What is version control:

* *Makes* ***save point*** *(S1, S2, S3) that saves your project* or we can undo our line of code that we written accidently (Ctrl-Z)
* Provides total development freedom.
* Example git, subversion and perforce.
* Version control system watch the changes in the code or track it, so that we can undo our changes.
* **Git is a version control tool or a software that will track the changes in code base.**
* **Git-hub is website or service that hosts git repositories.**
* Through git-hub we can also collaborate over the internet.
* Repository is a folder but it has additional capability that git will watch or track the modification in that folder.

**Creating a Git Repo:**

.git – **meta data of git repository** that will track by git version control.

$ cd – change directory

$ ls – it will list current directories of folders.

$ git init – it will convert normal folder into git repository.

$ ls -al – it will list all pointers of file

$ git status - **The git status command displays the state of the working directory and the staging area.** It lets you see which changes have been staged, which haven't, and which files aren't being tracked by Git.

The git status command is used to display the **current status of the local repository**. The information displayed by the git status command includes the name of the branch, the current status of the branch, staged/unstaged changes, etc.

**"git diff" will show us all current local changes in our working copy that are unstaged.** If you want to see only changes that have already been added to the Staging Area, "git diff --staged" is your command of choice.

**Life cycle of a change:**

1. Working Directory – temporary changes that we do in our file (git add)
2. Staging index – the changes that we about to commit. (git commit)
3. Repository (Committed) – the changes we want to finalised.

**Review a Repo History:**

Commit=save point.

$ git log – it will show all the commit that you have made (from latest to old). To exist enter q.

$ git log -2 – it will show latest 2 commits that you have made.

$ git log -p – it will show all the commits name and id and also see the changes what you have made in the file.

$ git log --oneline – it will show all the commits name and id only in an optimised manner.

$ git log --stat - You only want to see those file which was modified and number of lines which are modified.

but in this you can’t see the actual content which were modified.

$ git show (commit id) – you want see particular changes in those commits.

**Doing your first commit:**

$ mkdir (folder name) – to create a folder.

$ git add – add file to a repo to track.

$ git commit -m “message to shown” :

Recent commit will be pointed by HEAD. And stored in a head (Recent working commit)

If you want to discard the changes that we written by accidently then

$ git restore (file name)

If you want that git would not track some files like some documentation (Docx)