

Git

Hands on 1 :

```
rajan@DESKTOP-AVS12T3 MINGW64 ~
$ git --version
git version 2.50.1.windows.1

rajan@DESKTOP-AVS12T3 MINGW64 ~
$ git config --global user.name "Rachana"
git config --global user.email "pusulurirachana@gmail.com"
git config --global --list
user.name=Rachana
user.email=pusulurirachana@gmail.com
core.editor=notepad++ -multiInst -notabbar -nosession -noPlugin

rajan@DESKTOP-AVS12T3 MINGW64 ~
$ ^[[200~git config --global core.editor "notepad++ -multiInst -notabbar -nosession
-noPlugin"
bash: $'\E[200~git': command not found

rajan@DESKTOP-AVS12T3 MINGW64 ~
$ git config --global -e

rajan@DESKTOP-AVS12T3 MINGW64 ~
$ mkdir GitDemo
cd GitDemo
git init
ls -a
Initialized empty Git repository in C:/Users/rajan/GitDemo/.git/
./ ../ .git/
```

```
MINGW64:/c/Users/rajan/GitDemo
./ ../ .git/

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ echo "Welcome to Git" > welcome.txt
cat welcome.txt
git status
git add welcome.txt
git commit -m "Added welcome file"
git status
Welcome to Git
On branch master

No commits yet

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

nothing added to commit but untracked files present (use "git add" to track)
warning: in the working copy of 'welcome.txt', LF will be replaced by CRLF the next
time Git touches it
[master (root-commit) 027dace] Added welcome file
 1 file changed, 1 insertion(+)
 create mode 100644 welcome.txt
On branch master
nothing to commit, working tree clean
```

MINGW64:/c/Users/rajan/GitDemo

```
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git remote add origin https://github.com/Rachana-Pusuluri/GitDemo.git
git branch -M 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), 235 bytes | 117.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:   https://github.com/Rachana-Pusuluri/GitDemo/pull/new/master
remote:
To https://github.com/Rachana-Pusuluri/GitDemo.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git add welcome.txt

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git commit -m "Added welcome.txt"
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git push -u origin master
branch 'master' set up to track 'origin/master'.
Everything up-to-date

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ cd /c/Users/rajan/GitDemo

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ pwd
/c/Users/rajan/GitDemo
```

MINGW64:/c/Users/rajan/GitDemo

```
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ cd /c/Users/rajan/GitDemo

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ pwd
/c/Users/rajan/GitDemo

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git add welcome.txt
git commit -m "Added welcome.txt"
git push -u origin master
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
branch 'master' set up to track 'origin/master'.
Everything up-to-date

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git push origin master --force
Everything up-to-date

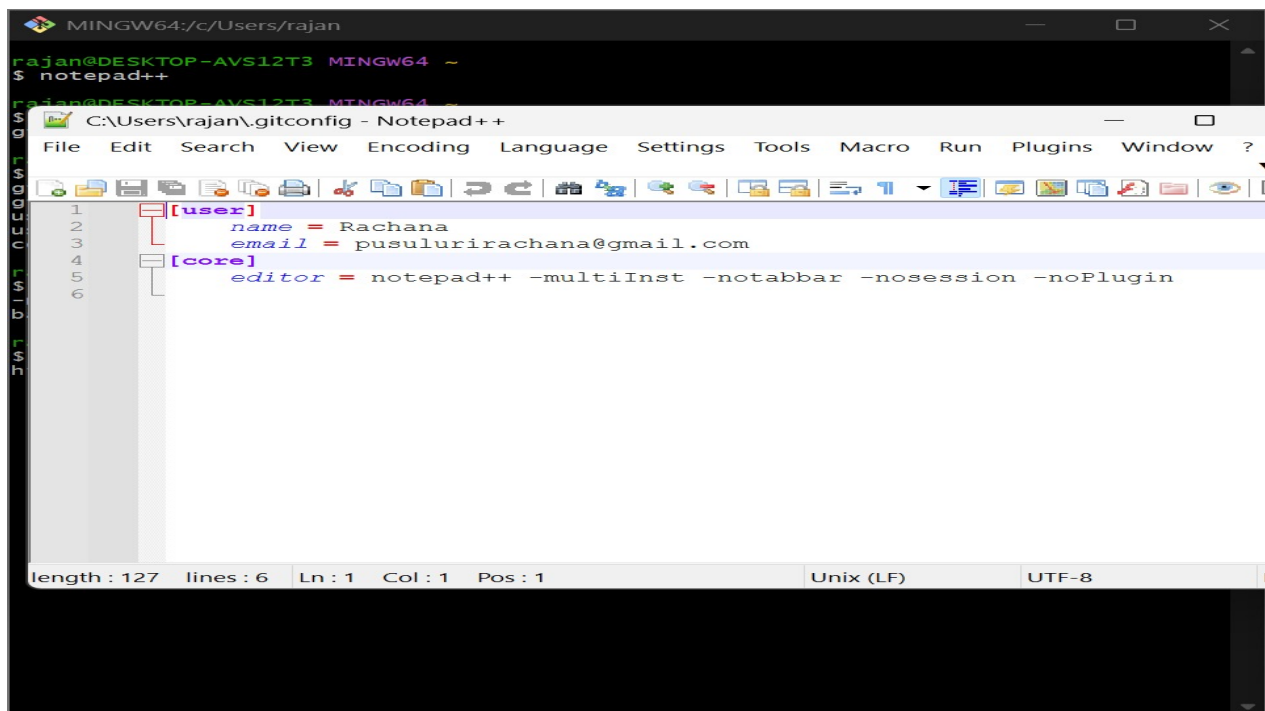
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git log --oneline
027dace (HEAD -> master, origin/master) Added welcome file

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git show --name-only
commit 027dace90e5cfd8697674246909fdebafc2ed388 (HEAD -> master, origin/master)
Author: Rachana <pusulurirachana@gmail.com>
Date: Sun Aug 10 07:17:47 2025 +0530

    Added welcome file

welcome.txt
```

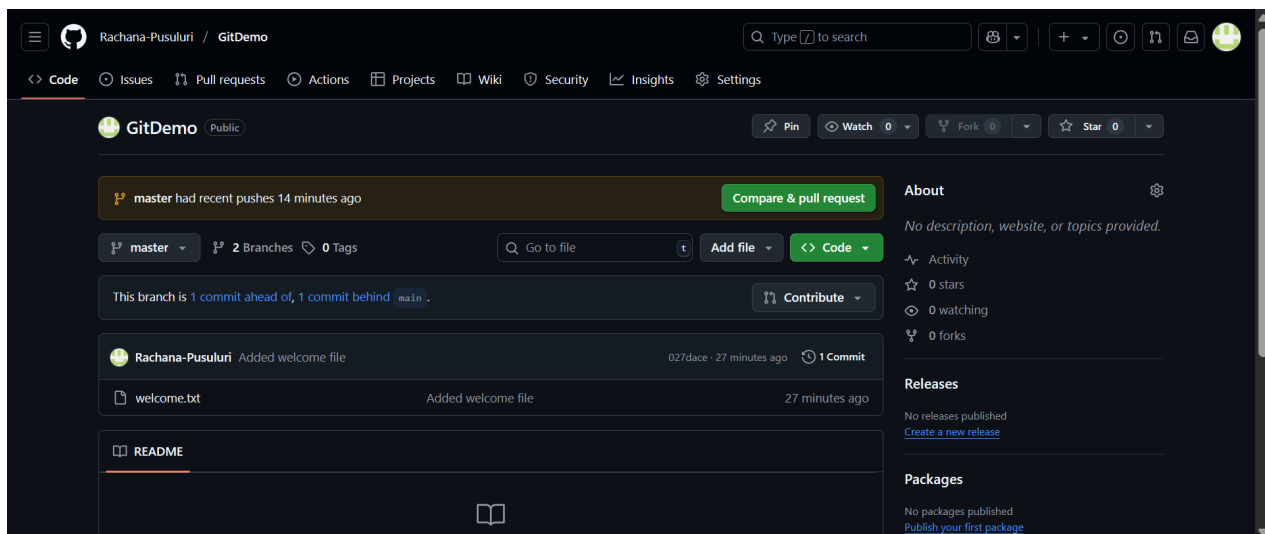
Output :



A screenshot of a Notepad++ window titled "C:\Users\rajan\gitconfig - Notepad++". The window shows a git configuration file with the following content:

```
1 [user]
2   name = Rachana
3   email = pusulurirachana@gmail.com
4 [core]
5   editor = notepad++ -multiInst -notabbar -nosession -noPlugin
6
```

The status bar at the bottom indicates "length : 127 lines : 6 Ln : 1 Col : 1 Pos : 1" and "Unix (LF) UTF-8".



Hands On 2 :

```
MINGW64/c/Users/rajan/GitDemo
rajan@DESKTOP-AVS12T3 MINGW64 ~
$ cd /c/Users/rajan/GitDemo

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ echo "This is a log file" > debug.log

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ mkdir logs
echo "Log folder file" > logs/error.log
mkdir: cannot create directory 'logs': File exists

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ cat .gitignore
.log
logs/

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

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

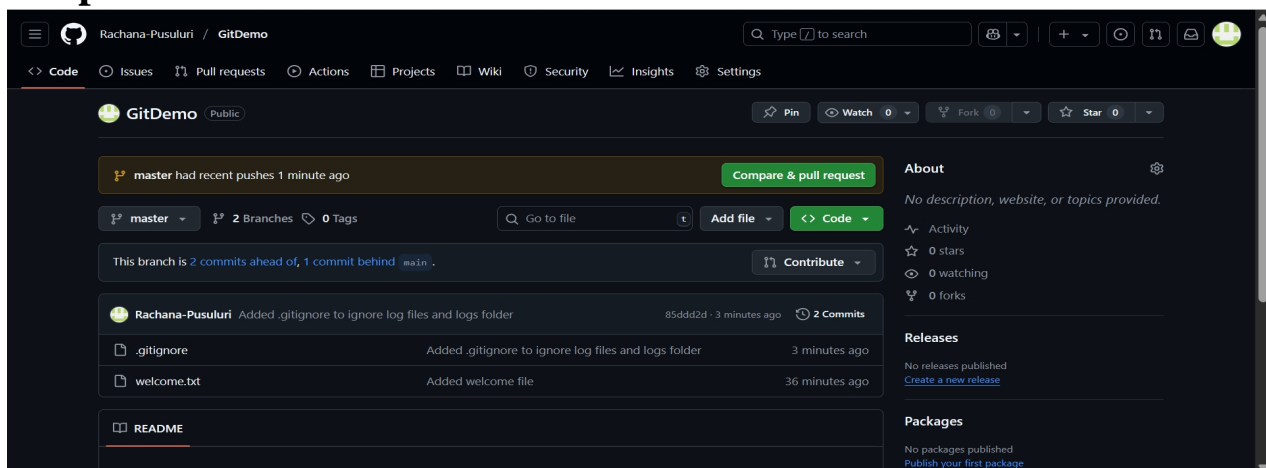
nothing added to commit but untracked files present (use "git add" to track)

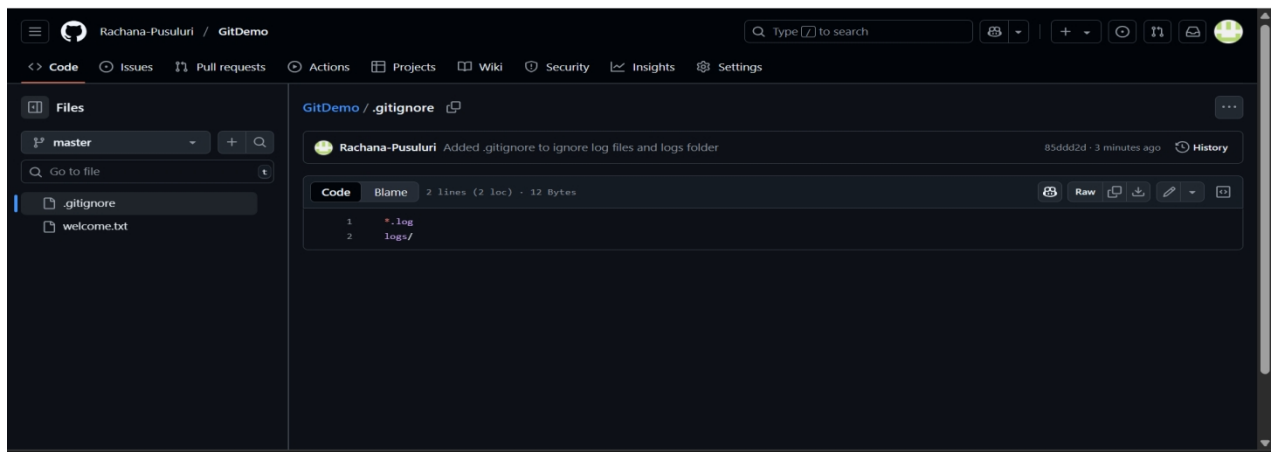
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git add .gitignore
git commit -m "Added .gitignore to ignore log files and logs folder"
git push origin master
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the next time Git touches it
[master 85ddd2d] Added .gitignore to ignore log files and logs folder
1 file changed, 2 insertions(+)
create mode 100644 .gitignore
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 315 bytes | 315.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Rachana-Pusuluri/GitDemo.git
027dace..85ddd2d master -> master
```

```
GNU nano 8.5 .gitignore
.log
logs/
|

AG Help      AQ Write Out  AF Where Is   AK Cut        AT Execute   AC Location
AX Exit      AR Read File  AL Replace   AU Paste      AJ Justify   AZ Go To Line
```

Output:





Hands On 3 :

```
MINGW64~/c/Users/rajan/GitDemo
rajan@DESKTOP-AVS12T3 MINGW64 ~
$ cd GitDemo

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git init
Reinitialized existing Git repository in C:/Users/rajan/GitDemo/.git/

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git branch GitNewBranch

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git branch
  GitNewBranch
* master

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git checkout GitNewBranch
Switched to branch 'GitNewBranch'

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (GitNewBranch)
$ echo "This is my first branch file" > branchfile.txt

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (GitNewBranch)
$ git add branchfile.txt
warning: in the working copy of 'branchfile.txt', LF will be replaced by CRLF the next time Git touches it

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (GitNewBranch)
$ git commit -m "Added branchfile.txt in GitNewBranch"
[GitNewBranch 9a60bf9] Added branchfile.txt in GitNewBranch
1 file changed, 1 insertion(+)
create mode 100644 branchfile.txt

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (GitNewBranch)
$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git merge GitNewBranch
Updating 85ddd2d..9a60bf9
Fast-forward
 branchfile.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 branchfile.txt
```

```
MINGW64~/c/Users/rajan/GitDemo
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git branch -d GitNewBranch
Deleted branch GitNewBranch (was 9a60bf9).

rajan@DESKTOP-AVS12T3 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

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 358 bytes | 119.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Rachana-Pusuluri/GitDemo.git
  85ddd2d..9a60bf9  master -> master

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git log --oneline --graph --decorate
* 9a60bf9 (HEAD -> master, origin/master) Added branchfile.txt in GitNewBranch
* 85ddd2d Added .gitignore to ignore log files and logs folder
* 027dace Added welcome file

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git checkout master
Already on 'master'
Your branch is up to date with 'origin/master'.

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git checkout -b TestDiffBranch
Switched to a new branch 'TestDiffBranch'

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (TestDiffBranch)
$ echo "This is a test for git diff" >> branchfile.txt

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (TestDiffBranch)
$ git add branchfile.txt
$ git commit -m "Added test line for diff"
warning: in the working copy of 'branchfile.txt', LF will be replaced by CRLF the next time Git touches it
[TestDiffBranch 180d8cb] Added test line for diff
```

```

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (TestDiffBranch)
$ git add branchfile.txt
git commit -m "Added test line for diff"
warning: in the working copy of 'branchfile.txt', LF will be replaced by CRLF the ne
xt time Git touches it
[TestDiffBranch 180d8cb] Added test line for diff
1 file changed, 1 insertion(+)

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (TestDiffBranch)
$ git diff master..TestDiffBranch
diff --git a/branchfile.txt b/branchfile.txt
index 366c912..7bc3eaf 100644
--- a/branchfile.txt
+++ b/branchfile.txt
@@ -1,2 @@
 This is my first branch file
+This is a test for git diff

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (TestDiffBranch)
$ git checkout master
git merge TestDiffBranch
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
Updating 9a60bf9..180d8cb
Fast-forward
 branchfile.txt | 1 +
1 file changed, 1 insertion(+)

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git branch -d TestDiffBranch
Deleted branch TestDiffBranch (was 180d8cb).

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 373 bytes | 373.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Rachana-Pusuluri/GitDemo.git
 9a60bf9..180d8cb master -> master

```

Output:

The screenshot displays the GitHub interface for the 'GitDemo' repository. On the left, the 'Files' sidebar shows the file structure with 'branchfile.txt' selected. The main content area shows the file's content, which matches the output of the git diff command in the terminal above. The commit history shows a single commit by Rachana-Pusuluri with the message 'Added test line for diff'.

Hands On 4: Hands-on ID: “Git-T03-HOL_001”

```
MINGW64~/Users/rajan/GitDemo
rajan@DESKTOP-AVS12T3 MINGW64 ~ (Gitwork)
$ cd GitDemo

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git checkout -b Gitwork
Switched to a new branch 'Gitwork'

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (Gitwork)
$ echo "<message>Hello from Gitwork branch</message>" > hello.xml
git add hello.xml
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the next time git touches it

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (Gitwork)
$ git commit -m "Add hello.xml in Gitwork branch"
[Gitwork d56ca4c] Add hello.xml in Gitwork branch
1 file changed, 1 insertion(+)
create mode 100644 hello.xml

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (Gitwork)
$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ echo "<message>Hello from master branch</message>" > hello.xml
git add hello.xml
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the next time git touches it

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git commit -m "Add hello.xml in master branch"
```

```
MINGW64~/Users/rajan/GitDemo
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git commit -m "Add hello.xml in master branch"
[master d36cf27] Add hello.xml in master branch
1 file changed, 1 insertion(+)
create mode 100644 hello.xml

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git log --oneline --graph --decorate --all
* d36cf27 (HEAD -> master) Add hello.xml in master branch
| * d56ca4c (Gitwork) Add hello.xml in Gitwork branch
|
| * 180d8cb (origin/master) Added test line for diff
| * 9a60bf9 Added branchfile.txt in GitNewBranch
| * 85ddd2d Added .gitignore to ignore log files and logs folder
| * 027dace Added welcome file
|
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git diff master Gitwork
diff --git a/hello.xml b/hello.xml
index 82868a7..0bf4c19 100644
--- a/hello.xml
+++ b/hello.xml
@@ -1,1 @@
- <message>Hello from master branch</message>
+ <message>Hello from Gitwork branch</message>

rajan@DESKTOP-AVS12T3 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.

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master|MERGING)
$ ls
branchfile.txt debug.log hello.xml logs/ welcome.txt

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master|MERGING)
$ notepad hello.xml

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master|MERGING)
```

```
MINGW64~/Users/rajan/GitDemo
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master|MERGING)
$ git add hello.xml
git commit -m "Resolved merge conflict in hello.xml"
[master c146772] Resolved merge conflict in hello.xml

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 3 commits.
(use "git push" to publish your local commits)

nothing to commit, working tree clean

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ AC

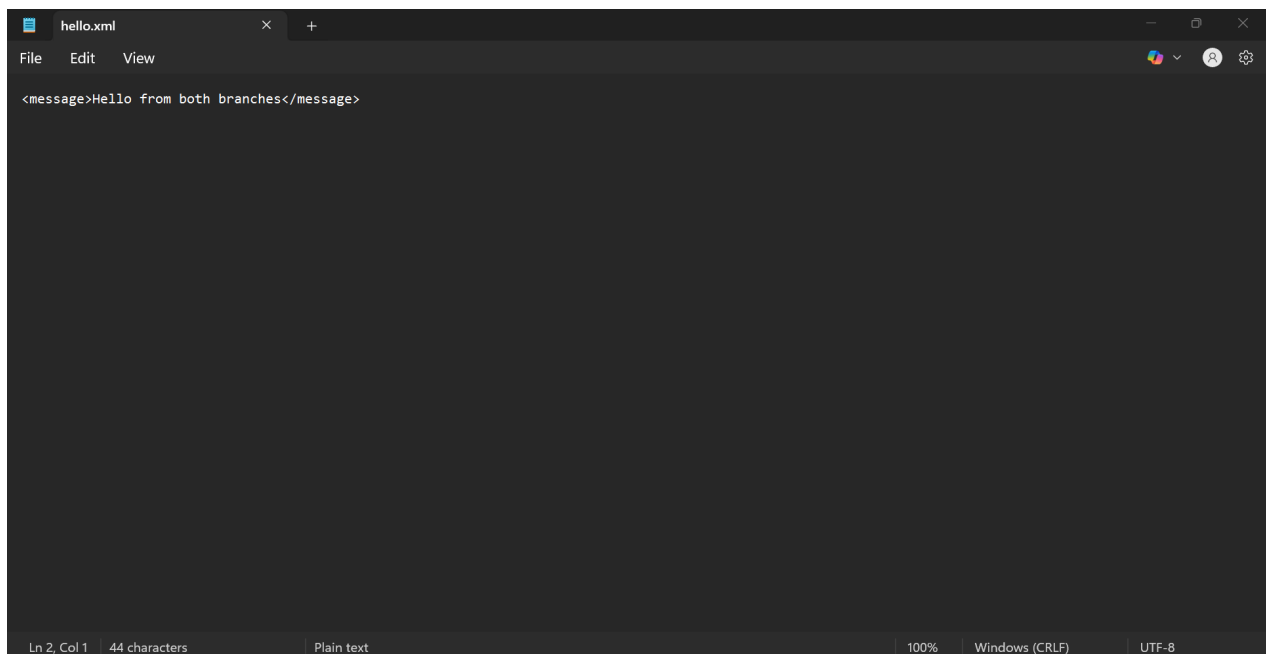
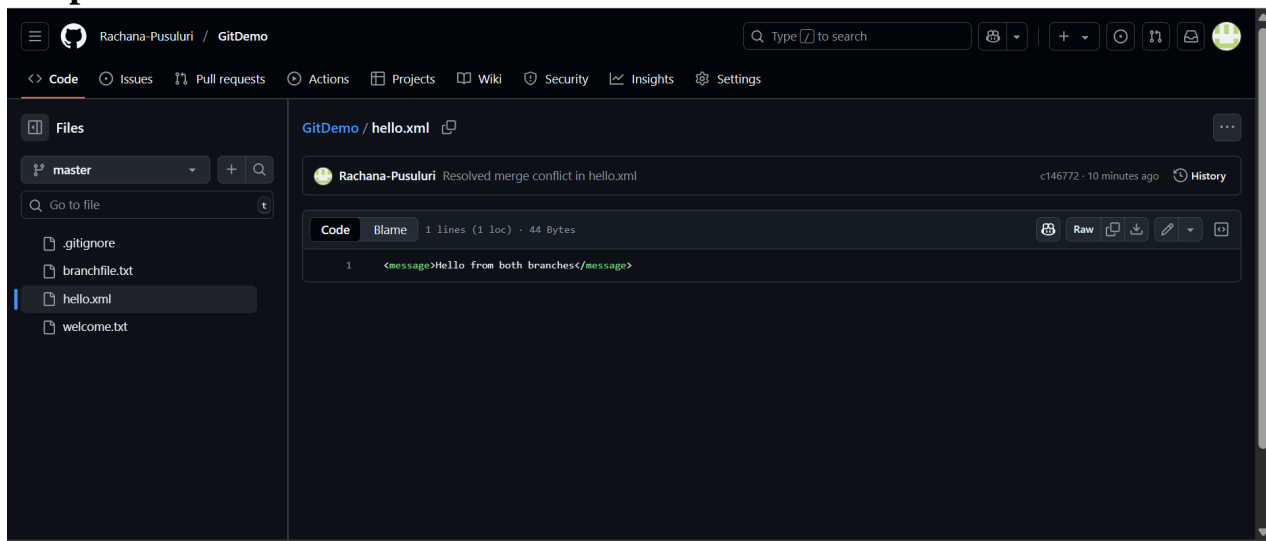
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git branch
Gitwork
* master

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git branch -d Gitwork
Deleted branch Gitwork (was d56ca4c).

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git log --oneline --graph --decorate
* c146772 (HEAD -> master) Resolved merge conflict in hello.xml
|
| * d56ca4c Add hello.xml in Gitwork branch
| * d36cf27 Add hello.xml in master branch
|
| * 180d8cb (origin/master) Added test line for diff
| * 9a60bf9 Added branchfile.txt in GitNewBranch
| * 85ddd2d Added .gitignore to ignore log files and logs folder
| * 027dace Added welcome file
|
rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git push origin master
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 4 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (9/9), 873 bytes | 218.00 KiB/s, done.
Total 9 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 1 local object
To https://github.com/Rachana-Pusuluri/GitDemo.git
180d8cb..c146772 master -> master

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$
```


Output:



Hands On 5 : Hands-on ID: “Git-T03-HOL_002”

```
MINGW64/c/Users/rajan/GitDemo
rajan@DESKTOP-AVS12T3 MINGW64 - (GitWork)
$ cd GitDemo

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git branch
* master

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git pull origin master
From https://github.com/Rachana-Pusuluri/GitDemo
 * branch      master       -> FETCH_HEAD
Already up to date.

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git push origin master
Everything up-to-date

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git fetch --all
git branch -a
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 865 bytes | 96.00 KiB/s, done.
From https://github.com/Rachana-Pusuluri/GitDemo
 * [new branch]      main       -> origin/main
 * master
  remotes/origin/HEAD -> origin/main
  remotes/origin/main
  remotes/origin/master

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

rajan@DESKTOP-AVS12T3 MINGW64 ~/GitDemo (master)
$
```

Conclusion :

This is link of GitHub repository where all the changes and hands on are made for checking :

<https://github.com/Rachana-Pusuluri/GitDemo/tree/master>