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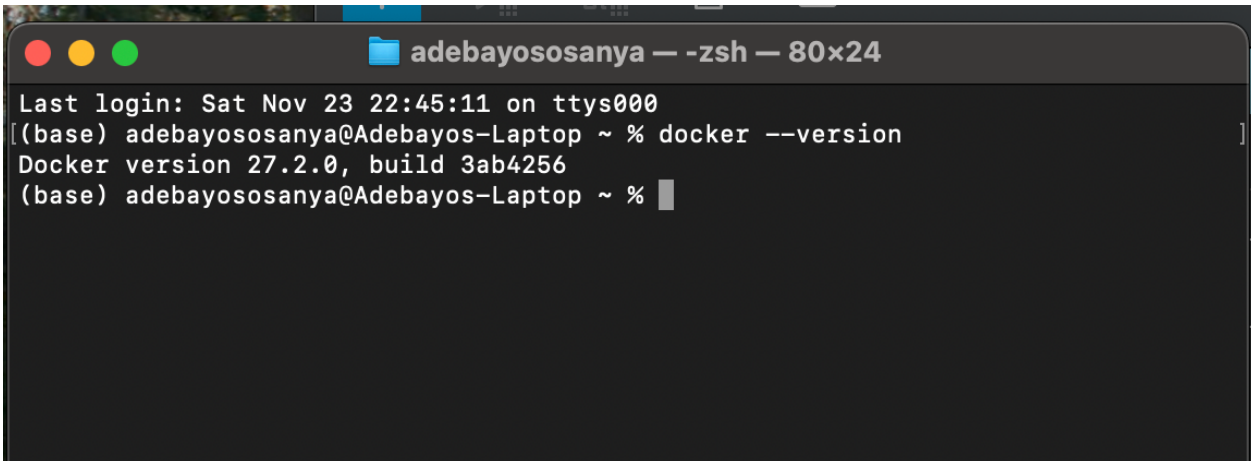
Week 11 Homework 1: Project: GenAI - Containerize your app

https://hc.labnet.sfbu.edu/~henry/sfbu/course/cloud_computing/genai/slide/exercise_kubernetes.html

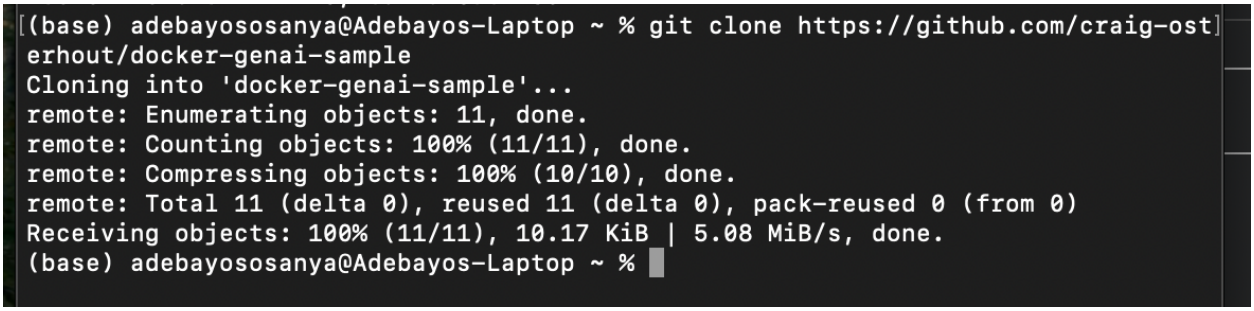
Step 1: Open Terminal

Step 2: Check if docker is already installed, if not, install



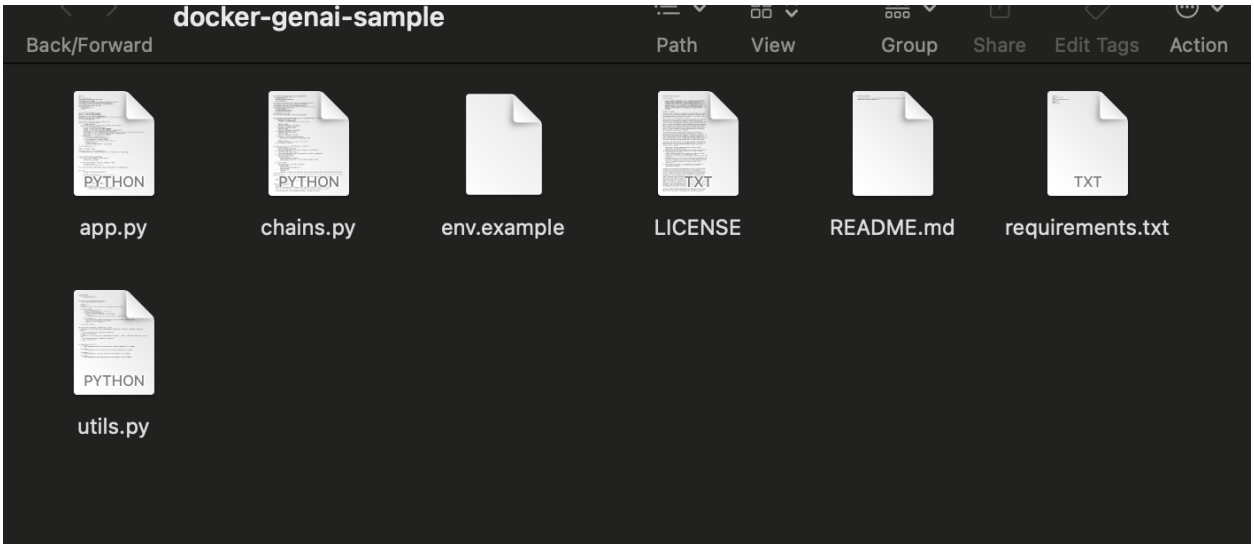
Step 3: Clone the Sample Application Repository

~git clone https://github.com/craig-osterhout/docker-genai-sample



Step 4: Navigate to the Cloned Directory

cd docker-genai-sample
pwd



Step 5: Initialize the Application with Docker

```
This utility will walk you through creating the following files with sensible de
faults for your project:
  - .dockerignore
  - Dockerfile
  - compose.yaml
  - README.Docker.md

Let's get started!

? What application platform does your project use? Python
[? What version of Python do you want to use? 3.12.4                            ]
[? What port do you want your app to listen on? 8000                            ]
? What is the command you use to run your app (e.g., gunicorn 'myapp.example:app
' --bind=0.0.0.0:8000)?
```

streamlit run app.py --server.address=0.0.0.0 --server.port=8000

```
Let's get started!

? What application platform does your project use? Python
[? What version of Python do you want to use? 3.12.4                                    ]
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[' --bind=0.0.0.0:8000)? streamlit run app.py --server.address=0.0.0.0 --server.p]
ort=8000

✓ Created → .dockerignore
✓ Created → Dockerfile
✓ Created → compose.yaml
✓ Created → README.Docker.md

→ Your Docker files are ready!
  Review your Docker files and tailor them to your application.
  Consult README.Docker.md for information about using the generated files.

What's next?
  Start your application by running → docker compose up --build
  Your application will be available at http://localhost:8000
(base) adebayososanya@Adebayos-Laptop docker-genai-sample %
```

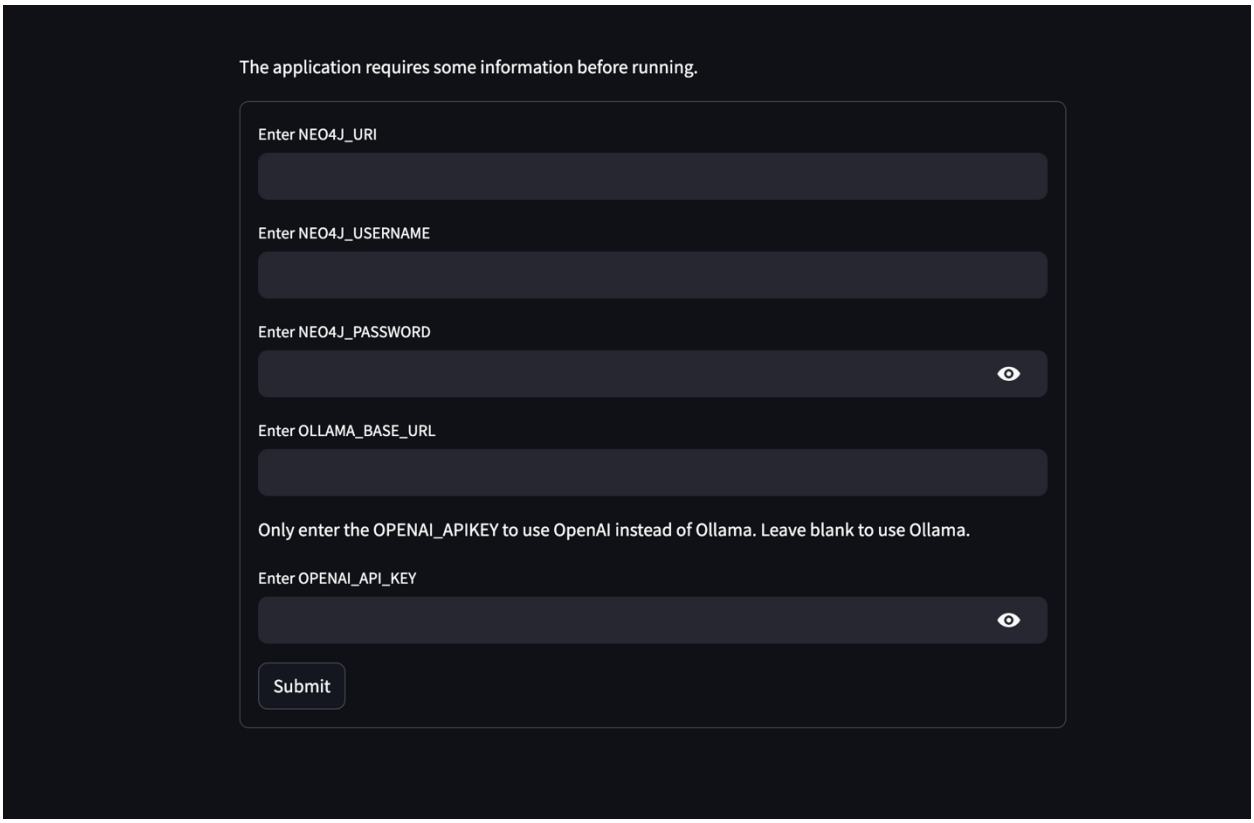
docker compose up –build

```
(base) adebayososanya@Adebayos-Laptop docker-genai-sample % docker compose up --build
[+] Building 257.9s (13/13) FINISHED                                    docker:desktop-linux
 => [server internal] load build definition from Dockerfile                              0.0s
 => => transferring dockerfile: 2.03kB                                                   0.0s
[ => [server] resolve image config for docker-image://docker.io/docker/dockerfile:1     1.1s
 => CACHED [server] docker-image://docker.io/docker/dockerfile:1@sha256:865e5dd094beca432  0.0s
 => => resolve docker.io/docker/dockerfile:1@sha256:865e5dd094beca432e8c0a1d5e1c465db5f99  0.0s
 => [server internal] load metadata for docker.io/library/python:3.11.4-slim             1.2s
 => [server internal] load .dockerignore                                                 0.0s
 => => transferring context: 708B                                                        0.0s
 => [server base 1/5] FROM docker.io/library/python:3.11.4-slim@sha256:17d62d681d9ecef20  19.2s
 => => resolve docker.io/library/python:3.11.4-slim@sha256:17d62d681d9ecef20aae6c6605e9cf  0.0s
 => => sha256:195bd9e1cc4ce5c5a37dd5aa84655124ccb493c78fedcdd7c51e032f170 3.38MB / 3.38MB  4.1s
 => => sha256:a18610e9d04ba666042cc81099c8673493d266d52fc73d8a3e5bf72b4f0023e 245B / 245B  0.3s
 => => sha256:493e98a6d531d3e898241b29e0b8e182289a651c4f9f7d67bb1f50d9811 3.32MB / 3.32MB  3.7s
 => => sha256:ed400aec434dd69b5fec2ef7cf80866b6b17455124631ccf81dc46fd 16.84MB / 16.84MB  11.9s
 => => sha256:4ee097f9a36616fddb52e45aba72142c4bc6f2e594f0a746e406acfd 29.16MB / 29.16MB  18.1s
 => => extracting sha256:4ee097f9a36616fddb52e45aba72142c4bc6f2e594f0a746e406acfde4f02f51  0.4s
 => => extracting sha256:493e98a6d531d3e898241b29e0b8e182289a651c4f9f7d67bb1f50d9811a1b43  0.0s
 => => extracting sha256:ed400aec434dd69b5fec2ef7cf80866b6b17455124631ccf81dc46fda19eb2d3  0.2s
 => => extracting sha256:a18610e9d04ba666042cc81099c8673493d266d52fc73d8a3e5bf72b4f0023e8  0.0s
 => => extracting sha256:195bd9e1cc4ce5c5a37dd5aa84655124ccb493c78fedcdd7c51e032f170791f2  0.1s
 => [server internal] load build context                                                 0.0s
 => => transferring context: 224B                                                        0.0s
 => [server base 2/5] WORKDIR /app                                                       0.2s
 => [server base 3/5] RUN adduser     --disabled-password     --gecos ""     --home "/non  0.1s
 => [server base 4/5] RUN --mount=type=cache,target=/root/.cache/pip     --mount=type=b  201.2s
 => [server base 5/5] COPY . .                                                           0.2s
 => [server] exporting to image                                                         34.4s
 => => exporting layers                                                                 26.1s
 => => exporting manifest sha256:fdb1176a70c931bc3e3a3186275215fb921a28efd47aed4f1036eb2c  0.0s
 => => exporting config sha256:5f162883d62660ae4780740474264O7f4f5c20a86127d869279d725428  0.0s
 => => exporting attestation manifest sha256:76cf12db5664f10b30d3b2217f1cec53b176439ed814  0.0s
 => => exporting manifest list sha256:2cd95283df478c7ccf102e3e259141b870a618362c1cc991929  0.0s
 => => naming to docker.io/library/docker-genai-sample-server:latest                     0.0s
 => => unpacking to docker.io/library/docker-genai-sample-server:latest                  8.2s
 => [server] resolving provenance for metadata file                                      0.0s
[+] Running 2/2
 ✔ Network docker-genai-sample_default     Create...                                     0.0s
 ✔ Container docker-genai-sample-server-1  Cre...                                      0.2s
Attaching to server-1
server-1  |
server-1  | Collecting usage statistics. To deactivate, set browser.gatherUsageStats to false.
server-1  |
server-1  |
server-1  |   You can now view your Streamlit app in your browser.
server-1  |
server-1  |   URL: http://0.0.0.0:8000
server-1  |


v View in Docker Desktop   o View Config   w Enable Watch
```

Step 7: Open a browser and view the application at

~http://localhost:8000



Step 8: press this command in the terminal to stop the application.

~ ctrl+c