Report of COMP7940 Project

1. **Chatbot ID**
   6174689459:AAHRukz1VafGXz25A_1Dak9I7JUxe1grqbc

2. **Name and Student ID**
   Name: Zhao Yangyi
   Student ID: 22441514

3. **Summary of app**
   The Telegram chatbot is a **study assistant chatbot**. It uses Python code to interact with users and a MongoDB database to store and retrieve data. The chatbot is hosted on the Azure cloud platform using Docker.

   a) Python code of app
   The main Python code uses the telegram, openai, youtube and Google translate libraries to interact with the Telegram API and handle user inputs. It has various functions to handle different types of user requests and responses:
   - Start command: Greet user and represent that user can interact with the chatbot.
   - Chat function: This function uses openai API, and user can ask the chatbot questions about what they are learning and get answers from the chatbot.
   - Search Video function: This function uses google-api-python-client API to search some videos related to the areas that users are learning and show 5 videos to users to watch.
   - Translate function: This function uses Google translate API and users can use this function to translate the contents they get from the chatbot to Chinese, so that they can understand the knowledge better.

   It also connects to the MongoDB database using the PyMongo library to store and retrieve data.
   Another Python file named "command statistic.py" is used to count the number of different commands sent by different user ids in the database and display the data in bar charts to analyze which commands are used more frequently by users.

   b) Database
   The chatbot uses a MongoDB database to store user data such as user id and command sent by users. The database is hosted on a remote MongoDB server, and the Python code connects to it using the PyMongo library.

   c) Docker and Cloud Platform
   The chatbot is hosted on the Azure cloud platform using Docker. Docker is used to containerize the chatbot and its dependencies, making it easy to deploy and manage on the cloud. The chatbot runs on a virtual machine on Azure, which is configured to run Docker containers. Azure provides a reliable and scalable infrastructure for hosting the chatbot, ensuring that it is always

available and responsive to user requests.

d) Git

Different developers can pull the code and files from Github and develop and update the code.

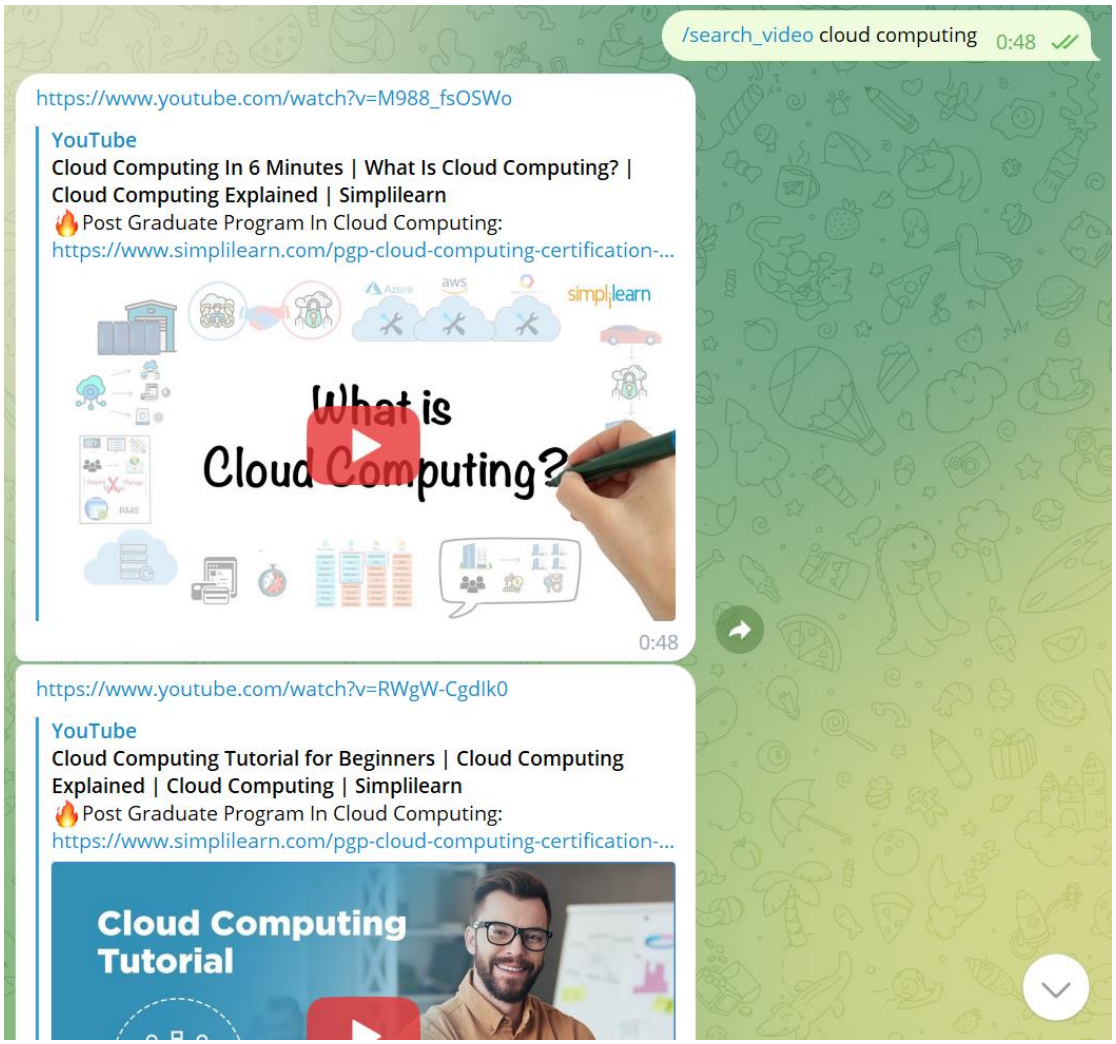
For this project, I just work alone, so I just update my code and files by Github.

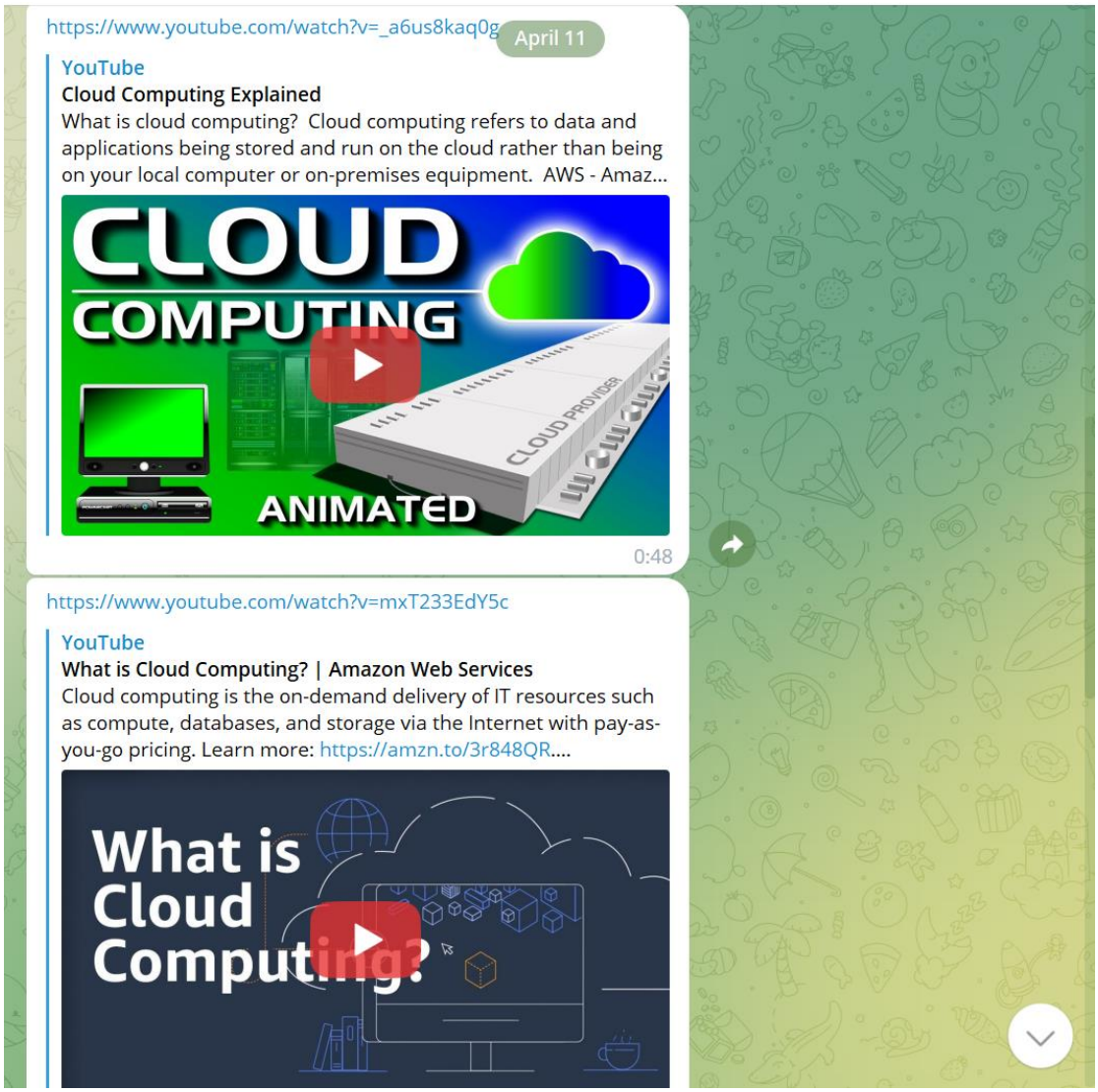
4. Result

a) Chatbot Interact

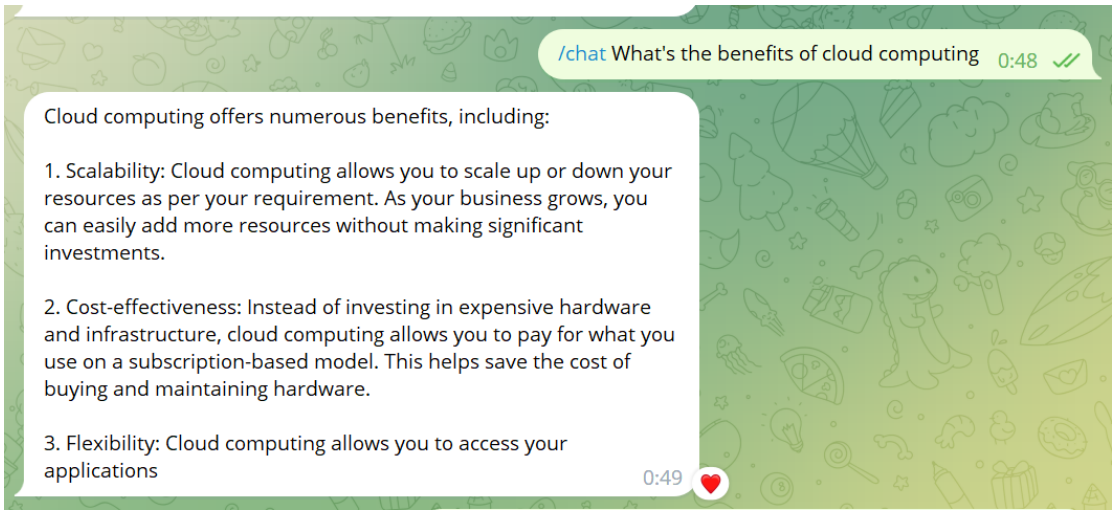
- Start function:

- Search video function:

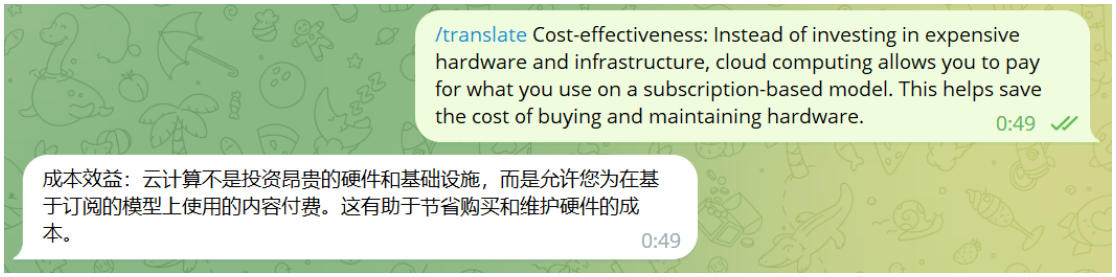




- Chat function:

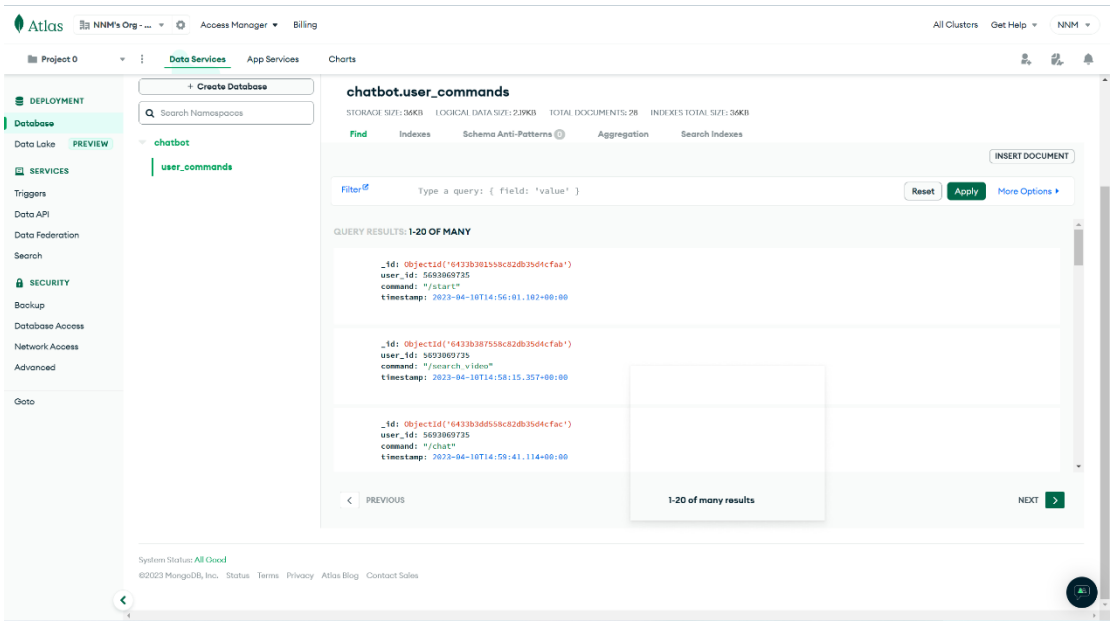


- Translate function:

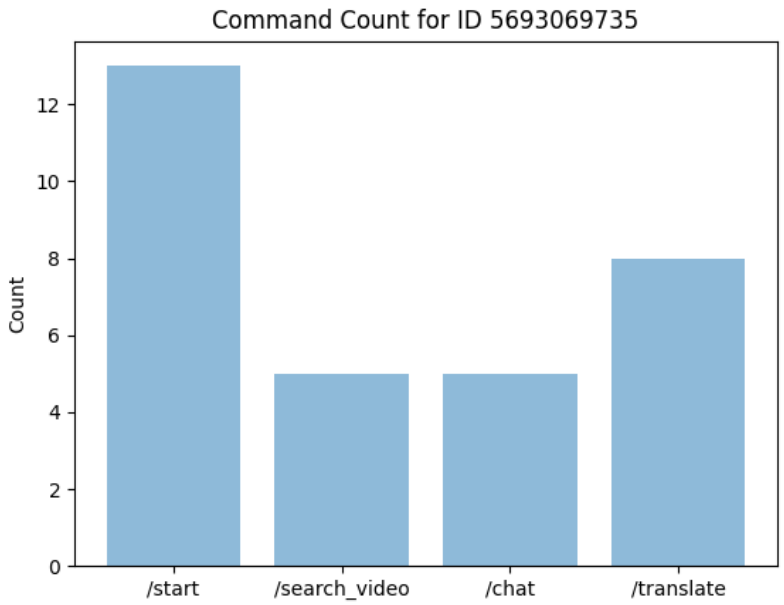


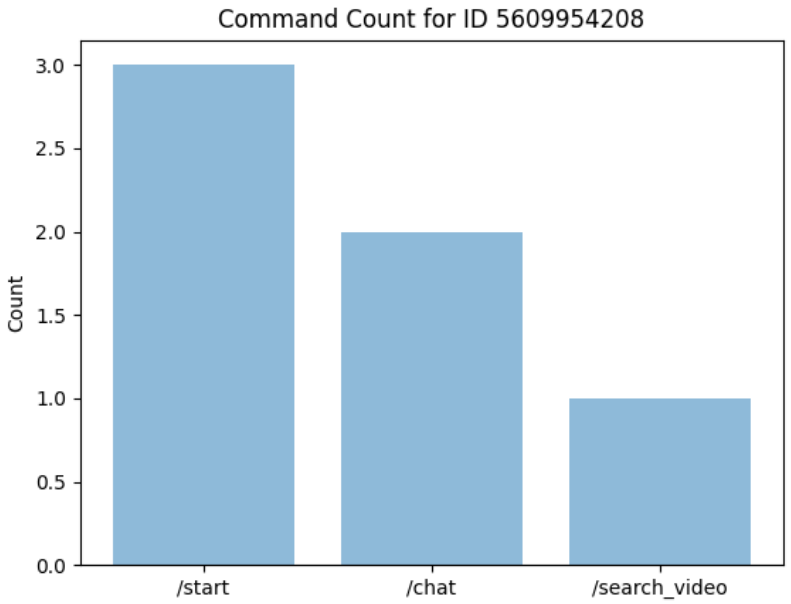
b) Database

- Database:

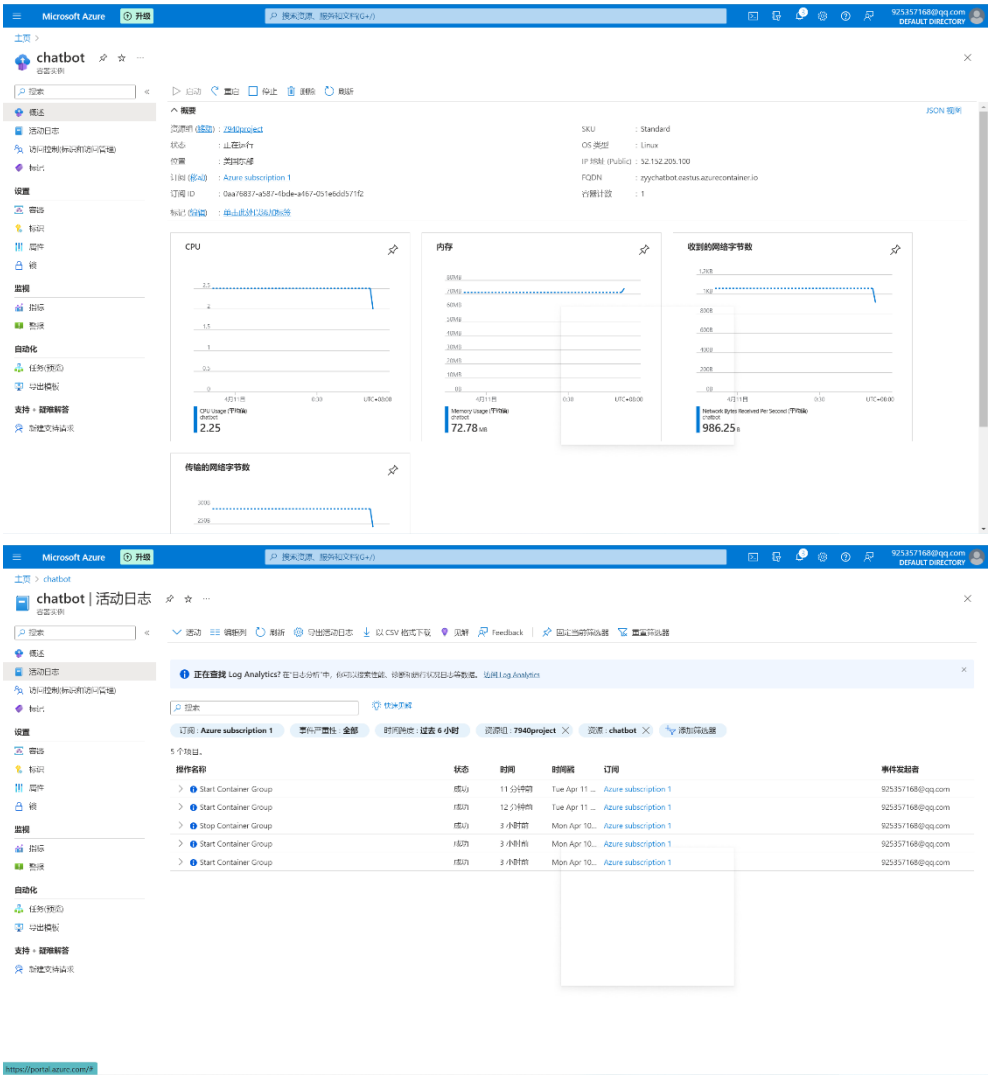


- Command statistic:





c) Cloud Platform



Reference

1) Chatgpt
   https://chat.openai.com/chat
2) Azure support document
   https://learn.microsoft.com/zh-cn/cli/azure/
3) MongoDB support document
   https://www.mongodb.com/docs/
4) Docker documentation
   https://learn.microsoft.com/en-us/dotnet/architecture/microservices/container-docker-introduction/docker-defined