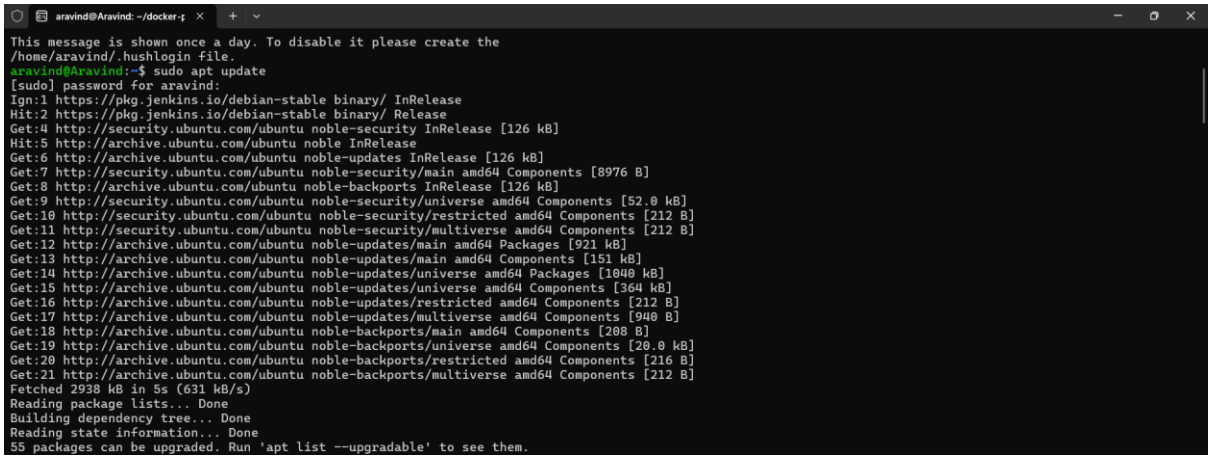
DEVOPS

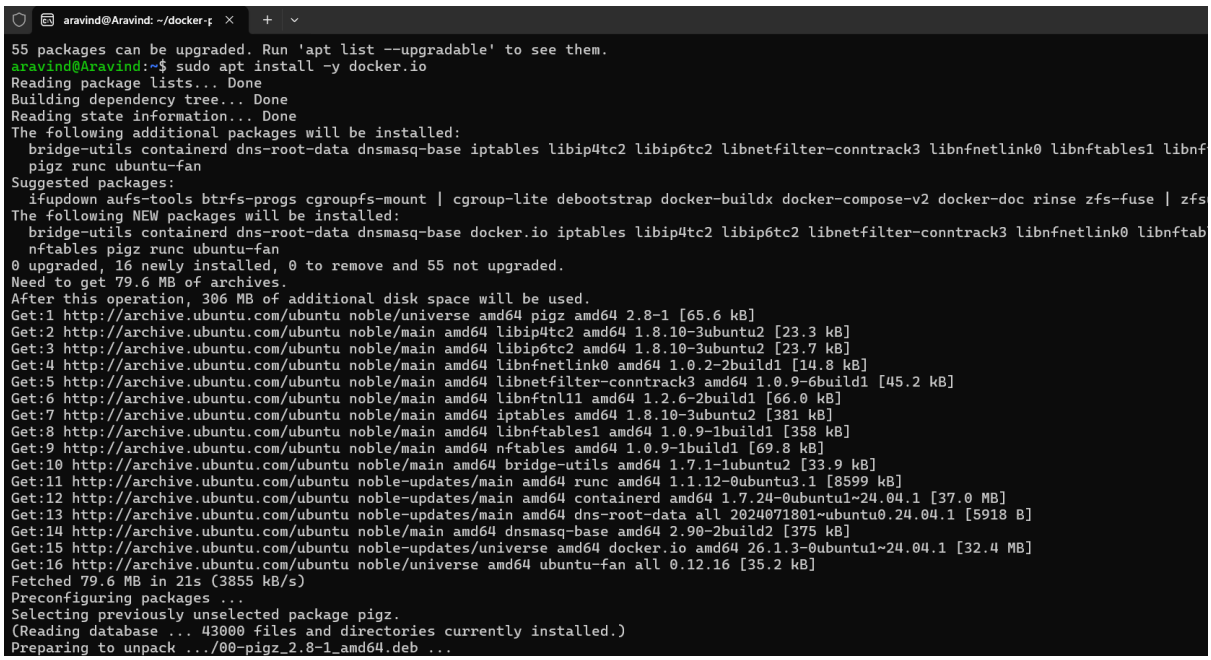
DAY-2

STEP -1 :INSTALL DOCKER

1) sudo apt update



2) sudo apt install -y docker.io



STEP 2: ENABLE AND DISABLE

1) sudo systemctl enable docker

2)sudo systemctl start docker

STEP 3:VERIFY THE INSTALLATION:

docker –version

STEP 4:INSTALL DOCKER COMPOSE

sudo curl -L "https://github.com/docker/compose/releases/latest/download/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose

```
aravind@Aravind:~$ docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1~24.04.1
aravind@Aravind:~$ sudo curl -L "https://github.com/docker/compose/releases/latest/download/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker
-compose
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
  0     0    0     0    0     0      0      0 --:--:-- --:--:-- --:--:--     0
  0     0    0     0    0     0      0      0 --:--:-- --:--:-- --:--:--     0
100 71.4M  100 71.4M    0     0  5241k      0  0:00:13  0:00:13 --:--:-- 6558k
```

VERIFY INSTALLATION

```
aravind@Aravind:~$ docker-compose --version
Docker Compose version v2.34.0
```

CREATE AN “HELLO WOLRD: APPLICATION

Create a project directory

```
~$ mkdir ~/docker-python-app
~$ cd ~/docker-python-app
```

Create the python Application File

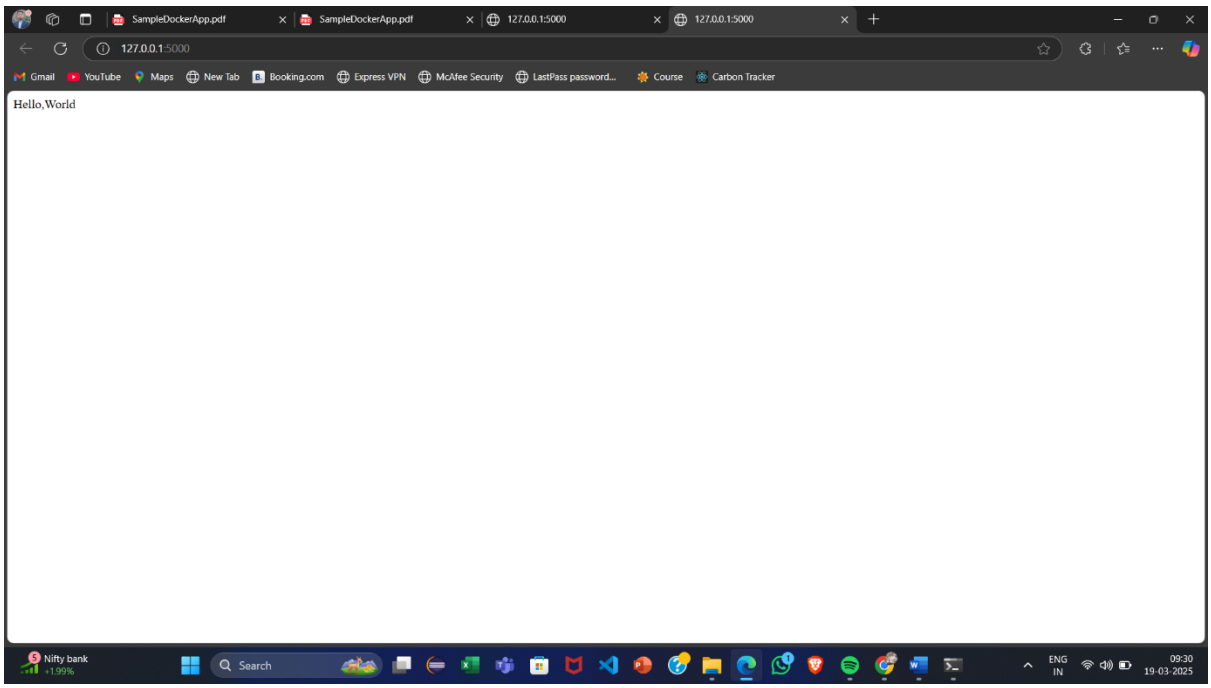
Create a file

```
aravind@Aravind:~/docker-python-app$ nano app.py
aravind@Aravind:~/docker-python-app$ cat app.py
from flask import Flask
app = Flask(__name__)
@app.route("/")
def hello():
 return "Hello, World! Running inside Docker!"
if __name__ == "__main__":
 app.run(host="0.0.0.0", port=5000)
aravind@Aravind:~/docker-python-app$
```

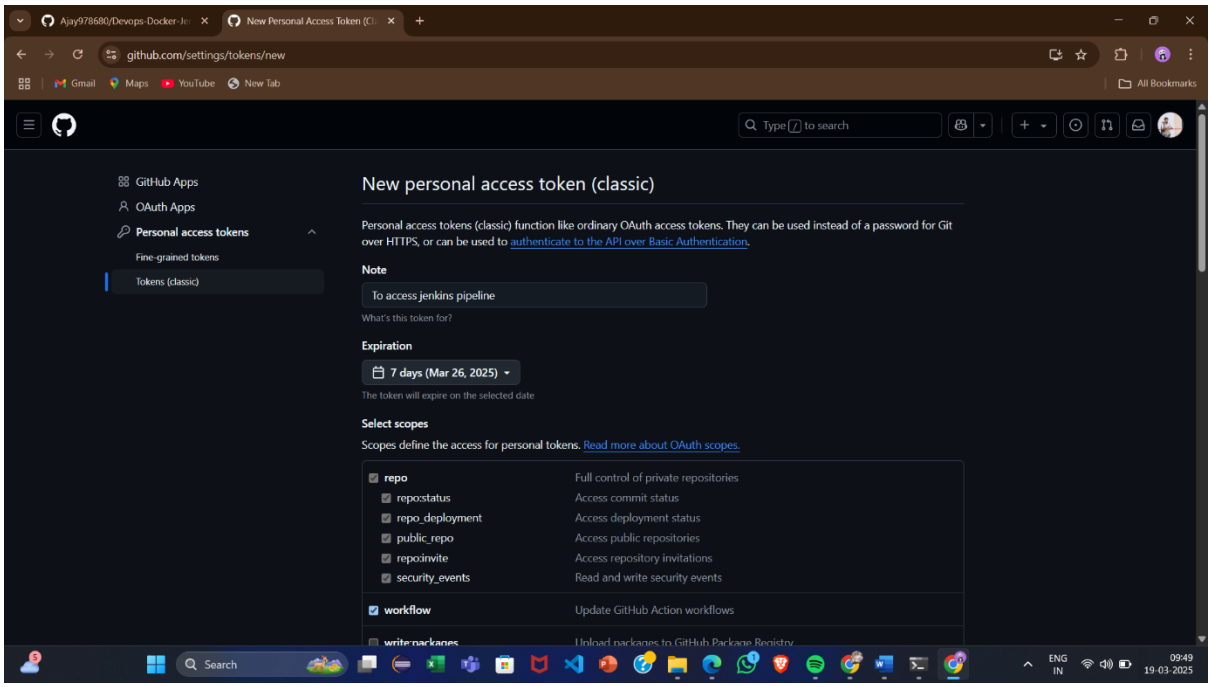
To Run an Docker

```
aravind@Aravind:~/docker-python-app$ sudo docker-compose build
WARN[0000] /home/aravind/docker-python-app/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential
confusion
Compose can now delegate builds to bake for better performance.
 To do so, set COMPOSE_BAKE=true.
[+] Building 90.9s (7/8)                                        docker:default
 => [app internal] load build definition from Dockerfile                   0.3s
 => => transferring dockerfile: 164B                                       0.0s
 => [app internal] load metadata for docker.io/library/python:3.11        11.4s
 => [app internal] load .dockerignore                                      0.2s
 => => transferring context: 2B                                            0.0s
 => [app 1/4] FROM docker.io/library/python:3.11@sha256:ebfa8696e47a      70.5s
 => => resolve docker.io/library/python:3.11@sha256:ebfa8696e47a68cff      0.2s
 => => sha256:18c8f2265fd94d4d17a0a465d6053f18dd19fdc 6.18kB / 6.18kB      0.0s
 => => sha256:ebfa8696e47a68cffebb31e370a93ce57c01bc7 9.08kB / 9.08kB      0.0s
 => => sha256:53218a9ae69d38aedef8f402e9a544862d3aee8 2.33kB / 2.33kB      0.0s
 => => sha256:255774e0027b72d2327719e78dbad5ad8c9c 64.40MB / 64.40MB      25.2s
 => => sha256:7cd785773db44407e20a679ce5439222e505 48.47MB / 48.47MB      36.3s
 => => sha256:091eb8249475f42de217265c501e0186f0a3e 24.01MB / 24.01MB      5.8s
 => => sha256:353e14e5cc47664fba714a7da288001d90 211.35MB / 211.35MB      60.6s
 => => sha256:963091970bc2ac7e8b231ef98df8c29a8cb44a 6.16MB / 6.16MB      29.0s
 => => sha256:e7235c43f7e31b18eb2e528d9c2e6b7935d9 24.31MB / 24.31MB      39.3s
 => => sha256:7f221c50e407e12492524c3298560149597363 4af6 250B / 250B      37.5s
 => => extracting sha256:7cd785773db44407e20a679ce5439222e505475eed5b      2.9s
 => => extracting sha256:091eb8249475f42de217265c501e0186f0a3ea7490ef      0.6s
 => => extracting sha256:255774e0027b72d2327719e78dbad5ad8c9cf446d055      3.0s
 => => extracting sha256:353e14e5cc47664fba714a7da288001d90427c705494      6.5s
 => => extracting sha256:963091970bc2ac7e8b231ef98df8c29a8cb44ac28a26      0.3s
 => => extracting sha256:e7235c43f7e31b18eb2e528d9c2e6b7935d99979a261      1.1s
 => => extracting sha256:7f221c50e407e12492524c3298560149597363 4af6da     0.0s
 => [app internal] load build context                                      0.2s
 => => transferring context: 618B                                          0.0s
 => [app 2/4] WORKDIR /app                                                 0.3s
```

Output:



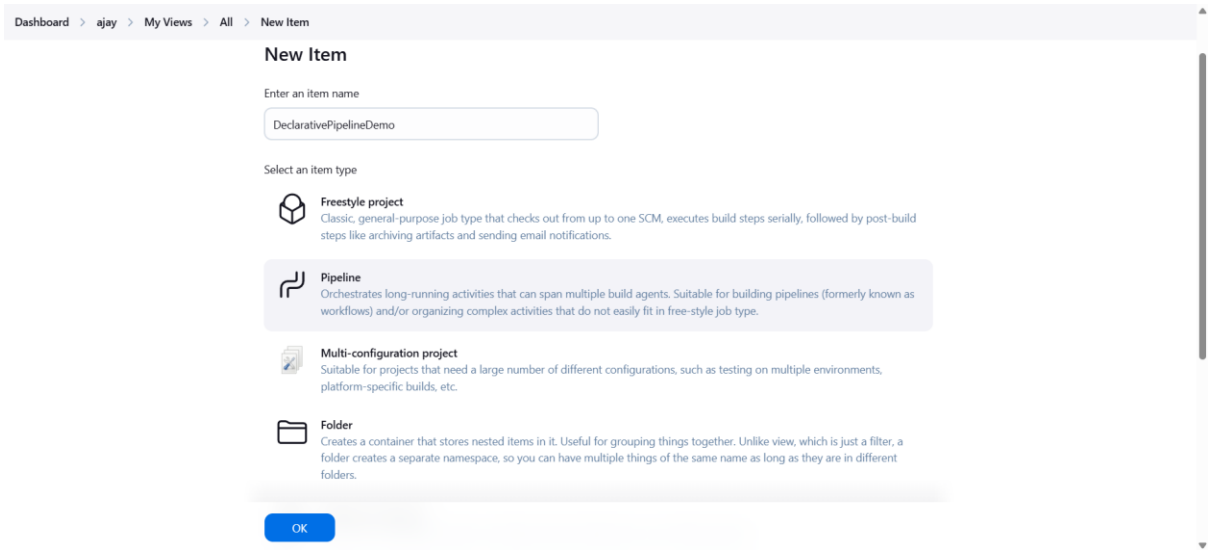
Devops Jenkins-Docker

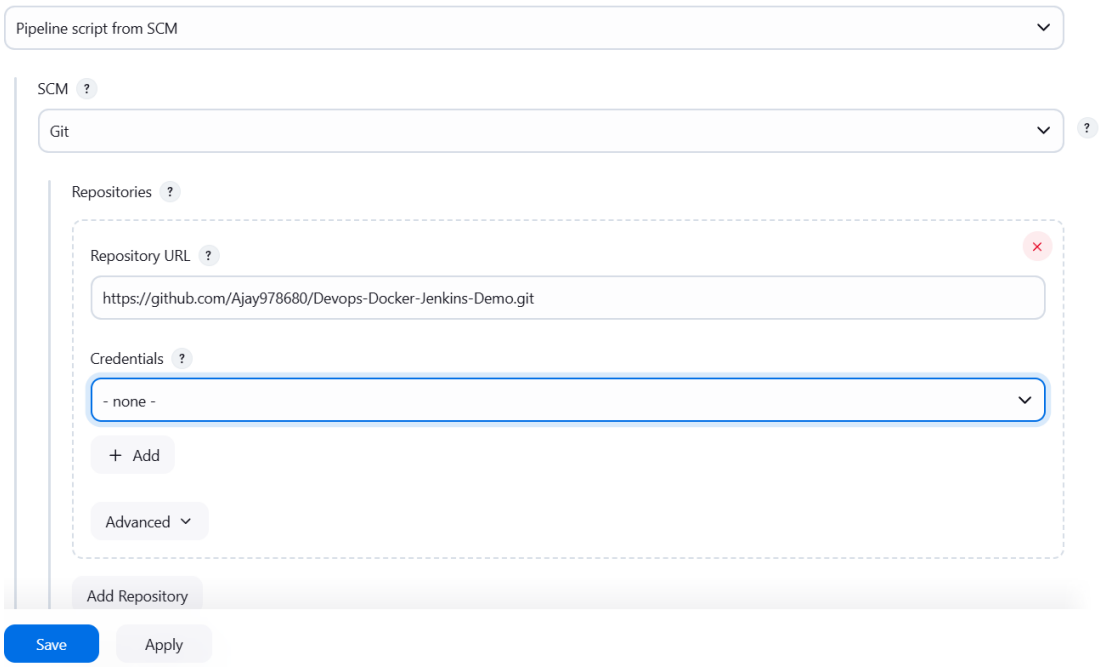


Personal Token : **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**

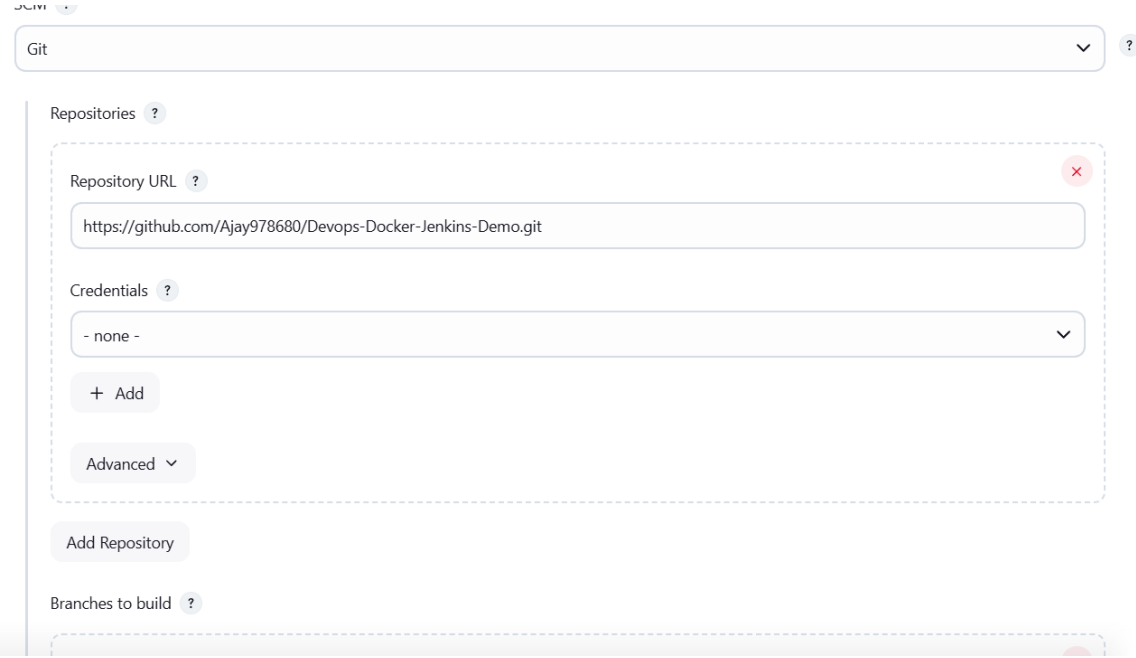
Start Jenkins

```
aravind@Aravind:~/docker-python-app$ sudo systemctl enable jenkins
[sudo] password for aravind:
Synchronizing state of jenkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable jenkins
aravind@Aravind:~/docker-python-app$ sudo systemctl start jenkins
```


Dashboard > ajay > My Views > All > New Item
New Item
Enter an item name
DeclarativePipelineDemo
Select an item type
Freestyle project
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.
Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.
Multi-configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.
Folder
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.
OK


Pipeline script from SCM
SCM
Git
Repositories
Repository URL
https://github.com/Ajay978680/Devops-Docker-Jenkins-Demo.git
Credentials
- none -
Add
Advanced
Add Repository
Save
Apply

Click on Add Credentials and Fill the details



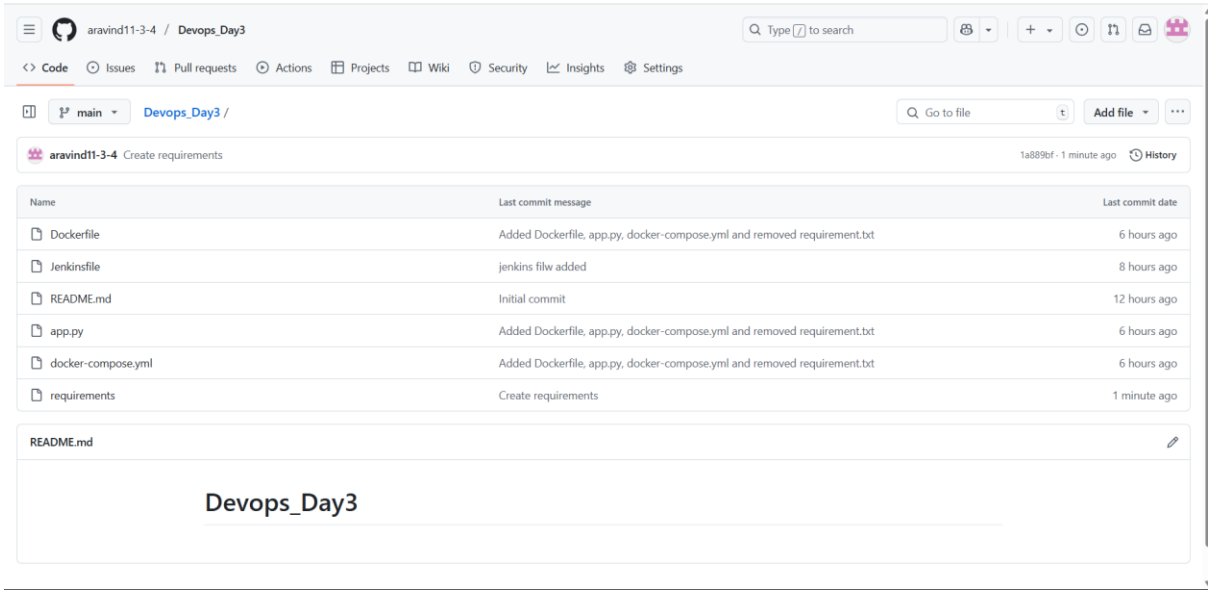
In First Time, it Will have Password, in that we will give github token for it.

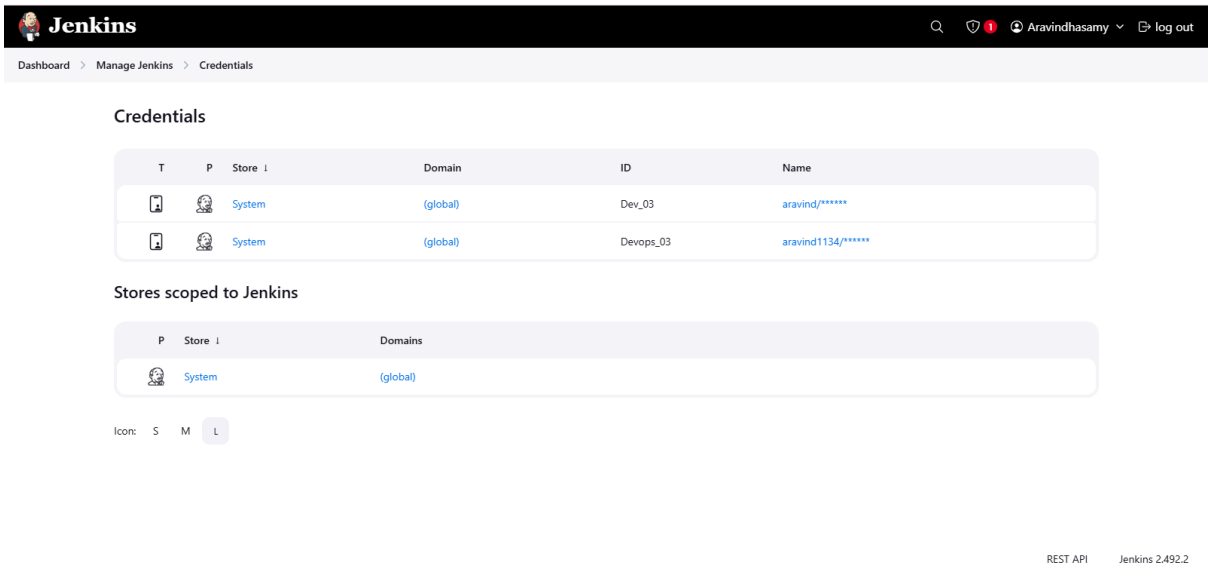
Clone the Git Repo in Terminal:

```
aravind@mcacc1-57:~/Devops_Day3$ git config --list
user.name=aravind
user.email=aravind110304@gmail.com
core.repositoryformatversion=0
core.filemode=true
core.bare=false
core.logallrefupdates=true
remote.origin.url=https://github.com/aravind11-3-4/Devops_Day3.git
remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
branch.main.remote=origin
branch.main.merge=refs/heads/main
aravind@mcacc1-57:~/Devops_Day3$ git config --global user.name aravind11-3-4
aravind@mcacc1-57:~/Devops_Day3$ git push https://github.com/aravind11-3-4/Devops_Day3.git
Username for 'https://github.com': aravind11-3-4
Password for 'https://aravind11-3-4@github.com':
remote: Invalid username or password.
fatal: Authentication failed for 'https://github.com/aravind11-3-4/Devops_Day3.git/'
aravind@mcacc1-57:~/Devops_Day3$ git push https://aravind11-3-4: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/aravind11-3-4/Devops_Day3.git
fatal: unable to access 'https://aravind11-3-4: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/aravind11-3-4/Devops_Day3.git/': URL rejected: Port number was not a decimal number be
tween 0 and 65535
aravind@mcacc1-57:~/Devops_Day3$ git push https://github.com/aravind11-3-4/Devops_Day3.git
Username for 'https://github.com': aravind11-3-4
Password for 'https://aravind11-3-4@github.com':
remote: Invalid username or password.
fatal: Authentication failed for 'https://github.com/aravind11-3-4/Devops_Day3.git/'
aravind@mcacc1-57:~/Devops_Day3$ git push https://github.com/aravind11-3-4/Devops_Day3.git
Username for 'https://github.com': Aravind
Password for 'https://Aravind@github.com':
remote: Invalid username or password.
fatal: Authentication failed for 'https://github.com/aravind11-3-4/Devops_Day3.git/'
aravind@mcacc1-57:~/Devops_Day3$ git push https://github.com/aravind11-3-4/Devops_Day3.git
Username for 'https://github.com': aravind11-3-4
Password for 'https://aravind11-3-4@github.com':
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 16 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (8/8), 887 bytes | 887.00 KiB/s, done.
Total 8 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/aravind11-3-4/Devops_Day3.git
   78d48a0..7ac94b3  main -> main
aravind@mcacc1-57:~/Devops_Day3$
```

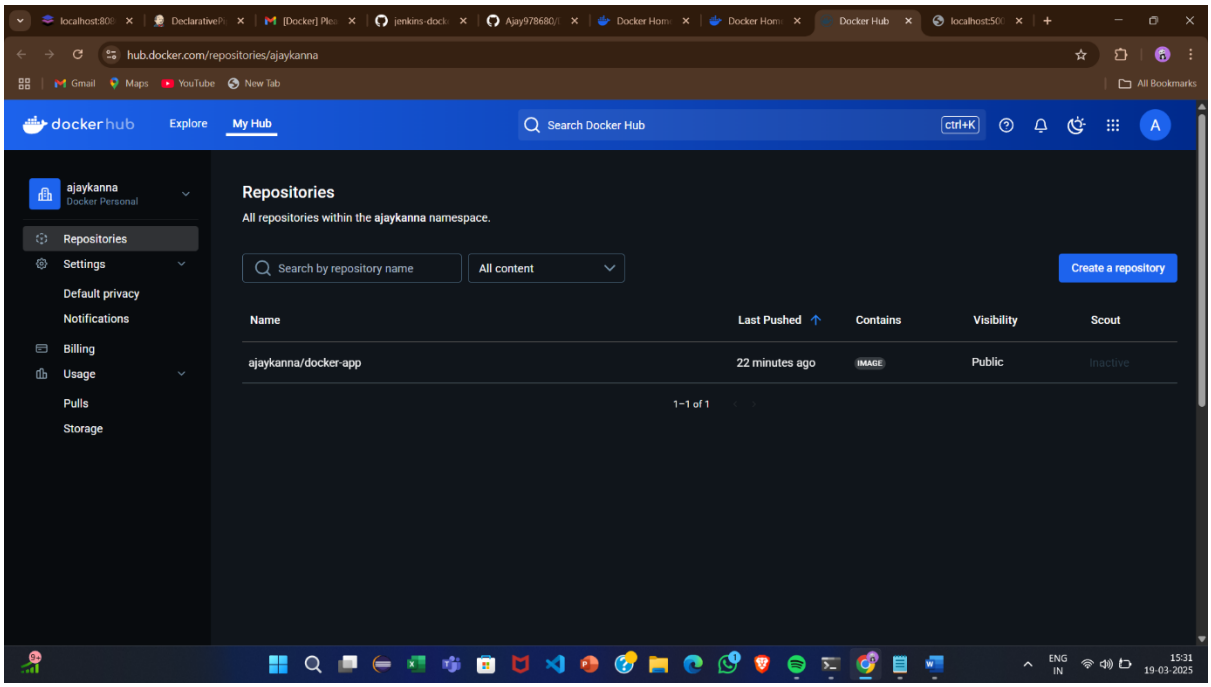
And move all other file to github repo folder.

Git fetch – Remote repo Change and haven't pulled in local.





Then create, Build now again and Click the repository in docker:



Click the container that we create in Jenkins: