

Module 2: Introduction To Git

#Git:

- Git is a distributed version control system. You can use git in any OS and also offline.
- Git comes with built-in GUI tools for committing (git-gui) and browsing (gitk), but there are several third-party tools for users looking for platform-specific experience.
- For ease in use github is more popular than other third party git tools.

#Common terms in Github:

- **Repository (repo):** A folder in which all files and their version histories are stored.
- **Branch:** A workspace in which you can make changes that won't affect the live site.
- **Markdown (.md):** A way to write in Github that converts plain text to GitHub code.
- **Commit:** A saved record of a change made to a file within the repo.
- **Push:** The git push command is used to upload local repository content to a remote repository.
- **Pull Request (PR):** The way to ask for changes made to a branch to be merged into another branch.
- **Merge:** After a pull request is approved, the commit will be pulled in (or merged) from one branch to another and then, deployed on the live site

#1st time Github Repo initialising:

1. `git init` → to set the repository.
2. `git add "filename.txt"` → to add "filename.txt" . If there are many files, we can simply use "`git add .`" → to add all files in the git repo.
3. `git commit -m "any commit you like"` for committing the added files.

N.B: For the first time on a PC after committing you need to configure your username and email. This is required only for the 1st time.

```
git config --global user.email "you@example.com"  
git config --global user.name "Your Name"
```

4. `git branch -M main` → to set master branch to main.

5. Go to Browser and redicate to www.github.com and create a new repo with "any-name"
6. After creating the repo "any-name" You will get a git url for that repo like below:
`https://github.com/your-github-account-name/any-name.git`
7. `git remote add origin "url"` → to add remote github repo as your working folder repository.
8. `git push -u origin main` → to push working folder to the remote repo added in #7.
9. `git remote set-url origin "url"` → to set new origin repo for working folder. Here "url" is the new github repo you want to set as a new remote repo for your working folder.
10. `git pull` → It's an easy way to synchronize your local repository with upstream changes(changes in remote repo).
11. "`git status`" → to display the state of the repository and staging area. It's a good practice to use "`git status`" before giving other git command. It will help you to realize what command you need next.

Github Related Some Issues and Fixes

গিটহাব জনিত সমস্যা সমাধানের BLOG লিংকঃ

১. .NET ইন্সটল জনিত সমস্যা ও সমাধান -> [Click Here](#)

২. VS Code এর ইন্টিগ্রেটেড টার্মিনালে Git Bash না দেখা গেলে: [Click Here](#)

৩. git push >> fatal: no configured push destination: [Click Here](#)

৪. Fatal: unable to access.....The requested URL returned error: 403: [Click Here](#)

৫. গিটহাব এ ডেপ্লয় করার পর যদি 404 There isn't a GitHub Pages site here দেখায়: [Click Here](#)

৬. নতুন গিটহাব একাউন্টে কোড পুশ ইরোর unable to access origin: [Click Here](#)

৭. When we provide the git push command and it gives an error fatal: unable to access?: [Click Here](#)

৮. error: remote origin already exists: [Click Here](#)

৯. Git error: "Please make sure you have the correct access rights and the repository exists". [Click Here](#)

১০. Fatal: unable to access.....Could not resolve host: github.com: [Click Here](#)

১১. লোকাল কম্পিউটার এর গিটহাব এর সাথে কানেক্টেড ফোল্ডার টা কিভাবে রিমোভ করবেন (.git <= folder)? [Click Here](#)

১২. Github থেকে কোন একটা রিপোজিটরি কিভাবে ডিলিট করবেন ? [Click Here](#)

১৩. নতুন গিটহাব রিপোজিটরিতে কোড পুশ করতে গেলে অনেক সময় fatal: Could not read from remote repository. <= এই প্রব্লেম দেখা যায়: [Click Here](#)

Source : Programing Hero Batch 5 Facebook Group