



PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY
Department of Information Technology
(NBA Accredited)



Department of Information Technology

Academic Year: 2025-26

Semester: V

Class / Branch: TEIT/Div C

Subject: DevOps Lab

Name of Instructor: Prof. Sujata Oak

Name of Student: Jigyasha Singh

Student ID: 2310417

Date of Performance: 23.07.2025

Date of Submission: 23.07.2025

Experiment No. 2

Aim: To understand and perform version control system / source code management using Git Branch

```
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~$ cd Desktop
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop$ cd git-jigyasha
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/git-jigyasha$ ls
23104017@jigyasha.pdf 23104017_jigyasha.pdf gitdemo16072025 token.odt
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/git-jigyasha$ sudo su
[sudo] password for apsit:
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha#
```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha# cd gitdemo16072025
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# ls
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# ls
hello.py mynewfile1 README.md
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#
```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git branch
* main
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git branch featureC
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git checkout featureC
Switched to branch 'featureC'
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#
```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# vi add.py
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# cat add.py
a=int(input("Enter a"))
b=int(input("Enter b"))
c=a+b
print("Addition is",c)
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#
```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git add add.py
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git status
On branch featureC
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   add.py

root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git commit -m "Added add.py file for commit on 23072025"
[featureC 8422cf8] Added add.py file for commit on 23072025
 1 file changed, 4 insertions(+)
 create mode 100644 add.py
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#
```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git log
commit 8422cf8f00c7d700ab797a8bce4109f7ab5e90a0 (HEAD -> featureC)
Author: jigyasha12 <23104017@apsit.edu.in>
Date:   Wed Jul 23 10:50:17 2025 +0530

    Added add.py file for commit on 23072025

commit 17ee078bf46bf92795faca189677fe9f9cfedc13 (main)
Author: jigyasha12 <23104017@apsit.edu.in>
Date:   Wed Jul 16 11:49:11 2025 +0530

    add info on branching

commit 168dc8bb0ec738b636c2c65bb1c9359aa8d49246 (origin/main, origin/HEAD)
Author: jigyasha12 <23104017@apsit.edu.in>
Date:   Wed Jul 16 11:35:45 2025 +0530

    Create mynewfile1

    I am committing my new file1

commit 90a399942cc11bb0feb81e5048261577d84cb793
Author: jigyasha12 <23104017@apsit.edu.in>
Date:   Wed Jul 16 11:08:13 2025 +0530

    First hello.py file

commit b008799f3200fde46629cf752fd1adcd3ff27bc4
Author: jigyasha12 <23104017@apsit.edu.in>
Date:   Wed Jul 16 10:50:02 2025 +0530

    Initial commit
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#
```

```

root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git push --set-upstream origin featureC
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 12 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 679 bytes | 679.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
remote:
remote: Create a pull request for 'featureC' on GitHub by visiting:
remote:   https://github.com/jigyasha12/gitdemo16072025/pull/new/featureC
remote:
To https://github.com/jigyasha12/gitdemo16072025
 * [new branch]   featureC -> featureC
branch 'featureC' set up to track 'origin/featureC'.
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#

```

The screenshot displays the GitHub interface for the repository `gitdemo16072025`. The main area shows the `featureC` branch, which is 2 commits ahead of the `main` branch. A recent commit by `jigyasha12` is highlighted, showing the addition of `add.py`. Below the commit list, a table of files is shown, including `README.md`, `add.py`, `hello.py`, and `mynewfile1`. The right sidebar contains sections for `About`, `Releases`, `Packages`, and `Languages`.

```

root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git branch
* featureC
  main
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# touch featureC-1
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# touch featureC-2
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# touch featureC-3
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# ls
add.py featureC-1 featureC-2 featureC-3 hello.py mynewfile1 README.md
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#

```

```

root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git add .
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git status
On branch featureC
Your branch is up to date with 'origin/featureC'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   featureC-1
    new file:   featureC-2
    new file:   featureC-3

root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#

```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git commit -m "Added 3 files in featureC branch"
[featureC 04a07de] Added 3 files in featureC branch
3 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 featureC-1
create mode 100644 featureC-2
create mode 100644 featureC-3
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git push -u origin featureC
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), 394 bytes | 394.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/jigyasha12/gitdemo16072025
   8422cf8..04a07de  featureC -> featureC
branch 'featureC' set up to track 'origin/featureC'.
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#
```

added 3 files in featureC branch #1

jigyasha12 wants to merge 3 commits into `main` from `featureC`

Conversation **0** Commits **3** Checks **0** Files changed **5** +7 -0

jigyasha12 commented [now](#) Owner ...

merging a branch featureC to main branch

jigyasha12 added 3 commits [last week](#)

- [add info on branching](#) 17ee078
- [Added add.py file for commit on 23872825](#) 8422cfe
- [Added 3 files in featureC branch](#) 04a07de

No conflicts with base branch

Merging can be performed automatically.

Merge pull request You can also merge this with the command line. [View command line instructions.](#)

Reviewers

No reviews

Still in progress? [Convert to draft](#)

Assignees

No one—[assign yourself](#)

Labels

None yet

Projects

None yet

Milestone

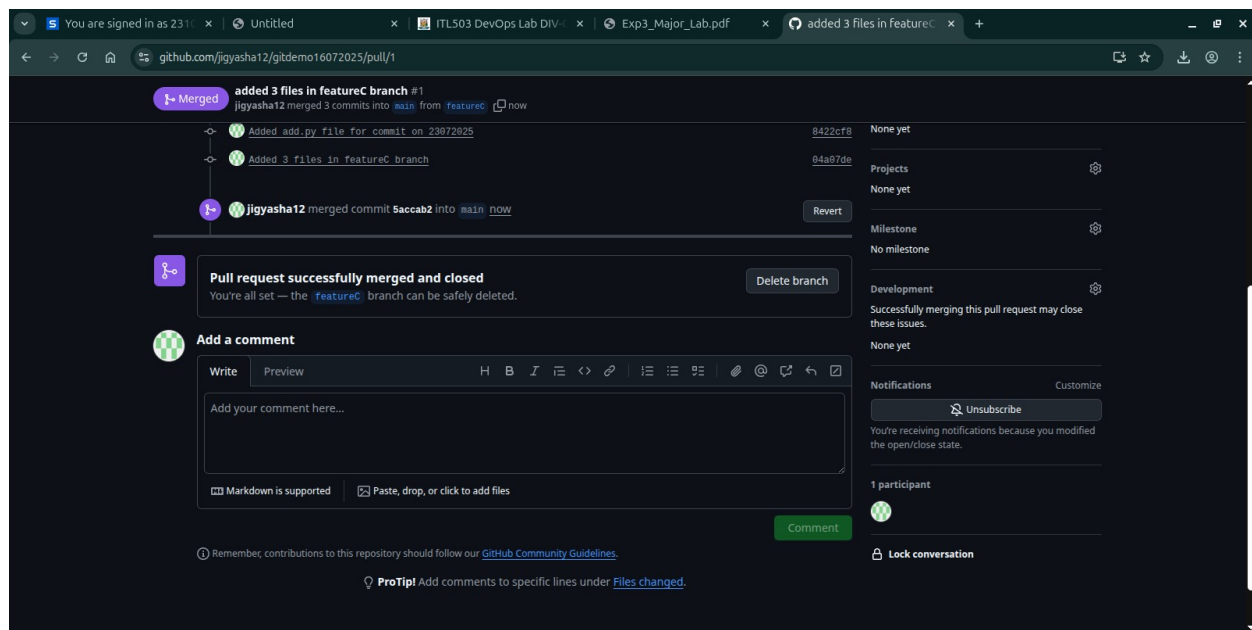
No milestone

Development

Successfully merging this pull request may close these issues.

None yet

Add a comment



```

root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git merge featureC
Updating 17ee078..04a07de
Fast-forward
 add.py      | 4 ++++
 featureC-1 | 0
 featureC-2 | 0
 featureC-3 | 0
 4 files changed, 4 insertions(+)
 create mode 100644 add.py
 create mode 100644 featureC-1
 create mode 100644 featureC-2
 create mode 100644 featureC-3
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# ls
add.py featureC-1 featureC-2 featureC-3 hello.py mynewfile1 README.md
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#

```

```

root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git branch -d featureC
Deleted branch featureC (was 04a07de).
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git branch
* main
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#

```

```

root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git push --delete origin featureC
To https://github.com/jigyasha12/gitdemo16072025
- [deleted]      featureC
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#

```

Conclusion: In this experiment, we used branching and merging. Commands such as checkout, branch and merge were used for displaying the changes made.