Department of Information Technology

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Semester: V   **Student ID:23104017**

Class / Branch: TEIT/Div C   **Date of Performance:16/07/2025**

Subject: DevOps Lab   **Date of Submission: 16/07/2025**

Name of Instructor: Prof. Sujata Oak

Experiment No. 2

Aim:To perform installation of Git and work on local and remote Git repositories.

```
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
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/git-jigyasha$ pwd
/home/apsit/Desktop/git-jigyasha
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/git-jigyasha$
```

```
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/git-jigyasha$ sudo su
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha# apt update
Get:1 https://packages.microsoft.com/repos/code stable InRelease [3,590 B]
Get:2 https://dl.google.com/linux/chrome/deb stable InRelease [1,825 B]
Get:3 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:4 http://archive.ubuntu.com/ubuntu noble InRelease
Get:5 https://packages.microsoft.com/repos/code stable/main amd64 Packages [20.1 kB]
Get:6 https://packages.microsoft.com/repos/code stable/main armhf Packages [20.3 kB]
```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha# git --version
git version 2.43.0
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha# git config --global user.name "jigyasha12"
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha# git config --global user.email 23104017@apsit.edu.in
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha# git config --list
user.name=jigyasha12
user.email=23104017@apsit.edu.in
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# git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/apsit/Desktop/git-jigyasha/.git/
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# ls -altr
total 12
drwxr-xr-x 6 apsit apsit 4096 Jul 16 10:32 ..
drwxrwxr-x 3 apsit apsit 4096 Jul 16 10:50 .
drwxr-xr-x 7 root  root  4096 Jul 16 10:50 .git
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# git clone https://github.com/jigyasha12/gitdemo16072025.git
Cloning into 'gitdemo16072025'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
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# ls -altr
total 16
drwxr-xr-x 6 apsit apsit 4096 Jul 16 10:32 ..
drwxr-xr-x 7 root  root  4096 Jul 16 10:50 .git
drwxrwxr-x 4 apsit apsit 4096 Jul 16 10:54 .
drwxr-xr-x 3 root  root  4096 Jul 16 10:54 gitdemo16072025
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/gitdemo16072025# cat README.md
# gitdemo16072025
Setup git demo on remote repository
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 hello.py
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# ls
hello.py   README.md
```

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

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   hello.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 commit -m "First hello.py file"
[main 90a3999] First hello.py file
 1 file changed, 1905 insertions(+)
 create mode 100644 hello.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 remote set-url origin https://ghp_RY2MWEASNnCQC5Ega6wPPKIIzMAv1T0Qkl
4t@github.com/jigyasha12/gitdemo16072025
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 349 bytes | 349.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/jigyasha12/gitdemo16072025
   b008799..90a3999  main -> main
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#
```

gitdemo16072025 (Public)

Pin | Watch 0

main | 1 Branch | 0 Tags | Go to file | Add file | <> Code

jigyasha12 First hello.py file | 90a3999 · 23 minutes ago | 2 Commits

| README.md | Initial commit | 41 minutes ago |
| hello.py | First hello.py file | 23 minutes ago |

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# ls -ltr
total 8
-rw-r--r-- 1 root root   54 Jul 16 10:54 README.md
-rw-r--r-- 1 root root 3829 Jul 16 11:02 hello.py
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git pull
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 1023 bytes | 1023.00 KiB/s, done.
From https://github.com/jigyasha12/gitdemo16072025
   90a3999..168dc8b  main        -> origin/main
Updating 90a3999..168dc8b
Fast-forward
 mynewfile1 | 3 +++
 1 file changed, 3 insertions(+)
 create mode 100644 mynewfile1
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# ls -ltr
total 12
-rw-r--r-- 1 root root   54 Jul 16 10:54 README.md
-rw-r--r-- 1 root root 3829 Jul 16 11:02 hello.py
-rw-r--r-- 1 root root   62 Jul 16 11:36 mynewfile1
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# cat mynewfile1
Welcome to session on version control System
git github
okay
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git log
commit 168dc8bb0ec738b636c2c65bb1c9359aa8d49246 (HEAD -> main, origin/main, origin/HEAD)
Author: jigyasha12 <23104017@apsit.edu.in>
Date:   Wed Jul 16 11:35:45 2025 +0530

    Create mynewfile1

    I am commiting 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 log --oneline
168dc8b (HEAD -> main, origin/main, origin/HEAD) Create mynewfile1
90a3999 First hello.py file
b008799 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 show 168dc8b
commit 168dc8bb0ec738b636c2c65bb1c9359aa8d49246 (HEAD -> main, origin/main, origin/HEAD)
Author: jigyasha12 <23104017@apsit.edu.in>
Date:   Wed Jul 16 11:35:45 2025 +0530

    Create mynewfile1

    I am commiting my new file1

diff --git a/mynewfile1 b/mynewfile1
new file mode 100644
index 0000000..ced62e4
--- /dev/null
+++ b/mynewfile1
@@ -0,0 +1,3 @@
+Welcome to session on version control System
+git github
+okay
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 mynewfile1
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git status
On branch main
Your branch is up to date with 'origin/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:   mynewfile1

no changes added to commit (use "git add" and/or "git commit -a")
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 main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   mynewfile1
```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git commit -m "add info on branching"
[main 17ee078] add info on branching
 1 file changed, 3 insertions(+)
```

```
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git log --oneline
17ee078 (HEAD -> main) add info on branching
168dc8b (origin/main, origin/HEAD) Create mynewfile1
90a3999 First hello.py file
b008799 Initial commit
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025# git diff 17ee078 168dc8b
diff --git a/mynewfile1 b/mynewfile1
index d218b11..ced62e4 100644
--- a/mynewfile1
+++ b/mynewfile1
@@ -1,6 +1,3 @@
-
-learning git branch
-goOD
 Welcome to session on version control System
 git github
 okay
root@apsit-HP-ProDesk-600-G4-PCI-MT:/home/apsit/Desktop/git-jigyasha/gitdemo16072025#
```

Conclusion: In this experiment, we installed git and created local and remote repositories. We configured user details, and understood how to initialize, commit, push, and pull changes.