

Git Assignment

Git Repository Detail:

Repository name- Git_Assignment_NucleusTeq

Repository Link- https://github.com/Pakhi-21/Git_Assignment_NucleusTeq

Assignment:

1. Create a New Repository.

Create repo on local system by

- cd Git_Assignment_PakhiGupta

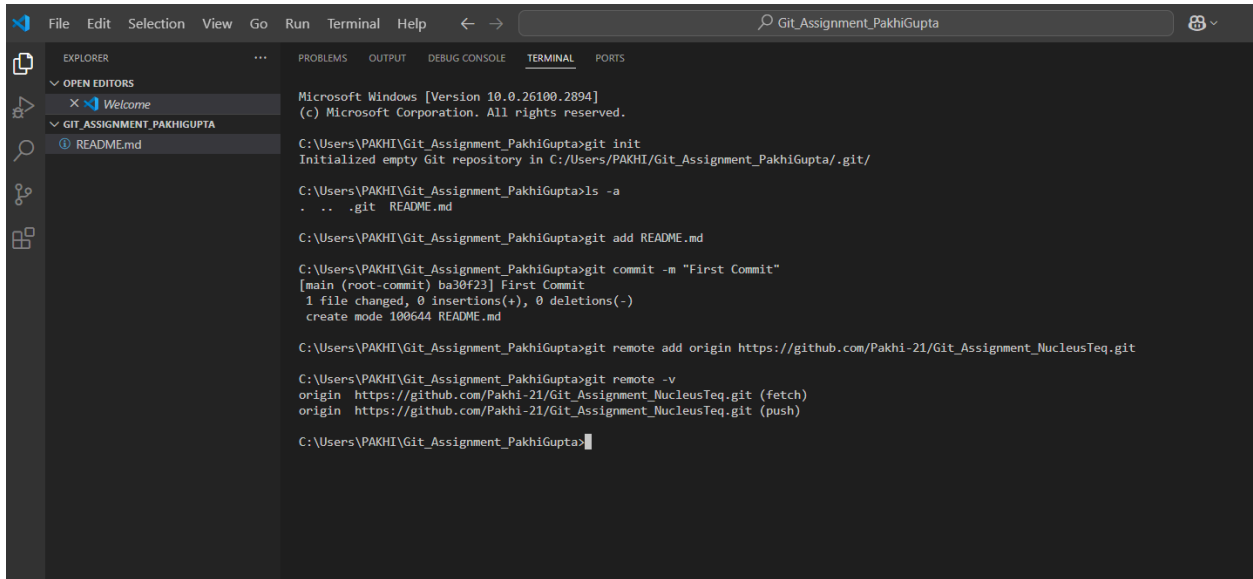
- git init

Connect with remote repo of Github

- git remote add [https://github.com/Pakhi-21/Git_Assignment_NucleusTeq.git](https://github.com/Pakhi-21/Git_Assignment_NucleusTeq)

https://github.com/Pakhi-21/Git_Assignment_NucleusTeq

```
MINGW64/c/Users/PAKHI/Git_Assignment_PakhiGupta
PAKHI@DESKTOP-012M6N7 MINGW64 ~ (main)
$ git --version
git version 2.42.0.windows.2
PAKHI@DESKTOP-012M6N7 MINGW64 ~ (main)
$ mkdir Git_Assignment_PakhiGupta
PAKHI@DESKTOP-012M6N7 MINGW64 ~ (main)
$ cd Git_Assignment_PakhiGupta
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ pwd
/c/Users/PAKHI/Git_Assignment_PakhiGupta
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git config --global user.name "Pakhi-21"
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git config --global user.email "pakhigupta556@gmail.com"
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/etc/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=main
user.email=pakhigupta556@gmail.com
user.name=Pakhi-21
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
core.ignorecase=true
gui.wmstate=normal
gui.geometry=1109x563+128+128 216 255
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git code .
git: 'code' is not a git command. See 'git --help'.
The most similar command is
clone
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ code .
```



The screenshot shows the VS Code interface with the Explorer sidebar on the left showing 'Welcome' and 'GIT_ASSIGNMENT_PAKHIGUPTA' folders, with 'README.md' selected. The main editor area displays the terminal output for the following commands:

```
Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\PAKHI\Git_Assignment_PakhiGupta>git init
Initialized empty Git repository in C:/Users/PAKHI/Git_Assignment_PakhiGupta/.git/

C:\Users\PAKHI\Git_Assignment_PakhiGupta>ls -a
. .. .git README.md

C:\Users\PAKHI\Git_Assignment_PakhiGupta>git add README.md

C:\Users\PAKHI\Git_Assignment_PakhiGupta>git commit -m "First Commit"
[main (root-commit) ba30f23] First Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 README.md

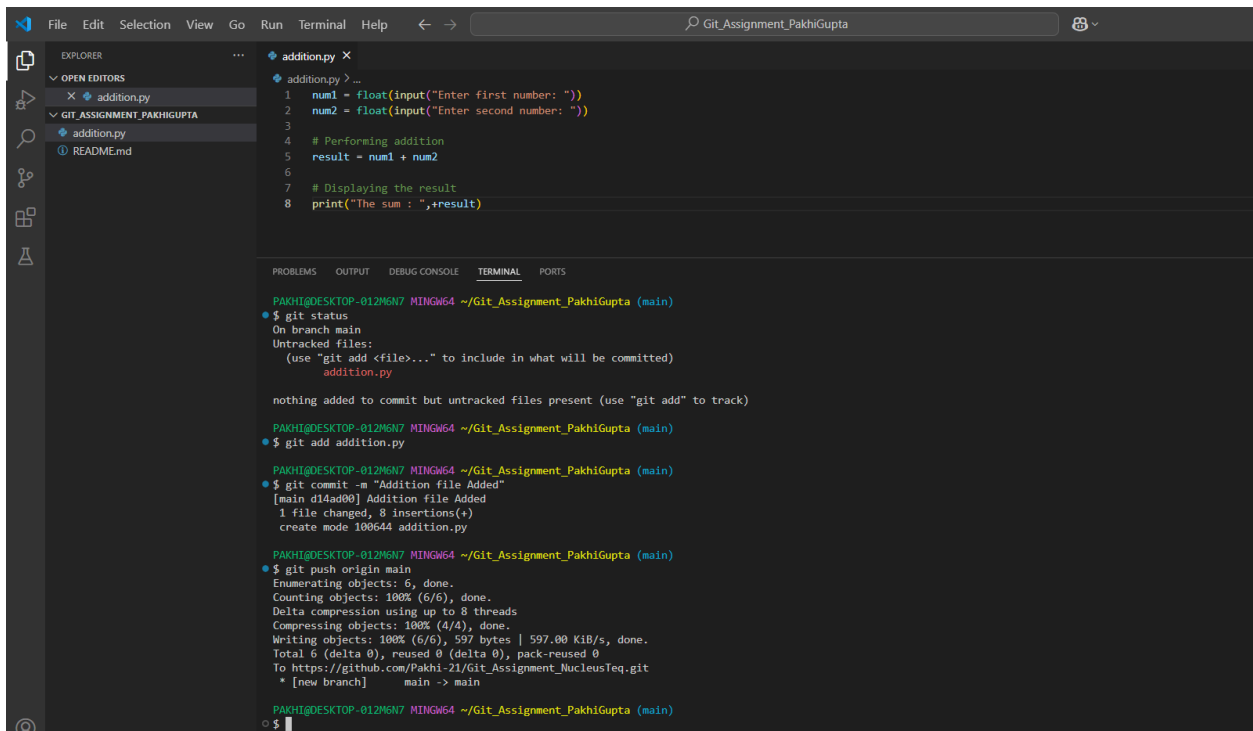
C:\Users\PAKHI\Git_Assignment_PakhiGupta>git remote add origin https://github.com/Pakhi-21/Git_Assignment_NucleusTeq.git

C:\Users\PAKHI\Git_Assignment_PakhiGupta>git remote -v
origin https://github.com/Pakhi-21/Git_Assignment_NucleusTeq.git (fetch)
origin https://github.com/Pakhi-21/Git_Assignment_NucleusTeq.git (push)

C:\Users\PAKHI\Git_Assignment_PakhiGupta>
```

2. Create a New File

- touch addition.py
- git add addition.py
- git commit -m “Addition file added”
- git push origin main



The screenshot shows the VS Code interface with the Explorer sidebar on the left showing 'addition.py' and 'README.md' files. The main editor area displays the code for 'addition.py' and the terminal output for the following commands:

```
1 num1 = float(input("Enter first number: "))
2 num2 = float(input("Enter second number: "))
3
4 # Performing addition
5 result = num1 + num2
6
7 # Displaying the result
8 print("The sum : ",+result)

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
• $ git status
On branch main
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    addition.py

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

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
• $ git add addition.py

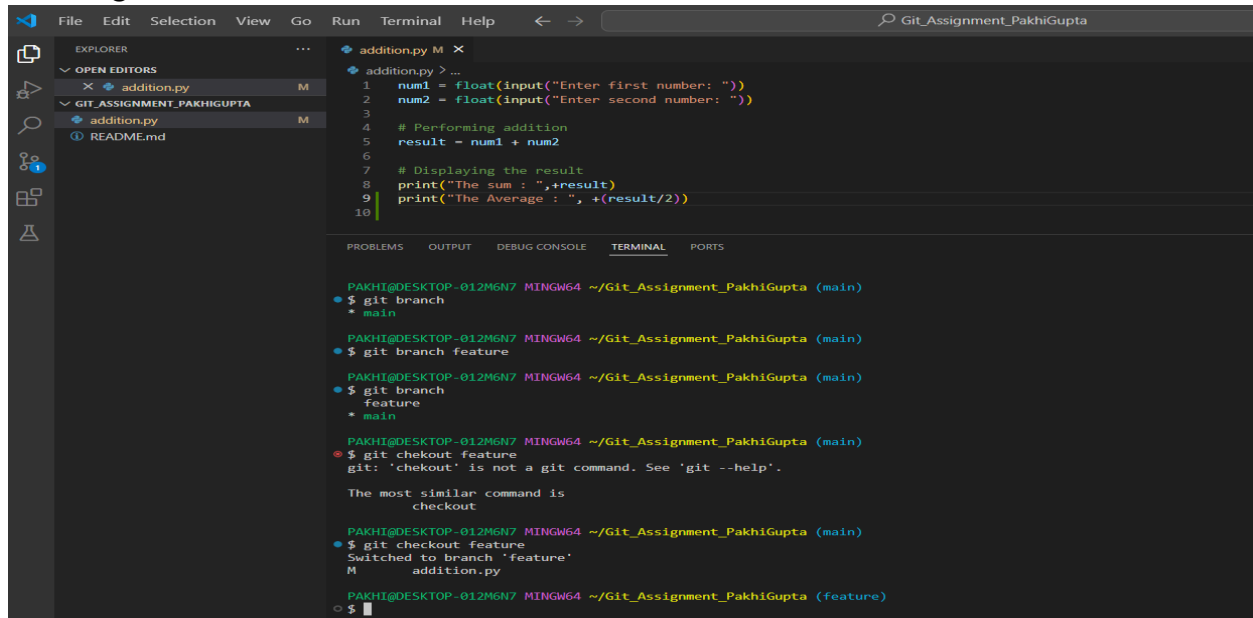
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
• $ git commit -m "Addition file Added"
[main d14ad00] Addition file Added
1 file changed, 8 insertions(+)
create mode 100644 addition.py

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
• $ git push origin main
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 597 bytes | 597.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
to https://github.com/Pakhi-21/Git_Assignment_NucleusTeq.git
 * [new branch]      main -> main

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
o $
```

3. Create a Branch

- git branch feature
- git checkout feature



The screenshot shows the VS Code interface with the Explorer panel on the left showing the file structure. The main editor displays the `addition.py` file. The terminal panel at the bottom shows the following commands and output:

```
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git branch
* main

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git branch feature
* main

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git checkout feature
git: 'checkout' is not a git command. See 'git --help'.

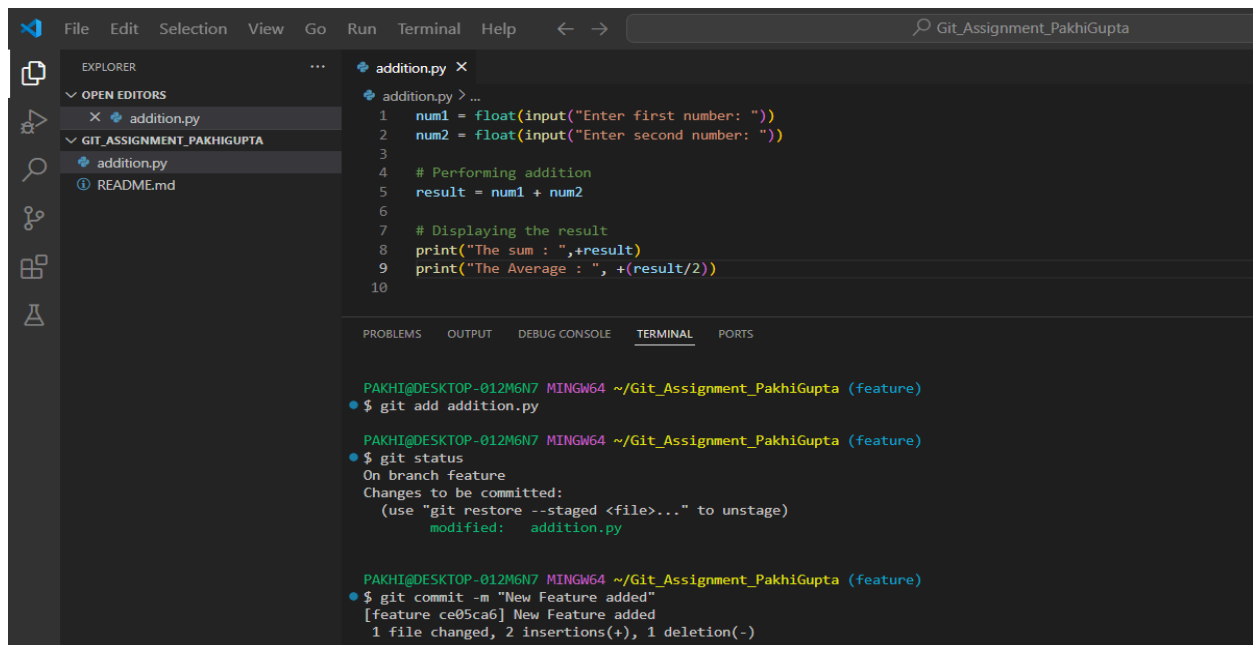
The most similar command is
checkout

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git checkout feature
Switched to branch 'feature'
M   addition.py

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (feature)
$
```

4. Make Changes in the New Branch

- In feature branch, added new line in `addition.py`
- Staged and commit the changes:
 - `git add addition.py`
 - `git commit -m "New feature added"`



The screenshot shows the VS Code interface with the Explorer panel on the left showing the file structure. The main editor displays the `addition.py` file. The terminal panel at the bottom shows the following commands and output:

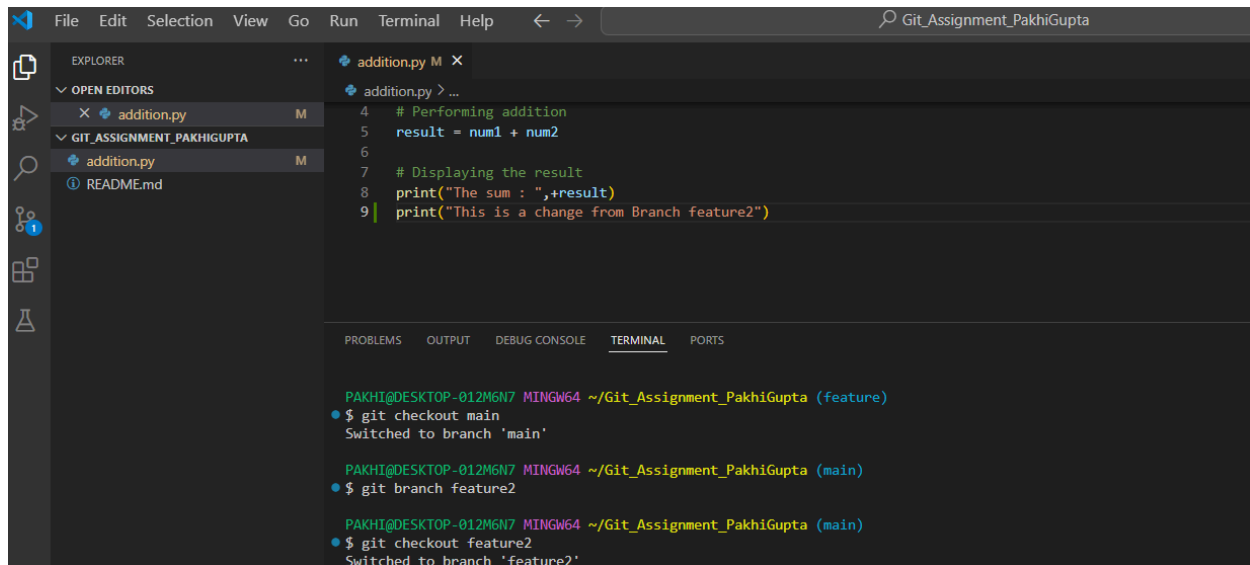
```
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (feature)
$ git add addition.py

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (feature)
$ git status
On branch feature
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   addition.py

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (feature)
$ git commit -m "New Feature added"
[feature ce05ca6] New Feature added
1 file changed, 2 insertions(+), 1 deletion(-)
```

5. Create Another Branch (Optional)

- From main, create new branch feature2,move to feature2 branch
- Add new line in addition.py
- Staged and commit the file
 - `git add addition.py`
 - `git commit -m "Updated addition.py in feature2"`



```
File Edit Selection View Go Run Terminal Help ← → Git_Assignment_PakhiGupta

EXPLORER
  OPEN EDITORS
    addition.py M
  GIT_ASSIGNMENT_PAKHIGUPTA
    addition.py M
    README.md

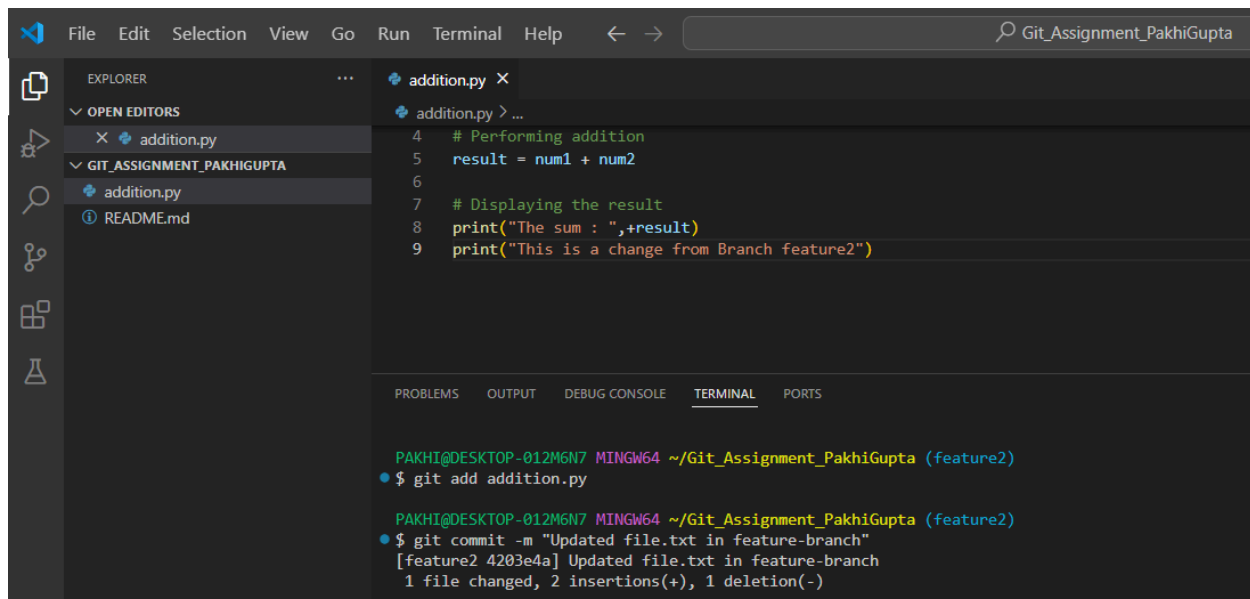
addition.py > ...
4 # Performing addition
5 result = num1 + num2
6
7 # Displaying the result
8 print("The sum : ",+result)
9 print("This is a change from Branch feature2")

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (feature)
• $ git checkout main
Switched to branch 'main'

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
• $ git branch feature2

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
• $ git checkout feature2
Switched to branch 'feature2'
```



```
File Edit Selection View Go Run Terminal Help ← → Git_Assignment_PakhiGupta

EXPLORER
  OPEN EDITORS
    addition.py
  GIT_ASSIGNMENT_PAKHIGUPTA
    addition.py
    README.md

addition.py > ...
4 # Performing addition
5 result = num1 + num2
6
7 # Displaying the result
8 print("The sum : ",+result)
9 print("This is a change from Branch feature2")

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

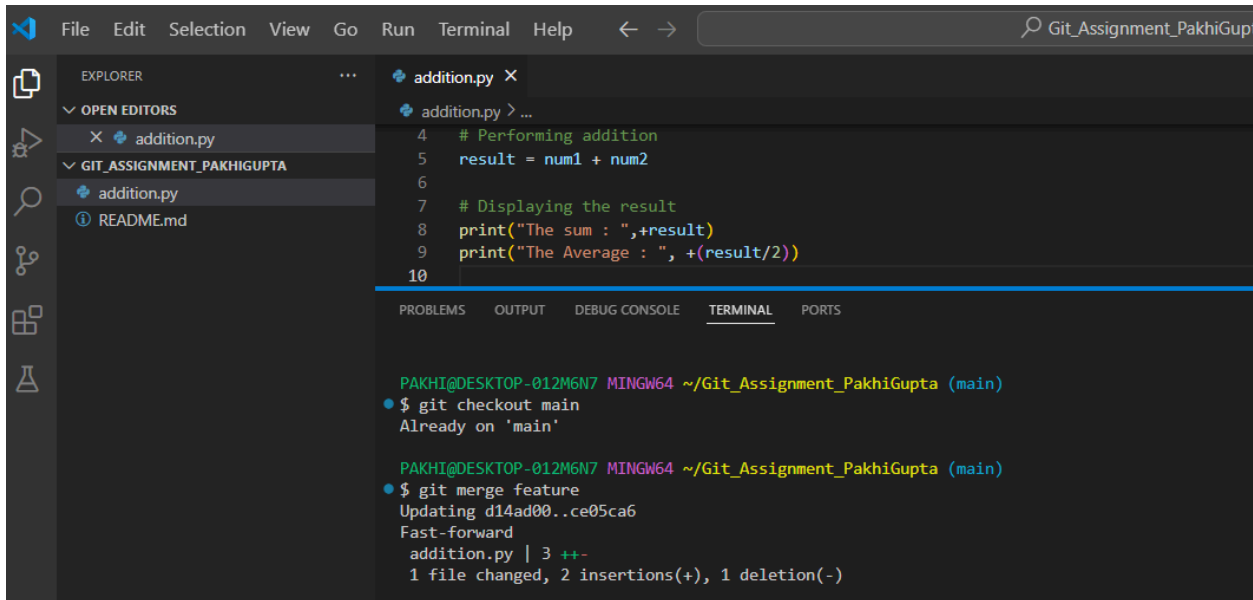
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (feature2)
• $ git add addition.py

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (feature2)
• $ git commit -m "Updated file.txt in feature-branch"
[feature2 4203e4a] Updated file.txt in feature-branch
1 file changed, 2 insertions(+), 1 deletion(-)
```

6. Merge Branches

-Merge feature branch into main branch:

- git checkout main
- git merge feature
- Merge successfully done



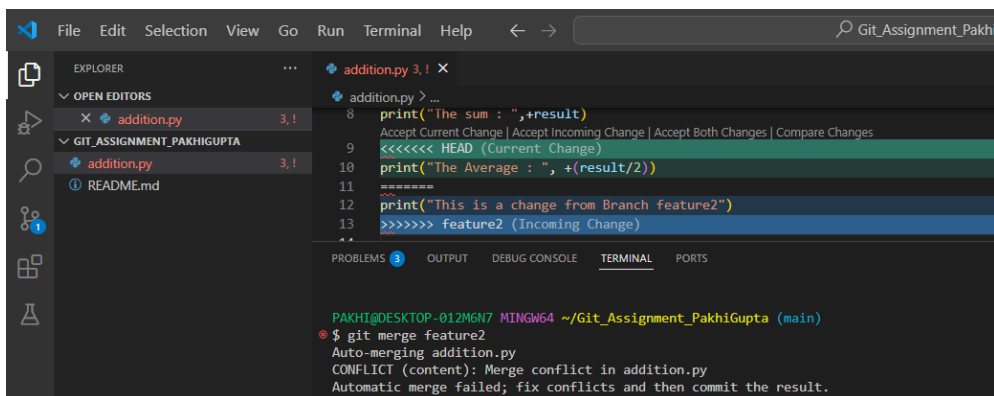
The screenshot shows the VS Code interface with the Explorer sidebar on the left showing the project structure. The main editor displays the `addition.py` file. The terminal at the bottom shows the following commands and output:

```
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git checkout main
Already on 'main'

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git merge feature
Updating d14ad00..ce05ca6
Fast-forward
 addition.py | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)
```

-Merge feature2 branch into main:

- git merge feature2
- Merge conflicts occur.

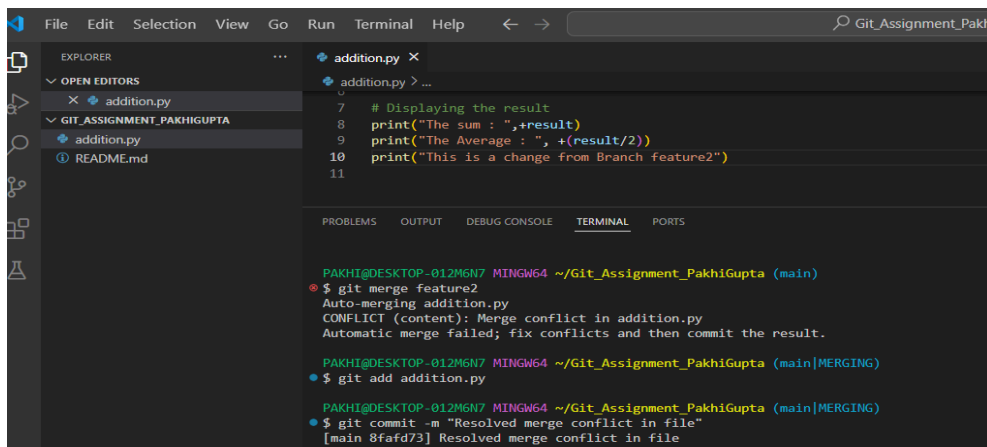


The screenshot shows the VS Code interface with the Explorer sidebar on the left. The main editor displays the `addition.py` file with conflict markers. The terminal at the bottom shows the following commands and output:

```
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git merge feature2
Auto-merging addition.py
CONFLICT (content): Merge conflict in addition.py
Automatic merge failed; fix conflicts and then commit the result.
```

- To resolve the conflict, open the conflict file `addition.py`
- Remove the conflict marker from the file, keep the correct version, then save the file, staged and commit the file.

- `git add addition.py`
- `git commit -m "Resolved merge conflict in file"`



```

7  # Displaying the result
8  print("The sum : ",+result)
9  print("The Average : ", +(result/2))
10 print("This is a change from Branch feature2")
11

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
• $ git merge feature2
Auto-merging addition.py
CONFLICT (content): Merge conflict in addition.py
Automatic merge failed; fix conflicts and then commit the result.

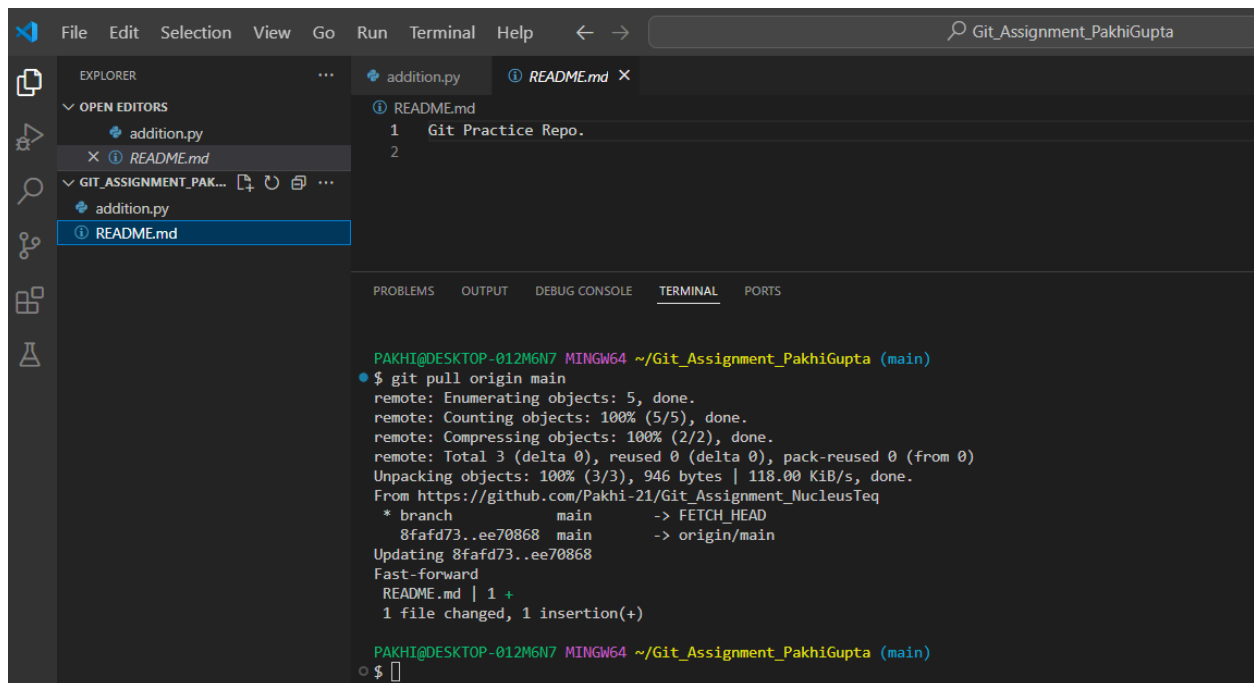
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main|MERGING)
• $ git add addition.py

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main|MERGING)
• $ git commit -m "Resolved merge conflict in file"
[main 8fafd73] Resolved merge conflict in file

```

7. Pull Changes from Remote

- Make changes in remote repo, pull the code in local repository.
- git pull origin main



```

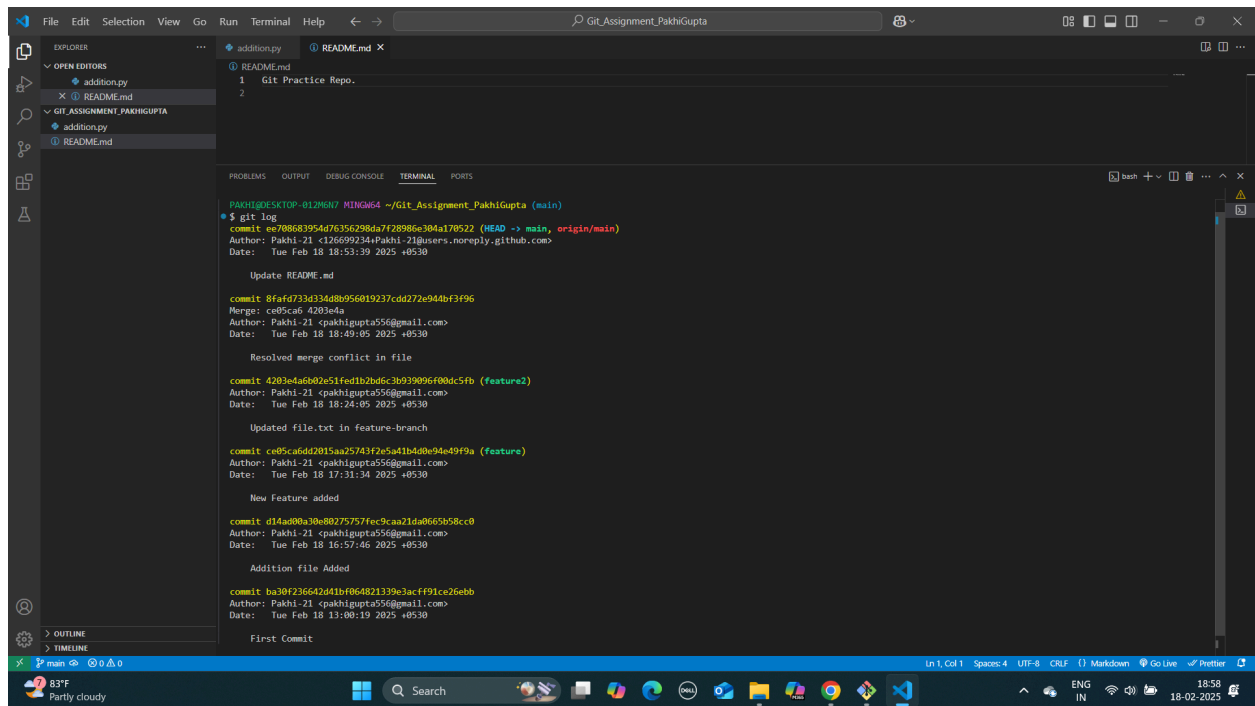
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
• $ git pull origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 946 bytes | 118.00 KiB/s, done.
From https://github.com/Pakhi-21/Git_Assignment_NucleusTeq
* branch      main       -> FETCH_HEAD
8fafd73..ee70868 main    -> origin/main
Updating 8fafd73..ee70868
Fast-forward
 README.md | 1 +
1 file changed, 1 insertion(+)

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
○ $

```

8. View Git Log and History

-git log



The screenshot shows a Visual Studio Code window with the Explorer sidebar on the left showing a project named 'Git_Assignment_PakhiGupta'. The main editor area displays the output of the 'git log' command in the terminal. The log shows a series of commits, including a merge commit and a feature branch commit. The status bar at the bottom indicates the current branch is 'main'.

```
PAKHIDESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git log
commit ee708683954476356298da7f28986e304a170522 (HEAD -> main, origin/main)
Author: Pakhi-21 <126699234@Pakhi-21@users.noreply.github.com>
Date: Tue Feb 18 18:53:39 2025 +0530

    Update README.md

commit 8fafd73d334d8b956019237cd472e944bf3496
Merge: ce05ca6 4203e4a
Author: Pakhi-21 <pakhigupta556@gmail.com>
Date: Tue Feb 18 18:24:05 2025 +0530

    Resolved merge conflict in file

commit 4203e4a6b02e51fe1b2bd6c3b939096f00dc5fb (feature2)
Author: Pakhi-21 <pakhigupta556@gmail.com>
Date: Tue Feb 18 18:24:05 2025 +0530

    Updated file.txt in feature-branch

commit ce05ca6d40815a2574373c5a1b1b0b04de09f9a (feature)
Author: Pakhi-21 <pakhigupta556@gmail.com>
Date: Tue Feb 18 17:31:34 2025 +0530

    New Feature added

commit d14ad00a30e80275757fec9caa21da0605b58cc0
Author: Pakhi-21 <pakhigupta556@gmail.com>
Date: Tue Feb 18 16:57:46 2025 +0530

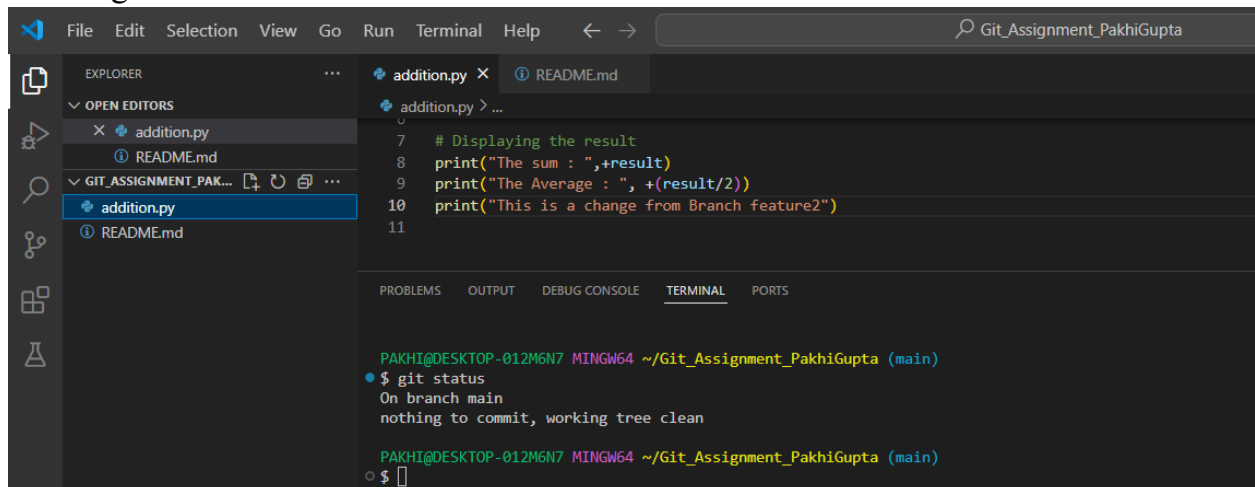
    Addition file Added

commit ba30f236642d41bf064821339e3acf91ce26ebb
Author: Pakhi-21 <pakhigupta556@gmail.com>
Date: Tue Feb 18 13:00:19 2025 +0530

    First Commit
```

9. Git Status and Staging

-git status
-git add .



The screenshot shows a Visual Studio Code window with the Explorer sidebar on the left showing a project named 'Git_Assignment_PakhiGupta'. The main editor area displays the output of the 'git status' and 'git add .' commands in the terminal. The status bar at the bottom indicates the current branch is 'main'.

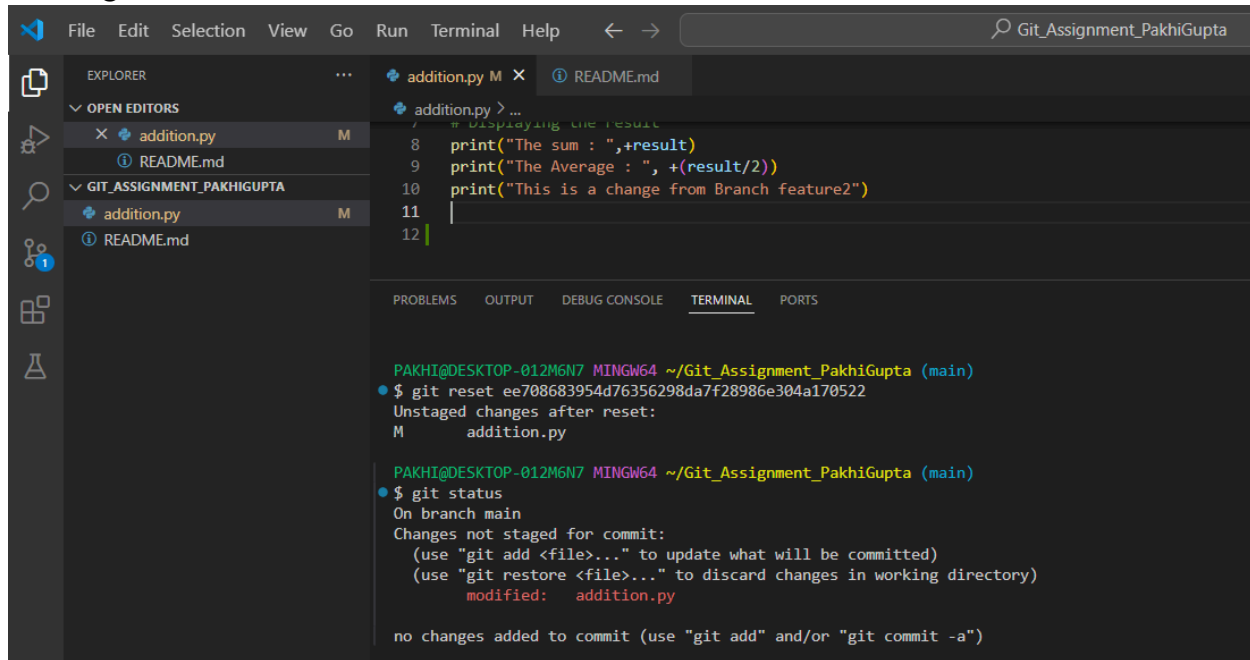
```
PAKHIDESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git status
On branch main
nothing to commit, working tree clean

PAKHIDESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$
```

10. Revert and Reset

-Reset Undo commits and remove changes

-git reset ee708683954d76356298da7f28986e304a170522



The screenshot shows the Visual Studio Code interface with the Explorer, Open Editors, and Git Explorer panels on the left. The main editor displays a Python file named `addition.py` with the following content:

```
1 # Displaying the result
2 result = 0
3 for i in range(1, 10):
4     result += i
5
6 # Calculating the average
7 average = result / 10
8 print("The sum : ",+result)
9 print("The Average : ", +(result/2))
10 print("This is a change from Branch feature2")
11
12
```

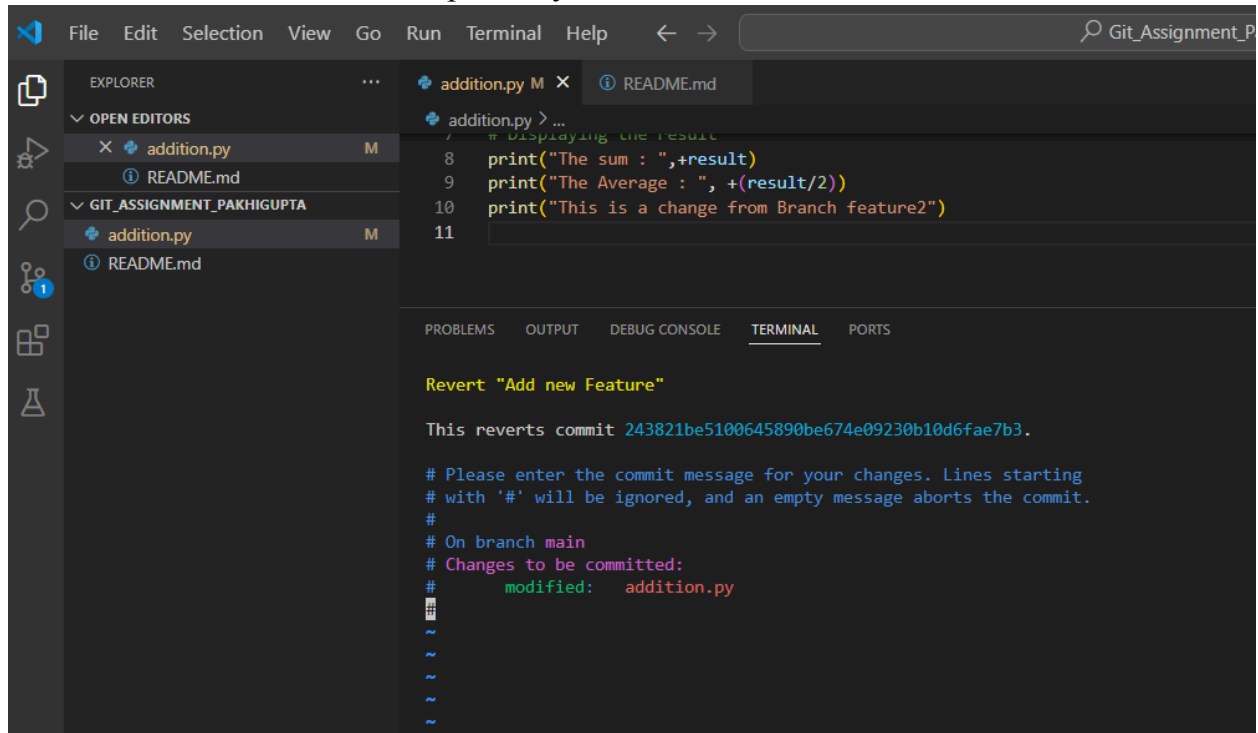
The terminal panel at the bottom shows the execution of the `git reset` command:

```
PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git reset ee708683954d76356298da7f28986e304a170522
Unstaged changes after reset:
M   addition.py

PAKHI@DESKTOP-012M6N7 MINGW64 ~/Git_Assignment_PakhiGupta (main)
$ git status
On branch main
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   addition.py

no changes added to commit (use "git add" and/or "git commit -a")
```

-Revert Undo a commit but keep history



The screenshot shows the Visual Studio Code interface with the Explorer, Open Editors, and Git Explorer panels on the left. The main editor displays the same `addition.py` file as in the previous screenshot.

The terminal panel at the bottom shows the execution of the `git revert` command:

```
Revert "Add new Feature"

This reverts commit 243821be5100645890be674e09230b10d6fae7b3.

# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# On branch main
# Changes to be committed:
#       modified:   addition.py
#
~
~
~
~
~
```