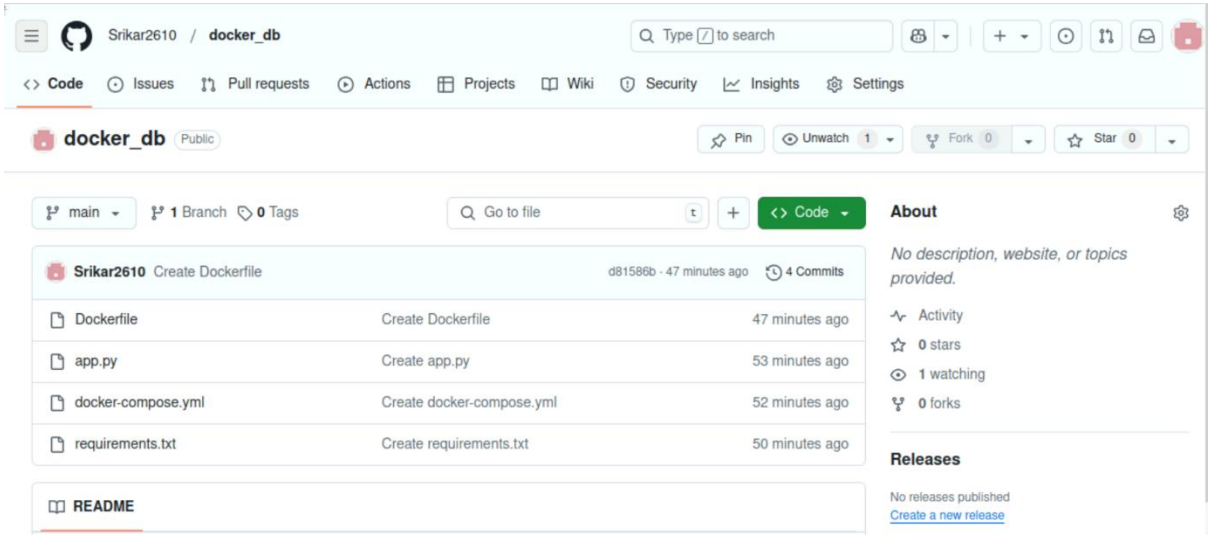
Multi-Container Flask Application with PostgreSQL Using Docker Compose

Step 1: Create a GitHub Repository and add files into it



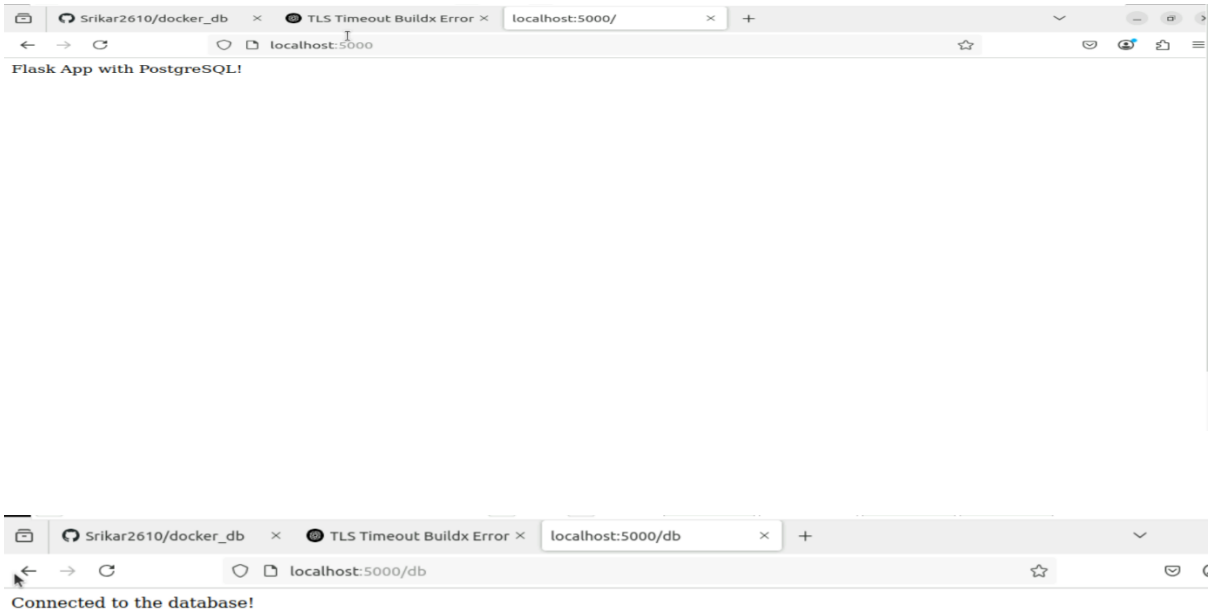
Step 2: Build and Start the Containers

```
master@master-vm:~/Desktop$ docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1~22.04.1
master@master-vm:~/Desktop$ sudo apt install docker-compose
[sudo] password for master:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  python3-attr python3-distutils python3-docker python3-dockerpty
  python3-docopt python3-dotenv python3-jsonschema python3-pyrsistent
  python3-setuptools python3-texttable python3-websocket
Suggested packages:
  python-attr-doc python-jsonschema-doc python-setuptools-doc
The following NEW packages will be installed:
  docker-compose python3-attr python3-distutils python3-docker
  python3-dockerpty python3-docopt python3-dotenv python3-jsonschema
  python3-pyrsistent python3-setuptools python3-texttable python3-websocket
0 upgraded, 12 newly installed, 0 to remove and 4 not upgraded.
Need to get 911 kB of archives.
After this operation, 4,842 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3-distu
tils all 3.10.8-1~22.04 [139 kB]
Get:2 http://in.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-websocket
```

Step 3: Verify the running Container

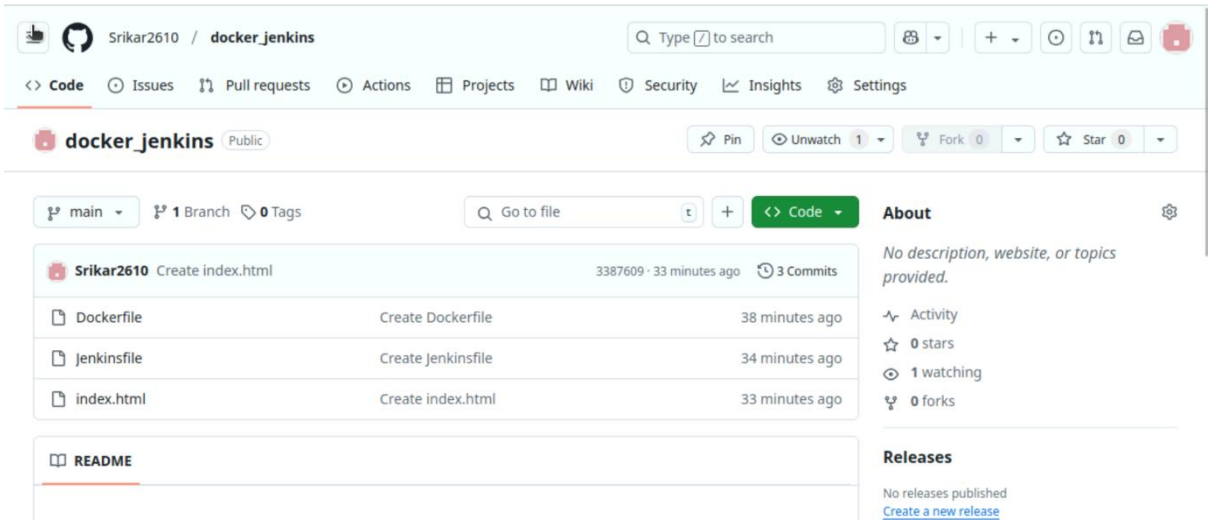
```
master@master-vm:~/Desktop/docker_db$ docker ps
CONTAINER ID   IMAGE           COMMAND                  CREATED          STATUS
        PORTS                                       NAMES
ea5a54ae0d3e   docker_db_web   "python app.py"          56 minutes ago   Up 56 m
inutes   0.0.0.0:5000->5000/tcp, :::5000->5000/tcp   docker_db_web_1
004f25a9aa8f   postgres        "docker-entrypoint.s…"   56 minutes ago   Up 56 m
inutes   0.0.0.0:5433->5432/tcp, :::5433->5432/tcp   docker_db_db_1
master@master-vm:~/Desktop/docker_db$
```

Step 4: Test the application

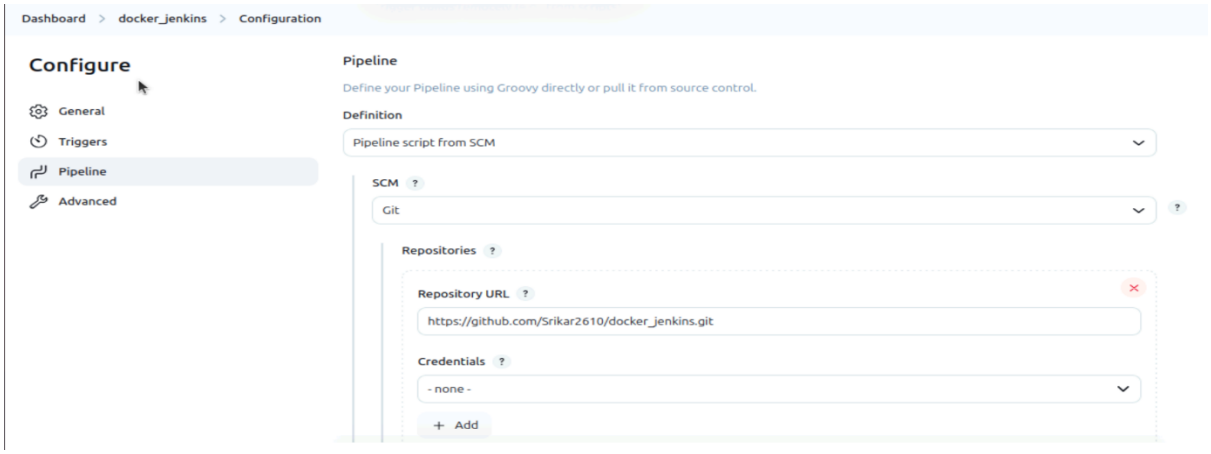


Jenkins-Dockers Using Web Application

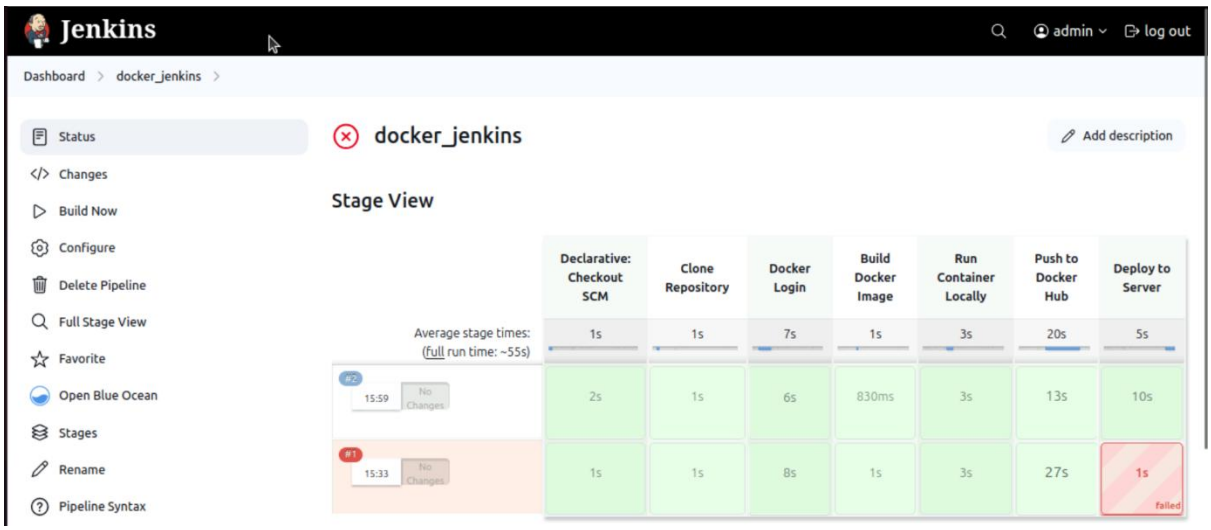
STEP 1: Push files to GitHub Repository



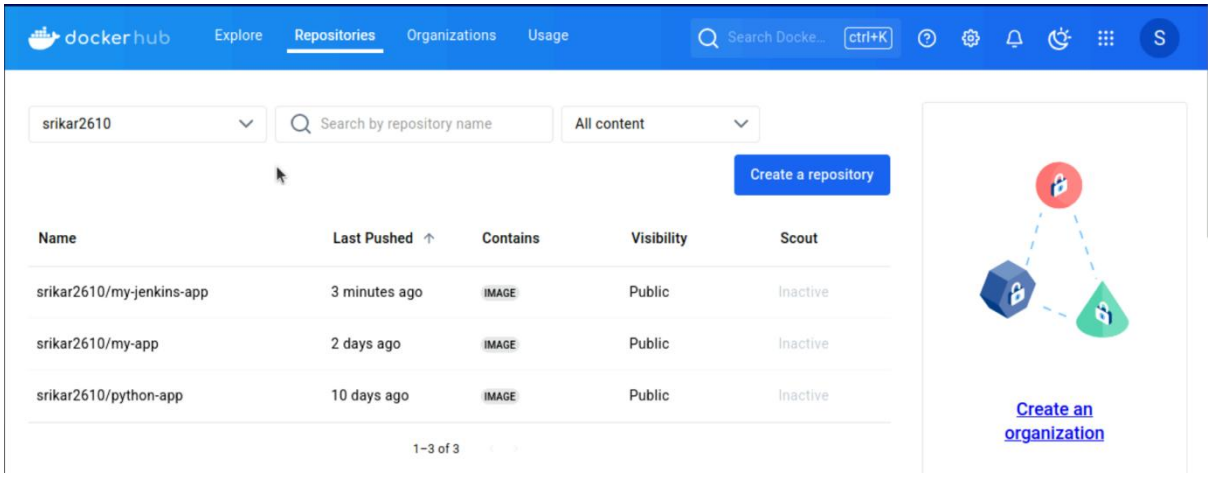
Step 2: Create a Pipeline



Step 3: Build the Pipeline



Step 4: my-jenkins-app image is build in Docker repository



OUTPUT