

# Version Control System (VCS), GIT

## Prabhakar P

### git mv:

- Added test2.txt into staged and committed
- Renamed test2.txt into test3.txt using “git mv”.
- Used “git diff --staged” to see the difference between committed file and staged.

```
MINGW64/c/Users/praba/AU_Assignment
praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git add test2.txt

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   test2.txt

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git commit -m "initial commit"
[master 0a9a022] initial commit
1 file changed, 1 insertion(+)
create mode 100644 test2.txt

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git mv test2.txt test3.txt

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    renamed:   test2.txt -> test3.txt

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git diff --staged
diff --git a/test2.txt b/test3.txt
similarity index 100%
rename from test2.txt
rename to test3.txt

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git commit -m "file renamed"
[master e44a7db] file renamed
1 file changed, 0 insertions(+), 0 deletions(-)
rename test2.txt => test3.txt (100%)

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git status
On branch master
nothing to commit, working tree clean

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git log
commit e44a7db1e0052493a5a73251154037a827830e2e (HEAD -> master)
Author: Prabhakar19 <praphakar119@gmail.com>
Date:   Wed Jan 6 22:13:07 2021 +0530
```

### git rm:

- “test.txt” file is already committed and i removed it using “git rm test.txt”
- Using “git status”, I am able to see deleted changes.
- Using “git diff --staged”, can compare committed file and staged changes. Here it says it was removed.

```
MINGW64/c/Users/praba/AU_Assignment
praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    sample.txt

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

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git rm test.txt
rm 'test.txt'

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    deleted:    test.txt

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

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git diff --staged
diff --git a/test.txt b/test.txt
deleted file mode 100644
index c992a33..0000000
--- a/test.txt
+++ /dev/null
@@ -1,0 @@
-testing file 1
\ No newline at end of file

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git rm sample.txt
fatal: pathspec 'sample.txt' did not match any files

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git add sample.txt

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   sample.txt
    deleted:    test.txt
```

## git tag:

- Created a "sample.txt" file and added it into staged.
- Then committed the sample.txt as v1.0 using "git tag" command. When i show the version using "git show v1.0", i am able to see tag and commit details

```
MINGW64/c/Users/praba/AU_Assignment
praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   sample.txt

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

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git add sample.txt

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git tag -a v1.0 -m "first version"

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git tag
v1.0

praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git show v1.0
tag v1.0
Tagger: Prabakar19 <praphakar119@gmail.com>
Date: Wed Jan 6 22:52:08 2021 +0530

first version

commit 3edae581a2ba0d0a49e16f0b38d26328bd914302 (HEAD -> master, tag: v1.0)
Author: Prabakar19 <praphakar119@gmail.com>
Date: Wed Jan 6 22:51:07 2021 +0530

    sample

diff --git a/sample.txt b/sample.txt
new file mode 100644
index 0000000..f8a1113
--- /dev/null
+++ b/sample.txt
@@ -0,0 +1 @@
+this is sample file
\ No newline at end of file
diff --git a/test.txt b/test.txt
deleted file mode 100644
index c992a33..0000000
--- a/test.txt
+++ /dev/null
@@ -1,0 @@
-testing file 1
\ No newline at end of file
```

- Added version “v0.9” to the last commit using first 8 character of the commit id.
- “git tag” shows all the versions.

```

MINGW64/c/Users/praba/AU_Assignment
praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git tag -a "v0.9" -m "pre-release" 3edae58
praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git tag
v0.9
v1.0
praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$ git show v0.9
tag v0.9
Tagger: Prabakar19 <praphakar119@gmail.com>
Date:   Wed Jan 6 22:59:04 2021 +0530

pre-release

commit 3edae581a2ba0da49e16f0b38d26328bd914302 (HEAD -> master, tag: v1.0, tag: v0.9)
Author: Prabakar19 <praphakar119@gmail.com>
Date:   Wed Jan 6 22:51:07 2021 +0530

    sample

diff --git a/sample.txt b/sample.txt
new file mode 100644
index 0000000..f8a1113
--- /dev/null
+++ b/sample.txt
@@ -0,0 +1 @@
+this is sample file
\ No newline at end of file
diff --git a/test.txt b/test.txt
deleted file mode 100644
index c992a33..0000000
--- a/test.txt
+++ /dev/null
@@ -1,0 +0,0 @@
-testing file 1
\ No newline at end of file
praba@LAPTOP-QRTOREV7 MINGW64 ~/AU_Assignment (master)
$

```