

WEEK 8:

1)

Step 1: Setup your machine with Git Configuration

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

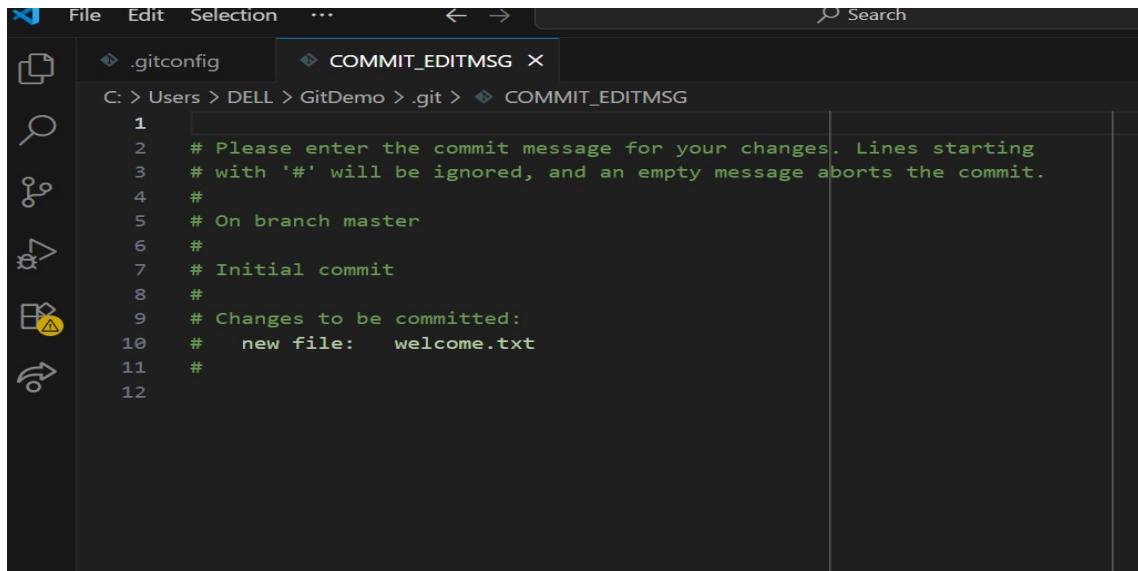
Step 3: Add a file to source code repository

```
MINGW64:/c/Users/DELL
$ git --version
git version 2.48.1.windows.1
$ git config --global user.name "123"
$ git config --global user.email "123@email@example.com"
$ 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=123
user.email=123@email@example.com

MINGW64 ~
$ notepad++
bash: notepad++: command not found

MINGW64 ~
$ code --version
1.102.1
7adae6a56e34cb64d08899664b814cf620465925
x64

MINGW64 ~
$ git config --global core.editor "code --wait"
MINGW64 ~
$
```



```

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$ git commit -m "Initial commit with welcome.txt"
[master (root-commit) a8be72d] Initial commit with welcome.txt
 1 file changed, 1 insertion(+)
 create mode 100644 welcome.txt

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$ git push origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 246 bytes | 246.00 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/tharshitha57-group/gitdemo/-/merge_requests/new?merge_r
equest%5Bsource_branch%5D=master
remote:
To https://gitlab.com/tharshitha57-group/gitdemo.git
 * [new branch]      master -> master

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$ echo "This is an updated line." >> welcome.txt

DELL@4GW22CS044 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

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$ git commit -m "Updated welcome.txt with an additional line"
[master 5aeeae1] Updated welcome.txt with an additional line
 1 file changed, 1 insertion(+)

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$ git push origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 308 bytes | 308.00 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/tharshitha57-group/gitdemo/-/merge_requests/new?merge_r
equest%5Bsource_branch%5D=master
remote:
To https://gitlab.com/tharshitha57-group/gitdemo.git
 a8be72d..5aeeae1 master -> master

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$ git checkout -b feature-branch
Switched to a new branch 'feature-branch'

```

```

DELL@4GW22CS044 MINGW64 ~/GitDemo (feature-branch)
$ git push origin feature-branch
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: To create a merge request for feature-branch, visit:
remote:   https://gitlab.com/tharshitha57-group/gitdemo/-/merge_requests/new?merge_r
equest%5Bsource_branch%5D=feature-branch
remote:
To https://gitlab.com/tharshitha57-group/gitdemo.git
 * [new branch]      feature-branch -> feature-branch

DELL@4GW22CS044 MINGW64 ~/GitDemo (feature-branch)
$ echo "# GitDemo Project" > README.md

DELL@4GW22CS044 MINGW64 ~/GitDemo (feature-branch)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next ti
me Git touches it

DELL@4GW22CS044 MINGW64 ~/GitDemo (feature-branch)
$ git commit -m "Added README file"
[feature-branch 617bf3a] Added README file
 1 file changed, 1 insertion(+)
 create mode 100644 README.md

DELL@4GW22CS044 MINGW64 ~/GitDemo (feature-branch)
$ git push origin master
Everything up-to-date

```



You can now close this page.

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.

```
Last login: Thu Aug  7 17:51:59 on ttys000
(base) dhatriss@Dhatris-MacBook-Air ~ % mkdir GitDemoIgnore
(base) dhatriss@Dhatris-MacBook-Air ~ % cd GitDemoIgnore
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % git init
Initialized empty Git repository in /Users/dhatriss/GitDemoIgnore/.git/
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % echo "This is a test log file" > error.log
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % mkdir log
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % echo "Log details here" > log/debug.log
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % touch .gitignore
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % code .gitignore
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % git status
[On branch master
No commits yet
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)
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % git add .gitignore
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % git commit -m "Add .gitignore to ignore .log files and log folder"
[master (root-commit) 28d7567] Add .gitignore to ignore .log files and log folder
[ 1 file changed, 2 insertions(+)
create mode 100644 .gitignore
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % git status
On branch master
nothing to commit, working tree clean
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore % git ls-files --others --ignored --exclude-standard
error.log
log/debug.log
(base) dhatriss@Dhatris-MacBook-Air GitDemoIgnore %
```

3) Branching:

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

Merging:

- Switch to the master
- List out all the differences between trunk and branch. These provide the differences in command line interface.
- List out all the visual differences between master and branch using **P4Merge tool**.
- Merge the source branch to the trunk.
- Observe the logging after merging using “**git log –oneline –graph –decorate**”
- Delete the branch after merging with the trunk and observe the git status.

```
Last login: Thu Aug  7 18:30:14 on ttys000
^[[A
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git init
Initialized empty Git repository in /Users/dhathris/MyGitProject/.git/
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git branch GitNewBranch
fatal: Not a valid object name: 'master'.
(base) dhathris@Dhathris-MacBook-Air MyGitProject % echo "# My First Git Repo" > README.md
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git add README.md
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git commit -m "Initial commit"
[master (root-commit) 601bf41] Initial commit
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git branch GitNewBranch
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git branch
  * master
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git branch -r
  (base) dhathris@Dhathris-MacBook-Air MyGitProject % git branch -a
    GitNewBranch
  * master
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git checkout GitNewBranch
Switched to branch 'GitNewBranch'
(base) dhathris@Dhathris-MacBook-Air MyGitProject % echo "Sample content" > newfile.txt
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git add newfile.txt
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git commit -m "Added newfile.txt to GitNewBranch"
[GitNewBranch 857fd2d] Added newfile.txt to GitNewBranch
 1 file changed, 1 insertion(+)
 create mode 100644 newfile.txt
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git status
On branch GitNewBranch
nothing to commit, working tree clean
(base) dhathris@Dhathris-MacBook-Air MyGitProject % 
```

```
Last login: Thu Aug  7 18:31:07 on ttys000
(base) dhathris@Dhathris-MacBook-Air ~ % git diff master GitNewBranch
error: Could not access 'master'.
(base) dhathris@Dhathris-MacBook-Air ~ % cd MyGitProject
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git diff master GitNewBranch
diff --git a/newfile.txt b/newfile.txt
new file mode 100644
index 0000000..53f3099
--- /dev/null
+++ b/newfile.txt
@@ -0,0 +1 @@
+Sample content
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git merge GitNewBranch
Updating 601bf41..857fd2d
Fast-forward
 newfile.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 newfile.txt
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git log --oneline --graph --decorate
* 857fd2d (HEAD => master, GitNewBranch) Added newfile.txt to GitNewBranch
* 601bf41 Initial commit
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git branch -d GitNewBranch
Deleted branch GitNewBranch (was 857fd2d).
(base) dhathris@Dhathris-MacBook-Air MyGitProject % git status
On branch master
nothing to commit, working tree clean
(base) dhathris@Dhathris-MacBook-Air MyGitProject % 
```

4)

```
Last login: Thu Aug  7 18:38:24 on ttys000
git init
(base) dhathris@Dhathris-MacBook-Air ~ % git init
Initialized empty Git repository in /Users/dhathris/.git/
(base) dhathris@Dhathris-MacBook-Air ~ %
(base) dhathris@Dhathris-MacBook-Air ~ % cd GitLabHandsOn
(base) dhathris@Dhathris-MacBook-Air % cd GitLabHandsOn
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git init
Initialized empty Git repository in /Users/dhathris/GitLabHandsOn/.git/
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git status
On branch master
No commits yet
nothing to commit (create/copy files and use "git add" to track)
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git checkout -b GitWork
Switched to a new branch 'GitWork'
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % echo "<message>Hello from GitWork branch</message>" > hello.xml
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % cat hello.xml
<message>Hello from GitWork branch</message>
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % echo "<message>Updated message in GitWork</message>" > hello.xml
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git status
On branch GitWork
No commits yet
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)
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git add hello.xml
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git commit -m "Updated hello.xml in GitWork branch"
[GitWork (root-commit) 8d4ee99] Updated hello.xml in GitWork branch
 1 file changed, 1 insertion(+)
 create mode 100644 hello.xml
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git checkout master
error: pathspec 'master' did not match any file(s) known to git.
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git branch
* GitWork
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git checkout --orphan master
Switched to a new branch 'master'
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % echo "Initial commit" > dummy.txt
(base) dhathris@Dhathris-MacBook-Air GitLabHandsOn % git add dummy.txt
```

```

Switched to a new branch 'master'
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % echo "initial commit" > dummy.txt
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % git add dummy.txt
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % git commit -m "Initial commit in master"
[master (root-commit) 62eb141] Initial commit in master
[ 2 files changed, 2 insertions(+)
  create mode 100644 dummy.txt
  create mode 100644 hello.xml
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % git checkout master

Already on 'master'
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % echo "<message>Different content in master</message>" > hello.xml
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % cat hello.xml
<message>Different content in master</message>
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % git add hello.xml
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % git commit -m "Added hello.xml in master with different content"
[master 77129e9] Added hello.xml in master with different content
1 file changed, 1 insertion(+), 1 deletion(-)
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % git log --oneline --graph --decorate --all

* 77129e9 (HEAD -> master) Added hello.xml in master with different content
* 62eb141 Initial commit in master
* 8d4ee99 (GitWork) Updated hello.xml in GitWork branch
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn % git diff master GitWork -- hello.xml

diff --git a/hello.xml b/hello.xml
index 289477d..750cf03 100644
--- a/hello.xml
+++ b/hello.xml
@@ -1 +1 @@
-<message>Different content in master</message>
+<message>Updated message in GitWork</message>
(base) dhatrhis@Dhathris-MacBook-Air GitLabHandsOn %

```

5)

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

```

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$ git branch -a
  feature-branch
* master
  remotes/origin/feature-branch
  remotes/origin/master

DELL@4GW22CS044 MINGW64 ~/GitDemo (master)
$ git checkout -b Git-T03-HOL_002
Switched to a new branch 'Git-T03-HOL_002'

DELL@4GW22CS044 MINGW64 ~/GitDemo (Git-T03-HOL_002)
$ git add .

DELL@4GW22CS044 MINGW64 ~/GitDemo (Git-T03-HOL_002)
$ git commit -m "Added changes for Git-T03-HOL_002"
On branch Git-T03-HOL_002
nothing to commit, working tree clean

DELL@4GW22CS044 MINGW64 ~/GitDemo (Git-T03-HOL_002)
$ git push origin Git-T03-HOL_002
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: To create a merge request for Git-T03-HOL_002, visit:
remote:   https://gitlab.com/tharshitha57-group/gitdemo/-/merge_requests/new?merge_r
equest%5Bsource_branch%5D=Git-T03-HOL_002
remote:
To https://gitlab.com/tharshitha57-group/gitdemo.git
 * [new branch]      Git-T03-HOL_002 -> Git-T03-HOL_002

```