

```
MINGW64~/c/Users/Deepa/my-git-lab
| * 961b988 (feature-branch) Feature branch changes Line 2
| * | 239dcf1 Main branch changes Line 2
|/
* 1f344f1 Initial version of app.py
* 6e162ad Update app.py to version 3
* 78cd7da Update app.py to version 2
* 7fd4d99 Initial commit: add app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment|REBASE 2/2)
$ git log --oneline
99fbc9 (HEAD) rebase-experiment: Add Line A
e632eeb (main) main: Add Line X
881c056 Resolved merge conflict in app.py
239dcf1 Main branch changes Line 2
961b988 (feature-branch) Feature branch changes Line 2
1f344f1 Initial version of app.py
6e162ad Update app.py to version 3
78cd7da Update app.py to version 2
7fd4d99 Initial commit: add app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment|REBASE 2/2)
$ git revert 239dcf1
error: Reverting is not possible because you have unmerged files.
hint: Fix them up in the work tree, and then use 'git add/rm <file>'
hint: as appropriate to mark resolution and make a commit.
fatal: revert failed

Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment|REBASE 2/2)
$ git log --oneline
99fbc9 (HEAD) rebase-experiment: Add Line A
e632eeb (main) main: Add Line X
881c056 Resolved merge conflict in app.py
239dcf1 Main branch changes Line 2
961b988 (feature-branch) Feature branch changes Line 2
1f344f1 Initial version of app.py
6e162ad Update app.py to version 3
78cd7da Update app.py to version 2
7fd4d99 Initial commit: add app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment|REBASE 2/2)
$
```

```
[detached HEAD 99fbc9] rebase-experiment: Add Line A
1 file changed, 3 insertions(+), 4 deletions(-)
Auto-merging app.py
CONFLICT (content): Merge conflict in app.py
error: could not apply 3ab98bc... rebase-experiment: Add Line B
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort".
hint: Disable this message with "git config advice.mergeConflict false"
could not apply 3ab98bc... rebase-experiment: Add Line B
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment|REBASE 2/2)
```

```
$ git log --oneline --graph
* 99fbc9 (HEAD) rebase-experiment: Add Line A
* e632eeb (main) main: Add Line X
* 881c056 Resolved merge conflict in app.py
| \
| * 961b988 (feature-branch) Feature branch changes Line 2
* | 239dcf1 Main branch changes Line 2
| /
* 1f344f1 Initial version of app.py
* 6e162ad Update app.py to version 3
* 78cd7da Update app.py to version 2
* 7fd4d99 Initial commit: add app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment|REBASE 2/2)
```

```
$ |
```

rebase-experiment: Add Line A

```
# Conflicts:
#   app.py

# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# interactive rebase in progress; onto e632eeb
# Last command done (1 command done):
#   pick 13a20a7 rebase-experiment: Add Line A
# Next command to do (1 remaining command):
#   pick 3ab98bc rebase-experiment: Add Line B
# You are currently rebasing branch 'rebase-experiment' on 'e632eeb'.
#
# Changes to be committed:
#   modified:   app.py
```

.git/COMMIT_EDITMSG [unix] (12:46 04/04/2025)

1,1 All

~/my-git-lab/.git/COMMIT_EDITMSG" [unix] 18L, 538B



```
print("Line 1")
print("Rebase branch change")
print("Line 3")
|
```

^G Help	^O Write Out	^F Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-] To Bracket
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^/ Go To Line	M-E Redo	M-6 Copy	^B Where Was

Line 1
Line 2 resolved manually
Line 3

<<<<<< HEAD
Main Line X
=====

Experiment Line A
>>>>>> 13a20a7 (rebase-experiment: Add Line A)

[Read 12 lines (converted from DOS format)]

^G Help	^O Write Out	^F Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-] To Bracket
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^_ Go To Line	M-E Redo	M-6 Copy	^B Where Was

1 file changed, 1 insertion(+)

Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)

\$ git checkout main

Switched to branch 'main'

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ echo "Main Line X" >> app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git add app.py\

> exit

fatal: pathspec 'app.pyexit' did not match any files

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git add app.py

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

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git commit -m "main: Add Line X"

[main e632eeb] main: Add Line X

1 file changed, 1 insertion(+)

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git checkout rebase-experiment

Switched to branch 'rebase-experiment'

Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)

\$ git rebase main

Auto-merging app.py

CONFLICT (content): Merge conflict in app.py

error: could not apply 13a20a7... rebase-experiment: Add Line A

hint: Resolve all conflicts manually, mark them as resolved with

hint: "git add/rm <conflicted_files>", then run "git rebase --continue".

hint: You can instead skip this commit: run "git rebase --skip".

hint: To abort and get back to the state before "git rebase", run "git rebase --abort".

hint: Disable this message with "git config advice.mergeConflict false"

Could not apply 13a20a7... rebase-experiment: Add Line A

Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment|REBASE 1/2)

\$ |

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main|MERGING)
$ git commit -m "Resolved merge conflict in app.py"
[main 881c056] Resolved merge conflict in app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ nano app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ git checkout -b rebase-experiment
Switched to a new branch 'rebase-experiment'
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)
$ echo "Experiment Line A" >> app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)
$ git add app.py
warning: in the working copy of 'app.py', LF will be replaced by CRLF the next time Git touches it
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)
$ git commit -m "rebase-experiment: Add Line A"
[rebase-experiment 13a20a7] rebase-experiment: Add Line A
1 file changed, 4 insertions(+)
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)
$ echo "Experiment Line B" >> app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)
$ git add app.py
warning: in the working copy of 'app.py', LF will be replaced by CRLF the next time Git touches it
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)
$ git commit -m "rebase-experiment: Add Line B"
[rebase-experiment 3ab98bc] rebase-experiment: Add Line B
1 file changed, 1 insertion(+)
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (rebase-experiment)
$ git checkout main
Switched to branch 'main'
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
Line 1
Line 2 resolved manually
Line 3
|
```

^G Help	^O Write Out	^F Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-] To Bracket
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^/ Go To Line	M-E Redo	M-6 Copy	^B Where Was




```
Line 1
<<<<<<< HEAD
Line 2 from main branch
=====
Line 2 from feature branch
>>>>>>> feature-branch
Line 3
|
```

^G Help	^O Write Out	^F Where Is	^K Cut	^T Execute	^C Location	M-U Undo	M-A Set Mark	M-] To Bracket
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^/ Go To Line	M-E Redo	M-6 Copy	^B Where Was

Deepa@DeepakBatra MINGW64 ~/my-git-lab (feature-branch)

```
$ git checkout main
Switched to branch 'main'
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

```
$ nano app.py
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

```
$ git add app.py
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

```
$ git commit -m "Main branch changes Line 2"
[main 239dcf1] Main branch changes Line 2
1 file changed, 1 insertion(+), 1 deletion(-)
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

```
$ git merge feature-branch
```

Auto-merging app.py

CONFLICT (content): Merge conflict in app.py

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

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main|MERGING)

```
$ nano app.py
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main|MERGING)

```
$ git add app.py
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main|MERGING)

```
$ git add app.py
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main|MERGING)

```
$
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main|MERGING)

```
$ git commit -m "Resolved merge conflict in app.py"
[main 881c056] Resolved merge conflict in app.py
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

```
$ |
```

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git status

On branch main

nothing to commit, working tree clean

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ echo "Line 1

Line 2

Line 3" > app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git add app.py

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

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git commit -m "Initial version of app.py"

[main 1f344f1] Initial version of app.py

1 file changed, 3 insertions(+), 3 deletions(-)

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git checkout -b feature-branch

Switched to a new branch 'feature-branch'

Deepa@DeepakBatra MINGW64 ~/my-git-lab (feature-branch)

\$ nano app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (feature-branch)

\$ git add app.py

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

Deepa@DeepakBatra MINGW64 ~/my-git-lab (feature-branch)

\$ git commit -m "Feature branch changes Line 2"

[feature-branch 961b988] Feature branch changes Line 2

1 file changed, 1 insertion(+), 1 deletion(-)

Deepa@DeepakBatra MINGW64 ~/my-git-lab (feature-branch)

\$ git checkout main

Switched to branch 'main'

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$

```
[main 1554f95] Revert "Update app.py to version 2"
1 file changed, 1 deletion(-)
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
$ cat app.py
print('Hello, world')
print('Version 2')
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
$ echo "print('Temporary change')" >> app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
$ git add app.py
```

```
warning: in the working copy of 'app.py', LF will be replaced by CRLF the next time git touches it
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
$ git commit -m "Temporary commit to test reset"
```

```
[main d2d42e1] Temporary commit to test reset
1 file changed, 1 insertion(+)
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
$ git reset --soft HEAD~1
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
$ git status
```

```
On branch main
```

```
Changes to be committed:
```

```
(use "git restore --staged <file>..." to unstage)
```

```
modified:   app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
$ git reset --hard HEAD~1
```

```
HEAD is now at 6e162ad Update app.py to version 3
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
```

```
$ git status
```

```
On branch main
```

```
nothing to commit, working tree clean
```


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

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ git commit -m "Initial commit: add app.py"
[main (root-commit) 7fd4d99] Initial commit: add app.py
1 file changed, 1 insertion(+)
create mode 100644 app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ echo "print('Version 2')" >> app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ git add app.py
warning: in the working copy of 'app.py', LF will be replaced by CRLF the next time Git touches it
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ git commit -m "Update app.py to version 2"
[main 78cd7da] Update app.py to version 2
1 file changed, 1 insertion(+)
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ echo "print('Version 3')" >> app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ git add app.py
warning: in the working copy of 'app.py', LF will be replaced by CRLF the next time Git touches it
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ git commit -m "Update app.py to version 3"
[main 6e162ad] Update app.py to version 3
1 file changed, 1 insertion(+)
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$ git log --oneline
6e162ad (HEAD -> main) Update app.py to version 3
78cd7da Update app.py to version 2
7fd4d99 Initial commit: add app.py
```

```
Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)
$
```


Deepa@DeepakBatra MINGW64 ~ (main)

\$ mkdir my-git-lab

Deepa@DeepakBatra MINGW64 ~ (main)

\$ cd my-git-lab

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git init

Initialized empty Git repository in C:/Users/Deepa/my-git-lab/.git/

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ echo "print('Hello, world!')" > app.py

bash: !': event not found

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ echo "print('Hello, world')" > app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git add app.py

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

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git commit -m "Initial commit: add app.py"

[main (root-commit) 7fd4d99] Initial commit: add app.py

1 file changed, 1 insertion(+)

create mode 100644 app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ echo "print('version 2')" >> app.py

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git add app.py

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

Deepa@DeepakBatra MINGW64 ~/my-git-lab (main)

\$ git commit -m "Update app.py to version 2"

[main 78cd7da] Update app.py to version 2

1 file changed, 1 insertion(+)