Git assignment - Nucleusteq consulting pvt. ltd

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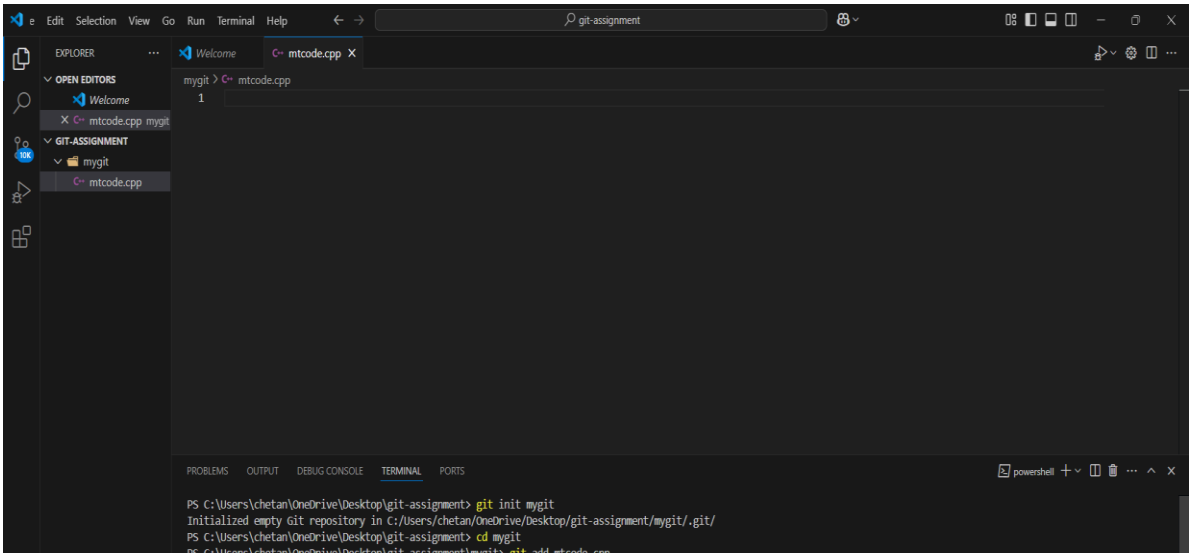
1. Create a New Repository:-

   The command for creating a new Git repository is: **git init <foldername>**

   I created a new repository named mygit using the following command in the terminal:



2. Create a New File

   I created an empty C++ file named mtcode.cpp in the mygit directory.
   Then, I added the file to the staging area using:

   git add mtcode.cpp

   Next, I committed the mtcode.cpp file to the master branch using:

   git commit -m "First commit"

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```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\chetan\OneDrive\Desktop\git-assignment> git init mygit
Initialized empty Git repository in C:/Users/chetan/OneDrive/Desktop/git-assignment/mygit/.git/
PS C:\Users\chetan\OneDrive\Desktop\git-assignment> cd mygit
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git add mtcode.cpp
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git commit -m "first commit"
[master (root-commit) 3ca602f] first commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 mtcode.cpp
```

3. Create a Branch

The command to create a new branch is: **git branch <new-branch-name>**

I created a new branch named new-branch using: **git branch new-branch**

Then, I switched to the new branch using: **git checkout new-branch**

```
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git branch new-branch
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git checkout new-branch
Switched to branch 'new-branch'
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git status
On branch new-branch
nothing to commit, working tree clean
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> ehco "working in newbranch" >>file.txt
```

4. Make Changes in the New Branch

I created a new file named file.txt and added it to the staging area of a new branch using the following commands: **git add file.txt**

```
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> echo  "working in newbranch" >>file.txt
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git add file.txt
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git commit -m "commiting in new branch"
[new-branch 9e0933d] commiting in new branch
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file.txt
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git branch
  master
* new-branch
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit>
```

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5. Merge Branches

The command for merging a branch into the current branch is:

git merge <branch_name>

I merged the newly created branch named new-branch into the master branch using the following steps:

git checkout master

git merge new-branch

```
 create mode 100644 file.txt
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git branch
  master
* new-branch
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git checkout main
error: pathspec 'main' did not match any file(s) known to git
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git checkout master
Switched to branch 'master'
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git merge new-branch
Updating 3ca602f..9e0933d
Fast-forward
 file.txt | Bin 0 -> 46 bytes
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file.txt
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit>
```

6. Pull Changes from Remote

The command for pulling changes from a remote repository is:

git pull origin main

First, I added a remote repository using:

git remote add origin repository_link

Then, I verified the remote repository using:

git remote -v

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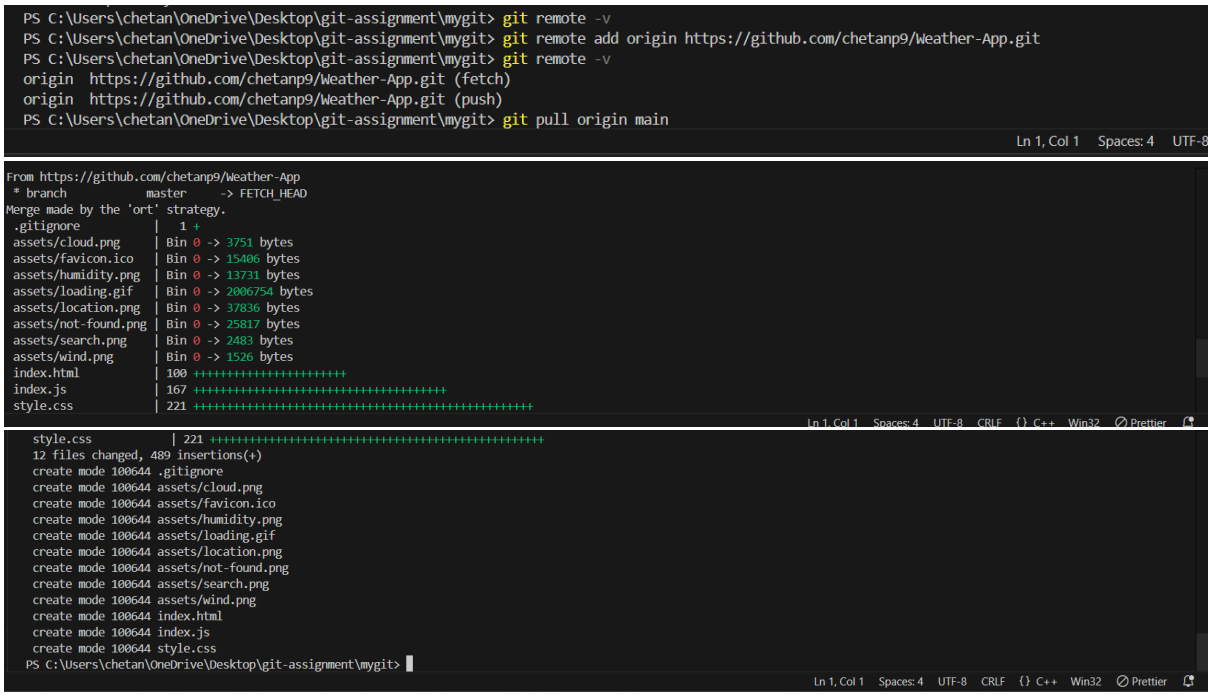
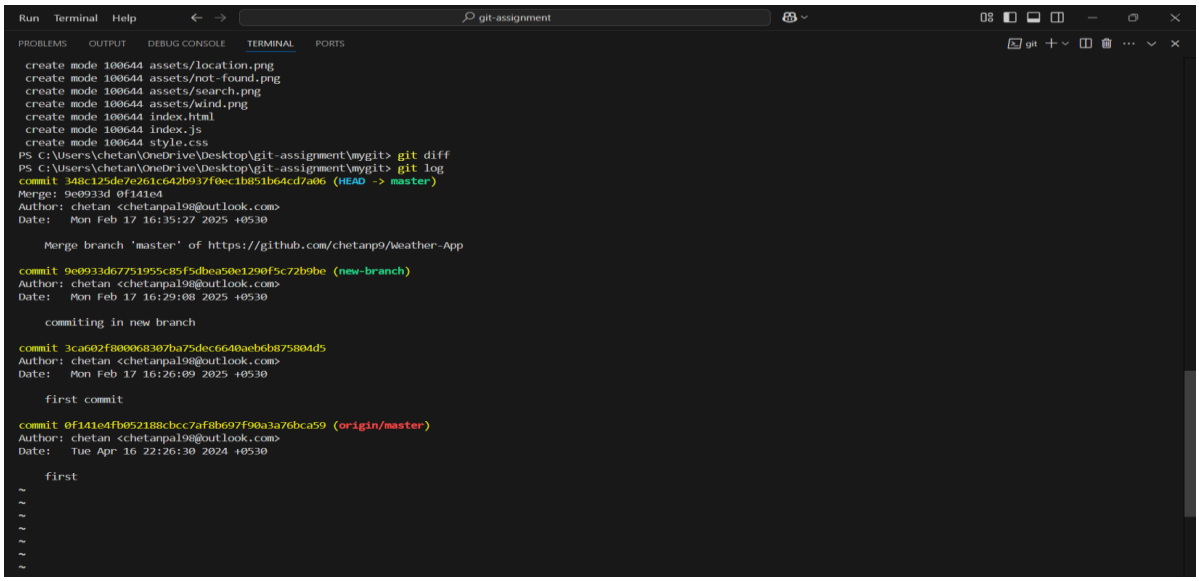
Finally, I pulled the latest changes from the remote repository into my local machine using: **git pull origin main**



7. View Git Log and History

The command for viewing the Git commit history is: **git log**

The Git HEAD pointer refers to the latest commit in the current branch.



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8. Git Status and Staging

The **git status** command is used to view the untracked and modified files in the repository.
I created a new text file named **file2.txt** and added it to the staging area using the command:

git add file2.txt

Then, I used the **git reset file2.txt** command to move the file from the staging area back to the working directory (local machine).

```
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git status
On branch master
nothing to commit, working tree clean
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> echo "Staging and git status" >> file2.txt
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file2.txt

nothing added to commit but untracked files present (use "git add" to track)
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git add file2.txt
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   file2.txt

PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git reset file2.txt
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit> git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file2.txt

nothing added to commit but untracked files present (use "git add" to track)
PS C:\Users\chetan\OneDrive\Desktop\git-assignment\mygit>
```

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9. Revert and Reset.

git revert is a command used to undo a specific commit while preserving the history of the repository.