GITHUB

GidHub is the Web-Based Repository Hosting
Git push <remote> <branch>
Correct order to submit your changes from the working directory : GIT, add, git commit, git push

What is GITHUB?:

GitHub is an online hosting service for Git repositories. Imagine working on a project at home and while you are away, maybe at a friend's place, you suddenly remember the solution to a code error that has kept you restless for days.

You cannot make these changes because your PC is not with you. But if you project hosted on GitHub, you can access and download that project with a command on whatever computer you have access to. Then you can make your changes and push the latest version back to **GitHub**.

In summary, **GitHub** lets you store your repo on their platform. Another awesome feature that comes with **GitHub** is the ability to collaborate with other developers from any location.
Now that we have created and initialized our project locally, let's push it to **GitHub**.

GITHUB - Push & Pull :

git pull command is used to pull a repository.
git push command used to push into the repository.

How to push a repository to GitHub?

I will divide this section into steps to help you understand the process more clearly.

Step 1 - Create a GitHub account

To be able to use GitHub, you will have to create an account first. You can do that on their website(github.com).

Step 2-Create a repository

You can click on the + symbol on the top right corner of the page then choose “New repository”. Give your repo a name then scroll down and click on “ Create repository”.

git remote add origin https://github.com/Hephzibah811/MyGitRepo.git
git remote -v (display the origin)
git branch -M main (renaming the branch)
git push -u origin main
Git pull origin (git pull origin main)

The first command “git remote add origin” creates a connection between your local repo and the remote repo on Github.

GITHUB - Clone :

git clone

Pull Branch from GITHUB
Git pull https://github.com/Hephzibah811/MyGitRepo.git
Git branch
Git branch -a (display the branches)

Push Branch to GITHUB
Lets’s create a new local branch
Git branch “Mybranch1”
Git branch
Git checkout Mybranch1
Git push https://github.com/Hephzibah811/MyGitRepo.git

Pull Request:
In their simplest form, pull requests are a mechanism for s developer to notify team members that they have completed a feature.
Once their feature branch is ready, the developer files a pull request via their GitHub account.

This lets everybody involved know that they need to review the code and merge it into the main branch.

```
D:\CloneRepo>git clone https://github.com/Hephzibah811/MyGitRepo.git
Cloning into 'MyGitRepo'...
remote: Enumerating objects: 8, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 8 (delta 1), reused 4 (delta 0), pack-reused 0
Receiving objects: 100% (8/8), done.
Resolving deltas: 100% (1/1), done.

D:\CloneRepo>cd MyGitRepo

D:\CloneRepo\MyGitRepo>git ls-files
Myfile1
Myfile2.txt

D:\CloneRepo\MyGitRepo>git branch
* main

D:\CloneRepo\MyGitRepo>git branch -a
* main
  remotes/origin/HEAD -> origin/main
  remotes/origin/Mybranch1
  remotes/origin/main
```

```
C:\Users\dharshana.a>d:

D:\>mkdir MyRepo

D:\>cd MyRepo

D:\MyRepo>git init
Initialized empty Git repository in D:/MyRepo/.git/

D:\MyRepo>git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)

D:\MyRepo>git remote add origin https://github.com/DharshuAlagar23/MyGitRepo.git

D:\MyRepo>git remote -v
origin  https://github.com/DharshuAlagar23/MyGitRepo.git (fetch)
origin  https://github.com/DharshuAlagar23/MyGitRepo.git (push)

D:\MyRepo>git pull origin
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), 1.23 KiB | 22.00 KiB/s, done.
From https://github.com/DharshuAlagar23/MyGitRepo
 * [new branch]      main       -> origin/main
You asked to pull from the remote 'origin', but did not specify
a branch. Because this is not the default configured remote
for your current branch, you must specify a branch on the command line.

D:\MyRepo>git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)

D:\MyRepo>git branch

D:\MyRepo>git pull origin main
```

```
D:\MyRepo>git pull origin main
From https://github.com/DharshuAlagar23/MyGitRepo
 * branch            main       -> FETCH_HEAD

D:\MyRepo>git status
On branch master
nothing to commit, working tree clean

D:\MyRepo>git branch
* master

D:\MyRepo>git ls-files
Myfile1

D:\MyRepo>git push -u origin main
error: src refspec main does not match any
error: failed to push some refs to 'https://github.com/DharshuAlagar23/MyGitRepo.git'

D:\MyRepo>git push -u origin main
error: src refspec main does not match any
error: failed to push some refs to 'https://github.com/DharshuAlagar23/MyGitRepo.git'

D:\MyRepo>git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Myfile2.txt

nothing added to commit but untracked files present (use "git add" to track)

D:\MyRepo>git add Myfile2.txt

D:\MyRepo>git commit -m "Commit"
[master 4704a5d] Commit
 Committer: Dharshana Alagarsamy <dharshana.a@itp.objectfrontier.com>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:
```

```
After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 1 insertion(+)
 create mode 100644 Myfile2.txt

D:\MyRepo>git status
On branch master
nothing to commit, working tree clean

D:\MyRepo>git branch -M main

D:\MyRepo>git branch
* main

D:\MyRepo>git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 298 bytes | 149.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/DharshuAlagar23/MyGitRepo.git
   7eebf65..4704a5d  main -> main
branch 'main' set up to track 'origin/main'.

D:\MyRepo>git push -u origin main
Everything up-to-date
branch 'main' set up to track 'origin/main'.

D:\MyRepo>git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

D:\MyRepo>git branch MyBranch1

D:\MyRepo>git checkout MyBranch1
Switched to branch 'MyBranch1'
```

```
D:\MyRepo>git checkout MyBranch1
Switched to branch 'MyBranch1'

D:\MyRepo>git branch
* MyBranch1
  main

D:\MyRepo>git status
On branch MyBranch1
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Myfile3.txt

nothing added to commit but untracked files present (use "git add" to track)

D:\MyRepo>git add Myfile3.txt

D:\MyRepo>git commit -m "3rd Commit"
[MyBranch1 814865a] 3rd Commit
 Committer: Dharshana Alagarsamy <dharshana.a@itp.objectfrontier.com>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Myfile3.txt

D:\MyRepo>git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

```
D:\MyRepo>git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

D:\MyRepo>git push origin MyBranch1
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 311 bytes | 311.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'MyBranch1' on GitHub by visiting:
remote:      https://github.com/DharshuAlagar23/MyGitRepo/pull/new/MyBranch1
remote:
To https://github.com/DharshuAlagar23/MyGitRepo.git
 * [new branch]      MyBranch1 -> MyBranch1

D:\MyRepo>git clone https://github.com/DharshuAlagar23/MyGitRepo.git
Cloning into 'MyGitRepo'...
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (6/6), done.
remote: Total 12 (delta 1), reused 5 (delta 0), pack-reused 0
Receiving objects: 100% (12/12), done.
Resolving deltas: 100% (1/1), done.

D:\MyRepo>d:

D:\MyRepo>mkdir CloneRepo

D:\MyRepo>cd CloneRepo

D:\MyRepo\CloneRepo>git clone https://github.com/DharshuAlagar23/MyGitRepo.git
Cloning into 'MyGitRepo'...
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (6/6), done.
remote: Total 12 (delta 1), reused 5 (delta 0), pack-reused 0
Receiving objects: 100% (12/12), done.
Resolving deltas: 100% (1/1), done.

D:\MyRepo\CloneRepo>cd..
```

```
D:\MyRepo>cd CloneRepo

D:\MyRepo\CloneRepo>git clone https://github.com/DharshuAlagar23/MyGitRepo.git
Cloning into 'MyGitRepo'...
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (6/6), done.
remote: Total 12 (delta 1), reused 5 (delta 0), pack-reused 0
Receiving objects: 100% (12/12), done.
Resolving deltas: 100% (1/1), done.

D:\MyRepo\CloneRepo>cd..

D:\MyRepo>cd..

D:\>mkdir CloneRepo

D:\>cd CloneRepo

D:\CloneRepo>git clone https://github.com/DharshuAlagar23/MyGitRepo.git
Cloning into 'MyGitRepo'...
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (6/6), done.
remote: Total 12 (delta 1), reused 5 (delta 0), pack-reused 0
Receiving objects: 100% (12/12), done.
Resolving deltas: 100% (1/1), done.

D:\CloneRepo>cd MyGitRepo

D:\CloneRepo\MyGitRepo>git ls-files
Myfile1
Myfile2.txt

D:\CloneRepo\MyGitRepo>git branch
* main

D:\CloneRepo\MyGitRepo>git branch -a
* main
  remotes/origin/HEAD -> origin/main
  remotes/origin/MyBranch1
  remotes/origin/main
```

Bit Bucket :

Bitbucket is an online hosting service for git repositories like github.

Bitbucket is a cloud-based service that helps developers store and manage their code as well as track and control the changes to their code.

Bitbucket provides a cloud based git repository hosting service.

GItHub	BitBucket
Github support only git	github support both git and mercurial
Github is a code hosting platform that allows developers from all over the world to work together on projects.	Bitbucket is a cloud-based repository service which provides private and public code repositories for advanced collaboration
Github offer private repository with unlimited collaborators absolutely free of cost	BitBucket provides unlimited private repositories for up to five users

Create a repository in Bitbucket.