Day 1 :

26/08/2023

SDLC : Software Development Life cycle

Water fall model

Requirement gathering          6 months

Plan

Design

Coding / testing

Build the project        development mode

Deploy the project        production mode

Provide the service

Increment model

V model

Agile model

Sprint : time duration to develop small module 1 or 2 week.        Login page, feedback page

Dashboard

DevOps :        Development and Operation

Development people develop the application using any language like java, python, etc

Operation team interact with customer or end user client and they are responsible to maintain the application.

Admin

Developer

Tester

Admin

Database designer

Architecture      etc

Git and git hub

Maven and Gradle (Java development)

CI and CD tool using Jenkin (Continuous Integration and Continuous deployment or delivery)

Selenium tool (testing )

Ansible tool (monitoring tool as well as configuration tool)

Docker container

Nagios tool

Kubernetes

Git and github

Sub version control which help to record the application flow.

Dev1                login page

Dev2                java or python code                merge the code

Dev3                database

Unix commands

ls : this command display all files and folder present in current directory

pwd : print working directory : it show current path of terminal or command prompt.

mkdir foldername: this command is use to create the folder

cd foldername   : move inside a folder

cd ..                : come outside a folder or move to parent directory of current folder

rmdir foldername : to remove folder

touch filename          : to create empty file

vi filename             : open the file in vi mode

                        once open hit i key to move inside a vi editor mode

                        write the contents

esc             : to come out from editor mode to normal mode

:wq             : write and q quite (save and exit)

cat filename    : it is use to read contents from a file

                cat means concatenate

<mark>Git</mark>  : Git is version control system which help to track or record changes done in the application or project or app.

Git also known a distributed sub version control.

First create the folder

Then create the file and write the contents

<mark>git --version</mark>

<mark>git init</mark>         it is use to make local folder as git repository

                init command create .git folder insider that current directory

<mark>ls -a</mark>          : it display all files and folder with hidden folder.

<mark>git status</mark> :      this command is use to check the current status of your repository

<mark>git add filename</mark>        : to add files or folder normal local folder to staging area.

Or

<mark>git add .</mark>        : this command is use to add all files and folder present in

                Current directory.

<mark>git commit -m "message"</mark>        : this command use to pass the task from staging area to

                local repository.

git config --global user.email "akash300383@gmail.com"

git config --global user.name "akash"

steps

1. Create folder with any name ie Demo
2. Then create the file with any name ie test and write the contents insider that file.
3. Then open the terminal inside that folder please use pwd
4. git init
5. git status
6. git add .
7. git status
8. git commit -m "message"
9. first time we need to set config details as emailed and name
10. git config --global user.email "akash300383@gmail.com"
11. git config --global user.name "akash"
12. Then please commit using command as git commit -m "done"
13. git status

git branch : branch is like a pointer which hold more than one commit details.

By default git provide default branch. Default branch name may be master or main.

If we want to check branch details present in local repository

git branch

command to create user defined branch

git branch branchname             this command is use to create user defined branch

git checkout branchname           this command is use to switch from one branch

                                  to another branch.

Current branch is master or any other branch

git merge branchname          this command add all task in current branch

==git branch -D branchname==        this command is use to remove the branch

Demo.java

int a;                akash branch

int b;                Vikash branch

Remote repository help us to share the code between two or more than one tabme.

Git hub

Git lab

Bitbucket

Aws

Azure

Private cloud etc

==git hub :== it is a type of remote repository provided by micro soft organization.

We want to connect local repository with remote repository

1. Token base authentication
2. SSH Client
   More

To connect local repository with remote repository

git remote add origin URL

git remote add origin https://github.com/Kaleakash/test_rep.git

git remote add origin https://token@github.com/Kaleakash/test_rep.git

git push -u origin main (it is use to push the code)

how to resolve the conflict

1. first create Repo2 folder

2. then open terminal inside that folder

3. create sample file

4. add some data $1^{st}$, $2^{nd}$

5. using git init make folder as repository

6. git add .

7. git commit -m "done changes in master branch"

8. create the branch

9. git branch akash

10. git checkout akash

11. in akash branch we will add $3^{rd}$ and $4^{th}$ message.

12. Then git add .

13. Then git commit -m "in akash branch done some changes in sample file"

14. Create another branch with name as Vikash

15. git checkout -b Vikash (it will create the branch and switch to that branch)

16. in sample file in Vikash we will add the message as 5th and 6th.

17. Then git add .

18. Git commit -m "done change in sample file by Vikash branch"

19. Please move the master branch ie git chechout master.

20. Please verify current branch using command as git branch

21. Then in master branch merge the code from akash branch

22. Git merge akash

23. Using cat sample read the data from sample file

24. Out must be 1st, 2nd, 3rd, 4th

25.


Download or clone the repository
    1. Create the folder with any name ie devopstrainig In VM
    2. Then open the terminal
    3. git clone URL
    4. git clone
       https://github.com/Kaleakash/devops_aug_2023_trainig_batch.git
    5. use ls command to see downloaded folder
    6. using cd command please move inside that folder.
    7. cd devops_aug_2023_trainig_batch
    8. ls command to see the more than one file.


if we do any changes in local repository
we need to add, commit and push

git add .
git commit -m "done some changes in file"
git push -u origin main

    1. open the terminal inside a repository folder
    2. make sure .git folder present using command verify ls -a
    3. git pull

       git clone URL : it help to download fresh repository in local machine

       git pull : it will pull new updated from remote to local repository