Question 1

GIT STASH:

- Git stashing is used to store data temporarily in Git without committing the code to the repository.
- Git stashing takes the incomplete state of our code, and save it temporarily for future purpose.
- It is used to temporarily remove uncommitted changes.
- Git stash is a built-in command with the distributed Version control tool in Git that locally stores all the most recent changes in a workspace and resets the state of the workspace to the prior commit state.

COMMANDS USED FOR GIT STASH:

GIT STASH LIST: It display the stash history in chronological order.

GIT STASH APPLY: It Takes the files in a stash and places them back into the development workspace, but does not delete the stash from history.

- You can re-apply the changes that you just stashed by using the git stash command.
- In case of more than one stash, you can use "git stash apply" command followed by stash index id to apply the particular commit.
- If we don't specify a stash, Git takes the most recent stash and tries to apply it.

GIT STASH POP: It Takes the files in a stash, places them back into the development workspace and deletes the stash from history.

GIT STASH PUSH: It Creates a new stash and rolls back the state of all modified files.

LearningGit/sample.py at 20a91a

github.com/snehal-herovired/LearningGit/blob/20a91a0429/sample.py

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20a91a0429 LearningGit / sample.py / Jump to Go to file

prasannachowdary12 task Latest commit 5074da3 3 minutes ago History

1 contributor

2 lines (2 sloc) 12 Bytes Raw Blame

```
"hi"
"hello"
```

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C:\Windows\System32\cmd.exe

```
Microsoft Windows [Version 10.0.22000.1455]
(c) Microsoft Corporation. All rights reserved.

C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>code .

C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>git init
Reinitialized existing Git repository in C:/Users/prasanna chowdary/OneDrive/Desktop/task-1/.git/

C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>git status
On branch 20a91a0429
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   sample.py

no changes added to commit (use "git add" and/or "git commit -a")

C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>git add .

C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>git status
On branch 20a91a0429
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   sample.py


C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>git stash
Saved working directory and index state WIP on 20a91a0429: 0369735 task

C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>git stash list
stash@{0}: WIP on 20a91a0429: 0369735 task

C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>git stash apply 0
On branch 20a91a0429
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   sample.py

no changes added to commit (use "git add" and/or "git commit -a")

C:\Users\prasanna chowdary\OneDrive\Desktop\task-1>git add .
```

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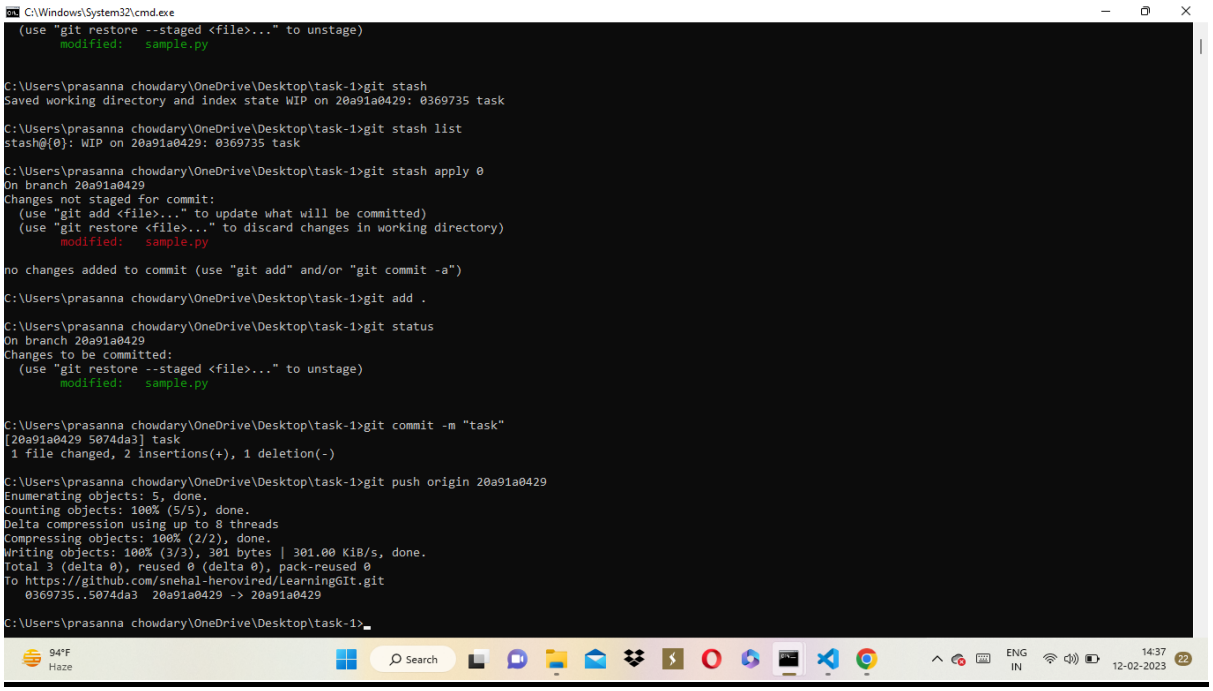


Question 2

GIT MERGE:

- It is used to integrate changes from another branch.
- It takes the contents of a source branch and integrates them with a target branch.

Different types of merges:

1.Fast Forward: When we create a branch, make some commits in that branch, the time we're ready to merge, there is no new merge on the master.

2.Recursive: when it's time to merge, git recurses over the branch and creates a new merge commit.

3.Resolve: It tries to carefully detect criss-cross merge ambiguities and is considered generally safe and fast.

GIT FETCH:

- git fetch is primary command used to download the contents from remote repository.
- git fetch is used when you only want to see all of the current branches and changes in your remote repository.
- git fetch commands is used to pull the updates from remote-tracking branches. Additionally we can get the updates that have been pushed to our local machines.

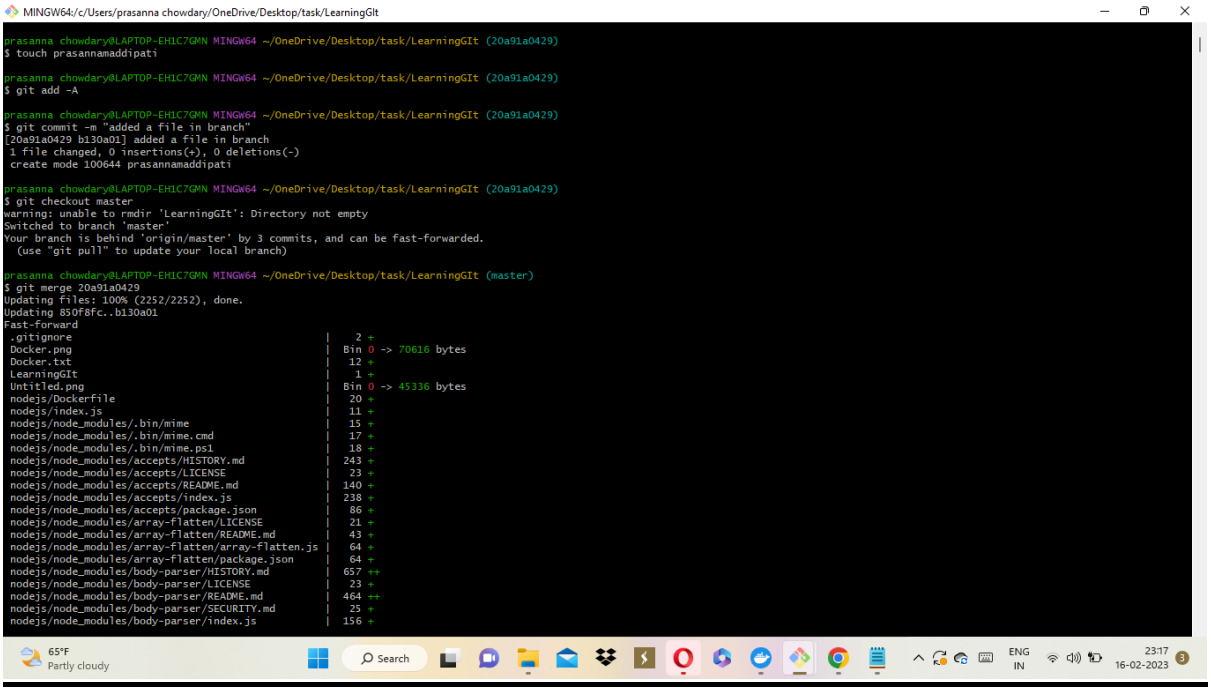
FETCH COMMANDS:

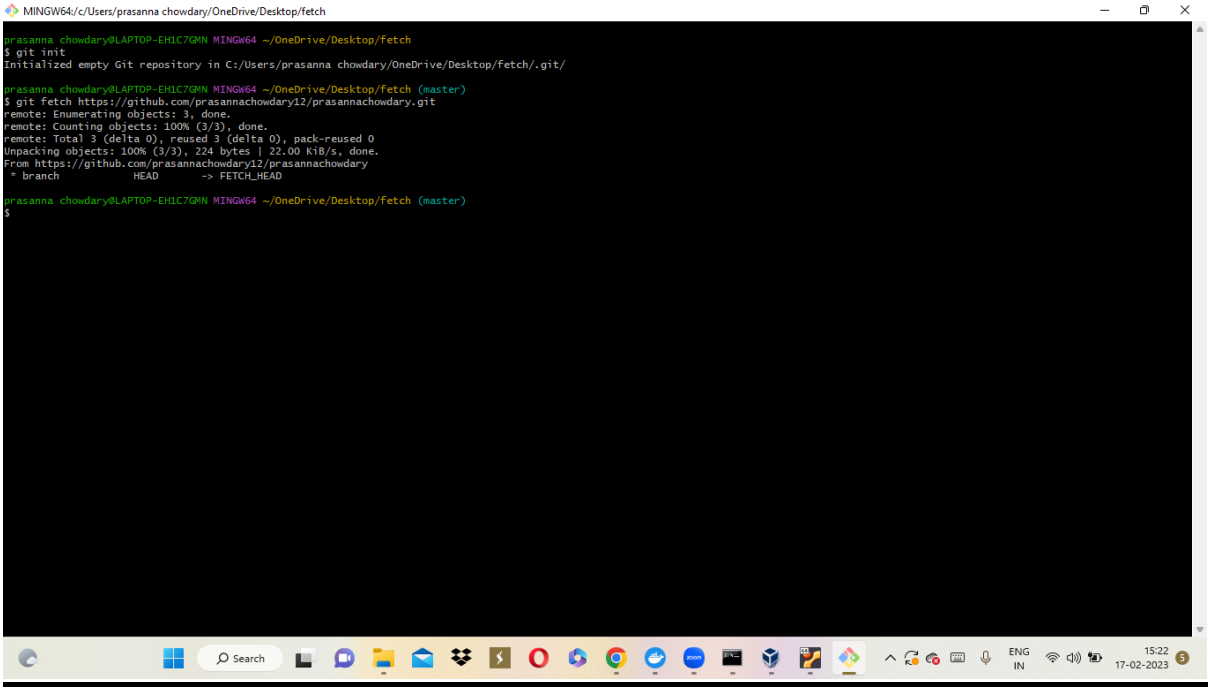
1) git fetch <repository url> : By using this command we can fetch the complete repository with the help of fetch command from repository URL.

2)git fetch <branch URL> <branch name>: This command is used to fetch data from specific branch.

3)git fetch --all: This command is used to fetch the data from all the branches simultaneously.

- The git fetch can fetch from either a single named repository or URL or from several repositories at once.
- The git fetch downloads the remote content but not update your local repository working state when no remote server is specified, by default, it will fetch the origin remote.





Question 3

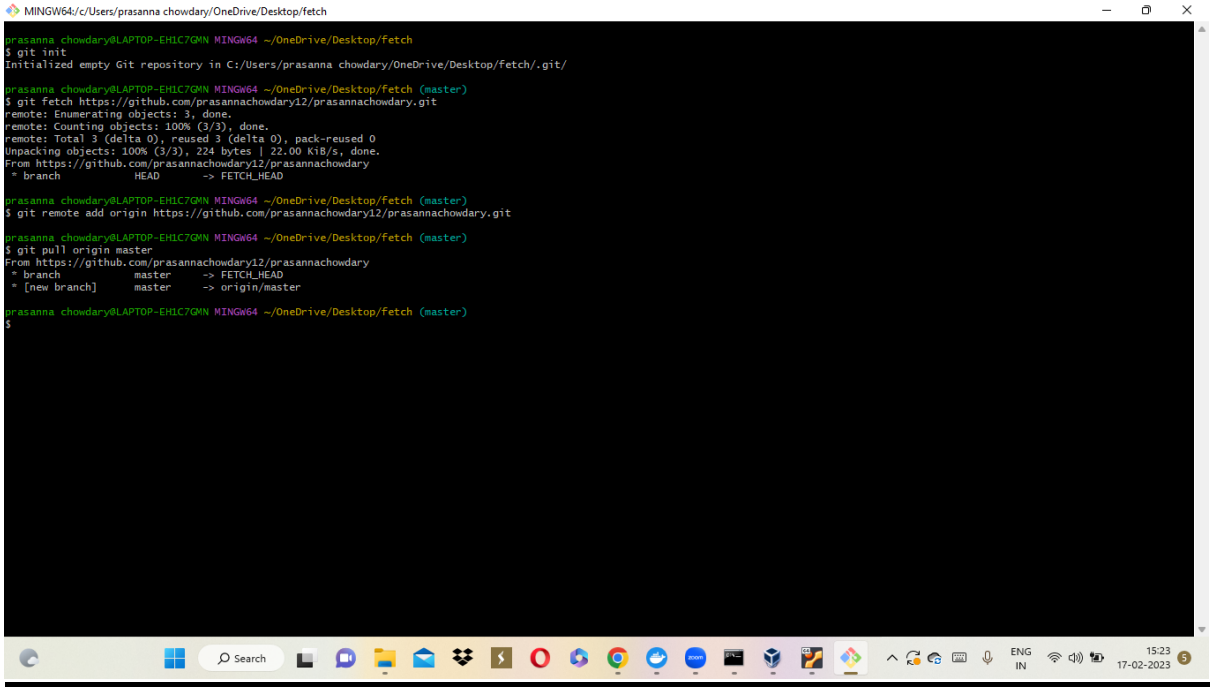
DIFFERENCE BETWEEN GIT FETCH AND GIT PILL:

GIT FETCH:

- It is the command that tells the local repository that there are changes available in the remote repository without bringing the changes into the local repository.
- It gathers any commits from the target branch that do not exist in the current branch and stores them in our local repository.
- It is a safer alternative because it pulls in all the commits from your remote but doesn't make any changes to your local files.
- It is a command to see all of the remote's changes without applying them.

GIT PULL:

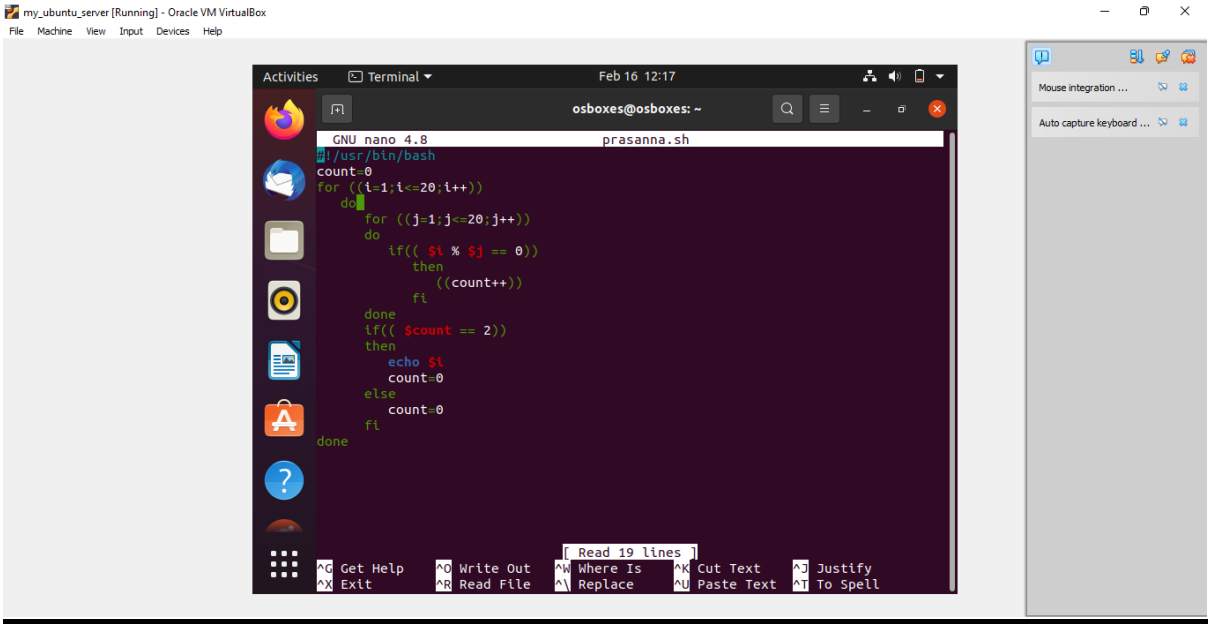
- It is used to fetch and Merge any commits from the tracking remote branch.
- It is used to fetch and download content from a remote repository and immediately update the local repository to match that content.
- It is more advanced action and it's important to understand that you will be introducing changes and immediately applying them to your currently checked out branch.
- Git pull is a command that allows you to fetch from and integrate with another repository or local branch.

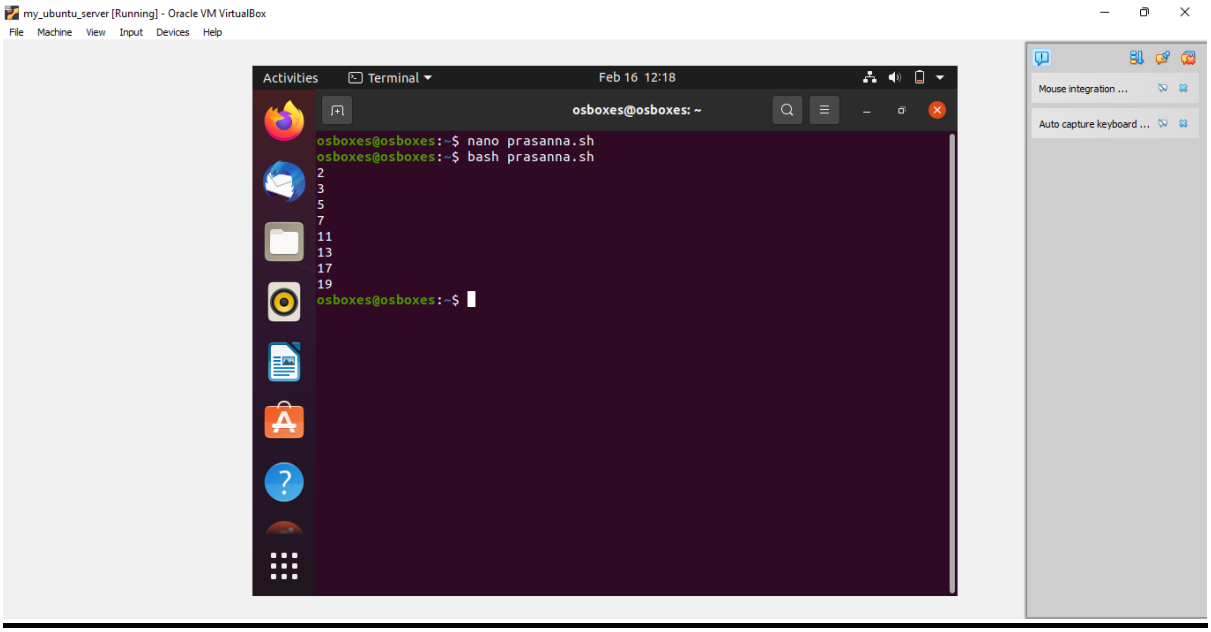


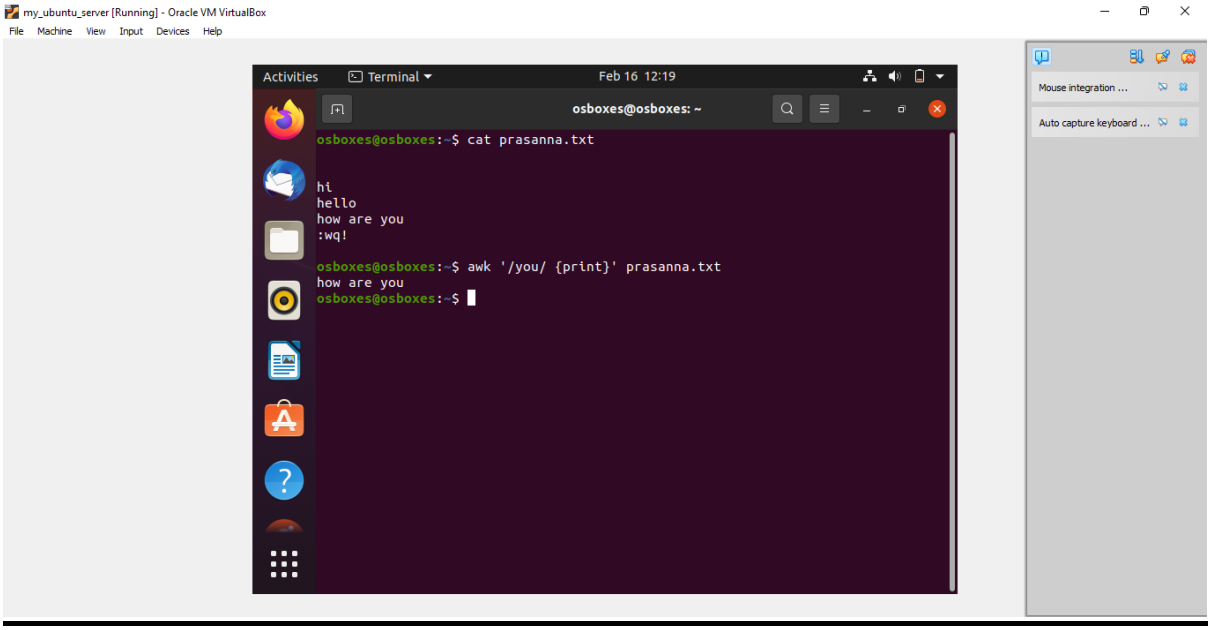
Question 4

LINUX AWK:

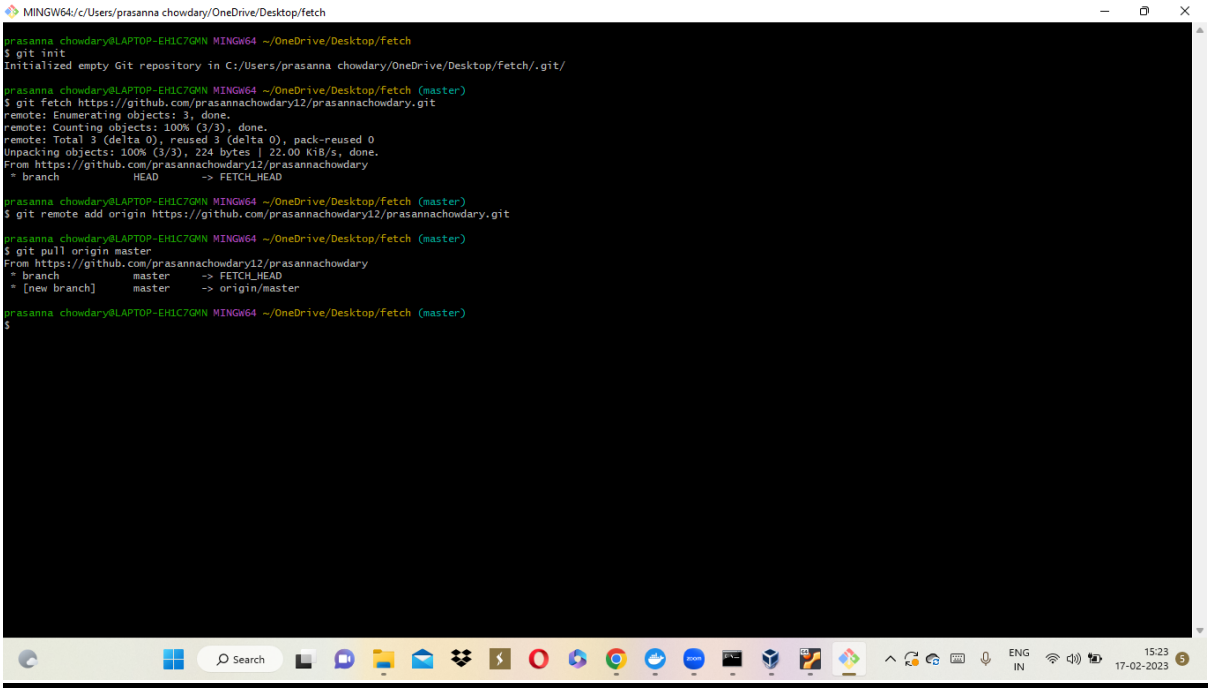
- Awk is mostly used for pattern scanning and processing.
- It searches one or more files to see if they contain lines that matches with the specified patterns and then perform the associated actions.







GIT HISTORY:



Question 5

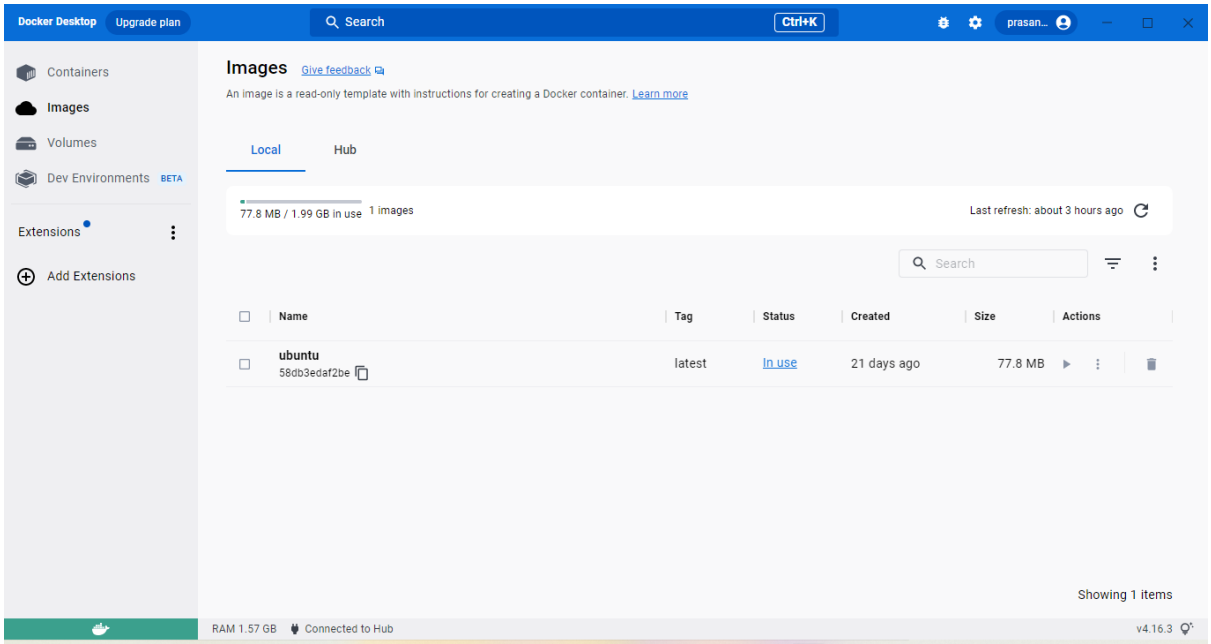
Ubuntu:

root@8ca9f1699bfd: /

```
prasanna chowdary@LAPTOP-EH1C7GMN MINGW64 ~
$ docker login
Authenticating with existing credentials...
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/

prasanna chowdary@LAPTOP-EH1C7GMN MINGW64 ~
$ docker info
Client:
 Context:    default
 Debug Mode: false
 Plugins:
  buildx: Docker Buildx (Docker Inc., v0.10.0)
  compose: Docker Compose (Docker Inc., v2.15.1)
  dev: Docker Dev Environments (Docker Inc., v0.0.5)
  extension: Manages Docker extensions (Docker Inc., v0.2.17)
  sbom: View the packaged-based Software Bill Of Materials (SBOM) for an image (Anchore Inc., 0.6.0)
  scan: Docker Scan (Docker Inc., v0.23.0)

Server:
 Containers: 0
  Running: 0
  Paused: 0
  Stopped: 0
 Images: 0
 Server Version: 20.10.22
 Storage Driver: overlay2
  Backing Filesystem: extfs
  Supports d_type: true
  Native Overlay Diff: true
  userxattr: false
 Logging Driver: json-file
 Cgroup Driver: cgroupfs
 Cgroup Version: 1
 Plugins:
  Volume: local
  Network: bridge host ipvlan macvlan null overlay
  Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk syslog
 Swarm: inactive
 Runtimes: io.containerd.runtime.v1.linux runc io.containerd.runc.v2
 Default Runtime: runc
 Init Binary: docker-init
 containerd version: 9ba4b250366a5ddde94bb7c9d1def331423aa323
 runc version: v1.1.4-0-g5fd4c4d
 init version: de40ad0
 Security Options:
```

root@8ca9f1699bfd: /

```
 Kernel Version: 5.10.16.3-microsoft-standard-WSL2
 Operating System: Docker Desktop
 OSType: linux
 Architecture: x86_64
 CPUs: 8
 Total Memory: 3.75GiB
 Name: docker-desktop
 ID: FGVZ:VQNZ:24WE:H5ZI:GPF8:WNC3:NWNK:KVTB:JIYG:EWIC:LK2F:26DN
 Docker Root Dir: /var/lib/docker
 Debug Mode: false
 HTTP Proxy: http.docker.internal:3128
 HTTPS Proxy: http.docker.internal:3128
 No Proxy: hubproxy.docker.internal
 Registry: https://index.docker.io/v1/
 Labels:
 Experimental: false
 Insecure Registries:
  hubproxy.docker.internal:5000
  127.0.0.0/8
 Live Restore Enabled: false

WARNING: No blkio throttle.read_bps_device support
WARNING: No blkio throttle.write_bps_device support
WARNING: No blkio throttle.read_iops_device support
WARNING: No blkio throttle.write_iops_device support

prasanna chowdary@LAPTOP-EH1C7GMN MINGW64 ~
$ docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
677076032cca: Pulling fs layer
677076032cca: Download complete
677076032cca: Pull complete
Digest: sha256:9a0bdde4188b896a372804be2384015e90e3f84906b750c1a53539b585fbbe7f
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest

prasanna chowdary@LAPTOP-EH1C7GMN MINGW64 ~
$ docker images
REPOSITORY   TAG       IMAGE ID       CREATED       SIZE
ubuntu       latest    58db3edaf2be   3 weeks ago   77.8MB

prasanna chowdary@LAPTOP-EH1C7GMN MINGW64 ~
$ docker run -it ubuntu
the input device is not a TTY.  If you are using mintty, try prefixing the command with 'winpty'

prasanna chowdary@LAPTOP-EH1C7GMN MINGW64 ~
$ winpty docker run -it ubuntu
root@8ca9f1699bfd:/#
```


Docker Desktop
Upgrade plan
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prasan...
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Add Extensions
Images
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An image is a read-only template with instructions for creating a Docker container. Learn more
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Hub
77.8 MB / 1.99 GB in use
1 images
Last refresh: about 3 hours ago
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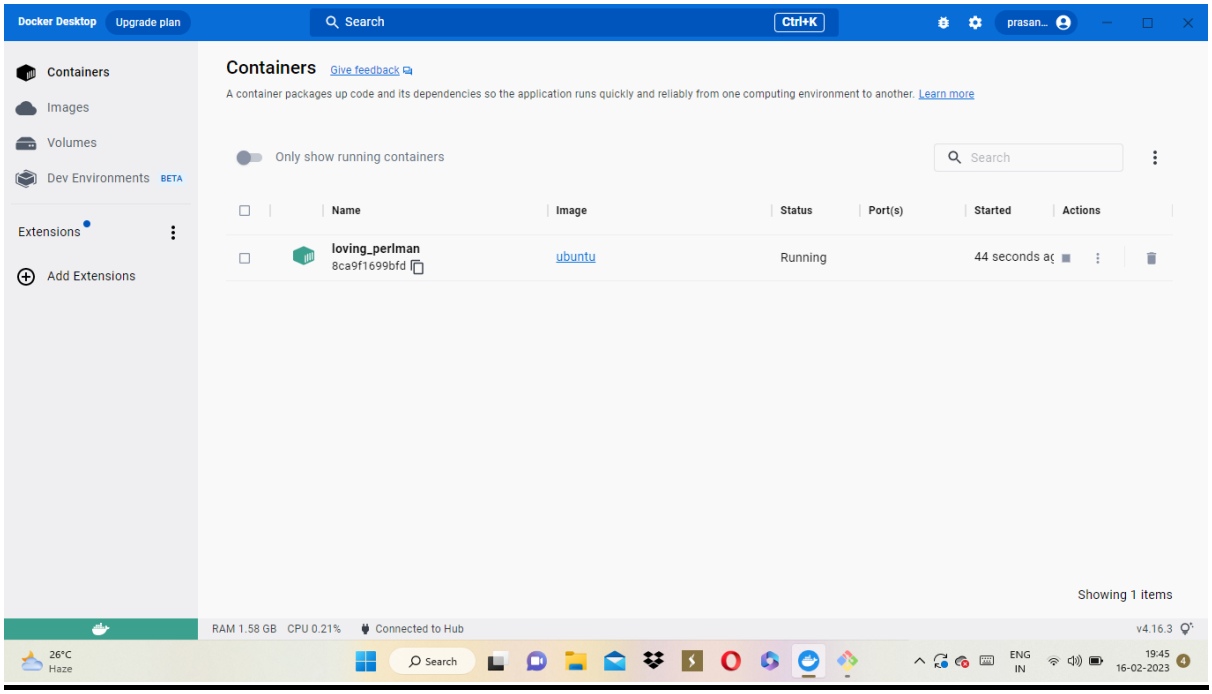
Tag
Status
Created
Size
Actions
ubuntu
58db3edaf2be
latest
In use
21 days ago
77.8 MB
Showing 1 items
RAM 1.57 GB
Connected to Hub
v4.16.3
26°C
Haze
Search
ENG
IN
19:45
16-02-2023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Containers
Give feedback
A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more
Only show running containers
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Image
Status
Port(s)
Started
Actions
loving_perlman
8ca9f1699bfd
ubuntu
Running
44 seconds ag
Showing 1 items
RAM 1.58 GB
CPU 0.21%
Connected to Hub
v4.16.3
26°C
Haze
Search
ENG
IN
19:45
16-02-2023