# Demo #03: Git and GitHub Collaboration

Link to Demo #3 Hand-in Template

Link to Git Cheat Sheet (for reference)

## Learning objectives

Last week, you learnt how to create a local repo, create an empty remote repo, and push your local repo into the remote repo (Method 1 below). This week, we will try the other methods. We will also try Visual Studio Code. BTW, whenever you see "Elmo", ***use your own name*** 😊

## ▼ Summary of some methods to start a repository:

| Method | Details | Note | |
|---|---|---|---|
| 1. Initialize on the local machine | start folder locally, initialize with `git init`, stage/commit files, then push to an "empty" remote | no history | last week! |
| 2. Fork and clone | go to an existing project, then use **"Fork"** to create your copy of it, then `git clone` URL to bring it to your local computer | keep the commit history of the owner | today! |
| 2. Create a new and clone | create a new repo on GitHub, then `git clone URL` to bring it to the local computer | no commit history | today! |
| 4. Clone someone else's repo | `git clone URL` to bring it to the local computer | inherit commit history of the owner | today! |
| 5. Use a template and clone | go to someone's template, then click **"Use this template"** create your copy of it, then `git clone URL` to bring it to your local computer | no commit history of the owner | in lab! |

# Part 1: Fork and clone (Screen Capture #1)

https://www.attosol.com/top-20-projects-on-github/

Let's pick some famous open-source projects to "fork" together.

Now it's yours!

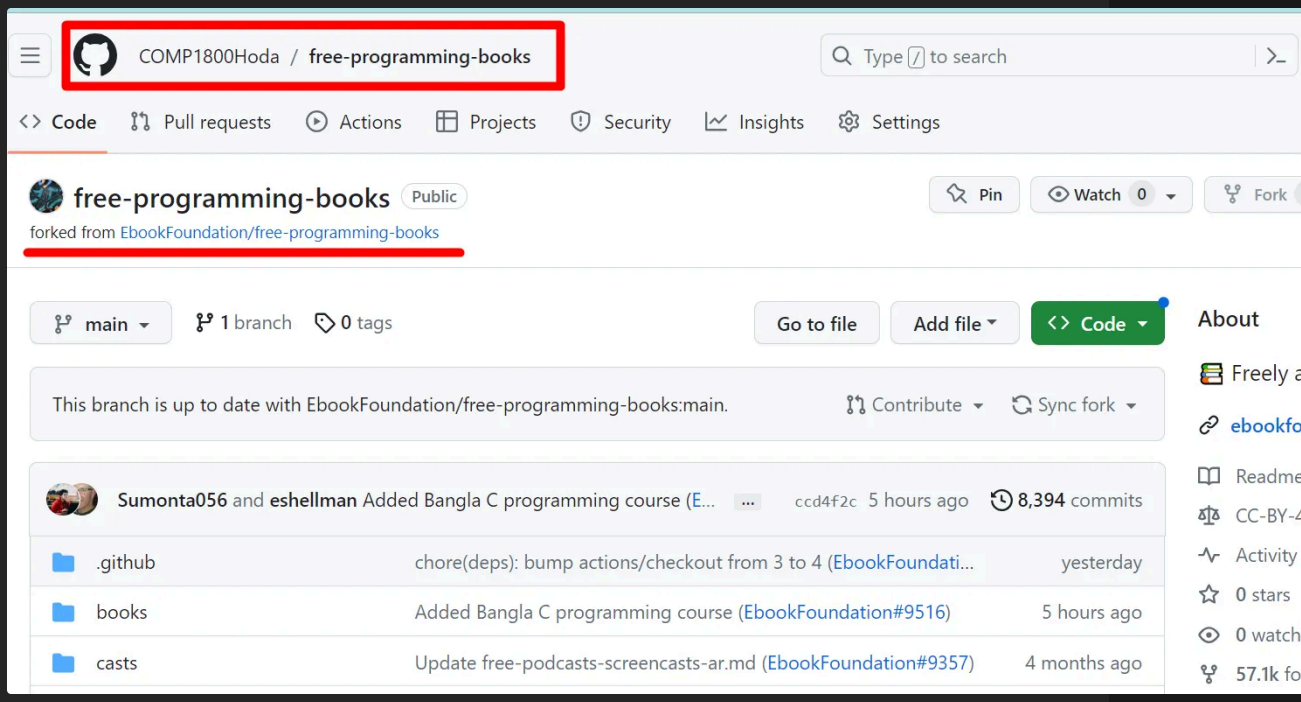
You are free to clone, create branches, and add your own work.

When done, you can issue a "Pull request" to ask the owner to pull your changes into the original repo!

We won't do it today.

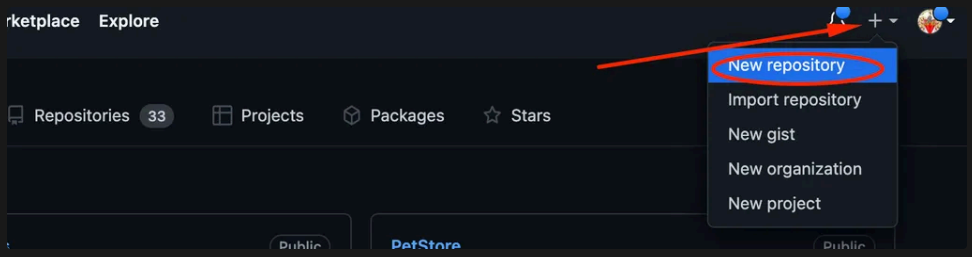
### Time to get Screen Capture #1

To prove that you have done everything correctly, let's see YOUR GitHub URL of the forked project!

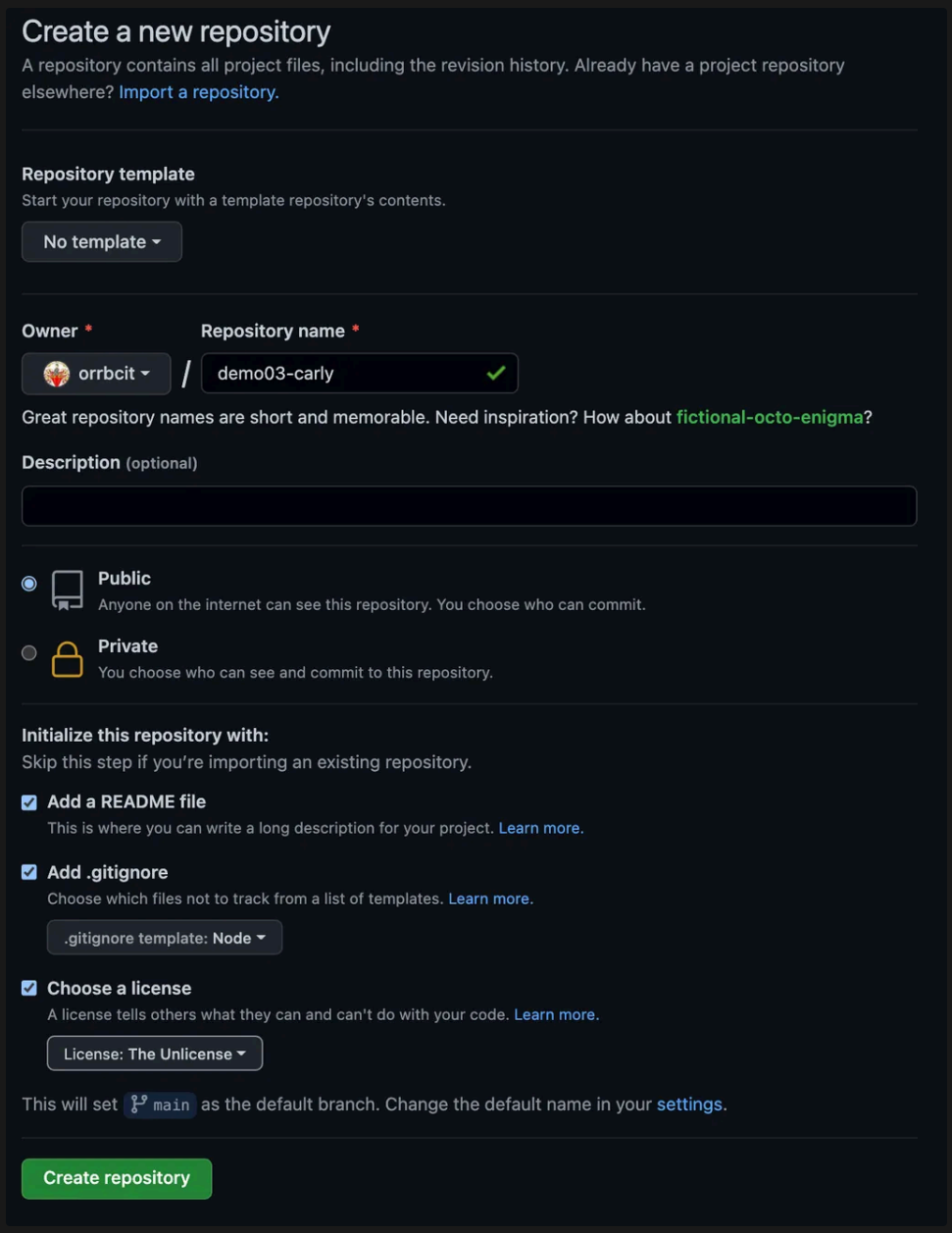


## Part 2: Create a new non-empty repo on GitHub (Screen Capture #2)

1. Go to your gitHub, and click on the “+” (top right corner), to Create a new repo.

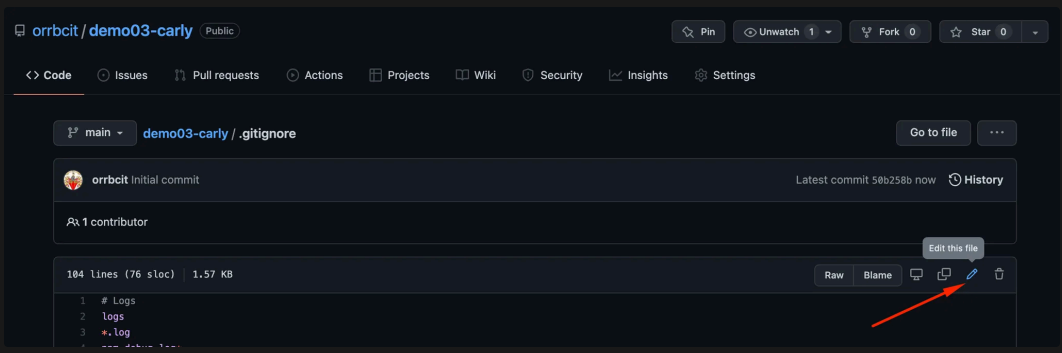


2. Let's make a (non-empty) repo:
    - use name "`demo03-yourname`"
    - public (for comp1800 learning purposes)
    - add a `README` file
    - add `.gitignore` file (Node template)
    - choose "`The Unlicense`" just for fun (not needed for 1800 project)



3. Edit the `.gitignore` file in GitHub.

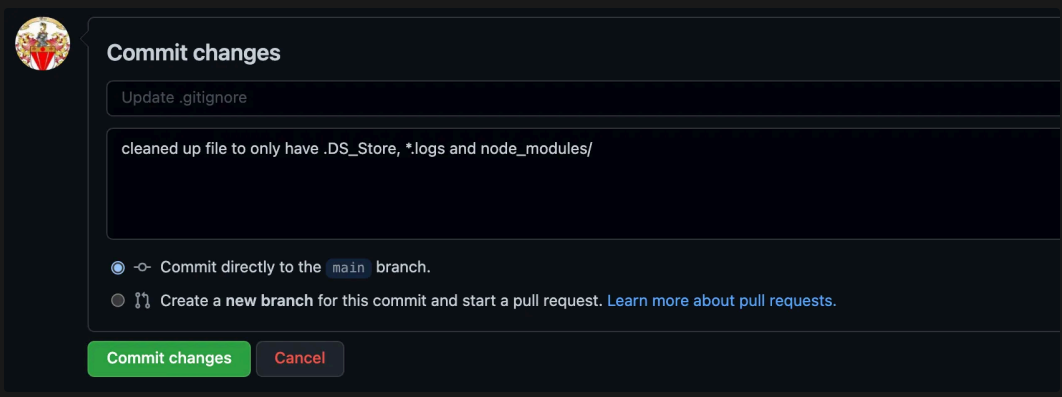
   Note: GitHub is not an IDE. But, minor edits are allowed. Saving changes means doing a "commit".




   Delete everything in the file, since we don't need them in our project. The only files that affect us in comp1800 might be:

```
.DS_Store *.log node_modules/ .vscode/
```

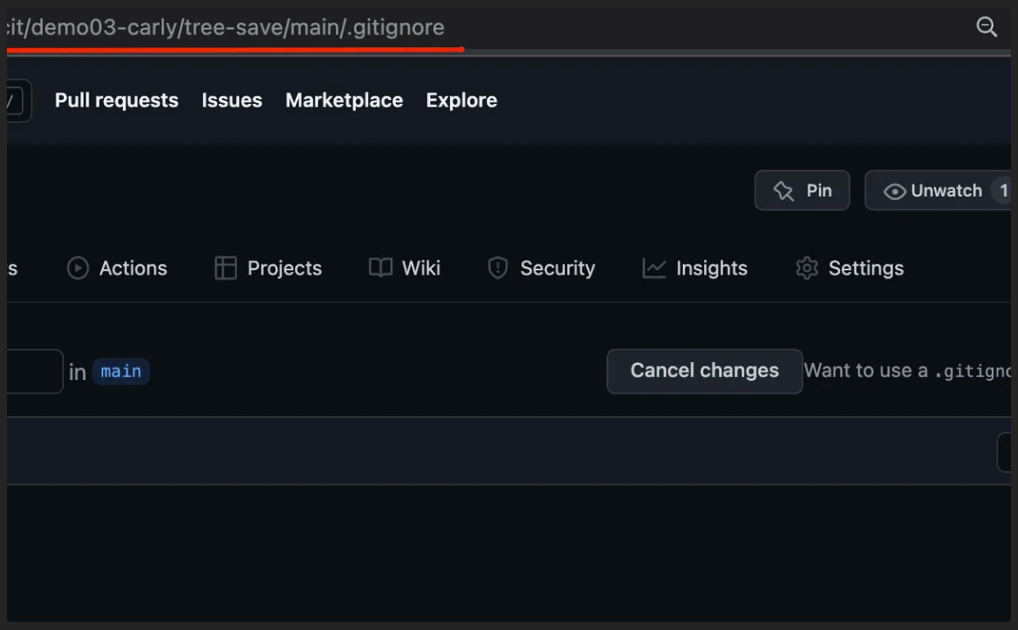
   After editing, then "save" the file, we actually perform a "`Commit`". Add a comment, and click "Commit changes".




   💡 Optional: Edit the `README.md` file to provide a title and author, and try doing a small edit in GitHub. The file extension "`.md`" means GitHub Markdown Language file. It is easy to learn. To save, you must "commit" this change.

### Time to get Screen Capture #2

To prove that you have done everything correctly, let's see your GitHub URL, and your `.gitignore` file contents.



## Part 3: Clone someone's repo (Screen Capture #3)

1. Let's go to your computer and create a working location.

   Let's clone SOMEONE'S project.

   Ie, Today, please clone your instructor's project. **THE URL WILL BE GIVEN TO YOU DURING DEMO TIME.**

   After cloning, " `cd` " (change directory) into the repo. Type " `dir` " (or ls) to look around.

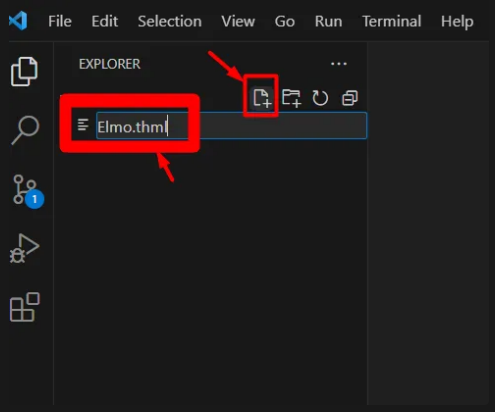
   ```
   cd Documents/comp1800 mkdir demo03 cd demo03 git clone URL (URL to be cloned will be given to you during Demo) dir cd repo-name
   dir
   ```

2. Now, open this project using a code editor, such as VSCode.

   I will use VSCode in this folder and launch it by typing " `code .` " at the command prompt.

   You can also launch VSCode first, then open the files in the repo folder, using the VSCode File Menu.

3. Let's code!




Create an HTML file named after you, and put a simple `<h1>` message there. Customize with your name.

Eg. `elmo.html, hesam.html, carly.html`

```
<html> <body> <h1>This is Elmo's page!</h1> </body> </html>
```

Create an `index.html` with the following code. Let's add our first interaction element! Customize with your name.

```
<html> <body> <h1>This is the demo03 landing page.</h1> <button type="button" onclick="window.location.href='elmo.html'"> Go to Elmo's Page!</button> </body> </html>
```

That's it! Select the index HTML file in VSCode, right-click and choose "Open with Live Server" to render it. Or, you can simply open `index.html` from the file folder, and double-click.

Your web page shows up! Click on the "Go to Elmo's Page" button.

Does everything look good?

Now that you are finished your coding. It's time to stage/commit. In VSCode, open " `Terminal → New Terminal` " from the menu. (You can also stage/commit from the command-line window, ie. the place where you first cloned.)

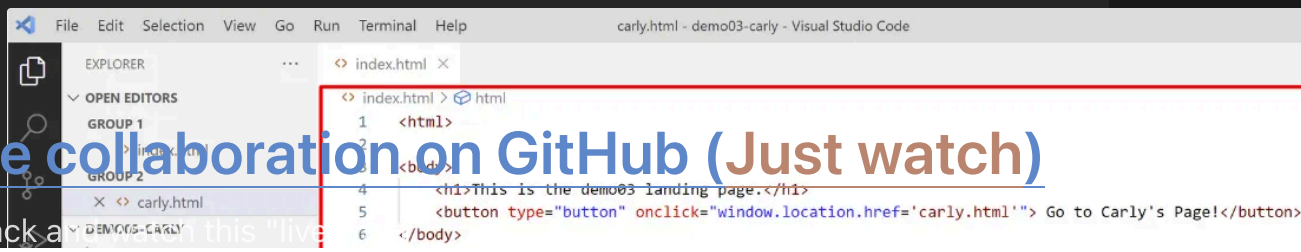
```
git add . git commit -m "adding index.html and yourname.html" git status
```

💡 **Time to get Screen Capture #3**

To prove that you have done everything correctly, let's see your VS Code window with (at least) 3 items: `index.html`, `yourname.html,` and a terminal window showing clean "`git status`". Your project name should reflect the project that was cloned.

**Hint: Go to View, Editor Layout, and split up/down to show two files like so.**

Example image:




## Live collaboration on GitHub (Just watch)

Sit back and watch this "live