**Git Commands**

* **git --version:** Correct for checking the installed Git version.
* **git config --global user.name "<name>":** Correct for setting the global username.
* **git config --global user.email "<email>":** Correct for setting the global email.
* **git config user.name:** Correct for displaying the configured username.
* **git config user.email:** Correct for displaying the configured email.
* **git init:** Correct for initializing a new Git repository.
* **git status:** Correct for checking the status of the working directory.
* **git add <filename> or git add --all:** Correct for adding files to the staging area.
* **git commit -m "<message>":** Correct for committing changes with a message.
* **git status --short:** Correct for a brief summary of the repository status.
* **git log:** Correct for viewing the commit history.

**Branch Commands**

* **git branch:** Correct for listing branches.
* **git branch <branch1>:** Correct for creating a new branch.
* **git checkout <branch1>:** Correct for switching to a branch.
* **git merge <branch1>:** Correct for merging a branch into the current branch.
* **git branch -d <branch1>:** Correct for deleting a branch**.**
* **git branch -a:** Correct for listing all branches (local and remote).
* **git branch -r:** Correct for listing only remote branches.

**GitHub Commands**

* **git remote add origin <URL>:** Correct for adding a remote repository.
* **git push --set-upstream origin master:** Correct for pushing and setting the upstream branch.
* **git fetch origin:** Correct for fetching changes from the remote repository.
* **git branch:** Correct for listing branches (as already mentioned under "Branch Commands").
* **git log origin/master:** Correct for viewing the commit history of the remote master branch.
* **git diff origin/master:** showing differences between the local and remote master branches.
* **git merge origin/master:** Correct for merging the remote master into the current branch.
* **git pull origin**: Correct for fetching and merging changes from the remote repository.
* **git push origin:** Correct for pushing changes to the remote repository.
* **git pull:** Correct for fetching and merging changes from the default remote and branch

**Demo**

**C:\Users\kahar\Desktop\Meta SciFor\testGit>git --version**

git version 2.42.0.windows.2

**C:\Users\kahar\Desktop\Meta SciFor\testGit>git config --global user.name "Saurabh Kahar"**

**C:\Users\kahar\Desktop\Meta SciFor\testGit>git config --global user.email "kaharsaurabh2017@gmail.com"**

**C:\Users\kahar\Desktop\Meta SciFor\testGit>git config user.name**

Saurabh Kahar

**C:\Users\kahar\Desktop\Meta SciFor\testGit>git config user.email**

kaharsaurabh2017@gmail.com

**C:\Users\kahar\Desktop\Meta SciFor\testGit>mkdir myproject**

**C:\Users\kahar\Desktop\Meta SciFor\testGit>cd myproject**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git init**

Initialized empty Git repository in C:/Users/kahar/Desktop/Meta SciFor/testGit/myproject/.git/

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>dir**

Volume in drive C is Windows

Volume Serial Number is 2658-C19A

Directory of C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject

Aug 18, 2024 08:57 AM <DIR> .

Aug 18, 2024 08:54 AM <DIR> ..

Aug 18, 2024 08:58 AM 267 index.html

1 File(s) 267 bytes

2 Dir(s) 176,047,132,672 bytes free

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

No commits yet

Untracked files:

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

index.html

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

**Creating file index.html**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git add index.html**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

No commits yet

Changes to be committed:

(use "git rm --cached <file>..." to unstage)

new file: index.html

C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject> git status

On branch master

No commits yet

Changes to be committed:

(use "git rm --cached <file>..." to unstage)

new file: index.html

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: index.html

Untracked files:

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

README.md

bluestyle.css

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git add --all**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

No commits yet

Changes to be committed:

(use "git rm --cached <file>..." to unstage)

new file: README.md

new file: bluestyle.css

new file: index.html

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git commit -m "Fir**

st release of index.html, bluestyle.css, READMD.md."

[master (root-commit) 3a697c2] First release of index.html, bluestyle.css, READMD.md.

3 files changed, 24 insertions(+)

create mode 100644 README.md

create mode 100644 bluestyle.css

create mode 100644 index.html

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status --short**

M index.html

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git add index.html**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git commit -m "adding one line in index.html file"**

[master 0320a43] adding one line in index.html file

1 file changed, 2 insertions(+)

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git log**

commit 0320a43fcc20077c7e3487f81e4575b04ed14978 (HEAD -> master)

Author: Saurabh Kahar <kaharsaurabh2017@gmail.com>

Date: Sun Aug 18 09:07:13 2024 +0530

adding one line in index.html file

commit 3a697c2d58798843bf4cec370df2d12a609fe2ae

Author: Saurabh Kahar <kaharsaurabh2017@gmail.com>

Date: Sun Aug 18 09:04:38 2024 +0530

First release of index.html, bluestyle.css, READMD.md.

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch**

\* master

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch branch1**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch**

branch1

\* master

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git checkout branch1**

Switched to branch 'branch1'

C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch

\* branch1

Master

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch branch1

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: index.html

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

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git add --all**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch branch1

Changes to be committed:

(use "git restore --staged <file>..." to unstage)

modified: index.html

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git commit -m "added ta**

ble to index.html file"

[branch1 30e1d06] added table to index.html file

1 file changed, 17 insertions(+)

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git checkout master**

Switched to branch 'master'

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>dir**

Volume in drive C is Windows

Volume Serial Number is 2658-C19A

Directory of C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject

Aug 18, 2024 09:18 AM <DIR> .

Aug 18, 2024 08:54 AM <DIR> ..

Aug 18, 2024 09:01 AM 112 bluestyle.css

Aug 18, 2024 09:18 AM 374 index.html

Aug 18, 2024 09:00 AM 54 README.md

3 File(s) 540 bytes

2 Dir(s) 175,959,519,232 bytes free

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git checkout master**

Already on 'master'

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git merge branch1**

Updating 0320a43..30e1d06

Fast-forward

index.html | 17 +++++++++++++++++

1 file changed, 17 insertions(+)

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git commit -m "Merge br**

anch1 with master"

On branch master

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch -d branch1**

Deleted branch branch1 (was 30e1d06).

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch**

\* master

**Adding files to GitHub**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git remote add origin https://github.com/SaurabhKahar/testGit.git**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git push --set-upstream origin master**

Enumerating objects: 11, done.

Counting objects: 100% (11/11), done.

Delta compression using up to 12 threads

Compressing objects: 100% (11/11), done.

Writing objects: 100% (11/11), 1.25 KiB | 183.00 KiB/s, done.

Total 11 (delta 4), reused 0 (delta 0), pack-reused 0

remote: Resolving deltas: 100% (4/4), done.

To https://github.com/SaurabhKahar/testGit.git

\* [new branch] master -> master

branch 'master' set up to track 'origin/master'.

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git log**

commit 30e1d06ad2fecdaf37103b6a2c74baa4283bed07 (HEAD -> master, origin/master)

Author: Saurabh Kahar <kaharsaurabh2017@gmail.com>

Date: Sun Aug 18 09:18:00 2024 +0530

added table to index.html file

commit 0320a43fcc20077c7e3487f81e4575b04ed14978

Author: Saurabh Kahar <kaharsaurabh2017@gmail.com>

Date: Sun Aug 18 09:07:13 2024 +0530

adding one line in index.html file

commit 3a697c2d58798843bf4cec370df2d12a609fe2ae

Author: Saurabh Kahar <kaharsaurabh2017@gmail.com>

Date: Sun Aug 18 09:04:38 2024 +0530

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git fetch origin**

remote: Enumerating objects: 5, done.

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

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

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

Unpacking objects: 100% (3/3), 1.01 KiB | 64.00 KiB/s, done.

From https://github.com/SaurabhKahar/testGit

30e1d06..a6b0496 master -> origin/master

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch**

\* master

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git log origin/master**

commit a6b04965884fa3f677588b74e3772359423a294e (origin/master)

Author: Saurabh Kahar <91754929+SaurabhKahar@users.noreply.github.com>

Date: Sun Aug 18 09:29:28 2024 +0530

Update README.md

commit 30e1d06ad2fecdaf37103b6a2c74baa4283bed07 (HEAD -> master)

Author: Saurabh Kahar <kaharsaurabh2017@gmail.com>

Date: Sun Aug 18 09:18:00 2024 +0530

added table to index.html file

commit 0320a43fcc20077c7e3487f81e4575b04ed14978

Author: Saurabh Kahar <kaharsaurabh2017@gmail.com>

Date: Sun Aug 18 09:07:13 2024 +0530

adding one line in index.html file

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git diff origin/master**

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

index 690997a..7232d14 100644

--- a/README.md

+++ b/README.md

@@ -1,4 +1,2 @@

# hello-world

-Hello World repository for Git tutorial

-

-added folder to github

+Hello World repository for Git tutorial

\ No newline at end of file

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git merge origin/master**

Updating 30e1d06..a6b0496

Fast-forward

README.md | 4 +++-

1 file changed, 3 insertions(+), 1 deletion(-)

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git pull origin**

remote: Enumerating objects: 5, done.

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

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

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

Unpacking objects: 100% (3/3), 1.04 KiB | 62.00 KiB/s, done.

From https://github.com/SaurabhKahar/testGit

a6b0496..5dfb934 master -> origin/master

Updating a6b0496..5dfb934

Fast-forward

README.md | 2 ++

1 file changed, 2 insertions(+)

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git commit -a -m "updated the city name in index.html file."**

[master 9b965f8] updated the city name in index.html file.

1 file changed, 1 insertion(+), 1 deletion(-)

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

Your branch is ahead of 'origin/master' by 1 commit.

(use "git push" to publish your local commits)

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git push origin**

Enumerating objects: 5, done.

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

Delta compression using up to 12 threads

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

Writing objects: 100% (3/3), 322 bytes | 161.00 KiB/s, done.

Total 3 (delta 2), reused 0 (delta 0), pack-reused 0

remote: Resolving deltas: 100% (2/2), completed with 2 local objects.

To https://github.com/SaurabhKahar/testGit.git

5dfb934..9b965f8 master -> master

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git pull**

remote: Enumerating objects: 5, done.

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

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

remote: Total 3 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)

Unpacking objects: 100% (3/3), 965 bytes | 53.00 KiB/s, done.

From https://github.com/SaurabhKahar/testGit

\* [new branch] newbranch1 -> origin/newbranch1

Already up to date.

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch master

Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch -a**

\* master

remotes/origin/master

remotes/origin/newbranch1

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git branch -r**

origin/master

origin/newbranch1

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git checkout newbranch1**

Switched to a new branch 'newbranch1'

branch 'newbranch1' set up to track 'origin/newbranch1'.

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git pull**

Already up to date.

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git checkout -b updateReadme**

Switched to a new branch 'updateReadme'

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch updateReadme

nothing to commit, working tree clean

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git status**

On branch updateReadme

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

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

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git add README.md**

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git commit**

Aborting commit due to empty commit message.

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git commit -m "updated**

readme for github branch."

[updateReadme e00df2e] updated readme for github branch.

1 file changed, 2 insertions(+)

**C:\Users\kahar\Desktop\Meta SciFor\testGit\myproject>git push origin updateReadme**

Enumerating objects: 5, done.

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

Delta compression using up to 12 threads

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

Writing objects: 100% (3/3), 394 bytes | 197.00 KiB/s, done.

Total 3 (delta 1), reused 0 (delta 0), pack-reused 0

remote: Resolving deltas: 100% (1/1), completed with 1 local object.

remote:

remote: Create a pull request for 'updateReadme' on GitHub by visiting:

remote: https://github.com/SaurabhKahar/testGit/pull/new/updateReadme

remote:

To https://github.com/SaurabhKahar/testGit.git

\* [new branch] updateReadme -> updateReadme