

BWT WEEK 4

TASK 7

SHERAZ BIN TAHIR

MAIL: BAIGS543@GMAIL.COM

REMOTE GITHUB REPOSITORY

A remote GitHub Repository refers to a copy of your project stored on GitHub's servers. It is a central location to store your code, track changes, collaborate with others, and access your project from anywhere.

Key Concepts of Remote Repositories

1. Remote URLs:

Each remote repository is identified by a URL, which can be an HTTP(s) or SSH URL. This URL points to the location where the repository is hosted.

2. Default Remote:

When you clone a repository, Git automatically names the remote repository as `origin`. This is the default name for the remote repository, but you can change it or add additional remotes.

3. Common Operations:

- **Fetching:** `git fetch` downloads commits, files, and references from a remote repository into your local repository. It does not automatically merge them into your working files.
- **Pulling:** `git pull` is a combination of `git fetch` and `git merge`. It fetches the changes from the remote repository and automatically merges them into your current branch.
- **Pushing:** `git push` uploads your commits from your local repository to the remote repository.

4. Adding Remotes:

You can add a remote repository to your local repository with the ``git remote add`` command.

```
git remote add <remote-name> <remote-URL>
```

5. Viewing Remotes:

You can view the configured remote repositories using:

```
git remote -v
```

6. Removing and Renaming Remotes:

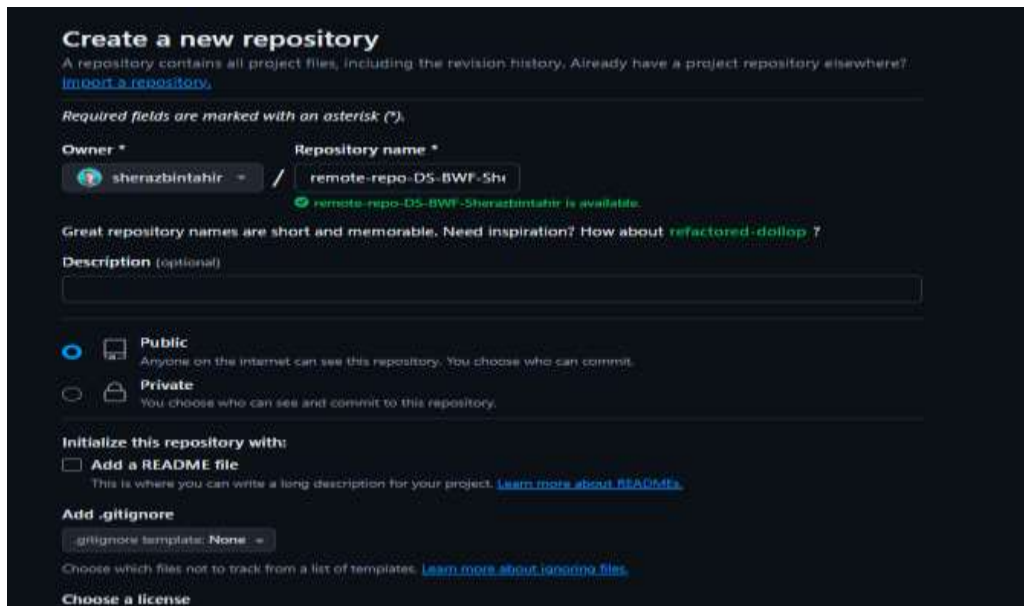
- **Removing:** ``git remote remove <remote-name>``
- **Renaming:** ``git remote rename <old-remote-name> <new-remote-name>``

Benefits of Using Remote Repositories:

- **Collaboration:** Multiple users can work on the same project simultaneously.
- **Backup:** The remote server acts as a backup for your project.
- **Accessibility:** You can access your project from different locations and machines.

How to create a Remote GitHub Repository?

1. Creating a simple Repo.



The screenshot shows the GitHub 'Create a new repository' page. At the top, it says 'Create a new repository' and provides a link to 'import a repository'. Below this, it states 'Required fields are marked with an asterisk (*)'. The 'Owner' field is set to 'sharazbintahir' and the 'Repository name' field is set to 'remote-repo-D5-BWF-Shi', with a green checkmark indicating it is available. A suggestion for 'refactored-dallop' is shown. The 'Description' field is optional and empty. Under 'Visibility', 'Public' is selected. The 'Initialize this repository with:' section has 'Add a README file' checked. The '.gitignore' template is set to 'None'. At the bottom, there is a 'Choose a license' section.

2. Remote Repo

```
Command Prompt
Reinitialized existing Git repository in C:/Users/baigs/.git/

C:\Users\baigs>git add .
fatal: Unable to create 'C:/Users/baigs/.git/index.lock': File exists.

Another git process seems to be running in this repository, e.g.
an editor opened by 'git commit'. Please make sure all processes
are terminated then try again. If it still fails, a git process
may have crashed in this repository earlier:
remove the file manually to continue.

C:\Users\baigs>git commit -m "Initial commit"
fatal: Unable to create 'C:/Users/baigs/.git/index.lock': File exists.

Another git process seems to be running in this repository, e.g.
an editor opened by 'git commit'. Please make sure all processes
are terminated then try again. If it still fails, a git process
may have crashed in this repository earlier:
remove the file manually to continue.

C:\Users\baigs>git remote add origin https://github.com/sherazbintahir/remote-repo-DS-BWF-Sherazbintahir.git
error: remote origin already exists.

C:\Users\baigs>git branch -M main

C:\Users\baigs>
```