Ques 1 : Explain the below DockerFile

```
FROM nvidia/cuda:11.4.2-cudnn8-runtime-ubuntu20.04


#set up environment
RUN apt-get update && apt-get install --no-install-recommends --no-install-suggests -y curl
RUN apt-get install unzip
RUN apt-get -y install python3
RUN apt-get -y install python3-pip

# Copy our application code
WORKDIR /var/app

# . Here means current directory.
COPY . .


RUN pip3 install --no-cache-dir -r requirements.txt
RUN python3 download_HF_Question_Generation_summarization.py

ENV LC_ALL=C.UTF-8
ENV LANG=C.UTF-8


EXPOSE 80

# Start the app
CMD ["gunicorn", "-b", "0.0.0.0:80","app:app","--workers","1","-k","uvicorn.workers.UvicornWorker"]
```

- First always start with base image. It is using nvidia/cuba Docker image.
- Second, **RUN** commands is used to run command in base image, here it is updating os, installing packages like, unzip, python3, python-pip
- Third, **WORKDIR** this command is used to change the working directory. In above file we are changing the working directory to /var/app
- Fourth **COPY** command, this command is used to copy the content, it required 2 mandatory parameter first is source location of the file and second destination. Here two dot means it is copying all the files from current project folder to current working directory which is /var/app
- Again RUN command and it is now installing all the dependencies from requirements.txt file, --no-cache-dir is to disable the caching to reduce the image size
- Next **ENV** command is setting up the environment variable
- EXPOSE command is used to tell the docker container to listen the application on specific port. Here it is using port 80
- CMD is used to execute commands. Here it is using gunicorn which is webserver gateway and running the application on 0.0.0.0:80.
- app:app means python module name “app” and another app after colon is variable so it is like from app import app
- --workers is the number of worker processors here it is 1 worker.