****Linux Assignment Tasks and Commands****

1. ****Create a new directory(folder):**mkdir assignments**
2. ****Create/Open text file using vi:**vi file1.txt**
3. ****Copy file from src to dest:**cp file1.txt ./src/**
4. ****Copy folder from src to dest:**cp -r src dest**
5. ****Rename file and folder name:**mv file2.txt file3.txt**
6. ****Delete a single file:**rm file1.txt**
7. ****Delete a whole folder:**rm -r dest**
8. ****Write a command to Change the working directory:**cd devops**
9. ****How to Move to the Parent Folder:**cd ..**
10. ****List contents of a folder:**ls**
11. ****List contents of a folder including hidden files:**ls -a**
12. ****Write a command to check the Print current directory:**pwd**
13. ****How to Open a manual for a command:**man grep**
14. ****Create a new directory with the name COL100:**mkdir COL100**
15. ****Change the current directory to COL100:**cd COL100**
16. ****In this directory, create another folder, called Lab0:**mkdir Lab0**
17. ****Change the current directory to Lab0:**   
    cd Lab0**
18. ****Create a text file me.txt using vi and copy the contents of me.txt to mycopy.txt using cp:**vi me.txt  
    cp me.txt mycopy.txt**
19. ****Rename mycopy.txt as stillme.txt using mv:**mv mycopy.txt stillme.txt**
20. ****Check if the file has been renamed by listing the contents using ls:** ls**
21. ****Copy the directory hierarchy COL100 to COL100 copy using cp -r:** cp -r COL100 COL100\_copy**
22. ****Check the contents of the folder COL100copy by going to the folder (cd) and then listing the contents(ls):**cd COL100\_copy  
    ls**
23. ****Go out of the folder (cd …) and delete the whole directory COL100copy:**   
    cd .. && rm -r COL100\_copy**
24. ****Write a command to count no. of lines, no of words, no. of characters in a file:**wc file.txt**
25. ****Write a command to search a pattern in a file:**grep -i [N]\* file.txt**
26. ****Write a command to display the running process:**ps**
27. ****Write a command to stop the process forcefully:**kill -9 3784**
28. ****How you are going to stop the process gracefully:**kill 64202**
29. ****How you’re going to check which process is taking more memory:** top**
30. ****Write a command to see the available ports on the system and listening(used) ports:**netstat -tuln  
    or netstat -a**
31. ****Command is used to check if the remote server port is open or not:**nc -zv google.com 80**

****Git****

****Assignment – 1****

****Clone our fork of the project locally. (Any github project)  
Create a descriptive topic branch.  
Make our change to the code.  
Check that the change is good.  
Commit our change to the topic branch.  
Push our new topic branch back up to our GitHub fork.  
Commands performed:****

**git init  
git clone** <https://github.com/20Vinay23/devopsAssignments.git>**git branch  
git branch -r  
git status  
cd devopsAssignments/  
git checkout -b assignment1  
cd ..  
cp -r COL100 file3.txt src devopsAssignments/  
cd devopsAssignments/  
git status  
git add .  
git status  
git commit -m "Added linux file to branch"  
git push origin assignment1**

****Assignment – 2****

****Add the original repository as a remote named upstream.  
Fetch the newest work from that remote.  
Merge the main branch of that repository into your topic branch.  
Fix the conflict that occurred.  
Push back up to the same topic branch.****

****Commands performed:****

**git remote add upstream** <https://github.com/20Vinay23/devopsAssignments.git>**git remote  
git fetch upstream  
git pull origin assignment1  
git status  
vi file3.txt  
git status  
git add file3.txt   
git commit -m "file updated"  
git checkout assignment1  
git merge main  
git status  
git push upstream assignment1**

****Assignment – 3****

****Fork the project. (Any github project)  
Create a topic branch from the master.  
Make some commits to improve the project.  
Push this branch to your GitHub project.  
Open a Pull Request on GitHub.  
Discuss, and optionally continue committing.  
The project owner merges or closes the Pull Request.  
Sync the updated master back to your fork.****

****Commands performed:****

**git clone** <https://github.com/20Vinay23/PythonForked.git> **git branch  
cd PythonForked/  
git status  
git checkout -b topic  
nano beta.py  
git status  
git add .  
git commit -m "Changd beta.py file"  
git push origin topic  
git checkout master  
git pull origin topic  
git push origin master**

****Assignment – 4****

****Adding files to the repository  
Create a folder with all the necessary files to be pushed into the repository.  
Open a terminal from VSCode, go to the created folder, and perform the following steps:  
git init  
git status  
git add .  
git status  
git commit -m “Any message”  
Enter the two statements from the notepad(git remote add and git push)****

****Refresh the repository page to see the pushed files****

****Commands performed:****

**Step1: VsCode -> Opened vs code terminal using ctrl+`  
Step2: Performed the below steps.  
git status  
git add .  
git commit -m "Commit from vsCode terminal"  
git remote  
git branch  
git checkout assignment1  
git status  
git merge main  
git status  
git push origin assignment1  
  
  
  
**Shell Scripts****

**Write a script to check if the given string is a file or a directory or a link or if it doesn’t exist.  
Filename on git: **checkFileExt.sh.****

**Write a script to find the number of characters in each line of a file.  
Filename on git: **readCharacter.sh****

**Write a script to display file names if they contain the pattern and display the respective message whether the file contains a pattern or not.  
Filename on Git: **searchTextInFile.sh****

**Write a script to find the sum of elements in an array.  
Filename on Git: **arraySum.sh****

**Write a script to monitor the usage of the server memory, if the server memory reaches its threshold value (70%). It will send an email to the concerned person.  
Filename on git: **monitorMemory.sh****

**Write a script to monitor the services, if the services stop automatically it has to send a mail notification to the concerned team  
Filename on git: **monitorService.sh****

**Write a shell script to rename all text files into HTML files.  
Filename on Git: **convertTxtToHtml.sh****

**Write a script to display the content of the file in reverse.  
Filename on Git: **displayReverse.sh****