Practical 1. Git

Github:-

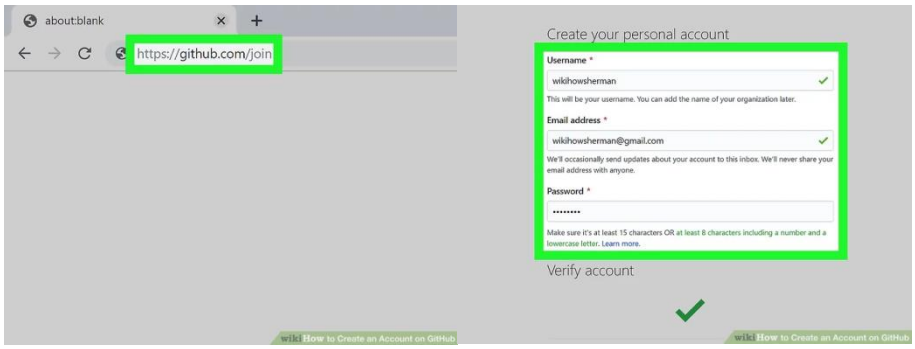
Github is a code hosting platform for version control and collaboration. It allows the user and others to work together on projects from anywhere.

[1] To create Github account

a] https://github.com/join , can use any web browser on your computer, phone or tablet to join. Free Github account gives the user unlimited access to public and private software repositories and the ability to collaborate with up to 3 users.

b] Enter your personal details

User name, email id, password (15 characters in length or at least 8 characters with at least one number and lower case letter.)

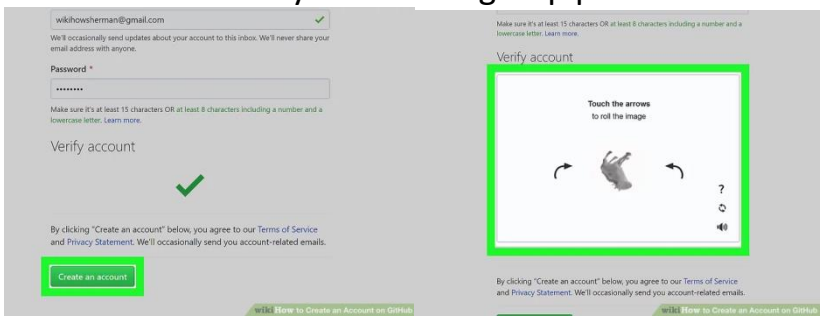


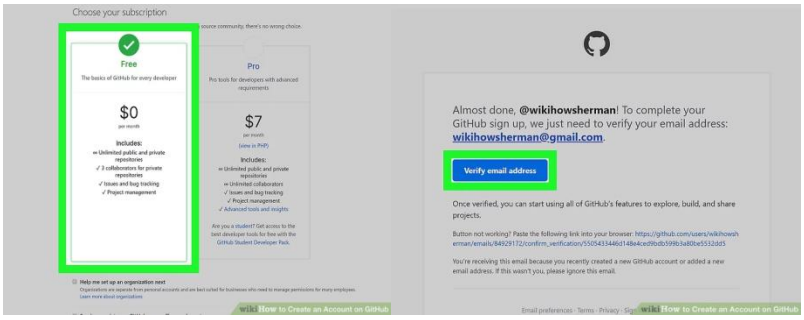
c] Click create an account button,

Complete the CAPTCHA puzzle,

Click the button for the desired plan (for lab experiments we will use the free plan),

Click verify email in the message received from Github. This confirms your email address and returns you to the sign-up process.



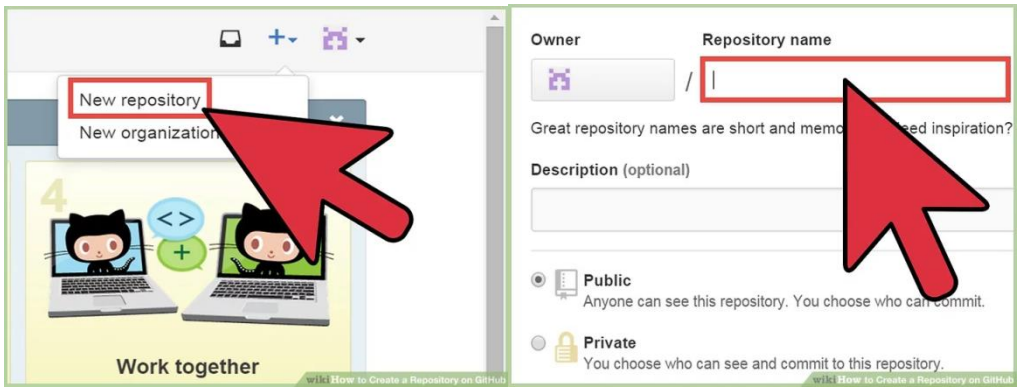


[2] Create a Repository

A repository is usually used to organize a single project. Repository contains folders, files, images, videos, spreadsheets and datasets. It contains requirements of a project.

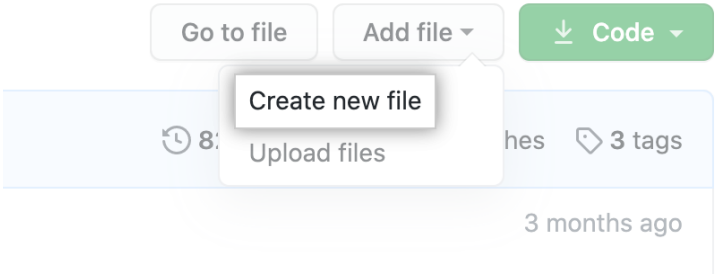
Method to create a Repository

In the upper right corner of the Github account, next to the identicon, click + and select new repository.
Name the repository (with your name and roll number.)
Select initialize the repository with README
Select 'Public' option to create a free public repository
Click 'create repository' button to create your repository.



[3] Create New file and upload file

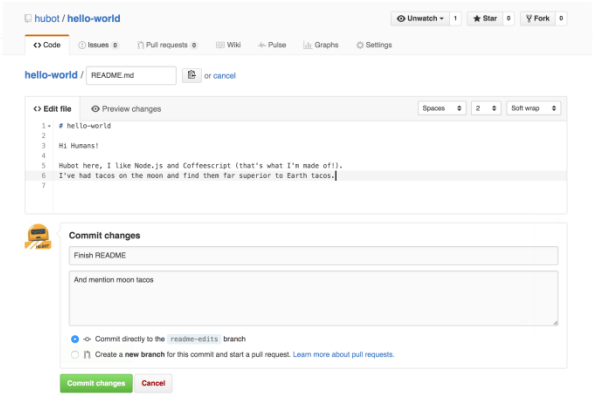
On GitHub, navigate to the main page of the repository. In your repository, browse to the folder where you want to create a file. Above the file list, click Create new file. In the file name field, type the name and extension for the file. On the Edit new file tab, add content to the file.



[4] Make and Commit changes

On GitHub, saved changes are called commits. Each commit has an associated commit message, which is a description explaining why a particular change was made. Commit messages capture the history of your changes, so other contributors can understand what you've done and why.

Click the `README.md` file.
Click the pencil icon in the upper right corner of the file view to edit.
In the editor, write a bit about yourself.
Write a commit message that describes your changes.
Click **Commit changes** button.

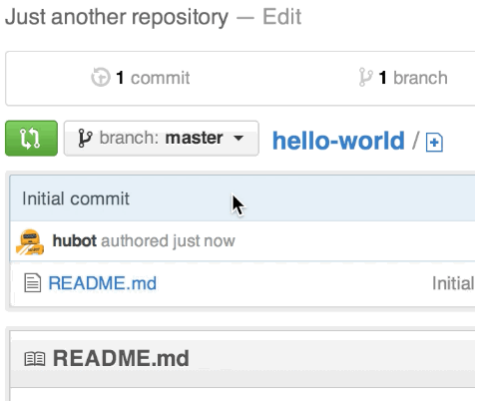


[4] Create a Branch

Use a branch to isolate development work without affecting other branches in the repository. Each repository has one default branch, and can have multiple other branches.

When you create a repository on GitHub with content, the repository is initialized with a single branch, called the default branch. The default branch is

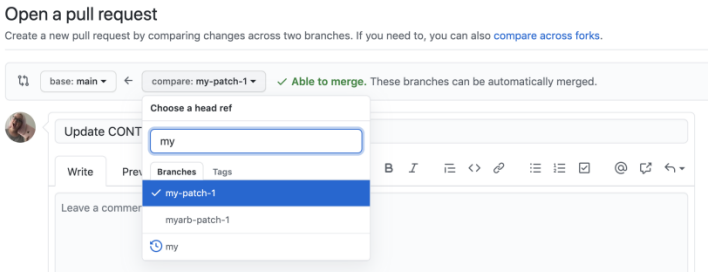
the branch that GitHub displays when anyone visits your repository. The default branch is also the initial branch and is the base branch in the repository.
By default, the default branch name is master, but you can set the name to anything that makes sense for your workflow.



Now you have two branches, main branch and the new branch. They look exactly the same. Next we'll add our changes to the new branch.

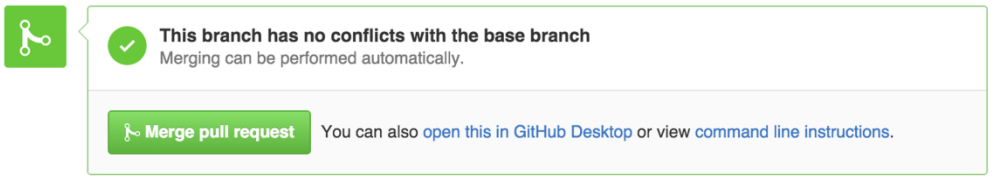
[5] Pull Request

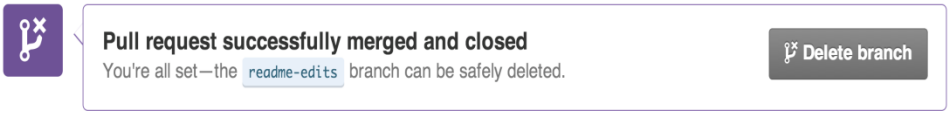
Pull Requests are the heart of collaboration on GitHub. When you open a pull request, you're proposing your changes and requesting that someone review and pull in your contribution and merge them into their branch. Pull requests show diffs, or differences, of the content from both branches. As soon as you make a commit, you can open a pull request.



[6] Merge

To bring your changes together we merge the branch to the main branch.





[7] Creating a pull request from a fork

Create a pull request to propose and collaborate on changes to a repository. These changes are proposed in a branch, which ensures that the default branch only contains finished and approved work.

[8] Delete a repository

Find the repository you want to delete, and click on the title. Then, locate the toolbar at the top and click the Settings tab. Scroll all the way to the bottom of the page until you see the Danger Zone section. Here, click Delete this repository.

[9] Clone

Git clone is primarily used to point to an existing repo and make a clone or copy of that repo at in a new directory, at another location. The original repository can be located on the local file system or on remote machine accessible supported protocols. The git clone command copies an existing Git repository.

[10] Insights and Network