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CS571- Week 11 Homework 2

Q6 ===> GenAI - Containerized video transcription and chat app

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

Step 1. Containerize your app

1. Open Command Prompt in your Windows

- Create a working directory and navigate inside it(optional).

mkdir video_transcription_chat_app

cd video_transcription_chat_app

- In a terminal, run the following command to clone the sample application's repository.

git clone https://github.com/Davidnet/docker-genai.git

```
C:\Users\HP>mkdir video_transcription_chat_app

C:\Users\HP>cd video_transcription_chat_app

C:\Users\HP\video_transcription_chat_app>git clone https://github.com/Davidnet/docker-genai.git
Cloning into 'docker-genai'...
remote: Enumerating objects: 66, done.
remote: Counting objects: 100% (66/66), done.
remote: Compressing objects: 100% (43/43), done.
remote: Total 66 (delta 24), reused 60 (delta 20), pack-reused 0
Receiving objects: 100% (66/66), 114.38 KiB | 880.00 KiB/s, done.
Resolving deltas: 100% (24/24), done.

C:\Users\HP\video_transcription_chat_app>
```

2. Go to the docker-genai directory.

```
C:\Users\HP\video_transcription_chat_app>cd docker-genai

C:\Users\HP\video_transcription_chat_app\docker-genai>dir
 Volume in drive C is Windows
 Volume Serial Number is E48C-D9EE

 Directory of C:\Users\HP\video_transcription_chat_app\docker-genai

07/31/2024  11:32 PM    <DIR>          .
07/31/2024  11:32 PM    <DIR>          ..
07/31/2024  11:32 PM               494 .env.example
07/31/2024  11:32 PM             3,668 .gitignore
07/31/2024  11:32 PM    <DIR>          docker-bot
07/31/2024  11:32 PM               298 docker-compose.yml
07/31/2024  11:32 PM             1,091 LICENSE
07/31/2024  11:32 PM               103 README.md
07/31/2024  11:32 PM    <DIR>          yt-whisper
               5 File(s)          5,654 bytes
               4 Dir(s)   9,444,667,392 bytes free

C:\Users\HP\video_transcription_chat_app\docker-genai>
```

3. Create a copy of the .env.example file, name it .env and edit it in the editor (can use vim, cp, ...) I used notepad

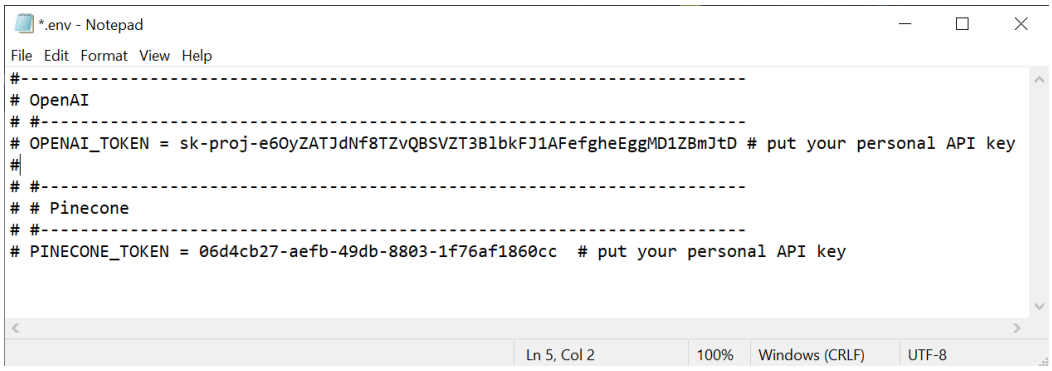
~ notepad .env

And then check this for a prerequisite and create a personal api key from OpenAI and/or pinecone:

- You have an OpenAI API Key.
- You have a Pinecone API Key.
- You have installed the latest version of Docker Desktop. And open and start the docker app in your desktop
- You have a Git client.

Specify your API keys. In the docker-genai directory, create a text file called .env and specify your API keys inside

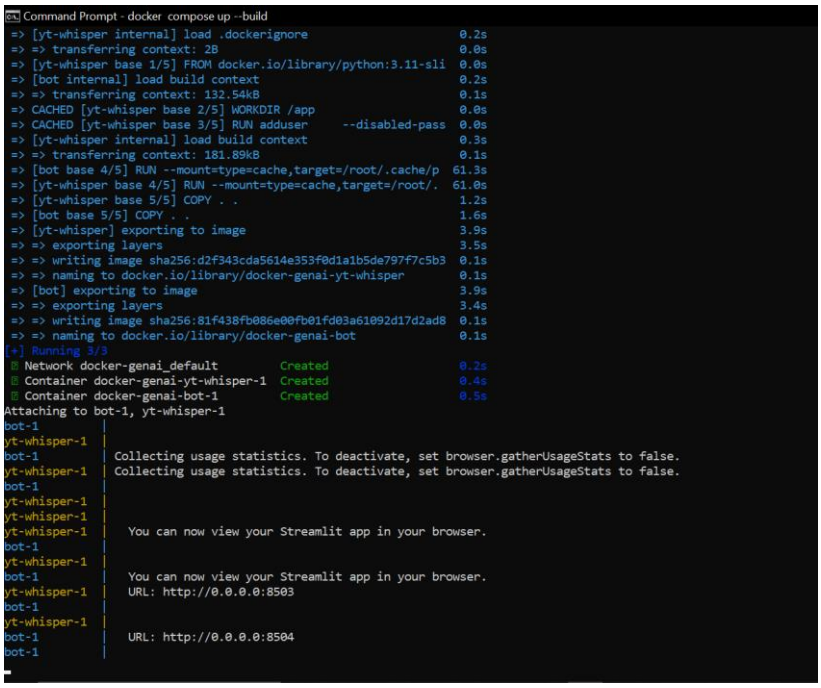
```
C:\Users\HP\video_transcription_chat_app\docker-genai>notepad .env
```



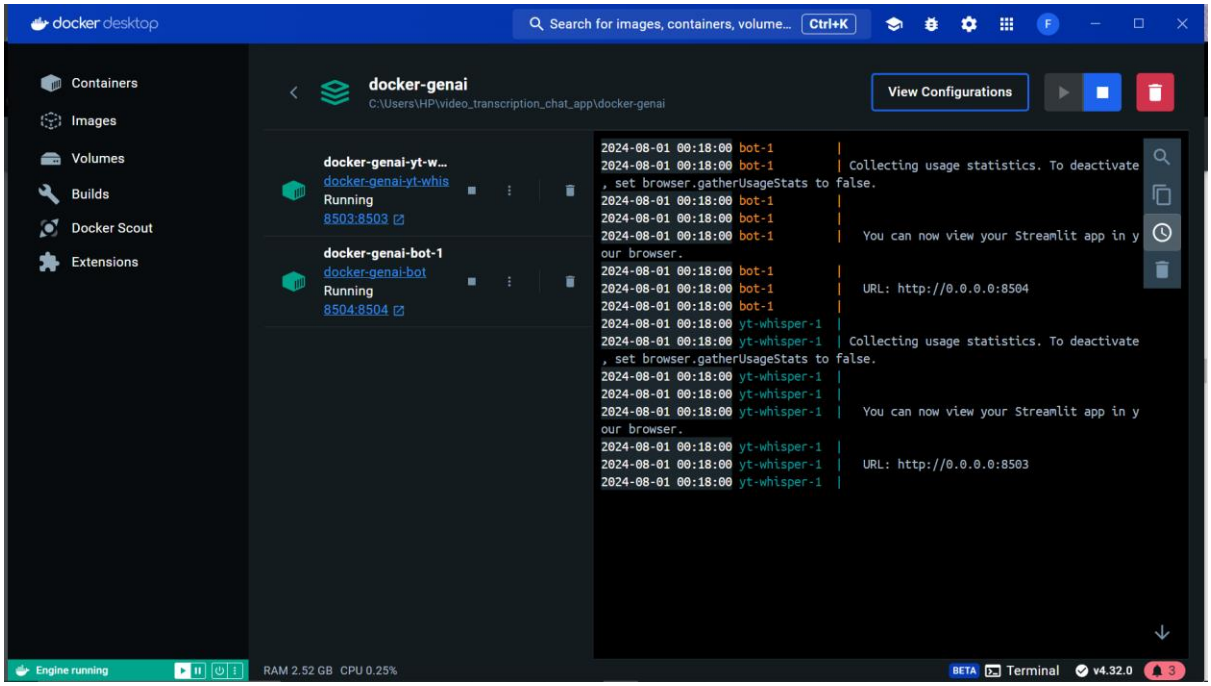
```
C:\Users\HP\docker-genai>dir
 Volume in drive C is Windows
 Volume Serial Number is E48C-D9EE

 Directory of C:\Users\HP\docker-genai

07/31/2024  11:28 PM    <DIR>          .
07/31/2024  11:28 PM    <DIR>          ..
07/31/2024  11:28 PM               494 .env.example
07/31/2024  11:28 PM             3,668 .gitignore
07/31/2024  11:28 PM    <DIR>          docker-bot
07/31/2024  11:28 PM               298 docker-compose.yml
07/31/2024  11:28 PM             1,091 LICENSE
07/31/2024  11:28 PM               103 README.md
07/31/2024  11:28 PM    <DIR>          yt-whisper
               5 File(s)          5,654 bytes
               4 Dir(s)   8,831,819,776 bytes free
```

4. Build and run the application. In a terminal, change directory to your docker-genai directory and run the following command.

docker compose up --build



And when viewed from the Docker Desktop (press v to see like this below)



• In the above logs, we can see the services are exposed on ports 8503 and 8504. The two services are complimentary to each other.

• The yt-whisper service is running on port 8503. This service feeds the Pinecone database with videos that you want to archive.

Step 2: Video transcription and chat

Using the yt-whisper service

5. Open a browser and access the yt-whisper service at.

http://localhost:8503

6. Once the application appears, in the Youtube URL field specify a Youtube video URL and select Submit.

7. After processing the video, a video list appears in the web app that informs you which videos have been indexed in Pinecone. It also provides a button to download the transcript.

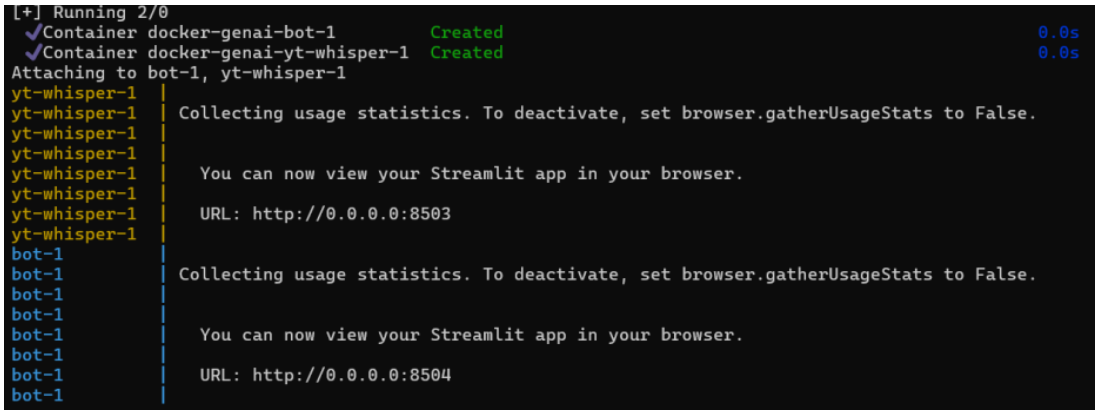
Using the dockerbot service

8. Open a browser and access the service at.

http://localhost:8504

9. The following example asks the question, "What is a sugar cookie?".

10. Docker Compose is a tool for defining and running multi-container applications. Here with a single command, it enables to easily run this application simplifies the control of your entire application stack, making it easy to manage all things in a single, comprehensible YAML configuration file.



11. To stop the application, we press 'ctrl+C' in the terminal.