**Exercise 4 : Git-HOL**

**Hands-on ID:** **“Git-T03-HOL\_001”**

**Learning to resolve the conflict during merge.**

arsha@DESKTOP-8CH3EHJ MINGW64 ~

**$ cd GitDemo/**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo (main)

**$ cd Git4HOL/**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git status**

On branch main

Your branch is up to date with 'origin/main'.

**After Creating a GitWork branch and adding a file:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git checkout GitWork**

Switched to branch 'GitWork'

**Update content in hello.xml:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (GitWork)

**$ echo "<branch>GitWork updated content</branch>" >> hello.xml**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (GitWork)

**$ git status**

On branch GitWork

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

**Commit changes in the branch:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (GitWork)

**$ git add hello.xml**

warning: in the working copy of 'Git4HOL/hello.xml', LF will be replaced by CRLF the next time Git touches it

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (GitWork)

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

[GitWork 3b798d3] Updated hello.xml in GitWork branch

1 file changed, 1 insertion(+)

create mode 100644 Git4HOL/hello.xml

**Switching back to main:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (GitWork)

**$ git checkout main**

Switched to branch 'main'

Your branch is up to date with 'origin/main'.

**Adding a new file hello.xml with different content in main:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ echo "<message>Hello from main</message>" > hello.xml**

**Commit changes in the main:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git add hello.xml**

warning: in the working copy of 'Git4HOL/hello.xml', LF will be replaced by CRLF the next time Git touches it

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git commit -m "Added hello.xml in main with different content"**

[main 368fdc8] Added hello.xml in main with different content

1 file changed, 1 insertion(+)

create mode 100644 Git4HOL/hello.xml

**Viewing commit log:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git log --oneline --graph --decorate --all**

\* 368fdc8 (HEAD -> main) Added hello.xml in main with different content

| \* 3b798d3 (GitWork) Updated hello.xml in GitWork branch

|/

\* 8f9f7ff (origin/main) Added .gitignore to ignore log files and log folder

\* 78ad7a6 Merge branch 'main' of https://gitlab.com/jannat-s/gitdemo

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| \* 0295a4a Initial commit

\* cd90a5f Added welcome.txt file

**Checking the diff between master and GitWork:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git diff GitWork**

diff --git a/Git4HOL/hello.xml b/Git4HOL/hello.xml

index 7eaeb69..b9ba826 100644

--- a/Git4HOL/hello.xml

+++ b/Git4HOL/hello.xml

@@ -1 +1 @@

-<branch>GitWork updated content</branch>

+<message>Hello from main</message>

**Using P4Merge tool:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git config --global merge.tool p4merge**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git config --global diff.tool p4merge**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git mergetool**

No files need merging

**Merging GitWork into main:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git merge GitWork**

Auto-merging Git4HOL/hello.xml

CONFLICT (add/add): Merge conflict in Git4HOL/hello.xml

Automatic merge failed; fix conflicts and then commit the result.

**Conflict occurs in hello.xml:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main|MERGING)

**$ cat hello.xml**

<<<<<<< HEAD

<message>Hello from main</message>

=======

<branch>GitWork updated content</branch>

>>>>>>> GitWork

**Using a 3-way merge tool:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main|MERGING)

**$ code hello.xml**

**Updating hello.xml - Manually resolve conflict in hello.xml :**

<message>Hello from both branches</message>

<branch>GitWork updated content</branch>

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main|MERGING)

**$ git add hello.xml**

**Commiting the resolved merge:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main|MERGING)

**$ git commit -m "Resolved merge conflict in hello.xml"**

[main e24bc46] Resolved merge conflict in hello.xml

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ ls**

hello.xml

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ echo "\*.orig" >> .gitignore**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git add .gitignore**

warning: in the working copy of 'Git4HOL/.gitignore', LF will be replaced by CRLF the next time Git touches it

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git commit -m "Ignore merge backup files"**

[main 6addd0d] Ignore merge backup files

1 file changed, 1 insertion(+)

create mode 100644 Git4HOL/.gitignore

**Listing all branches:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git branch**

GitWork

\* main

**Deleting the merged branch GitWork:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git branch -d GitWork**

Deleted branch GitWork (was 3b798d3).

**Final Git History:**

arsha@DESKTOP-8CH3EHJ MINGW64 ~/GitDemo/Git4HOL (main)

**$ git log --oneline --graph --decorate**

\* 6addd0d (HEAD -> main) Ignore merge backup files

\* e24bc46 Resolved merge conflict in hello.xml

|\

| \* 3b798d3 Updated hello.xml in GitWork branch

\* | 368fdc8 Added hello.xml in master with different content

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\* 8f9f7ff (origin/main) Added .gitignore to ignore log files and log folder

\* 78ad7a6 Merge branch 'main' of https://gitlab.com/jannat-s/gitdemo

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