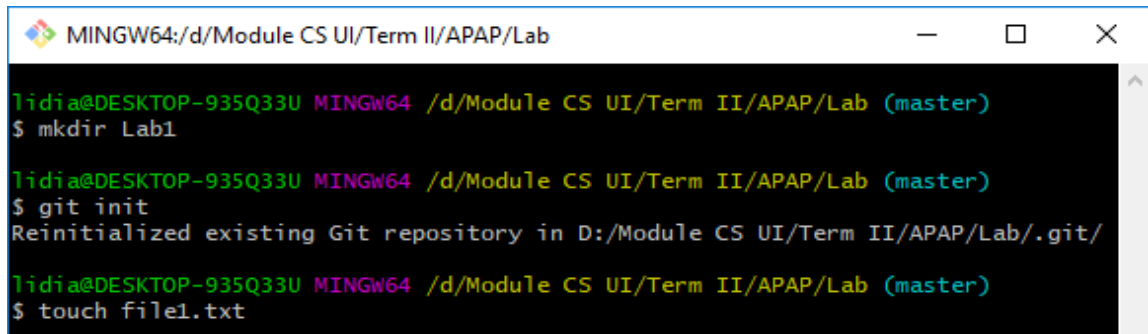


Skenario 1. Membuat Local Repository

1. Membuat directory di lokal computer dengan command **\$ mkdir Lab1**
2. Initializing git dengan command **\$ git init**
3. Menambah file dengan command **\$touch file1.txt**

Langkah-langkah diatas di-execute sebagai berikut:



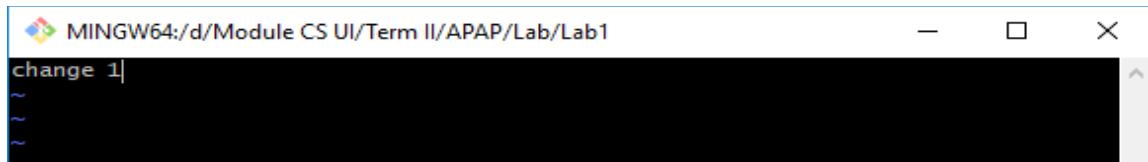
```
MINGW64:/d/Module CS UI/Term II/APAP/Lab

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ mkdir Lab1

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ git init
Reinitialized existing Git repository in D:/Module CS UI/Term II/APAP/Lab/.git/

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ touch file1.txt
```

4. Tulis file.txt dengan menekan huruf l dan simpan perubahan dengan command **“:wq”**

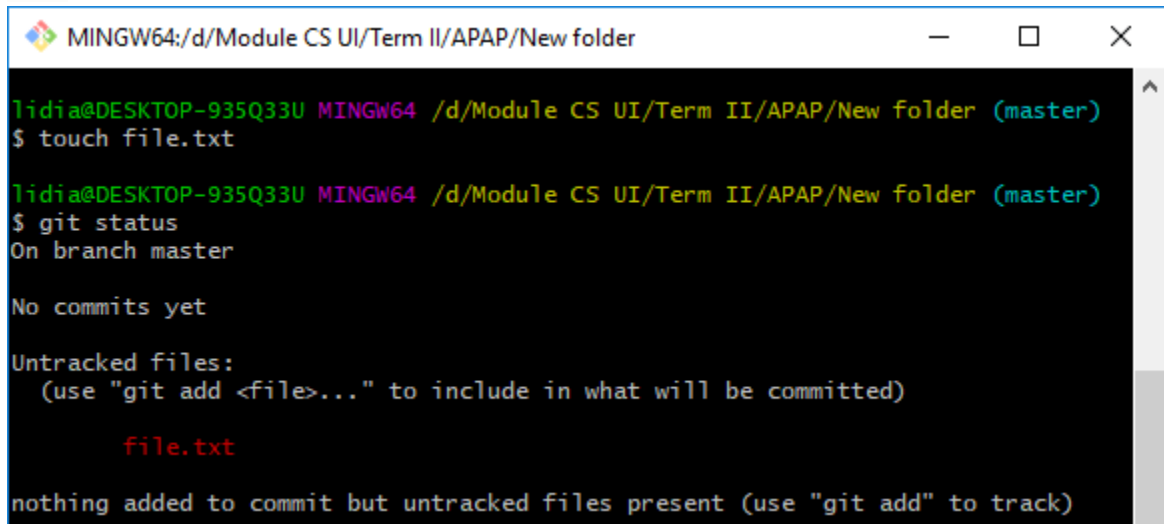


```
MINGW64:/d/Module CS UI/Term II/APAP/Lab/Lab1

change 1|
~
~
~
```

5. Untuk mengecek staging area, input command **\$ git status**

Pada gambar di bawah, terdapat keterangan Untracked, berarti Git melihat sebuah berkas yang sebelumnya tidak dimiliki di snapshot (commit) sebelumnya dan belum berada di stage area.



```
MINGW64:/d/Module CS UI/Term II/APAP/New folder

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/New folder (master)
$ touch file.txt

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/New folder (master)
$ git status
On branch master

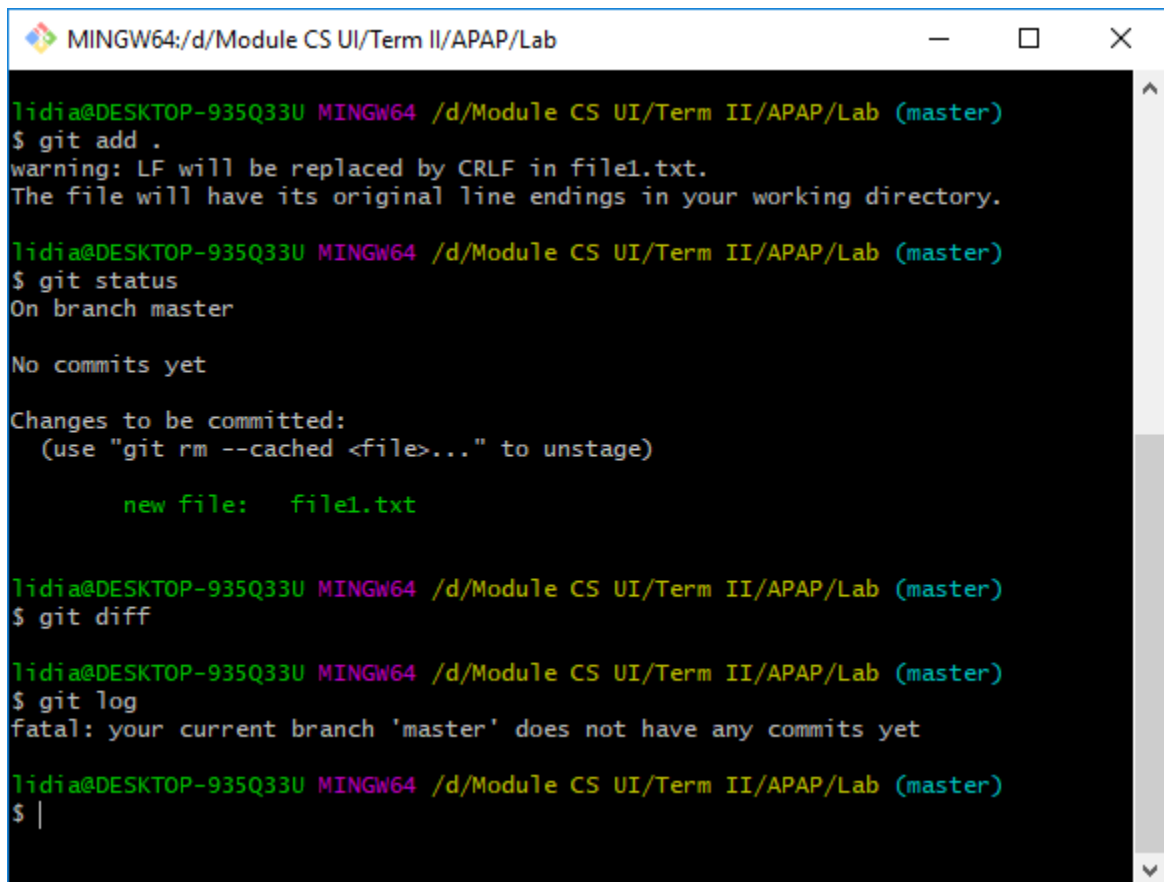
No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        file.txt

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

6. **\$ git add .** : Untuk menyimpan file ke stage area
\$ git status : Mengecek perubahan status
\$ git diff : Untuk melihat perubahan.
\$ git log : untuk melihat hasil commit yang dilakukan. Pada tampilan di bawah, commit belum ada sehingga muncul notifikasi.



```
MINGW64:/d/Module CS UI/Term II/APAP/Lab

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ git add .
warning: LF will be replaced by CRLF in file1.txt.
The file will have its original line endings in your working directory.

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ git status
On branch master

No commits yet

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

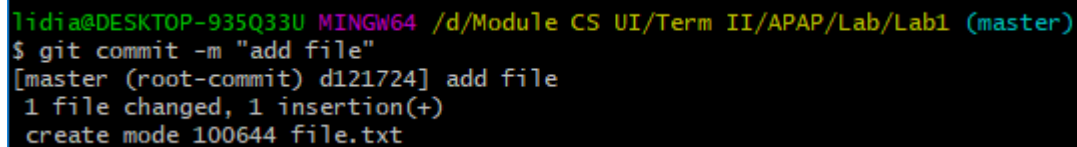
    new file:   file1.txt

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ git diff

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ git log
fatal: your current branch 'master' does not have any commits yet

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ |
```

7. Jika perubahan dicommit dengan command **\$ git commit** muncul tampilan berikut :



```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1 (master)
$ git commit -m "add file"
[master (root-commit) d121724] add file
1 file changed, 1 insertion(+)
create mode 100644 file.txt
```

8. **\$ git status** dibawah berarti notifikasi stage area sudah bersih karena sudah dicommit
\$ git log : terlihat daftar commit yang berisi author, tanggal, dan pesan.

```

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1 (master)
$ git status
On branch master
nothing to commit, working tree clean

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1 (master)
$ git diff

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1 (master)
$ git log
commit d121724a5150009f3efa52f8b134a83a96c2487e (HEAD -> master)
Author: lidia <lidiamanik@outlook.com>
Date: Sat Feb 17 08:29:05 2018 +0700

    add file

```

9. Selanjutnya lakukan perubahan pada file.txt dengan menambah **change2**

```

change1
change2|
~
~
~

```

10. Input command :

\$ **git status** : terdapat keterangan modifikasi pada file.txt.

\$ **git diff** : terdapat perubahan yang dilakukan pada file.txt (**change2**)

```

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ git status
On branch master

No commits yet

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

    new file:   file1.txt

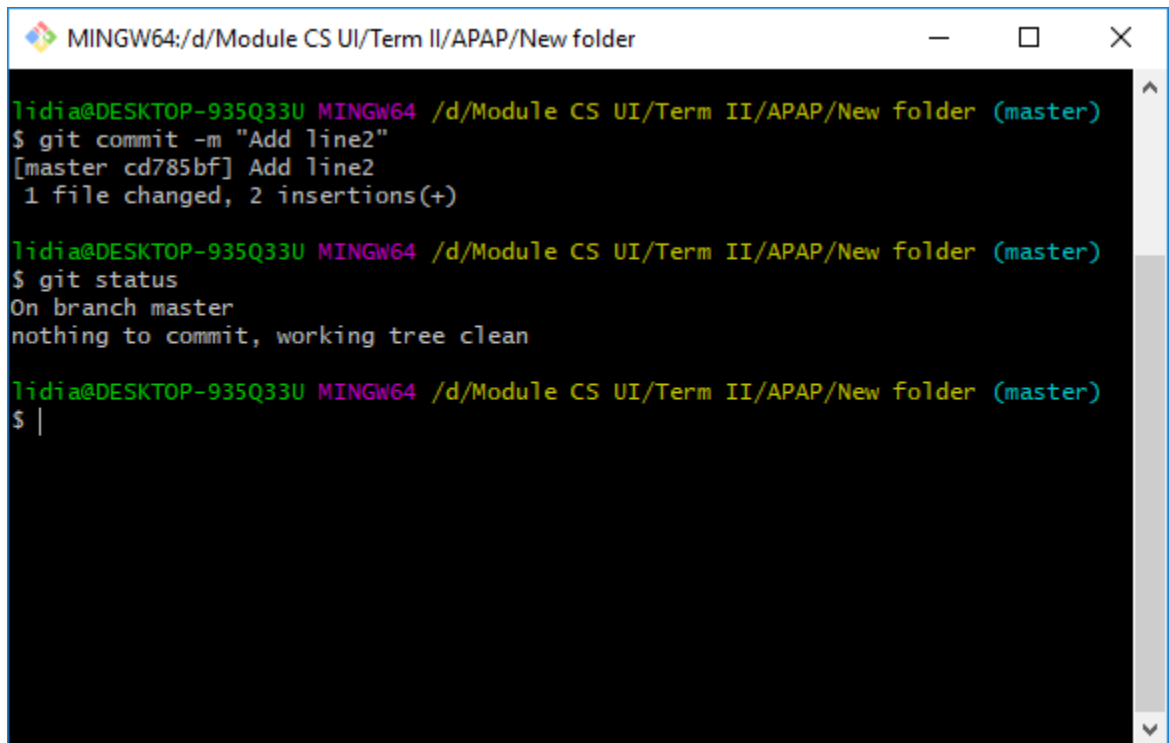
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

    modified:   file1.txt

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ git diff
warning: LF will be replaced by CRLF in file1.txt.
The file will have its original line endings in your working directory.
diff --git a/file1.txt b/file1.txt
index 5be4a41..1725fe9 100644
--- a/file1.txt
+++ b/file1.txt
@@ -1,2 @@
 change1
+change2

```

11. Input command `$ git commit` , `$ git status`



```
MINGW64:/d/Module CS UI/Term II/APAP/New folder
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/New folder (master)
$ git commit -m "Add line2"
[master cd785bf] Add line2
1 file changed, 2 insertions(+)

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/New folder (master)
$ git status
On branch master
nothing to commit, working tree clean

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/New folder (master)
$ |
```

Skenario 2. Cloning Remote Repository

1. Mahasiswa 2 melakukan clone remote repository

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab (master)
$ git clone https://github.com/davidtompul/Lab1_LatihanGit.git
Cloning into 'Lab1_LatihanGit'...
warning: You appear to have cloned an empty repository.
```

2. Mahasiswa 2 membuat remote repository

```
MINGW64:/d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (
master)
$ git remote -v
origin https://github.com/davidtompul/Lab1_LatihanGit.git (fetch)
origin https://github.com/davidtompul/Lab1_LatihanGit.git (push)
```

3. Mahasiswa 2 melakukan pull dari remote repository dengan command \$ git pull

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (
master)
$ git pull
remote: Counting objects: 3, done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
From https://github.com/davidtompul/Lab1_LatihanGit
* [new branch]      master    -> origin/master
```

Lihat status, diff dan log repository sebagai berikut :

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git diff

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git log
commit e8ce513b548b7ea83722b34e0a1cf5ec03003444 (HEAD -> master, origin/master)
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:09:31 2018 +0700

    add line 1
```

4. Lakukan perubahan file pada **demo.txt** dan cek sehingga muncul sebagai berikut :

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   demo.txt

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

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git diff
diff --git a/demo.txt b/demo.txt
index 89b24ec..7bba8c8 100644
--- a/demo.txt
+++ b/demo.txt
@@ -1,2 @@
 line 1
+line 2

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git log
commit e8ce513b548b7ea83722b34e0a1cf5ec03003444 (HEAD -> master, origin/master)
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:09:31 2018 +0700

    add line 1
```

5. Commit perubahan dan lihat perubahan dengan command berikut beserta hasilnya :

```
MINGW64:/d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git add .

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   demo.txt

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git diff

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git log
commit e8ce513b548b7ea83722b34e0a1cf5ec03003444 (HEAD -> master, origin/master)
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:09:31 2018 +0700

    add line 1
```

6. Push perubahan dan lihat perubahan dengan command berikut beserta hasilnya:

```
MINGW64:/d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git commit -m "Add change 2"
[master 3c94c56] Add change 2
1 file changed, 1 insertion(+)

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git push
Counting objects: 3, done.
Writing objects: 100% (3/3), 248 bytes | 124.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/davidtompul/Lab1_LatihanGit.git
e8ce513..3c94c56 master -> master
```

7. Apabila dijalankan git log, muncul tampilan berikut :

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git log
commit 3c94c56f9ed31af0e3c74871c20ba2a7f89381d6 (HEAD -> master)
Author: lidia <lidiamanik@outlook.com>
Date: Sat Feb 17 15:16:03 2018 +0700

    Add change 2

commit e8ce513b548b7ea83722b34e0a1cf5ec03003444 (origin/master)
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:09:31 2018 +0700

    add line 1

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git diff
```

Skenario 3 - Conflict

1. Lakukan perubahan pada file demo.txt dan commit perubahan

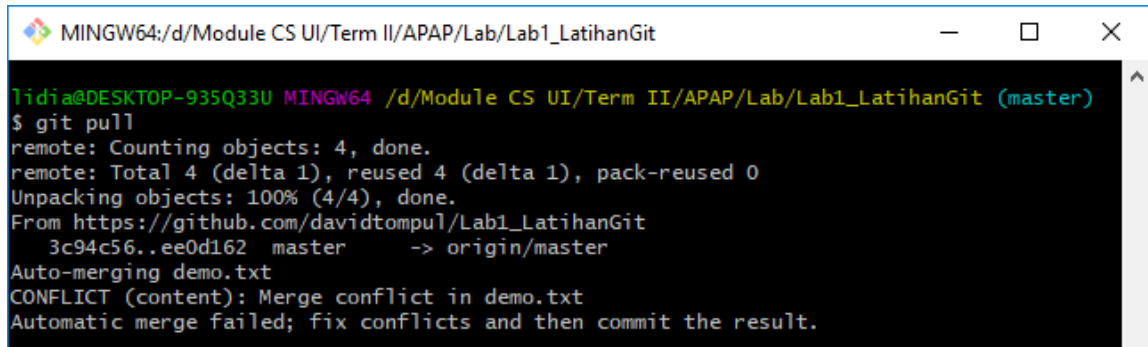
```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ vim demo.txt

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git add .

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git commit -m "add line 3"
error: pathspec '-' did not match any file(s) known to git.
error: pathspec 'm' did not match any file(s) known to git.
error: pathspec 'add line 3' did not match any file(s) known to git.

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git commit -m "add line 3"
[master dfce6c7] add line 3
1 file changed, 1 insertion(+)
```

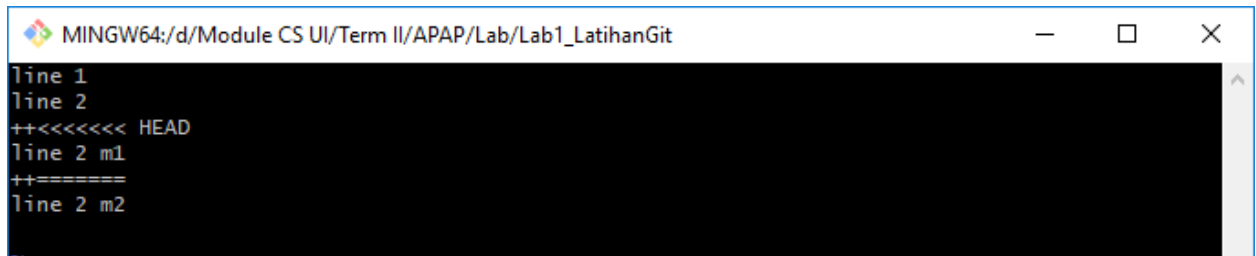
2. Lakukan pull dan muncul CONFLICT sebagai berikut karena mengubah baris yang sama sebagai berikut:



```

MINGW64:/d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git pull
remote: Counting objects: 4, done.
remote: Total 4 (delta 1), reused 4 (delta 1), pack-reused 0
Unpacking objects: 100% (4/4), done.
From https://github.com/davidtompul/Lab1_LatihanGit
   3c94c56..ee0d162  master    -> origin/master
Auto-merging demo.txt
CONFLICT (content): Merge conflict in demo.txt
Automatic merge failed; fix conflicts and then commit the result.
  
```

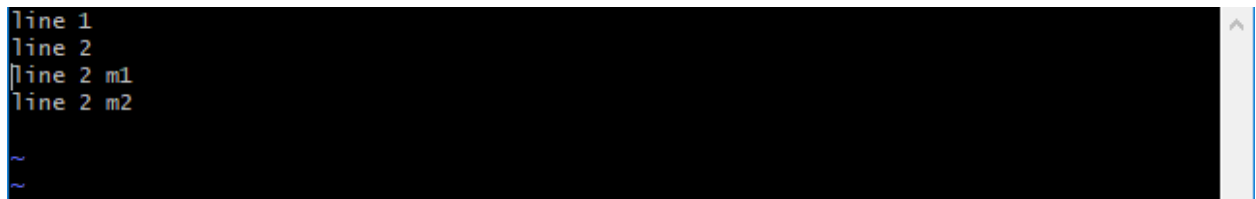
3. Perbaiki conflict sebagai berikut :



```

MINGW64:/d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit
line 1
line 2
++<<<<<<< HEAD
line 2 m1
++=====
line 2 m2
~
  
```

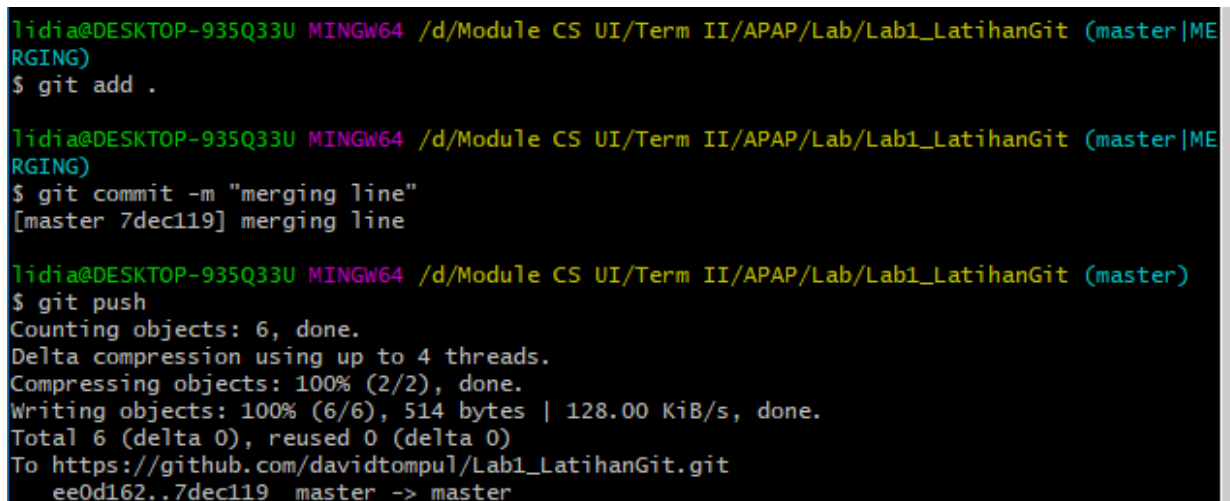
Menjadi



```

line 1
line 2
line 2 m1
line 2 m2
~
~
  
```

4. Setelah file conflict diperbaiki dan conflict diperbaiki, maka hasil yang muncul sebagai berikut :



```

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master|MERGING)
$ git add .

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master|MERGING)
$ git commit -m "merging line"
[master 7dec119] merging line

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git push
Counting objects: 6, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (6/6), 514 bytes | 128.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0)
To https://github.com/davidtompul/Lab1_LatihanGit.git
   ee0d162..7dec119  master -> master
  
```


Skenario 4 – Branching dan Merging

1. Membuat branch (**mhs2**) dari local repository

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git branch mhs2

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git branch
* master
  mhs2
```

2. Checkout ke branch baru (**mhs2**) dan membuat file baru sebagai berikut :

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git checkout mhs2
Switched to branch 'mhs2'

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (mhs2)
$ ls
demo.txt

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (mhs2)
$ touch demo2.txt

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (mhs2)
$ ls
demo.txt  demo2.txt
```

3. Update file **demo.txt** dan **demo2.txt** dan lihat perubahan dengan command **git status**
Commit perubahan dengan **\$ git commit -m "Add new file and update demo.txt"**

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (mhs2)
$ git status
On branch mhs2
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   demo.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        demo2.txt

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

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (mhs2)
$ git add .
warning: LF will be replaced by CRLF in demo2.txt.
The file will have its original line endings in your working directory.

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (mhs2)
$ git commit -m "Add new file and update demo.txt"
[mhs2 e8a9255] Add new file and update demo.txt
2 files changed, 2 insertions(+)
create mode 100644 demo2.txt
```

4. Merge Branch Mhs2 ke branch Master

Masuk ke branch master dengan perintah **\$ git checkout master**

```
MINGW64:/d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (mhs2)
$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
```

Merge file yang ada di branch mhs2 ke master dan push dengan command sebagai berikut :

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git merge mhs2
Updating 7dec119..e8a9255
Fast-forward
 demo.txt | 1 +
 demo2.txt | 1 +
 2 files changed, 2 insertions(+)
 create mode 100644 demo2.txt
```

5. Kondisi git branch dan sebagai berikut :

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git merge mhs2
Updating 7dec119..e8a9255
Fast-forward
 demo.txt | 1 +
 demo2.txt | 1 +
 2 files changed, 2 insertions(+)
 create mode 100644 demo2.txt

lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git branch
* master
  mhs2
```

6. Apabila git di push, maka tampilan log akan menjadi sebagai berikut :

```
lidia@DESKTOP-935Q33U MINGW64 /d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit (master)
$ git push origin master
Counting objects: 4, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 324 bytes | 162.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0)
```

```
MINGW64:/d/Module CS UI/Term II/APAP/Lab/Lab1_LatihanGit
Date: Sat Feb 17 15:44:29 2018 +0700

Add new file and update demo.txt

commit 7dec119745d8a343cb4c982c01eb2e318800a56d
Merge: dfce6c7 ee0d162
Author: lidia <lidiamanik@outlook.com>
Date: Sat Feb 17 15:33:41 2018 +0700

merging line

commit ee0d162ae0dc7d02fd6f3f62a9d02040dde6d0cc
Merge: e20e5ac 3c94c56
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:31:46 2018 +0700

resolve conflict add line 2 m1

commit dfce6c791ac2a11b0830505e431e7e9ae868f2f9
Author: lidia <lidiamanik@outlook.com>
Date: Sat Feb 17 15:29:25 2018 +0700

add line 3

commit e20e5ac3ce6529be0e5b7ecffb23bdafe723c7ac
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:27:18 2018 +0700

add line 2 m1

:
Date: Sat Feb 17 15:44:29 2018 +0700

Add new file and update demo.txt

commit 7dec119745d8a343cb4c982c01eb2e318800a56d
Merge: dfce6c7 ee0d162
Author: lidia <lidiamanik@outlook.com>
Date: Sat Feb 17 15:33:41 2018 +0700

merging line

commit ee0d162ae0dc7d02fd6f3f62a9d02040dde6d0cc
Merge: e20e5ac 3c94c56
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:31:46 2018 +0700

resolve conflict add line 2 m1
```

```
commit dfce6c791ac2a11b0830505e431e7e9ae868f2f9
Author: lidia <lidiamanik@outlook.com>
Date: Sat Feb 17 15:29:25 2018 +0700

    add line 3

commit e20e5ac3ce6529be0e5b7ecffb23bdaf723c7ac
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:27:18 2018 +0700

    add line 2 m1

commit 3c94c56f9ed31af0e3c74871c20ba2a7f89381d6
Author: lidia <lidiamanik@outlook.com>
Date: Sat Feb 17 15:16:03 2018 +0700

    Add change 2

commit e8ce513b548b7ea83722b34e0a1cf5ec03003444
Author: <davids.elkana@gmail.com>
Date: Sat Feb 17 15:09:31 2018 +0700

    add line 1

~
~
(END)
```