Question : 29/03/2022

What is Git

Git is a mature, actively Maintained open source Software.

The raw performance characteristics of Git are very strong when compared to many alternatives. Committing new changes, branching, Merging and comparing past versions are all optimized for performance.

Github is a Web-based hosting and collaboration platform used by professional programmers to develop new software.

It is a advanced platform.

Commands

1) Git Clone

It is a command for downloading existing source code from a remote repository.

git clone <https://name-of-the-repo>

2) Git branch

Branches are highly important in the git world. By using Branches, several developers are able to work in parallel on same project. Simultaneously.

git branch <branch-name>

This command will create a branch locally.

Viewing branches :-

git branch or git branch --list

Deleting branch :-

git branch -d <branch-name>

3) Git checkout

Used to switching from one branch to another. We can also use it for checking out files and commits.

git checkout <name-of-your-branch>

4) Git Status

The Git Status command gives us all the necessary information about the current branch.

git status

5) Git add.

When we create, modify or delete a file, these changes will happen in our local and won't be included in the next commit.

We need to use the git add command to include the changes of a files into our next commit.

To add a single file:

```
git add <file>
```

To add everything at once:

```
git add -A.
```

6) Git commit

The most used command.

Git commit is like setting a checkpoint in the development process which you can go back to later if needed.

```
Git commit -m "commit message"
```

7) Git push.

After committing your changes, the next thing you want to do is send your changes to the remote server. Git push uploads your commits to the remote repository.

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

8) Git pull

The git pull command is used to get updates from the remote repo.

```
git pull <remote>
```

9) Git revert

Used to undo the changes that we've made.

There is the safer way that we can undo our commits is by using git revert.

```
git revert 3321844
```

10) Git Config

It is a convenience function that is used to set Git configuration values on a global or local project level.

```
git config user.email
```

11) Git init

Creates a new Git repository.

```
git init
git init <directory>
```

Installing Github

```
$ sudo apt update
$ sudo apt install git
$ git --version
  = git version 2.25.1
```

2) Functions

Function is a command in linux which is used to create functions or Methods.

Using function keyword a function can be declared by using keyword function before the name of the function. Different statements can be seperated by a semicolon or a new line

Function is a reusable block of code. Often we put repeated code in a function and call that function from various places. Library is a collection of functions. We can define commonly used function in a library and other scripts can use them without duplicating the code.

Calling function :- $ My-func

Creating function :-

```
function_name () {
    list of commands
}
```

Pass parameters to function :-

You can define a function that will accept parameters while calling the function. These parameters would be represented by $1, $2 and so on.

Returning value from function

If you execute an exit command from inside a function, its effects is not only to terminate execution of the function but also the shell program that called the function.

return code.

Nested function:-

One of the more interesting feature of function is that they can call themselves and also other function. A function that calls itself is know as a recursive function.