Project Day-1

- Without Version Control System
 - → No collaboration between the team.
 - → Once saved all changes are permanent.
 - → Since there is no backup maintained.
- All these problems can be solved with the help of Version Control System.
 - o Best Version Control Systems are : GitHub,GitLab,etc.

WorkFlow oF Git

1. **Remote Repository:** All the changes that Collaborators make just uploaded to Remote repository.

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- Local Repository: Users access all the files to the local Repository and then make changes. Once they have a set of changes, push changes to the remote repository.
- 3. **Working Copy:** it is a User Active Directory, the user modifies the existing file and creates the new file.
- 4. **Staging Area:** All the modified files commit a place. Once you make a changes then commit the changes before committing you just put them into a staging area. It is a place between working copy and remote repository.

The Commands that perform these Actions

CLONE: create copy of existing remote repository inside the local repository.

COMMIT: commits all the files in the staging area to the local repository.

PUSH: pushes all the changes made in the local repository to the remote repository.

FETCH: collects the changes made in the remote repository and copies them to the local

Repository.

PULL: Similar to fetch.

Need to Generate SSH Key

You Can connect github without using supplying username and personal access Token at each visit.

Steps to be followed:

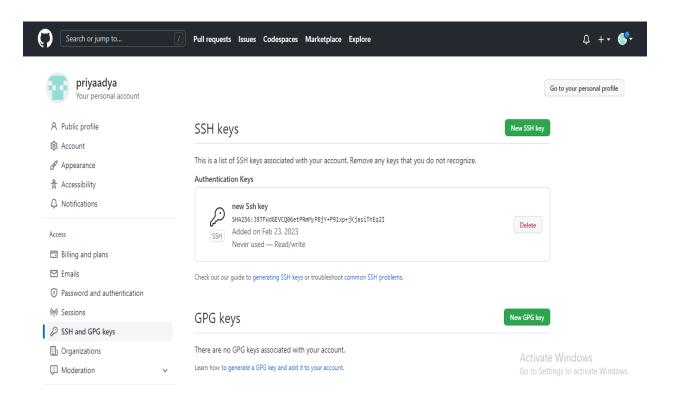
- → Go to github account
- → select settings
- → Select ssh key and GPG keys
- → Next select new ssh key
- → Search in google Generating ssh key
- → \$ ssh-keygen -t ed25519 -C "your_email@example.com" take this text

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- → Open git bash at anywhere
- → Paste that text you copied
- → Then enter enter
- → One key will be generated and it showing one location
 - MINGW64:/c/Users/User/Pictures

```
User@DESKTOP-MOBIJV6 MINGW64 ~/Pictures (master)
$ ssh-keygen -t ed25519 -C "priyankakankanawadi423@gmail.com"
Generating public/private ed25519 key pair.
Enter file in which to save the key (/c/Users/User/.ssh/id_ed25519):
/c/Users/User/.ssh/id_ed25519 already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Passphrases do not match. Try again.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Passphrases do not match. Try again.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/User/.ssh/id_ed25519
Your public key has been saved in /c/Users/User/.ssh/id_ed25519.pub
The key fingerprint is:
SHA256:J8TFWdGEVCQ06etPRmMyP8jY+P91xp+jKjasiThEq2I priyankakankanawadi423@gmail.
com
The key's randomart image is:
+--[ED25519 256]--+
          ..=BO+
        . .0 00.
        5 . 0.+
        o =.B o
         . 0.+ = =
 .E .. . .= ..o +=
0 ... 00 0.0++0+
 ----[SHA256]----+
Jser@DESKTOP-MOBIJV6 MINGW64 ~/Pictures (master)
```

- → Go to the specified location and copy that generated key
- → Go to github select new ssh key
- → Title : anything you want Key: paste that copied key
- → Click on add SSH key
- → Confirm git access password



Cloning from remote to local repository using ssh key

- → Go to github account from which repository you want take that one copy ssh key from code
- → Git Bash anywhere you want
- → Use clone and paste that copied code

```
User@DESKTOP-MOBIJV6 MINGW64 /e
$ git clone git@github.com:priyaadya/Demo.git
Cloning into 'Demo'...
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (8/8), done.
remote: Total 9 (delta 1), reused 8 (delta 0), pack-reused 0
Receiving objects: 100% (9/9), done.
Resolving deltas: 100% (1/1), done.

User@DESKTOP-MOBIJV6 MINGW64 /e
$ git status
fatal: not a git repository (or any of the parent directories): .git

User@DESKTOP-MOBIJV6 MINGW64 /e
$ 0
```

- → After cloning you will get a remote repository in your local repository. If you want to add any new file from the local repository create a new file and git bash from where the file is located.
- → Check git status
- → Git add -A for adding files
- → Git commit -m "message"
- → Git push -u origin master