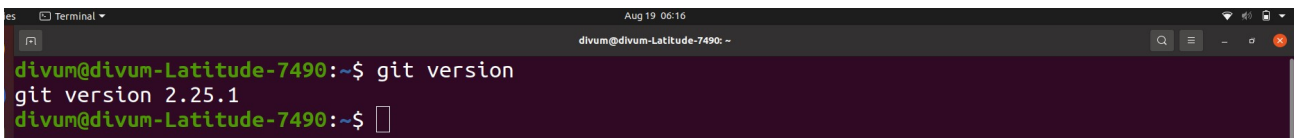


GIT Basic Commands Documentation

GIT: Global Information Tracker

Git is a DevOps tool for source code management ,an open-source version control system (VCS) used to handle small to very large projects efficiently.GIT is used to tracking changes in the source code, supporting non-linear development so that multiple developers can work together in near real-time.

\$ git --version *# To check the version of git which got installed in our system*

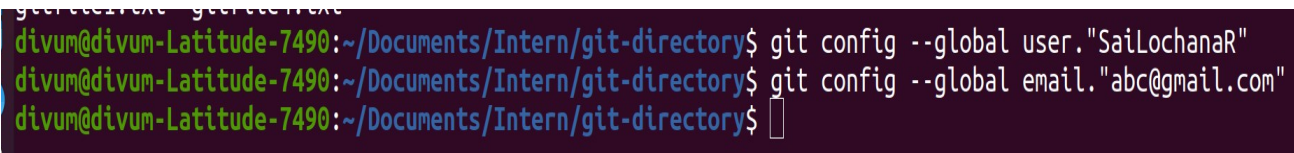
A terminal window with a dark purple background. The prompt is 'divum@divum-Latitude-7490:~\$'. The user enters 'git version' and the output is 'git version 2.25.1'.

```
divum@divum-Latitude-7490:~$ git version
git version 2.25.1
divum@divum-Latitude-7490:~$
```

\$ git help config *#This command displays information about GIT.*

\$ git config --global user.name "FIRST_NAME LAST_NAME" *#set username*

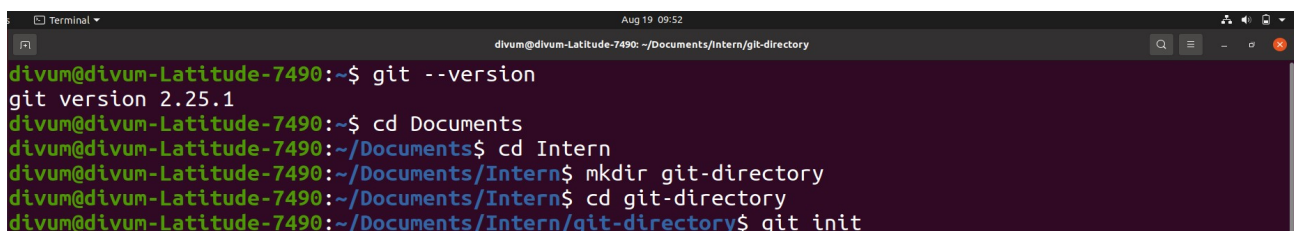
\$ git config --global user.email "MY_NAME@example.com" *#set email*

A terminal window with a dark purple background. The prompt is 'divum@divum-Latitude-7490:~/Documents/Intern/git-directory\$'. The user enters 'git config --global user."SaiLochanaR"' and the output is 'git config --global user.name SaiLochanaR'. Then the user enters 'git config --global email."abc@gmail.com"' and the output is 'git config --global user.email abc@gmail.com'.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git config --global user."SaiLochanaR"
git config --global user.name SaiLochanaR
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git config --global email."abc@gmail.com"
git config --global user.email abc@gmail.com
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$
```

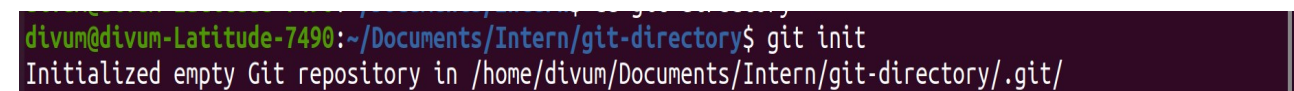
\$ mkdir dir_name *# To create directory*

\$ cd dir_name *#change directory which navigates to the current dir which we just now created.*

A terminal window with a dark purple background. The prompt is 'divum@divum-Latitude-7490:~\$'. The user enters 'git --version' and the output is 'git version 2.25.1'. Then the user enters 'cd Documents' and the prompt changes to 'divum@divum-Latitude-7490:~/Documents\$'. Then the user enters 'cd Intern' and the prompt changes to 'divum@divum-Latitude-7490:~/Documents/Intern\$'. Then the user enters 'mkdir git-directory' and the prompt changes to 'divum@divum-Latitude-7490:~/Documents/Intern\$'. Then the user enters 'cd git-directory' and the prompt changes to 'divum@divum-Latitude-7490:~/Documents/Intern/git-directory\$'. Finally, the user enters 'git init' and the output is 'Initialized empty Git repository in /home/divum/Documents/Intern/git-directory/.git/'.

```
divum@divum-Latitude-7490:~$ git --version
git version 2.25.1
divum@divum-Latitude-7490:~$ cd Documents
divum@divum-Latitude-7490:~/Documents$ cd Intern
divum@divum-Latitude-7490:~/Documents/Intern$ mkdir git-directory
divum@divum-Latitude-7490:~/Documents/Intern$ cd git-directory
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git init
Initialized empty Git repository in /home/divum/Documents/Intern/git-directory/.git/
```

\$ git init *#It initializes empty git repository in the path where our directory is located*

A terminal window with a dark purple background. The prompt is 'divum@divum-Latitude-7490:~/Documents/Intern/git-directory\$'. The user enters 'git init' and the output is 'Initialized empty Git repository in /home/divum/Documents/Intern/git-directory/.git/'.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git init
Initialized empty Git repository in /home/divum/Documents/Intern/git-directory/.git/
```

- **Repository:** A Git repository tracks and saves the history of all changes made to the files in a Git project.

\$ touch file_name.extension #It creates a file

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ touch gitfile1.txt
```

\$ git status #To check status of the directory

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    gitfile1.txt

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

- The above screenshots shows the status about which file is added and which file is yet to be added ,It tracks all the changes made in the directory. The red colored text i.e that file is not yet added in the dir.

\$ git add . #adds every file into directory

\$ git add file1_name.extension ,file2_name.extension .. #adds the specified files into directory

\$ git add file_name.extension #adds a single file into the directory

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git add .
```

\$ git commit -m"message" #The git commit command will save all staged changes, along with a brief description from the user, in a "commit" to the local repository.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git add .
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git commit -m"git file1 committed"
[master (root-commit) 165fe5f] git file1 committed
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 gitfile1.txt
```

- **\$ git status** #To check status of the directory

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git add .
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git commit -m"gitfile3 has committed"
[master bc8e780] gitfile3 has committed
3 files changed, 2 insertions(+)
create mode 100644 gitfile2.txt
create mode 100644 gitfile3.txt
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git status
On branch master
nothing to commit, working tree clean
```

\$ git diff # Diffing is a function that takes two input data sets and outputs the changes between them. *git diff* is a multi-use Git command that when executed runs a diff function on Git data sources.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git diff
diff --git a/gitfile1.txt b/gitfile1.txt
index fd74cc2..8fd126d 100644
--- a/gitfile1.txt
+++ b/gitfile1.txt
@@ -1,2 +1,3 @@
 Hey there..
```

\$ git diff --staged #show changes to files in the "staged" area.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git diff --staged
diff --git a/gitfile1.txt b/gitfile1.txt
index fd74cc2..ce957db 100644
--- a/gitfile1.txt
+++ b/gitfile1.txt
@@ -1,2 +1,4 @@
 Hey there..
```

\$ git diff --cached # It shows only those changes of tracked files which are present in staging area.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git diff --cached
diff --git a/gitfile1.txt b/gitfile1.txt
index fd74cc2..ce957db 100644
--- a/gitfile1.txt
+++ b/gitfile1.txt
@@ -1,2 +1,4 @@
 Hey there..
```

\$ git difftool # allows you to compare and edit files between revisions using common diff tools.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git difftool

Viewing (1/1): 'gitfile1.txt'
Launch 'vscode' [Y/n]? Y
```

- It opens an editor where we can observe the changes in file

\$ git rm file_name.extension #removes a file from directory.

\$ git rm --cached file_name.extension # Removes from staging area only

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git rm gitfile2.txt
rm 'gitfile2.txt'
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ ls
gitfile1.txt  gitfile3.txt
```

\$ git mv <old file name> <new file name> *#To rename and move files.*

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git mv gitfile3.txt gitfile4.txt
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ ls
gitfile1.txt  gitfile4.txt
```

\$ git log *# Full history*

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git log
commit bc8e7801f1aebb59b7f47956e1cd97795961d126 (HEAD -> master)
Author: Sailochana <sailochana@divum.in>
Date:   Fri Aug 19 10:45:35 2022 +0530

    gitfile3 has committed

commit 165fe5fe570315efd0a6176a1a7098d0dd878bb0
Author: Sailochana <sailochana@divum.in>
Date:   Fri Aug 19 09:44:35 2022 +0530

    git file1 committed
```

\$ git log --oneline *# The oneline option is used to display the output as one commit per line.*

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git log --oneline
bc8e780 (HEAD -> master) gitfile3 has committed
165fe5f git file1 committed
```

\$ git log --reverse *# Lists the commits from the oldest to the newest*

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git log --reverse
commit 165fe5fe570315efd0a6176a1a7098d0dd878bb0
Author: Sailochana <sailochana@divum.in>
Date:   Fri Aug 19 09:44:35 2022 +0530

    git file1 committed

commit bc8e7801f1aebb59b7f47956e1cd97795961d126 (HEAD -> master)
Author: Sailochana <sailochana@divum.in>
Date:   Fri Aug 19 10:45:35 2022 +0530

    gitfile3 has committed
```


\$ touch .gitignore # It tells git which files should be ignored when changes are staged (added) and committed.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ touch .gitignore
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ ls
gitfile1.txt  gitfile3.txt
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git add .
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git diff --staged
diff --git a/gitfile2.txt b/.gitignore
similarity index 100%
rename from gitfile2.txt
rename to .gitignore
diff --git a/gitfile1.txt b/gitfile1.txt
index fd74cc2..ce957db 100644
--- a/gitfile1.txt
+++ b/gitfile1.txt
@@ -1,2 +1,4 @@
 Hey there..
```

\$ git log --stat #The --stat flag causes git log to display. the files that were modified in each commit.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git log --stat
commit bc8e7801f1aebb59b7f47956e1cd97795961d126 (HEAD -> master)
Author: Sailochana <sailochana@divum.in>
Date: Fri Aug 19 10:45:35 2022 +0530

    gitfile3 has committed

gitfile1.txt | 2 ++
gitfile2.txt | 0
gitfile3.txt | 0
3 files changed, 2 insertions(+)

commit 165fe5fe570315efd0a6176a1a7098d0dd878bb0
Author: Sailochana <sailochana@divum.in>
Date: Fri Aug 19 09:44:35 2022 +0530

    git file1 committed

gitfile1.txt | 0
1 file changed, 0 insertions(+), 0 deletions(-)
```

\$ git log --patch #displays the files that have been modified.

```
divum@divum-Latitude-7490:~/Documents/Intern/git-directory$ git log --patch
commit bc8e7801f1aebb59b7f47956e1cd97795961d126 (HEAD -> master)
Author: Sailochana <sailochana@divum.in>
Date: Fri Aug 19 10:45:35 2022 +0530

    gitfile3 has committed

diff --git a/gitfile1.txt b/gitfile1.txt
index e69de29..fd74cc2 100644
--- a/gitfile1.txt
+++ b/gitfile1.txt
@@ -0,0 +1,2 @@
+Hey there..
+Its a txt file in git directory.
\ No newline at end of file
diff --git a/gitfile2.txt b/gitfile2.txt
new file mode 100644
index 0000000..e69de29
diff --git a/gitfile3.txt b/gitfile3.txt
new file mode 100644
index 0000000..e69de29
```

