

Objectives

- Explain how to resolve the conflict during merge.

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"**

Output:

```
MINGW64 ~/Users/HOME
```

```
GHERDESKTOP-737UVF1 MINGW64 ~ (Gitwork)
$ git status
error: 'status' is not a git command. See 'git --help'.

The most similar command is
    status

GHERDESKTOP-737UVF1 MINGW64 ~ (Gitwork)
$ git status
warning: could not open directory 'Application Data/': Permission denied
warning: could not open directory 'Cookies/': Permission denied
warning: could not open directory 'Documents/My Music/': Permission denied
warning: could not open directory 'Documents/My Pictures/': Permission denied
warning: could not open directory 'Documents/My Videos/': Permission denied
warning: could not open directory 'Local Settings/': Permission denied
warning: could not open directory 'My Documents/': Permission denied
warning: could not open directory 'NetHood/': Permission denied
warning: could not open directory 'PrintHood/': Permission denied
warning: could not open directory 'Recent/': Permission denied
warning: could not open directory 'SendTo/': Permission denied
warning: could not open directory 'Start Menu/': Permission denied
warning: could not open directory 'Templates/': Permission denied
On branch Gitwork
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .\14-windows.xml
        .VirtualBox/.bash_history
        cache/
        eclipse/
        gitconfig
        gscale/
        idlerc/
        jasc/
        kexmls/
        lesshist
        m2/
        .node_repl_history
        p2/
        vcode/
        3D objects/
        AppData/
        Contacts/
        Downloads/
        Favorites/
        GitBase/
        GitGraphicsProfiles/
        ltnls
```

```

C:\WINDOWS\system32\cmd.exe /c cd C:\ProgramData\Microsoft\Windows Defender\Definition Updates\Definitions; dir
dir
    NTFS
    NTFS_C
    NTFS_DAT
    NTFS_DATA[513b98dc-1dc4-11ea-a811-000d3aa4692b].7z.slf
    NTFS_DATA[513b98dc-1dc4-11ea-a811-000d3aa4692b].7zContainer@000000000000
00000001.regtrans-ms
    NTFS_DATA[513b98dc-1dc4-11ea-a811-000d3aa4692b].7zContainer@000000000000
00000002.regtrans-ms
    README.md
    Saved Games/
    SearchIndex/
    Videos
    WindowsBox Vm's/
    bloopnp/
    bloopnpapp/
    cohorttracker/
    cscldatapp/
    ecslipse-workspace/
    ecslipse/
    eventspacelapp/
    hello.xml
    log/
    myfirstreact/
    nuster.dat.LOG1
    nuster.dat.LOG2
    nuster.ini
    officepacereantalapp/
    package-lock.json
    package.json
    praveen.html
    praveen.js
    public/
    samle-log
    sanju.html2
    sqlcalculatorapp/
    src/
    studentapp/
    timestoplogapp/
    website.html

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

C:\WINDOWS\system32\cmd.exe /c cd C:\ProgramData\Microsoft\Windows Defender\Definition Updates\Definitions; git checkout -b gitwork
fatal: a branch named 'gitwork' already exists

C:\WINDOWS\system32\cmd.exe /c cd C:\ProgramData\Microsoft\Windows Defender\Definition Updates\Definitions; git checkout -b gitwork
C:\WINDOWS\system32\cmd.exe /c cd C:\ProgramData\Microsoft\Windows Defender\Definition Updates\Definitions; git pull
e echo "hellobranch version<=hallo"> >hello.xml

```

MINGW64/c/Users/HOME

```
[GitWork abea096] Add hello.xml in Gitwork
1 file changed, 1 insertion(+)
create mode 100644 hello.xml

HOME@DESKTOP-737UVF1 MINGW64 - (GitWork)
$ git checkout master
Switched to branch 'master'

HOME@DESKTOP-737UVF1 MINGW64 - (master)
$ echo "<hello>Master version</hello>" > hello.xml
git add hello.xml
git commit -m "Add hello.xml in master"
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the next time git touches it
Auto packing the repository in background for optimum performance.
See "git help gc" for manual housekeeping.
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Checking connectivity: 16467, done.
warning: There are too many unreachable loose objects; run 'git prune' to remove them.
[master a94cead] Add hello.xml in master
1 file changed, 1 insertion(+)
create mode 100644 hello.xml

HOME@DESKTOP-737UVF1 MINGW64 - (master)
$ git log --oneline --graph --decorate --all
* a94cead (HEAD -> master) Add hello.xml in master
* abea096 (GitWork) Add hello.xml in Gitwork
/
* 28c5a7f (GitNewBranch) Add .gitignore to ignore .log files and log/ directories
$

HOME@DESKTOP-737UVF1 MINGW64 - (master)
$ git diff master Gitwork
diff --git a/hello.xml b/hello.xml
index 57e1754..de20e51 100644
--- a/hello.xml
+++ b/hello.xml
@@ -1,1 @@
-<hello>Master version</hello>
+<hello>Branch version</hello>

HOME@DESKTOP-737UVF1 MINGW64 - (master)
$ git difftool --tool=p4merge master Gitwork
```

MINGW64/c/Users/HOME

```
+++ b/hello.xml
@@ -1,1 @@
-<hello>Master version</hello>
+<hello>Branch version</hello>

HOME@DESKTOP-737UVF1 MINGW64 - (master)
$ git difftool --tool=p4merge master Gitwork

Viewing (1/1): 'hello.xml'
Launch 'p4merge' [Y/n]? y
The diff tool p4merge is not available as 'p4merge'
fatal: external diff died, stopping at hello.xml

HOME@DESKTOP-737UVF1 MINGW64 - (master)
$ git checkout master
git merge Gitwork
Already on 'master'
Auto-merging hello.xml
CONFLICT (add/add): Merge conflict in hello.xml
Automatic merge failed; fix conflicts and then commit the result.

HOME@DESKTOP-737UVF1 MINGW64 - (master|MERGING)
$ git config --global diff.tool p4merge
git config --global difftool.p4merge.path "C:/Program Files/Perforce/p4merge.exe"
git config --global difftool.prompt false
git config --global merge.tool p4merge
git config --global mergetool.p4merge.path "C:/Program Files/Perforce/p4merge.exe"
git config --global mergetool.keepBackup false
git config --global mergetool.prompt false

HOME@DESKTOP-737UVF1 MINGW64 - (master|MERGING)
$
$ git config --global --list
core.editor=C:/Program Files/Notepad+/notepad+.exe -multiInst -notabbar -nosession -noPlugin
user.name=Your Name
user.email=Your.email@example.com
diff.tool=p4merge
difftool.p4merge.path=C:/Program Files/Perforce/p4merge.exe
difftool.prompt=false
merge.tool=p4merge
mergetool.p4merge.path=C:/Program Files/Perforce/p4merge.exe
mergetool.keepBackup=false
mergetool.prompt=false
```

