**Local Respository:**

* Local repositories are nothing but we can do in our local sytem.
* And also we can push or pull our code to remote location

**Example :Git**

* In git we can do different types of operations to push our code to remote location.
* If you are trying to push code to remote location first we must install git in our local system then only we can push
* Commands for pushing an file or document to your remote location

Step 1: First you need to initialize git

* git init

Step 2: To add a file

* git add filename ( which file you want to push give that filename)
* git add . ( . means takes all files from the directory or folder)

Step 3: Commiting our file

* git commit -m “first commit”( save our file )

Step 4: Next, you need to mention your remote branch name i.e., main or master

* git branch -M main
* git branch -M master

Step 4: Add your remote location url

* git remote origin add repo-url

Step 5: To push code to remote location

* git push -u origin branchname(main or master which you are using)

**Central Repository:**

* Central repositories are nothing but to store our code in one place.

**Example:Github**

* In github we have public and private repositories.
* Public repository is everyone can see and commit.
* Private respository is accessible to the person whom you are selected only those persons can do changes.

Commands from github(Central repository) to git(local repository)

Step 1: cloning data to our local repository

* git clone github-repository-url

Step 2: if there are any changes made in our repo we can pull by using the below command

* git pull ( it will asks for username and password )

**Sourcecode Management:**

* Manage our code with different versions we use SCM.
* Check modifications in our repositories on code base level.

**Examples:**

Local Repositores: git

Central Repositories: github,bitbucket

**LifeCycle of Git:**

We have three phases

* Workspace
* Staging area
* Local repository
* **WorkSpace:**
* Creating new files or modifying existing files those files will be in workspace area.
* **Local Repository:**
* If we are pushing any files to central repository those files must be present in local repository then only we can push.
* **Staging area:**
* It shows the author name and commit id and email id.
* File modified and when file was committed and so on.

**Command:**

* To check whether the file is available or not type below command.

git status(checks the status of the file).

* Adding files from workspace to staging area type below command.
* Check whether file is added or not

git add filename or git add .

git status

* Adding files from staging area to local repository.

git commit -m “provide any msg” filename

Note: here -m specifies message.

* Checking files are added or not in local repository type below command.

git log

* Below command displays the files you committed using commitid.

git show cid

* Getting file from staging area to workspace.

git reset HEAD filename(specified file).

git reset HEAD \*(All files).

* Getting file from local repository to staging area.

git reset –soft cid(previous commitid)

* Getting file from local repositoy to workspace.

git reset –mixed cid

* Pushing files from local repository to central repository.

git push <remote-url> <branch-name>