Devops Assignment

Q1: Describe the usage of the git stash command by using an example and also state the process by giving the screenshot of all the commands written in git bash

Stash:

Stash enables us to switch branches without committing the current branch.

Stash uses the stack data structure.

Stash's meaning is "store something safely in a hidden place".

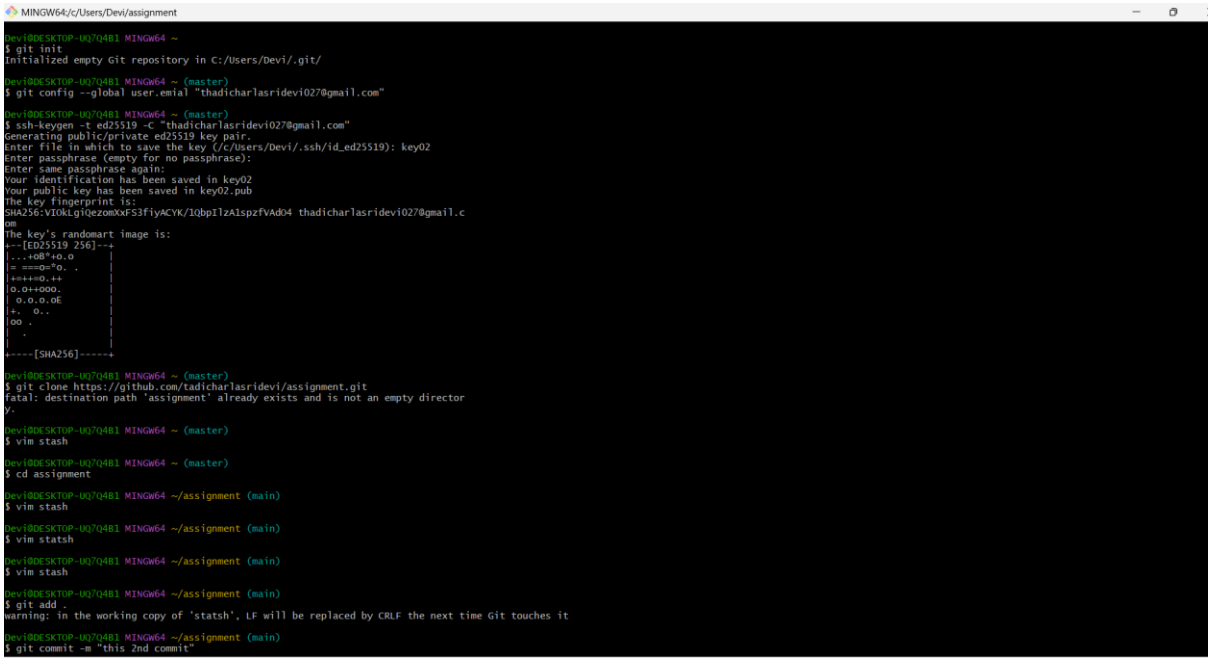
For example:

we are working in current project but without making the commits of current project we want to switch the branch. For that scenario stash allows us to switch the branch without committing the current branch.

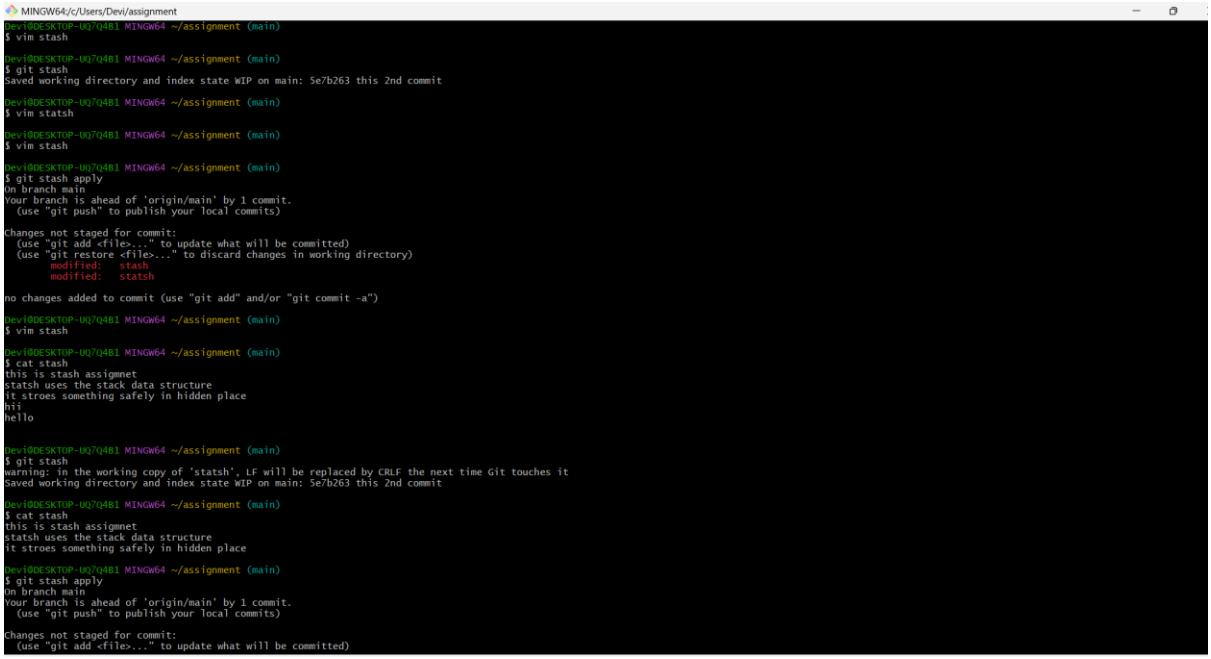
- git stash list: it is used to check the stored stashes
- git stash apply: You can re-apply the changes that you just stashed by using the git stash command.
- git stash pop: Git allows the user to re-apply the previous commits by using git stash pop command. The popping option removes the changes from stash and applies them to your working file.
- git stash drop: The git stash drop command is used to delete a stash from the queue. it deletes the most recent stash

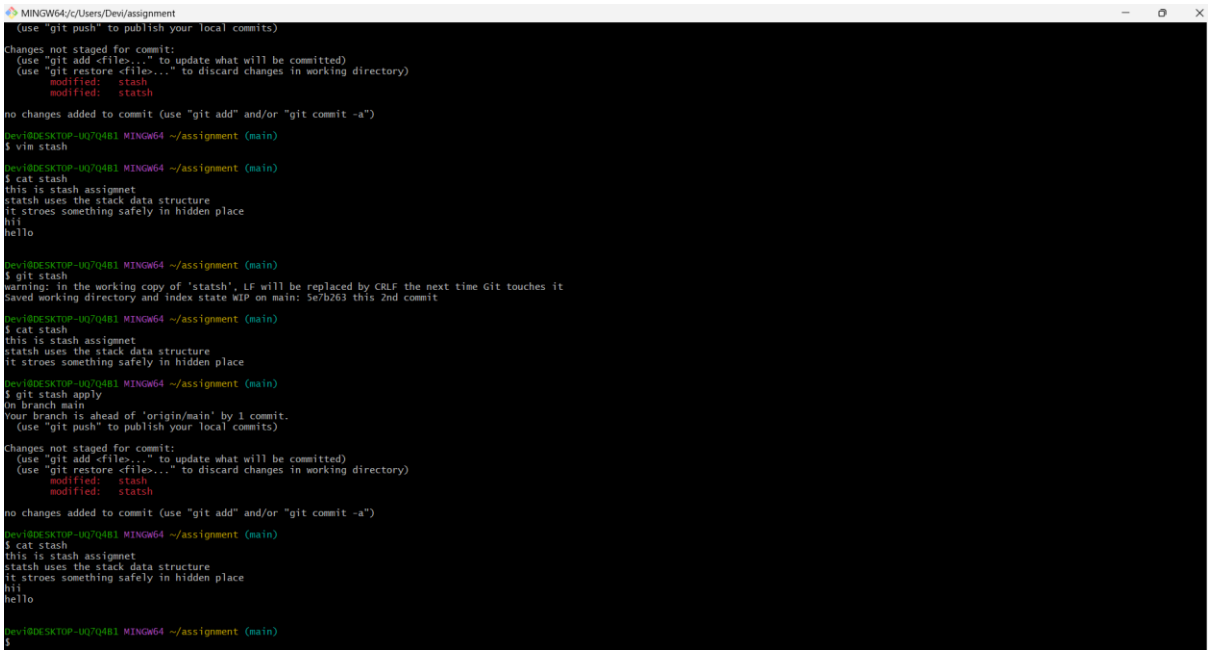
steps to use git stash:

step 1) create a file and add the file into staging area and committed file.



Step 2) After do some modifications in file and check the status of a file. It shows an error when the file in modified stage and try to switch the branch.





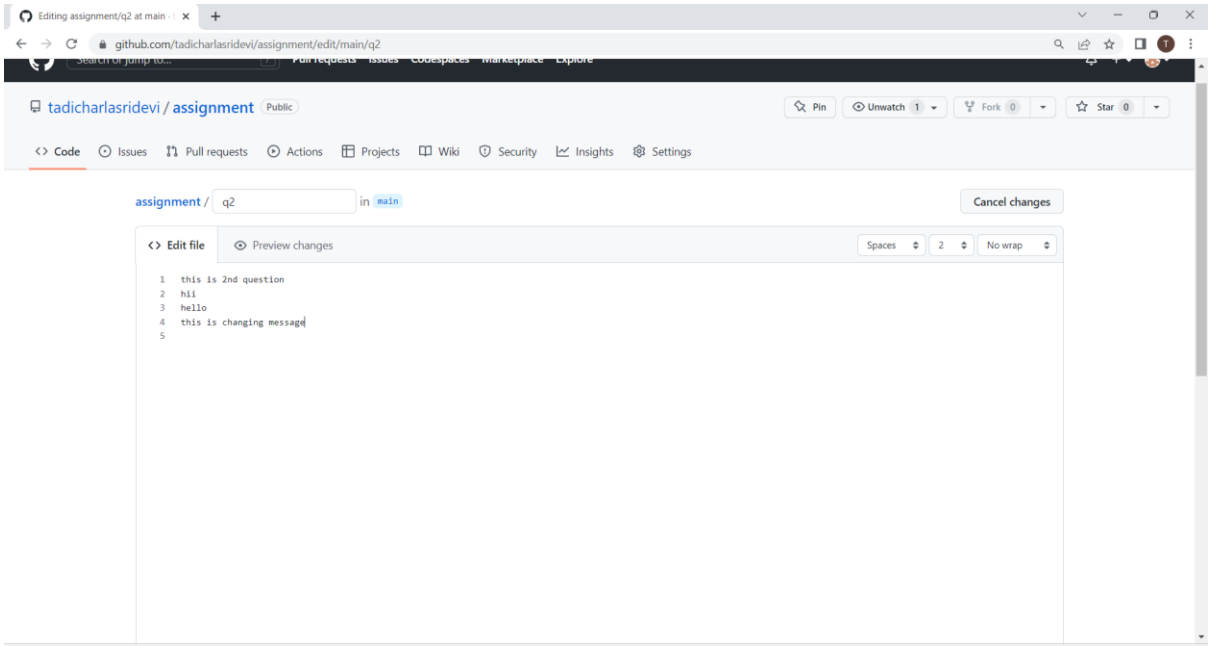
Q2. By using a sample example of your choice, use the git fetch command and also use the git merge command and describe the whole process through a screenshot with all the commands and their output in git bash.

GIT FETCH:

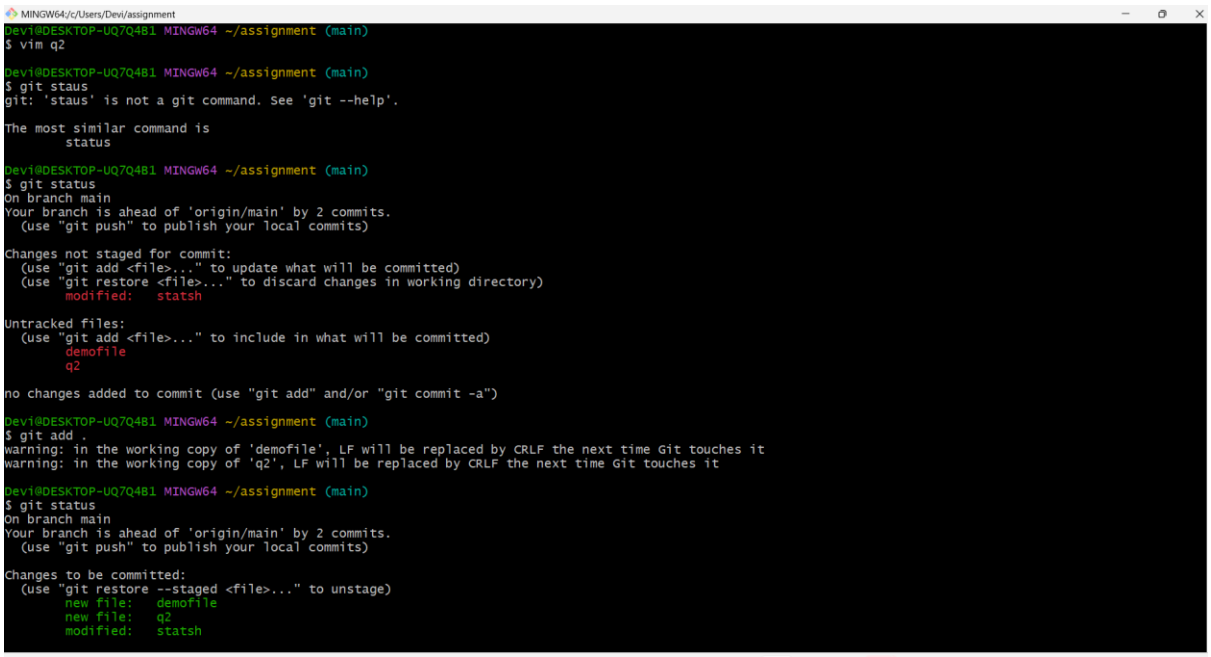
The git fetch command is used to get the updates that pushed to our remote branches to local machines. This command fetches branches and history from a specific remote repository. It only updates the remote tracking branches.

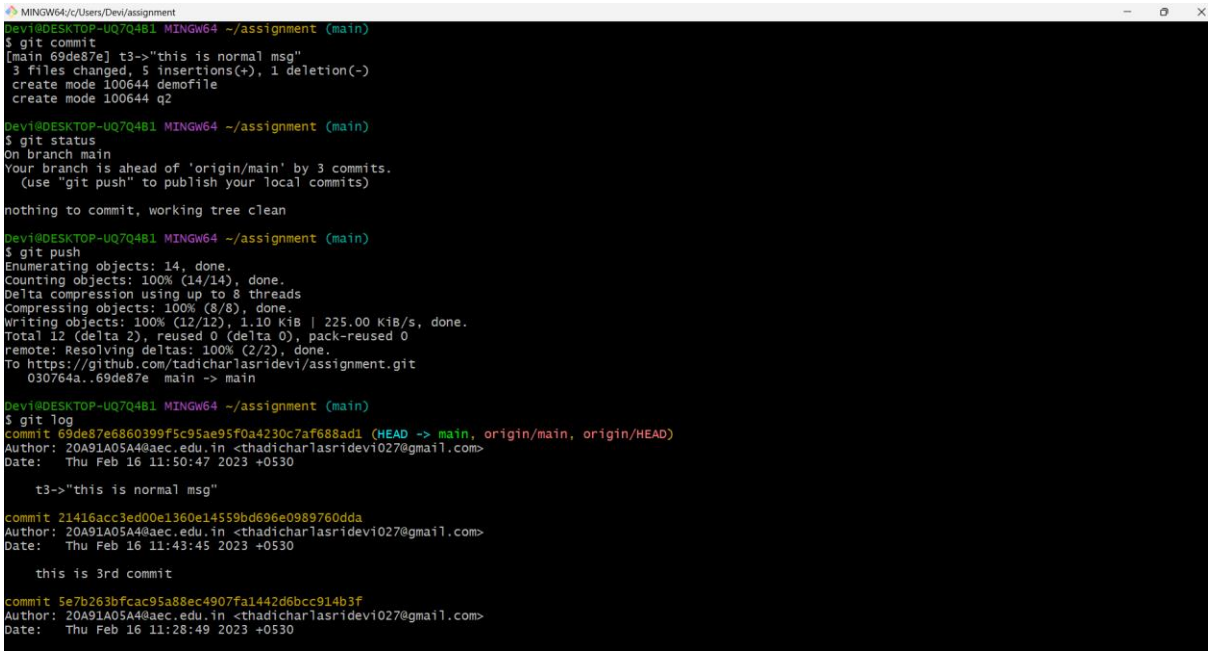
Steps for git fetch:

Step1) create a repository and check the status of repository by using the git stash.



Step2) While remote repository has two commits but local repository has only one commit. I have used git log command to see the previous commits.

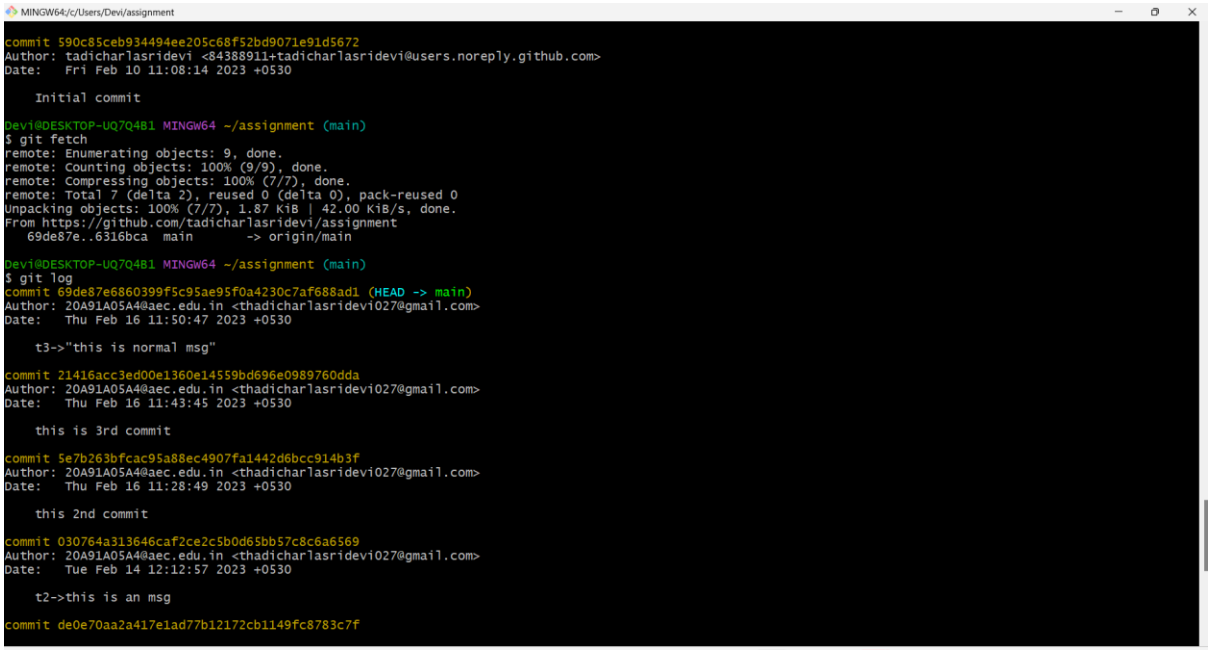




Step 3) After using the git fetch command some commits are done in remote repository.

Step 4) Then merge the changes into local repository by using the command git merge origin/main.

Step 5) To see the commits in local repository use the git log command.



Q3. State the difference between git fetch and git pull by doing a practical example in your git bash and attach a screenshot of all the processes.

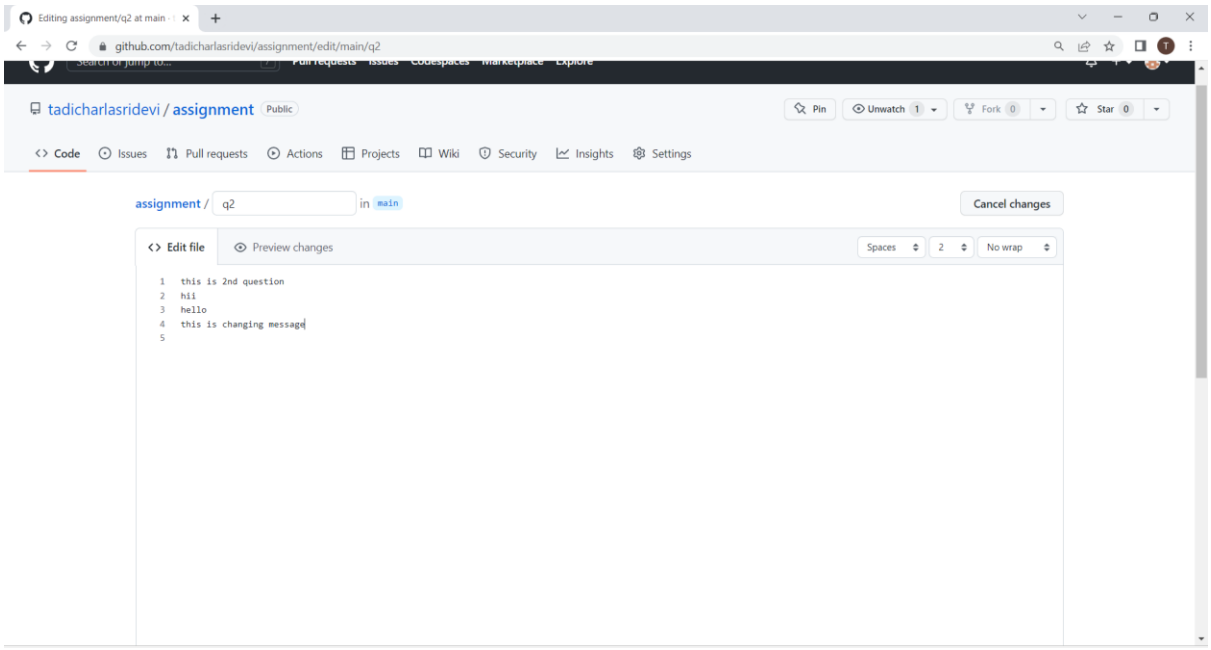
GIT FETCH:

The git fetch command is used to get the updates that have been pushed to our remote branches to local machines.

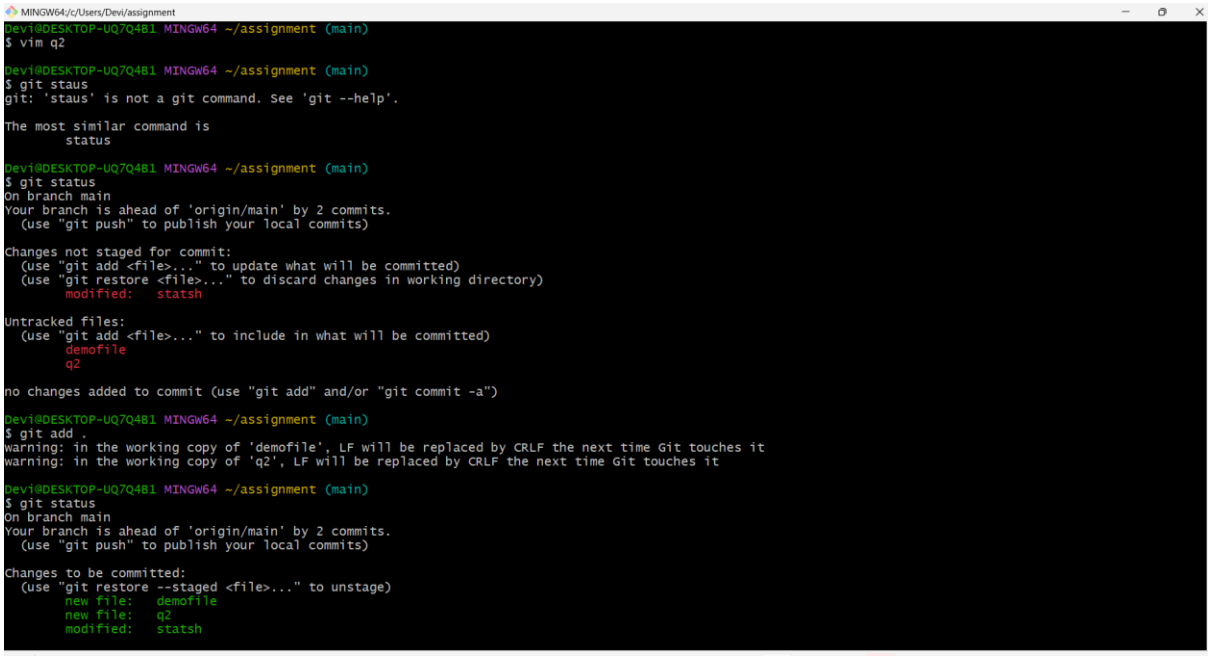
GIT PULL:
Git pull=Git fetch +Git merge
Git Pull brings the copy of the remote directory changes into the local repository

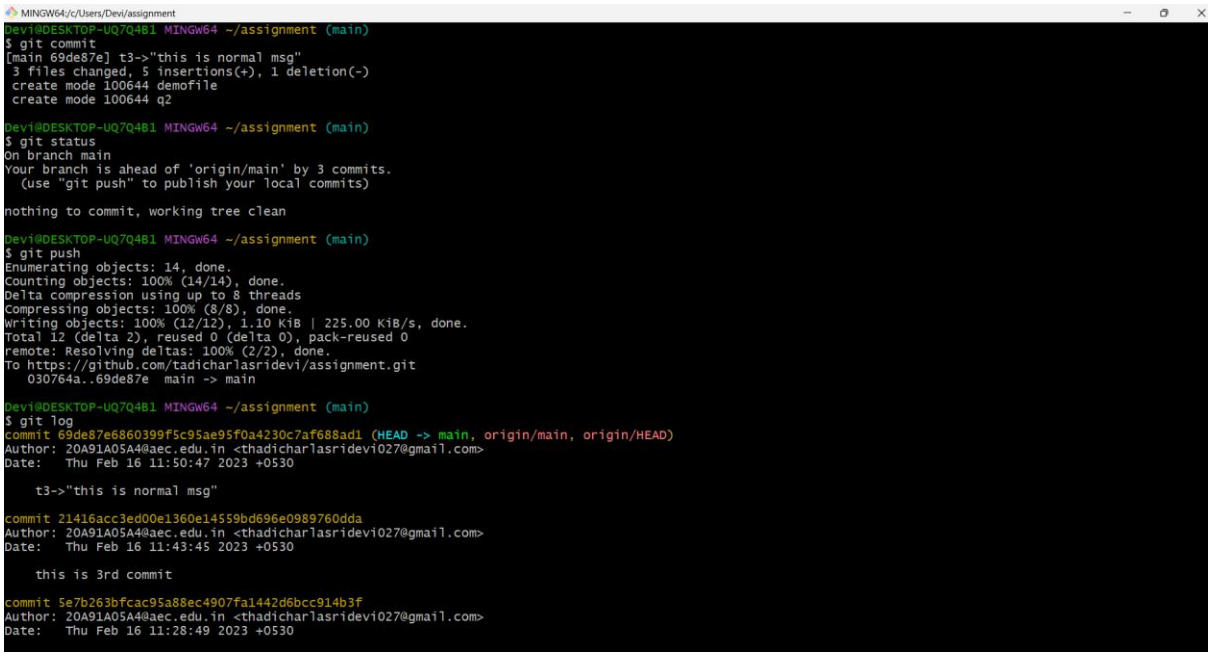
Steps for git fetch:

Step1) create a repository and check the status of repository by using the git stash.



Step2) While remote repository has two commits but local repository has only one commit. I have used git log command to see the previous commits.

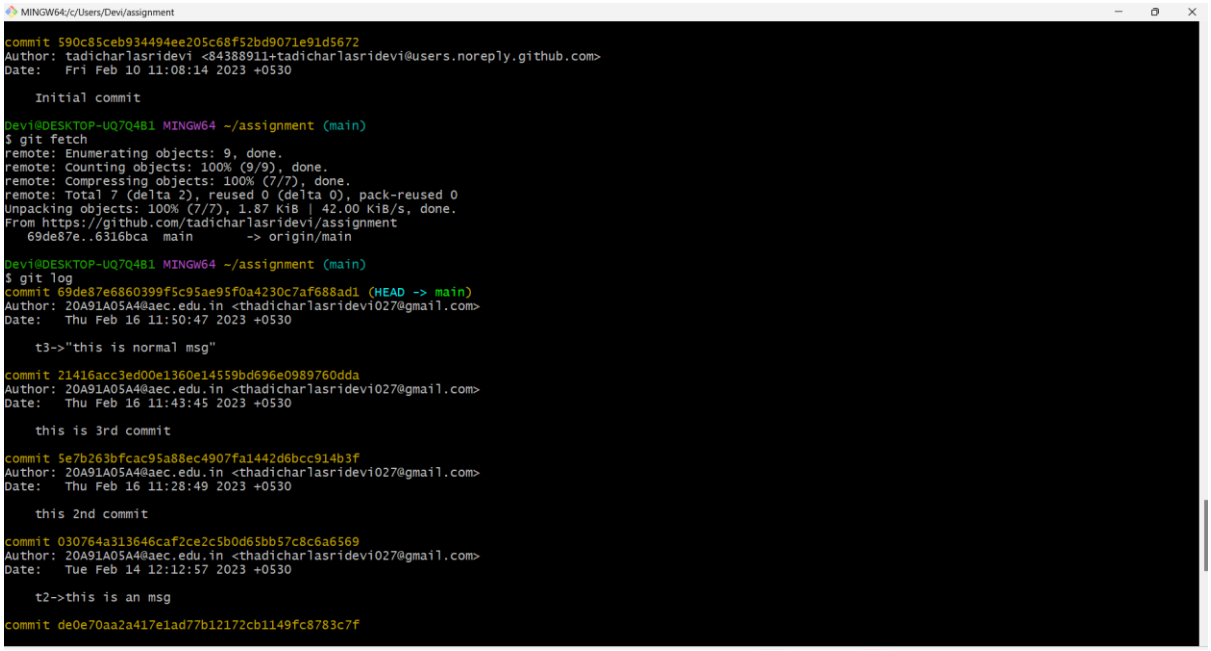




Step 3) After using the git fetch command some commits are done in remote repository.

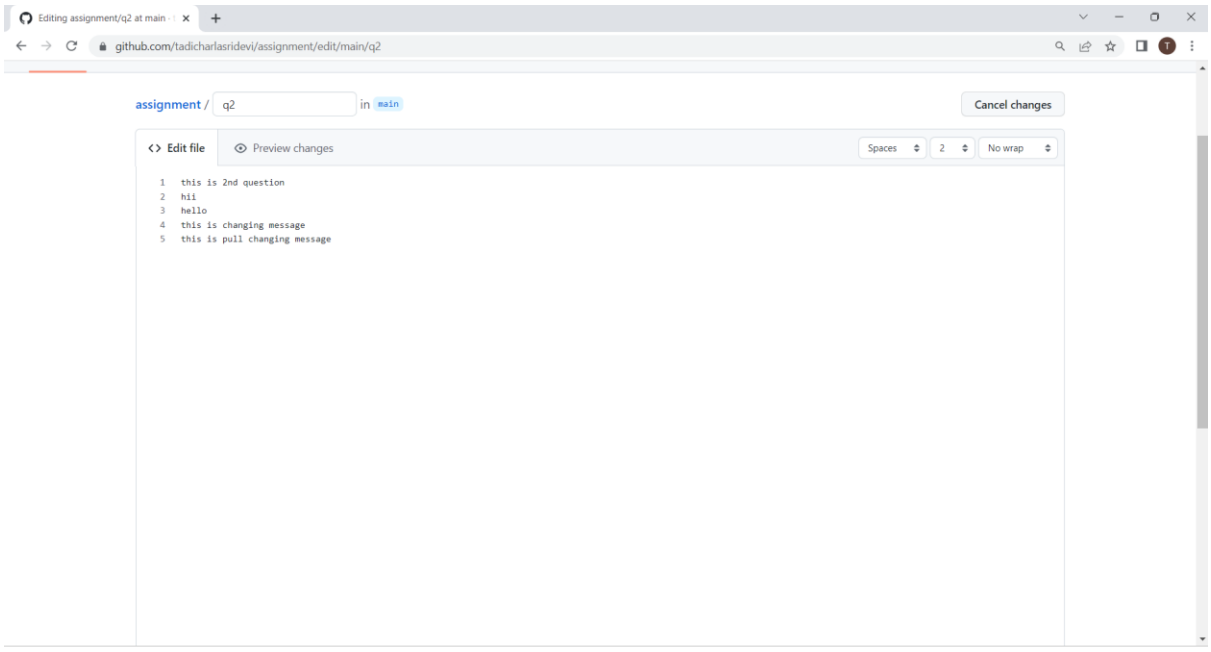
Step 4) Then merge the changes into local repository by using the command git merge origin/main.

Step 5) To see the commits in local repository use the git log command.



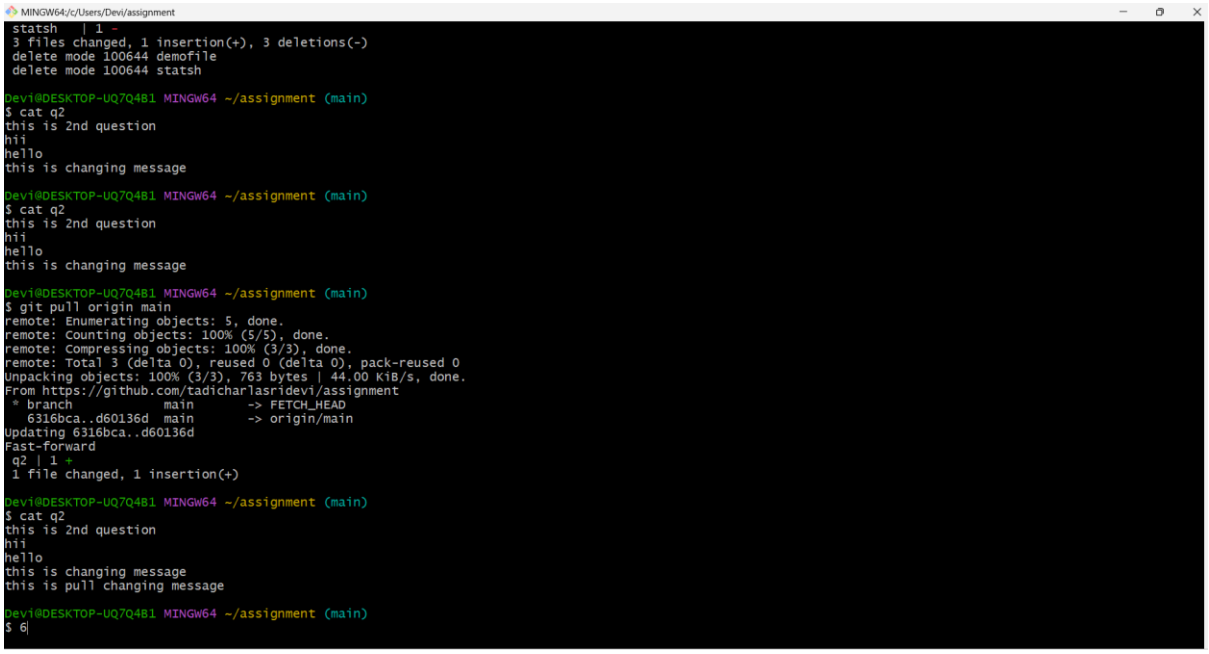
Steps for Git pull:

Step1)) create a repository and check the status of repository by using the git stash.



Step 2) Now the file have 3 commits in remote repository and 2 commits in local repository. To directly fetch and merge remote repository with the local repository.

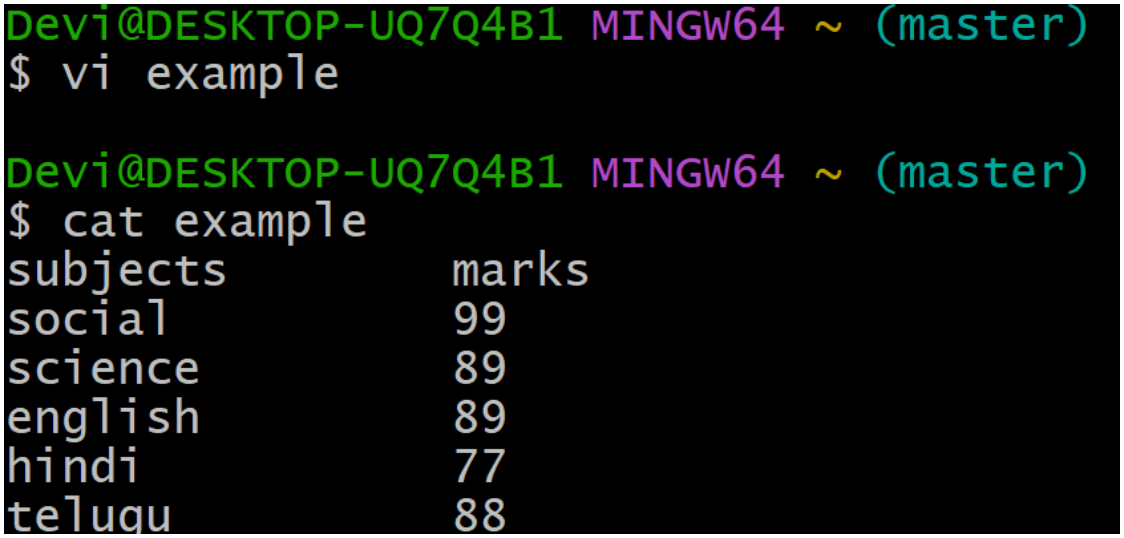
Step 3) git pull command helps to fetch and merge the remote repository.



Q4. Try to find out about the awk command and use it while reading a file created by yourself. Also, make a bash script file and try to find out the prime number from the range 1 to 20.

AWK

The Awk is a powerful scripting language used for text scripting. It searches and replaces the texts and sorts, validates, and indexes the database. It performs various actions on a file like searching a specified text and more.



To print the file we can give the following command.

```
Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$ awk '{print}' example
subjects        marks
social          99
science         89
english         89
hindi           77
telugu          88


Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$ awk '/99/ {print}' example
social          99

Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$ awk '{print $1,$2}' example
subjects marks
social 99
science 89
```

To get the record having the 99 marks the below command is used.

```
Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$ awk '/99/ {print}' example
social          99

Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$ awk '{print $1,$2}' example
subjects marks
social 99
science 89
english 89
hindi 77
telugu 88


Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$ awk '{print $1,$NF}' example
subjects marks
social 99
science 89
english 89
hindi 77
telugu 88
```

Steps to follow bash scripting:

Step1) create the file with extension .sh.

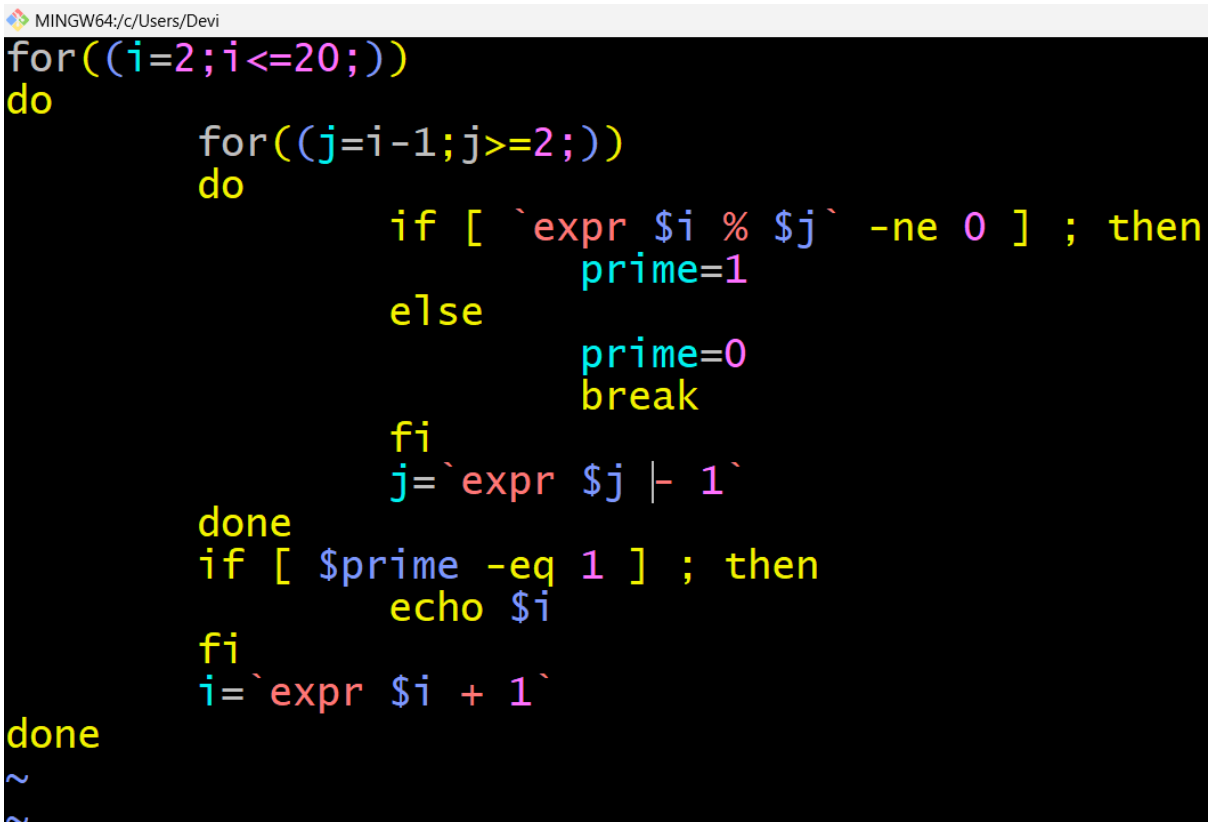
Step 2) open the shell and write the script.

Step 3) we can give the permissions of read, write and execute.

Step 4) save the code and run the code.

To run the run a code

Syntax: ./filename.

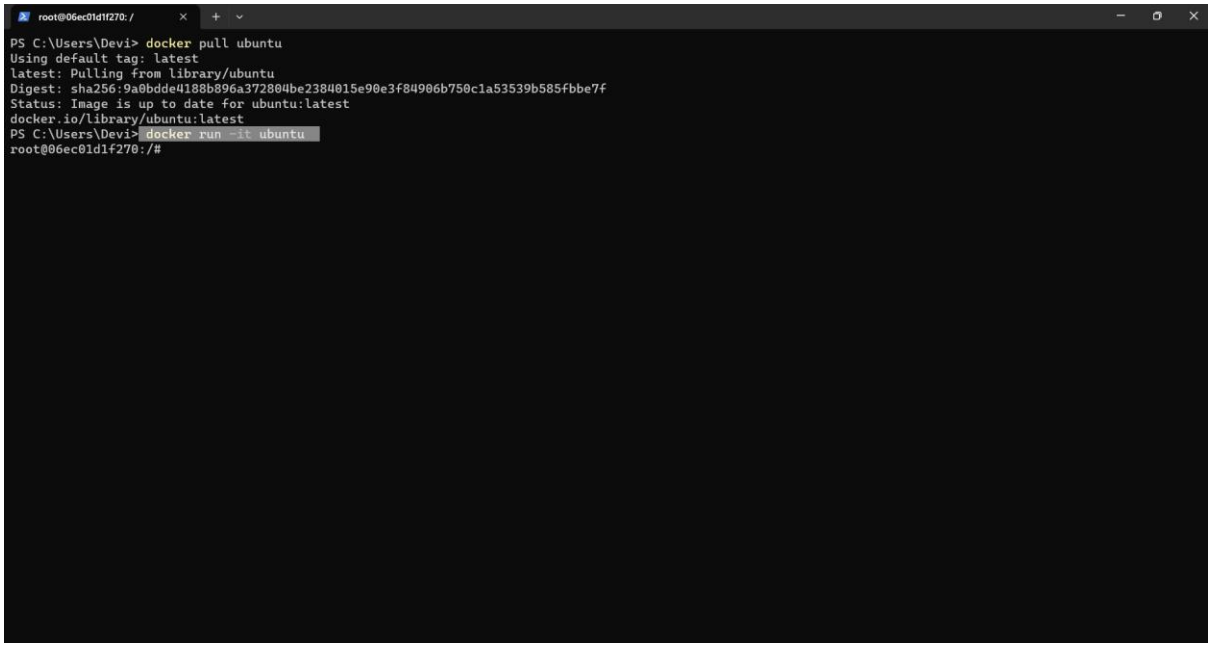


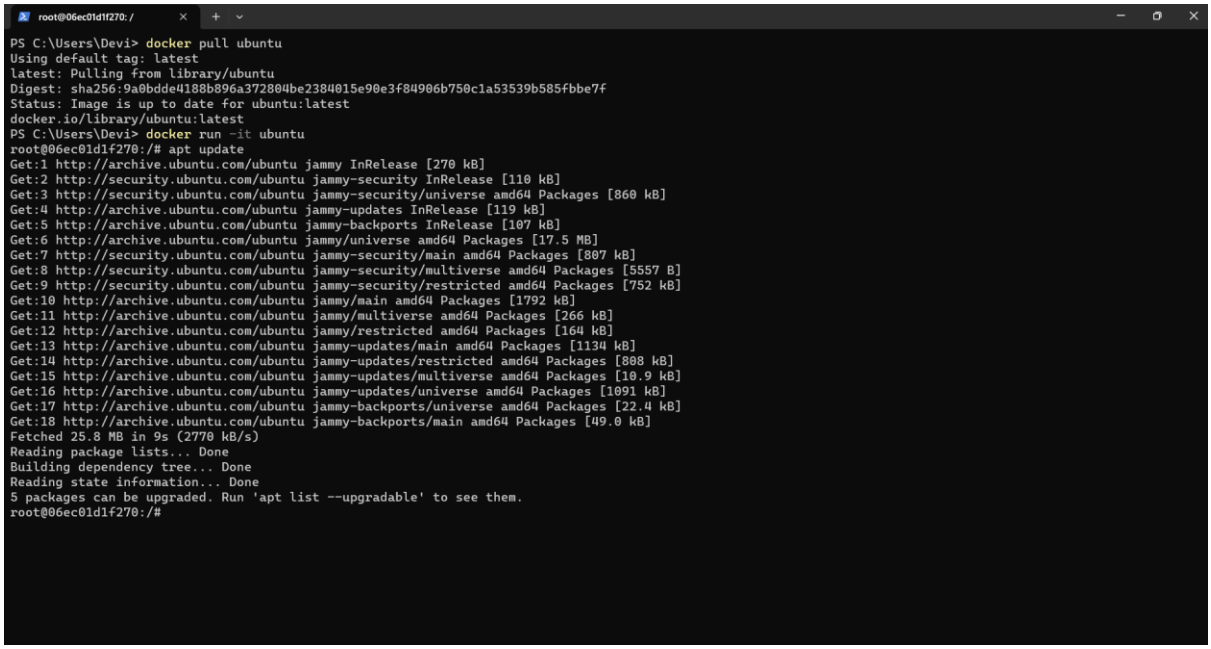
```
Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$ vi primenumber.sh

Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$ bash primenumber.sh
primenumber.sh: line 13: [: -eq: unary operator expected
3
5
7
11
13
17
19

Devi@DESKTOP-UQ7Q4B1 MINGW64 ~ (master)
$
```

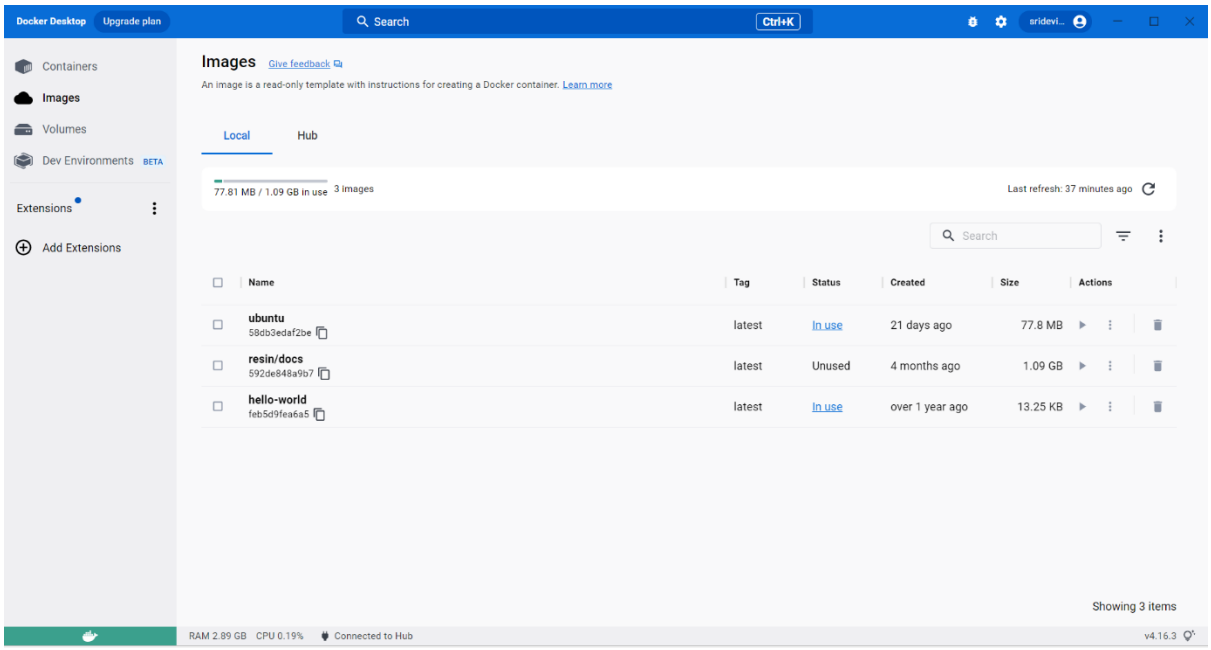
Q5. Set up a container and run a Ubuntu operating system. For this purpose, you can make use of the docker hub and run the container in interactive mode.
All the processes pertaining to this should be provided in a screenshot for grading.

Steps for setting up a container and run a Ubuntu os.

Step 1) download the image of Ubuntu
Syntax: docker pull ubuntu
Step 2) to bring the Ubuntu image
Syntax: docker run -it ubuntu
NOTE: "-it" option runs the container in an interactive mode and opens up a shell within the ubuntu os.
Step 3) To get an idea about the available update.
Syntax: apt update.




root@06ec01d1f270: /
PS C:\Users\Devi> docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
Digest: sha256:9a0bdde4188b896a372804be2384015e90e3f84906b750c1a53539b585fbbe7f
Status: Image is up to date for ubuntu:latest
docker.io/library/ubuntu:latest
PS C:\Users\Devi> docker run -it ubuntu
root@06ec01d1f270:/# apt update
Get:1 http://archive.ubuntu.com/ubuntu jammy InRelease [270 kB]
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [860 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [107 kB]
Get:6 http://archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [17.5 MB]
Get:7 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [807 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [5557 B]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [752 kB]
Get:10 http://archive.ubuntu.com/ubuntu jammy/main amd64 Packages [1792 kB]
Get:11 http://archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [266 kB]
Get:12 http://archive.ubuntu.com/ubuntu jammy/restricted amd64 Packages [164 kB]
Get:13 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1134 kB]
Get:14 http://archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [808 kB]
Get:15 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [10.9 kB]
Get:16 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1091 kB]
Get:17 http://archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [22.4 kB]
Get:18 http://archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [49.0 kB]
Fetched 25.8 MB in 9s (2770 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
5 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@06ec01d1f270:/#


Docker Desktop
Upgrade plan
Search
Ctrl+K
sridevi...
Containers
Images
Volumes
Dev Environments
BETA
Extensions
Add Extensions
Images
Give feedback
An image is a read-only template with instructions for creating a Docker container. Learn more
Local
Hub
77.81 MB / 1.09 GB in use
3 images
Last refresh: 37 minutes ago
Search
Name
Tag
Status
Created
Size
Actions
ubuntu
58db3edaf2be
latest
In use
21 days ago
77.8 MB
resin/docs
592de848a9b7
latest
Unused
4 months ago
1.09 GB
hello-world
feb5d9fea6a5
latest
In use
over 1 year ago
13.25 KB
Showing 3 items
RAM 2.89 GB
CPU 0.19%
Connected to Hub
v4.16.3