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Note :- The answer is in bullets (➔)

Assigignment-14 :

Ques 1 : Explain the below DockerFile

The given Dockerfile is used to create a Docker image that is based on the nvidia/cuda:11.4.2-cudnn8-runtime-ubuntu20.04 image, which includes the CUDA and cuDNN libraries for running GPU-accelerated applications.

The Dockerfile starts by running the command **RUN apt-get update && apt-get install --no-install-recommends --no-install-suggests -y curl** which updates the package list and installs curl package. Then it runs **RUN apt-get install unzip** command to install unzip package. Next, it runs **RUN apt-get -y install python3** and **RUN apt-get -y install python3-pip** commands to install python3 and python3-pip packages.

It then uses the command **COPY . /var/app** to copy the current directory to the working directory of the image, which is set to **/var/app** . And runs **RUN pip install --no-cache-dir -r requirements.txt** command to install dependencies from requirements.txt file.

It also runs a script **RUN python3 download_HF_Question_Generation_summarization.py** command. This script could be used for some specific task.

It then sets the environment variables **ENV LC_ALL=C.UTF-8** and **ENV LANG=C.UTF-8**, which is used to ensure consistent character encoding in the image. After that, it exposes port 80 using **EXPOSE 80** command so that it can be accessed from outside the container.

Finally, it starts the app using gunicorn, which is a python web server library, with the command **CMD ["gunicorn", "-b", "0.0.0.0:80","app: app", "--workers", "1", '-k',"uvicorn.workers.UvicornWorker']**. This command tells gunicorn to bind to all available network interfaces on port 80 and to start one worker process to handle incoming requests.