

## Module 3 learn git

- ❖ If you want to connect any file to github you have to do 6 things in git bash or vs terminal or cmd terminal :

1. `echo "# myModule1" >> README.md` not mandatory
2. `git init`
3. `git add README.md / .(dot)`
4. `git commit -m "first commit"`
5. `git branch -M main`
6. `git remote add origin link copy and paste like https://github.com/Tanvirulislam345/myModule1.git`
7. `git push -u origin main`

- ❖ If you change any code or send anything in github repository you have to do 3 things :

1. `git add .or [specific file name]` than Enter
2. `git commit -m "comment"` than Enter
3. `git push` than Enter or

**Note :** Use only when send data in the branch  
`git push --set-upstream origin [branch name].`

- ❖ If you change current working repository you to do again 6 work like file link to github :

1. `git init`
2. `Git add README.md / .(dot)`
3. `git commit -m "first commit"`
4. `git branch -M main`
5. `git remote set-url link copy and paste like https://github.com/Tanvirulislam345/myModule1.git`
6. `git push -u origin main`

- If we want to see our website using github server just follow the instruction :

1. **First go to setting**
2. **Then click pages**
3. **select branch main and save**

## Branch and merge :

- git **branch** use see how many branches you have.
- git **branch [branch name]** used for creating branches.
- git **checkout [branch name]** used to go to another branch from the current branch.
- git **checkout -b [branch name]** used to create and go to the new creating branch from the current branch.
- git **merge [filename]** used for brought data to current branch from another branch

**Note : you must add, commit and push after merge**

- Git **pull** used to bring new commits from remote to local repository.

**Git conflict :** you face some problems using conflict practice more and more.

## Some useful command :

1. **mkdir folderName** used to make a directory.
2. **touch file/folderName** used for creating a file or folder.
3. **ls**, or **ls -a** used to show all files or folders.
4. **git clone link** used for taking value from remote to file.
5. **pwd** use for show path

**scroll here for some command At a glance**

## Getting & Creating Projects

Command	Description
<code>git init</code>	Initialize a local Git repository
<code>git clone ssh://git@github.com/[username]/[repository-name] .git</code>	Create a local copy of a remote repository

## Basic Snapshotting

Command	Description
<code>git status</code>	Check status
<code>git add [file-name.txt]</code>	Add a file to the staging area
<code>git add -A</code>	Add all new and changed files to the staging area
<code>git commit -m "[commit message]"</code>	Commit changes
<code>git rm -r [file-name.txt]</code>	Remove a file (or folder)

## Branching & Merging

Command	Description
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`git branch`

List branches (the asterisk denotes the current branch)

`git branch -a`

List all branches (local and remote)

`git branch [branch name]`

Create a new branch

`git branch -d [branch name]`

Delete a branch

`git push origin --delete [branch name]`

Delete a remote branch

`git checkout -b [branch name]`

Create a new branch and switch to it

`git checkout -b [branch name] origin/[branch name]`

Clone a remote branch and switch to it

`git branch -m [old branch name] [new branch name]`

Rename a local branch

`git checkout [branch name]`

Switch to a branch

`git checkout -`

Switch to the branch last checked out

`git checkout -- [file-name.txt]`

Discard changes to a file

`git merge [branch name]`

Merge a branch into the active branch

`git merge [source branch] [target branch]`

Merge a branch into a target branch

```
git stash
```

Stash changes in a dirty working directory

```
git stash clear
```

Remove all stashed entries

## Sharing & Updating Projects

Command	Description
<pre>git push origin [branch name]</pre>	Push a branch to your remote repository
<pre>git push -u origin [branch name]</pre>	Push changes to remote repository (and remember the branch)
<pre>git push</pre>	Push changes to remote repository (remembered branch)
<pre>git push origin --delete [branch name]</pre>	Delete a remote branch
<pre>git pull</pre>	Update local repository to the newest commit
<pre>git pull origin [branch name]</pre>	Pull changes from remote repository

```
git remote add origin  
ssh://git@github.com/[username]/[repository-name].git
```

**Add a remote repository**

```
git remote set-url origin  
ssh://git@github.com/[username]/[repository-name].git
```

**Set a repository's origin branch to SSH**

## Inspection & Comparison

Command	Description
<code>git log</code>	<b>View changes</b>
<code>git log --summary</code>	<b>View changes (detailed)</b>
<code>git log --oneline</code>	<b>View changes (briefly)</b>
<code>git diff [source branch] [target branch]</code>	<b>Preview changes before merging</b>