



# **GITHUB AND CPANEL GIT REPOSITORIES USER GUIDE**

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## 1.0 Introduction

### 1.1 Git and GitHub Introduction

Git is a popular version control system. It was created by Linus Torvalds in 2005, and has been maintained by Junio Hamano since then. It enables multiple users to work simultaneously on a single project. It comes with features below:

- ✓ Tracking code changes
- ✓ Tracking who made changes
- ✓ Coding collaboration

Please visit <https://www.w3schools.com/git> for more details on Git and GitHub.

#### 1.1.1 What does Git do?

- ✓ Manage projects with Repositories
- ✓ Clone a project to work on a local copy
- ✓ Control and track changes with Staging and Committing
- ✓ Branch and Merge to allow for work on different parts and versions of a project
- ✓ Pull the latest version of the project to a local copy
- ✓ Push local updates to the main project

#### 1.1.2 Working with Git

- ✓ Initialize Git on a folder, making it a Repository
- ✓ Git now creates a hidden folder to keep track of changes in that folder
- ✓ When a file is changed, added or deleted, it is considered modified
- ✓ You select the modified files you want to Stage
- ✓ The Staged files are Committed, which prompts Git to store a permanent snapshot of the files
- ✓ Git allows you to see the full history of every commit.
- ✓ You can revert back to any previous commit.
- ✓ Git does not store a separate copy of every file in every commit, but keeps track of changes made in each commit!

#### 1.1.3 Git Platform

- ✓ GitHub - <https://github.com/>
- ✓ Bitbucket - <https://bitbucket.org/>
- ✓ GitLab - <https://gitlab.com/>



#### 1.1.4 Why Git?

- ✓ Over 70% of developers use Git!
- ✓ Developers can work together from anywhere in the world.
- ✓ Developers can see the full history of the project.
- ✓ Developers can revert to earlier versions of a project.

#### 1.1.5 What is GitHub?

- ✓ Git is not the same as GitHub.
- ✓ GitHub makes tools that use Git.
- ✓ GitHub is the largest host of source code in the world, and has been owned by Microsoft since 2018.

### 1.2 Requirement

Before using GitHub, Git –fast-version-control need to be installed on your device. Git can be installed through <https://git-scm.com/downloads>. They come with Git GUI and Git Bash terminal.

### 1.3 GitHub Access

#### 1.3.1 Through links

Sign up for GitHub account (if you are first time user) and login into your GitHub account through the link provided below:

<https://github.com>

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## 2.0 New Repositories

### 2.1 Create Repositories

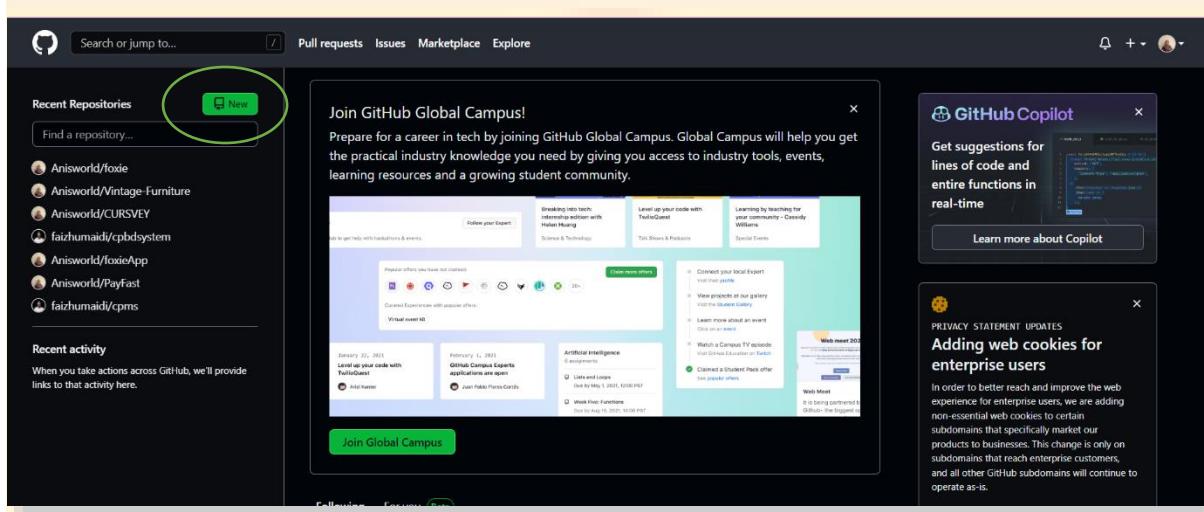


Figure 2.1 GitHub Home Page

### Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

---

**Owner \***      **Repository name \***

Anisworld /

Great repository names are short and memorable. Need inspiration? How about [cuddly-octo-invention](#)?

**Description (optional)**

**Public**  
Anyone on the internet can see this repository. You choose who can commit.

**Private**  
You choose who can see and commit to this repository.

---

**Initialize this repository with:**  
Skip this step if you're importing an existing repository.

**Add a README file**  
This is where you can write a long description for your project. [Learn more](#).

Figure 2.2 Form Create Repository

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Add .gitignore

Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: **None** ▾

Choose a license

A license tells others what they can and can't do with your code. [Learn more.](#)

License: **None** ▾

ⓘ You are creating a public repository in your personal account.

**Create repository**

Figure 2.3 Form Create Repository (Cont'd)

GitHub home page will be shown as in Figure 2.1. Click 'New' button on left side of screen as marked in the green circle.

Fill the form as shown in the Figure 2.2 and Figure 2.3. Enter your desired repository name (system shortform is recommended). Choose private to give access only to certain people or choose public to give access to all people on the internet. However, private repositories are recommended since IT department are developing in-house application only. Click Create Repositories after complete.

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## 2.2 Create README.md file

Open file project and add new text document. Rename the file “README” and change the file extension to “.md”. Write a simple description in the file. That description will be displayed in GitHub repositories. Figure below shows the example of README.md file.

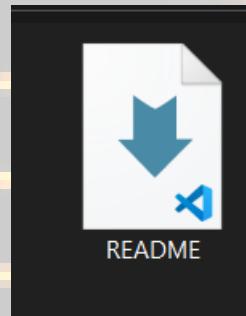


Figure 2.4 README.md file

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### 2.3 Add system/Project into GitHub

Go into project directory in localhost (C:AppServ/www/your\_project), right click and click git bash here as shows in the Figure 2.5. Git Bash Terminal will appear as shown in the Figure 2.6.

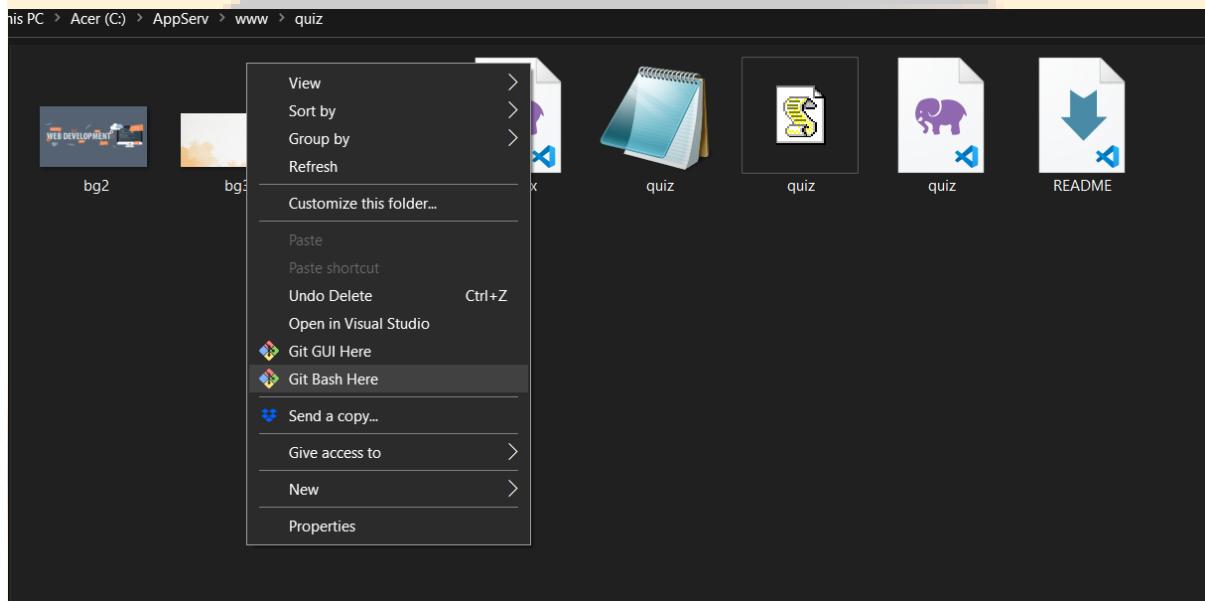


Figure 2.5 Project directory

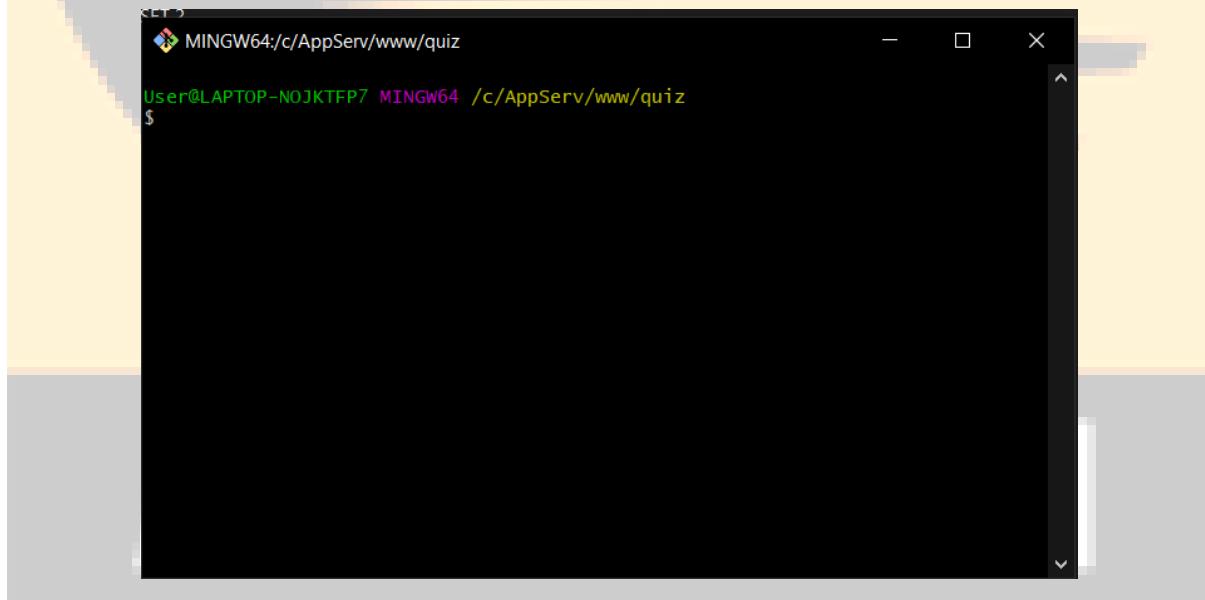


Figure 2.6 Git bash terminal



### 2.3.1 Initialize Git

Insert command below in the git bash terminal as shown in the Figure 2.7.

A screenshot of a terminal window titled "MINGW64;c/AppServ/www/quiz". The window shows the command "git init" being run and its output: "Initialized empty Git repository in C:/AppServ/www/quiz/.git/". The terminal is located on a yellow background with a large, semi-transparent watermark of the word "Aims-Global" repeated vertically.

```
git init
MINGW64;c/AppServ/www/quiz
User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz
$ git init
Initialized empty Git repository in C:/AppServ/www/quiz/.git/
User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (master)
$
```

Figure 2.7 Git init

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#### 2.3.2 Git Remote

Copy https link from your GitHub Repository as shown in Figure 2.8. Insert command below in git bash terminal as shown in Figure 2.9.

```
git remote add origin https://github.com/your_username/your_repo.git
```

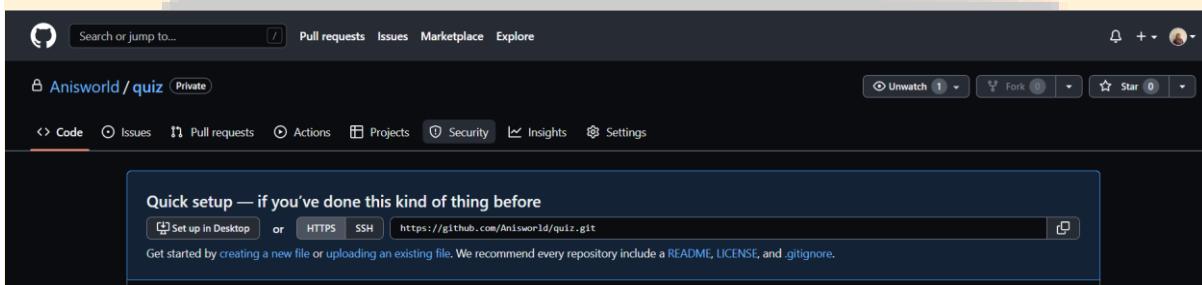
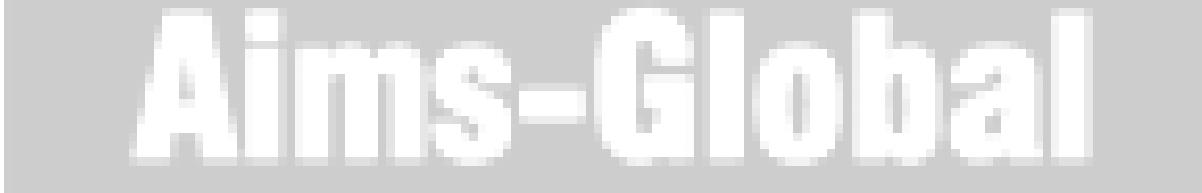


Figure 2.8 GitHub Repository https link

```
User@LAPTOP-NOJKTTP7 MINGW64 /c/AppServ/www/quiz (main)
$ git remote add origin https://github.com/Anisworld/QUIZ.git~

User@LAPTOP-NOJKTTP7 MINGW64 /c/AppServ/www/quiz (main)
$
```

Figure 2.9 Add remote repository





#### 2.3.3 Git Add

There are two ways to add files into staging which are add all edited files and add single files one by one. Refer step below to add files into staging.

- All Files

Insert command below in Git Bash Terminal to add all files.

```
git add .
```

- Single Files

Insert command below in Git Bash Terminal to add single files.

Let's choose dashboard.php as example.

```
git add dashboard.php
```

```
User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (master)
$ git add .
```

```
User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (master)
$
```

Figure 2.10 Git add

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#### 2.3.4 Git Commit

Insert command below to set commit message for your git push command.

```
git commit -m "Your message here"
```

Example output for this command is shown in Figure 2.11.

```
User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (master)
$ git commit -m "new project"
[master (root-commit) ca32bd5] new project
 8 files changed, 821 insertions(+)
create mode 100644 F1213_F1171_PBT1 DFP50193 WEB-SET 2.docx
create mode 100644 README.md
create mode 100644 bg2.jpg
create mode 100644 bg3.jpg
create mode 100644 index.php
create mode 100644 quiz.css
create mode 100644 quiz.js
create mode 100644 quiz.php

User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (master)
$ |
```

Figure 2.11 Git Commit

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### 2.3.5 Git Push

Enter command below to push all added and committed files into your GitHub repository. Output of this command is shown in Figure 2.12.

```
git push -u origin main
```

```
User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (main)
$ git push -u origin main
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 8 threads
Compressing objects: 100% (9/9), done.
Writing objects: 100% (10/10), 6.25 MiB | 1.24 MiB/s, done.
Total 10 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Anisworld/quiz.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

```
User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (main)
$ |
```

Figure 2.12 Git Push

Now, refresh your GitHub Repository in browser (e.g., Google Chrome) and make sure all files that added just now are showing. See Figure 2.13.

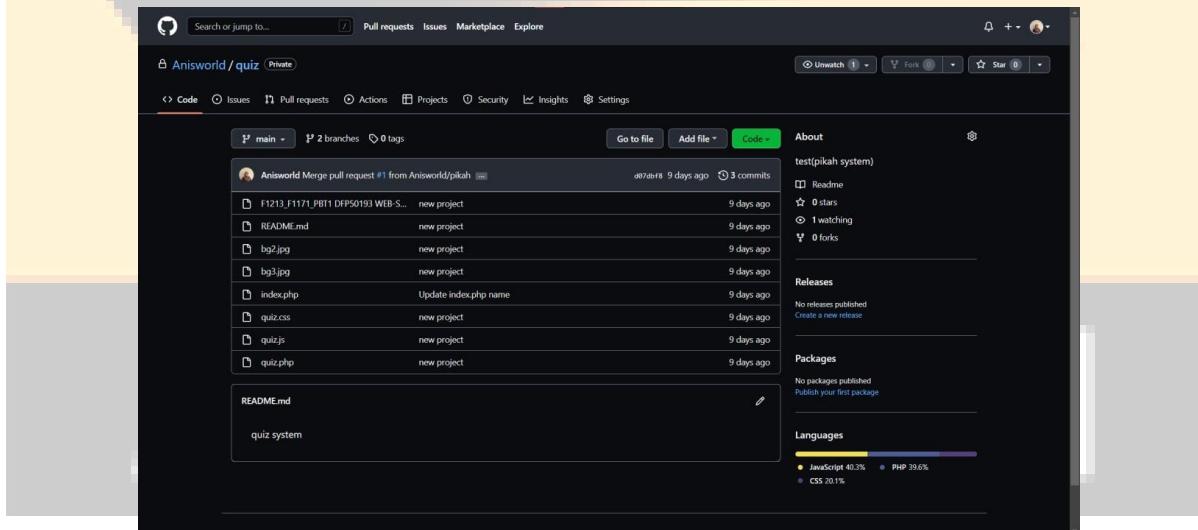


Figure 2.13 GitHub Repository after git push



#### 2.3.6 Git Branch

Insert command below to rename your current working branch to main.

‘main’ is common branch name for master. You also can create or rename another working branch. Please visit Git Documentation for details.

```
git branch -M main
```

Output of the command is shown in Figure 2.14.

```
User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (master)
$ git branch -M main

User@LAPTOP-NOJKTFP7 MINGW64 /c/AppServ/www/quiz (main)
$
```

Figure 2.14 Git Branch

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### 3.0 Collaborator

Private repository can be worked by individual or in a team. If the repository or project are worked in a team, collaborators need to be added into the repository.

#### 3.1 Add Collaborator

Go to setting in the GitHub Repository, choose ‘Collaborators’ in left side menu, and click ‘Add people’ button as shown in the Figure 3.1. A popup will appear and collaborators can be added using the popup. Simply type username or email of their GitHub account to add them as collaborators.

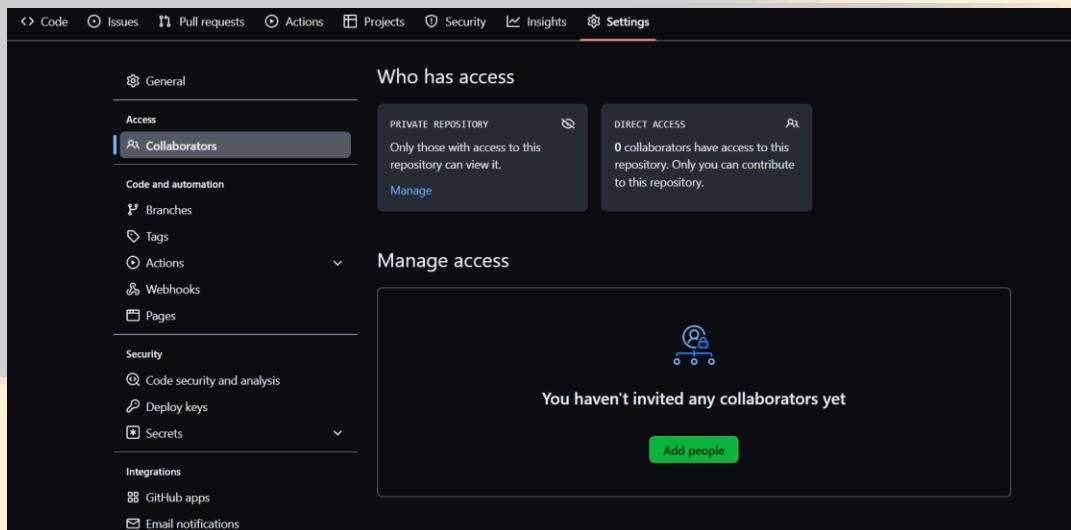


Figure 3.1 Collaborators

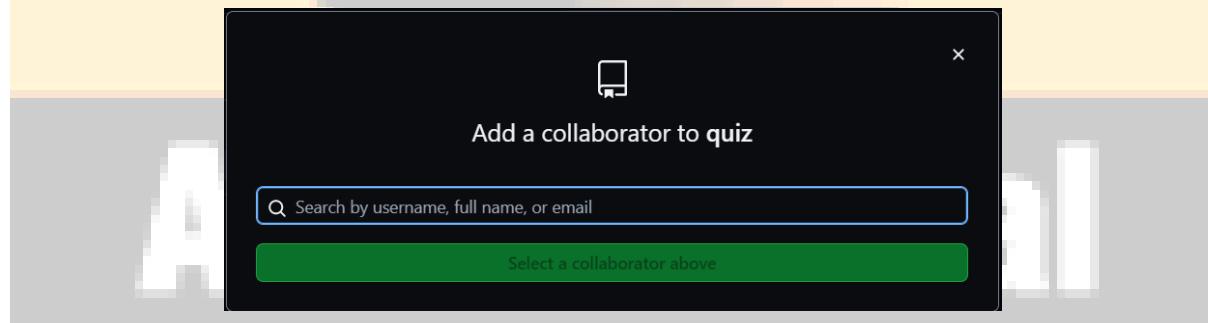


Figure 3.2 Popup Add a Collaborator

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After adding collaborators, they need to accept collaborators invitation in 7 days. Please inform your collaborators to accept invitation in <https://github.com>. Simply click profile picture in top-right screen to view menu, and choose ‘Your Repositories’ to check for any invitation. Click ‘Accept’ button and confirm access by entering your GitHub account password.

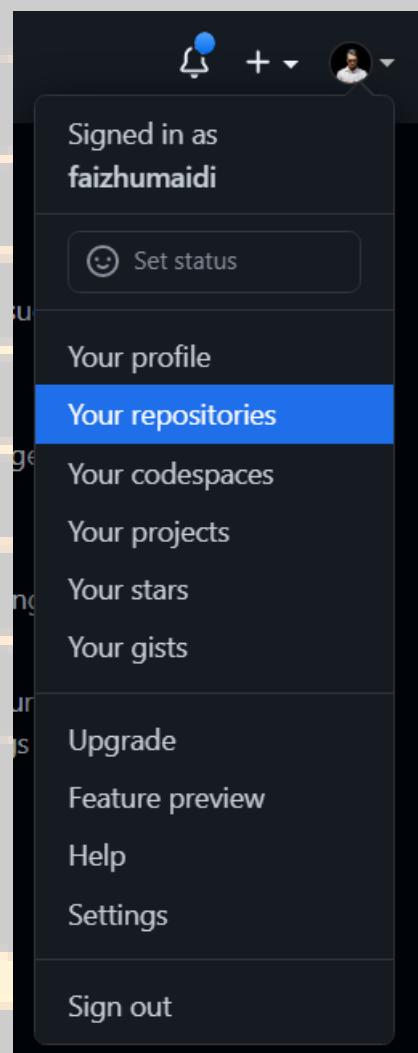


Figure 3.3 Top-right Profile Menu



## 4.0 Clone Repositories and Pull Updates

Clone is a full copy of a repository, including all logging and versions of files.

People can clone any repository on GitHub which means download a copy of the project along with git features. Public repository can be clone by anyone (including for those who do not have GitHub account) using https link. While public repository can only be cloned by people who have access to the repository (GitHub account is required).

Using git clone enables developers to work on project development in their local device. They can pull latest updates or push their modified/added files into repository on GitHub.

### 4.1 Git Clone

Insert command below to clone repository from GitHub. Remember that collaborator access is required for private repository. Replace <github\_repo\_https\_link> with your desired repository link where you can get it on <https://github.com>.

```
git clone <github_repo_https_link>
```

```
[user@localhost] $ git clone https://github.com/w3schools-test/w3schools-test.github.io.git
Cloning into 'w3schools-test.github.io'...
remote: Enumerating objects: 33, done.
remote: Counting objects: 100% (33/33), done.
remote: Compressing objects: 100% (15/15), done.
remote: Total 33 (delta 18), reused 33 (delta 18), pack-reused 0
Receiving objects: 100% (33/33), 94.79 KiB | 3.16 MiB/s, done.
Resolving deltas: 100% (18/18), done.
```

Figure 4.1 Example output of git clone

Figure 4.1 shows an example output of git clone command. Then you can open the project using your preferred Integrated Development Environment (IDE) such as



Visual Studio Code and JetBrains PhpStorm. These IDE provide built-in Git GUI for developers to making pull, push, commit, view modified files, and many more.

### 4.2 Git Pull

Git pull enables developer to get the most recent changes remote repository to local copy (localhost). Pull is a combination of 2 different commands which are fetch and merge. Visit [w3schools.com/git/git\\_pull\\_from\\_remote](https://www.w3schools.com/git/git_pull_from_remote) for details.

Insert command below to get most recent changes from GitHub. Example output is shown in Figure 4.2.

```
git pull origin
```

```
[user@localhost] $ git pull origin
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 794 bytes | 1024 bytes/s, done.
From https://github.com/w3schools-test/hello-world
  a7cdd4b..ab6b4ed  master      -> origin/master
Updating a7cdd4b..ab6b4ed
Fast-forward
 README.md | 2 ++
 1 file changed, 2 insertions(+)
```

Figure 4.2 Example output of git pull

Instead of using command line, you also can use IDE with built-in Git GUI such as [Visual Studio Code](#) and [JetBrains PhpStorm](#). Visit your preferred IDE official site for documentation.



## 5.0 Branch

In Git, a branch is a new/separate version of the main repository. Branches allow you to work on different parts of a project without impacting the main branch. When the work is complete, a branch can be merged with the main project. You can even switch between branches and work on different projects without them interfering with each other.

If you are working on updates of existing project, you are recommended to updates on separated branch first before merging with main branch so that we can avoid impacting the project that has been hosted.

Git Branch is recommended especially you are working on a project with teams. In other words, you can create branch for each developer in your team to avoid interference between your part and your teammate's part. You can merge the branch with the main in the end of development.

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### 5.1 Create Branch in GitHub

Go to <https://github.com> and click button new branch as shown in the Figure 5.1

Fill branch name and click ‘Create Branch’ as shown in Figure 5.2.

A screenshot of a GitHub repository page. At the top, there's a navigation bar with links like 'Code', 'Issues', 'Pull requests', 'Actions', 'Projects', 'Security', 'Insights', and 'Settings'. Below the navigation bar is a search bar labeled 'Search branches...'. To the right of the search bar are buttons for 'Overview', 'Yours', 'Active', 'Stale', 'All branches', and a green 'New branch' button. Underneath the search bar, there's a section titled 'Default branch' showing a single branch named 'main'. At the bottom of the page, there's a footer with links to 'Terms', 'Privacy', 'Security', 'Status', 'Docs', 'Contact GitHub', 'Pricing', 'API', 'Training', 'Blog', and 'About'. The URL in the address bar is https://github.com/Anisworld/cpbdsystem.

Figure 5.1 Create Branch in GitHub

A screenshot of a 'Create a branch' modal window. It has a dark background with white text. The title is 'Create a branch'. There are two main input fields: 'Branch name' containing 'pikah' and 'Branch source' set to 'main'. At the bottom left is a 'Share feedback' link, and at the bottom right is a green 'Create branch' button.

Figure 5.2 Create branch popup form

View branch list on GitHub or using terminal by inserting command below:

```
git branch
```

```
USER@LAPTOP-NJFNNLTF MINGW64 /c/AppServ/www/cpbdsystem (main)
$ git branch
* main

USER@LAPTOP-NJFNNLTF MINGW64 /c/AppServ/www/cpbdsystem (main)
$ |
```

Figure 5.3 Example output of git branch

### 5.2 Switch Branch

Git checkout command enables developer to switch between working branch.

There are multiple ways to use git checkout especially using IDE with built-in Git GUI.

#### 5.2.1 JetBrains PhpStorm

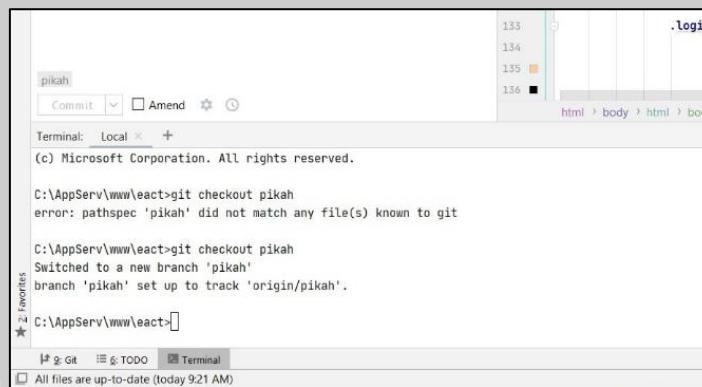
There are two options to git checkout in the PhpStorm. First, by using git checkout command and second is by clicking branch option on the bottom-right screen.

- Terminal

Insert command below and you will change branch immediately.

See Figure 5.4 for example.

```
git checkout your_branch_name
```



The screenshot shows the PhpStorm interface with a terminal window open. The terminal window has a title bar 'pikah' and a status bar 'Terminal: Local'. The main area of the terminal shows the command 'git checkout pikah' being run, followed by the output: 'error: pathspec 'pikah' did not match any file(s) known to git' and 'Switched to a new branch 'pikah''. The background of the interface shows a code editor with some HTML and CSS code.

Figure 5.4 Switch Branch using terminal

- Branch Option Interface

Click branch option on bottom-right screen. Options for branch will appear and choose any branch under 'Local Branches' label that you want to switch. See Figure 5.5 and Figure 5.6.



Figure 5.5 Branch option button in PhpStorm

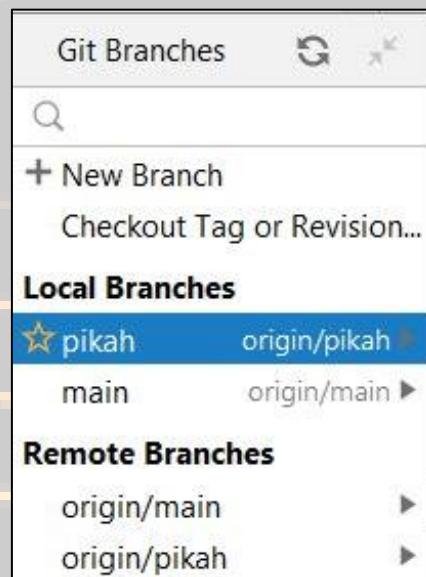


Figure 5.6 Branch options in PhpStorm

### 5.2.2 GitHub Desktop

Open GitHub Desktop and click at the current branch and will appear as shows in figure below, then can click branch want to use as shows in the Figure 5.7.

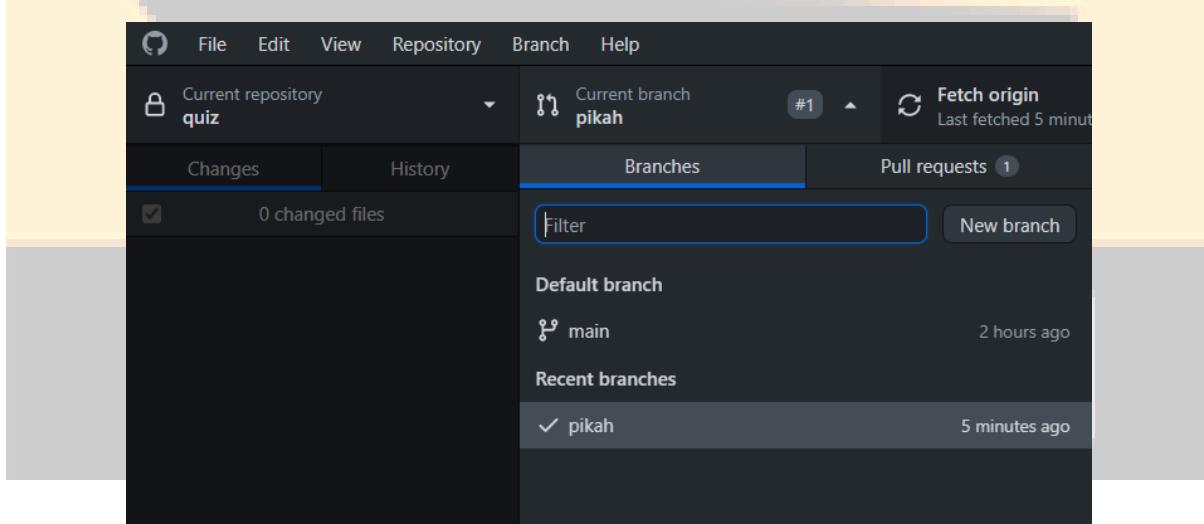


Figure 5.7 Git Checkout in GitHub Desktop

### 5.3 Git Merge

#### 5.3.1 Git Merge for PhpStorm

Git merge also can be done in different ways whether using terminal or using any Git GUI.

- Terminal

Let's say you are currently in main branch. Insert command below to merge defined branch to your current branch.

```
git merge pikah
```

All changes from branch 'pikah' will be merge into branch main after inserting the command.

- Built-in GUI

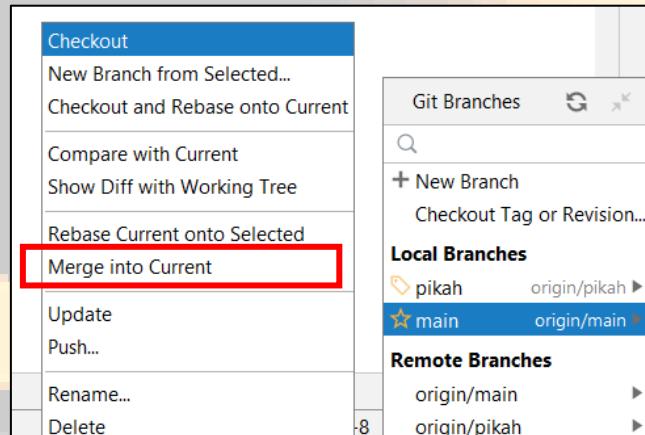


Figure 5.8 Git Merge for PhpStorm

Click branch options, and find 'Merge into Current' options from desired branch to merge.



### 5.3.2 Git Merge for GitHub Desktop

Click ‘Current Branch’ tab and click ‘Choose a branch to merge into currentbranch\_name’ as shown in Figure 5.9. After that, click your desired branch to merge into the current branch, then click ‘Merge Branch’ into Branch as shown in the Figure 5.10. Lastly, click ‘Push Origin’ to push your local changes to the remote repository as shown in Figure 5.11.

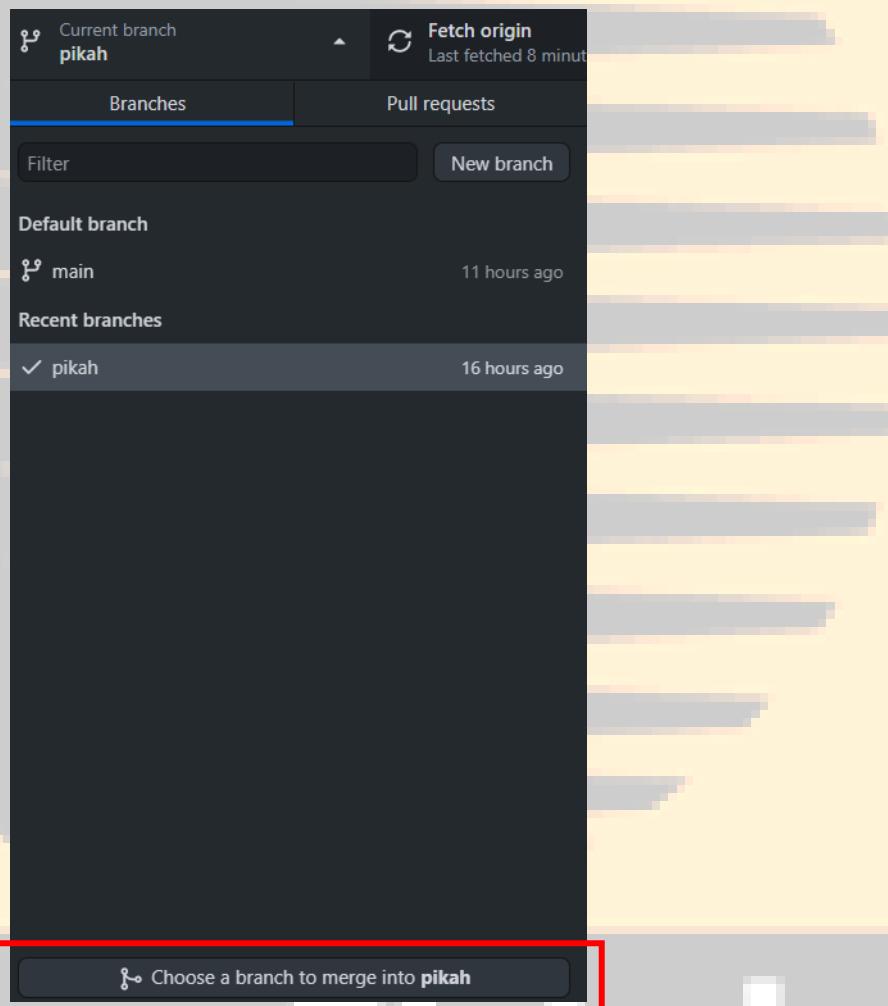


Figure 5.9 Git Merge for GitHub Desktop

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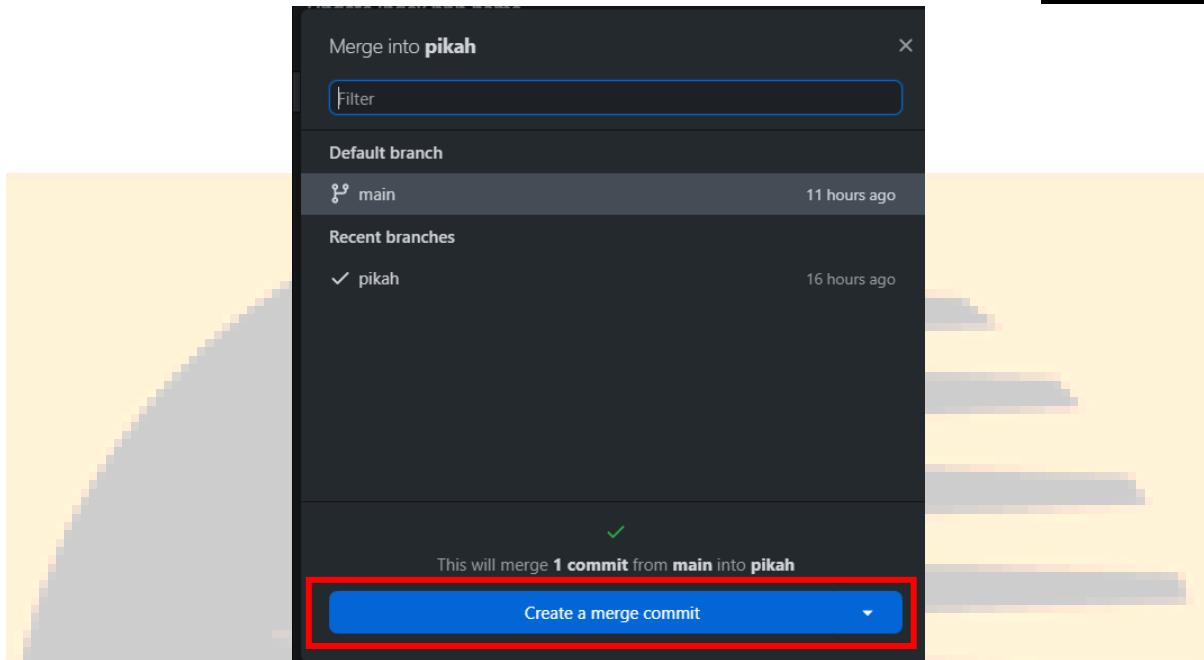


Figure 5.10 Popup Merge in GitHub Desktop

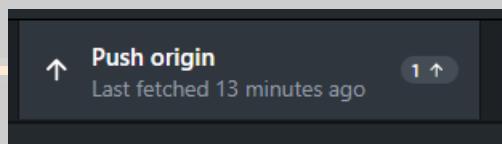
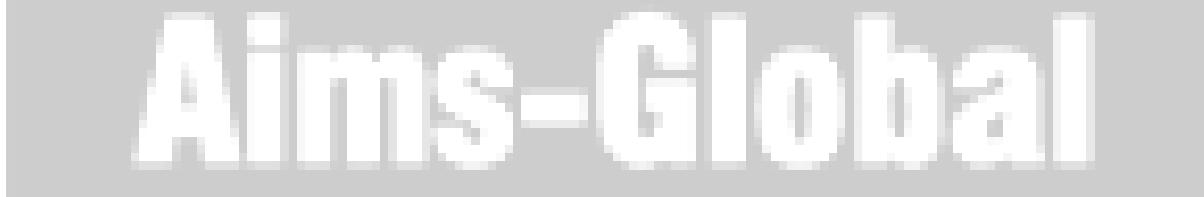


Figure 5.11 Push Origin after Git Merge



### 5.4 Delete branch

Delete branch also can be done in terminal or git GUI of any IDE.

#### 5.4.1 Delete Branch for PhpStorm

- Terminal

Insert command below to delete branch where branch\_name is your branch name that will be deleted.

```
git branch -d branch_name
```

- Built-in GUI

Use branch option as shown in Figure 5.12 to delete branch.

However, please avoid delete main branch as it is the main source for the project.

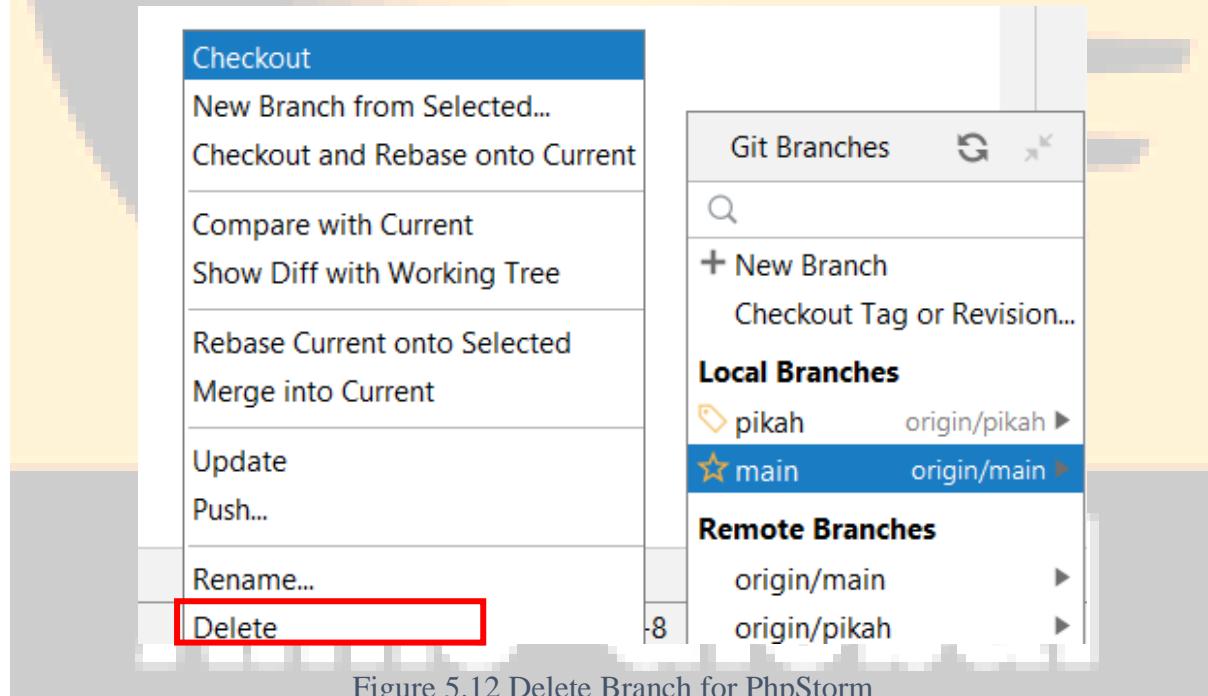


Figure 5.12 Delete Branch for PhpStorm

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#### 5.4.2 Delete Branch for GitHub Desktop

Switch to branch that will be deleted. Go to ‘Branch’ at the top screen, and click

delete in the dropdown option as shown in the Figure 5.13.

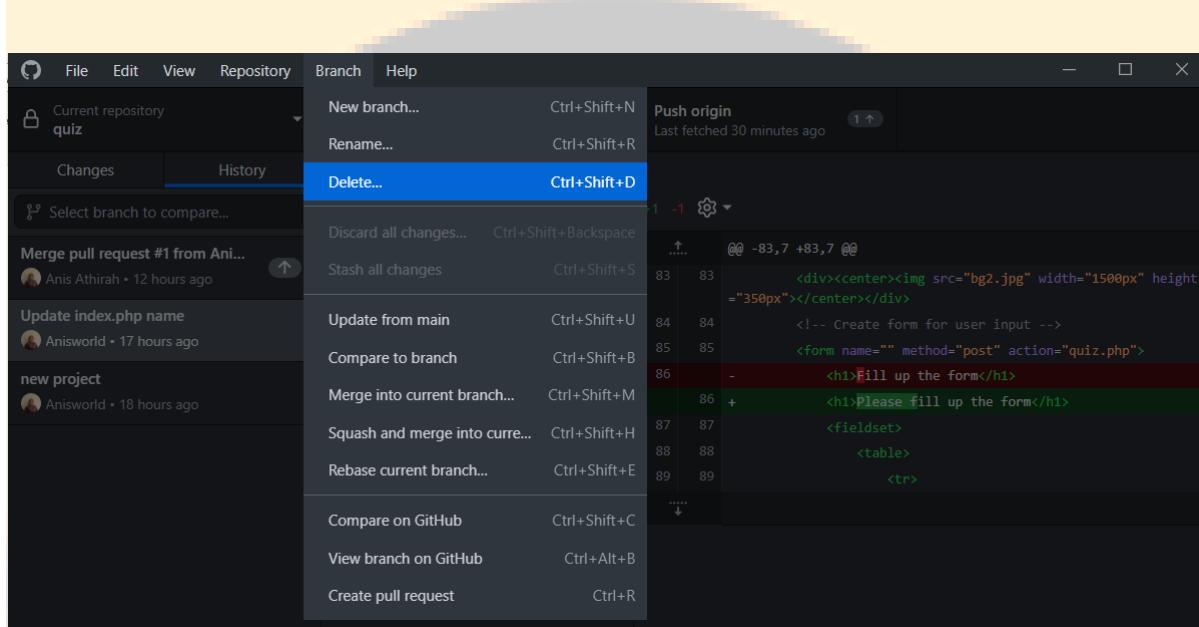
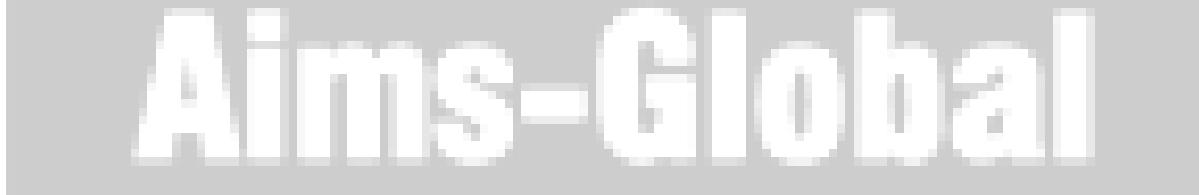


Figure 5.13 Delete Branch for GitHub Desktop





## 6.0 Connecting cPanel with GitHub

### 6.1 cPanel Git™ Version Control Introduction

The Git™ Version Control feature allows you to easily host Git repositories on your cPanel account. You can use Git to maintain any set of files (web-app files).

SSH keys are required to access private repositories from GitHub. However, cPanel Git Version Control system only offering one SSH key to access GitHub private repository. In other words, only one GitHub account can be accessed by one cPanel account.

In this case, we recommend using the GitHub account of the Programming Team Leader to connect and gain access from Git Version Control System to GitHub repository. Team Leader GitHub account must have access to all projects (private repositories) which are from another GitHub account. If and only if the project will be deployed in the cPanel Git Version Control System. See Figure 6.1.

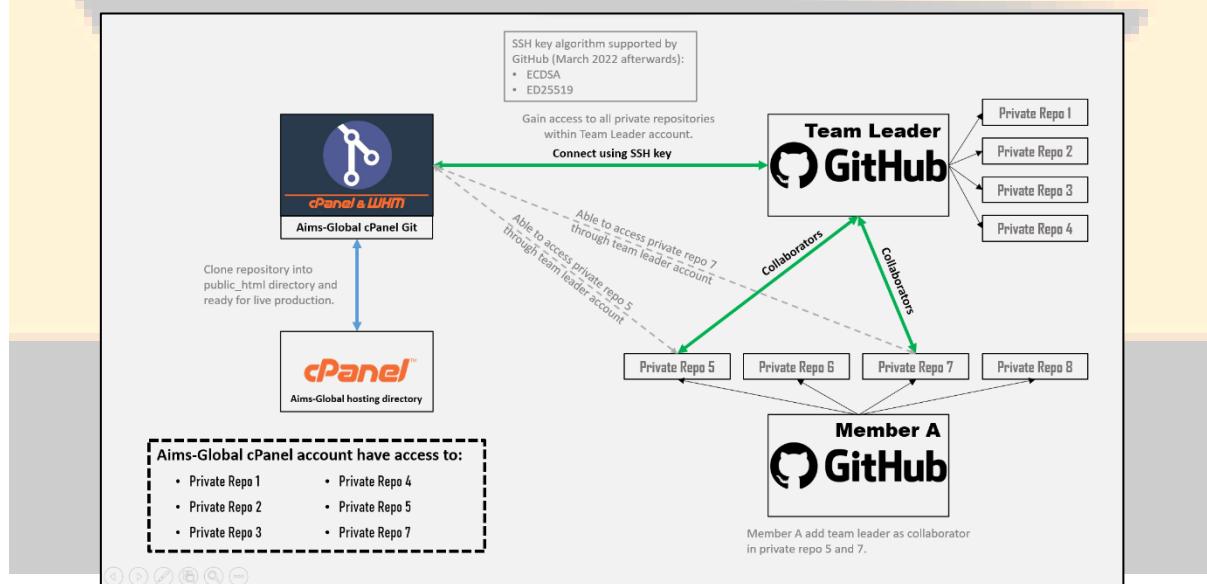


Figure 6.1 cPanel Git and GitHub connection flow



### 6.2 cPanel Access

Only IT department staffs are authorized to access cPanel Server. Please ask for assistance from authorities (IT Staffs).

### 6.3 Generate SSH key

#### 6.3.1 Generate key and add to SSH agent

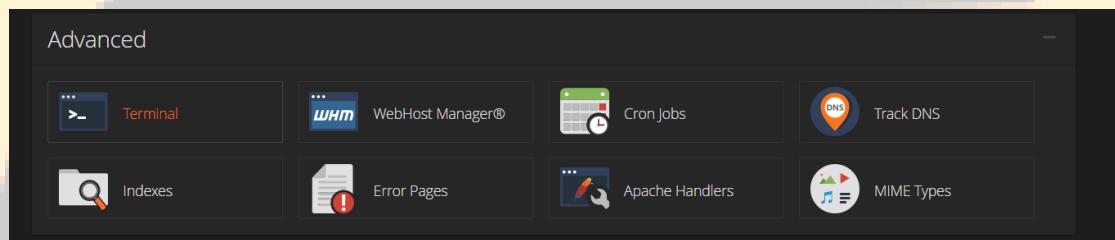


Figure 6.2 cPanel Terminal

Please skip this step if current cPanel Git is linked with one GitHub account. All system access will be terminated if SSH key was overwritten.

Go to terminal in cPanel as shown in figure above and insert command below.

```
ssh-keygen -t ed25519 -C "your_email@example.com"
```

Then it will ask you to enter location to save the SSH key file. Click enter to save in the suggested location. Make sure you are not overwriting SSH key files. Next, it will ask for a passphrase for the generated key. Do not enter anything for the passphrases and click enter. Click enter again for confirmation.

```
> Enter passphrase (empty for no passphrase): [Type a passphrase]
> Enter same passphrase again: [Type passphrase again]
```

The generated key needs to be added into ssh agent. Simply enter command below to add the key into ssh agent.



```
eval "$(ssh-agent -s)"
```

Command above will start SSH agent in background. Example output for command above is shown in Figure 6.3

```
# start the ssh-agent in the background
$ eval "$(ssh-agent -s)"
> Agent pid 59566
```

Figure 6.3 Example output of starting SSH agent command

Add your generated key into SSH agent by inserting command below. id\_ed25519 is default SSH key file name. It is common file name for SSH key. However, please check your SSH key file in directory (/home/aimsglob/.ssh) for confirmation.

```
ssh-add ~/.ssh/id_ed25519
```

The output will be “Identity has been added: /home/aimsglob/.ssh/id\_ed25519”.

Generating SSH key and adding into SSH agent has been completed.

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### 6.3.2 Authorize SSH key

Open SSH access under category Security in cPanel interface as shown in Figure

- 6.4. Find your generated key (id\_ed25519 – usually with status ‘not authorized’) and click manage. Click authorized, go back to SSH Access list (Figure 6.5) and you will see that your key is now authorized as shown in Figure 6.7.<sup>1</sup>



Figure 6.4 SSH Access Icon

Name	Authorization Status	Actions
aims	authorized	
eact	authorized	
id_ed25519	authorized	
id_rsa	authorized	
id_rsa_anis	not authorized	
sparks	authorized	

**NOTE:** If you authorize a key that is identical to other keys, those keys may also become authorized.

Figure 6.5 SSH Access (Manage)

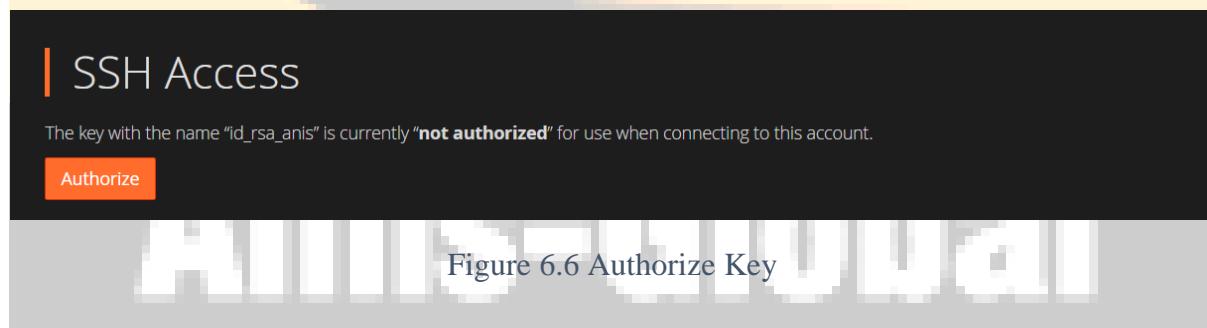


Figure 6.6 Authorize Key

<sup>1</sup> Figure 6.5, Figure 6.6, Figure 6.7, and Figure 6.8 are shown for reference only. id\_rsa\_anis key is an rsa key type and not accepted by GitHub for access.

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#### 6.3.3 Register SSH key with GitHub account

In order to gain GitHub account access for cPanel Git, SSH key need to be register in GitHub account (in our case is Team Leader account). Go to SSH Access list and find your generated key. Click ‘View/Download’ and copy all the content displayed. See Figure 6.7 and Figure 6.8 for reference.<sup>2</sup>

Name	Authorization Status	Actions
aims	authorized	<a href="#">Delete</a> <a href="#">View/Download</a> <a href="#">Manage</a>
eact	authorized	<a href="#">Delete</a> <a href="#">View/Download</a> <a href="#">Manage</a>
id_ed25519	authorized	<a href="#">Delete</a> <a href="#">View/Download</a> <a href="#">Manage</a>
id_rsa	authorized	<a href="#">Delete</a> <a href="#">View/Download</a> <a href="#">Manage</a>
id_rsa_anis	authorized	<a href="#">Delete</a> <a href="#">View/Download</a> <a href="#">Manage</a>
sparks	authorized	<a href="#">Delete</a> <a href="#">View/Download</a> <a href="#">Manage</a>

**NOTE:** If you authorize a key that is identical to other keys, those keys may also become authorized.

Figure 6.7 SSH Access (View/Download)

### SSH Access

View or Download SSH Keys

**Public SSH Key “id\_rsa\_anis” Open Key**

```
ssh-rsa AAAAB3NzaC1yc2EAAAQABAAQDDOAZJhAvnh1M57QSy7jxHLfkzCoInuwTsRA5VI1/0+0fsZIjvmyc
```

[Download Key](#)

Figure 6.8 SSH View/Download

<sup>2</sup> Figure 6.7, Figure 6.8, Figure 6.9, and Figure 6.10 are shown for reference only. id\_rsa\_anis key is an rsa key type and it is not accepted by GitHub for access.

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Go to [github.com](https://github.com) and click ‘Setting’ in dropdown from top right screen as shown in the Figure 6.9. Go to ‘SSH and GPG keys’ in left menu sidebar, click ‘New SSH key’ button as shown in the Figure 6.10.

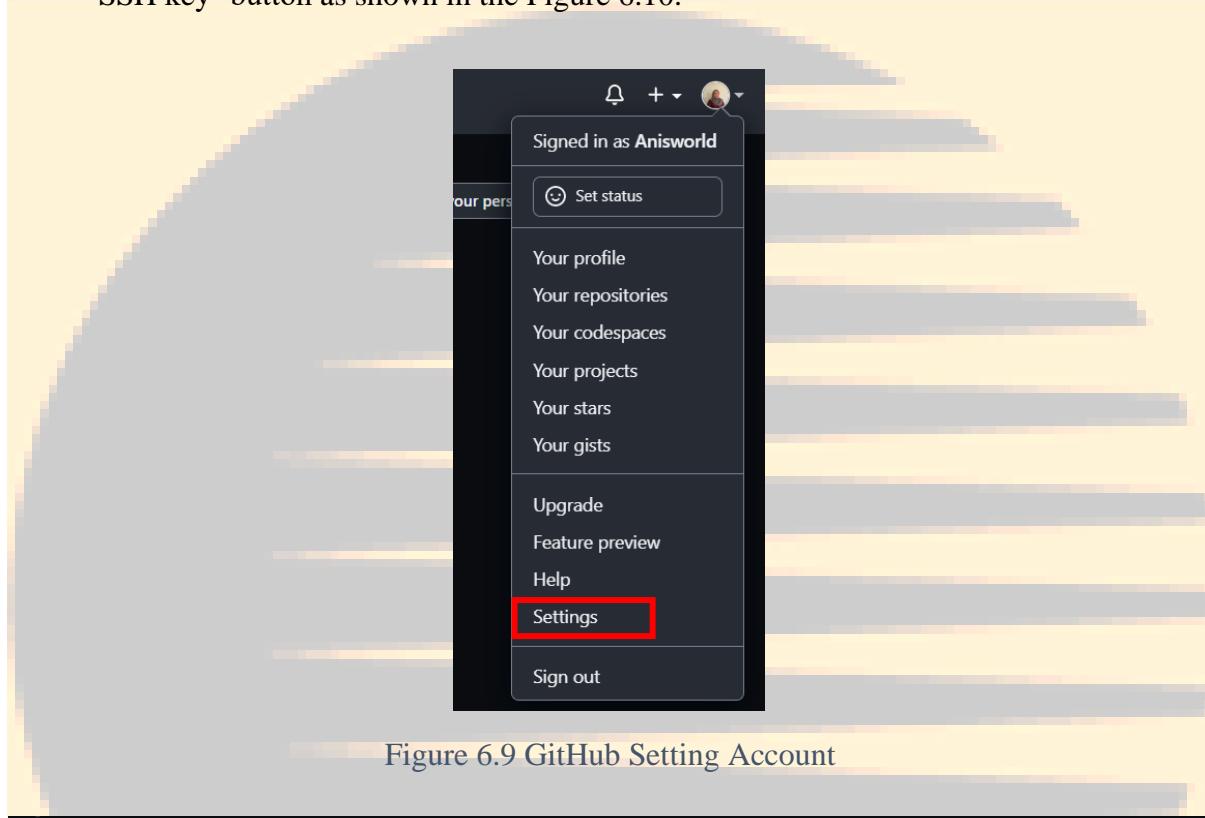


Figure 6.9 GitHub Setting Account

A screenshot of the GitHub SSH keys settings page. It shows sections for SSH keys, GPG keys, and Vigilant mode. The SSH keys section has a 'New SSH key' button. The GPG keys section has a 'New GPG key' button. The Vigilant mode section has a checkbox for 'Flag unsigned commits as unverified'. The left sidebar shows the 'SSH and GPG keys' option selected. The background features a large watermark of the word 'Aims-Global'.

Figure 6.10 Github SSH Key



Now, SSH key form will be showed. Insert your preferred name in title input, choose ‘Authentication Key’ as key type, and paste your copied key from cPanel SSH Access in key input. Make sure there is no line-breaking (line with no character) at the end of the key to avoid error. Click ‘Add SSH Key’ after complete. See Figure 6.11 for reference.

A screenshot of a web-based form titled "SSH keys / Add new". The form has three main sections: "Title" (input field containing "id\_rsa\_anis"), "Key type" (dropdown menu set to "Authentication Key"), and "Key" (text area containing a long string of characters starting with "ssh-rsa" and ending with "anis"). At the bottom is a green "Add SSH key" button.

Figure 6.11 SSH/ Add New Key in Github

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### 6.4 Git Repository

#### 6.4.1 Add team leader as collaborator

Add team leader as collaborators in GitHub Repository so that cPanel Git can gain access to the private repository as shown in the Figure 6.12.

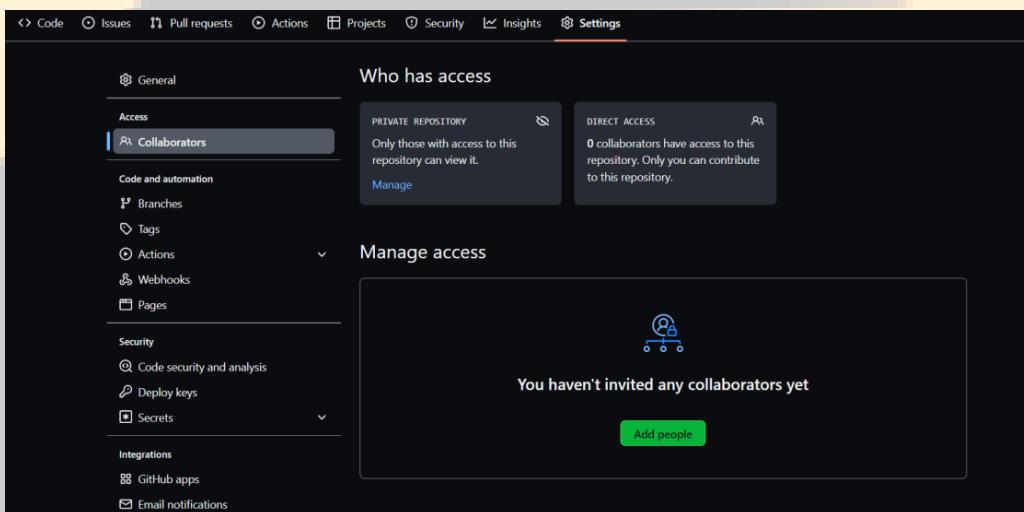


Figure 6.12 Add Collaborators

#### 6.4.2 Create and clone repository in cPanel Git Version Control

Go to the Git™ Version Control in the cPanel as shown in the Figure 6.13. Click 'Create' as shown in Figure 6.14 and a form will appear.

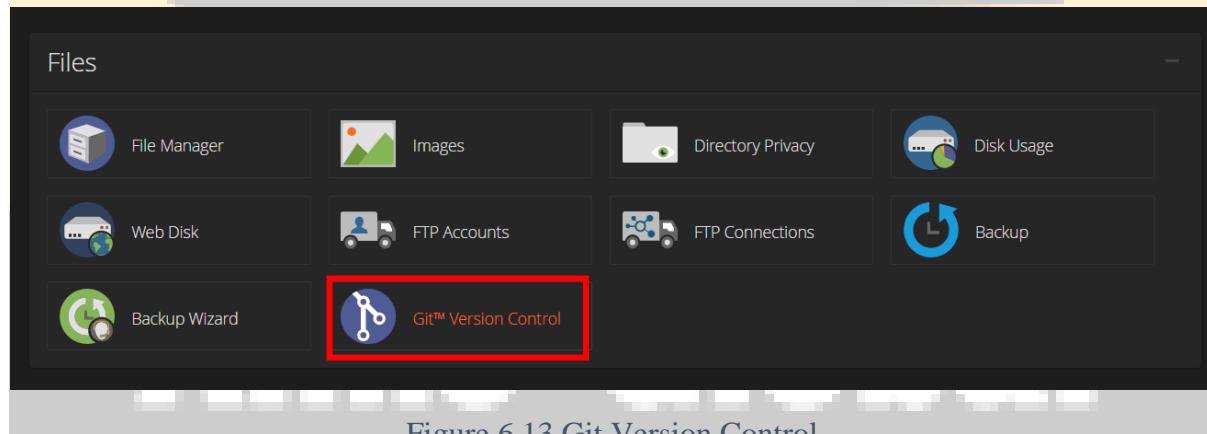


Figure 6.13 Git Version Control

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A screenshot of the cPanel Git™ Version Control interface. At the top, there's a search bar and a 'Create' button highlighted with a red box. Below is a table listing three repositories: cpbdsystem, eact, and sparks, each with its path and manage/history/remove buttons.

Figure 6.14 Git Repositories Create

Follow steps below to complete Git Version Control Form. See Figure 6.15 and Figure 6.16 for references.

- Go to GitHub Repository and copy SSH link for that repository (not https link).
- Paste the SSH link into Clone URL input.
- Make sure repository path is “public\_html/<system\_name>”. System name will be repository cloned folder. Make sure the folder is not existed or an empty folder (directory).
- Repository name can be anything. However, default name is recommended.
- Click ‘Create’ button after complete and a success notification will appear. You will be redirected to cPanel Git Repository List.

A screenshot of the 'Create Repository' form. It shows fields for cloning a repository from GitHub, specifying a repository path ('/home/aimsglob/public\_html/link2'), and a repository name ('link2'). The 'Create' button at the bottom is highlighted with a red box.

Figure 6.15 Form Create Git Repositories

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A screenshot of a web-based Git version control interface. The top navigation bar includes a search bar, a "Create" button, and page size controls (10 items). A message box at the top right states: "Information: The system successfully initiated the clone process for the 'link2u' repository. The system may require more time to clone large remote repositories." The main content area displays a table of repositories with columns for Repository, Repository Path, and actions (Manage, History, Remove). One row for "link2u" is highlighted with a blue background and shows a progress indicator: "Clone is in progress ...".

Repository	Repository Path	Actions
amirvision	/home/aimsglob/public_html/amirvision.com.my	Manage History Remove
cpbdsystem	/home/aimsglob/public_html/cpbdsystem	Manage History Remove
eact	/home/aimsglob/public_html/eact	Manage History Remove
link2u	/home/aimsglob/public_html/link2u	Manage History Remove
sparks	/home/aimsglob/public_html/sparks	Manage History Remove

Figure 6.16 Successful Create Git Repositories

### 6.5 Change Permission

After cloning process is completed, you can see the system folder in File Manager with 0700 permission. This permission will cause the system cannot be load from web browser and will produce ‘File not Found’ text. The folder permission needs to be change to 0755 to be accessed from web browser. The steps are as follows:

1. Open File Manager from cPanel Tools Interface. See Figure 6.17.
2. Go to the cloned system directory. In this case is ‘public\_html/link2u’.
3. Click system folder and click permission button at the top of page as shown in Figure 6.18. You also can use right-click to open permission settings.
4. Change permission to 0755. Please refer to Figure 6.19

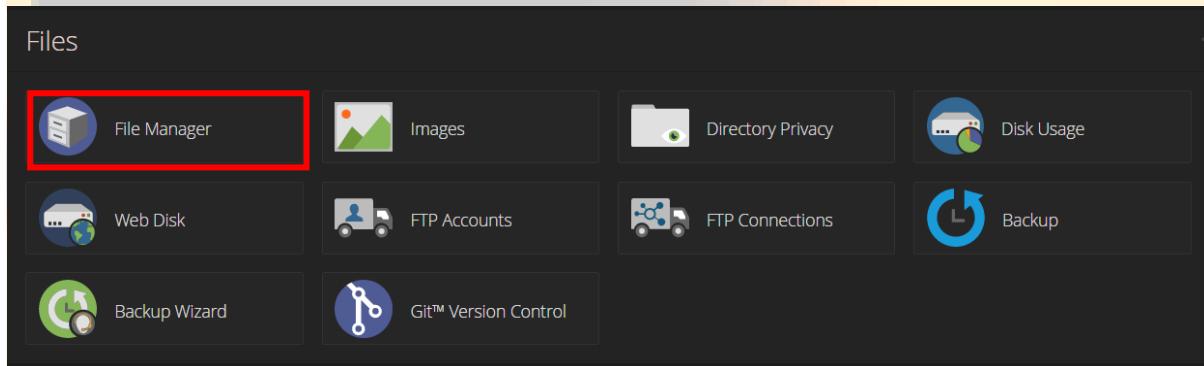
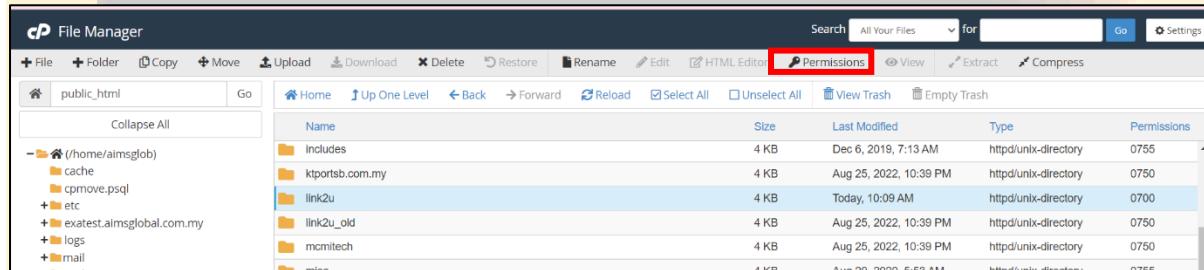
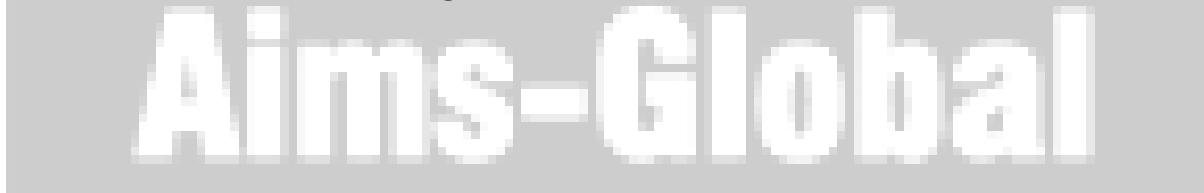


Figure 6.17 File Manager



Name	Size	Last Modified	Type	Permissions
Includes	4 KB	Dec 6, 2019, 7:13 AM	httpd/unix-directory	0755
ktportsb.com.my	4 KB	Aug 25, 2022, 10:39 PM	httpd/unix-directory	0750
link2u	4 KB	Today, 10:09 AM	httpd/unix-directory	0700
link2u_old	4 KB	Aug 25, 2022, 10:39 PM	httpd/unix-directory	0750
mcmitech	4 KB	Aug 25, 2022, 10:39 PM	httpd/unix-directory	0750
misc	4 KB	Aug 20, 2020, 5:53 AM	httpd/unix_directory	0755

Figure 6.18 Permission button



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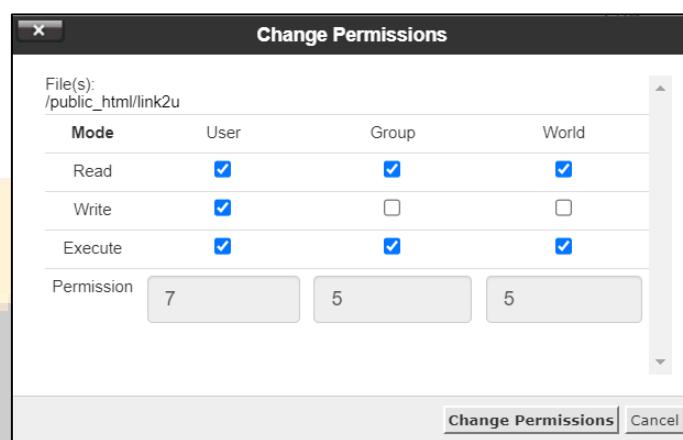


Figure 6.19 Change Permission Popup



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#### 6.6 Pull changes from GitHub

Pull changes from GitHub will update all modified files, add new files, or delete any files according to commit from GitHub repository. After completing any changes from local devices, commit and push the changes into GitHub, then you can use cPanel Git Version control to pull changes from GitHub. The steps are as follows:

1. Go to the Git™ Version Control as shown in the Figure 6.20
2. go to Pull and deploy section
3. click button Update from Remote as shown in the Figure 6.21.

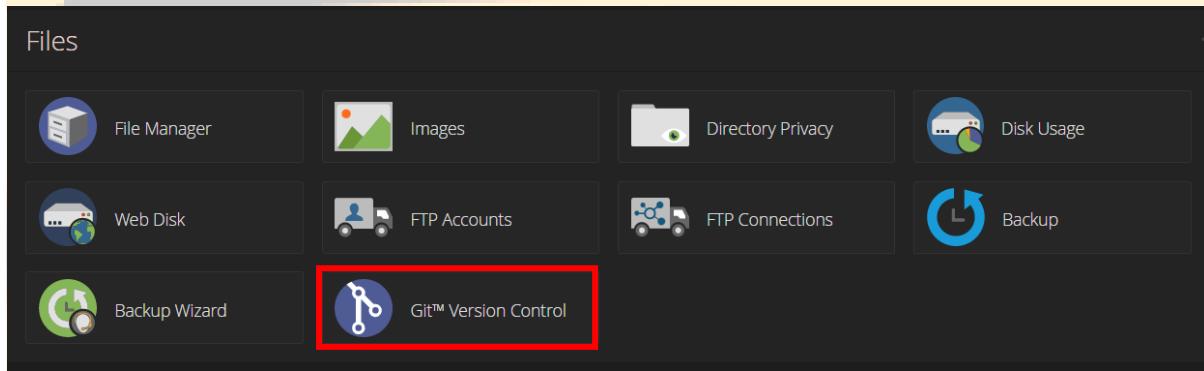


Figure 6.20 Git Version Control Icon

A screenshot of the 'Git™ Version Control' interface in cPanel. It shows basic information like repository path (/home/aimsglob/public\_html/link2u), remote URL (git@github.com:Anisworld/link2u.git), and checked-out branch (main). It also displays a HEAD Commit with details: Commit: 230556c6e89dea9bad0e7e201ba9ca2ee0e90671, Author: Anisworld &lt;anisathirah.y@gmail.com&gt;, Date: Sep 1, 2022 4:31:28 PM, and a note about a new project. A message box states 'The system cannot deploy' with requirements: 1. A valid .cpANEL.yml file exists. 2. No uncommitted changes exist on the checked-out branch. At the bottom, there are two buttons: 'Update from Remote' (highlighted with a red box) and 'Deploy HEAD Commit'.

Figure 6.21 cPanel Git Pull or Deploy