

## 1. Git Setup

<https://confluence.atlassian.com/bitbucket/set-up-git-744723531.html>

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ sudo apt-get install git
[sudo] password for ttn:
Reading package lists... Done
Building dependency tree
Reading state information... Done
git is already the newest version (1:2.17.1-1ubuntu0.4).
0 upgraded, 0 newly installed, 0 to remove and 374 not upgraded.
```

## 2. Initialize a Git Repository

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ git init
Initialized empty Git repository in /home/ttn/Desktop/projects/day2/.git/
ttn@sarthak-sharma:~/Desktop/projects/day2$
```

## 3. Add files to the repository

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ git add .
```

## 4. Unstage 1 file

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ git rm --cache first_file
rm 'first_file'
ttn@sarthak-sharma:~/Desktop/projects/day2$ git status
On branch master

No commits yet

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

    first_file

nothing added to commit but untracked files present (use "git add" to track)
ttn@sarthak-sharma:~/Desktop/projects/day2$
```

## 5. Commit the file

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ git add .
ttn@sarthak-sharma:~/Desktop/projects/day2$ git commit
[master (root-commit) d77a4bd] first change
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 first_file
ttn@sarthak-sharma:~/Desktop/projects/day2$
```

## 6. Add a remote

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ git remote add day2 git@github.com:SarthakSharma886/ttn_workspace.git
ttn@sarthak-sharma:~/Desktop/projects/day2$ git remote -v
day2    git@github.com:SarthakSharma886/ttn_workspace.git (fetch)
day2    git@github.com:SarthakSharma886/ttn_workspace.git (push)
ttn@sarthak-sharma:~/Desktop/projects/day2$
```

## 7. Undo changes to a particular file

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ git commit --amend
[master 97a8c3d] first revert
Date: Tue Feb 5 18:06:37 2019 +0530
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 first_file
ttn@sarthak-sharma:~/Desktop/projects/day2$ git log
commit 97a8c3db65bf38e2ef7596cd9a59bf5f23d5d498 (HEAD -> master)
Author: Sarthak Sharma <sarthak.sharma@tothenew.com>
Date: Tue Feb 5 18:06:37 2019 +0530

    first revert
ttn@sarthak-sharma:~/Desktop/projects/day2$ git status
On branch master
nothing to commit, working tree clean
ttn@sarthak-sharma:~/Desktop/projects/day2$
```

## 8. Push changes to Github

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ git push -u day2 master
Branch 'master' set up to track remote branch 'master' from 'day2'.
Everything up-to-date
ttn@sarthak-sharma:~/Desktop/projects/day2$
```

## 9. Clone the repository

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ git clone git@github.com:SarthakSharma886/ttn_workspace.git
Cloning into 'ttn_workspace'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
ttn@sarthak-sharma:~/Desktop/projects/day2$
```

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

```
ttn@sarthak-sharma:~/Desktop/projects/day2$ echo "take care">> first_file
ttn@sarthak-sharma:~/Desktop/projects/day2$ cat first_file
hello
mister
have a good day
take care
ttn@sarthak-sharma:~/Desktop/projects/day2$ git add .
ttn@sarthak-sharma:~/Desktop/projects/day2$ git commit
[master f0e4aec] number 10
 4 files changed, 6 insertions(+)
 create mode 160000 another_repo
 create mode 100644 first
 create mode 100644 first_file
 create mode 160000 ttn_workspace
ttn@sarthak-sharma:~/Desktop/projects/day2$ git push  day2 master
Counting objects: 4, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 411 bytes | 411.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0)
To github.com:SarthakSharma886/ttn_workspace.git
   35a0d50..f0e4aec  master -> master
ttn@sarthak-sharma:~/Desktop/projects/day2$
```



```

ttn@sarthak-sharma:~/Desktop/projects/day2$ cd another_repo
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ cat first_file
cat: first_file: No such file or directory
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ ls
README.md
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git pull day2 master
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 4 (delta 0), reused 4 (delta 0), pack-reused 0
Unpacking objects: 100% (4/4), done.
From github.com:SarthakSharma886/ttn_workspace
 * branch                master      -> FETCH_HEAD
   35a0d50..f0e4aec      master      -> day2/master
Updating 35a0d50..f0e4aec
Fast-forward
 another_repo | 1 +
  first       | 0
  first_file  | 4 ++++
  ttn_workspace | 1 +
 4 files changed, 6 insertions(+)
 create mode 160000 another_repo
 create mode 100644 first
 create mode 100644 first_file
 create mode 160000 ttn_workspace
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ cat first_file
hello
mister
have a good day
take care
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$

```

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

```

ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ touch q11
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ echo testing > q11
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git add q11
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git diff --cached
diff --git a/q11 b/q11
new file mode 100644
index 0000000..038d718
--- /dev/null
+++ b/q11
@@ -0,0 +1 @@
+testing
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$

```

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

```
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ vi .gitignore
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ cat .gitignore
ignore
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ touch ignore
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   q11

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

        .gitignore

ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git add .
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   .gitignore
        new file:   q11

ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ ls
another_repo  first  first_file  ignore  q11  README.md  ttn_workspace
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$
```

## 13. Create a new branch.

```
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git checkout -b new_directory
A       .gitignore
A       q11
Switched to a new branch 'new_directory'
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$
```

## 14. Diverge them with commits

```
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git checkout new_directory
Switched to branch 'new_directory'
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ echo "hello" > message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git add message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git commit -m "message at new_directory"
[new_directory 8430c88] message at new_directory
1 file changed, 1 insertion(+), 1 deletion(-)
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git checkout another_new_directory
Switched to branch 'another_new_directory'
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ echo "hello" > message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git add message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git commit -m "message at another_new_directory"
[another_new_directory 124a067] message at another_new_directory
1 file changed, 1 insertion(+), 1 deletion(-)
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$
```



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

```
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git checkout new_directory
A
.gitignore
A
q11
Already on 'new_directory'
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ echo "hello new_directory" > message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git add message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git commit
[new_directory 352daa4] message at new_directory
3 files changed, 3 insertions(+)
create mode 100644 .gitignore
create mode 100644 message
create mode 100644 q11
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git checkout another_new_directory
Switched to branch 'another_new_directory'
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ echo "hello another_new_directory" > message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git add message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git commit -m "message at another_new_directory"
[another_new_directory 779ae4a] message at another_new_directory
1 file changed, 1 insertion(+)
create mode 100644 message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$
```

16. Try merging and resolve merge conflicts

```
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git merge new_directory
Auto-merging message
CONFLICT (content): Merge conflict in message
Automatic merge failed; fix conflicts and then commit the result.
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ cat message
<<<<<<< HEAD
qwerty hello another_new_directory
=====
this is new hello new_directory
hello another_new_directory

>>>>>>> new_directory
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ nano message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ cat message
qwerty hello another_new_directory
this is new hello new_directory
hello another_new_directory
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git add .
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git commit -m "conflict resolved"
[another_new_directory 7b6ed0d] conflict resolved
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$
```

## 17. Stash the changes and pop them

```
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git status
On branch another_new_directory
nothing to commit, working tree clean
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ echo "modified message" > message
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git status
On branch another_new_directory
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:   message

no changes added to commit (use "git add" and/or "git commit -a")
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git add .
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git stash
Saved working directory and index state WIP on another_new_directory: 7b6ed0d conflict resolved
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git stash list
stash@{0}: WIP on another_new_directory: 7b6ed0d conflict resolved
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$ git stash pop
On branch another_new_directory
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:   message

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (ca301ca0837a9230bfdeab51d4c29b31c5aefa45)
ttn@sarthak-sharma:~/Desktop/projects/day2/another_repo$
```

## 18. 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
```

```
ttn@sarthak-sharma:~ $ sudo nano .bashrc
[sudo] password for ttn:
ttn@sarthak-sharma:~ $ cd Desktop
ttn@sarthak-sharma:Desktop $ ls
GoodLogo2.png  projects  sarthak
ttn@sarthak-sharma:Desktop $ cd projects
ttn@sarthak-sharma:projects (development)$
```