

## **Exercise 2**

**Name : Karthi M**

**Reg No : 73772114153**

**Dept : B.E\_Computer Science and Engineering**

**College: K S Rangasamy college of Technology**

# Screenshots

1. Run the status command. Notice how it tells you what branch you are in.

```
git CMD
x + v
- My name is Dharun S
- I am from Karur
- \ No newline at end of file

D:\73772114128\src>git log
commit 1f8ada8be72ed81178f77fe67de370ba0b3160 (HEAD -> main)
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 18:04:30 2024 +0530

    Another file name has also changed

commit 7f063925d03c96798c7eb1cc15cbbf8e649cc5c4
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 18:02:02 2024 +0530

    File name has been changed

commit 080a999a2614bd94f62f0fa2982ed012de25624d
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:45:46 2024 +0530

    File 3 has been deleted

commit 4b0f8bea9be23f9e19c656482882f66f4a9b07
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:42:17 2024 +0530

    second file could be modified

commit 54dc2575d98232e7036f8e07d6e2c1efe93593fa
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:39:29 2024 +0530

    New Files were added

commit 2e0e188f0697ef0f3b2a1520211903da0ef0b98e
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:33:53 2024 +0530

    New Changes were Added

D:\73772114128\src>
D:\73772114128\src>git status
On branch main
Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    file1.txt
        deleted:    file2.txt

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

D:\73772114128\src>
```

2. Use the branch command to create a new branch.

```
git CMD
x + v
- I am from Karur
- \ No newline at end of file

D:\73772114128\src>git log
commit 1f8ada8be72ed81178f77fe67de370ba0b3160 (HEAD -> main)
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 18:04:30 2024 +0530

    Another file name has also changed

commit 7f063925d03c96798c7eb1cc15cbbf8e649cc5c4
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 18:02:02 2024 +0530

    File name has been changed

commit 080a999a2614bd94f62f0fa2982ed012de25624d
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:45:46 2024 +0530

    File 3 has been deleted

commit 4b0f8bea9be23f9e19c656482882f66f4a9b07
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:42:17 2024 +0530

    second file could be modified

commit 54dc2575d98232e7036f8e07d6e2c1efe93593fa
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:39:29 2024 +0530

    New Files were added

commit 2e0e188f0697ef0f3b2a1520211903da0ef0b98e
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:33:53 2024 +0530

    New Changes were Added

D:\73772114128\src>
D:\73772114128\src>git status
On branch main
Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    file1.txt
        deleted:    file2.txt

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

D:\73772114128\src>git branch MyBr
D:\73772114128\src>
```

### 3. Use the checkout command to switch to it.

```
git CMD
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 18:04:30 2024 +0530

Another file name has also changed

commit 7f863925d03c96798c7eb1cc15ccbf8e649cc5c4
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 18:02:02 2024 +0530

File name has been changed

commit 08da999a2614bd94f62f9fa2982ed012de2562hd
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:48:46 2024 +0530

File 3 has been deleted

commit 4b8f8bea9be23f9e19c6564820802f6fbfa09b07
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:42:17 2024 +0530

second file could be modified

commit 54dc2575d98232e7036f8e87d6e2c1efe93593fa
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:39:29 2024 +0530

New Files were added

commit 2e5e189f0697ef9f3b2e1520211903d9aef0b98e
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:33:53 2024 +0530

New Changes were Added

D:\V3772114128\src>
D:\V3772114128\src>git status
On branch main
Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    file1.txt
        deleted:    file2.txt

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

D:\V3772114128\src>git branch MyBr
D:\V3772114128\src>git checkout MyBr
D
  file1.txt
D
  file2.txt
Switched to branch 'MyBr'

D:\V3772114128\src>
```

### 4. Make a couple of commits in the branch – perhaps adding a new file and/or editing existing ones.

```
git CMD

commit 4b8f8bea9be23f9e19c6564820802f6fbfa09b07
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:42:17 2024 +0530

second file could be modified

commit 54dc2575d98232e7036f8e87d6e2c1efe93593fa
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:39:29 2024 +0530

New Files were added

commit 2e5e189f0697ef9f3b2e1520211903d9aef0b98e
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:33:53 2024 +0530

New Changes were Added

D:\V3772114128\src>
D:\V3772114128\src>git status
On branch main
Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    file1.txt
        deleted:    file2.txt

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

D:\V3772114128\src>git branch MyBr
D:\V3772114128\src>git checkout MyBr
D
  file1.txt
D
  file2.txt
Switched to branch 'MyBr'

D:\V3772114128\src>git status
On branch MyBr
Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    file1.txt
        deleted:    file2.txt

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

D:\V3772114128\src>git add file.txt
D:\V3772114128\src>git commit -m "file has been modified"
[MyBr 82de8e2] file has been modified
 1 file changed, 3 insertions(+), 1 deletion(-)

D:\V3772114128\src>
```

**5. Use the log command to see the latest commits. The two you just made should be at the top of the list.**

```
git CMD
D:\73772114128\src>git commit -m "Another file has also changed"
[MyBr 8d8b3d8] Another file has also changed
1 file changed, 1 insertion(+)

D:\73772114128\src>git log
commit 8d8b3d8bf8b75c3884f5ade2619cf1965de5d99 (HEAD -> MyBr)
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 11:18:21 2024 +0530

    Another file has also changed

commit 82de8e2c92adcbf46d8788f48af3c6e6d3ec78e2
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 11:07:58 2024 +0530

    file has been modified

commit 1f8ada88e72ed01178f7f8e67de3780a0bc3160 (main)
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 10:04:30 2024 +0530

    Another file name has also changed

commit 7f863925d93c96798c7eb1cc15ccbf8e649cc5c4
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 10:02:02 2024 +0530

    File name has been changed

commit 884a999a261bd94f62f8fa2982ed012de2562d4d
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:45:46 2024 +0530

    File 3 has been deleted

commit 4b0f8bea9be23f9e19c6564820882f6fbfa09b07
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:42:17 2024 +0530

    second file could be modified

commit 5ddc2575d98232e7036f8e87d6e2c1efe93593fa
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:39:29 2024 +0530

    New Files were added

commit 2e8e188f8697ef0f3b2e1520211983d9aef0b98e
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:33:53 2024 +0530

    New Changes were Added

D:\73772114128\src>
```

**6. Use the checkout command to switch back to the master branch. Run log again. Notice your commits don't show up now. Check the files also – they should have their original contents.**

```
git CMD

second file could be modified

commit 5ddc2575d98232e7036f8e87d6e2c1efe93593fa
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:39:29 2024 +0530

    New Files were added

commit 2e8e188f8697ef0f3b2e1520211983d9aef0b98e
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:33:53 2024 +0530

    New Changes were Added

D:\73772114128\src>git checkout main
D
file1.txt
D
file2.txt
Switched to branch 'main'

D:\73772114128\src>git log
commit 1f8ada88e72ed01178f7f8e67de3780a0bc3160 (HEAD -> main)
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 10:04:30 2024 +0530

    Another file name has also changed

commit 7f863925d93c96798c7eb1cc15ccbf8e649cc5c4
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 10:02:02 2024 +0530

    File name has been changed

commit 884a999a261bd94f62f8fa2982ed012de2562d4d
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:45:46 2024 +0530

    File 3 has been deleted

commit 4b0f8bea9be23f9e19c6564820882f6fbfa09b07
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:42:17 2024 +0530

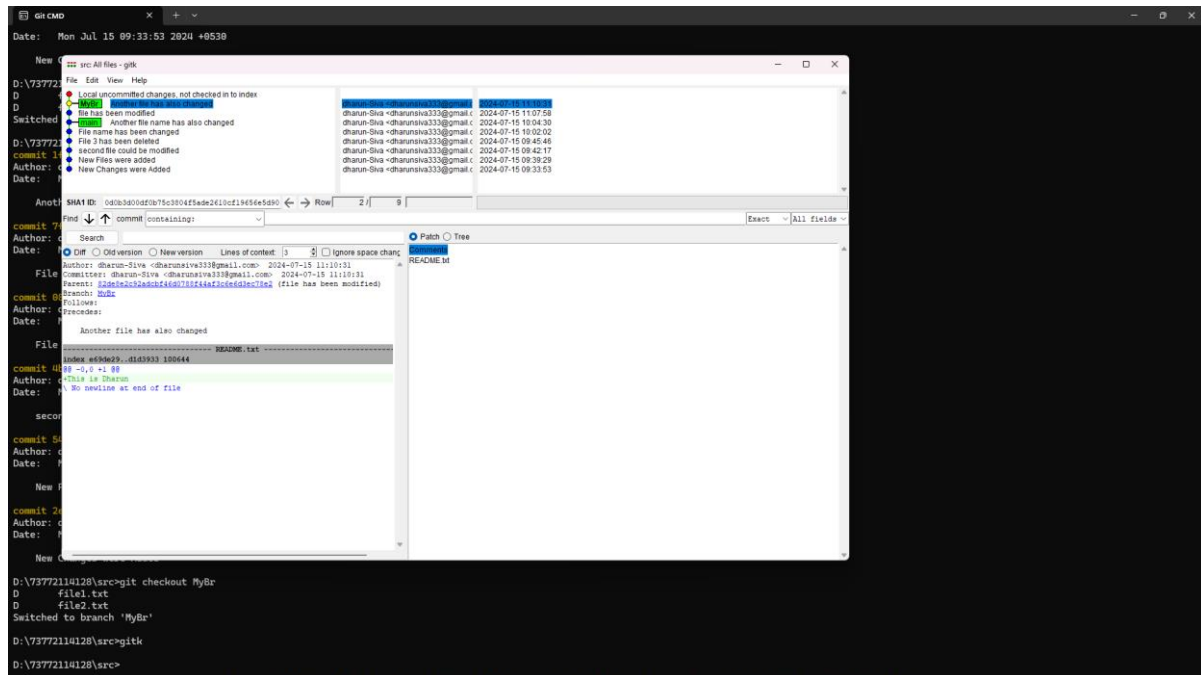
    second file could be modified

commit 5ddc2575d98232e7036f8e87d6e2c1efe93593fa
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:39:29 2024 +0530

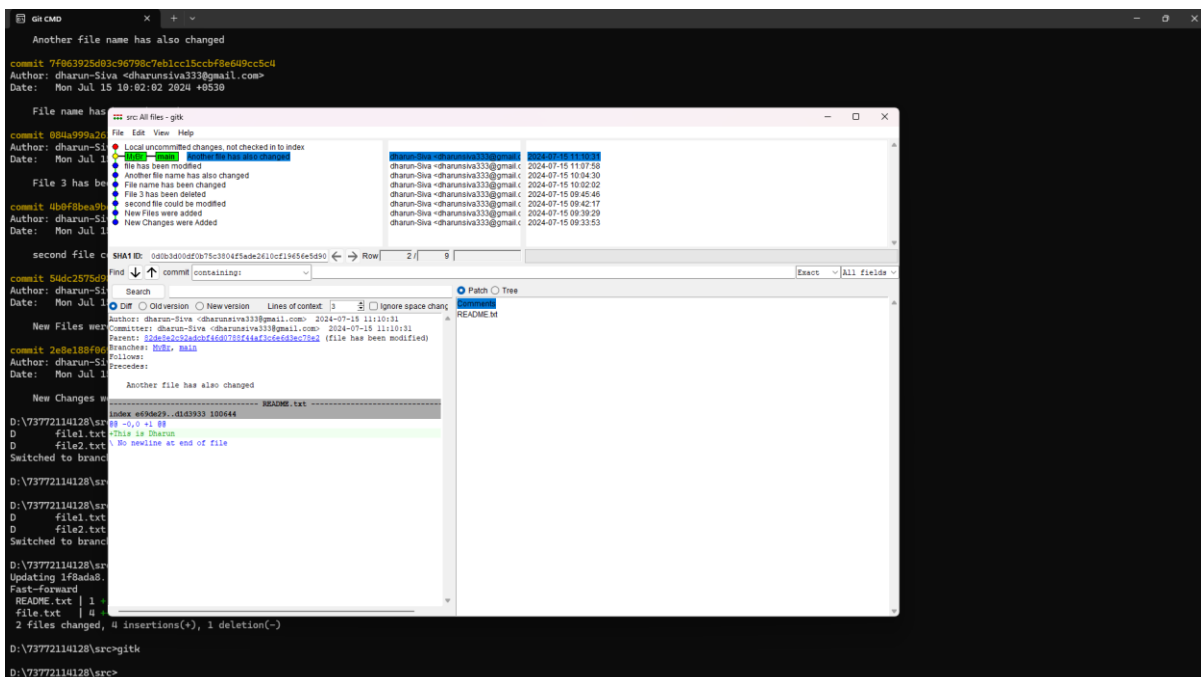
    New Files were added

commit 2e8e188f8697ef0f3b2e1520211983d9aef0b98e
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:33:53 2024 +0530
```

**7. Use the checkout command to switch back to your branch. Use gitk to take a look at the commit graph; notice it's linear**



**8. Now checkout the master branch again. Use the merge command to merge your branch in to it. Look for information about it having been a fast-forward merge. Look at git log, and see that there is no merge commit.**



## 9. Switch back to your branch. Make a couple more commits.

```
git CMD

second file could be modified

commit 5ddc2575d98232e7836f8e87d6e2c1efe93593fa
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:39:29 2024 +0530

New Files were added

commit 2e6e188f8697ef0f3b2a1520211903d0ae0b90e
Author: dharun-Siva <dharunsiva333@gmail.com>
Date: Mon Jul 15 09:33:53 2024 +0530

New Changes were Added

D:\V3772114128>src>git checkout MyBr
D
file1.txt
D
file2.txt
Switched to branch 'MyBr'

D:\V3772114128>src>gitk

D:\V3772114128>src>git checkout main
D
file1.txt
D
file2.txt
Switched to branch 'main'

D:\V3772114128>src>git merge MyBr
Updating 1f8ada8..8d0b3d0
Fast-forward
 README.txt | 1 +
 file.txt | 4 +++
 2 files changed, 4 insertions(+), 1 deletion(-)

D:\V3772114128>src>gitk

D:\V3772114128>src>git checkout MyBr
D
file1.txt
D
file2.txt
Switched to branch 'MyBr'

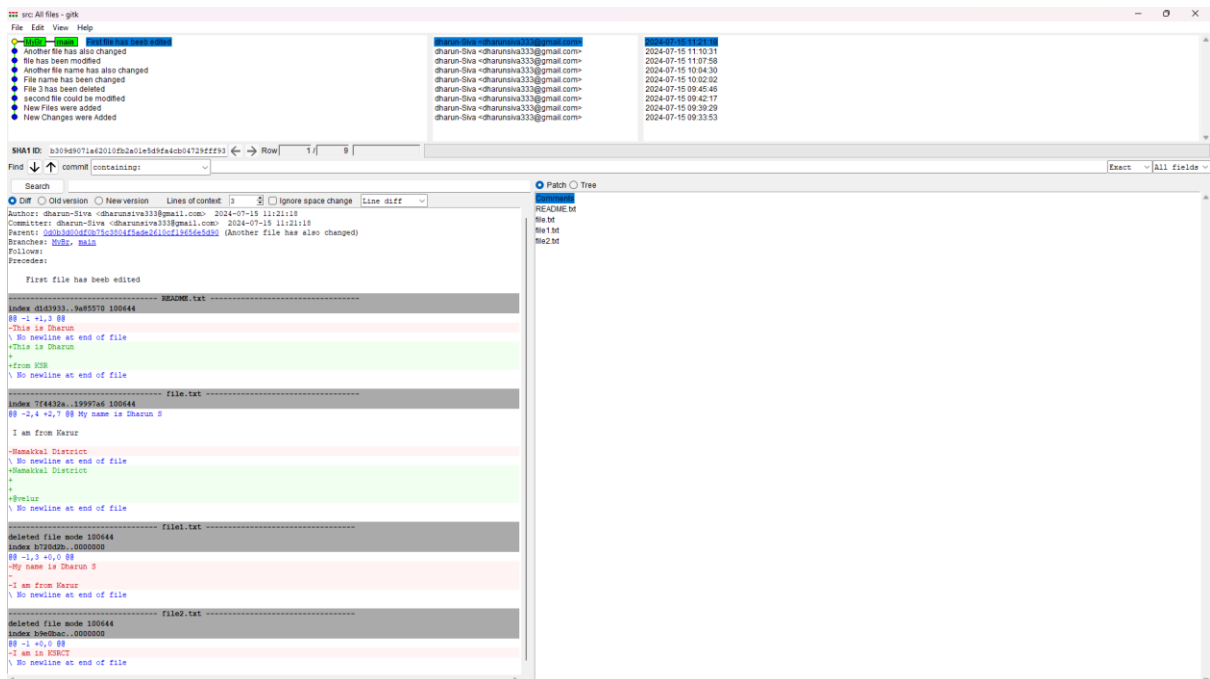
D:\V3772114128>src>git add .

D:\V3772114128>src>git commit -m"First file has beeb edited"
[MyBr b309d98] First file has beeb edited
4 files changed, 7 insertions(+), 6 deletions(-)
delete mode 100604 file1.txt
delete mode 100604 file2.txt

D:\V3772114128>src>git commit -m"Second file has beeb edited"
On branch MyBr
nothing to commit, working tree clean

D:\V3772114128>src>
```

## 10. Switch back to master. Make a commit there, which should edit a different file from the ones you touched in your branch – to be sure there is no conflict.



**11. Now merge your branch again. (Aside: you don't need to do anything to inform Git that you only want to merge things added since your previous merge. Due to the way Git works, that kind of issue simply does not come up, unlike in early versions of Subversion.)**

```

C:\WINDOWS\system32\cmd.exe
D:\73772114126>MyDir>git commit -m"File could be moved to Staging Area"
[main (root-commit) e516dde] File could be moved to Staging Area
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 README.md

D:\73772114126>MyDir>cd ..

D:\73772114126>cd src

D:\73772114126>src>git add .
fatal: not a git repository (or any of the parent directories): .git

D:\73772114126>src>git init
Initialized empty Git repository in D:/73772114126/src/.git/

D:\73772114126>src>git add .

D:\73772114126>src>git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   file1.txt
        new file:   file2.txt

D:\73772114126>src>git diff file1.txt
diff --git a/file1.txt b/file1.txt
index e69de29..5ef6220 100644
--- a/file1.txt
+++ b/file1.txt
@@ -0,0 +1,0 @@
+My new line Bharun S
\ No newline at end of file

D:\73772114126>src>git add file1.txt

D:\73772114126>src>git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   file1.txt
        new file:   file2.txt

D:\73772114126>src>git diff file1.txt

D:\73772114126>src>

```

**12. Look at git log. Notice that there is a merge commit. Also look in gitk. Notice the DAG now shows how things forked, and then were joined up again by a merge commit.**

```

C:\Users\user> git CMD

D:\73772114128\src>git commit -m"README file has changed"
[MyBr 913a462] README file has changed
1 file changed, 3 insertions(+), 1 deletion(-)

D:\73772114128\src>git checkout master
Switched to branch 'master'

D:\73772114128\src>git checkout MyBr
Switched to branch 'MyBr'

D:\73772114128\src>git checkout master
Switched to branch 'master'

D:\73772114128\src>git add file.txt

D:\73772114128\src>git commit -m"file 1 has changed"
[master 2d5dcf2] file 1 has changed
1 file changed, 4 insertions(+), 1 deletion(-)

D:\73772114128\src>git add README.txt

D:\73772114128\src>git commit -m"README file has changed"
On branch master
nothing to commit, working tree clean

D:\73772114128\src>git merge MyBr
Auto-merging file.txt
CONFLICT (content): Merge conflict in file.txt
Automatic merge failed; fix conflicts and then commit the result.

D:\73772114128\src>git commit -m"conflict has edited"
u   file.txt
error: Committing 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: Exiting because of an unresolved conflict.

D:\73772114128\src>git add file.txt

D:\73772114128\src>git status
On branch master
All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

Changes to be committed:
  modified:   README.txt
  modified:   file.txt

D:\73772114128\src>git commit -m"conflicts has resolved"
[master 9de9c97] conflicts has resolved

D:\73772114128\src>

```