## **SESSION-2**

# **VERSION CONTROL ASSIGNMENT**

1.Git Setup <a href="https://confluence.atlassian.com/bitbucket/set-up-git-744723531.html">https://confluence.atlassian.com/bitbucket/set-up-git-744723531.html</a>

```
riya@riya:~

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welcome

riya@riya:~$ sudo apt-get install git

[sudo] password for riya:

Reading package lists... Done

Building dependency tree

Reading state information... Done

git is already the newest version (1:2.17.1-1ubuntu0.5).

0 upgraded, 0 newly installed, 0 to remove and 622 not upgraded.

riya@riya:~$
```

root@riya:~# sudo apt-get install git

riya@riya:~\$ sudo apt-get update

## 2.Initialize a Git Repository

```
riya@riya:~$ mkdir tempgit1
riya@riya:~$ cd tempgit1
riya@riya:~/tempgit1$ git init
Initialized empty Git repository in /home/riya/tempgit1/.git/
riya@riya:~/tempgit1$
```

riya@riya:~\$ mkdir tempgit1 riya@riya:~\$ cd tempgit1 riya@riya:~/tempgit1\$ git init Initialized empty Git repository in /home/riya/tempgit1/.git/

#### 3.Add files to the repository

```
riya@riya:~/tempgit1$ touch file1.txt
riya@riya:~/tempgit1$ git status
On branch master
```

No commits yet

Untracked files:

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

file1.txt

nothing added to commit but untracked files present (use "git add" to track) riya@riya:~/tempgit1\$ git add file1.txt riya@riya:~/tempgit1\$ git status

On branch master

No commits yet

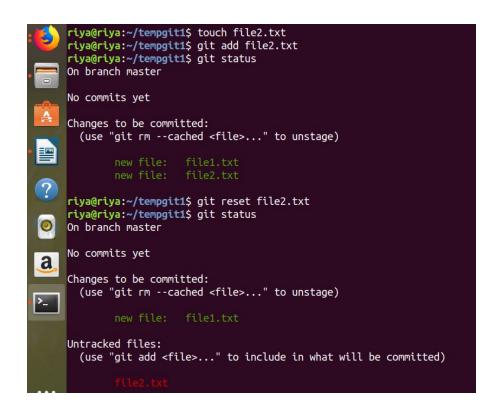
Changes to be committed:
(use "git rm --cached <file>..." to unstage)

new file: file1.txt

```
riya@riya:~/tempgit1$ git status
     On branch master
    No commits yet
     Untracked files:
       (use "git add <file>..." to include in what will be committed)
     nothing added to commit but untracked files present (use "git add" to track)
     riya@riya:~/tempgit1$ git add file1.txt
     riya@riya:~/tempgit1$ git status
    On branch master
    No commits yet
a
    Changes to be committed:
       (use "git rm --cached <file>..." to unstage)
>_
     Untracked files:
       (use "git add <file>..." to include in what will be committed)
     riya@riya:~/tempgit1$
```

## 4.Unstage 1 file

```
riya@riya:~/tempgit1$ touch file2.txt
riya@riya:~/tempgit1$ git add file2.txt
riya@riya:~/tempgit1$ git status
On branch master
No commits yet
Changes to be committed:
 (use "git rm --cached <file>..." to unstage)
  new file: file1.txt
  new file: file2.txt
riya@riya:~/tempgit1$ git reset file2.txt
riya@riya:~/tempgit1$ git status
On branch master
No commits yet
Changes to be committed:
 (use "git rm --cached <file>..." to unstage)
  new file: file1.txt
Untracked files:
 (use "git add <file>..." to include in what will be committed)
  file2.txt
```



#### 5.Commit the file



riya@riya:~/tempgit1\$ git commit -m "File1 was added" [master (root-commit) 65b94af] File1 was added 1 file changed, 1 insertion(+) create mode 100644 file1.txt

#### 6.Add a remote

```
riya@riya:~/Desktop/riyattn$ git remote add origin https://github.com/riyattn/riyattn.git
riya@riya:~/Desktop/riyattn$ git remote -v
origin https://github.com/riyattn/riyattn.git (fetch)
origin https://github.com/riyattn/riyattn.git (push)

riya@riya:~/Desktop/riyattn$ git remote add origin https://github.com/riyattn/riyattn.git
fatal: remote origin already exists.
riya@riya:~/Desktop/riyattn$ git remote -v
origin https://github.com/riyattn/riyattn.git (fetch)
origin https://github.com/riyattn/riyattn.git (push)
```

### 7. Undo changes to a particular file

riya@riya:~/tempgit1\$ cat file1.txt

hello. This is a new file.

hello. This is a new file.

riya@riya:~/tempgit1\$ git checkout -- file1.txt///////////////////////////////undo the changes

riya@riya:~/tempgit1\$ cat file1.txt /////////view file1 to see its contents.

```
riya@riya:~/tempgit1$ cat file1.txt
hello. This is a new file.

these are new lines added to this file.
riya@riya:~/tempgit1$ git status
On branch 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: file1.txt

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

file2.txt

no changes added to commit (use "git add" and/or "git commit -a")
riya@riya:~/tempgit1$ git checkout -- file1.txt
riya@riya:~/tempgit1$ cat file1.txt
hello. This is a new file.
```

#### 8. Push changes to Github

```
riya@riya:~/Desktop/riyattn$ Is
                                  ////////////////////////////cd to local repository and list it contents.
README.md
                                  //////edit readme file
riya@riya:~/Desktop/riyattn$ touch new.md //////////////create new file
riva@riva:~/Desktop/rivattn$ Is
new.md README.md
riya@riya:~/Desktop/riyattn$ 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: README.md
Untracked files:
 (use "git add <file>..." to include in what will be committed)
  new.md
no changes added to commit (use "git add" and/or "git commit -a")
riya@riya:~/Desktop/riyattn$ git add .
riya@riya:~/Desktop/riyattn$ 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: README.md

new file: new.md

riya@riya:~/Desktop/riyattn\$ git commit -m "edit readme and add new.md" [master 69e8159] edit readme and add new.md
2 files changed, 3 insertions(+), 1 deletion(-)
create mode 100644 new.md
riya@riya:~/Desktop/riyattn\$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.

Your branch is anead of forigin/master by 1 commit. (use "git push" to publish your local commits)

repository.

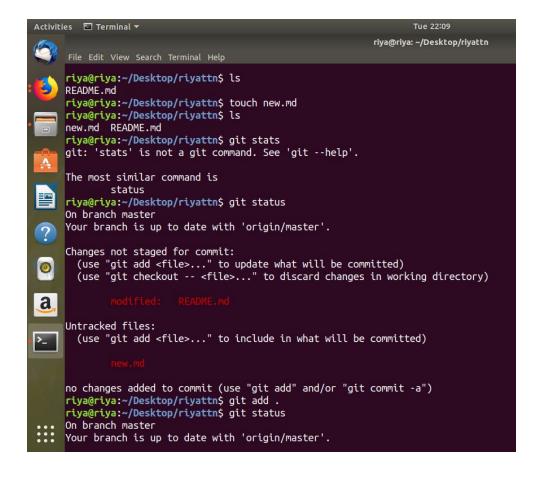
Username for 'https://github.com': riyattn Password for 'https://riyattn@github.com':

Counting objects: 4, done.

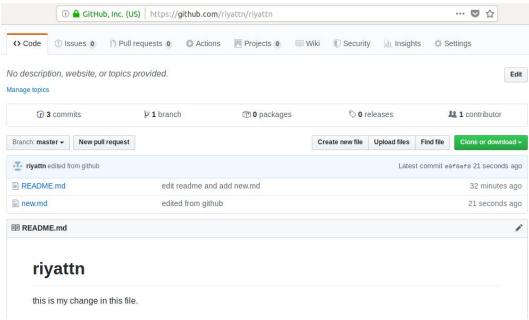
Delta compression using up to 8 threads. Compressing objects: 100% (2/2), done.

Writing objects: 100% (4/4), 323 bytes | 323.00 KiB/s, done.

Total 4 (delta 0), reused 0 (delta 0)
To https://github.com/riyattn/riyattn.git
7d41a69..69e8159 master -> master







## 9.clone the repository

riya@riya:~\$ cd ~/Desktop

riya@riya:~/Desktop\$ git clone https://github.com/riyattn/riyattn.git

Cloning into 'riyattn'...

remote: Enumerating objects: 3, done.

remote: Counting objects: 100% (3/3), done.

remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0

Unpacking objects: 100% (3/3), done.

```
riya@riya: ~/Desktop

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welcome
riya@riya:~$ cd ~/Desktop
riya@riya:~/Desktop$ git clone https://github.com/riyattn/riyattn.git

Cloning into 'riyattn'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0

Unpacking objects: 100% (3/3), done.
riya@riya:~/Desktop$
```

### 10.Add changes to one of the copies and pull the changes in the other.

```
riya@riya:~/Desktop/riyattn$ 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: new.md
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: new.md
riya@riya:~/Desktop/riyattn$ git add new.md
riya@riya:~/Desktop/riyattn$ 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: new.md

```
riya@riya:~/Desktop/riyattn$ 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: new.md
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)
riya@riya:~/Desktop/riyattn$ git add new.md
riya@riya:~/Desktop/riyattn$ 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: new.md
 riyattn / riyattn
                                                              O Unwatch → 1 ★ Star 0 ¥ Fork 0
  ♦ Code ① Issues 0 ② Pull requests 0 ② Actions ☐ Projects 0 ☐ Wiki ② Security ☐ Insights ❖ Settings
                                                                               Find file Copy path
  Branch: master → riyattn / new.md
   Triyattn edited from github
                                                                             e0f8af8 3 minutes ago
  1 contributor
  1 lines (1 sloc) 38 Bytes
                                                                      Raw Blame History
      this is the edit from github editor.
  riya@riya:~/Desktop/riyattn1$ git pull
  remote: Enumerating objects: 5, done.
  remote: Counting objects: 100% (5/5), done.
  remote: Compressing objects: 100% (2/2), done.
  remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
  Unpacking objects: 100% (3/3), done.
  From https://github.com/riyattn/riyattn1
      95208bd..b47cb79 master
                                           -> origin/master
  Updating 95208bd..b47cb79
  Fast-forward
   README.md | 3 ++
   1 file changed, 2 insertions(\pm), 1 deletion(-)
  riya@riya:~/Desktop/riyattn1$
```

remote: Enumerating objects: 5, done.

remote: Counting objects: 100% (5/5), done. remote: Compressing objects: 100% (2/2), done.

remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0

Unpacking objects: 100% (3/3), done. From https://github.com/riyattn/riyattn1

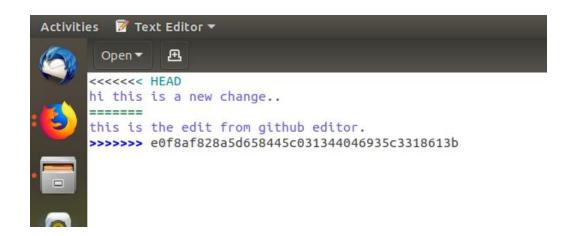
95208bd..b47cb79 master -> origin/master

Updating 95208bd..b47cb79

Fast-forward

README.md | 3 ++-

1 file changed, 2 insertions(+), 1 deletion(-)



## 11.Check differences between a file and its staged version

riya@riya:~/Desktop/riyattn1\$ git diff --cached

diff --git a/new.md b/new.md

```
riya@riya:~/Desktop/riyattn1$ git status
On branch master
Your branch is up to date with 'origin/master'.

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

nothing added to commit but untracked files present (use "git add" to track)
riya@riya:~/Desktop/riyattn1$ git add new.md
riya@riya:~/Desktop/riyattn1$ 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)
  new file: new.md
```

```
new file mode 100644
index 0000000..ce01362
--- /dev/null
+++ b/new.md
@@ -0,0 +1 @@
+hello
```

```
riya@riya:~/Desktop/riyattn1$ git status
On branch master
Your branch is up to date with 'origin/master'.
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
riya@riya:~/Desktop/riyattn1$ git add new.md
riya@riya:~/Desktop/riyattn1$ 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)
riya@riya:~/Desktop/riyattn1$ git diff --cached
diff --git a/new.md b/new.md
new file mode 100644
index 0000000..ce01362
--- /dev/null
+++ b/new.md
```

## 12.Ignore a few files to be checked in

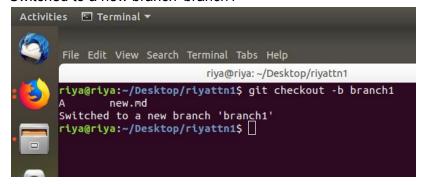
riya@riya:~/Desktop/riyattn1\$ touch .gitignore riya@riya:~/Desktop/riyattn1\$ touch hello



#### 13.Create a new branch.

riya@riya:~/Desktop/riyattn1\$ git checkout -b branch1 A new.md

Switched to a new branch 'branch1'



## 14.Diverge them with commits

Git checkout branch1

```
///edit the file new.md
Git add new.md
Git commit -m "edited file"
Git checkout master
/////edit the file new.md
Git add new.md
Git commit -m "edited file"
riya@riya:~/Desktop/riyattn1$ git checkout -b branch1
A new.md
Switched to a new branch 'branch1'
riya@riya:~/Desktop/riyattn1$ git status
On branch branch1
Changes to be committed:
 (use "git reset HEAD <file>..." to unstage)
  new file: new.md
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: new.md
Untracked files:
 (use "git add <file>..." to include in what will be committed)
  .gitignore
riya@riya:~/Desktop/riyattn1$ git commit -m "edit in line2"
[branch1 e786fa9] edit in line2
1 file changed, 1 insertion(+)
create mode 100644 new.md
riya@riya:~/Desktop/riyattn1$ git commit -m "edit in line2"
On branch branch1
Changes not staged for commit:
  modified: new.md
Untracked files:
  .gitignore
```

no changes added to commit

riya@riya:~/Desktop/riyattn1\$ git commit -m "edit in line2 2 dots"

On branch branch1

Changes not staged for commit:

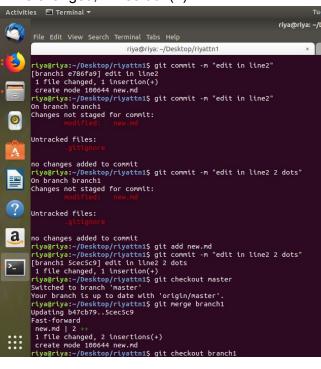
modified: new.md

Untracked files:

.gitignore

no changes added to commit riya@riya:~/Desktop/riyattn1\$ git add new.md riya@riya:~/Desktop/riyattn1\$ git commit -m "edit in line2 2 dots" [branch1 5cec5c9] edit in line2 2 dots

1 file changed, 1 insertion(+)



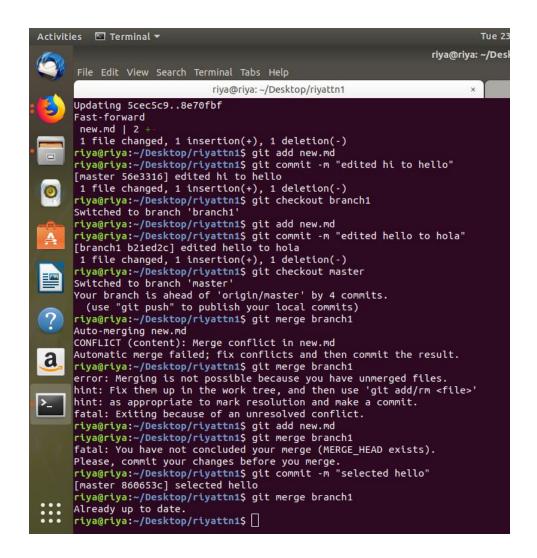
1. Edit the same file at the same line on both branches and commit

I edited the line 1 for both the file. Hola from branch1 and hello in master.

```
riya@riya:~/Desktop/riyattn1$ git checkout master
Switched to branch 'master'
 Your branch is ahead of 'origin/master' by 2 commits.
 (use "git push" to publish your local commits)
 riya@riya:~/Desktop/riyattn1$ git merge branch1
 Updating 5cec5c9..8e70fbf
Fast-forward
 new.md | 2
 1 file changed, 1 insertion(+), 1 deletion(-)
riya@riya:~/Desktop/riyattn1$ git add new.md
 riya@riya:~/Desktop/riyattn1$ git commit -m "edited hi to hello"
 [master 56e3316] edited hi to hello
1 file changed, 1 insertion(+), 1 deletion(-) riya@riya:~/Desktop/riyattn1$ git checkout branch1 Switched to branch 'branch1'
 riya@riya:~/Desktop/riyattn1$ git add new.md
 riya@riya:~/Desktop/riyattn1$ git commit -m "edited hello to hola"
 [branch1 b21ed2c] edited hello to hola
  1 file changed, 1 insertion(+), 1 deletion(-)
 riya@riya:~/Desktop/riyattn1$ git checkout master
Switched to branch 'master'
 Your branch is ahead of 'origin/master' by 4 commits.
   (use "git push" to publish your local commits)
```

#### 15. Try merging and resolve merge conflicts

riya@riya:~/Desktop/riyattn1\$ git merge branch1 Auto-merging new.md CONFLICT (content): Merge conflict in new.md Automatic merge failed; fix conflicts and then commit the result. riya@riya:~/Desktop/riyattn1\$ git merge branch1 error: Merging 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. riya@riya:~/Desktop/riyattn1\$ git add new.md riya@riya:~/Desktop/riyattn1\$ git merge branch1 fatal: You have not concluded your merge (MERGE HEAD exists). Please, commit your changes before you merge. riya@riya:~/Desktop/riyattn1\$ git commit -m "selected hello" [master 860653c] selected hello riya@riya:~/Desktop/riyattn1\$ git merge branch1 Already up to date.



#### 16.Stash the changes and pop them

riya@riya:~/Desktop/riyattn1\$ git stash
Saved working directory and index state WIP on master: 860653c selected hello
riya@riya:~/Desktop/riyattn1\$ git stash show
new.md | 2 ++
1 file changed, 2 insertions(+)

```
riya@riya: ~/Desktop/riy
                               riya@riya: ~/Desktop/riyattn1
        iya@riya:~/Desktop/riyattn1$ git branch
        branch1
      riya@riya:~/Desktop/riyattn1$ git stash
      Saved working directory and index state WIP on master: 860653c selected hello
      riya@riya:~/Desktop/riyattn1$ git stash show
       new.md | 2 ++
      1 file changed, 2 insertions(+)
riya@riya:~/Desktop/riyattn1$
```

```
riya@riya:~/Desktop/riyattn1$ git stash pop
On branch master
Your branch is ahead of 'origin/master' by 6 commits.
 (use "git push" to publish your local commits)
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: new.md
Untracked files:
 (use "git add <file>..." to include in what will be committed)
  .gitignore
no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (0458dafd33bbf043db8cae09500d2f796b1c4adb)
riya@riya:~/Desktop/riyattn1$ git status
On branch master
Your branch is ahead of 'origin/master' by 6 commits.
 (use "git push" to publish your local commits)
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: new.md
Untracked files:
 (use "git add <file>..." to include in what will be committed)
  .gitignore
```

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

```
riya@riya:~/Desktop/riyattn1$ git stash pop
On branch master
Your branch is ahead of 'origin/master' by 6 commits.
(use "git push" to publish your local commits)

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: new.md

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

.gitignore

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (0458dafd33bbf043db8cae09500d2f796b1c4adb)
riya@riya:-/Desktop/riyattn1$ git status
On branch master
Your branch is ahead of 'origin/master' by 6 commits.
(use "git push" to publish your local commits)

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: new.md

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

no changes added to commit (use "git add" and/or "git commit -a")
riya@riya:-/Desktop/riyattn1$ []
```

```
17.Add the following code to your .bashrc file : color_prompt="yes" parse_git_branch() {
    git branch 2> /dev/null | sed -e '/^[^*]/d' -e 's/* \(.*\)/(\1)/'
    }
    if [ "$color_prompt" = yes ]; then
    PS1='\u@\h\[\033[00m\]:\[\033[01;34m\]\W\[\033[01;31m\]
$(parse_git_branch)\[\033[00m\]\$'
    else
    PS1='\u@\h:\W $(parse_git_branch)\\$'
    fi
    unset color_prompt force_color_prompt
```

