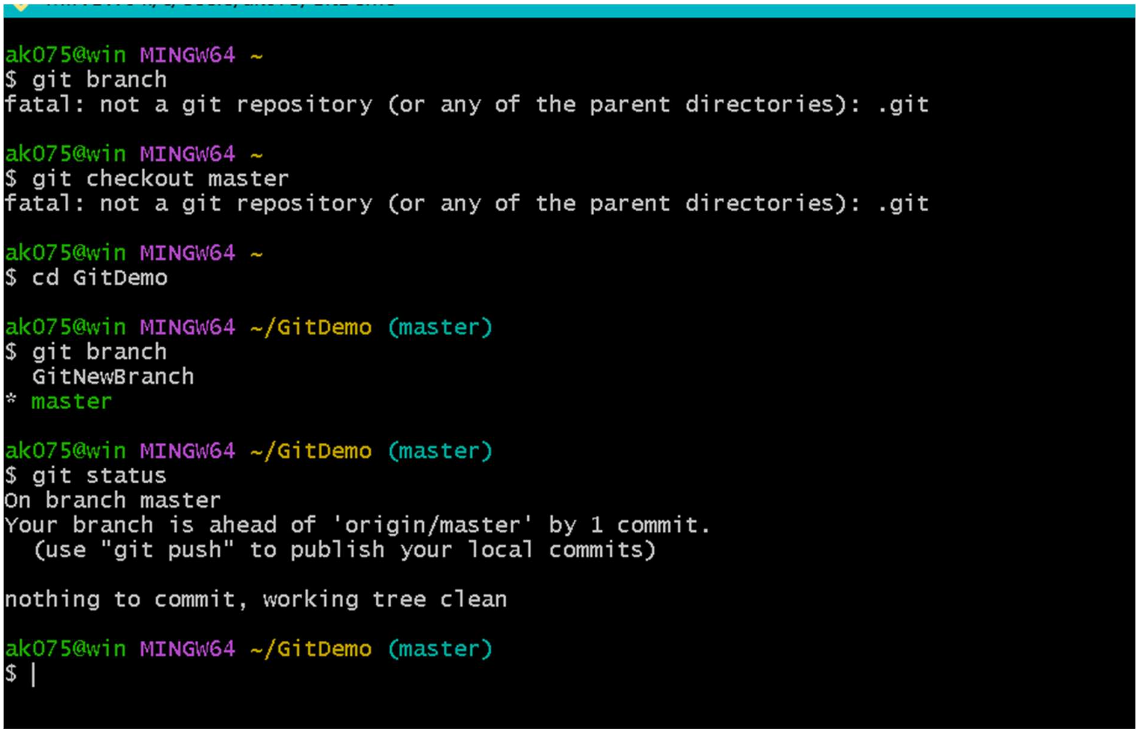
Step1: Verify if master is in clean state.

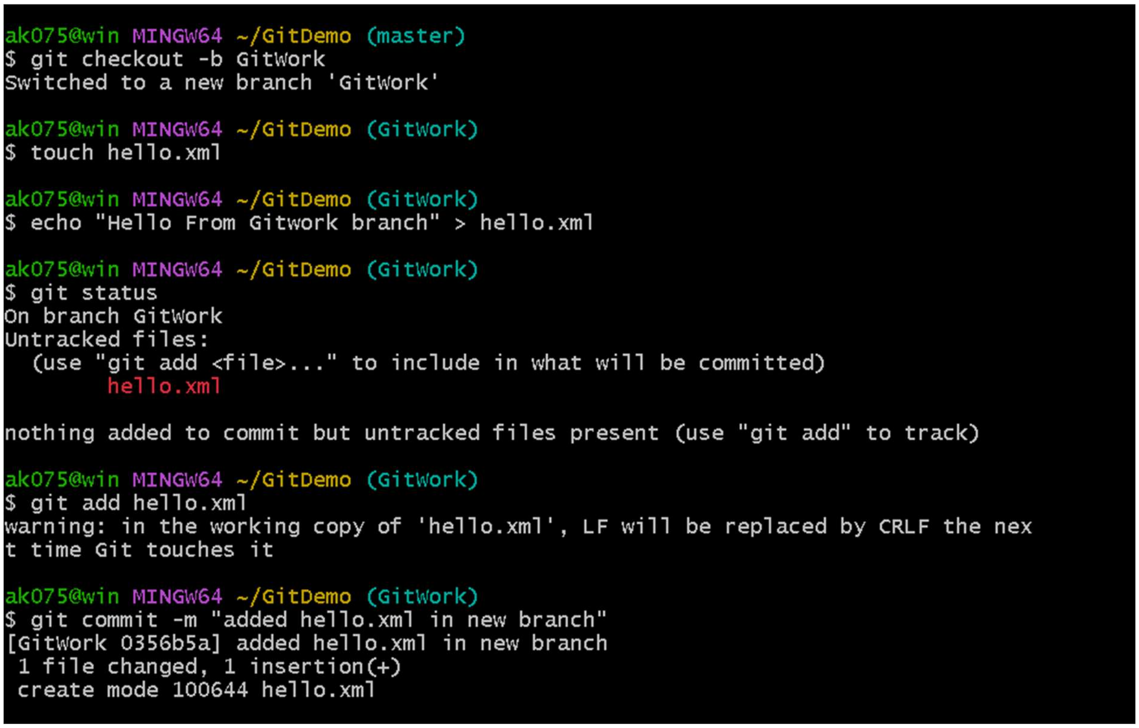


```
ak075@win MINGW64 ~
$ git branch
fatal: not a git repository (or any of the parent directories): .git

ak075@win MINGW64 ~
$ git checkout master
fatal: not a git repository (or any of the parent directories): .git

ak075@win MINGW64 ~
$ cd GitDemo

ak075@win MINGW64 ~/GitDemo (master)
$ git branch
  GitNewBranch
* master

ak075@win MINGW64 ~/GitDemo (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

ak075@win MINGW64 ~/GitDemo (master)
$ |
```

Step2: Create a branch “GitWork”. Add a file “hello.xml”.

Step3: Update the content of “hello.xml” and observe the status

Step4: Commit the changes to reflect in the branch

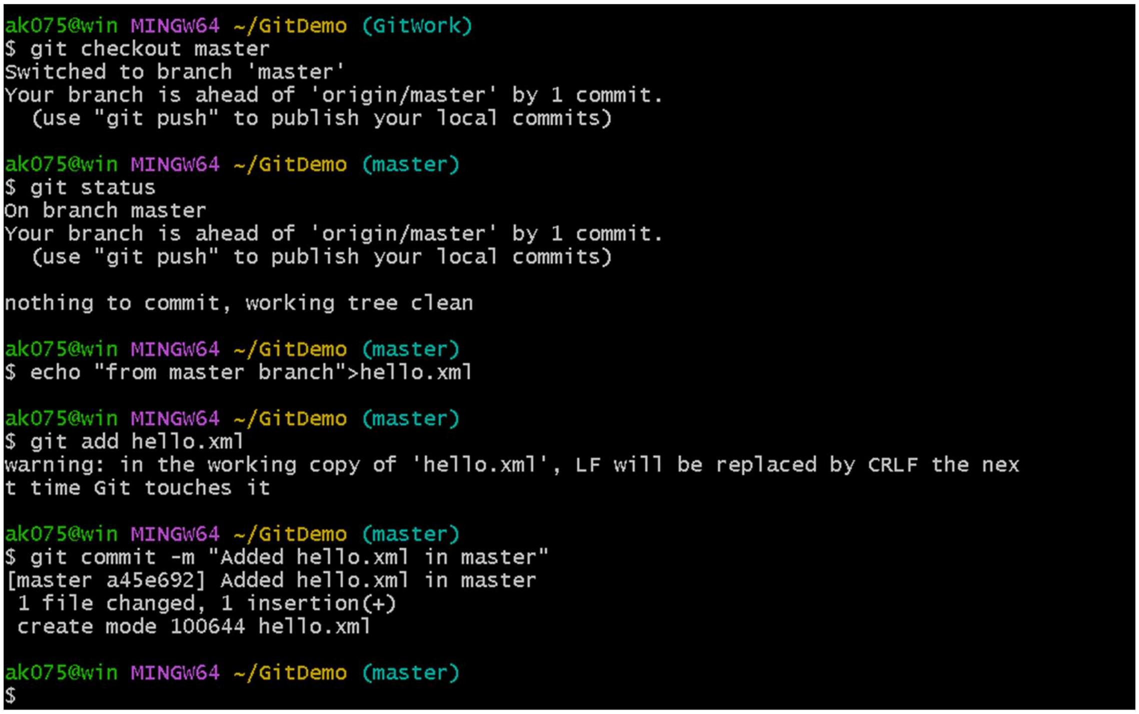


```
ak075@win MINGW64 ~/GitDemo (master)
$ git checkout -b GitWork
Switched to a new branch 'GitWork'

ak075@win MINGW64 ~/GitDemo (GitWork)
$ touch hello.xml

ak075@win MINGW64 ~/GitDemo (GitWork)
$ echo "Hello From Gitwork branch" > hello.xml

ak075@win MINGW64 ~/GitDemo (GitWork)
$ git status
On branch GitWork
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)

ak075@win MINGW64 ~/GitDemo (GitWork)
$ git add hello.xml
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the nex
t time Git touches it

ak075@win MINGW64 ~/GitDemo (GitWork)
$ git commit -m "added hello.xml in new branch"
[GitWork 0356b5a] added hello.xml in new branch
 1 file changed, 1 insertion(+)
 create mode 100644 hello.xml
```

Step5: Switch to master

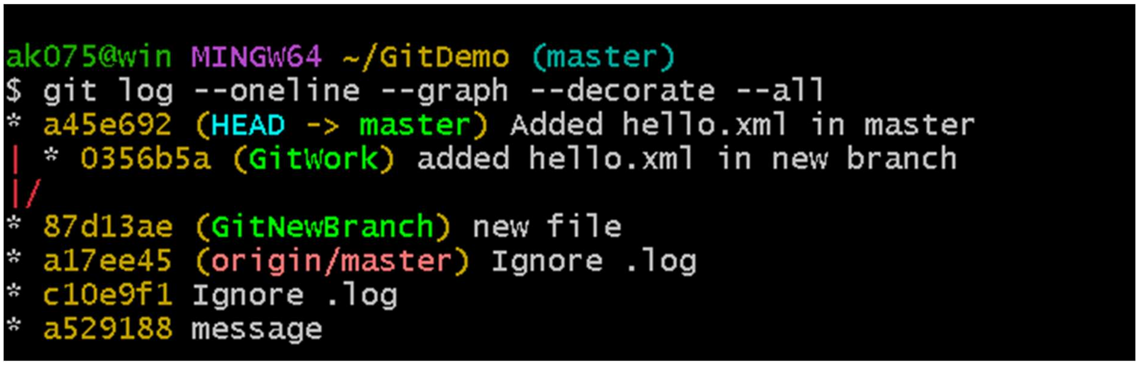
Step6: Add a file “hello.xml” to the master and add some different content than previous.

Step7: Commit the changes to the master



```
ak075@win MINGW64 ~/GitDemo (GitWork)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

ak075@win MINGW64 ~/GitDemo (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

ak075@win MINGW64 ~/GitDemo (master)
$ echo "from master branch">hello.xml

ak075@win MINGW64 ~/GitDemo (master)
$ git add hello.xml
warning: in the working copy of 'hello.xml', LF will be replaced by CRLF the nex
t time Git touches it

ak075@win MINGW64 ~/GitDemo (master)
$ git commit -m "Added hello.xml in master"
[master a45e692] Added hello.xml in master
 1 file changed, 1 insertion(+)
 create mode 100644 hello.xml

ak075@win MINGW64 ~/GitDemo (master)
$
```

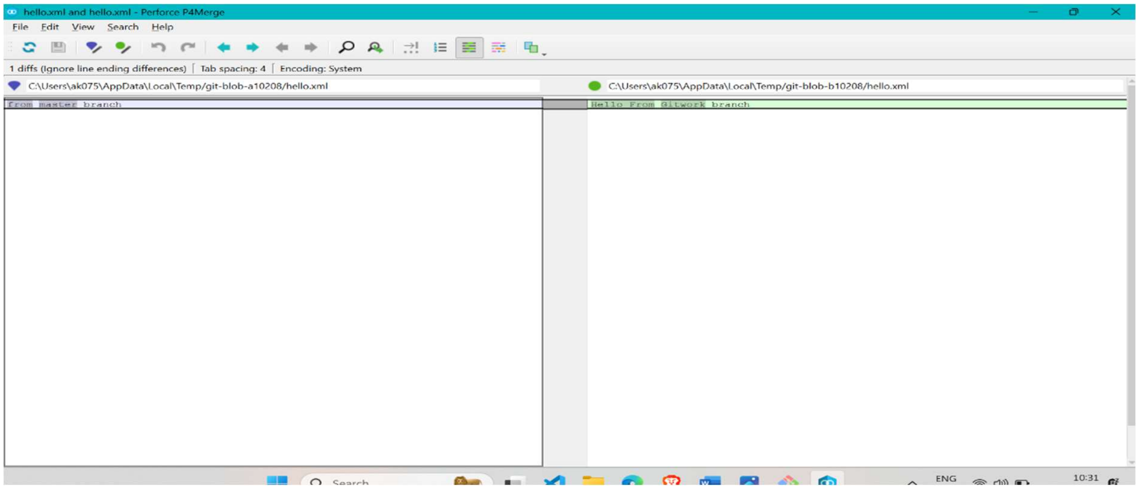
Step8: Observe the log by executing “git log –oneline –graph –decorate –all”



```
ak075@win MINGW64 ~/GitDemo (master)
$ git log --oneline --graph --decorate --all
* a45e692 (HEAD -> master) Added hello.xml in master
| * 0356b5a (GitWork) added hello.xml in new branch
|/
* 87d13ae (GitNewBranch) new file
* a17ee45 (origin/master) Ignore .log
* c10e9f1 Ignore .log
* a529188 message
```

Step9: Check the differences with Git diff tool

Step10: For better visualization, use P4Merge tool to list out all the differences between master and branch



hello.xml and hello.xml - Perforce P4Merge
File Edit View Search Help
ENG
10:31

1 diffs (Ignore line ending differences) | Tab spacing: 4 | Encoding: System

C:\Users\ak075\AppData\Local\Temp/git-blob-a10208/hello.xml

C:\Users\ak075\AppData\Local\Temp/git-blob-b10208/hello.xml

```
from master branch
```

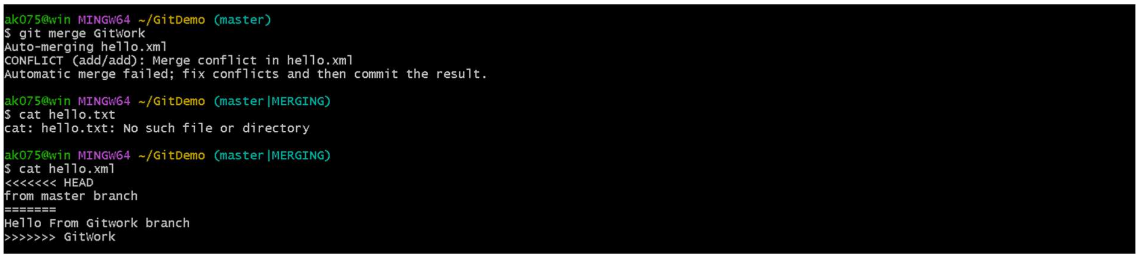
```
Hello From Gitwork branch
```

Step11: Merge the branch to the master

Step12: Observe the git mark up.

Step13: Use 3-way merge tool to resolve the conflict

Step14: Commit the changes to the master, once done with conflict



```
ak075@win MINGW64 ~/GitDemo (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.

ak075@win MINGW64 ~/GitDemo (master|MERGING)
$ cat hello.txt
cat: hello.txt: No such file or directory

ak075@win MINGW64 ~/GitDemo (master|MERGING)
$ cat hello.xml
<<<<<<< HEAD
from master branch
=======
Hello From Gitwork branch
>>>>>>> GitWork
```

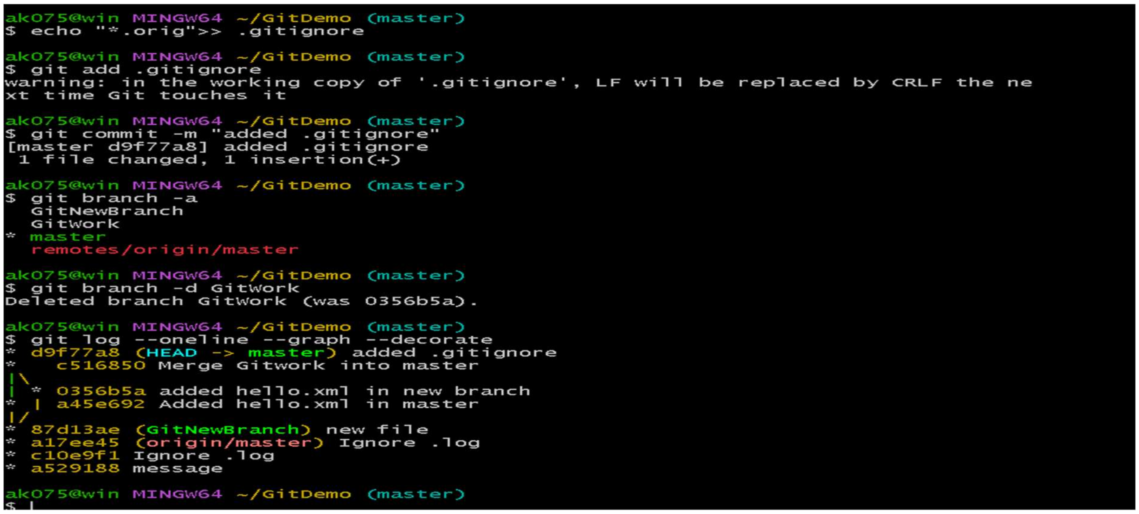
“resolved merge conflicts in mergetool”

Step13: Commit the changes to the .gitignore

Step14: List out all the available branches

Step15: Delete the branch, which merge to master.

Step16: Observe the log by executing “git log –oneline –graph –decorate”



```
ak075@win MINGW64 ~/GitDemo (master)
$ echo "*.orig">> .gitignore

ak075@win MINGW64 ~/GitDemo (master)
$ git add .gitignore
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the ne
xt time Git touches it

ak075@win MINGW64 ~/GitDemo (master)
$ git commit -m "added .gitignore"
[master d9f77a8] added .gitignore
 1 file changed, 1 insertion(+)

ak075@win MINGW64 ~/GitDemo (master)
$ git branch -a
  GitNewBranch
  GitWork
* master
  remotes/origin/master

ak075@win MINGW64 ~/GitDemo (master)
$ git branch -d GitWork
Deleted branch GitWork (was 0356b5a).

ak075@win MINGW64 ~/GitDemo (master)
$ git log --oneline --graph --decorate
* d9f77a8 (HEAD -> master) added .gitignore
*   c516850 Merge Gitwork into master
|\
| * 0356b5a added hello.xml in new branch
* | a45e692 Added hello.xml in master
|/
* 87d13ae (GitNewBranch) new file
* a17ee45 (origin/master) Ignore .log
* c10e9f1 Ignore .log
* a529188 message

ak075@win MINGW64 ~/GitDemo (master)
$
```