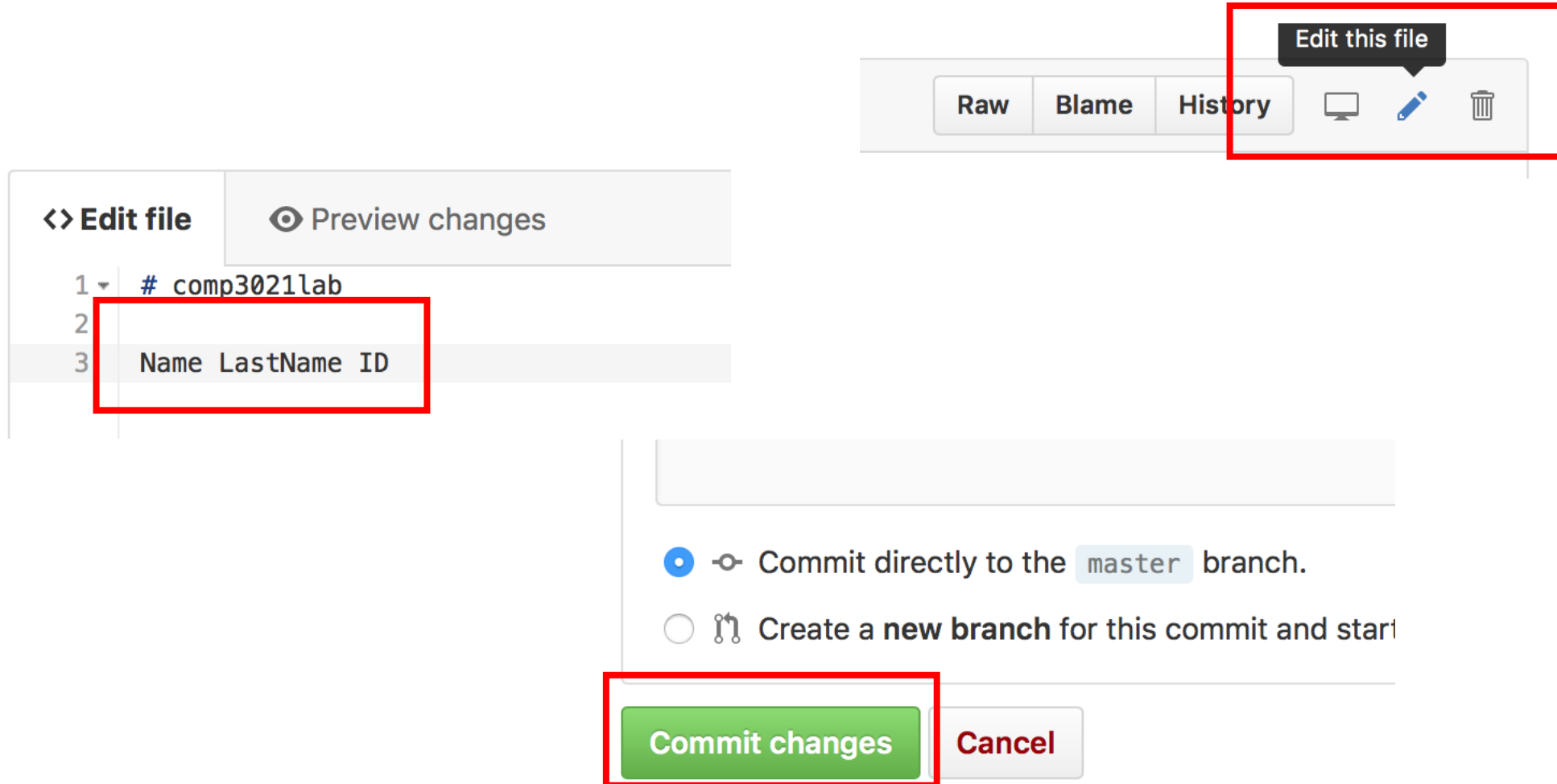
Help people interested in this repository understand your project by adding a README.

Add a README

OR

 valerio65 committed on GitHub Create README.md		Latest commit c8e97a6 just now
 src/comp3021	first commit	4 days ago
 README.md	Create README.md	just now

- Put in the readme file your name and student ID



END OF LAB #1