What is GIT?

* GIT is a distributed version control system and source code management (SCM) system with an emphasis to handle small and large projects with speed and efficiency.

What is a repository in GIT?

* A repository contains a directory named .git, where git keeps all of its metadata for the repository. The content of the .git directory are private to git.

Git commands

* **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**
* **git stash**

**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.

**git init**

* Usage: git init [repository name]
* This command is used to start a new repository.

**git clone**

* Usage: git clone [url]
* This command is used to obtain a repository from an existing URL.

**git add**

* Usage: git add [file]
* This command adds a file to the staging area.
* Usage: git add \*
* This command adds one or more to the staging area.

**git commit**

* Usage: git commit -m “[ Type in the commit message]”
* This command records or snapshots the file permanently in the version history.
* 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.

**git diff**

* Usage: git diff
* This command shows the file differences which are not yet staged.
* Usage: git diff –staged
* This command shows the differences between the files in the staging area and the latest version present.
* Usage: git diff [first branch] [second branch]
* This command shows the differences between the two branches mentioned.

**git reset**

* Usage: git reset [file]
* This command unstages the file, but it preserves the file contents.
* Usage: git reset [commit]
* This command undoes all the commits after the specified commit and preserves the changes locally.
* Usage: git reset –hard [commit]  This command discards all history and goes back to the specified commit.

**git status**

* Usage: git status
* This command lists all the files that have to be committed.

**git rm**

* Usage: git rm [file]
* This command deletes the file from your working directory and stages the deletion.

**git log**

* Usage: git log
* This command is used to list the version history for the current branch.
* Usage: git log –follow[file]
* This command lists version history for a file, including the renaming of files also.

**git show**

* Usage: git show [commit]
* This command shows the metadata and content changes of the specified commit.

**git tag**

* Usage: git tag [commit ID]
* This command is used to give tags to the specified commit.

**git branch**

* Usage: git branch
* This command lists all the local branches in the current repository.
* Usage: git branch [branch name]
* This command creates a new branch.
* Usage: git branch -d [branch name]
* This command deletes the feature branch.

**git checkout**

* Usage: git checkout [branch name]
* This command is used to switch from one branch to another.
* Usage: git checkout -b [branch name]
* This command creates a new branch and also switches to it.

**git merge**

* Usage: git merge [branch name]
* This command merges the specified branch’s history into the current branch.

**git remote**

* Usage: git remote add [variable name] [Remote Server Link]
* This command is used to connect your local repository to the remote server.

**git push**

* Usage: git push [variable name] master
* This command sends the committed changes of master branch to your remote repository.
* Usage: git push [variable name] [branch]
* This command sends the branch commits to your remote repository.
* Usage: git push –all [variable name]
* This command pushes all branches to your remote repository.
* Usage: git push [variable name] :[branch name]
* This command deletes a branch on your remote repository.

**git pull**

* Usage: git pull [Repository Link]
* This command fetches and merges changes on the remote server to your working directory.

**git stash**

* Usage: git stash save
* This command temporarily stores all the modified tracked files.
* Usage: git stash pop
* This command restores the most recently stashed files.
* Usage: git stash list
* This command lists all stashed changesets.
* Usage: git stash drop
* This command discards the most recently stashed changeset.