1. **Docker:** **Write** a Docker File to pull the Ubuntu with open jdk and write any java application. Give the difference between YML and dockerfile.

Aspect	YAML (YML)	Dockerfile
Purpose	Data serialization, configuration files	Building Docker images
Usage	Various applications, data representation	Specific to Docker containerization
Format	Human-readable data serialization	Script-like text file for Docker image build
Syntax	Uses indentation, whitespace-based	Sequence of commands for Docker image build
Commands	N/A	`FROM`, `RUN`, `COPY`, `CMD`, etc.
Examples	Configuration files for software apps	Steps to build Docker images

sudo apt update

sudo apt install -y apt-transport-https ca-certificates curl software-properties-common

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -

sudo apt update

$ curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | gpg --dearmor -o /usr/share/keyrings/docker-archive-keyring.gpg

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /usr/share/keyrings/docker-archive-keyring.gpg

```
echo "deb [arch=amd64 signed-by=/usr/share/keyrings/docker-archive-keyring.gpg]
https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable" | sudo tee
/etc/apt/sources.list.d/docker.list > /dev/null



sudo apt update


sudo apt install docker-ce

sudo systemctl start docker


sudo systemctl enable docker



 docker --version


mkdir A31

cd A31

nano Dockerfile


# Use the official Ubuntu as a base image
FROM ubuntu:latest

# Update Ubuntu packages and install OpenJDK
RUN apt-get update && apt-get install -y openjdk-11-jdk

# Set the working directory in the container
WORKDIR /app

# Copy the Java application to the container
COPY HelloWorld.java /app

# Compile the Java application
RUN javac HelloWorld.java

# Define the command to run the Java application when the container starts
```

```
CMD ["java", "HelloWorld"]


nano HelloWorld.java

public class HelloWorld {
        public static void main(String[] args) {
        System.out.println("Hello, World!");
        }
}



sudo docker build -t my-java-app .

sudo docker run my-java-app


docker  images
```