1. What is GIT and why it is use?

* GIT is a version control system(VCS), let say an example, when we don’t use to version control system , what will happen let say we have a computer and we are writing code on that computer the code file are saved in locally on that computer hard disk, but what will happen if your hard disk crashes or your computer have some problem everything will lost, second example is if multiple people want to contribute that code but they can’t do it, if it is one computer, one more example let say if you are fixing some bug, but it doesn’t look good, so you want go to back previous version of your code but if there is no way to version control system, that’s why version control is very important and we can solve all the problem by VCS.
* Let say first example is hard disk failure, in version control system the code is saved on cloud, cloud is basically some a remote machine which is much more stable than your local computer, and it will guarantee that you will never lose your code from cloud, so you used to your code on the cloud and you sink your file to local computer that way if you have hardwire problem or some computer breakdown, you always get your code back from the cloud, or multiple people contribute the same code, may be they are working on same function they can push it and change it, they don’t need to worry about that, or let say you have a file1 and version1 and you write some things and saved it, but that file you need to bring some change again you make change and saved it but different version like version2,

That’s how version control system is working.

1. What is GIT & GITHUB?

* GIT is a version control system
* GIT HUB is a website that allows you to store your code on the cloud, it is not just a cloud storage but a full version control system powered by GIT

1. What is pull request in GITHUB & why GITHUB has became so popular?

* On GITHUB, owner can share his code with other persons
* Other person can look at the code and he can make change a bug, and then send a request to owner to pull/merge his code changes into owners repository
* This request is called a pull request
* Let say if I give an example Harry has a repository for Node.JS which is open source project, and other person TOM, let say TOM is looks at Node.JS for and then he realized is that he need to fix some bug, this is the open source project and he can copy into his repository and pull the project into his local computer, and he can make change as a version, after that he can push the project his private repository, and after that he can make a pull request asking to person Harry, after send the new request owner Harry will see a change like different version, so pull request allows between the owner and code contributor by comment and accept the request directly, so this promote collaboration and pull request is one of the reason that’s why GITHUB is become very popular .

1. What is GIT Bash?

* GIT Bash is for windows and it is not just bash complied for windows, but also it’s a package that contain bash which is a command-line shell and others utilities

1. What is cloning?

* Copying the repository from your GITHUB to local computer,

1. What is the command of clone?

* git clone <https://github.com/git/git.git>

1. How to check the project is cloned or not?

* ls

1. How to go directory?

* cd and directory name

1. What does mean git status?

* When we do this, it’s shown that we have any change or not in our repository,

1. What is git add or how to add file from local computer to repository?

* It will add file to staging area or define area, so when we will write git commit that time file will add into repository.

1. What does mean git commit –m?

* git commit –m is a message for owner of git repo and other code contributor whatever we will add file into our repository
* one important things before write git push the commit will not pushed into remote cloud

1. What is git log?

* git log will show you the log off your all history so when you will write that command, you can see all commit id, author, and date

1. What is git push?

* git push will committed the changes to remote server that means it will add my code into repository

1. What is git difftool?

* git difftool shows difference between your local changes and previous version of the file changes

1. What does mean red and green color in github?

* Red mean remove the code and green mean add the code

1. What is branch in github or what is the benefit of branch in github?

* A branch in git is just a pointer or directory to commit your project
* Branch allow us to preserve the main code into master branch, we can make a copy by creating new branch, and then work within that new branch, we can do work in parallel development code in both branches , we can make experiment, we can make test staff, once finished the work, then we can merge the code in one file and back into master repository

1. What is master or default branch?

* Master is a default branch in git

1. What is merging and how to merge?

* Merging is the process combining code changes from different branches
* Before merging we have to active into master branch whatever branch name was before
* git merge then branch name

1. How to get the list of branches and create a new branch?

* git branch
* git branch and branch name whatever u give the branch name

1. How to active a new branch in git?

* git checkout and branch name

1. How to fix some common error like when we will push the code in branch?

* git push and branch name
* fatal error
* git push
* again error
* git pull
* git push
* after push code will be updated into master branch
* but we will not see new branch name, for present the new branch into repository
* git checkout and branch name, and again
* git push
* Again we will see fatal error, and a message [git push – set-upstream origin and branch name]
* Copy that message and paste and press enter
* Then new branch will be appear into repository

1. How to create a dummy branch and delete branch from repository?

* git checkout –b dummy[dummy mean it a branch name]
* then we have to do active master by git checkout master
* git branch –d and branch name

1. How to remove line of code from file in github?

* Git checkout – file name

1. How to undo uncommitted change in github?

* Git checkout -- .

1. How to undo committed change in github?

* Git revert and particular commit id
* Then it will show a message and you need to press [q]

1. How to reset in github?

* Git reset --hard and commit id

1. What is head and what is the command of head?

* Head is a reference to the most recent commit in the branch in most of the cases

1. How to see who is head in branch?

* Git show head
* Git show particular commit reference

1. What is difftool in github?

* This command show different between two commit
* Git difftoll older commit id and new commit id

1. What is the common error in github and what reason and how to fix the error?

* One of the common error, when we will push project into new github repository
* Because the remote contain to work we don’t have in locally, it is big complicated but root of the problem is sometime we initialized githut repo with the readme, that actually added in committed file of to github repo, which is not a file my local repo knows about, so when you try the push your text fiel to github, git is confused why your local repo doesn’t have a readme fiel, git correctly guessed is that you are probably trying to synk it to repo, but we can manually fix the problem, you need to simply update your local repo, to do this we will use a command, which is fetches the readme file from github repo and merge inti local repo
* Git pull origin master
* Then again write
* Git push origin master

1. Also we can avoid that error other two ways given bellow?

* First way would be the follow the exact way without don’t check the box with readme file, that way your initialize github repo will be empty, first time we won’t get any error
* Second approach is cloning approach, this approach is very familiar, in this approach you must create a repo with initialize with readme file, then you clone the repo to your local machine using git clone with the repo url, cloning download automatically to your local repository and store in your sub directory of your working directory, then we will add and commit and push file

1. How to check local repository and remote repository?

* Git remote -v