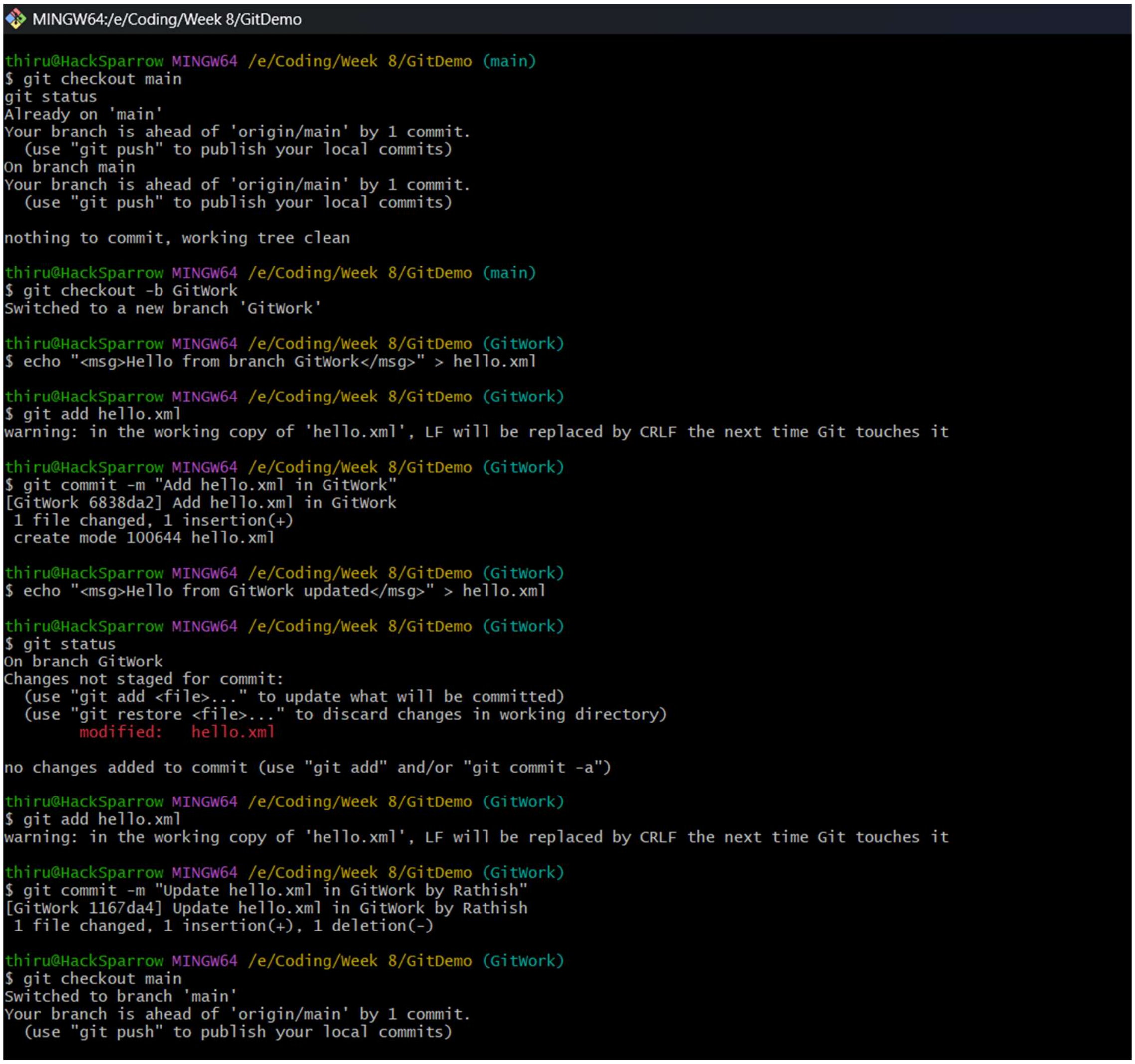
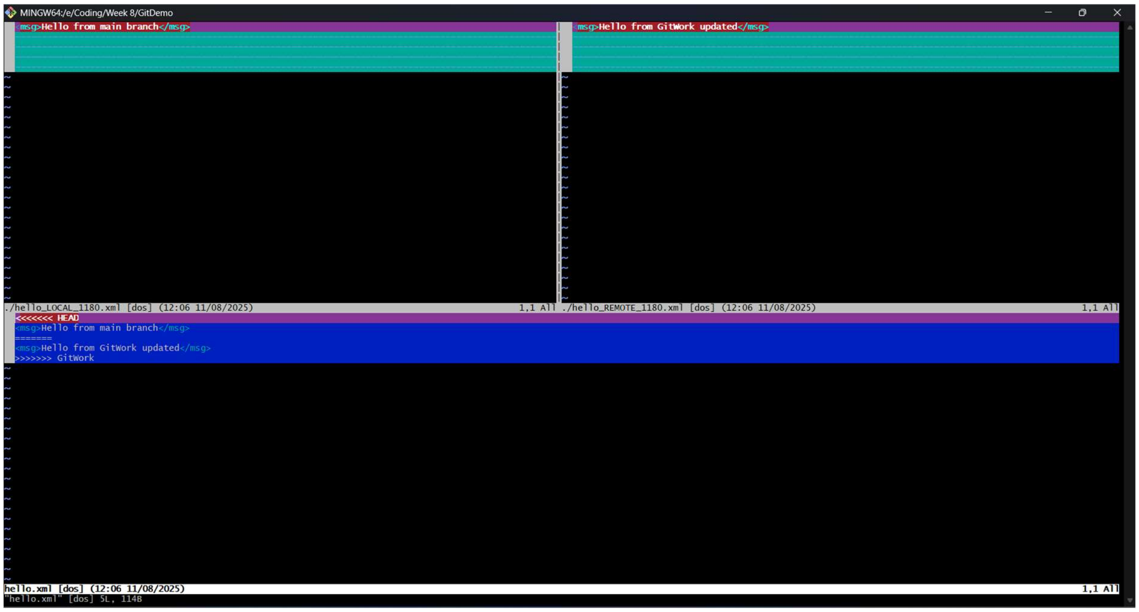
4. Git-HOL

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 –oneline –graph –decorate”



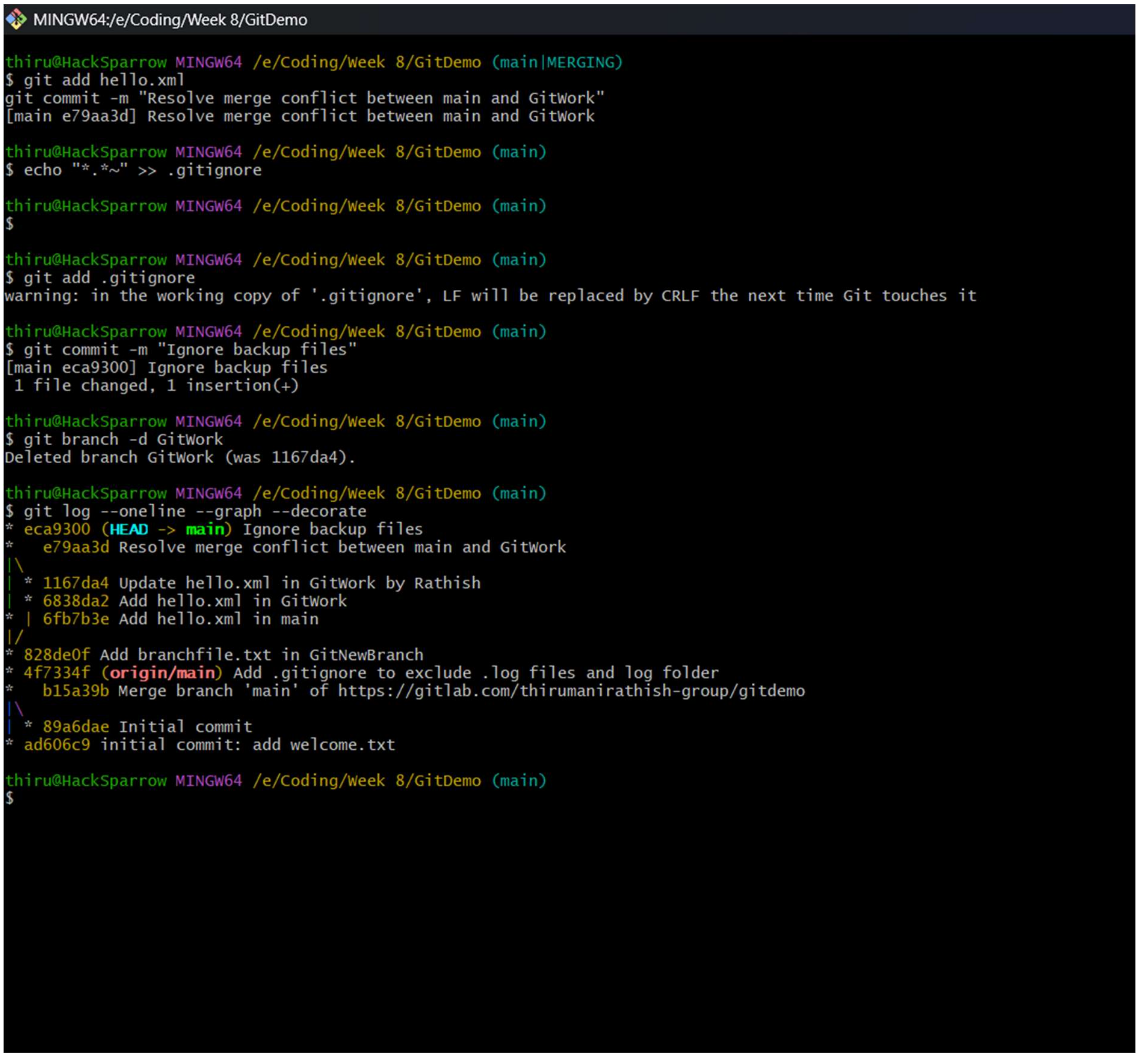
MINGW64:/e/Coding/Week 8/GitDemo

```
thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$ git checkout main
git status
Already on 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
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

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$ git checkout -b GitWork
Switched to a new branch 'GitWork'

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (GitWork)
$ echo "<msg>Hello from branch GitWork</msg>" > hello.xml

thiru@HackSparrow MINGW64 /e/Coding/Week 8/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

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (GitWork)
$ git commit -m "Add hello.xml in GitWork"
[GitWork 6838da2] Add hello.xml in GitWork
 1 file changed, 1 insertion(+)
 create mode 100644 hello.xml

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (GitWork)
$ echo "<msg>Hello from GitWork updated</msg>" > hello.xml

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (GitWork)
$ git status
On branch GitWork
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   hello.xml

no changes added to commit (use "git add" and/or "git commit -a")

thiru@HackSparrow MINGW64 /e/Coding/Week 8/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

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (GitWork)
$ git commit -m "Update hello.xml in GitWork by Rathish"
[GitWork 1167da4] Update hello.xml in GitWork by Rathish
 1 file changed, 1 insertion(+), 1 deletion(-)

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (GitWork)
$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
```



MINGW64:/e/Coding/Week 8/GitDemo

```
<msg>Hello from main branch</msg>                    <msg>Hello from GitWork updated</msg>

./hello_LOCAL_1180.xml [dos] (12:06 11/08/2025)   1,1 All ./hello_REMOTE_1180.xml [dos] (12:06 11/08/2025)   1,1 All
<<<<<<< HEAD
<msg>Hello from main branch</msg>
=======
<msg>Hello from GitWork updated</msg>
>>>>>>> GitWork

hello.xml [dos] (12:06 11/08/2025)                                                                          1,1 All
"hello.xml" [dos] 5L, 114B
```



```
thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main|MERGING)
$ git add hello.xml
git commit -m "Resolve merge conflict between main and GitWork"
[main e79aa3d] Resolve merge conflict between main and GitWork

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$ echo "*.*~" >> .gitignore

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$ git add .gitignore
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the next time Git touches it

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$ git commit -m "Ignore backup files"
[main eca9300] Ignore backup files
 1 file changed, 1 insertion(+)

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$ git branch -d GitWork
Deleted branch GitWork (was 1167da4).

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$ git log --oneline --graph --decorate
* eca9300 (HEAD -> main) Ignore backup files
*   e79aa3d Resolve merge conflict between main and GitWork
|\
| * 1167da4 Update hello.xml in GitWork by Rathish
| * 6838da2 Add hello.xml in GitWork
* | 6fb7b3e Add hello.xml in main
|/
* 828de0f Add branchfile.txt in GitNewBranch
* 4f7334f (origin/main) Add .gitignore to exclude .log files and log folder
*   b15a39b Merge branch 'main' of https://gitlab.com/thirumanirathish-group/gitdemo
|\
| * 89a6dae Initial commit
* ad606c9 initial commit: add welcome.txt

thiru@HackSparrow MINGW64 /e/Coding/Week 8/GitDemo (main)
$
```