

WEEK 8 – ASSIGNMENT

Superset ID: 6390124

Git Exercises:-

Exercise 1:

Step 1: Setup your machine with Git Configuration

To create a new repository, signup with GitLab and register your credentials

Login to GitLab and create a “GitDemo” project

1. To check if Git client is installed properly: Open Git bash shell and execute

```
$ git version
git version 2.21.0.windows.1
```

If output shows Git with its version information that indicates, that Git Client installs properly.

2. To configure user level configuration of user ID and email ID execute

```
$ git config --global user.name "username"
$ git config --global user.email "username@cognizant.com"
```

3. To check if the configuration is properly set, execute the following command.

```
$ git config --global --list
user.name=username
user.email=username@cognizant.com
```

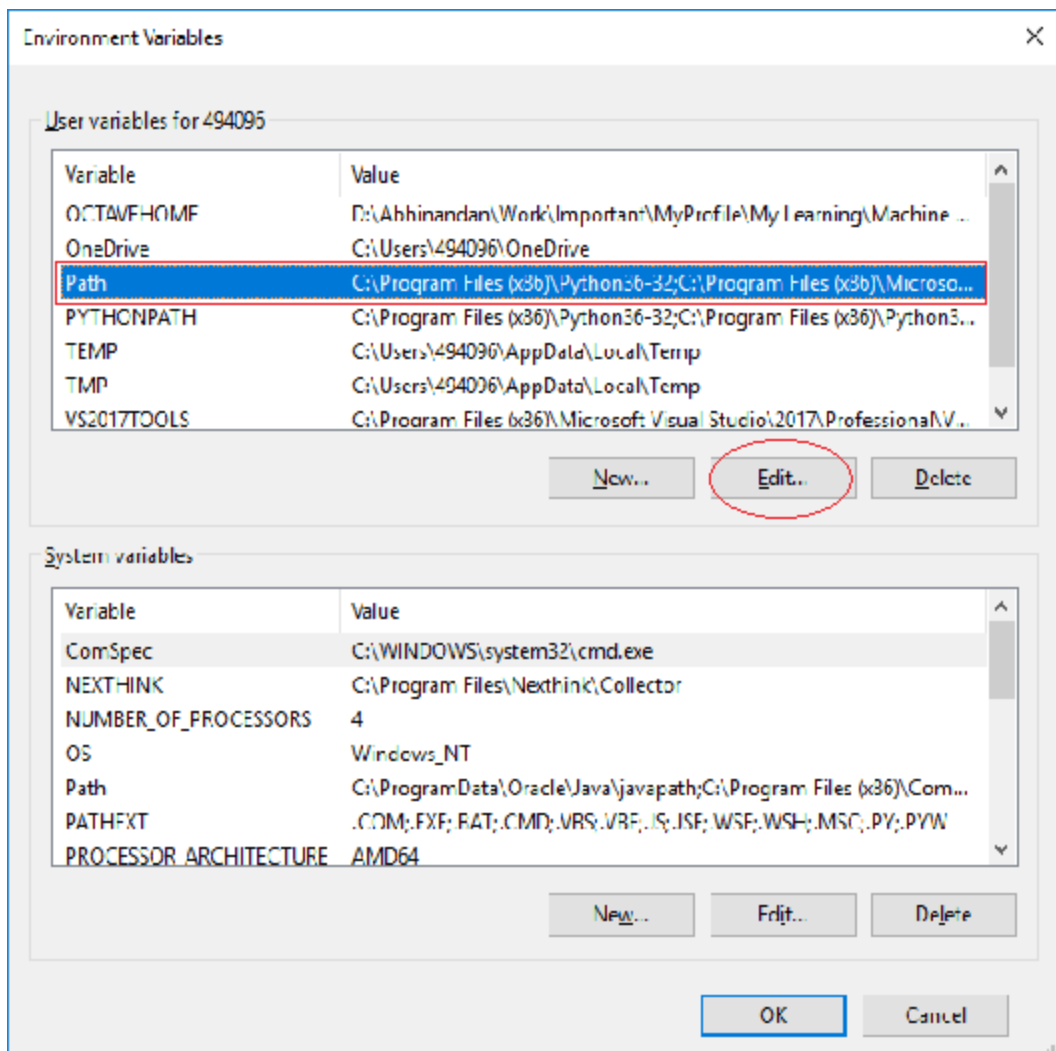
Step 2: Integrate notepad++.exe to Git and make it a default editor

1. To check, if notepad++.exe execute from Git bash

```
$ notepad++
bash: notepad++: command not found
```

If Git bash could not able to recognize notepad++ command that implies notepad++.exe is not added to the environment path variable.

To add path of notepad++.exe to environment variable, go to control panel -> System -> Advanced System settings. Go to Advanced tab -> Environment variables -> Add path of notepad++.exe to the path user variable by clicking on “Edit”



2. Exit Git bash shell, open bash shell and execute

```
$ notepad++
```

Now, notepad++ will open from Git bash shell

3. To create an alias command for notepad++.exe, execute

```
$ notepad++.exe bash -profile
```

It will open notepad++ from bash shell, and create a user profile by adding the line in notepad++

```
alias npp='notepad++.exe -multiInst -nosession'
```

4. To configure the editor, execute the command

```
$ git config --global core.editor "notepad++.exe -multiInst -nosession"
```

5. To verify if notepad++ is the default editor, execute the command

```
$ git config --global -e
hint: Waiting for your editor to close the file... _
```

Here '-e' option implies editor

It will show the entire global configuration as shown below,

```
[user]
    name = username
    email = username@cognizant.com
[core]
    editor = notepad++.exe -multiInst -nosession
```

Step 3: Add a file to source code repository

1. Open Git bash shell and create a new project “GitDemo” by executing the command

```
$ git init GitDemo
Initialized empty Git repository in D:/Development_Avecto/GitDemo/.git/
```

2. Git bash initializes the “GitDemo” repository. To verify, execute the command

```
$ ls -al
total 8
drwxr-xr-x 1          1049089 0 Jan 13 11:54 ./
drwxr-xr-x 1          1049089 0 Jan 13 11:54 ../
drwxr-xr-x 1          1049089 0 Jan 13 11:54 .git/
```

It will display all the hidden files in the Git “working directory”.

3. To create a file “welcome.txt” and add content to the file, execute the command

```
$ echo "Welcome to the version control" >> welcome.txt
```

4. To verify if the file “welcome.txt” is created, execute

```
$ ls -al
total 9
drwxr-xr-x 1 494096 1049089 0 Jan 13 12:02 ./
drwxr-xr-x 1 494096 1049089 0 Jan 13 11:54 ../
drwxr-xr-x 1 494096 1049089 0 Jan 13 12:01 .git/
-rw-r--r-- 1 494096 1049089 31 Jan 13 12:02 welcome.txt
```

5. To verify the content, execute the command

```
$ cat welcome.txt
Welcome to the version control
```

6. Check the status by executing

```
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)

    welcome.txt
```

Now the file “welcome.txt” is available in Git “working directory”

7. To make the file to be tracked by Git repository, execute the command

```
$ git add welcome.txt
warning: LF will be replaced by CRLF in welcome.txt.
The file will have its original line endings in your working directory
```

8. To add multi line comments, we are opening default editor to comment. Execute the command

```
$ git commit
```

Notepad++ editor will open and to add multi-line comment with default editor

9. To check if local and “Working Directory” git repository are same, execute git status

```
$ git status
On branch master
nothing to commit, working tree clean
```

welcome.txt is added to the local repository.

10. Signup with GitLab and create a remote repository “GitDemo”

11. To pull the remote repository, execute

git pull origin master

12. To push the local to remote repository, execute

git push origin master

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ git --version
git version 2.50.1.windows.1
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ git config --global user.name "SharanbabuB"
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ git config --global user.email "sharanbabu545@gmail.com"
```

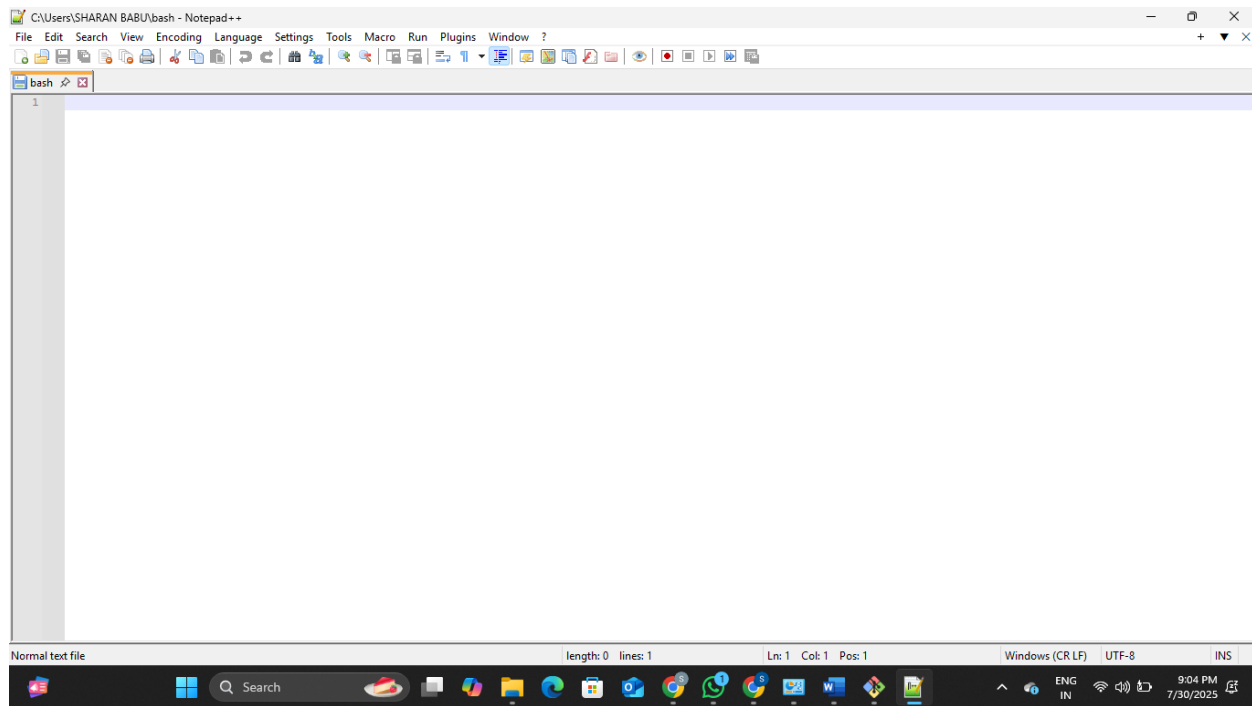
```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=schannel
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.name=SharanbabuB
user.email=sharanbabu545@gmail.com
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ git config --global --list
user.name=SharanbabuB
user.email=sharanbabu545@gmail.com
```

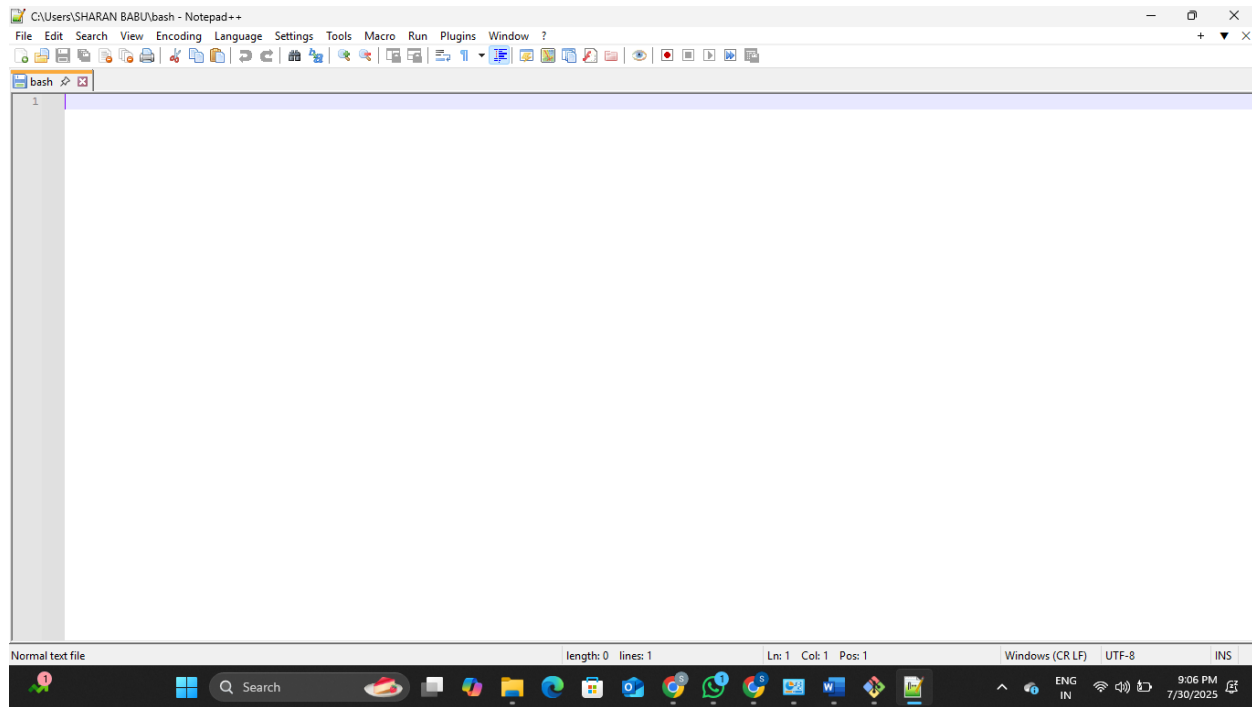
```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ notepad++
bash: notepad++: command not found
```

After setting the path of Notepad++:

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ notepad++
```



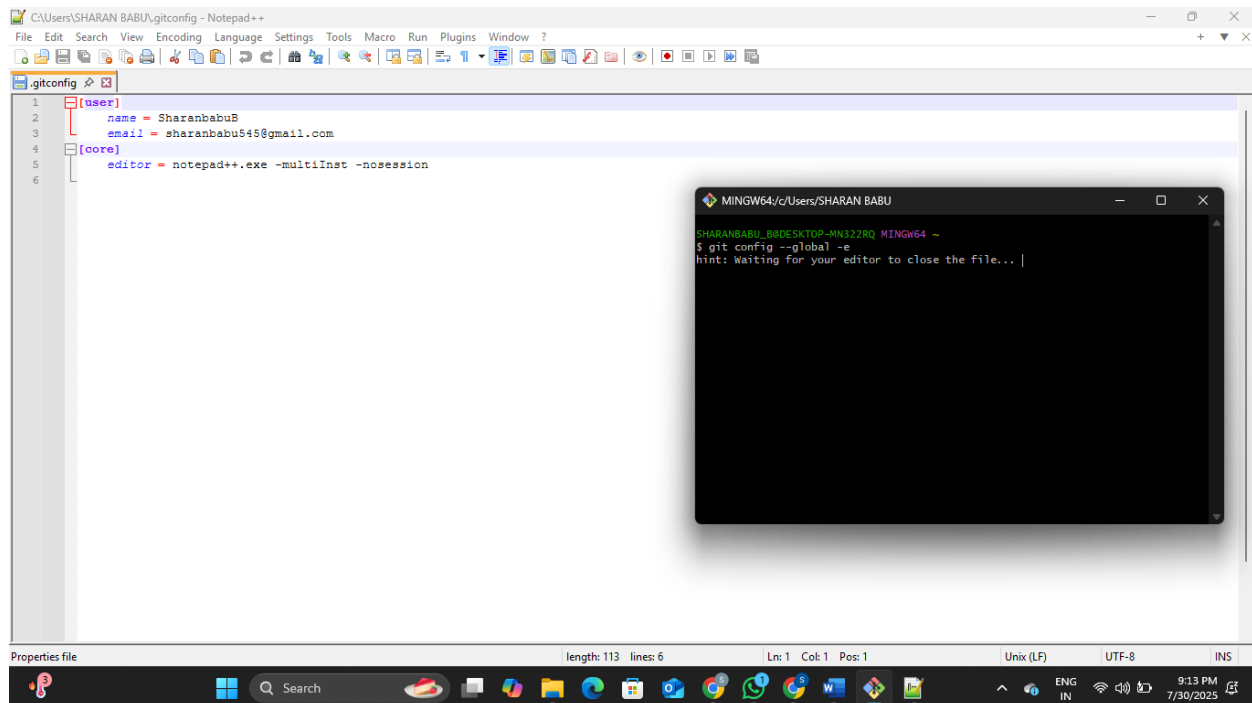
```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~  
$ notepad++.exe bash -profile
```



```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~  
$ alias npp='notepad++.exe -multiInst -nosession'
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ git config --global core.editor "notepad++.exe -multiInst -nosession"
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ git config --global -e
hint: Waiting for your editor to close the file...
```



```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ git init GitDemo
Initialized empty Git repository in C:/Users/SHARAN BABU/GitDemo/.git/
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ ls -al
total 11128
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 30 21:14 ./
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 26 15:14 ../
-rw-r--r-- 1 SHARANBABU_B 197121    361 Jul 30 19:36 .bash_history
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 28 19:30 .docker/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 21 19:20 .eclipse/
-rw-r--r-- 1 SHARANBABU_B 197121    113 Jul 30 21:09 .gitconfig
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar 24 10:28 .idlerc/
-rw-r--r-- 1 SHARANBABU_B 197121     20 Jul 30 19:30 .lessht
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jun 29 13:29 .m2/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar  1 14:01 .ms-ad/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar  5 21:34 .nuget/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 23 16:41 .p2/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 17:26 .redhat/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 13 14:10 .sts4/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar  1 13:52 .vscode/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:45 AppData/
lrwxrwxrwx 1 SHARANBABU_B 197121     36 May 20 16:44 'Application Data' ->
'/c/Users/SHARAN BABU/AppData/Roaming'/
```

```

drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:55 Contacts/
lrwxrwxrwx 1 SHARANBABU_B 197121     64 May 20 16:44 Cookies ->
'/c/Users/SHARAN BABU/AppData/Local/Microsoft/Windows/INetCookies'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul  3 22:03 Desktop/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar  1 13:24 Documents/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 30 19:18 Downloads/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:55 Favorites/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 30 21:14 GitDemo/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar 12 16:47 IntelGraphicsProfiles/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jun 18 21:55
Learning_Program_Solutions/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:55 Links/
lrwxrwxrwx 1 SHARANBABU_B 197121     34 May 20 16:44 'Local Settings' ->
'/c/Users/SHARAN BABU/AppData/Local'/
lrwxrwxrwx 1 SHARANBABU_B 197121     30 May 20 16:44 'My Documents' ->
'/c/Users/SHARAN BABU/Documents'/
-rw-r--r-- 1 SHARANBABU_B 197121 7077888 Jul 29 21:58 NTUSER.DAT
-rw-r--r-- 1 SHARANBABU_B 197121  65536 May 20 16:44 NTUSER.DAT{139b56a9-
356b-11f0-969e-85be75f19ede}.TM.blf
-rw-r--r-- 1 SHARANBABU_B 197121  524288 May 20 16:44 NTUSER.DAT{139b56a9-
356b-11f0-969e-85be75f19ede}.TMContainer0000000000000000000001.regtrans-ms
-rw-r--r-- 1 SHARANBABU_B 197121  524288 May 20 16:44 NTUSER.DAT{139b56a9-
356b-11f0-969e-85be75f19ede}.TMContainer0000000000000000000002.regtrans-ms
lrwxrwxrwx 1 SHARANBABU_B 197121     72 May 20 16:44 NetHood ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Network Shortcuts'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 30 19:00 OneDrive/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 13 16:15 Postman/
lrwxrwxrwx 1 SHARANBABU_B 197121     72 May 20 16:44 PrintHood ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Printer Shortcuts'/
lrwxrwxrwx 1 SHARANBABU_B 197121     61 May 20 16:44 Recent ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Recent'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:55 'Saved Games'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jun 17 08:00 Searches/
lrwxrwxrwx 1 SHARANBABU_B 197121     61 May 20 16:44 SendTo ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/SendTo'/
lrwxrwxrwx 1 SHARANBABU_B 197121     65 May 20 16:44 'Start Menu' ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Start Menu'/
lrwxrwxrwx 1 SHARANBABU_B 197121     64 May 20 16:44 Templates ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Templates'/
-rw-r--r-- 1 SHARANBABU_B 197121      0 Jul 30 20:58 bash
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 21 19:16 eclipse/
-rw-r--r-- 1 SHARANBABU_B 197121 1777664 May 20 16:44 ntuser.dat.LOG1
-rw-r--r-- 1 SHARANBABU_B 197121 1310720 May 20 16:44 ntuser.dat.LOG2
-rw-r--r-- 1 SHARANBABU_B 197121     20 May 20 16:55 ntuser.ini

```

```

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ echo "Welcome to the version control" >> welcome.txt

```

```

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~
$ ls -al
total 11501
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 30 21:16 ./
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 26 15:14 ../
-rw-r--r-- 1 SHARANBABU_B 197121    361 Jul 30 19:36 .bash_history
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 28 19:30 .docker/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 21 19:20 .eclipse/
-rw-r--r-- 1 SHARANBABU_B 197121    113 Jul 30 21:09 .gitconfig

```

```

drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar 24 10:28 .idlerc/
-rw-r--r-- 1 SHARANBABU_B 197121    20 Jul 30 19:30 .lessht
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jun 29 13:29 .m2/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar  1 14:01 .ms-ad/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar  5 21:34 .nuget/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 23 16:41 .p2/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 17:26 .redhat/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 13 14:10 .sts4/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar  1 13:52 .vscode/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:45 AppData/
lrwxrwxrwx 1 SHARANBABU_B 197121    36 May 20 16:44 'Application Data' ->
'/c/Users/SHARAN BABU/AppData/Roaming'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:55 Contacts/
lrwxrwxrwx 1 SHARANBABU_B 197121    64 May 20 16:44 Cookies ->
'/c/Users/SHARAN BABU/AppData/Local/Microsoft/Windows/INetCookies'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul  3 22:03 Desktop/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar  1 13:24 Documents/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 30 19:18 Downloads/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:55 Favorites/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 30 21:14 GitDemo/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Mar 12 16:47 IntelGraphicsProfiles/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jun 18 21:55
Learning_Program_Solutions/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:55 Links/
lrwxrwxrwx 1 SHARANBABU_B 197121    34 May 20 16:44 'Local Settings' ->
'/c/Users/SHARAN BABU/AppData/Local'/
lrwxrwxrwx 1 SHARANBABU_B 197121    30 May 20 16:44 'My Documents' ->
'/c/Users/SHARAN BABU/Documents'/
-rw-r--r-- 1 SHARANBABU_B 197121 7077888 Jul 29 21:58 NTUSER.DAT
-rw-r--r-- 1 SHARANBABU_B 197121 65536 May 20 16:44 NTUSER.DAT{139b56a9-
356b-11f0-969e-85be75f19ede}.TM.blf
-rw-r--r-- 1 SHARANBABU_B 197121 524288 May 20 16:44 NTUSER.DAT{139b56a9-
356b-11f0-969e-85be75f19ede}.TMContainer0000000000000000000001.regtrans-ms
-rw-r--r-- 1 SHARANBABU_B 197121 524288 May 20 16:44 NTUSER.DAT{139b56a9-
356b-11f0-969e-85be75f19ede}.TMContainer0000000000000000000002.regtrans-ms
lrwxrwxrwx 1 SHARANBABU_B 197121    72 May 20 16:44 NetHood ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Network Shortcuts'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 30 19:00 OneDrive/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jul 13 16:15 Postman/
lrwxrwxrwx 1 SHARANBABU_B 197121    72 May 20 16:44 PrintHood ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Printer Shortcuts'/
lrwxrwxrwx 1 SHARANBABU_B 197121    61 May 20 16:44 Recent ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Recent'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 20 16:55 'Saved Games'/
drwxr-xr-x 1 SHARANBABU_B 197121      0 Jun 17 08:00 Searches/
lrwxrwxrwx 1 SHARANBABU_B 197121    61 May 20 16:44 SendTo ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/SendTo'/
lrwxrwxrwx 1 SHARANBABU_B 197121    65 May 20 16:44 'Start Menu' ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Start Menu'/
lrwxrwxrwx 1 SHARANBABU_B 197121    64 May 20 16:44 Templates ->
'/c/Users/SHARAN BABU/AppData/Roaming/Microsoft/Windows/Templates'/
-rw-r--r-- 1 SHARANBABU_B 197121      0 Jul 30 20:58 bash
drwxr-xr-x 1 SHARANBABU_B 197121      0 May 21 19:16 eclipse/
-rw-r--r-- 1 SHARANBABU_B 197121 1777664 May 20 16:44 ntuser.dat.LOG1
-rw-r--r-- 1 SHARANBABU_B 197121 1688576 May 20 16:44 ntuser.dat.LOG2
-rw-r--r-- 1 SHARANBABU_B 197121      20 May 20 16:55 ntuser.ini
-rw-r--r-- 1 SHARANBABU_B 197121      31 Jul 30 21:16 welcome.txt

```



```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~  
$ cat welcome.txt  
Welcome to the version control
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~  
$ cd GitDemo
```

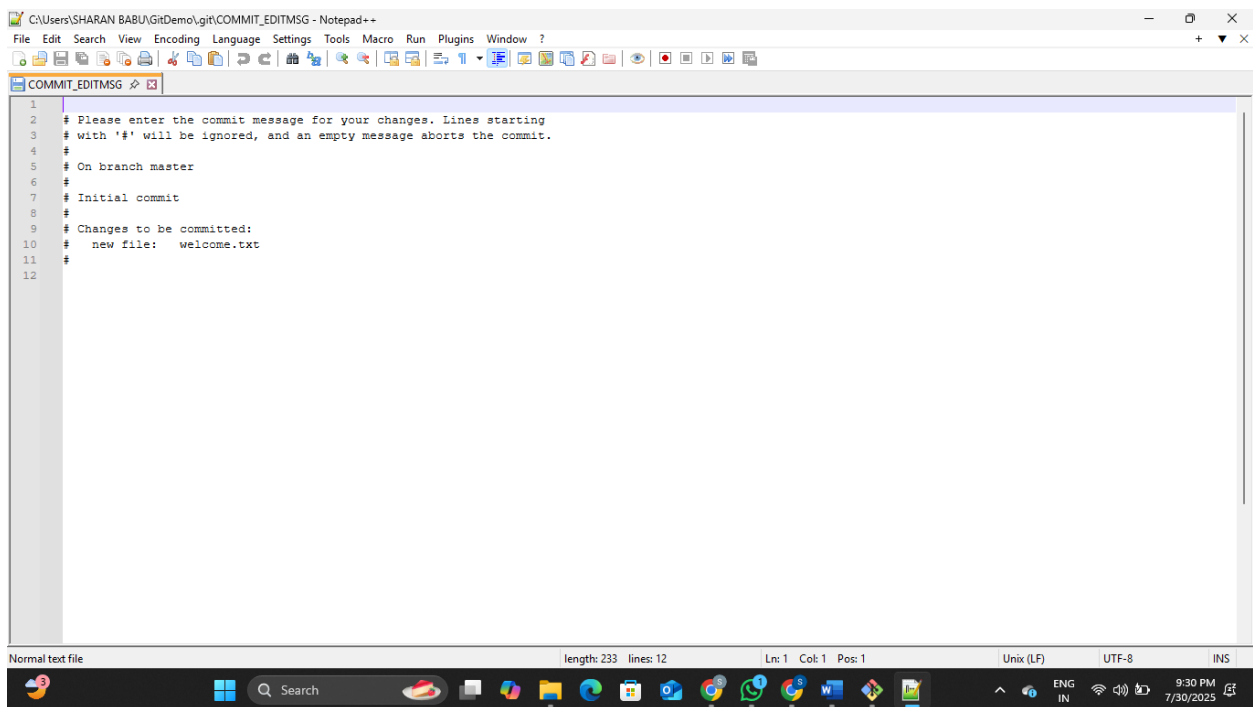
```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)  
$ git status  
On branch master
```

No commits yet

nothing to commit (create/copy files and use "git add" to track)

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)  
$ git add welcome.txt
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)  
$ git commit  
hint: Waiting for your editor to close the file...
```



```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)  
$ git remote add origin https://gitlab.com/sharanbabub-group/GitDemo
```

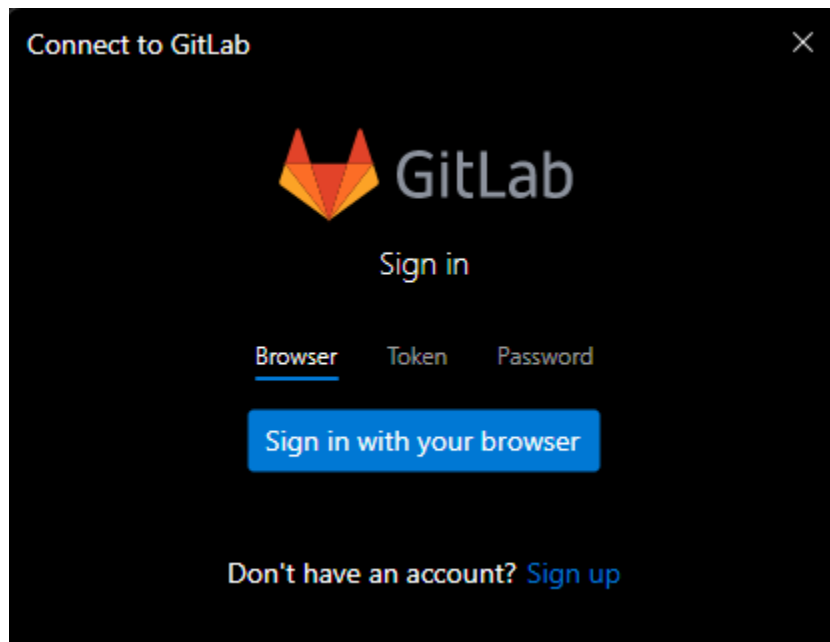
```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)  
$ git remote -v  
origin https://gitlab.com/sharanbabub-group/GitDemo (fetch)  
origin https://gitlab.com/sharanbabub-group/GitDemo (push)
```

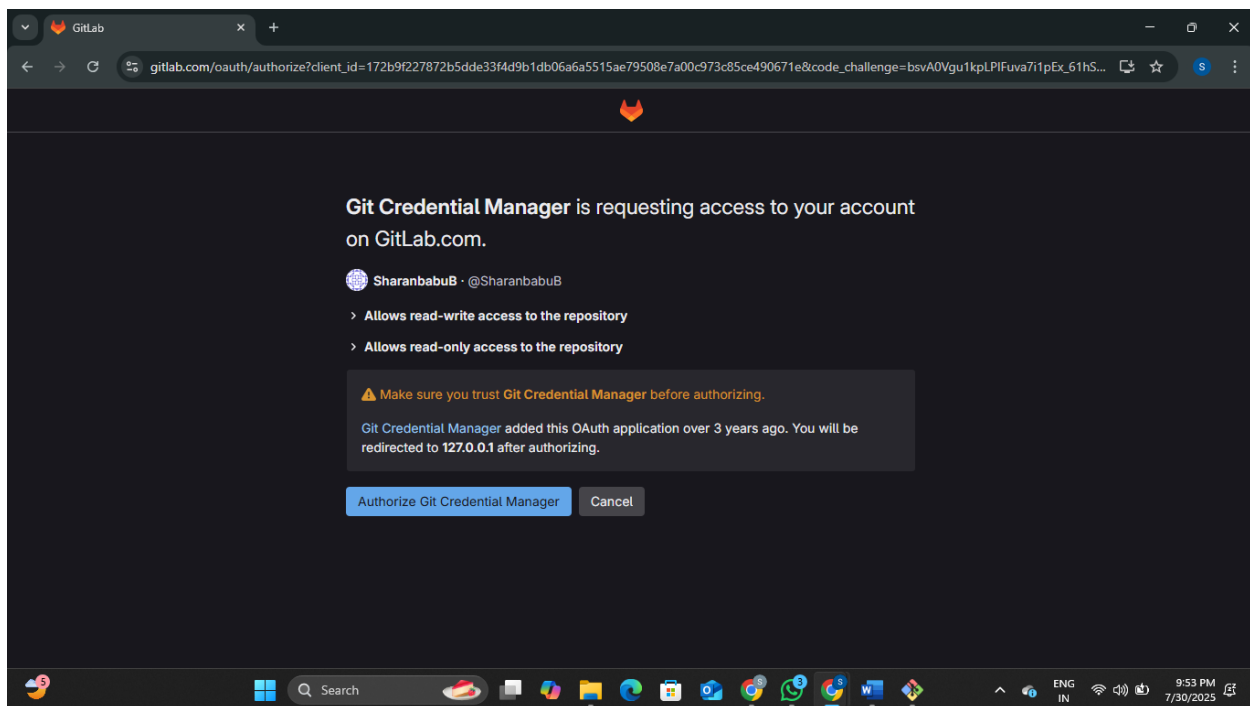
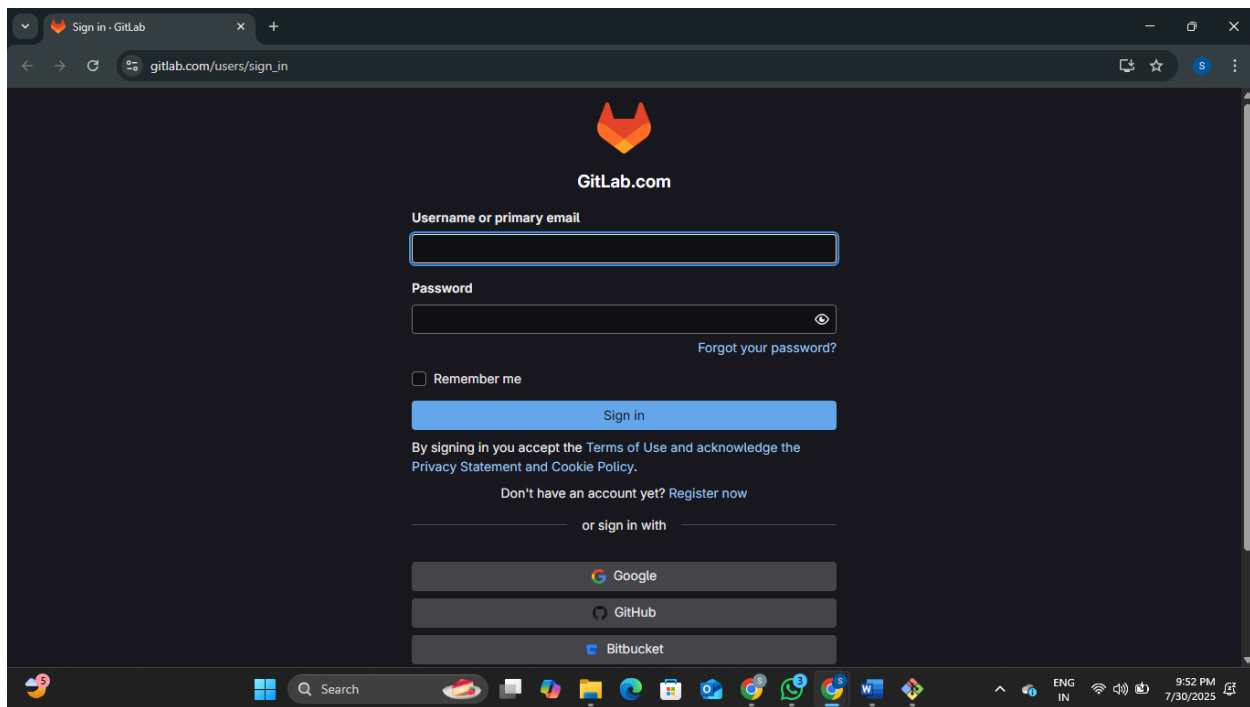
```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ ls
welcome.txt

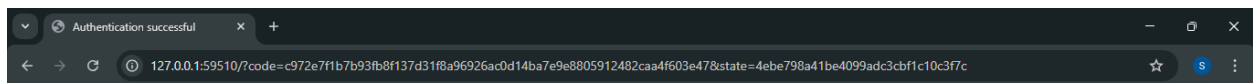
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git add welcome.txt

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git commit -m "Initial commit - added welcome.txt"
[master (root-commit) 486da77] Initial commit - added welcome.txt
1 file changed, 1 insertion(+)
create mode 100644 welcome.txt

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git push -u origin master
info: please complete authentication in your browser...
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 260 bytes | 86.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: To create a merge request for master, visit:
remote:   https://gitlab.com/sharanbabub-group/GitDemo/-
/merge_requests/new?merge_request%5Bsource_branch%5D=master
remote:
To https://gitlab.com/sharanbabub-group/GitDemo.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```

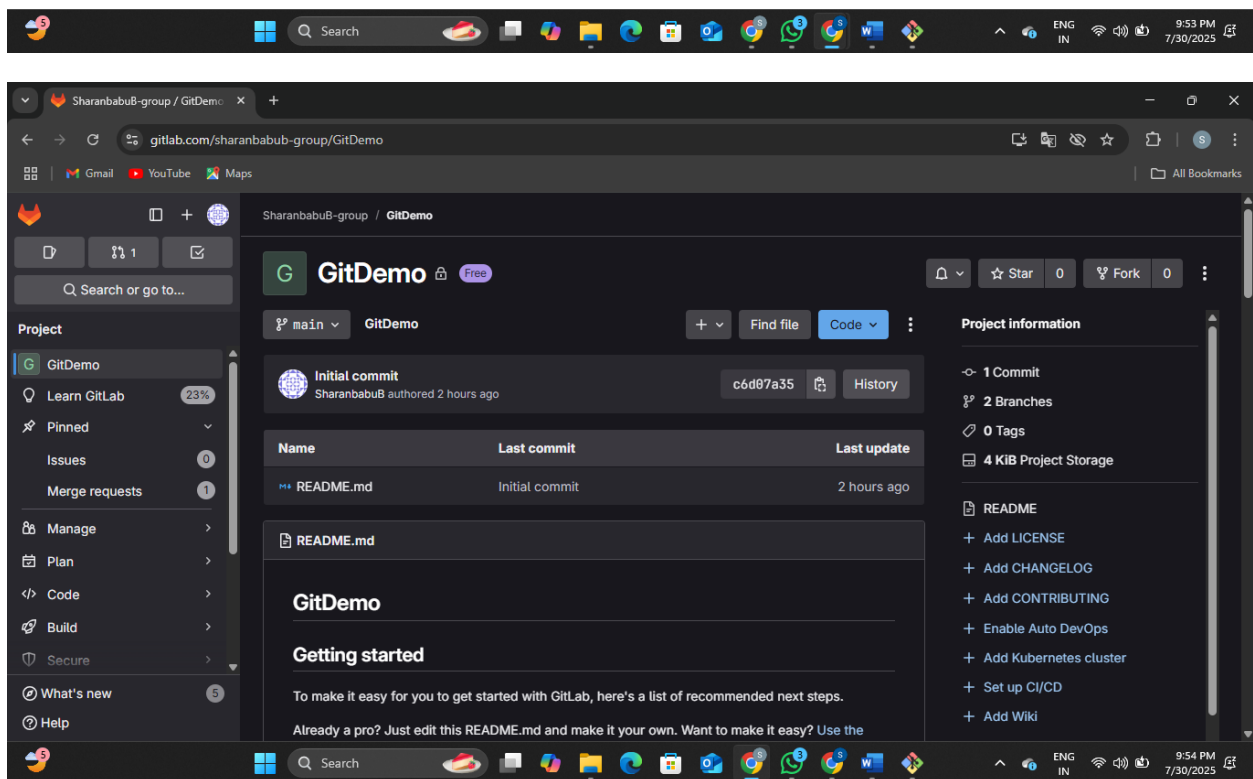






Authentication successful

You can now close this page.



```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git push origin master
Everything up-to-date
```

Exercise 2:

Create a **“.log”** file and a **log folder** in the working directory of Git. Update the **.gitignore** file in such a way that on committing, these files (.log extensions and log folders) are ignored. Verify if the git status reflects the same about working directory, local repository and git repository.

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)
$ echo "This is a log file." > test.log
```

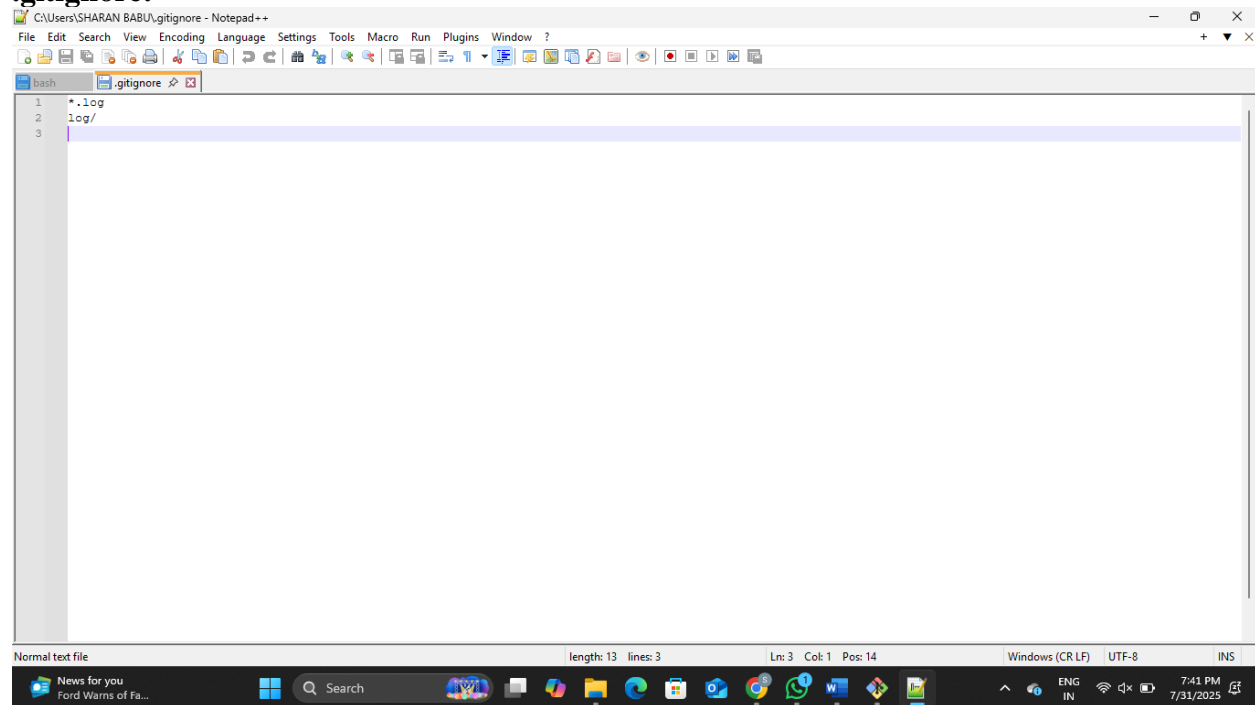
```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)
$ mkdir log
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)
$ echo "Inside log folder." > log/info.txt
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)
$ touch .gitignore
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)
$ notepad++ .gitignore
```

.gitignore:



```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)
$ git status
On branch master
```

No commits yet

Untracked files:

(use "git add <file>..." to include in what will be committed)

```
.bash_history
```

```

.docker/
.eclipse/
.gitconfig
.gitignore
.idlrc/
.lessht
.m2/
.nuget/
.p2/
.redhat/
.sts4/
.vscode/
AppData/
Contacts/
Desktop/
Downloads/
Favorites/
GitDemo/
IntelGraphicsProfiles/
Learning_Program_Solutions/
Links/
NTUSER.DAT
NTUSER.DAT{139b56a9-356b-11f0-969e-85be75f19ede}.TM.blf
NTUSER.DAT{139b56a9-356b-11f0-969e-
85be75f19ede}.TMContainer00000000000000000001.regtrans-ms
NTUSER.DAT{139b56a9-356b-11f0-969e-
85be75f19ede}.TMContainer00000000000000000002.regtrans-ms
OneDrive/
Saved Games/
Searches/
bash
eclipse/
ntuser.dat.LOG1
ntuser.dat.LOG2
ntuser.ini
welcome.txt

```

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

```

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)
$ git commit -m "Added .gitignore to ignore log files and folders"
On branch master

```

Initial commit

```

Untracked files:
(use "git add <file>..." to include in what will be committed)
.bash_history
.docker/
.eclipse/
.gitconfig
.gitignore
.idlrc/
.lessht
.m2/
.nuget/
.p2/

```

```

.redhat/
.sts4/
.vscode/
Contacts/
Desktop/
Downloads/
Favorites/
GitDemo/
IntelGraphicsProfiles/
Learning_Program_Solutions/
Links/
NTUSER.DAT
NTUSER.DAT{139b56a9-356b-11f0-969e-85be75f19ede}.TM.blf
NTUSER.DAT{139b56a9-356b-11f0-969e-
85be75f19ede}.TMContainer00000000000000000001.regtrans-ms
NTUSER.DAT{139b56a9-356b-11f0-969e-
85be75f19ede}.TMContainer00000000000000000002.regtrans-ms
OneDrive/
Saved Games/
Searches/
bash
eclipse/
ntuser.dat.LOG1
ntuser.dat.LOG2
ntuser.ini
welcome.txt

```

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

```

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~ (master)
$ git check-ignore -v test.log
.gitignore:1:*.log      test.log

```

Exercise 3:

Please follow the instruction to complete the hands-on. Each instruction expects a command for the Git Bash.

Branching:

1. Create a new branch “**GitNewBranch**”.
2. List all the local and remote branches available in the current trunk. Observe the “*” mark which denote the current pointing branch.
3. Switch to the newly created branch. Add some files to it with some contents.
4. Commit the changes to the branch.
5. Check the status with “**git status**” command.

Merging:

1. Switch to the master
2. List out all the differences between trunk and branch. These provide the differences in command line interface.
3. List out all the visual differences between master and branch using **P4Merge tool**.
4. Merge the source branch to the trunk.
5. Observe the logging after merging using “**git log –oneline –graph –decorate**”

6. Delete the branch after merging with the trunk and observe the git status.

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git init -b main
warning: re-init: ignored --initial-branch=main
Reinitialized existing Git repository in C:/Users/SHARAN BABU/GitDemo/.git/

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ echo "This is the main branch content" > base.txt

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git add base.txt
warning: in the working copy of 'base.txt', LF will be replaced by CRLF the
next time Git touches it

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git commit -m "Initial commit on main"
[master b04d527] Initial commit on main
1 file changed, 1 insertion(+)
create mode 100644 base.txt

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git checkout -b GitNewBranch
Switched to a new branch 'GitNewBranch'

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git branch
* GitNewBranch
  master

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git branch -r
origin/master

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ echo "This file was added in GitNewBranch" > feature.txt

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git add feature.txt
warning: in the working copy of 'feature.txt', LF will be replaced by CRLF
the next time Git touches it

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git commit -m "Added feature.txt in GitNewBranch"
[GitNewBranch b9fe0f1] Added feature.txt in GitNewBranch
1 file changed, 1 insertion(+)
create mode 100644 feature.txt

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git status
On branch GitNewBranch
nothing to commit, working tree clean

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git checkout main
error: pathspec 'main' did not match any file(s) known to git
```



```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git diff GitNewBranch
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git mergetool
```

This message is displayed because 'merge.tool' is not configured.
See 'git mergetool --tool-help' or 'git help config' for more details.
'git mergetool' will now attempt to use one of the following tools:
opendiff kdiff3 tkdiff xxdiff meld tortoisemerge gvimdiff diffuse diffmerge
ecmerge p4merge araxis bc codecompare smerge emerge vimdiff nvimdiff
No files need merging

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git merge GitNewBranch
Already up to date.
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git log --oneline --graph --decorate
* b9fe0f1 (HEAD -> GitNewBranch) Added feature.txt in GitNewBranch
* b04d527 (master) Initial commit on main
* 486da77 (origin/master) Initial commit - added welcome.txt
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git branch -d GitNewBranch
error: cannot delete branch 'GitNewBranch' used by worktree at
'C:/Users/SHARAN BABU/GitDemo'
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git status
On branch GitNewBranch
nothing to commit, working tree clean
```

Exercise 4:

Please follow the instructions to complete the hands-on. Each instruction expect a command for the Git Bash.

1. Verify if master is in clean state.
2. Create a branch **“GitWork”**. Add a file **“hello.xml”**.
3. Update the content of **“hello.xml”** and observe the status
4. Commit the changes to reflect in the branch
5. Switch to master.
6. Add a file **“hello.xml”** to the master and add some different content than previous.
7. Commit the changes to the master
8. Observe the log by executing **“git log --oneline --graph --decorate --all”**
9. Check the differences with Git diff tool
10. For better visualization, use P4Merge tool to list out all the differences between master and branch
11. Merge the bran to the master
12. Observe the git mark up.
13. Use 3-way merge tool to resolve the conflict
14. Commit the changes to the master, once done with conflict

15. Observe the git status and add backup file to the .gitignore file.
16. Commit the changes to the .gitignore
17. List out all the available branches
18. Delete the branch, which merge to master.
19. Observe the log by executing **“git log –online –graph –decorate”**

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitNewBranch)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)
```

nothing to commit, working tree clean

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git checkout -b GitWork
Switched to a new branch 'GitWork'
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitWork)
$ echo "<greeting>Hello from GitWork branch</greeting>" > hello.xml
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitWork)
$ git status
On branch GitWork
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    hello.xml
```

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

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitWork)
$ git add hello.xml
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the
next time Git touches it
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitWork)
$ git commit -m "Added hello.xml in GitWork"
[GitWork 048d4aa] Added hello.xml in GitWork
1 file changed, 1 insertion(+)
create mode 100644 hello.xml
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (GitWork)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ echo "<greeting>Hello from master branch</greeting>" > hello.xml
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git add hello.xml
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the
next time Git touches it
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git commit -m "Added hello.xml in master"
[master ba16449] Added hello.xml in master
1 file changed, 1 insertion(+)
create mode 100644 hello.xml
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git log --oneline --graph --decorate --all
* ba16449 (HEAD -> master) Added hello.xml in master
| * 048d4aa (GitWork) Added hello.xml in GitWork
|/
| * b9fe0f1 (GitNewBranch) Added feature.txt in GitNewBranch
|/
* b04d527 Initial commit on main
* 486da77 (origin/master) Initial commit - added welcome.txt
```

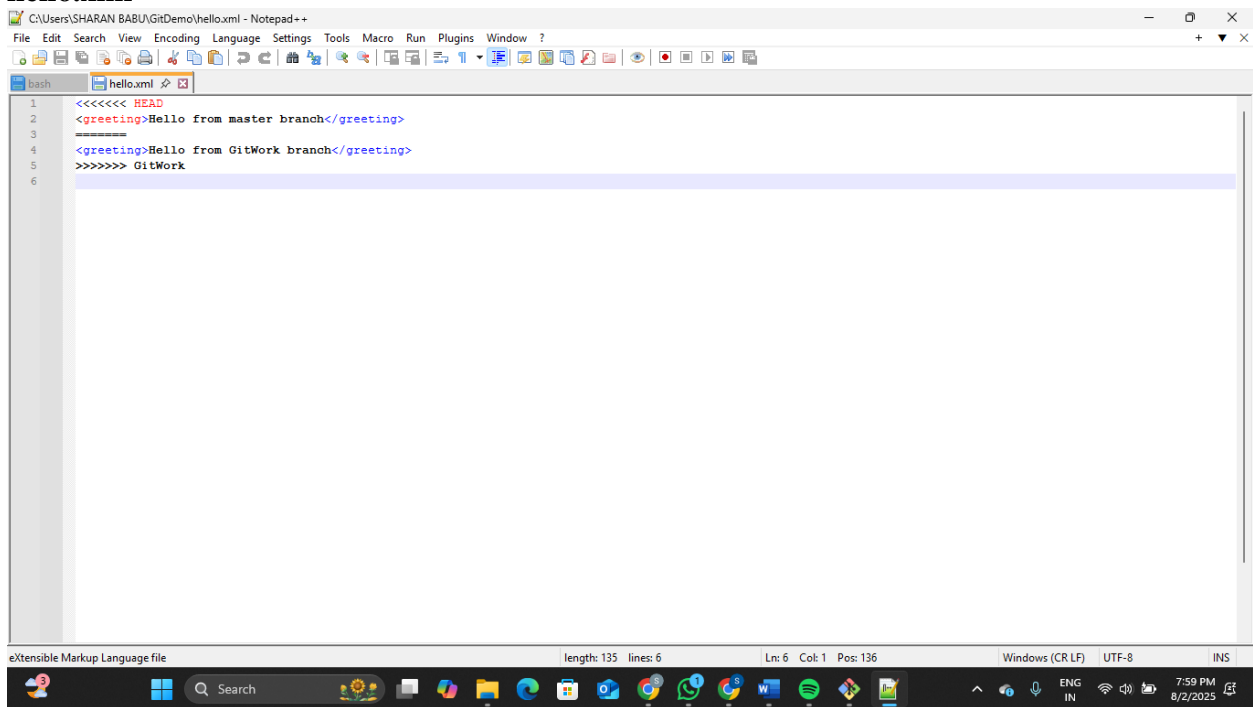
```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git diff GitWork
diff --git a/hello.xml b/hello.xml
index 181e8d0..2d8d754 100644
--- a/hello.xml
+++ b/hello.xml
@@ -1,1 @@
-<greeting>Hello from GitWork branch</greeting>
+<greeting>Hello from master branch</greeting>
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git mergetool
```

This message is displayed because 'merge.tool' is not configured.
See 'git mergetool --tool-help' or 'git help config' for more details.
'git mergetool' will now attempt to use one of the following tools:
opendiff kdiff3 tkdiff xxdiff meld tortoisemerge gvimdiff diffuse diffmerge
ecmerge p4merge araxis bc codecompare smerge emerge vimdiff nvimdiff
No files need merging

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git merge GitWork
Auto-merging hello.xml
CONFLICT (add/add): Merge conflict in hello.xml
Automatic merge failed; fix conflicts and then commit the result.
```

hello.xml



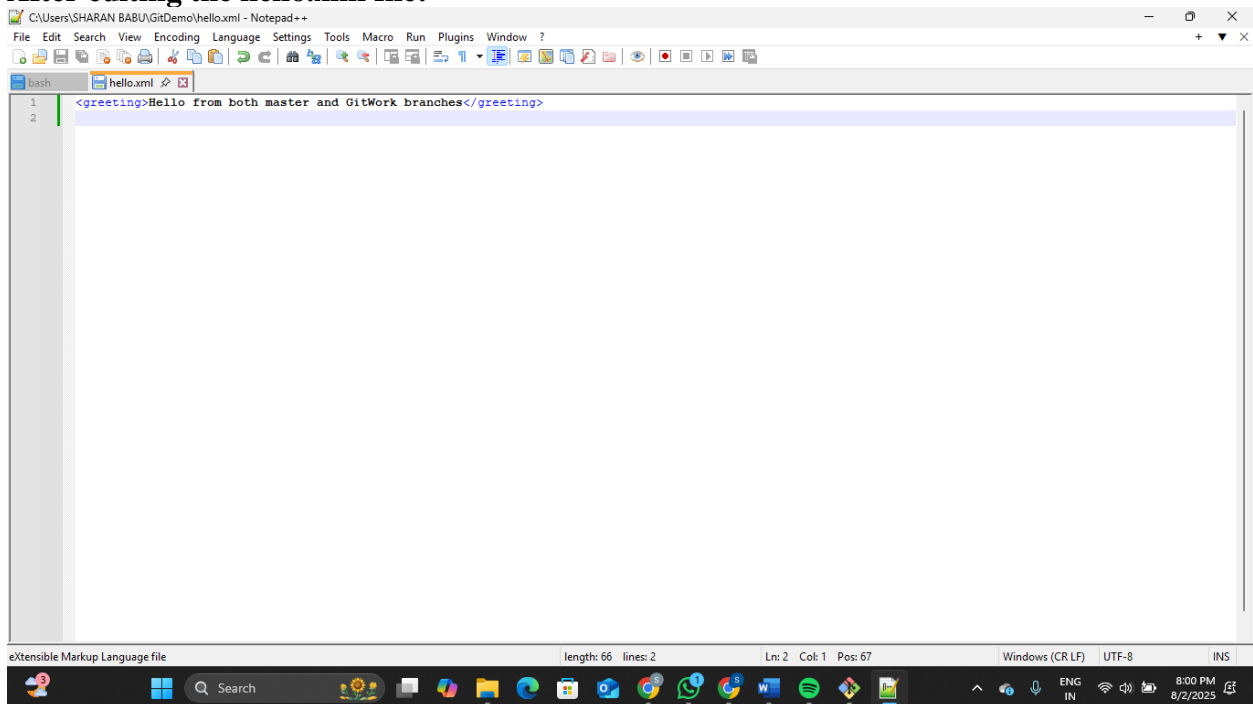
```
1 <<<<<< HEAD
2 <greeting>Hello from master branch</greeting>
3 =====
4 <greeting>Hello from GitWork branch</greeting>
5 >>>>>> GitWork
6
```

Notepad++ interface showing the file 'hello.xml' with the following content:

```
<<<<<< HEAD
<greeting>Hello from master branch</greeting>
=====
<greeting>Hello from GitWork branch</greeting>
>>>>>> GitWork
```

The status bar at the bottom indicates: eXtensible Markup Language file, length: 135, lines: 6, Ln: 6, Col: 1, Pos: 136, Windows (CR LF), UTF-8, INS.

After editing the hello.xml file:



```
1 <greeting>Hello from both master and GitWork branches</greeting>
2
```

Notepad++ interface showing the file 'hello.xml' with the following content:

```
<greeting>Hello from both master and GitWork branches</greeting>
```

The status bar at the bottom indicates: eXtensible Markup Language file, length: 66, lines: 2, Ln: 2, Col: 1, Pos: 67, Windows (CR LF), UTF-8, INS.

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master|MERGING)
$ git add hello.xml
```

```

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master|MERGING)
$ git commit -m "Resolved merge conflict in hello.xml"
[master 6e3ed3a] Resolved merge conflict in hello.xml

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ echo "*.orig" >> .gitignore

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git add .gitignore
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the
next time Git touches it

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git commit -m "Ignored backup files from merge"
[master 98c9b6f] Ignored backup files from merge
1 file changed, 1 insertion(+)
create mode 100644 .gitignore

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git branch
  GitNewBranch
  GitWork
* master

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git branch -d GitWork
Deleted branch GitWork (was 048d4aa).

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git log --oneline --graph --decorate
* 98c9b6f (HEAD -> master) Ignored backup files from merge
*   6e3ed3a Resolved merge conflict in hello.xml
|\
| * 048d4aa Added hello.xml in GitWork
* | ba16449 Added hello.xml in master
|/
* b04d527 Initial commit on main
* 486da77 (origin/master) Initial commit - added welcome.txt

```

Exercise 5:

Please follow the instructions to complete the hands-on. Each instruction expects a command for the Git Bash.

1. Verify if master is in clean state.
2. List out all the available branches.
3. Pull the remote git repository to the master
4. Push the changes, which are pending from “**Git-T03-HOL_002**” to the remote repository.
5. Observe if the changes are reflected in the remote repository.

```

SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
$ git checkout master
Already on 'master'
Your branch is ahead of 'origin/master' by 5 commits.

```

(use "git push" to publish your local commits)

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
```

```
$ git status
```

```
On branch master
```

```
Your branch is ahead of 'origin/master' by 5 commits.
```

(use "git push" to publish your local commits)

```
nothing to commit, working tree clean
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
```

```
$ git branch
```

```
GitNewBranch
```

```
* master
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
```

```
$ git branch -r
```

```
origin/master
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
```

```
$ git pull origin master
```

```
From https://gitlab.com/sharanbabub-group/GitDemo
```

```
* branch          master      -> FETCH_HEAD
```

```
Already up to date.
```

```
SHARANBABU_B@DESKTOP-MN322RQ MINGW64 ~/GitDemo (master)
```

```
$ git push origin master
```

```
Enumerating objects: 16, done.
```

```
Counting objects: 100% (16/16), done.
```

```
Delta compression using up to 4 threads
```

```
Compressing objects: 100% (11/11), done.
```

```
Writing objects: 100% (15/15), 1.49 KiB | 152.00 KiB/s, done.
```

```
Total 15 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
```

```
remote:
```

```
remote: View merge request for master:
```

```
remote:   https://gitlab.com/sharanbabub-group/GitDemo/-/merge_requests/1
```

```
remote:
```

```
To https://gitlab.com/sharanbabub-group/GitDemo.git
```

```
486da77..98c9b6f  master -> master
```

GitLab:

The screenshot shows the GitLab web interface for a repository named 'GitDemo' under the 'SharanbabuB-group'. The left sidebar contains navigation links: Project, Merge requests (1), Repository (selected), Branches, Commits, Tags, Repository graph, Compare revisions, What's new (5), and Help. The main content area displays the repository's file list. At the top, there's a commit summary for 'Ignored backup files from merge' by SharanbabuB, 9 minutes ago, with commit hash 98c9b6fc. Below this is a table of files:

Name	Last commit	Last update
<code>.gitignore</code>	Ignored backup files from merge	9 minutes ago
<code>base.txt</code>	Initial commit on main	57 minutes ago
<code>hello.xml</code>	Resolved merge conflict in hello.xml	13 minutes ago
<code>welcome.txt</code>	Initial commit - added welcome.txt	2 days ago

The bottom of the screen shows a Windows taskbar with various application icons and a system clock indicating 8:15 PM on 8/2/2025.

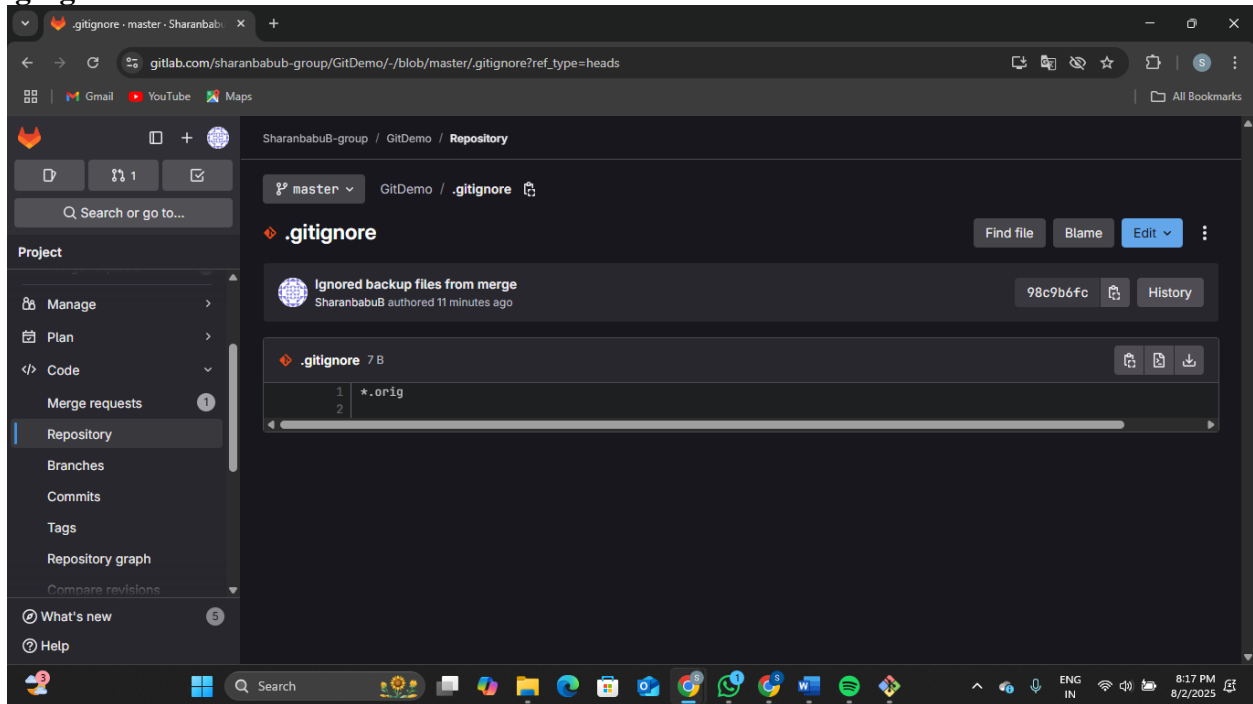
base.txt:

This screenshot shows the 'base.txt' file view within the 'GitDemo' repository. The left sidebar is identical to the previous screenshot, with 'Repository' selected. The main content area shows the file 'base.txt' with its initial commit on the main branch by SharanbabuB, 58 minutes ago, with commit hash b04d5279. The file content is displayed in a code editor with line numbers:

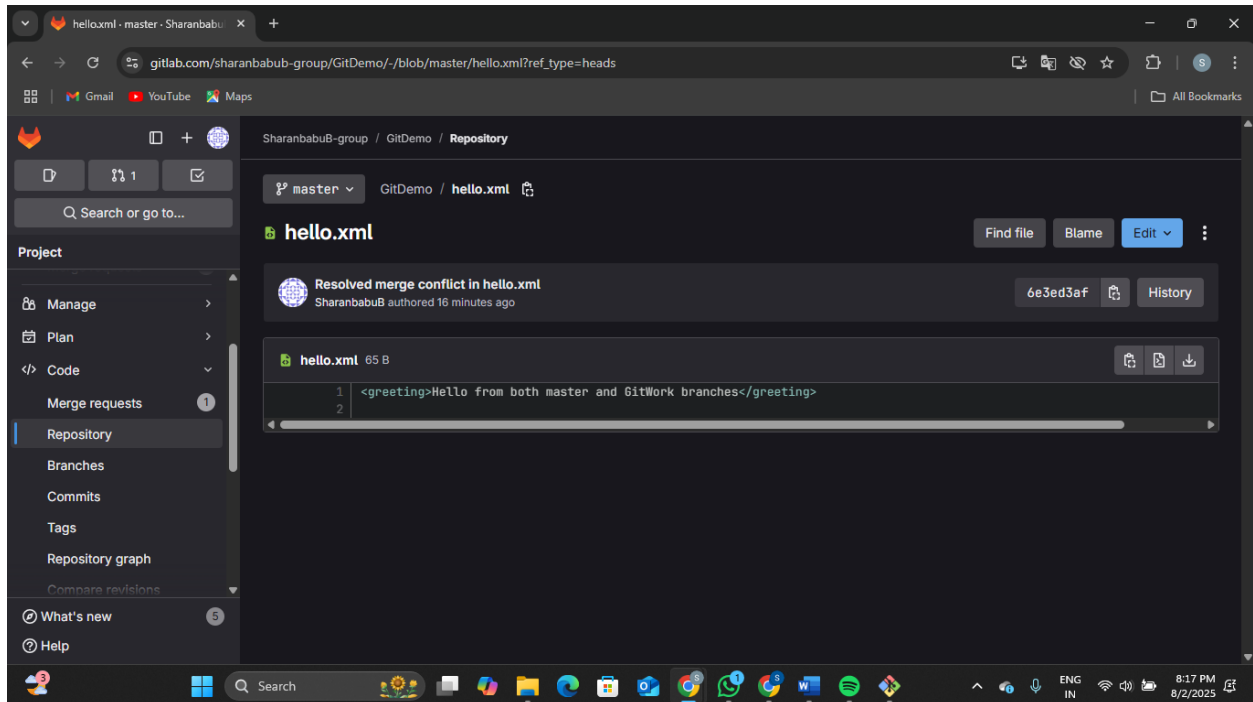
```
1 This is the main branch content
2
```

The bottom of the screen shows the same Windows taskbar as the previous screenshot, with the system clock indicating 8:16 PM on 8/2/2025.

.gitignore:



hello.xml:



welcome.txt:

The screenshot shows a web browser window displaying the GitLab interface for a repository named 'GitDemo' under the 'SharanbabuB-group'. The file 'welcome.txt' is selected, showing its commit history and content. The commit is titled 'Initial commit - added welcome.txt' and was authored by 'SharanbabuB' 2 days ago. The file content is 'Welcome to Git Hands-on Lab'. The left sidebar shows the repository structure with options like 'Manage', 'Plan', 'Code', 'Merge requests', 'Repository', 'Branches', 'Commits', 'Tags', 'Repository graph', 'Compare revisions', 'What's new', and 'Help'. The bottom status bar shows the system time as 8:18 PM on 8/2/2025.

GitLab interface showing the file `welcome.txt` in the `GitDemo` repository.

The file content is:

```
1 Welcome to Git Hands-on Lab
```

The commit history shows an initial commit titled "Initial commit - added welcome.txt" by SharanbabuB, authored 2 days ago.