Week 8 Assignment Solutions (GIT)

1. GIT HOL (Familiar with Git commands like git init, git status, git add, git commit, git push, and git pull.)

```
MINGW64:/c/Users/KIIT

KIIT@Vardhan-Raj MINGW64 ~

$ git version
git version 2.42.0.windows.2
```

```
MINGW64:/c/Users/KIT

KIIT@Vardhan-Raj MINGW64 ~
$ git config --global user.name "Raj Vardhan"

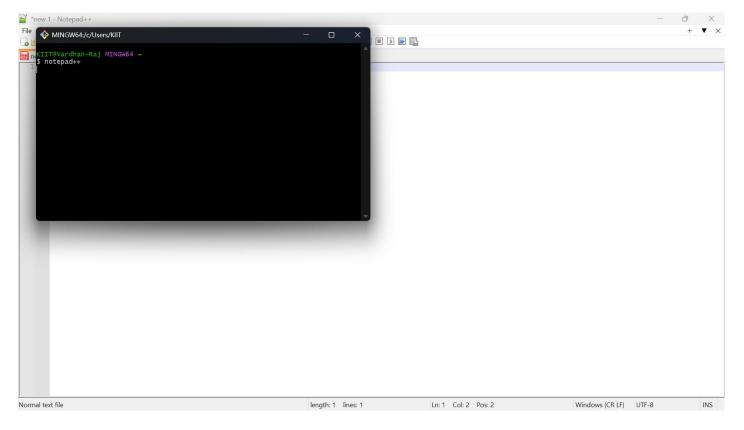
KIIT@Vardhan-Raj MINGW64 ~
$ git config --global user.email "22052843@kiit.ac.in"
```

```
MINGW64:/c/Users/KIIT

KIIT@Vardhan-Raj MINGW64 ~
$ git config --global user.name "Raj Vardhan"

KIIT@Vardhan-Raj MINGW64 ~
$ git config --global user.email "22052843@kiit.ac.in"

KIIT@Vardhan-Raj MINGW64 ~
$ git config --global --list
user.name=Raj Vardhan
user.email=22052843@kiit.ac.in
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
```



```
MINGW64:/c/Users/KIIT

KIIT@Vardhan-Raj MINGW64 ~
$ alias np='notepad++'

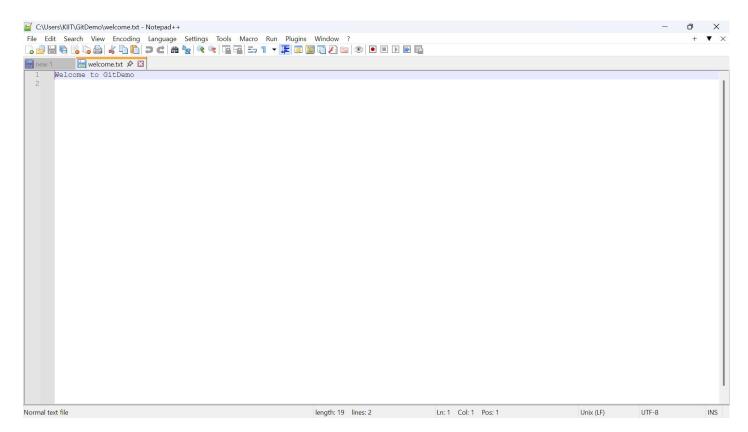
KIIT@Vardhan-Raj MINGW64 ~
$ echo "alias np='notepad++'" >> ~/.bashrc

KIIT@Vardhan-Raj MINGW64 ~
$ source ~/.bashrc

KIIT@Vardhan-Raj MINGW64 ~
$ git config --global core.editor "notepad++ -multiInst -nosession"

KIIT@Vardhan-Raj MINGW64 ~
$ git config --global --get core.editor
notepad++ -multiInst -nosession
```

```
KIIT@Vardhan-Raj MINGW64 ~
$ 1s -a1
total 60986
drwxr-xr-x 1 KIIT 197609
                                           0 Aug 10 20:41
drwxr-xr-x 1 KIIT 197609
                                           0 Mar 3 20:05
0 May 18 2023
                                                                .Ld9VirtualBox/
                                          0 Apr 6
0 May 27
0 Sep 27
                                                        2024
                                                                .TurboVPN/
                                                         2023
                                                                .VirtualBox/
drwxr-xr-x 1 KIIT 197609
                                                       2022
                                                                .android/
drwxr-xr-x 1 KIIT 197609
                                           0 Jul 12 22:47
                                                                .atom/
 -rw-r--r-- 1 KIIT 197609
                                        534 Aug 10 20:37
                                                                .bash_history
                                          21 Aug 10 20:38
 -rw-r--r-- 1 KIIT 197609
                                                                .bashrc
drwxr-xr-x 1 KIIT 197609
                                           0 Dec 16
                                                       2022
                                                                .cache/
drwxr-xr-x 1 KIIT 197609
                                           0 Jun 29 17:19
                                                                .dbclient/
drwxr-xr-x 1 KIIT 197609
                                          0 Jul 13 18:28
                                                                .dotnet/
 -rw-r--r-- 1 KIIT 197609
                                          31 Jan 27
                                                        2024
                                                                .earlystart
-rw-r--r-- 1 KIIT 197609
-rw-r--r-- 1 KIIT 197609
drwxr-xr-x 1 KIIT 197609
drwxr-xr-x 1 KIIT 197609
-rw-r--r-- 1 KIIT 197609
drwxr-xr-x 1 KIIT 197609
drwxr-xr-x 1 KIIT 197609
drwxr-xr-x 1 KIIT 197609
                                        231 Aug 10 20:39
                                                                .gitconfig
                                           0 Apr 16 2023
0 Mar 20 22:42
                                                       2023
                                                                .idlerc/
                                                                .keras/
                                          20 Aug 10 20:24
                                                                .lesshst
                                           0 Apr
                                                   9
                                                       13:31
                                                                .m2/
                                           0 Mar 20 23:13
                                                                 .matplotlib/
                                           0 Sep
                                                       2022
                                                   8
                                                                 .ms-ad/
                                           0 Jul 24
drwxr-xr-x 1 KIIT 197609
                                                       2022
                                                                .nbi/
 -rw-r--r-- 1 KIIT 197609
                                          12 Jul 31 11:19
                                                                .node_repl_history
drwxr-xr-x 1 KIIT 197609
                                           0 Jun 29 21:16
                                                                .nuget/
drwxr-xr-x 1 KIIT 197609
                                           0 Apr 23
                                                       2024
                                                                .openjfx/
-rw-r--r-- 1 KIIT 197609
                                        186 Feb 16 21:12
                                                                .packettracer
drwxr-xr-x 1 KIIT 197609
                                           0 Apr 16
                                                       2023
                                                                .redhat/
-rw-r--r-- 1 KIIT 197609
                                      12288 Sep 2
                                                        2024
                                                                .swp
drwxr-xr-x 1 KIIT 197609
drwxr-xr-x 1 KIIT 197609
-rw-r--r-- 1 KIIT 197609
drwxr-xr-x 1 KIIT 197609
drwxr-xr-x 1 KIIT 197609
                                           0 Jun 20 00:49
                                                                .templateengine/
                                           0 Jul 9 23:50
                                                                .u2net/
                                                   2
                                                        2024
                                                                .viminfo
                                        672 Sep
                                           0 Jun 15
0 Jul 26
                                                        2023
                                                                .vscode/
                                                       2024
                                                                .vscode-print-resource-cache/
drwxr-xr-x 1 KIIT 197609
                                           0 Jun 20 00:50 '6363514 learning program solutions'/
 -rw-r--r-- 1 KIIT 197609
                                                   2 23:01 Anytime_DSA.code-workspace
                                        120 Aug
```



```
<IIT@Vardhan-Raj MINGW64 ~</p>
$ mkdir ~/GitDemo
KIIT@Vardhan-Raj MINGW64 ~
$ cd ~/GitDemo
KIIT@Vardhan-Raj MINGW64 ~/GitDemo
Initialized empty Git repository in C:/Users/KIIT/GitDemo/.git/
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ 1s -1a
total 36
drwxr-xr-x 1 KIIT 197609 0 Aug 10 20:44 ./
drwxr-xr-x 1 KIIT 197609 0 Aug 10 20:44 ../
drwxr-xr-x 1 KIIT 197609 0 Aug 10 20:44 .git/
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ echo "Welcome to GitDemo" > welcome.txt
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ np welcome.txt
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ 1s -a1
total 37
drwxr-xr-x 1 KIIT 197609 0 Aug 10 20:45 ./
drwxr-xr-x 1 KIIT 197609 0 Aug 10 20:44 ../
drwxr-xr-x 1 KIIT 197609 0 Aug 10 20:44 .git/
-rw-r--r-- 1 KIIT 197609 19 Aug 10 20:45 welcome.txt
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ cat welcome.txt
Welcome to GitDemo
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git status
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)
```

```
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git status
On branch master
No commits yet
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git add welcome.txt
warning: in the working copy of 'welcome.txt', LF will be replaced by CRLF the next time Git touches it
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git commit -m "Add welcome.txt"
[master (root-commit) d4ec4d5] Add welcome.txt
 1 file changed, 1 insertion(+)
 create mode 100644 welcome.txt
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git status
On branch master
nothing to commit, working tree clean
```

```
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git remote -v
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git remote add origin https://github.com/Vardhan-Raj/GitDemo.git
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git remote -v
        https://github.com/Vardhan-Raj/GitDemo.git (fetch)
origin
        https://github.com/Vardhan-Raj/GitDemo.git (push)
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (master)
$ git branch -M main
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 240 bytes | 120.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Vardhan-Raj/GitDemo.git
* [new branch]
                     main -> main
branch 'main' set up to track 'origin/main'.
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git pull origin main
From https://github.com/Vardhan-Raj/GitDemo
* branch
                     main
                                -> FETCH_HEAD
Already up to date.
```

2. GIT HOL (Explain git ignore-----Explain how to ignore unwanted files using git ignore)

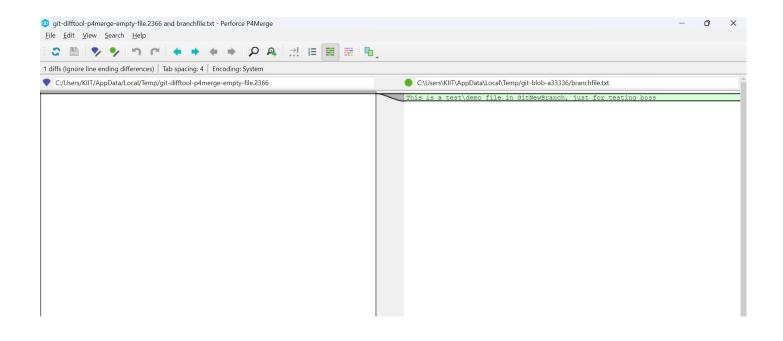
```
KIIT@Vardhan-Raj MINGW64 ~
$ cd ~/GitDemo
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ echo "This is a log file" > debug.log
mkdir log
echo "Error: Something failed" > log/error.txt
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ touch .gitignore
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ notepad++ .gitignore
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git add .gitignore
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git commit -m "Add .gitignore to ignore .log files and log folder"
[main 6fb3101] Add .gitignore to ignore .log files and log folder 1 file changed, 5 insertions(+)
 create mode 100644 .gitignore
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
   (use "git push" to publish your local commits)
nothing to commit, working tree clean
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 352 bytes | 352.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Vardhan-Raj/GitDemo.git
   d4ec4d5..6fb3101 main -> main
```

3. GIT HOL (Explain branching and merging------Explain about creating a branch request in GitLab-----Explain about creating a merge request in GitLab)

```
(IIT@Vardhan-Raj MINGW64 ~
$ cd ~/GitDemo
 KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git branch GitNewBranch
 (IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
  git branch
  GitNewBranch
  main
 (IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
  git branch -a
  GitNewBranch
  main
  remotes/origin/main
 (IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git checkout GitNewBranch
Switched to branch 'GitNewBranch'
KIIT@Vardhan-Raj MINGW64 ~<mark>/GitDemo (GitNewBranch)</mark>
$ echo "This is a test\demo file in GitNewBranch, just for testing boss" > branchfile.txt
KIIT@Vardhan-Raj 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
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (GitNewBranch)
$ git commit -m "Add branchfile.txt in GitNewBranch"
[GitNewBranch 8f1b52b] Add branchfile.txt in GitNewBranch
 1 file changed, 1 insertion(+) create mode 100644 branchfile.txt
 (IIT@Vardhan-Raj MINGW64 ~/GitDemo (GitNewBranch)
$ git status
On branch GitNewBranch
nothing to commit, working tree clean
 (IIT@Vardhan-Raj MINGW64 ~/GitDemo (GitNewBranch)
$ git checkout master
error: pathspec 'master' did not match any file(s) known to git
 (IIT@Vardhan-Raj MINGW64 ~/GitDemo (GitNewBranch)
$ git checkout main'
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

```
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git diff main GitNewBranch
diff --git a/branchfile.txt b/branchfile.txt
new file mode 100644
index 0000000..4f4082a
--- /dev/null
+++ b/branchfile.txt
@@ -0,0 +1 @@
+This is a test\demo file in GitNewBranch, just for testing boss
```

```
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
 git config --global merge.tool p4merge
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git config --global mergetool.p4merge.path "C:/Program Files/Perforce/p4merge.exe"
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git difftool master GitNewBranch
fatal: ambiguous argument 'master': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
git <command> [<revision>...] -- [<file>...]
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git difftool main GitNewBranch
Viewing (1/1): 'branchfile.txt'
Launch 'p4merge' [Y/n]? Y
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git merge GitNewBranch
Updating 6fb3101..8f1b52b
Fast-forward
branchfile.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 branchfile.txt
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git log --oneline --graph --decorate
 8f1b52b (HEAD -> main, GitNewBranch) Add branchfile.txt in GitNewBranch
* 6fb3101 (origin/main) Add .gitignore to ignore .log files and log folder
 d4ec4d5 Add welcome.txt
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git branch -d GitNewBranch
Deleted branch GitNewBranch (was 8f1b52b).
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
nothing to commit, working tree clean
```



```
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), 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/Vardhan-Raj/GitDemo.git
    6fb3101..8f1b52b main -> main
```

4. GIT HOL (Explain how to resolve the conflict during merge.)

```
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git checkout main
Already on 'main'
Your branch is up to date with 'origin/main'.
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git branch GitWork
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git checkout GitWork
Switched to branch 'GitWork'
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (GitWork)
$ echo "<message>Hello from GitWork branch</message>" > hello.xml
KIIT@Vardhan-Raj 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
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (GitWork)

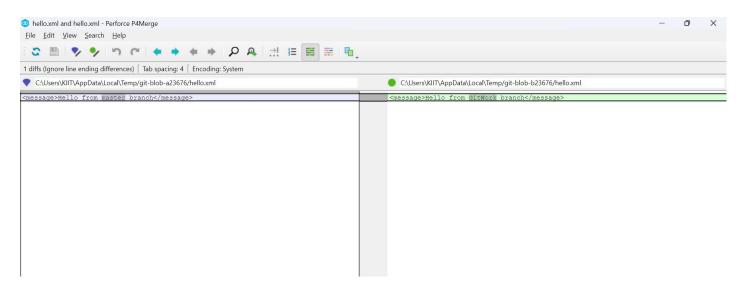
$ git commit -m "Adding hello.xml in GitWork branch"

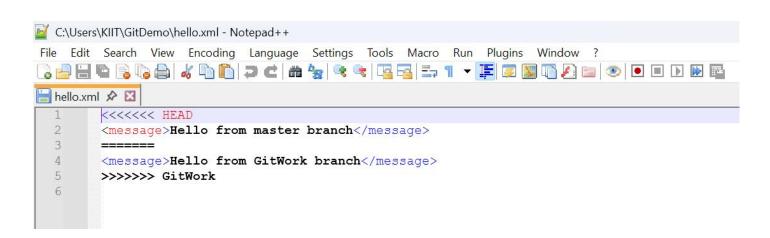
[GitWork 2ca6cc7] Adding hello.xml in GitWork branch

1 file changed, 1 insertion(+)

create mode 100644 hello.xml
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (GitWork)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ echo "<message>Hello from master branch</message>" > hello.xml
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git add hello.xml
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the next time Git touches it
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git commit -m "Add hello.xml in main branch"
[main 83baec8] Add hello.xml in main branch
 1 file changed, 1 insertion(+) create mode 100644 hello.xml
 KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
Git log --oneline --graph --decorate --all
  83baec8 (HEAD -> main) Add hello.xml in main branch
  * 2ca6cc7 (GitWork) Adding hello.xml in GitWork branch
  8f1b52b (origin/main) Add branchfile.txt in GitNewBranch 6fb3101 Add .gitignore to ignore .log files and log folder d4ec4d5 Add welcome.txt
```

```
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git diff main GitWork
diff --git a/hello.xml
index 82868a7..0bf4c19 100644
 -- a/hello.xml
+++ b/hello.xml
aa -1 +1 aa
 <message>Hello from master branch</message>
-<message>Hello from GitWork branch</message>
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git config --global merge.tool p4merge
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git config --global mergetool.p4merge.path "C:/Program Files/Perforce/p4merge.exe"
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git difftool master GitWork
fatal: ambiguous argument 'master': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
git <command> [<revision>...] -- [<file>...]'
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git difftool main GitWork
Viewing (1/1): 'hello.xml'
Launch 'p4merge' [Y/n]? Y
```





```
(IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ 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.
 KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main|MERGING)
$ notepad++ hello.xml
 <IIT@Vardhan-Raj MINGW64 ~/GitDemo (main|MERGING)</pre>
$ git add
Nothing specified, nothing added.
hint: Maybe you wanted to say 'git add .'?
hint: Turn this message off by running
hint: "git config advice.addEmptyPathspec false"
 KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main|MERGING)
$ git add .
 KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main|MERGING)
$ git commit
[main c8260d6] Merge branch 'GitWork'
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git add hello.xml
KIIT@Vardhan-Raj MINGW64 ~<mark>/GitDemo (main)</mark>
$ git commit -m "Merge GitWork into master and resolve conflict"
On branch main
Your branch is ahead of 'origin/main' by 3 commits.
   (use "git push" to publish your local commits)
nothing to commit, working tree clean
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ echo "*.orig" >> .gitignore
 (IIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git add .gitignore
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the next time Git touches it
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git commit -m "Ignore merge backup files"
[main 41d4a60] Ignore merge backup files
1 file changed, 1 insertion(+), 1 deletion(-)
```

```
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git branch -d GitWork
Deleted branch GitWork (was 2ca6cc7).

KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git log --oneline --graph --decorate
* 41d4a60 (HEAD -> main) Ignore merge backup files
* c8260d6 Merge branch 'GitWork'

| * 2ca6cc7 Adding hello.xml in GitWork branch
* | 83baec8 Add hello.xml in main branch
//
* 8f1b52b (origin/main) Add branchfile.txt in GitNewBranch
* 6fb3101 Add .gitignore to ignore .log files and log folder
* d4ec4d5 Add welcome.txt
```

5. GIT HOL (Explain how to clean up and push back to remote Git)

Output images:

```
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git status
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
  (use "git push" to publish your local commits)
nothing to commit, working tree clean
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git branch -a
* main
  remotes/origin/main
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git pull origin main
From https://github.com/Vardhan-Raj/GitDemo
* branch
                      main
                                 -> FETCH_HEAD
Already up to date.
KIIT@Vardhan-Raj MINGW64 ~/GitDemo (main)
$ git push origin main
Enumerating objects: 18, done.
Counting objects: 100% (18/18), done.
Delta compression using up to 8 threads
Compressing objects: 100% (11/11), done.
Writing objects: 100% (16/16), 1.48 KiB | 1.48 MiB/s, done.
Total 16 (delta 6), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (6/6), completed with 2 local objects.
To https://github.com/Vardhan-Raj/GitDemo.git
   8f1b52b..a44d78b
                      main -> main
```

This is Week-8 Assignment completed by Raj Vardhan Superset ID - 6363514

Thank You Giving me the opportunity of Deep Skilling Round:)