PARSHVANATH CHARITABLE TRUST'S

A. P. SHAH INSTITUTE OF TECHNOLOGY

Department of Information Technology

(NBA Accredited)

Department of Information Technology

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Class / Branch: TEIT/Div C
Subject: DevOps Lab
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Experiment No. 02

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

STEP1:You need to setup Git on your local machine, as follows:

STEP2:To update all local package index for ubuntu:

STEP3: Download & Install: #apt-get install git

STEP4: VERSION:

STEP5:USERNAME AND EMAIL:

```
git version 2.25.1
root@vora:/home/apsit/git-shravanis# git config --global user.name "shravanisawant813"
root@vora:/home/apsit/git-shravanis# git config --global user.email "24204018@apsit.edu.in"
root@vora:/home/apsit/git-shravanis#
```

STEP6:CONFIGURATION:

```
root@vora:/home/apsit/git-shravanis# git config --global user.email "24204018@apsit.edu.in"
root@vora:/home/apsit/git-shravanis# git config --list
user.name=shravanisawant813
user.email=24204018@apsit.edu.in
root@vora:/home/apsit/git-shravanis#
```

STEP7:INITIALISATION

```
user.email=24204018@apsit.edu.in
root@vora:/home/apsit/git-shravanis# git init
Initialized empty Git repository in /home/apsit/git-shravanis/.git/
root@vora:/home/apsit/git-shravanis#
```

STEP8: ALTR

```
root@vora:/home/apsit/git-shravanis# ls -altr
total 20
drwxrwxr-x  3 apsit apsit  4096 Jul 18 08:48 .
drwxr-xr-x  7 root  root   4096 Jul 18 08:48 .git
drwxr-xr-x 46 apsit apsit 12288 Jul 18 08:48 ..
root@vora:/home/apsit/git-shravanis#
```

STEP9: CLONE

```
drwxr-xr-x 46 apsit apsit 12288 Jul 18 08:48 ..
root@vora:/home/apsit/git-shravanis# git clone https://github.com/shravanisawant819/gitdemo18072025.git
Cloning into 'gitdemo18072025'...
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)
Unpacking objects: 100% (3/3), 895 bytes | 447.00 KiB/s, done.
root@vora:/home/apsit/git-shravanis#
```

```
unpacking objects: 100% (3/3), 895 bytes | 447.00 KiB/s, don
root@vora:/home/apsit/git-shravanis# ls -ltr
total 4
drwxr-xr-x 3 root root 4096 Jul 18 08:50 gitdemo18072025
root@vora:/home/apsit/git-shravanis#
```

```
root@vora:/home/apsit/git-shravanis# cd gitdemo18072025
root@vora:/home/apsit/git-shravanis/gitdemo18072025# ls
README.md
root@vora:/home/apsit/git-shravanis/gitdemo18072025# cat README.md
# gitdemo18072025
setup of git experiment 18072025
root@vora:/home/apsit/git-shravanis/gitdemo18072025#
```

STEP10: STATUS

```
nothing added to commit but untracked files present (use "git add" to track)
root@vora:/home/apsit/git-shravanis/gitdemo18072025# git add helloworld.py
root@vora:/home/apsit/git-shravanis/gitdemo18072025# 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:   helloworld.py

Google Chrome e/apsit/git-shravanis/gitdemo18072025#
```

```
nothing added to commit but untracked files present (use "git add" to track)
root@vora:/home/apsit/git-shravanis/gitdemo18072025# git add helloworld.py
root@vora:/home/apsit/git-shravanis/gitdemo18072025# 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:   helloworld.py

Google Chrome e/apsit/git-shravanis/gitdemo18072025#
```
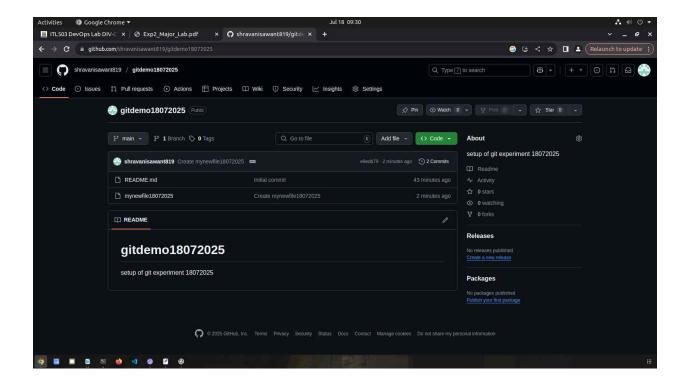
STEP11: COMMIT

```
root@vora:/home/apsit/git-shravanis/gitdemo18072025# git commit -m "first file added helloworld.py"
[main 7bf38fe] first file added helloworld.py
 1 file changed, 3 insertions(+)
 create mode 100644 helloworld.py
root@vora:/home/apsit/git-shravanis/gitdemo18072025#
```

STEP12:   USERNAME PASSWORD

```
nothing to commit, working tree clean
root@vora:/home/apsit/git-shravanis/gitdemo18072025# git push origin main
Username for 'https://github.com': shravanisawant813
Password for 'https://shravanisawant813@github.com':
remote: Support for password authentication was removed on August 13, 2021.
remote: Please see https://docs.github.com/get-started/getting-started-with-git/about-remote-repositories#cloning-with-https-urls for information on currently recommended modes
 of authentication.
fatal: Authentication failed for 'https://github.com/shravanisawant819/gitdemo18072025.git/'
root@vora:/home/apsit/git-shravanis/gitdemo18072025#
```

STEP13: PULL AND PUSH

```
total 8
-rw-r--r-- 1 root root 51 Jul 18 08:50 README.md
-rw-r--r-- 1 root root 55 Jul 18 08:58 helloworld.py
root@vora:/home/apsit/git-shravanis/gitdemo18072025#
```

STEP 14:GIT LOG

STEP15: git show

```
Date:    Thu Jul 18 17:36:17 2025 +0000

    first file added

diff --git a/factorial.py b/factorial.py
new file mode 100644
index 0000000..87338e7
--- /dev/null
+++ b/factorial.py
@@ -0,0 +1,11 @@
+num = int(input("Enter a number: "))
+factorial = 1
+
+if num < 0:
+    print("Factorial does not exist for negative numbers")
+elif num == 0:
+    print("The factorial of 0 is 1")
+else:
+    for i in range(1, num + 1):
+        factorial = factorial * i
```

CONCLUSION:

Installing Git provides a powerful tool for version control and collaborative
software development. By working on local repositories, users can efficiently track
changes and manage project history. Connecting to remote repositories enables
seamless collaboration with others, facilitating code sharing and integration.
Mastering Git commands and workflows enhances productivity and project
organization. Overall, Git is essential for modern development practices, ensuring
robust code management and teamwork.