**Day 8 : Git and Github**

**Git** is a distributed version control system (DVCS) that multiple developers and other contributors can use to work on a project. It provides a way to work with one or more local branches and then push them to a remote repository.

**GitHub** is a cloud platform that uses Git as its core technology. GitHub simplifies the process of collaborating on projects and provides a website, more command-line tools, and overall flow that developers and users can use to work together. GitHub act s as the remote repository mentioned earlier.

**git add**

git add is the command you use to tell Git to start keeping track of changes in certain files.

The technical term is staging these changes.

**git commit**

After you've staged some changes for commit, you can save your work to a snapshot by invoking the git commit command.

**git log**

The git log command allows you to see information about previous commits. Each commit has a message attached to it (a commit message saved.

**git help**

You've already tried out the git help command, but it's worth reminding you about. Use this command to easily get information about all the commands you've learned so far, and more.

**Exercises:**

**Create a new repository on GitHub and clone it to your local machine.**

Repo : Day8-sample-task

**ubuntu@DevOps**:**~**$ git clone https://github.com/ds-kamran/day8-sample-task.git

Cloning into 'day8-sample-task'...

warning: You appear to have cloned an empty repository.

**Make some changes to a file in the repository and commit them to the repository using Git.**

**ubuntu@DevOps**:**~**$ cd day8-sample-task/

**ubuntu@DevOps**:**~/day8-sample-task**$ vi index.txt

**ubuntu@DevOps**:**~/day8-sample-task**$ ls

index.txt

**ubuntu@DevOps**:**~/day8-sample-task**$ git add .

**ubuntu@DevOps**:**~/day8-sample-task**$ git commit -m "An empty index.txt file has been created" index.txt

[main (root-commit) 9b61c01] An empty index.txt file has been created

1 file changed, 1 insertion(+)

create mode 100644 index.txt

**Push the changes back to the repository on GitHub.**

**Set the connection of local repo with remote repo**git remote set-url origin https://<token\_number>@github.com/ds-kamran/day8-sample-task.git

**Move to the master origin:**

Git checkout -b master

git remote push origin

**Example Commands:**

ds\_kamranarif [ ~ ]$ git --version

git version 2.33.8

ds\_kamranarif [ ~ ]$ git config --global user.name "ds\*\*\*\*\*\*\*\*"

ds\_kamranarif [ ~ ]$ git config --global user.email "ds.-----------@gmail.com"ds\_kamranarif [ ~ ]$

ds\_kamranarif [ ~ ]$ git config --list

http.sslcapath=/etc/ssl/certs

user.name=ds-kamran

user.email=ds.kamranarif@gmail.com

ds\_kamranarif [ ~ ]$ mkdir Cats # make a directory

ds\_kamranarif [ ~ ]$ cd Cats/

ds\_kamranarif [ ~/Cats ]$ git init --initial-branch=main # initialize the new directory and name the branch as main

Initialized empty Git repository in /home/ds\_kamranarif/Cats/.git/

ds\_kamranarif [ ~/Cats ]$

ds\_kamranarif [ ~/Cats ]$ git status

On branch main

No commits yet

nothing to commit (create/copy files and use "git add" to track)

ds\_kamranarif [ ~/Cats ]$ ls -a

. .. .git

ds\_kamranarif [ ~/Cats ]$