

Prathamansh Jasrotia(6401411) Git-HOL-4-SOLUTION

Please follow the instructions to complete the hands-on. Each instruction expect a command for the Git Bash.

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"

Solution:

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Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~
$ mkdir gitc4

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~
$ cd gitc4

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4
$ git init
Initialized empty Git repository in C:/Users/Prathamansh Jasrotia/gitc4/.git/

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ echo "# conflict lab" > README.md
git add README.md
git commit -m "Initial commit"
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
[master (root-commit) 1332ef4] Initial commit
1 file changed, 1 insertion(+)
create mode 100644 README.md

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ git status
On branch master
nothing to commit, working tree clean

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ git checkout -b GitWork
cat > hello.xml <<'EOF'
<greeting>Hello from GitWork branch</greeting>
EOF
git add hello.xml
Switched to a new branch 'GitWork'
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the next time Git touches it

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (GitWork)
$ # edit/update file (here we overwrite with another line to ensure a diff)
cat > hello.xml <<'EOF'
<greeting>Hello from GitWork - updated</greeting>
EOF

git status
On branch GitWork
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   hello.xml

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
```

```

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (GitWork)
$ git add hello.xml
git commit -m "Add hello.xml on GitWork (branch version)"
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the next time Git touches it
[GitWork c0ed1ff] Add hello.xml on GitWork (branch version)
1 file changed, 1 insertion(+)
create mode 100644 hello.xml

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (GitWork)
$ git checkout master
Switched to branch 'master'

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ cat > hello.xml <<'EOF'
<greeting>Hello from master branch (different content)</greeting>
EOF
git add hello.xml
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the next time Git touches it

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ git commit -m "Add hello.xml on master (conflicting version)"
[master 0b3f73f] Add hello.xml on master (conflicting version)
1 file changed, 1 insertion(+)
create mode 100644 hello.xml

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ git log --oneline --graph --decorate --all
* 0b3f73f (HEAD -> master) Add hello.xml on master (conflicting version)
| * c0ed1ff (GitWork) Add hello.xml on GitWork (branch version)
|/
* 1332ef4 Initial commit

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ git diff master..GitWork # shows content differences
git diff --name-only master..GitWork
diff --git a/hello.xml b/hello.xml
index 826ad5f..c236a33 100644
--- a/hello.xml
+++ b/hello.xml
@@ -1,1 @@
-<greeting>Hello from master branch (different content)</greeting>
+<greeting>Hello from GitWork - updated</greeting>
hello.xml

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ git checkout master
Already on 'master'

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ git merge GitWork

```

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Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (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.

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master|MERGING)
$ git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
  (use "git merge --abort" to abort the merge)

Unmerged paths:
  (use "git add <file>..." to mark resolution)
    both added:      hello.xml

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

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master|MERGING)
$ cat hello.xml
# Or search for conflict markers:
grep -n '<<<<<<|=====|>>>>>>' -n hello.xml || true
<<<<<< HEAD
<greeting>Hello from master branch (different content)</greeting>
=====
<greeting>Hello from GitWork - updated</greeting>
>>>>>> GitWork
1:<<<<<< HEAD
3:=====
5:>>>>>> GitWork

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master|MERGING)
$ git add hello.xml
git commit -m "Merge GitWork into master - resolved conflict in hello.xml"
[master 5682468] Merge GitWork into master - resolved conflict in hello.xml

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ git status
On branch master
nothing to commit, working tree clean

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)
$ ls -la
total 18
drwxr-xr-x 1 Prathamansh Jasrotia 197121  0 Aug  8 21:05 ./
drwxr-xr-x 1 Prathamansh Jasrotia 197121  0 Aug  8 21:05 ../
drwxr-xr-x 1 Prathamansh Jasrotia 197121  0 Aug  8 21:06 .git/
-rw-r--r-- 1 Prathamansh Jasrotia 197121  15 Aug  8 21:03 README.md
-rw-r--r-- 1 Prathamansh Jasrotia 197121 158 Aug  8 21:05 hello.xml

Prathamansh Jasrotia@DESKTOP-JJJJGNV MINGW64 ~/gitc4 (master)

```