Git and Github definition

Git: Git is a distributed version control system for tracking changes in source code during software development. It is designed for coordinating work among programmers, but it can be used to track changes in any set of files. Its goals include speed, data integrity, and support for distributed, non-linear workflows.

GitHub: GitHub is a web-based Git repository hosting service, which offers all of the distributed revision control and source code management (SCM) functionality of Git as well as adding its own features.

S.No.	Git	GitHub
1.	Git is a software.	GitHub is a service.
2.	Git is a command-line tool	GitHub is a graphical user interface
3.	Git is installed locally on the system	GitHub is hosted on the web
4.	Git is maintained by linux.	GitHub is maintained by Microsoft.
5.	Git is focused on version control and code sharing.	GitHub is focused on centralized source code hosting.
6.	Git is a version control system to manage source code history.	GitHub is a hosting service for Git repositories.

S.No.	Git	GitHub
7.	Git was first released in 2005.	GitHub was launched in 2008.
8.	Git has no user management feature.	GitHub has a built-in user management feature.
9.	Git is open-source licensed.	GitHub includes a free-tier and pay-for-use tier.
10.	Git has minimal external tool configuration.	GitHub has an active marketplace for tool integration.
11.	Git provides a Desktop interface named Git Gui.	GitHub provides a Desktop interface named GitHub Desktop.
12.	Git competes with CVS, Azure DevOps Server, Subversion, Mercurial, etc.	GitHub competes with GitLab, Git Bucket, AWS Code Commit, etc

Github

Create a account

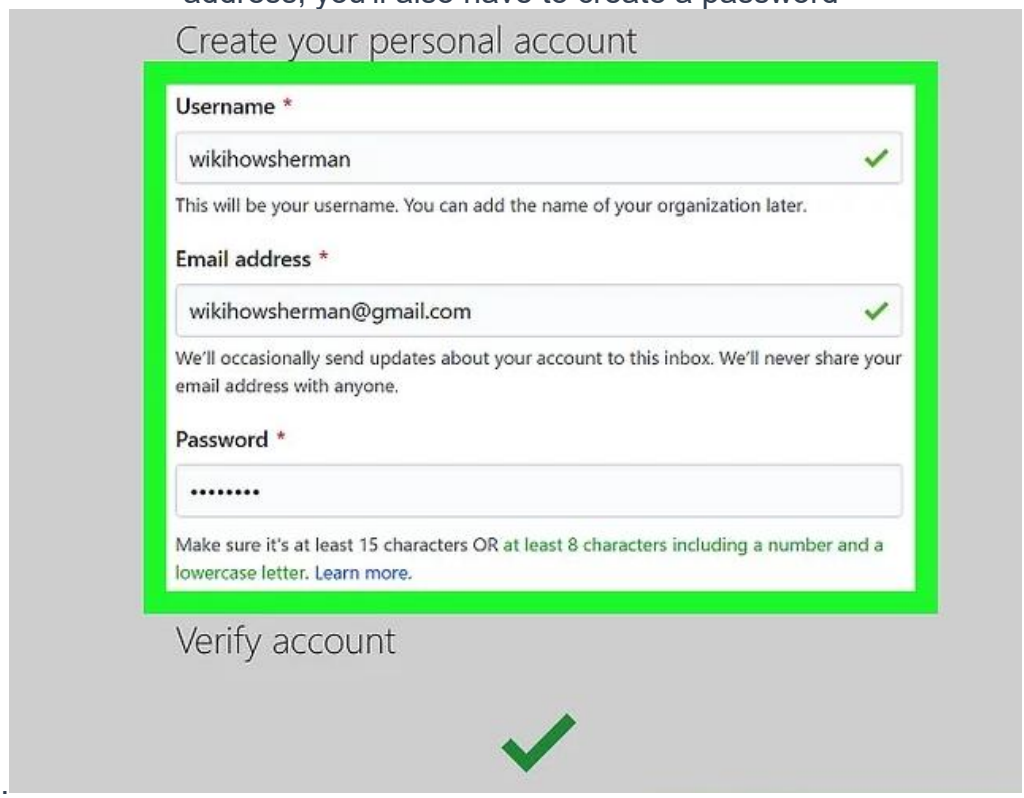
Type a user name, your email address, and a password
Choose Sign up for GitHub, and then follow the instructions.

Steps 1

Go to https://github.com/join in a web browser. You can use any web browser on your computer.

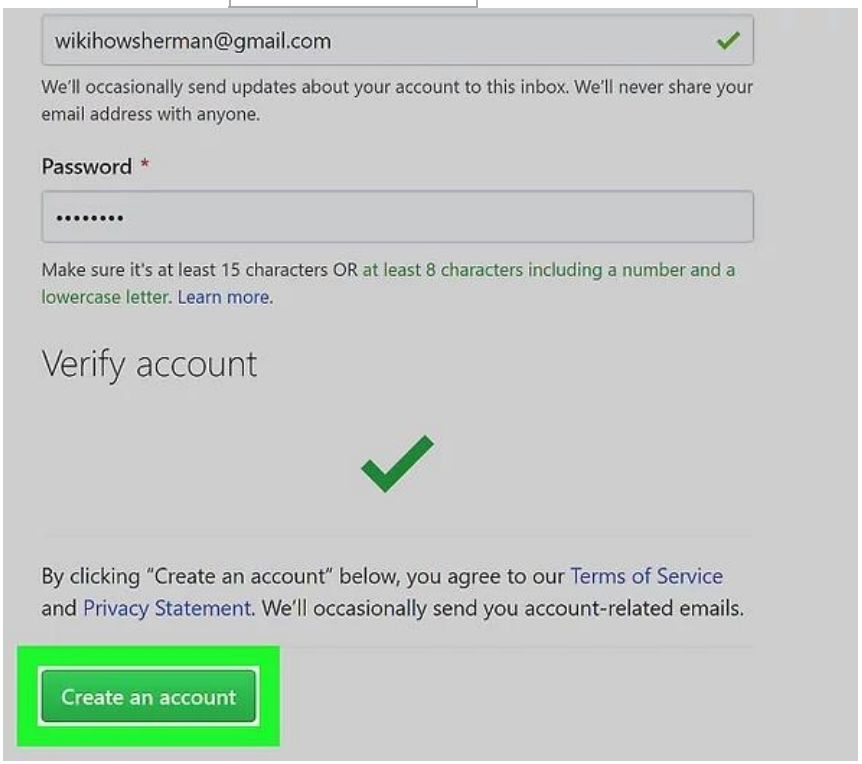
2

Enter your personal details. In addition to creating a username and entering an email address, you'll also have to create a password



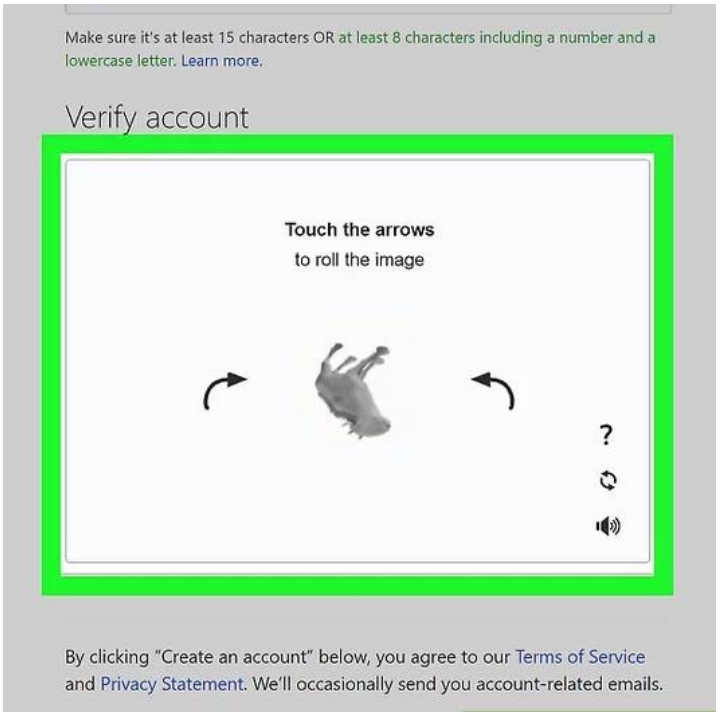
3

Click the green Create an account **button.** It's below the form.



4

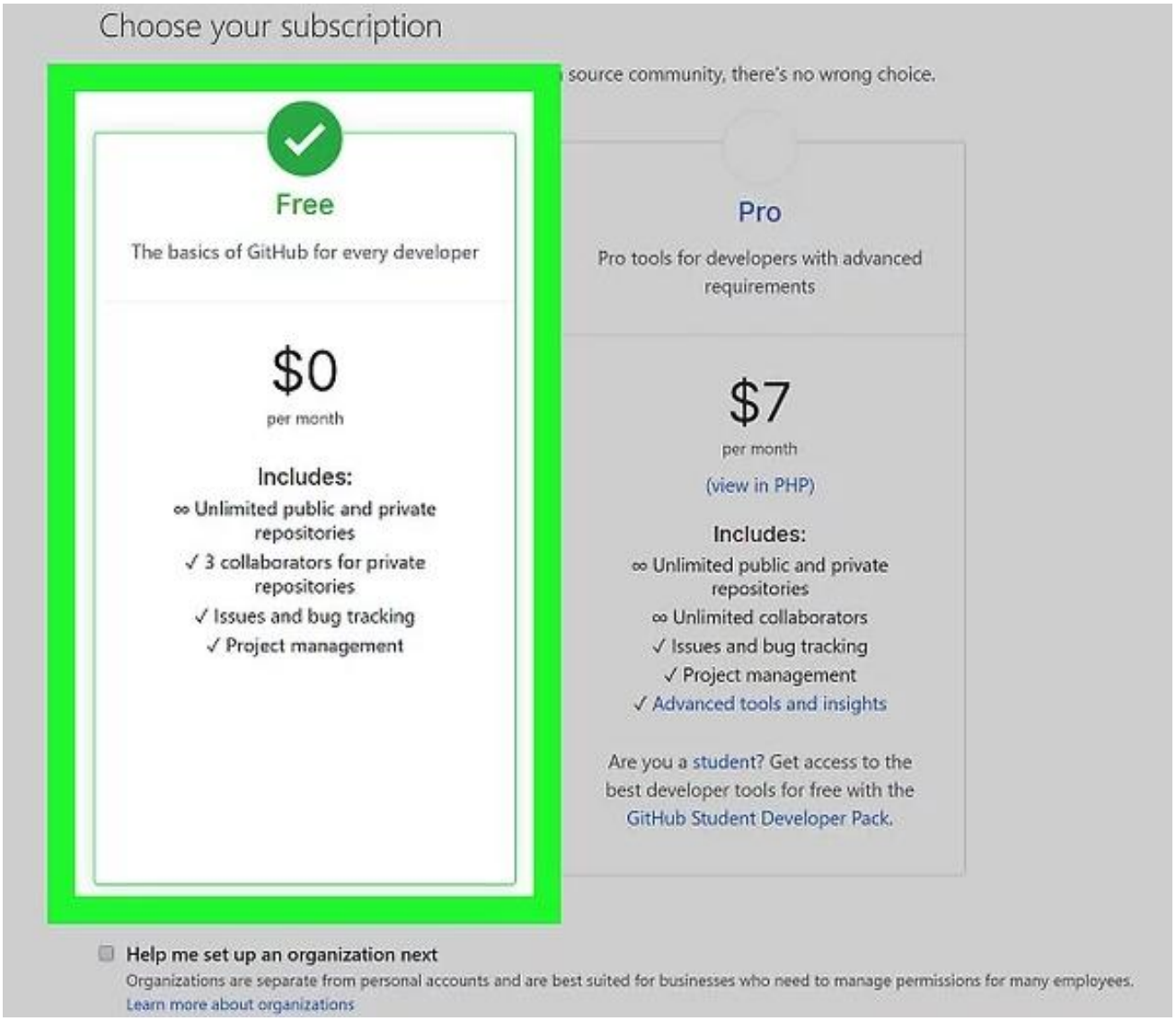
Complete the CAPTCHA puzzle. The instructions vary by puzzle, so just follow the on-screen instructions to confirm that you are a human.



5

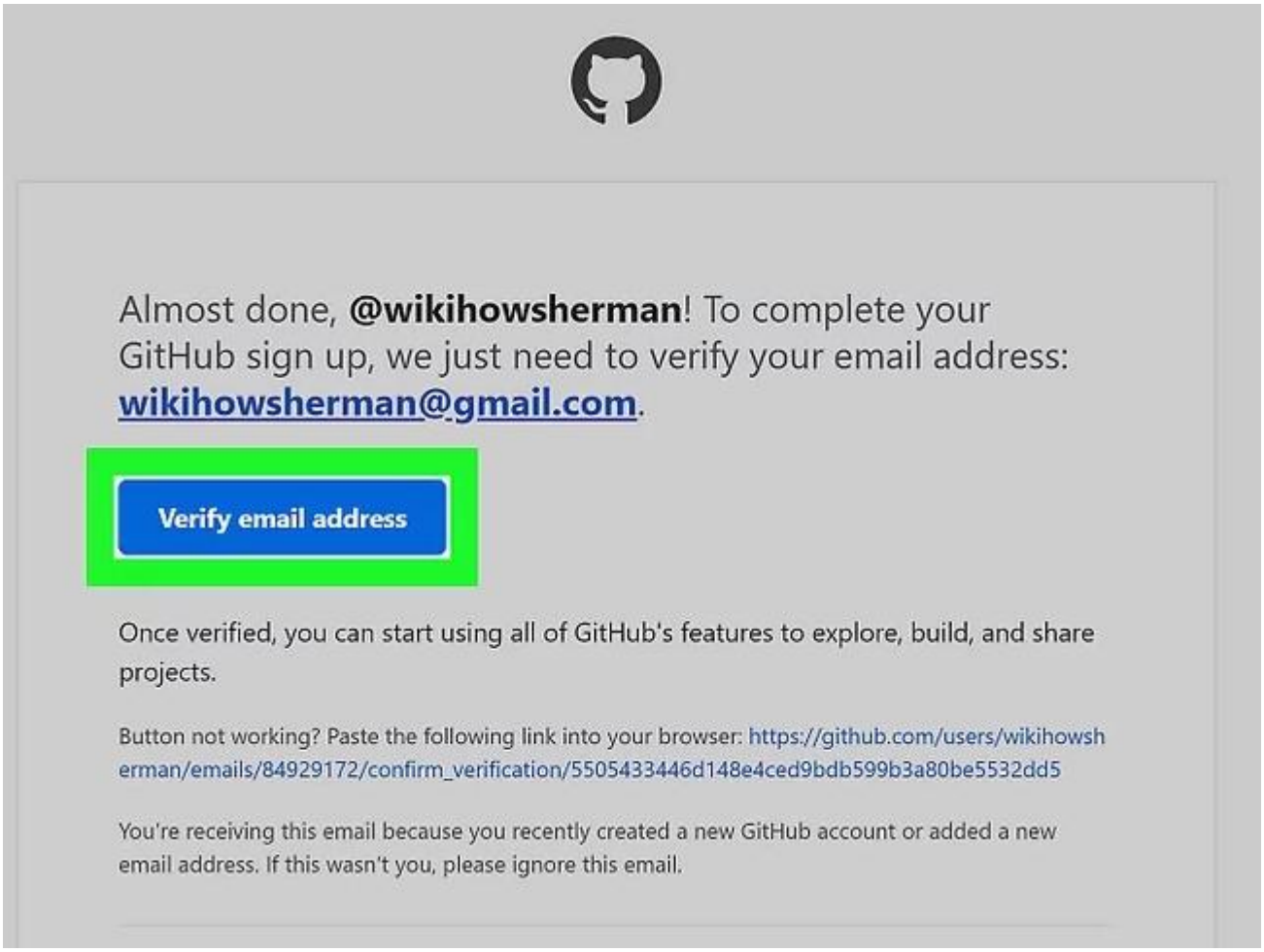
Click the Choose button for your desired plan. Once you select a plan, GitHub will send an email confirmation message to the address you entered. The plan options are:[2]

- **Free:** Unlimited public and private repositories, up to 3 collaborators, issues and bug tracking, and project management tools.



6

Click the Verify email address **button in the message from GitHub.** This confirms your email address and returns you to the sign-up process.



Select your preferences and click Submit**.** GitHub displays a quick survey that can help you tailor your experience to match what you're looking for. Once you make your selection, you'll be taken to a screen that allows you to set up your first repository.

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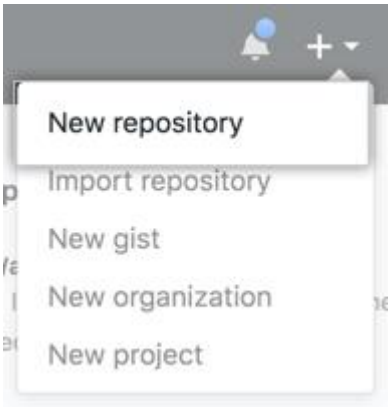
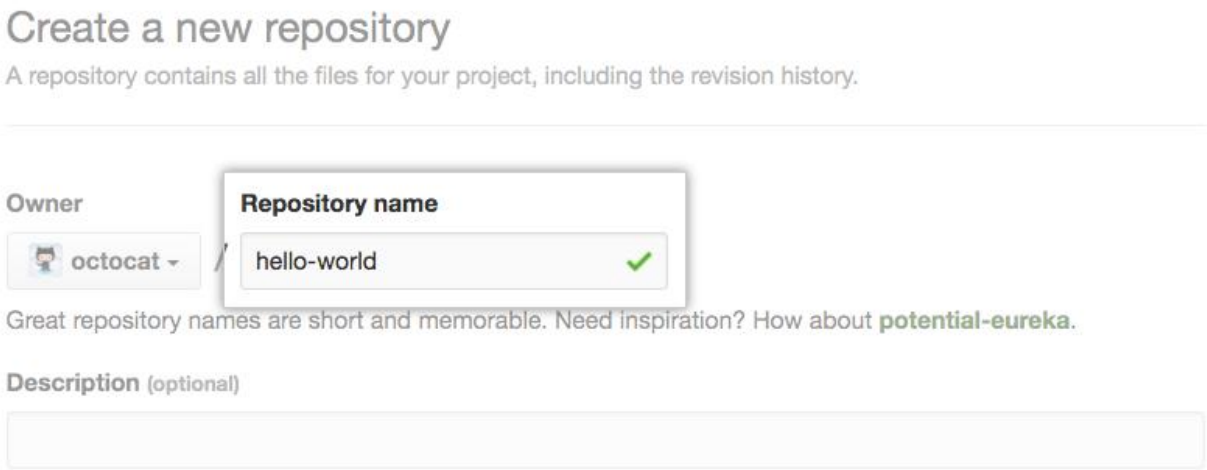
- If you want to upgrade your Github account in the future, click the menu at the top-right corner, select **Settings**, and choose **Billing** to view your options.[3]

Create a repository

. In the upper-right corner of any page, use the drop-down menu, and select **New repository**.



. Type a short, memorable name for your repository. For example, "hello-world".



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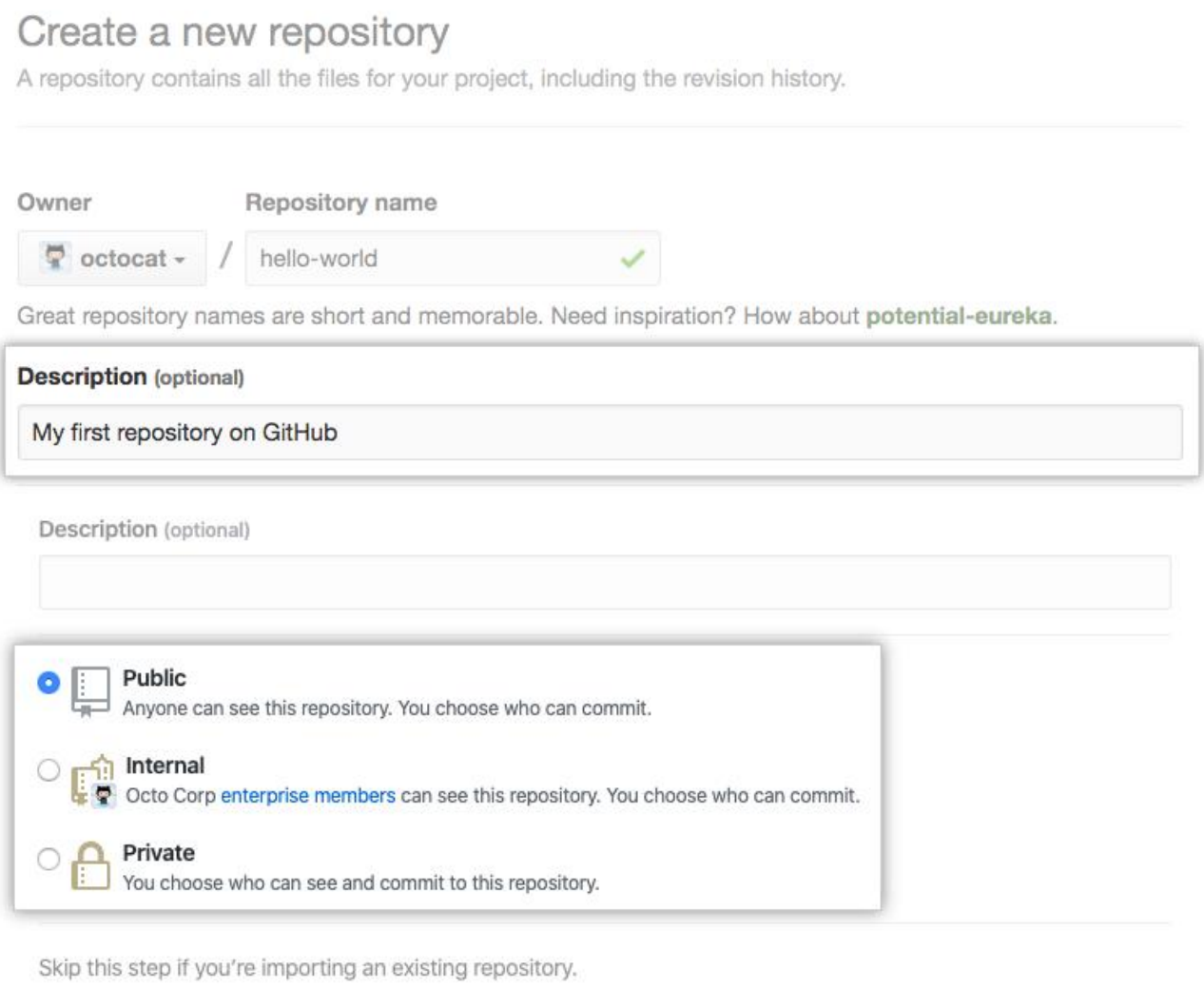
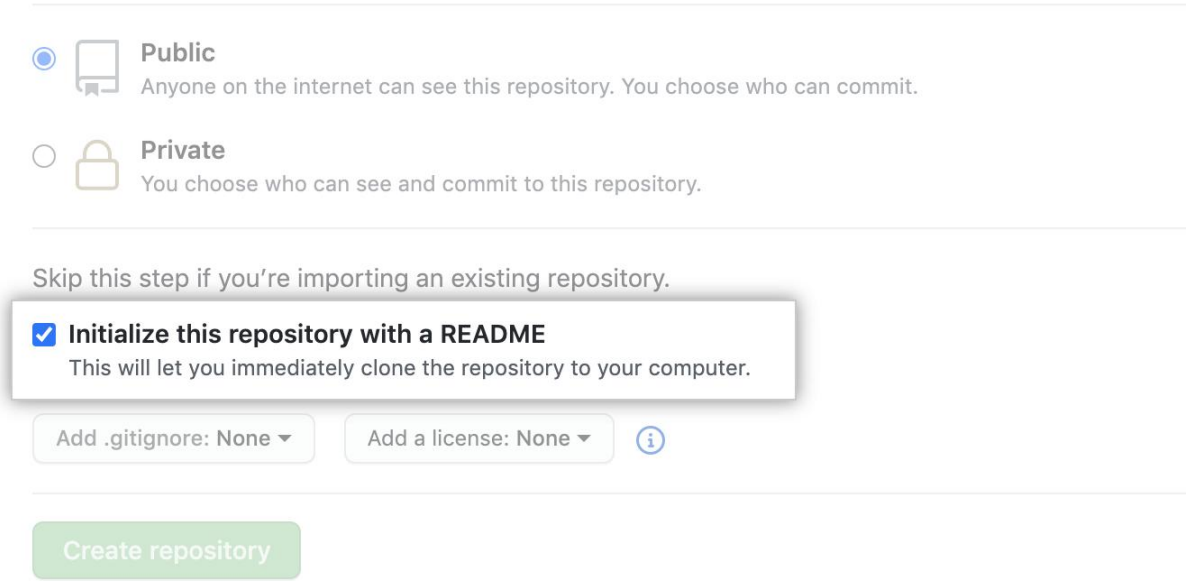
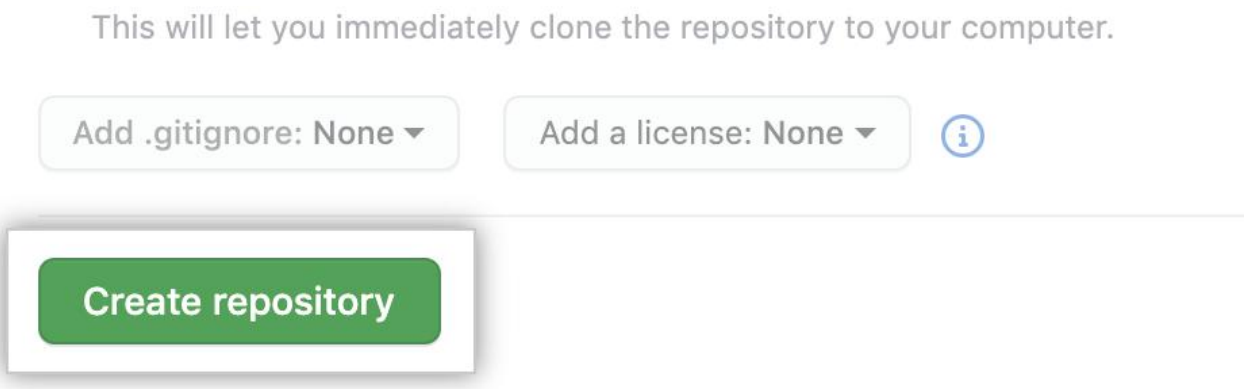
. Optionally, add a description of your repository. For example, "My first repository on GitHub."



. Select **Initialize this repository with a README**.



Click **Create repository**



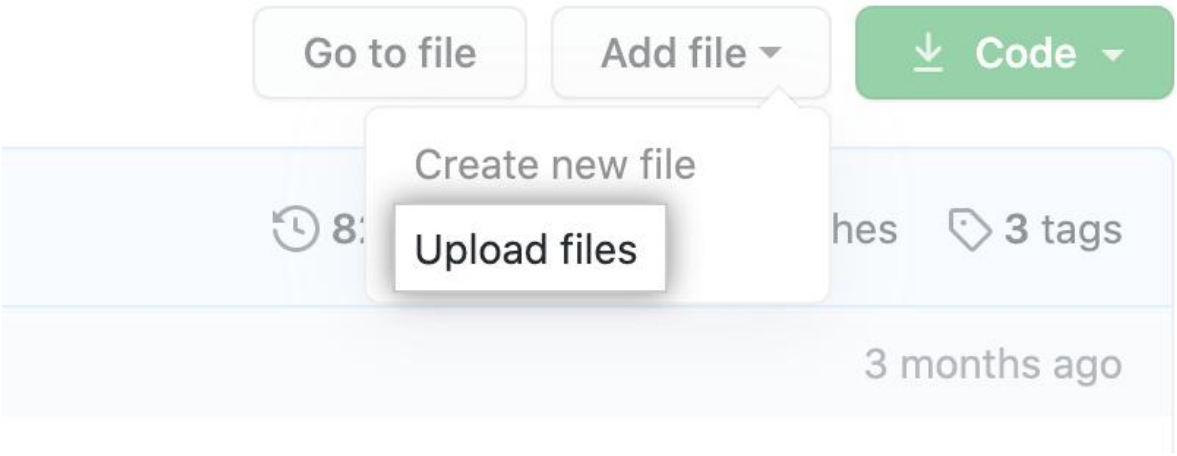
Upload the Project SRC & other project related files on the repo

Adding a file to a repository on GitHub

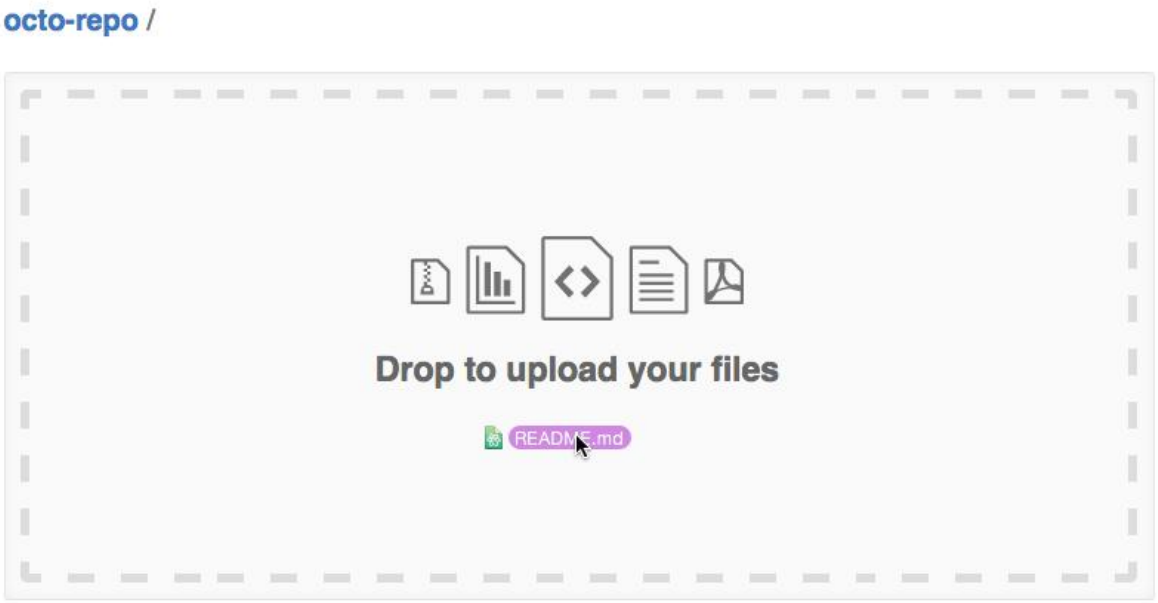
You can upload multiple files to GitHub at the same time.

On GitHub.com, navigate to the main page of the repository.

Above the list of files, using the **Add file** drop-down, click **Upload files**.



. Drag and drop the file or folder you'd like to upload to your repository onto the file tree.



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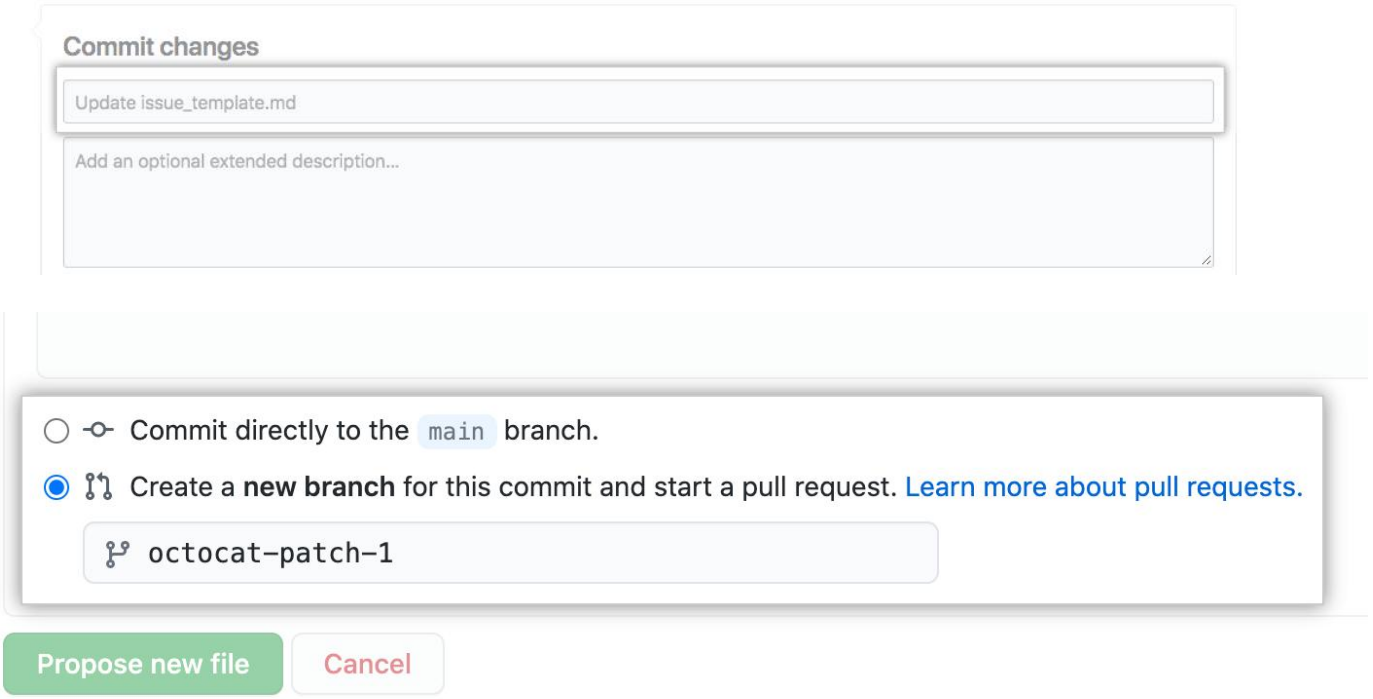
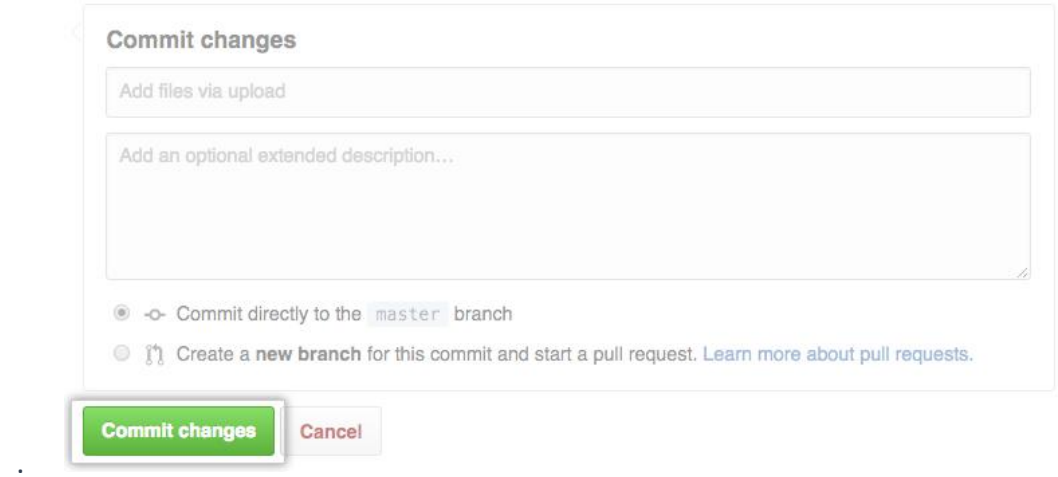


Click **Commit changes**.



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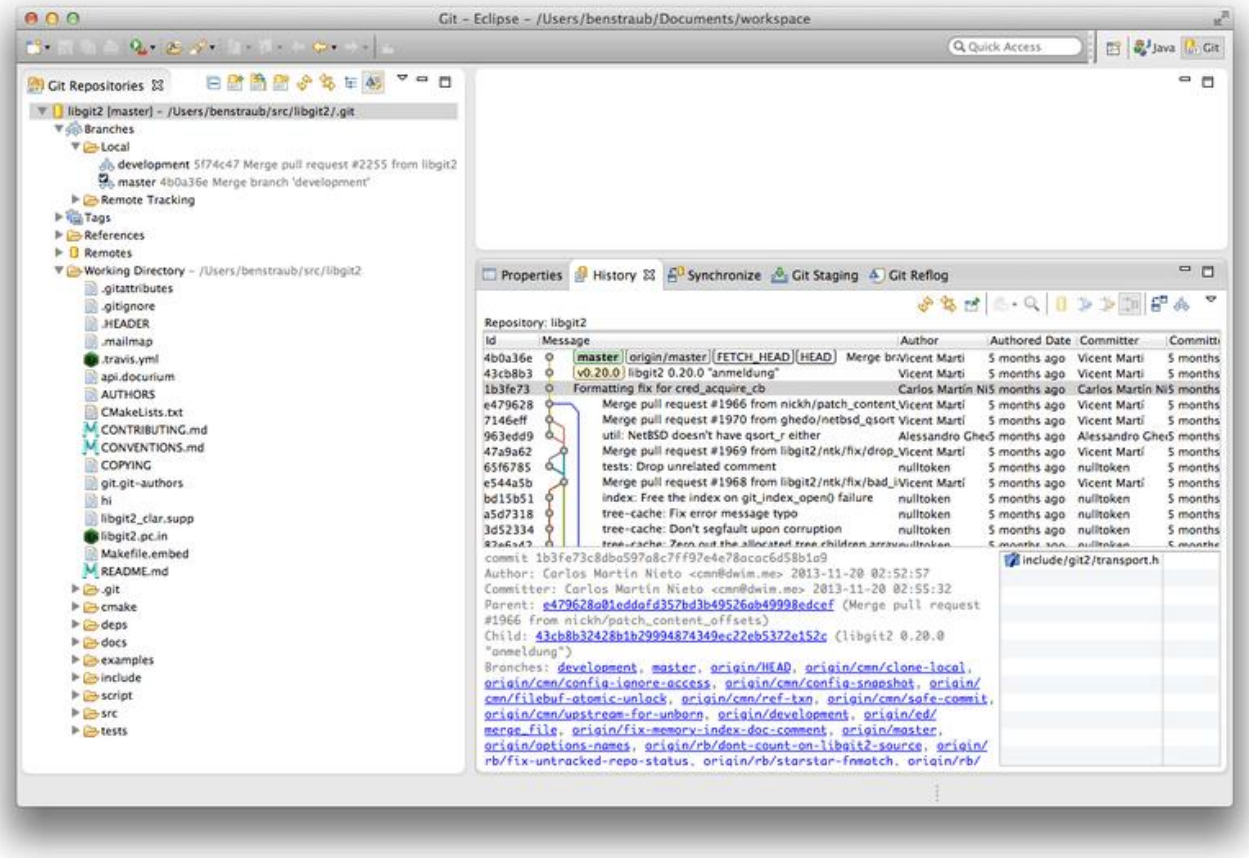
Git in Eclipse

Eclipse ships with a plugin called Egit, which provides a fairly-complete interface to Git operations. It's accessed by switching to the Git Perspective (Window > Open Perspective > Other…, and select "Git"

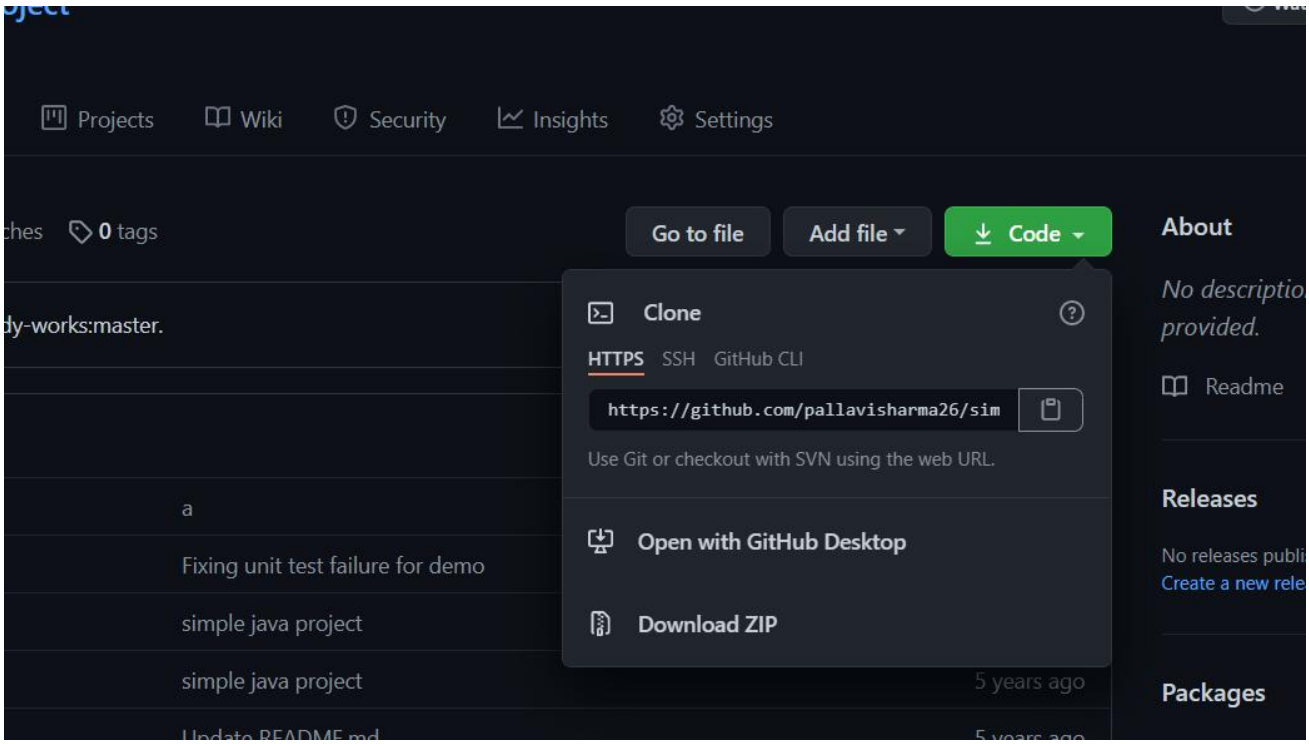


Git Perspective

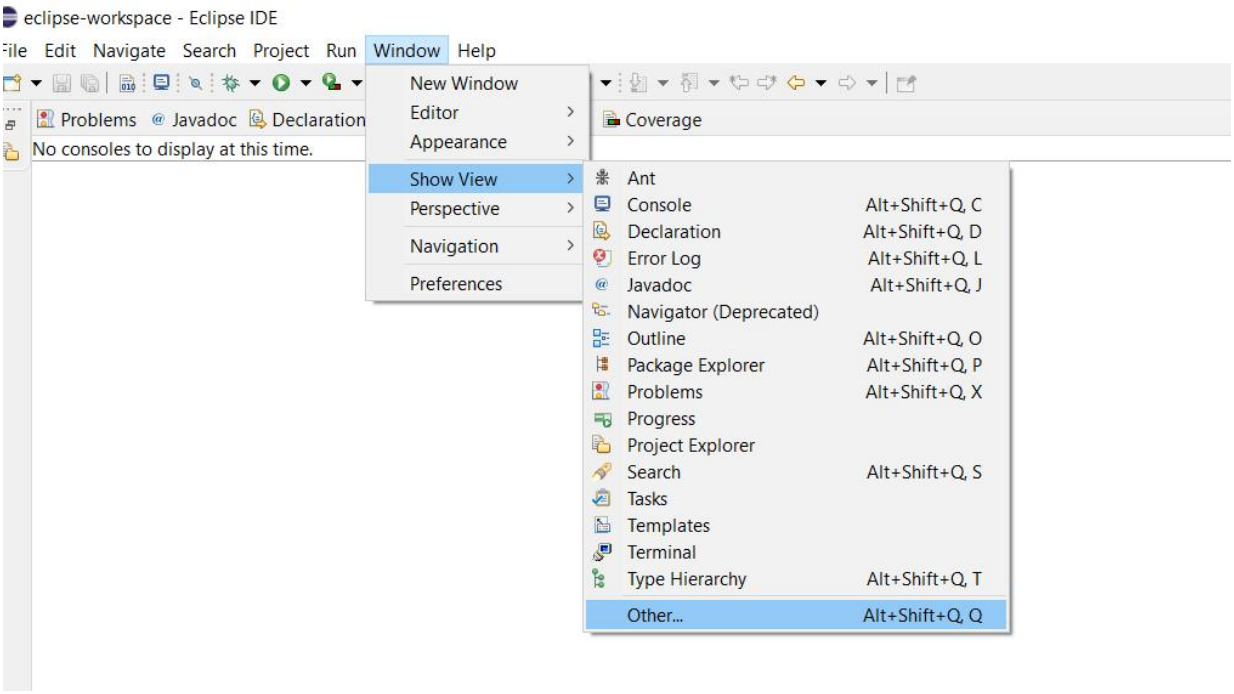
GIT perspective is a group of views and editors which is used to work with local and remote GIT repositories. allows interactive rebase (i.e. quick editing of commits including their removing, amending, squashing, etc.)

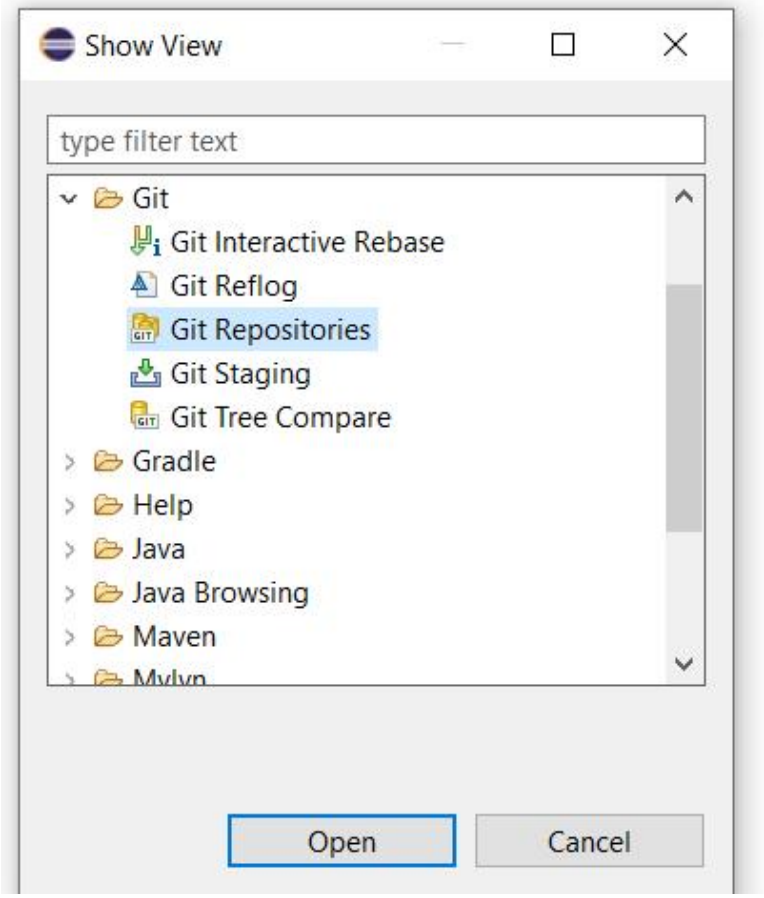
Cloning a project

Step 1: After selecting the project, click on the Green-colored Code button then copy the hyperlink as shown in the image. You can copy the link manually or by just click on the **Copy** icon.

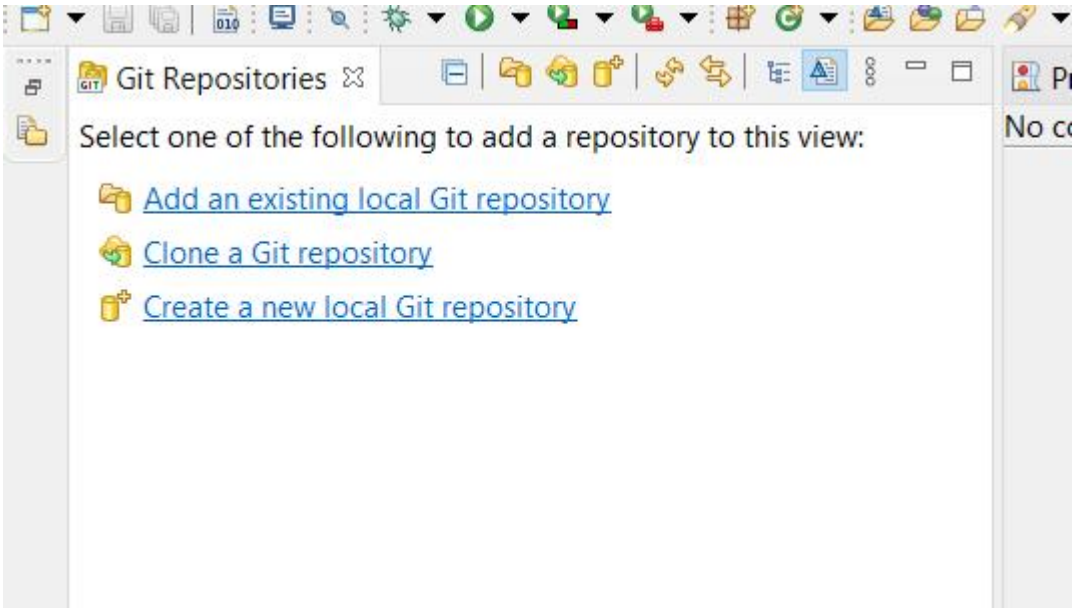


Step 2: Open Eclipse and go to **Window > Show views > Other > Git > Git Repositories** for making git repositories visible in eclipse as shown in the image.

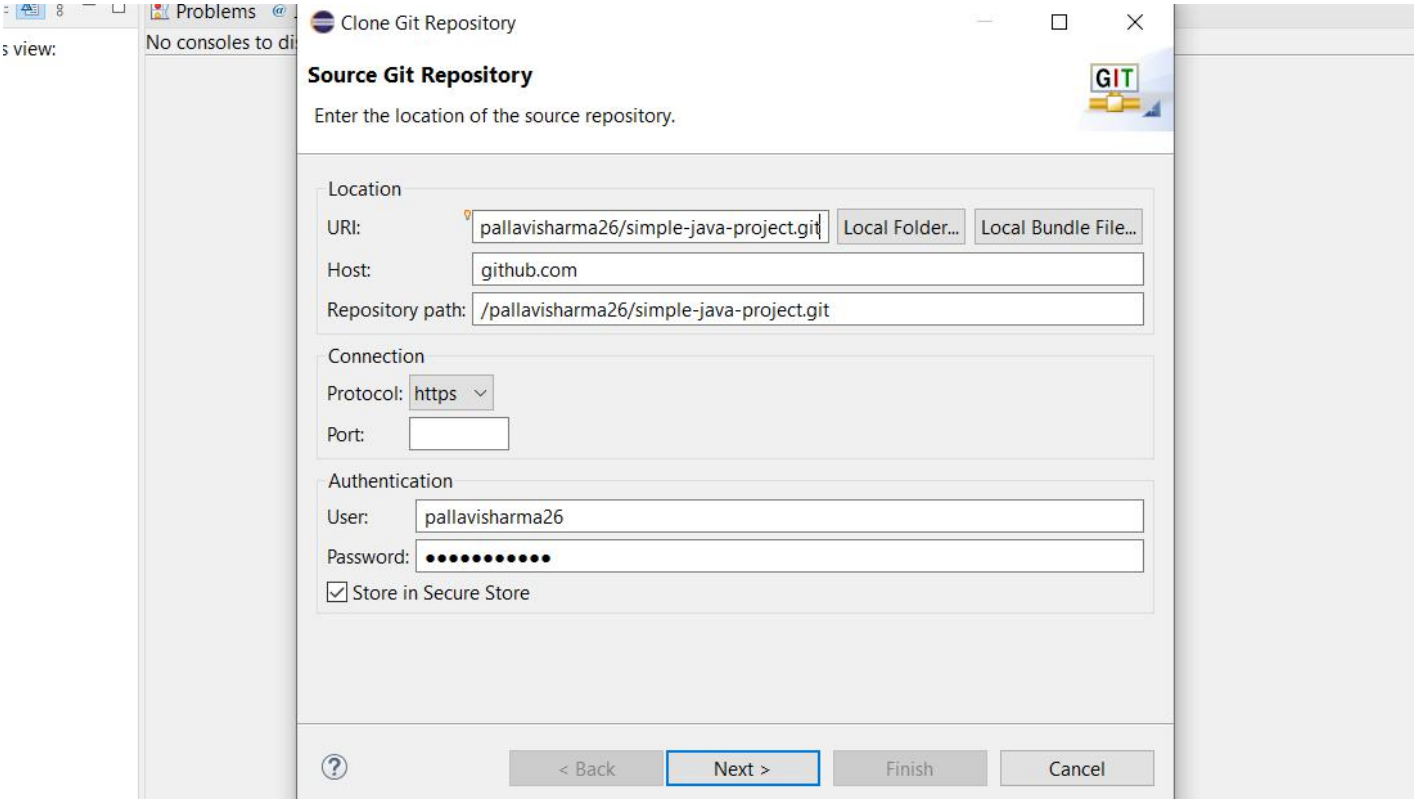




Step 3: We will after this as shown in the image now select "**Clone a Git repository**"

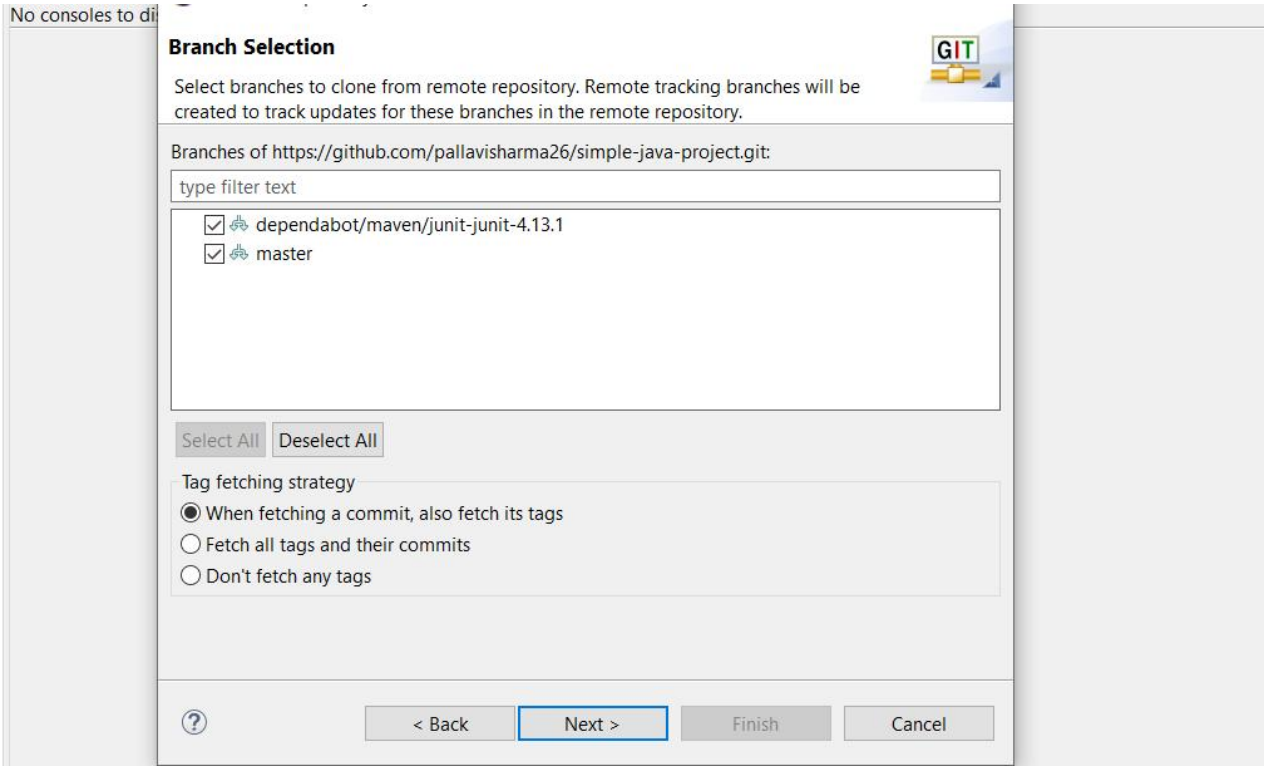


*Step 4: A window will pop up in which you have to paste the **GitHub Repository URL** and also **GitHub UserID and Password** and click on the "**Next**" button.*



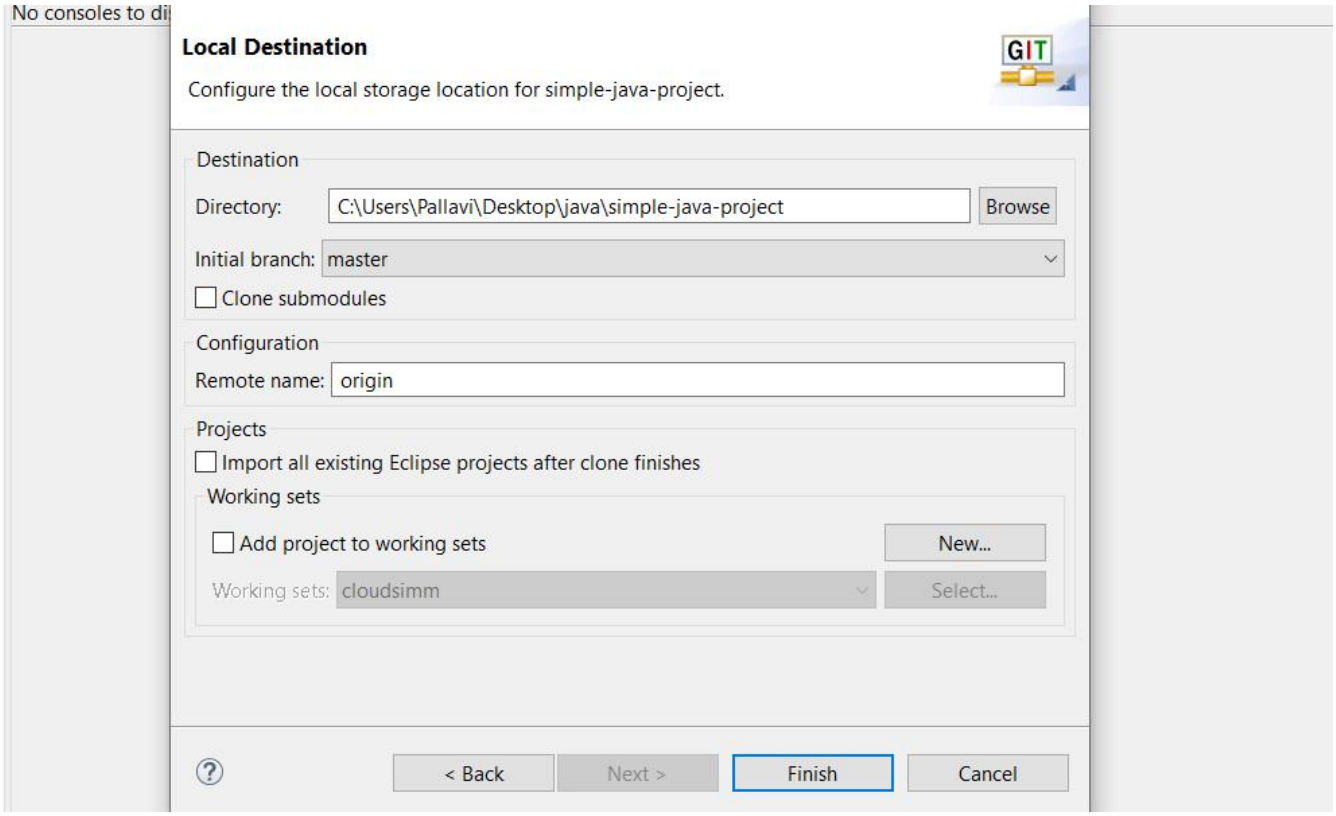
*Step 5: Select "**Branch**" and click "**Next**".*

v:

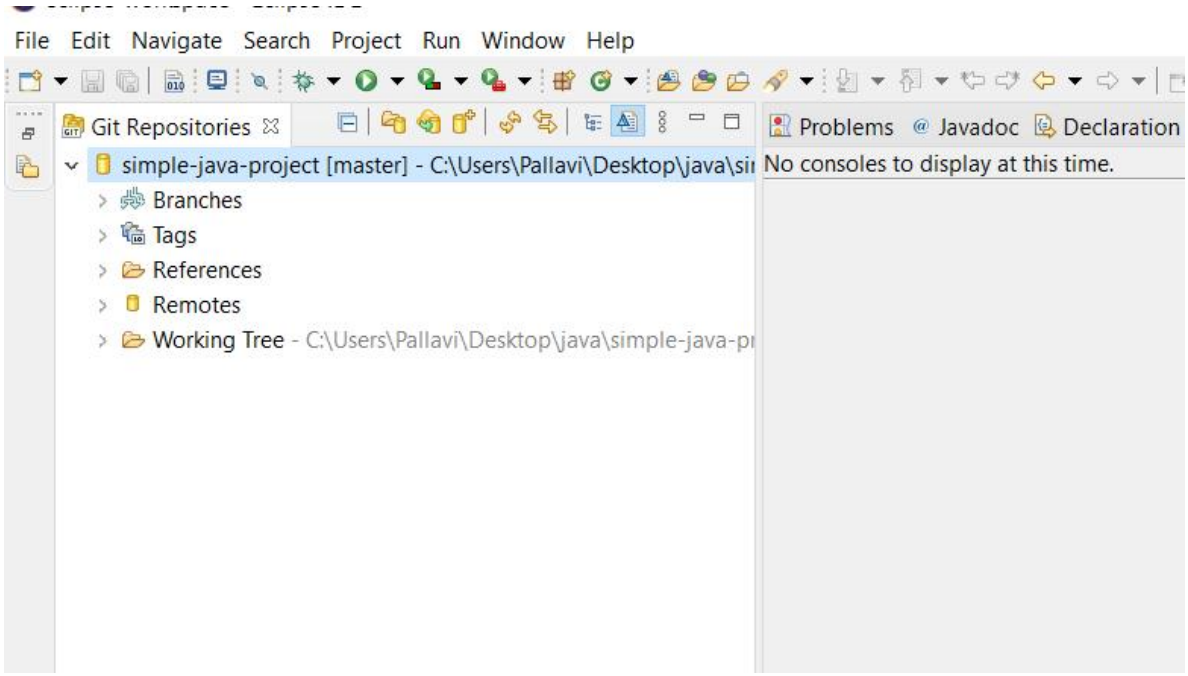


*Step 6: Select the **Folder directory** in which you want to import the repository and click "**Finish**".*

w:

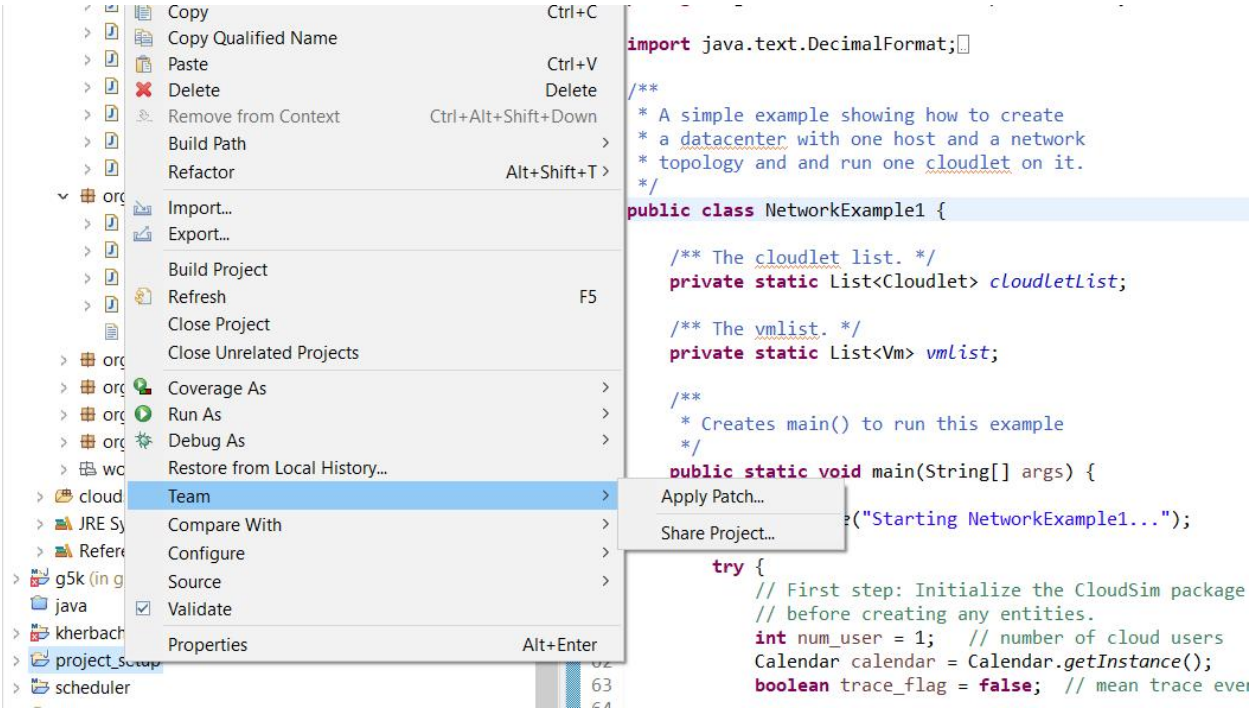


We have successfully imported the GitHub Repository and can make further changes to it.

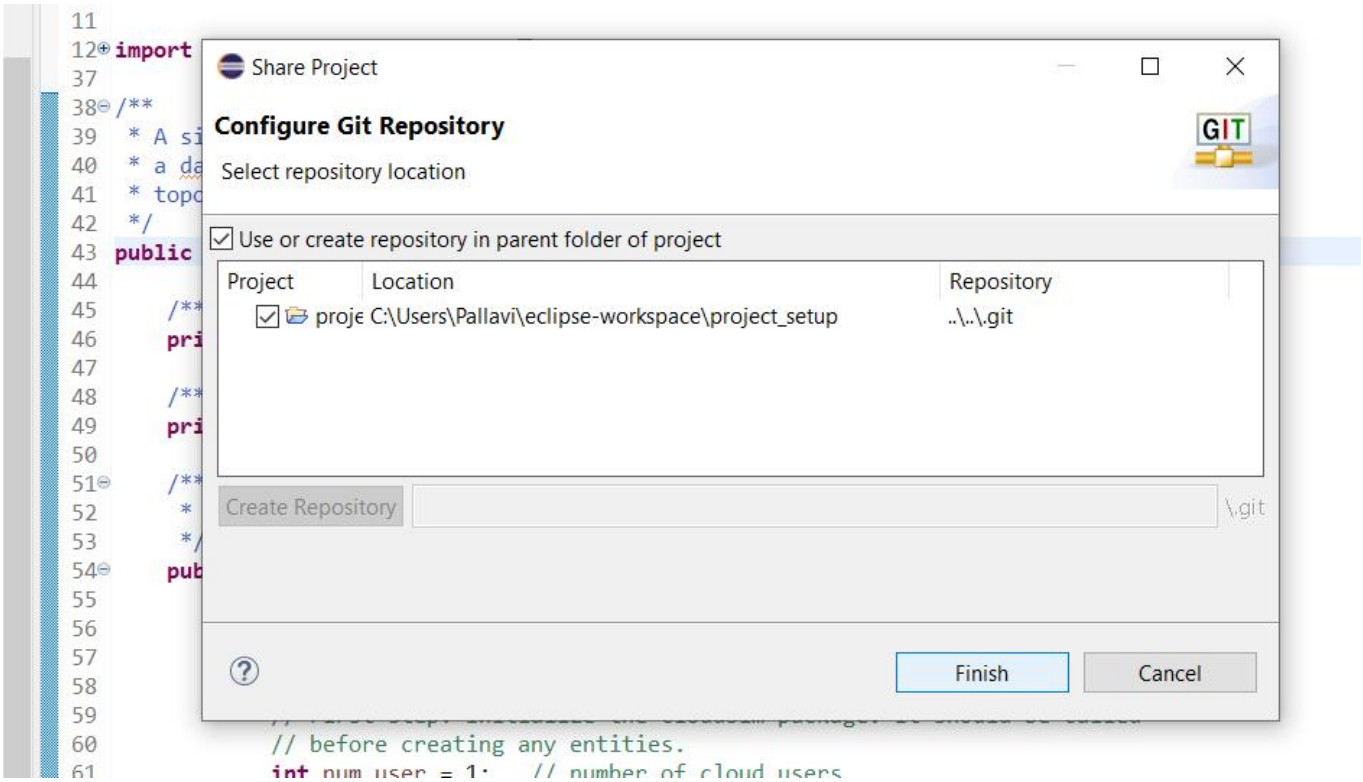


Syncing a project & Commit & Push

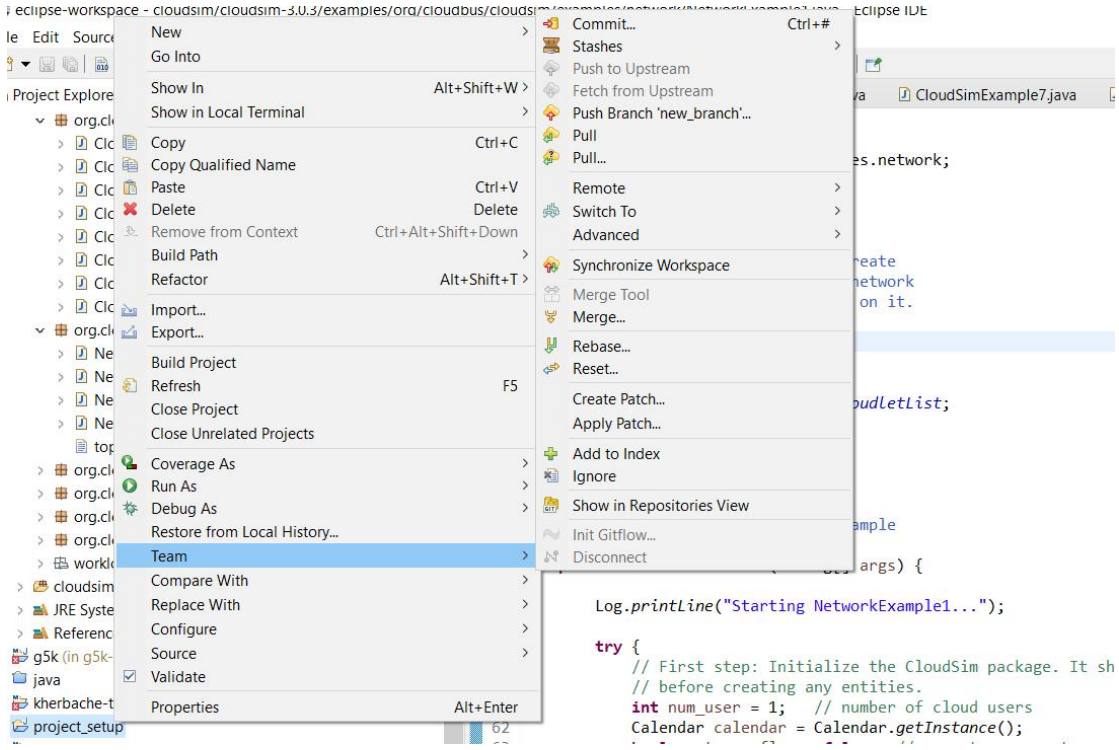
Step 1: Open Eclipse IDE and right-click on the project you want to push and go to **Team->share project.**



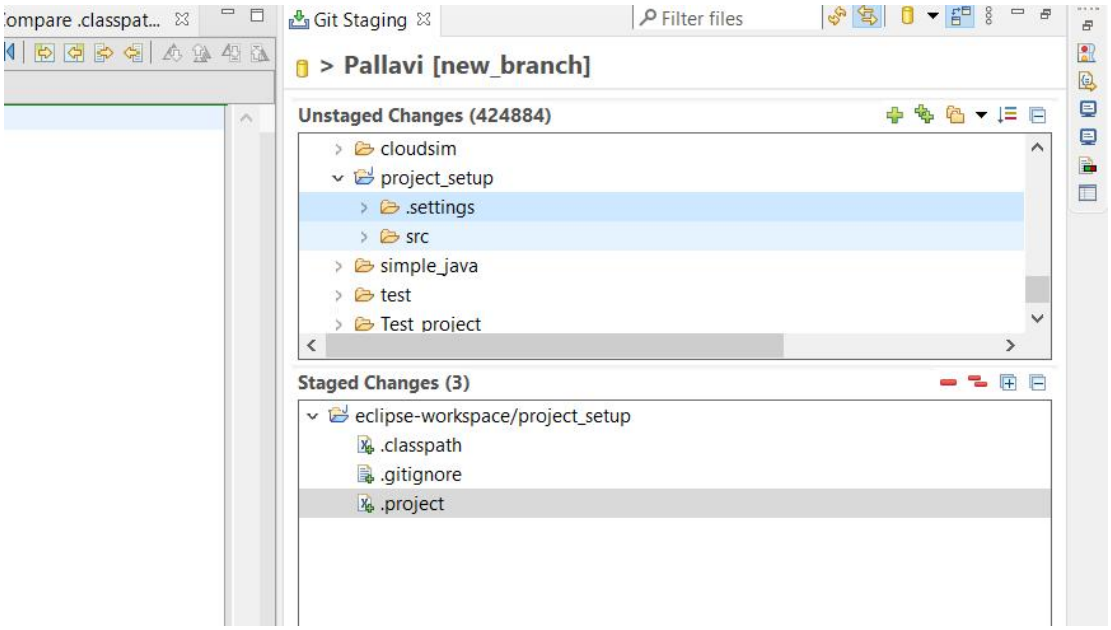
Step 2: It will add the project to the given repository as shown below:



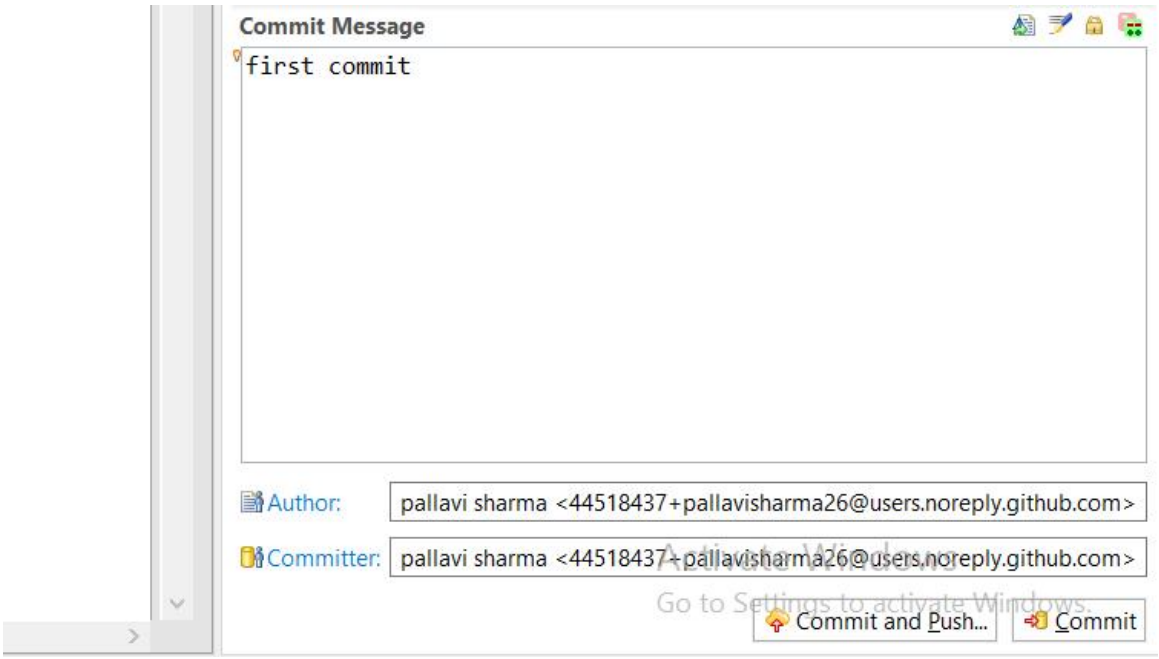
Step 3: Again right-click on the project and go to **Team->commit.**



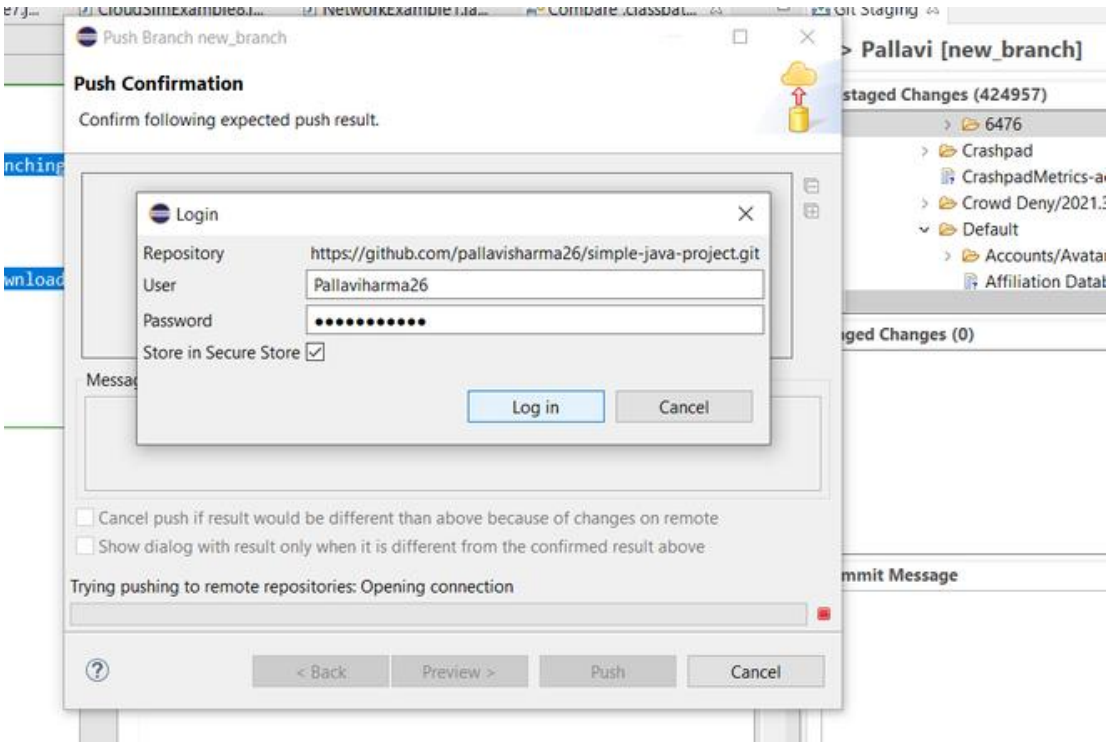
Step 4: Drag and Drop the files you want to commit from **Unchanged Changes to Staged Changes.**



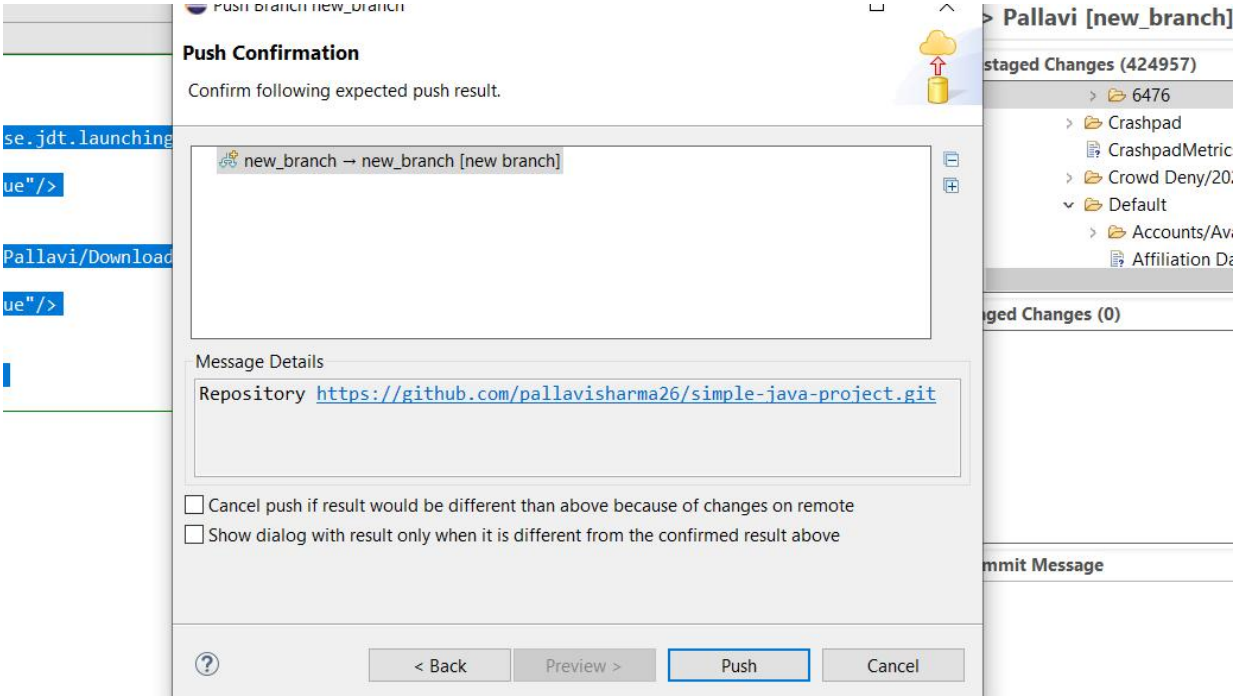
Step 5: Write the commit message in "**Commit Message**" and click "**Commit and Push**".



Step 6: Fill in your UserID and password of GitHub and click "**Log in**".



Step 7: Push to the new-branch of GitHub Repository and click "**Push**".



The new branch is created on GitHub and is required to be merged by creating a pull request.

"1. gitignore file

gitignore file is a text file that tells Git which files or folders to ignore in a project. A local . gitignore file is usually placed in the root directory of a

project. You can also create a global . gitignore file and any entries in that file will be ignored in all of your Git repositories.

2. readme.md file"

3. README.md files are intended to provide orientation for engineers browsing your code, especially first-time users. The README.md is likely the first file a reader encounters when they browse a directory that contains your code. In this way, it acts as a landing page for the directory.