Git

Version Control System - It is developed to co-ordinate the work among the developers.

Features of GIT

Open Source – GPL license

Scalable- large number of users git can easily handle

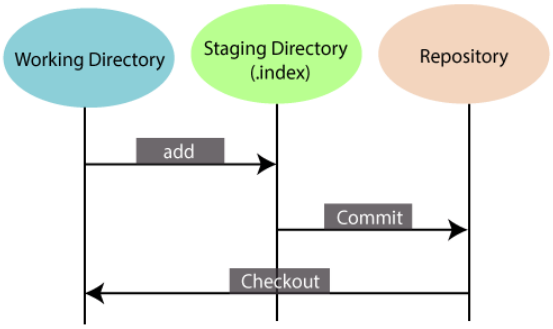
Distributed- on another machine user can easily clone

Security-Secure, uses SHA1 (Secure Hash Function) to name and identify the objects

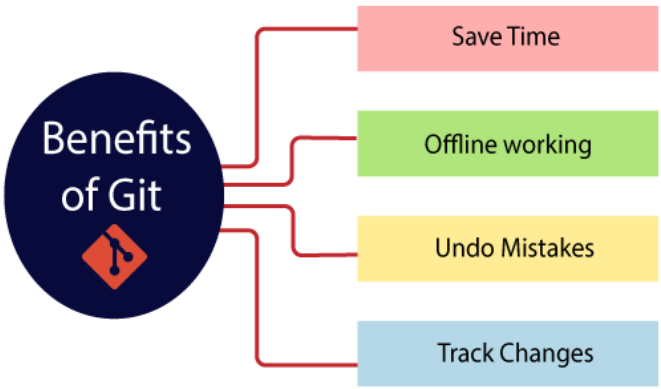
Speed-fast, most of the operation on local repo

Branching and Merging- great feature, multiple branches so that other developer work together.

Staging Area- preview of next commit.



Benefits of using GIT



Installing GIT on Windows

https://git-scm.com/downloads

download and install for this website

```
$ git --version
```

Register user with git

```
git config --global user.name "Durgesh"
git config --global user.email "learncodewithdurgesh@gmail.com"
```

user is successfully registered

```
git config --list
```

Important Terminology

Branch- repository diverges from main working directory.

Checkout- checkout is used for the act of switching between different versions of a target entity

Clone: making copy from server.

Merge – combining branches

Origin- remote repository from a project was initially cloned

Pull- receive the data from Server (GITHUB)

Push- Upload local repository to sever.

Git Ignore-use for intentionally untrack the fine

Git Diff- shows changes between commit, working tree etc.

Git Rm- for removing files.

Etc.

Let start

Create a local repository:

```
$ git init
```

Make copy

```
$ git clone
```

Adding file to staging area

```
$ git add file //single file
```

```
$ git add -A //all files
```

See the status of file

```
$ git status
```

Committing the change

```
$ git commit -m “comment”
```

Record the file permanently

Track the changes that have not been staged

```
$git diff
```

Track the changes that have staged but not committed

```
$git diff –-staged
```

Track the changes after committing a file:

```
$git diff HEAD
```

Show the objects

```
$ git show
```

Commit History

Display the most recent commits and status of the head.

```
$git log
$git log -p -2
```

Output as one commit per line

```
$git log –-oneline
```

Display the files that have been modified

```
$git log –-stat
```

Display the modification on each line of a file:

```
$ git blame <file name>
```

Ignoring Files

Create. gitignore file

Branching

List a branch

```
$git branch –-list
```

Create Branch

```
$git branch [name]
```

Delete Branch

```
$git branch -d [name]
```

Renaming the branch

```
$git branch -m [old name] [new name]
```

Git checkout

Switch between branch in a repository

```
$git checkout [branch name]
```

Create new branch and switch to it

```
$git checkout -b [branch name]
```

Merging

Merge the branches
```
$git merge [branch name]
```

Working on Remote
```
$git remote -v
```
Add remote to repository
```
$git remote add [name] [remote url]
```

Remove from
Delete the file
```
$git rm [file]
```

Only remove file from staging area
```
$git rm --cached [file]
```

GITHUB
Repository Hosting Service

Remote Repository:

Git remote add name url

Git remote -v

Git push -u origin master

Git remote set-url origin url