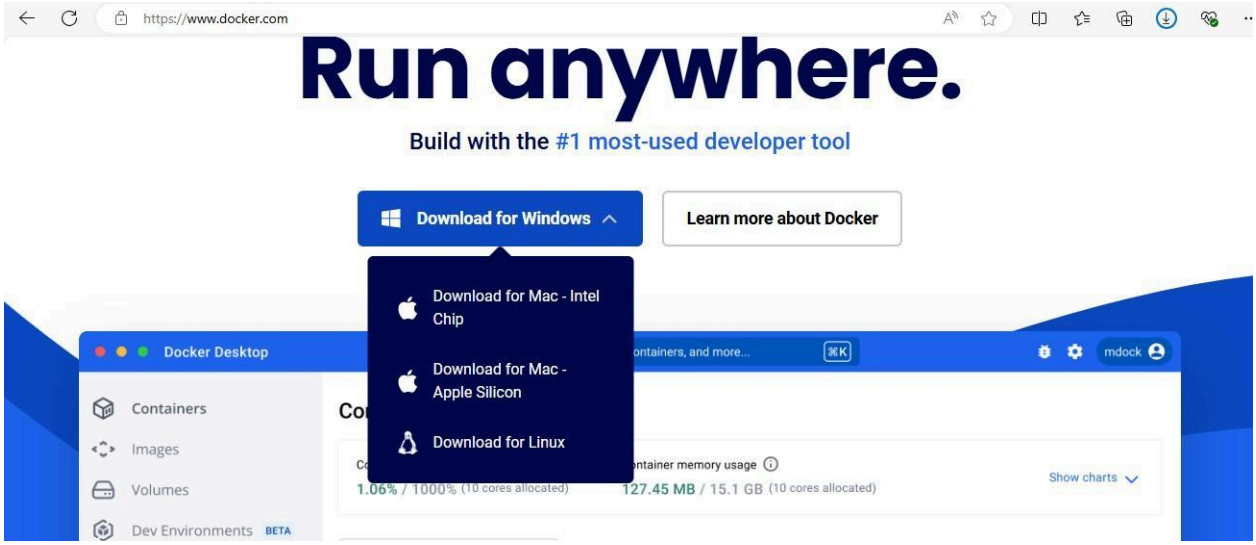
Mohit Patil **D15A - 37**

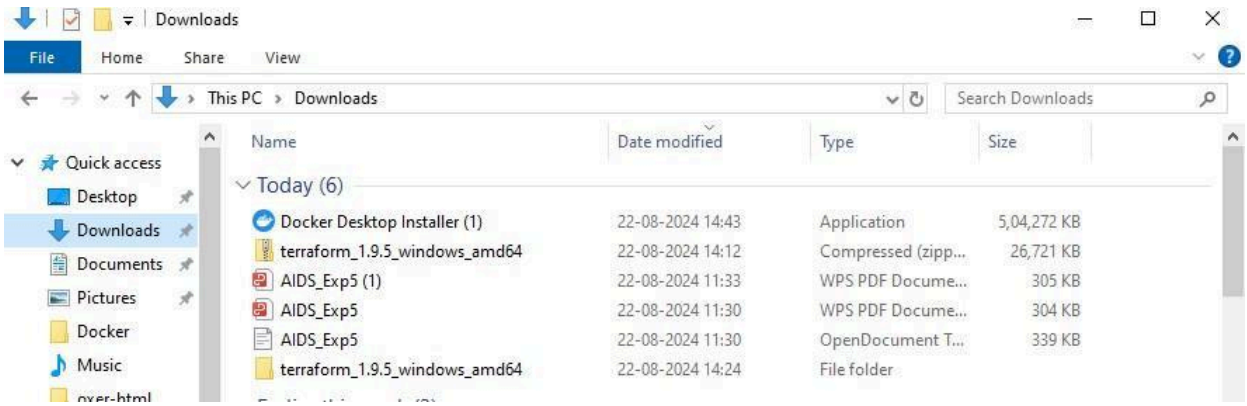
Experiment 6

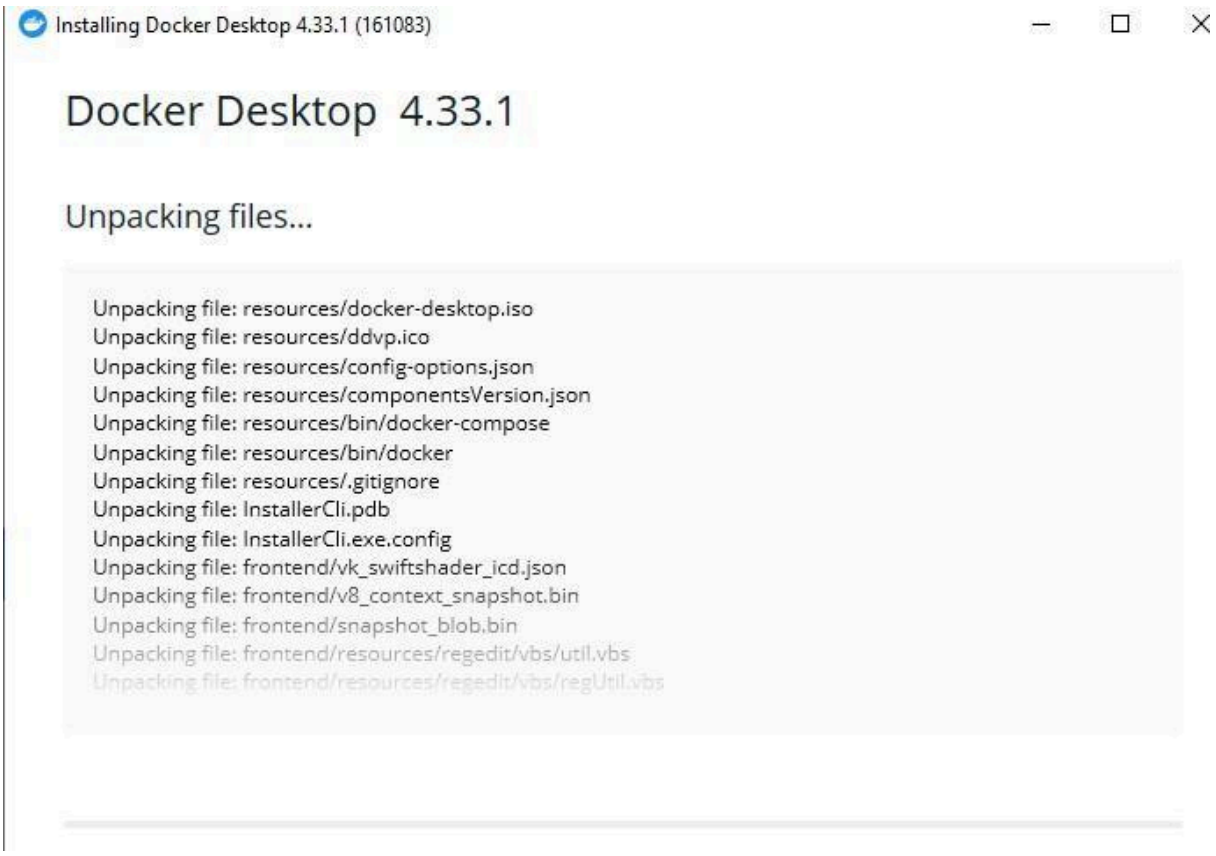
Aim:
To Build, change, and destroy AWS / GCP /Microsoft Azure/ DigitalOcean infrastructure Using Terraform.(S3 bucket or Docker)

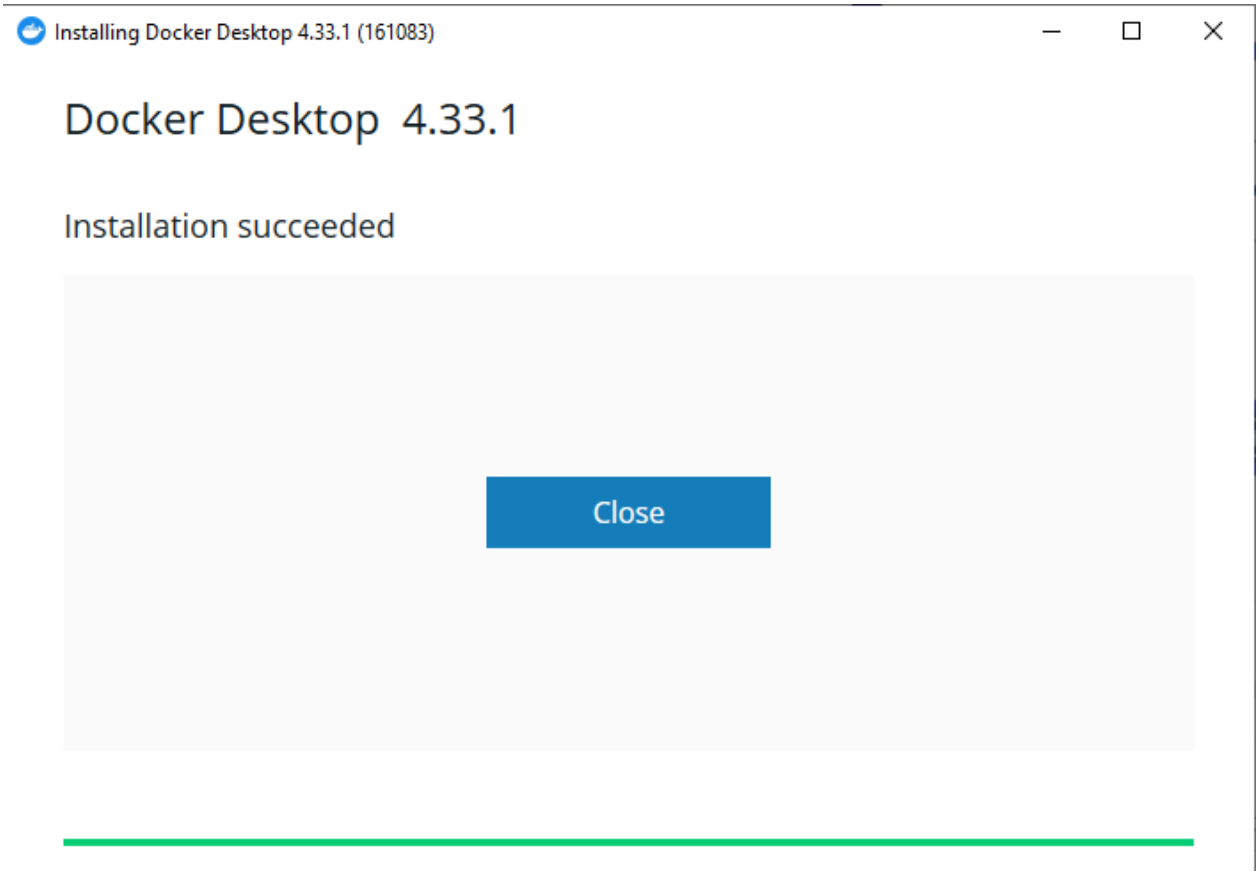
Step 1: Download Docker form www.docker.com



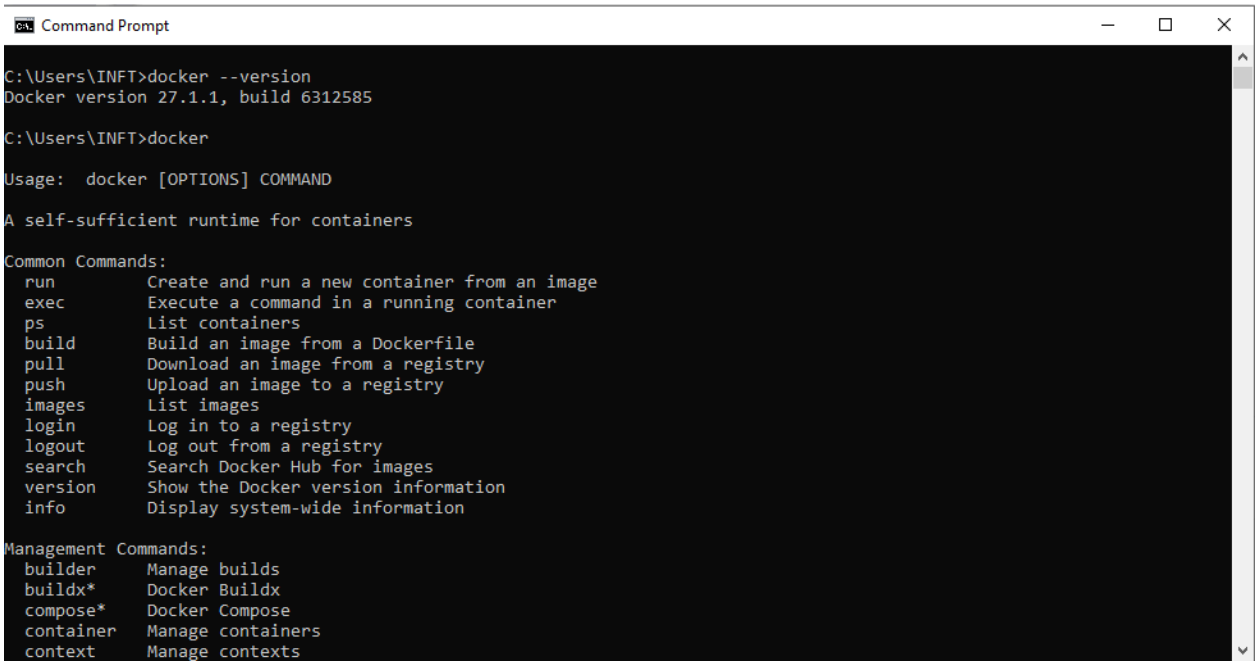
Step 2: The Docker is successfully downloaded. Now, run the docker installer and complete the installation.



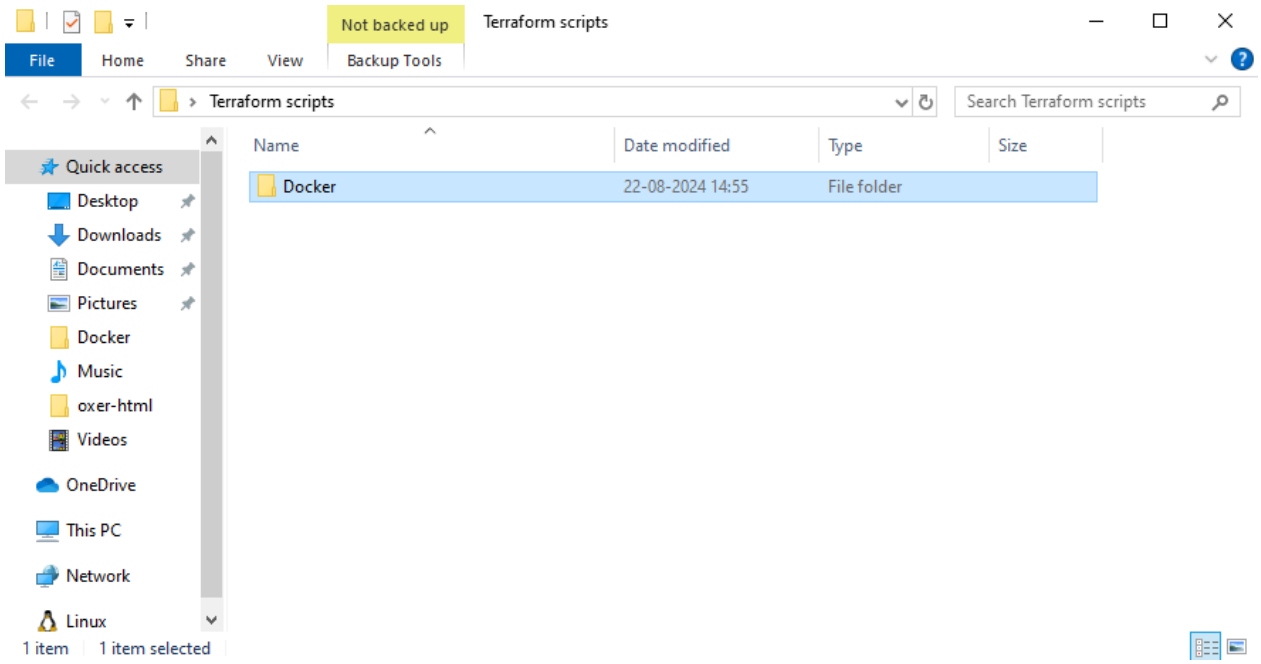

Installing Docker Desktop 4.33.1 (161083)
Docker Desktop 4.33.1
Unpacking files...
Unpacking file: resources/docker-desktop.iso
Unpacking file: resources/ddvp.ico
Unpacking file: resources/config-options.json
Unpacking file: resources/componentsVersion.json
Unpacking file: resources/bin/docker-compose
Unpacking file: resources/bin/docker
Unpacking file: resources/.gitignore
Unpacking file: InstallerCli.pdb
Unpacking file: InstallerCli.exe.config
Unpacking file: frontend/vk_swiftshader_icd.json
Unpacking file: frontend/v8_context_snapshot.bin
Unpacking file: frontend/snapshot_blob.bin
Unpacking file: frontend/resources/regedit/vbs/util.vbs
Unpacking file: frontend/resources/regedit/vbs/regUtil.vbs



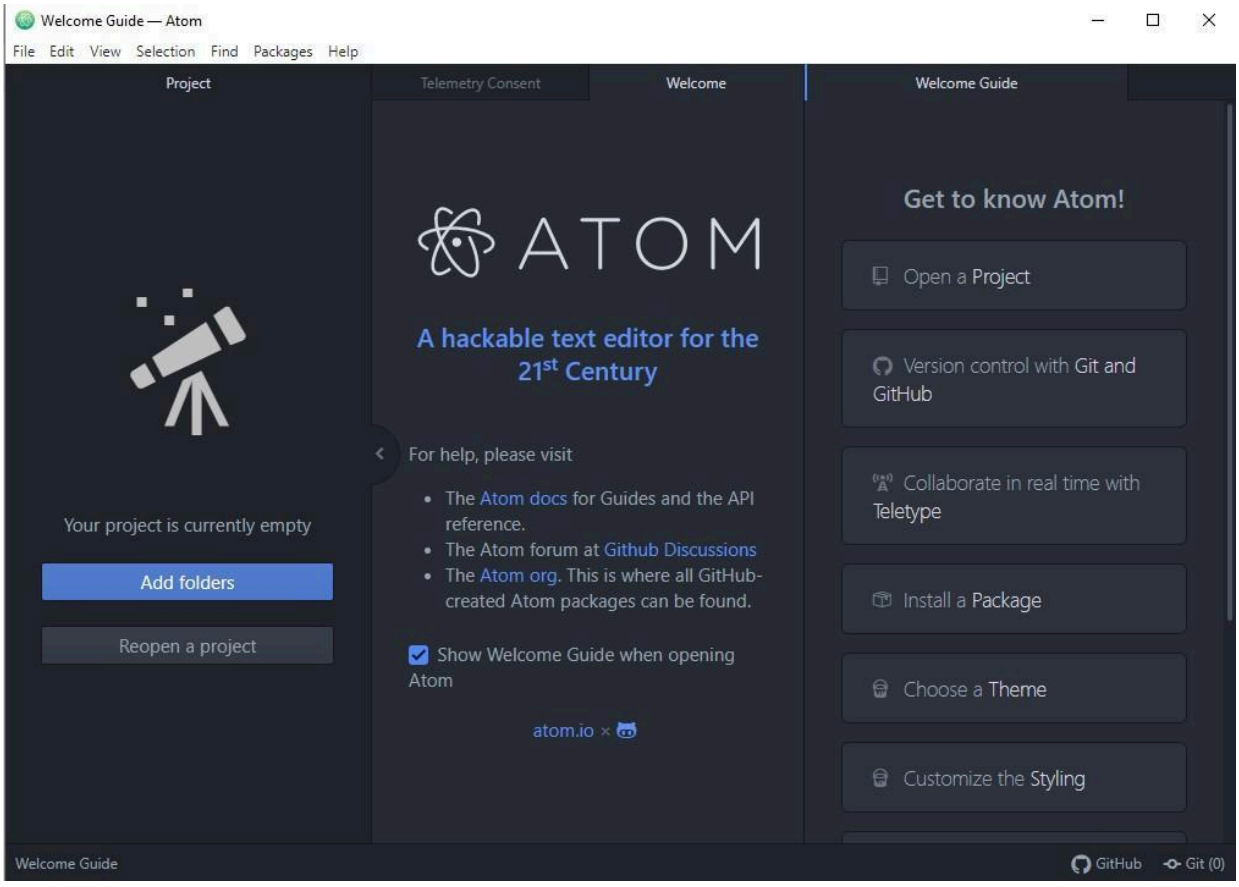
Step 3: Open Command Prompt and run as administrator. Enter the command docker –version, to check whether the docker is successfully installed.



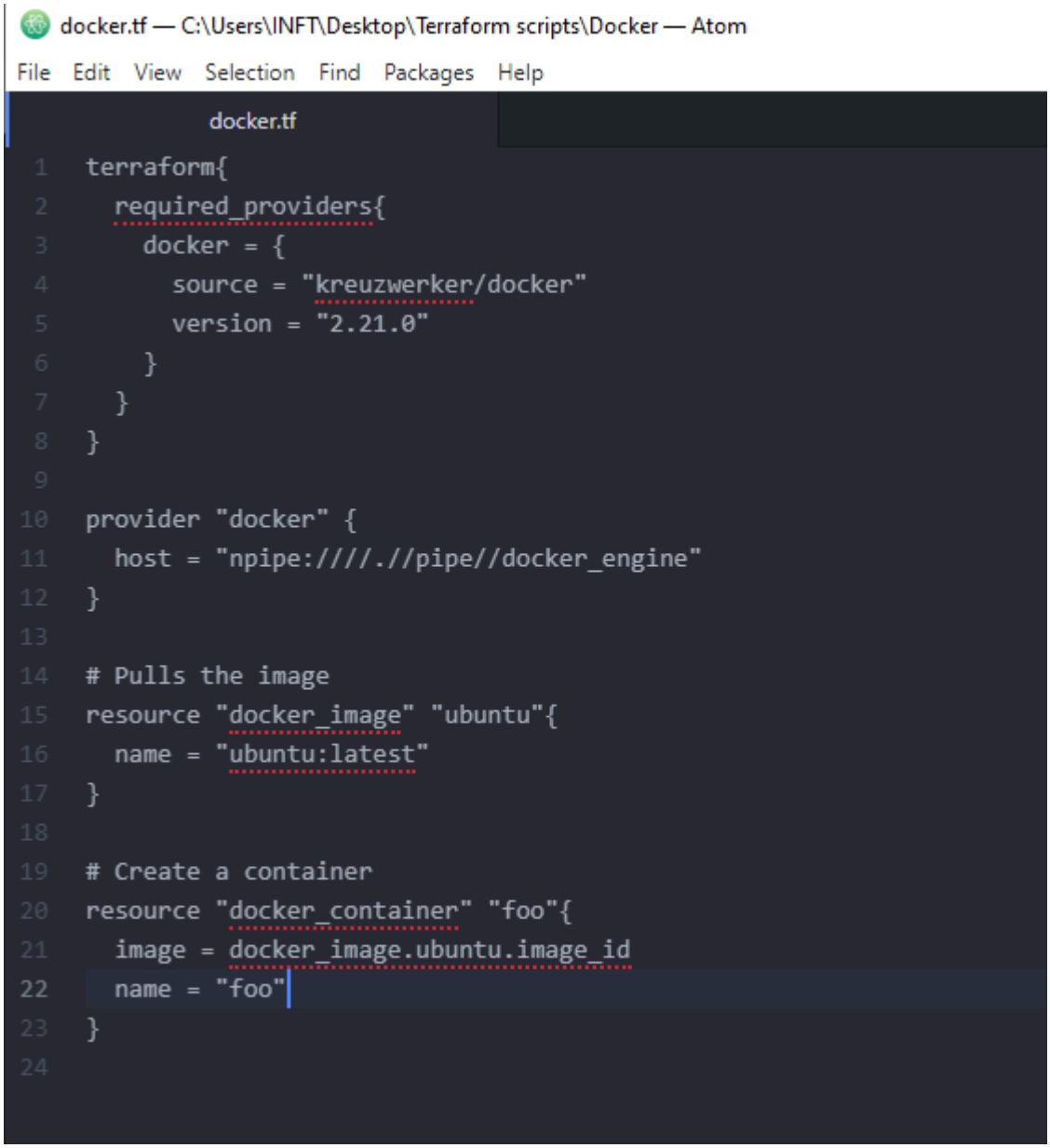
Step 4: Create a folder Terraform_scripts and inside it create a folder named Docker.



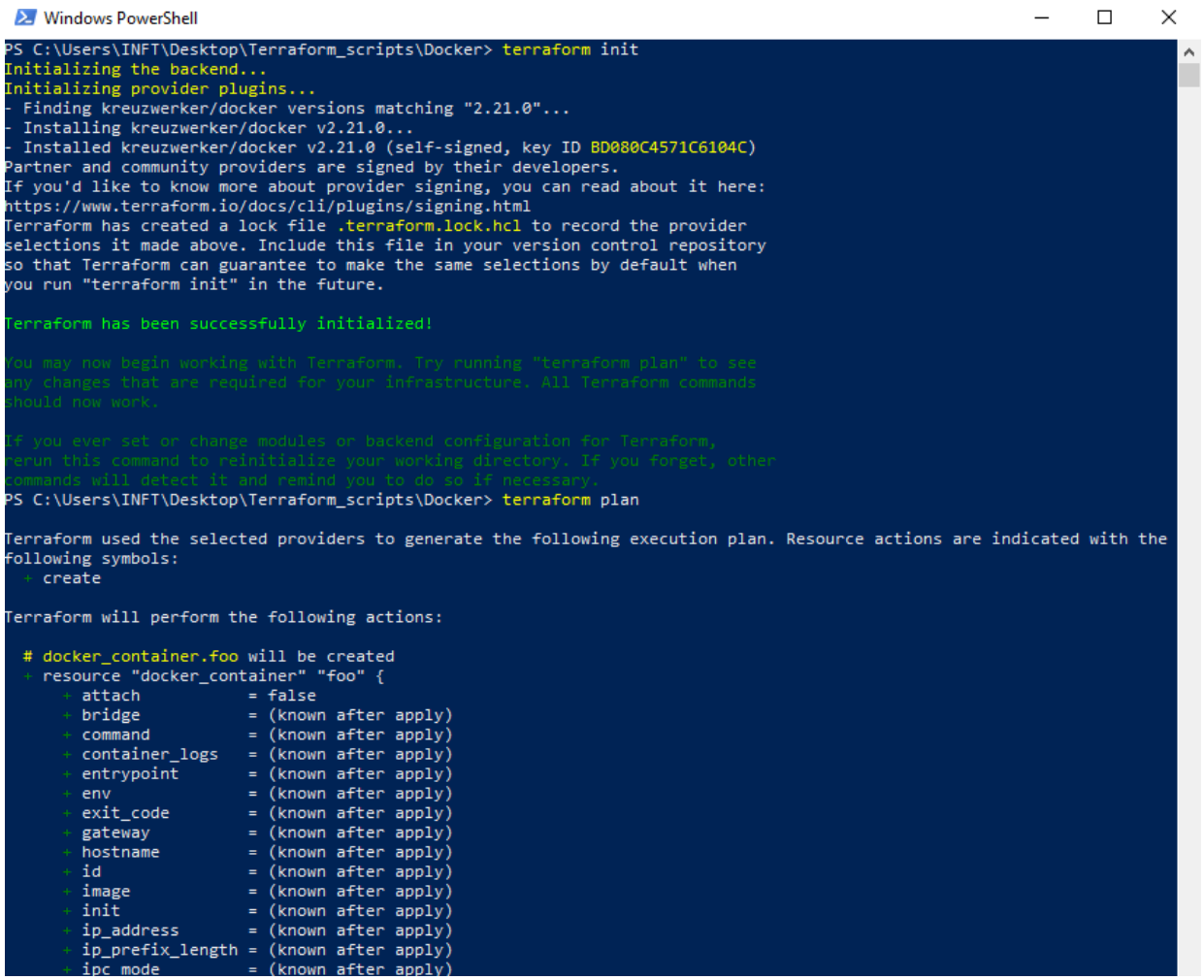
Step 5: Download Atom Editor.

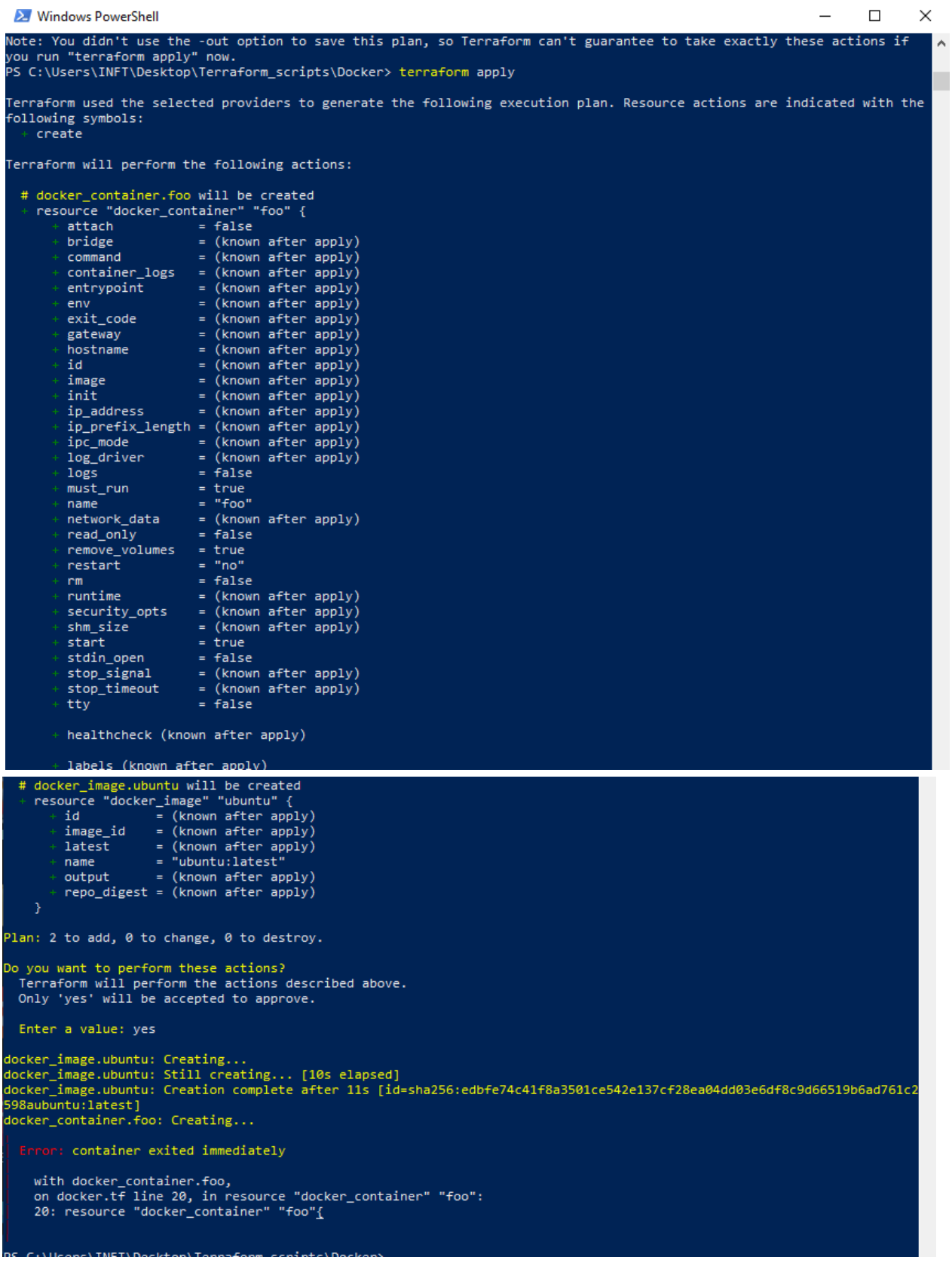


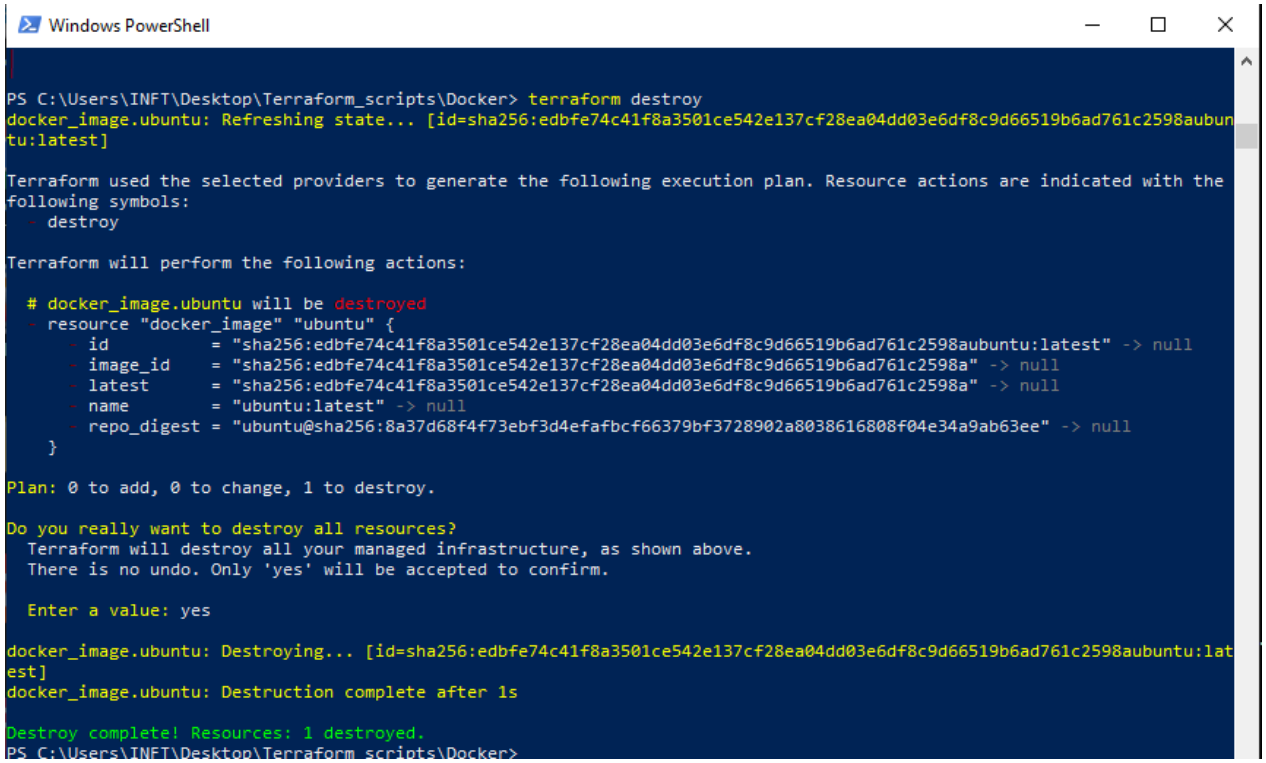
Step 6: Run the following script in the Atom Editor

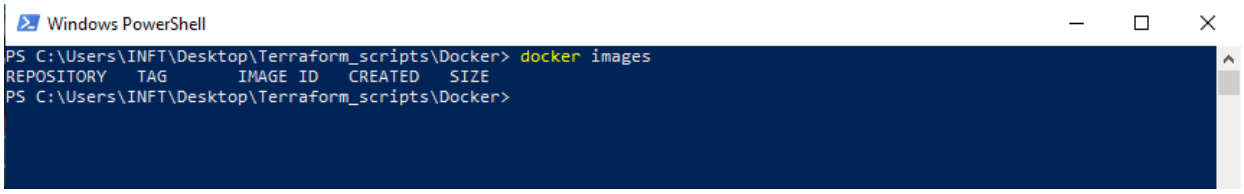


Step 7: Open Windows Explorer and run the following command terraform init, terraform plan, terraform apply, terraform destroy and docker images.


Windows PowerShell
PS C:\Users\INFT\Desktop\Terraform_scripts\Docker> terraform init
Initializing the backend...
Initializing provider plugins...
- Finding kreuzwerker/docker versions matching "2.21.0"...
- Installing kreuzwerker/docker v2.21.0...
- Installed kreuzwerker/docker v2.21.0 (self-signed, key ID BD080C4571C6104C)
Partner and community providers are signed by their developers.
If you'd like to know more about provider signing, you can read about it here:
https://www.terraform.io/docs/cli/plugins/signing.html
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.
Terraform has been successfully initialized!
You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.
If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
PS C:\Users\INFT\Desktop\Terraform_scripts\Docker> terraform plan
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the
following symbols:
+ create
Terraform will perform the following actions:
# docker_container.foo will be created
+ resource "docker_container" "foo" {
+ attach = false
+ bridge = (known after apply)
+ command = (known after apply)
+ container_logs = (known after apply)
+ entrypoint = (known after apply)
+ env = (known after apply)
+ exit_code = (known after apply)
+ gateway = (known after apply)
+ hostname = (known after apply)
+ id = (known after apply)
+ image = (known after apply)
+ init = (known after apply)
+ ip_address = (known after apply)
+ ip_prefix_length = (known after apply)
+ ipc_mode = (known after apply)


Windows PowerShell
Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.
PS C:\Users\INFT\Desktop\Terraform_scripts\Docker> terraform apply
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
+ create
Terraform will perform the following actions:
# docker_container.foo will be created
+ resource "docker_container" "foo" {
+ attach = false
+ bridge = (known after apply)
+ command = (known after apply)
+ container_logs = (known after apply)
+ entrypoint = (known after apply)
+ env = (known after apply)
+ exit_code = (known after apply)
+ gateway = (known after apply)
+ hostname = (known after apply)
+ id = (known after apply)
+ image = (known after apply)
+ init = (known after apply)
+ ip_address = (known after apply)
+ ip_prefix_length = (known after apply)
+ ipc_mode = (known after apply)
+ log_driver = (known after apply)
+ logs = false
+ must_run = true
+ name = "foo"
+ network_data = (known after apply)
+ read_only = false
+ remove_volumes = true
+ restart = "no"
+ rm = false
+ runtime = (known after apply)
+ security_opts = (known after apply)
+ shm_size = (known after apply)
+ start = true
+ stdin_open = false
+ stop_signal = (known after apply)
+ stop_timeout = (known after apply)
+ tty = false
+ healthcheck (known after apply)
+ labels (known after apply)
# docker_image.ubuntu will be created
+ resource "docker_image" "ubuntu" {
+ id = (known after apply)
+ image_id = (known after apply)
+ latest = (known after apply)
+ name = "ubuntu:latest"
+ output = (known after apply)
+ repo_digest = (known after apply)
}
Plan: 2 to add, 0 to change, 0 to destroy.
Do you want to perform these actions?
Terraform will perform the actions described above.
Only 'yes' will be accepted to approve.
Enter a value: yes
docker_image.ubuntu: Creating...
docker_image.ubuntu: Still creating... [10s elapsed]
docker_image.ubuntu: Creation complete after 11s [id=sha256:edbfe74c41f8a3501ce542e137cf28ea04dd03e6df8c9d66519b6ad761c2598aubuntu:latest]
docker_container.foo: Creating...
Error: container exited immediately
with docker_container.foo,
on docker.tf line 20, in resource "docker_container" "foo":
20: resource "docker_container" "foo"{


Windows PowerShell
PS C:\Users\INFT\Desktop\Terraform_scripts\Docker> terraform destroy
docker_image.ubuntu: Refreshing state... [id=sha256:edbfe74c41f8a3501ce542e137cf28ea04dd03e6df8c9d66519b6ad761c2598aubuntu:latest]
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
- destroy
Terraform will perform the following actions:
# docker_image.ubuntu will be destroyed
- resource "docker_image" "ubuntu" {
- id = "sha256:edbfe74c41f8a3501ce542e137cf28ea04dd03e6df8c9d66519b6ad761c2598aubuntu:latest" -> null
- image_id = "sha256:edbfe74c41f8a3501ce542e137cf28ea04dd03e6df8c9d66519b6ad761c2598a" -> null
- latest = "sha256:edbfe74c41f8a3501ce542e137cf28ea04dd03e6df8c9d66519b6ad761c2598a" -> null
- name = "ubuntu:latest" -> null
- repo_digest = "ubuntu@sha256:8a37d68f4f73ebf3d4efafbcf66379bf3728902a8038616808f04e34a9ab63ee" -> null
}
Plan: 0 to add, 0 to change, 1 to destroy.
Do you really want to destroy all resources?
Terraform will destroy all your managed infrastructure, as shown above.
There is no undo. Only 'yes' will be accepted to confirm.
Enter a value: yes
docker_image.ubuntu: Destroying... [id=sha256:edbfe74c41f8a3501ce542e137cf28ea04dd03e6df8c9d66519b6ad761c2598aubuntu:latest]
docker_image.ubuntu: Destruction complete after 1s
Destroy complete! Resources: 1 destroyed.
PS C:\Users\INFT\Desktop\Terraform_scripts\Docker>


Windows PowerShell
PS C:\Users\INFT\Desktop\Terraform_scripts\Docker> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
PS C:\Users\INFT\Desktop\Terraform_scripts\Docker>