

Version Control System (VCS) - GIT

Done by Ravi Theja Kolluru

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Assignment

1. Upload the hello-git (basic GIT commands) and branch-demo (branch examples) repositories that were created during the class.
2. Use GIT remove, move and reset commands and post the screenshots.
3. Fork the repo (<https://github.com/vikranthacco/hello-git>), create a feature branch and create a pull request to this repo (Refer 6.4 section in the material)

README.md

1. Creating a README.md file and sending it to Local Repository

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git init
Initialized empty Git repository in C:/Users/Ravi Theja Kolluru/VersionControlSystemGIT-Afternoon/assignment/.git/

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ vi README.md

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git add README.md

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git commit -m "README Commit"
[master (root-commit) e3837d1] README Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 README.md
```

RM command

2. Creating a RemoveFile.txt and sending it to Local Repository

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ vi RemoveFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git add RemoveFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git commit -m "RemoveFile Commit"
[master 29821da] RemoveFile Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 RemoveFile.txt
```

3. Removing the RemoveFile.txt using the rm command

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ ls
README.md RemoveFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git rm RemoveFile.txt
rm 'RemoveFile.txt'

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ ls
README.md
```

4. RM command along with Add, Commit and Diff

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    RemoveFile.txt

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

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git add RemoveFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   RemoveFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git commit -m "RemoveFile.txt Commit "
[master 300fb07] RemoveFile.txt Commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 RemoteRepo/RemoveFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git status
On branch master
nothing to commit, working tree clean

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git rm RemoveFile.txt
rm 'RemoteRepo/RemoveFile.txt'

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    deleted:    RemoveFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git diff --staged
diff --git a/RemoteRepo/RemoveFile.txt b/RemoteRepo/RemoveFile.txt
deleted file mode 100644
index e69de29..0000000
```

MV command

5. Creating a RenameFile.txt and sending it to Local Repository

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ vi RenameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git add RenameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git commit -m "RenameFile Commit"
[master beafbe2] RenameFile Commit
1 file changed, 0 insertions(+), 0 deletions(-)
rename RemoveFile.txt => RenameFile.txt (100%)
```

6. Renaming the RenameFile.txt to NewnameFile.txt using the mv command

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ ls
README.md RenameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git mv RenameFile.txt NewnameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ ls
NewnameFile.txt README.md
```

7. Sent the files to local repository

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git commit -m "New Commit"
[master d329c8a] New Commit
1 file changed, 0 insertions(+), 0 deletions(-)
rename RenameFile.txt => NewnameFile.txt (100%)
```

8. Viewing commit data

```
$ git log
commit d329c8aaa1c302691e798f01e25c24afe928d589 (HEAD -> master)
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 22:15:07 2021 +0530

    New Commit

commit beafbe21b14d5aed9fe9978771e35e27641dc56c
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 21:58:33 2021 +0530

    RenameFile Commit

commit 29821da40cbde7363e65c5eb9fbf65dab632fa02
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 21:52:19 2021 +0530

    RemoveFile Commit

commit e3837d1ff63f44335200937a86397b02fd2e53f3
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 21:49:50 2021 +0530

    README Commit
```

9. MV command along with Add, Commit and Diff

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    RenameFile.txt

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

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git add RenameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   RenameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git commit -m "RenameFile.txt commit"
[master d83a27b] RenameFile.txt commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 RemoteRepo/RenameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git status
On branch master
nothing to commit, working tree clean

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git mv RenameFile.txt NewNameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    renamed:   RenameFile.txt -> NewNameFile.txt

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git diff --staged
diff --git a/RemoteRepo/RenameFile.txt b/RemoteRepo/NewNameFile.txt
similarity index 100%
rename from RemoteRepo/RenameFile.txt
rename to RemoteRepo/NewNameFile.txt
```

RESET

10. Performing reset operation

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git reset --hard HEAD~1
HEAD is now at beafbe2 RenameFile Commit
```

11. Viewing the Commit data

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git log
commit beafbe21b14d5aed9fe9978771e35e27641dc56c (HEAD -> master)
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 21:58:33 2021 +0530

    RenameFile Commit

commit 29821da40cbde7363e65c5eb9fbf65dab632fa02
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 21:52:19 2021 +0530

    RemoveFile Commit

commit e3837d1ff63f44335200937a86397b02fd2e53f3
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 21:49:50 2021 +0530

    README Commit
```

TAG

12. Performing tagging operation

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git tag -a v1.0.0 -m "Tagging for first time"

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git tag
v1.0.0
```

13. Viewing tag status

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git show v1.0.0
tag v1.0.0
Tagger: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 22:22:12 2021 +0530

    Tagging for first time

commit beafbe21b14d5aed9fe9978771e35e27641dc56c (HEAD -> master, tag: v1.0.0)
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 21:58:33 2021 +0530

    RenameFile Commit

diff --git a/RemoveFile.txt b/RenameFile.txt
similarity index 100%
rename from RemoveFile.txt
rename to RenameFile.txt
```

14. Another tag operation

```

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git tag -a version -m "Second tag test"

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git tag
v1.0.0
version

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git show version
tag version
Tagger: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 22:24:42 2021 +0530

Second tag test

commit beafbe21b14d5aed9fe9978771e35e27641dc56c (HEAD -> master, tag: version, tag: v1.0.0)
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Thu Jan 7 21:58:33 2021 +0530

    RenameFile Commit

diff --git a/RemoveFile.txt b/RenameFile.txt
similarity index 100%
rename from RemoveFile.txt
rename to RenameFile.txt

```

FORK-FEATURE_BRANCH-PULL

15. Performing cloning operation to the forked repository

```

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (master)
$ git clone https://github.com/RaviThejaK/hello-git
Cloning into 'hello-git'...
remote: Enumerating objects: 14, done.
remote: Counting objects: 100% (14/14), done.
remote: Compressing objects: 100% (11/11), done.
remote: Total 14 (delta 3), reused 13 (delta 3), pack-reused 0
Receiving objects: 100% (14/14), done.
Resolving deltas: 100% (3/3), done.

```

16. Creating remote name pointing to original Remote repository

```

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/SAUAssignment/VersionControlSystemGIT-afternoon/assignment (master)
$ git remote add RaviRemote https://github.com/RaviThejaK/hello-git

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/SAUAssignment/VersionControlSystemGIT-afternoon/assignment (master)
$ git remote -v
RaviRemote      https://github.com/RaviThejaK/hello-git (fetch)
RaviRemote      https://github.com/RaviThejaK/hello-git (push)
origin          https://github.com/RaviThejaK/hello-git (fetch)
origin          https://github.com/RaviThejaK/hello-git (push)

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/SAUAssignment/VersionControlSystemGIT-afternoon/assignment (master)
$ git pull RaviRemote master
From https://github.com/RaviThejaK/hello-git
* branch          master      -> FETCH_HEAD
* [new branch]    master      -> RaviRemote/master

```

17. Creating Branch RaviFeature

```

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/SAUAssignment/VersionControlSystemGIT-afternoon/assignment (master)
$ git checkout -b RaviFeature master
Switched to a new branch 'RaviFeature'

```

18. Sending to local repos

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/SAUAssignment/VersionControlSystemGIT-afternoon/assignment (RaviFeature)
$ git add hello-git

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/SAUAssignment/VersionControlSystemGIT-afternoon/assignment (RaviFeature)
$ git commit -m "Ravi Feature"
[RaviFeature 6d22d1d] Ravi Feature
1 file changed, 1 insertion(+)
create mode 160000 hello-git
```

19. Pushing the feature and pulled into the repository

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/VersionControlSystemGIT-Afternoon/assignment (RaviFeature)
$ git push origin RaviFeature
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 4 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (9/9), 888 bytes | 222.00 KiB/s, done.
Total 9 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), done.
remote:
remote: Create a pull request for 'RaviFeature' on GitHub by visiting:
remote:   https://github.com/RaviThejaK/hello-git/pull/new/RaviFeature
remote:
To https://github.com/RaviThejaK/hello-git
 * [new branch]      RaviFeature -> RaviFeature
```

20. Pull In GIT

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

base repository: vikrantacco/hello-git

base: master

head repository: RaviThejaK/hello-git

compare: RTKfeature

✓ Able to merge.

These branches can be automatically merged.

Assignment commit

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Video support! Upload MP4 and MOV file types. Attach files by dragging & dropping, selecting or pasting them.

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Create pull request

Helpful resources

[GitHub Community Guidelines](#)

BASICS

1. Git Init

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git init
Initialized empty Git repository in C:/Users/Ravi Theja Kolluru/Hello-Git-Class/.git/
```

2. Git status in Working Dir.

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git status
On branch master

No commits yet

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

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:   README.md
```

3. Add, Commit and Status report

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git add README.md

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git status
On branch master

No commits yet

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

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git commit -m "Commit 1"
[master (root-commit) 482f8d8] Commit 1
 1 file changed, 3 insertions(+)
 create mode 100644 README.md

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git status
On branch master
nothing to commit, working tree clean
```

4. Git log

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git log
commit 482f8d8b2a24d421a538516ceebf3a37a694aeb3 (HEAD -> master)
Author: Ravi-Theja-Kolluru <ravitheja.kolluru18@gmail.com>
Date: Sat Jan 9 23:19:16 2021 +0530

    Commit 1

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git log --oneline
482f8d8 (HEAD -> master) Commit 1
```

5. Git diff

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git diff
warning: LF will be replaced by CRLF in README.md.
The file will have its original line endings in your working directory
diff --git a/README.md b/README.md
index 7092864..f886742 100644
--- a/README.md
+++ b/README.md
@@ -1,3 +1,4 @@
 This file contains info about
 what the folder contains.
+Extra Line added
```

6. Gitignore

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .gitignore

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

Branching

1. Creating Remote Repository

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git remote add origin https://github.com/RaviThejaK/HelloGIT.git

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/RemoteRepo (master)
$ git remote -v
origin  https://github.com/RaviThejaK/HelloGIT.git (fetch)
origin  https://github.com/RaviThejaK/HelloGIT.git (push)
```

Remote Repository

1. Creating and Deleting a branch

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/branching (master|MERGING)
$ git branch -D develop
Deleted branch develop (was 01c157b).

Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/branching (master|MERGING)
$ git branch develop
```

2. Checkout

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/branching (develop)
$ git checkout master
Switched to branch 'master'
```

3. Merge

```
Ravi Theja Kolluru@DESKTOP-I1JFN3D MINGW64 ~/Hello-Git-Class/branching (master)
$ git merge develop
Updating 9a05293..d43cda9
Fast-forward
 README.md | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)
```
