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# Top 20 Git Commands With Examples

by Sahiti Kappagantula 🐙 MVB · Jul. 24, 18 · Open Source Zone · Tutorial

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In the previous blog, you got an understanding of what git is. In this blog, I will talk about the Top 20 Git Commands that you will be using frequently while you are working with Git.

Here are the Git commands which are being covered:

- **git config**
- **git init**
- **git clone**
- **git add**
- **git commit**
- **git diff**
- **git reset**
- **git status**
- **git rm**
- **git log**
- **git show**
- **git tag**
- **git branch**
- **git checkout**
- **git merge**
- **git remote**
- **git push**

- **git pull**

## How to Migrate to NoSQL Without Changing Your Whole Schema

So, let's get started!

Learn how to migrate a table-based data model to JSON documents, how to tweak your queries for relational JSON data, and how to create indexes to support fast query performance

## Git Commands

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### git config

Usage: `git config --global user.name "[name]"`

Usage: `git config --global user.email "[email address]"`

This command sets the author name and email address respectively to be used with your commits.

```
edureka@master:~$ git config --global user.name "sahitikappagantula"
edureka@master:~$ git config --global user.email "sahiti.kappagantula@edureka.co"
```

### git init

Usage: `git init [repository name]`

This command is used to start a new repository.

```
edureka@master:~$ git init /home/edureka/Documents/DEMO
Initialized empty Git repository in /home/edureka/Documents/DEMO/.git/
```

### git clone

Usage: `git clone [url]`

This command is used to obtain a repository from an existing URL.

```
edureka@master:~$ git clone https://github.com/sahitikappagantula/gitexample.git
Cloning into 'gitexample'...
remote: Counting objects: 28, done.
remote: Compressing objects: 100% (16/16), done.
remote: Total 28 (delta 5), reused 28 (delta 5), pack-reused 0
Unpacking objects: 100% (28/28), done.
```

### git add

Usage: `git add [file]`

This command adds a file to the staging area.

```
edureka@master:~/Documents/DEMO$ git add project_1
```

Usage: `git add *`

This command adds one or more to the staging area.

```
edureka@master:~/Documents/DEMO$ git add *
```

# How to Migrate to NoSQL Without git changing Your Whole Schema

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Usage: `git commit -m "[Type in the commit message]"`

Learn how to migrate a table-based data model to JSON

documents, how to tweak your queries for relational JSON

This command records or snapshots the file permanently in the version history

data, and how to create indexes to support fast query

performance

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```
edureka@master:~/Documents/DEMO$ git commit -m "First Commit"
[master (root-commit) aff3269] First Commit
9 files changed, 200 insertions(+)
create mode 100644 project_1/css/site.css
create mode 100644 project_1/fonts/segoeui.ttf
create mode 100644 project_1/img/cloneWhite.svg
create mode 100644 project_1/img/deployWhite.svg
create mode 100644 project_1/img/lightbulbWhite.svg
create mode 100644 project_1/img/stackWhite.svg
create mode 100644 project_1/img/successCloudNew.svg
create mode 100644 project_1/img/tweetThis.svg
create mode 100644 project_1/index.html
```

Usage: `git commit -a`

This command commits any files you've added with the `git add` command and also commits any files you've changed since then.

```
edureka@master:~/Documents/DEMO$ git commit -a
On branch master
nothing to commit, working tree clean
```

## git diff

Usage: `git diff`

This command shows the file differences which are not yet staged.

```
edureka@master:~/Documents/DEMO$ git diff
diff --git a/project_1/index.html b/project_1/index.html
index 8a985d9..94cfa0f 100644
--- a/project_1/index.html
+++ b/project_1/index.html
@@ -20,8 +20,8 @@
</div>
<div class="content-body">
  <div class="success-text">Success!</div>
  <div class="description line-1"> AWS DevOps Project has been successfully setup</div>
  <div class="description line-2"> Your HTML app is up and running on AWS</div>
+  <div class="description line-1"> Azure DevOps Project has been successfully setup</div>
+  <div class="description line-2"> Your HTML app is up and running on Azure</div>
  <div class="next-steps-container">
    <div class="next-steps-header">Next up</div>
    <div class="next-steps-body">
```

Usage: `git diff --staged`

This command shows the differences between the files in the staging area and the latest version present.

```
edureka@master:~/Documents/DEMO/project_1/css$ git diff --staged
diff --git a/project_1/css/site.css b/project_1/css/site.css
index 25606b6..fba307d 100644
--- a/project_1/css/site.css
+++ b/project_1/css/site.css
```

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This command shows the differences between the two branches mentioned.

```
edureka@master:~/Documents/DEMO/project_1$ git diff branch_2 branch_3
diff --git a/project_1/index.html b/project_1/index.html
index b567d94..94cfa8f 100644
--- a/project_1/index.html
+++ b/project_1/index.html
@@ -47,7 +47,7 @@
<div class="step-icon">
  
</div>
<div class="step-text"><a href="https://go.microsoft.com/fwlink/?linkid=862126">Learn more about a
ll you can do with AWS & Google Cloud Platform projects by visiting the documentation</a></div>
+<div class="step-text"><a href="https://go.microsoft.com/fwlink/?linkid=862126">Learn more about a
ll you can do with AWS & GCP projects by visiting the documentation</a></div>
</div>
</div>
```

## git reset

Usage: git reset [file]

This command unstages the file, but it preserves the file contents.

```
edureka@master:~/Documents/DEMO/project_1/css$ git reset site.css
Unstaged changes after reset:
M    project_1/css/site.css
M    project_1/index.html
```

Usage: git reset [commit]

This command undoes all the commits after the specified commit and preserves the changes locally.

```
edureka@master:~/Documents/DEMO$ git reset 09bb8e3f996eaf9a68ac5ba8d8b8fceb0e8641e7
Unstaged changes after reset:
M    project_1/css/site.css
M    project_1/index.html
```

Usage: git reset -hard [commit] This command discards all history and goes back to the specified commit.

```
edureka@master:~/Documents/DEMO$ git reset --hard b01557d80d5f53dcf0ebdde4d3f8b0d20d8b8c16
HEAD is now at b01557d Changes made in HTML file
```

## git status

Usage: git status

This command lists all the files that have to be committed.

```
edureka@master:~/Documents/DEMO$ 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)
```



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Usage: `git rm [file]`

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This command deletes the file from your working directory and stages the deletion.

```
edureka@master:~/Documents/DEMO/project_2$ git rm example.txt
rm 'project_2/example.txt'
```

## git log

Usage: `git log`

This command is used to list the version history for the current branch.

```
edureka@master:~/Documents/DEMO$ git log
commit 09bb8e3f996eaf9a68ac5ba8d8b8fceb0e8641e7 (HEAD -> master)
Author: sahitikappagantula <sahiti.kappagantula@edureka.co>
Date: Fri Jul 20 12:25:17 2018 +0530

    Changes made in HTML and CSS file

commit b01557d80d5f53dcf0ebdde4d3f8b0d20d8b8c16
Author: sahitikappagantula <sahiti.kappagantula@edureka.co>
Date: Fri Jul 20 12:13:29 2018 +0530

    Changes made in HTML file

commit aff3269a856ed251bdfd7ef87acb1716a2a9527a
Author: sahitikappagantula <sahiti.kappagantula@edureka.co>
Date: Fri Jul 20 12:07:28 2018 +0530

    First Commit
```

Usage: `git log -follow[file]`

This command lists version history for a file, including the renaming of files also.

```
edureka@master:~/Documents/DEMO$ git log --follow project_1
commit 2b4c50431c127a0ae9ede4aace0b8dd1f9fcf2c5
Author: sahitikappagantula <sahiti.kappagantula@edureka.co>
Date: Fri Jul 20 12:50:08 2018 +0530

    New file added

commit 09bb8e3f996eaf9a68ac5ba8d8b8fceb0e8641e7
Author: sahitikappagantula <sahiti.kappagantula@edureka.co>
Date: Fri Jul 20 12:25:17 2018 +0530

    Changes made in HTML and CSS file

commit b01557d80d5f53dcf0ebdde4d3f8b0d20d8b8c16
Author: sahitikappagantula <sahiti.kappagantula@edureka.co>
Date: Fri Jul 20 12:13:29 2018 +0530
```

Changes made in HTML file

commit: 5ff3269a856ed251bdf7ef87acb1716a2a9527a  
 Author: sahitikappagantula <sahiti.kappagantula@edureka.co>  
 Date: Fri Jul 20 12:07:28 2018 +0530

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## git show

Usage: git show [commit]

This command shows the metadata and content changes of the specified commit.

```
edureka@master:~/Documents/DEMO$ git show b01557d80d5f53dcf0ebdde4d3f8b0d20d8b8c16
commit b01557d80d5f53dcf0ebdde4d3f8b0d20d8b8c16
Author: sahitikappagantula <sahiti.kappagantula@edureka.co>
Date: Fri Jul 20 12:13:29 2018 +0530

Changes made in HTML file

diff --git a/project_1/index.html b/project_1/index.html
index 8a985d9..94cfa0f 100644
--- a/project_1/index.html
+++ b/project_1/index.html
@@ -20,8 +20,8 @@
     </div>
     <div class="content-body">
       <div class="success-text">Success!</div>
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       <div class="next-steps-container">
         <div class="next-steps-header">Next up</div>
         <div class="next-steps-body">
```

## git tag

Usage: git tag [commitID]

This command is used to give tags to the specified commit.

```
edureka@master:~/Documents/DEMO$ git tag b01557d80d5f53dcf0ebdde4d3f8b0d20d8b8c16
edureka@master:~/Documents/DEMO$ git tag
5ff3269a856ed251bdf7ef87acb1716a2a9527a
b01557d80d5f53dcf0ebdde4d3f8b0d20d8b8c16
```

## git branch

Usage: git branch

This command lists all the local branches in the current repository.

```
edureka@master:~/Documents/DEMO$ git branch
* master
```

Usage: git branch [branch name]

This command creates a new branch.

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```
edureka@master:~/Documents/DEMO$ git branch -d branch_1  
Deleted branch branch_1 (was be040cc).
```

## git checkout

Usage: git checkout [branch name]

This command is used to switch from one branch to another.

```
edureka@master:~/Documents/DEMO$ git checkout branch_2  
Switched to branch 'branch_2'
```

Usage: git checkout -b [branch name]

This command creates a new branch and also switches to it.

```
edureka@master:~/Documents/DEMO$ git checkout -b branch_4  
Switched to a new branch 'branch_4'
```

## git merge

Usage: git merge [branch name]

This command merges the specified branch's history into the current branch.

```
edureka@master:~/Documents/DEMO$ git merge branch_2  
Merge made by the 'recursive' strategy.  
 project_1/index.html | 2 +  
 1 file changed, 1 insertion(+), 1 deletion(-)
```

## git remote

Usage: git remote add [variable name] [Remote Server Link]

This command is used to connect your local repository to the remote server.

```
edureka@master:~/Documents/DEMO$ git remote add origin https://github.com/sahitikappagantula/GitDemo.git
```

## git push

Usage: git push [variable name] master

This command sends the committed changes of master branch to your remote repository.

```
edureka@master:~/Documents/DEMO$ git push origin master  
Username for 'https://github.com': sahitikappagantula  
Password for 'https://sahitikappagantula@github.com':
```



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Learn how to convert MySQL to JSON documents, how to tweak your queries for relational JSON data, and how to create indexes to support fast query performance

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This command sends the branch commits to your remote repository.

```
edureka@master:~/Documents/DEMO$ git push origin master
Username for 'https://github.com': sahitikappagantula
Password for 'https://sahitikappagantula@github.com':
Counting objects: 42, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (32/32), done.
Writing objects: 100% (42/42), 463.10 KiB | 3.62 MiB/s, done.
Total 42 (delta 9), reused 0 (delta 0)
remote: Resolving deltas: 100% (9/9), done.
To https://github.com/sahitikappagantula/GitDemo.git
 * [new branch]      master -> master
```

Usage: `git push -all [variable name]`

This command pushes all branches to your remote repository.

```
edureka@master:~/Documents/DEMO$ git push --all origin
Username for 'https://github.com': sahitikappagantula
Password for 'https://sahitikappagantula@github.com':
Total 0 (delta 0), reused 0 (delta 0)
To https://github.com/sahitikappagantula/GitDemo.git
 * [new branch]      branch_3 -> branch_3
 * [new branch]      branch_4 -> branch_4
```

Usage: `git push [variable name] :[branch name]`

This command deletes a branch on your remote repository.

```
edureka@master:~/Documents/DEMO$ git push origin : branch_2
Username for 'https://github.com': sahitikappagantula
Password for 'https://sahitikappagantula@github.com':
Everything up-to-date
```

## git pull

Usage: `git pull [Repository Link]`

This command fetches and merges changes on the remote server to your working directory.

```
edureka@master:~/Documents/DEMO$ git pull https://github.com/sahitikappagantula/gitlearn.git
warning: no common commits
remote: Counting objects: 13, done.
remote: Compressing objects: 100% (8/8), done.
remote: Total 13 (delta 1), reused 10 (delta 1), pack-reused 0
Unpacking objects: 100% (13/13), done.
From https://github.com/sahitikappagantula/gitlearn
 * branch      HEAD      -> FETCH_HEAD
fatal: refusing to merge unrelated histories
```

## git stash

Usage: `git stash save`



Usage: git stash save

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This command saves all the uncommitted tracked

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This command restores the most recently stashed files.

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```
edureka@master:~/Documents/DEMO/project_1$ git stash pop
On branch branch_2
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:   index.html

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (365fa2ef6ed4f1f8d7d406bd0abb205279aad0c5)
```

Usage: git stash list

This command lists all stashed changesets.

```
edureka@master:~/Documents/DEMO/project_1$ git stash list
stash@{0}: WIP on master: 5f6ba20 Merge branch 'branch_2'
```

Usage: git stash drop

This command discards the most recently stashed changeset.

```
edureka@master:~/Documents/DEMO/project_1$ git stash drop stash@{0}
Dropped stash@{0} (5e2cbcea1b37d4e5b88854964d6165e461e2309d)
```

Want to learn more about git commands? Here is a Git Tutorial to get you started. Alternatively, you can take a top-down approach and start with this DevOps Tutorial.

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