Day 2

Maven Installation:

1. sudo apt install maven -y

2. mvn –version

Pipeline code:

pipeline {

agent any

stages {

stage('scm') {

steps {

git branch: 'main', url: 'https://github.com/devasriashok/devops.git'

}

}

stage('build') {

steps {

sh "mvn clean"

sh "mvn install"

}

}

Jenkins Installation:

JENKINS

Jenkins is an open-source automation tool written in Java programming language that allows continuous integration. Jenkins offers a straightforward way to set up a continuous integration or continuous delivery environment for almost any combination of languages and source code repositories using pipelines, as well as automating other routine development tasks.

The following are the main or most popular Jenkins use cases:

● Continuous Integration: With Jenkins pipelines, we can achieve CI for both applications and infrastructure as code.

● Continuous Delivery: You can set up well-defined and automated application delivery workflows with Jenkins pipelines.

Jenkins achieves CI (Continuous Integration) and CD (Continuous Deployment) with the help of plugins. Plugins are used to allow the integration of various DevOps stages. If you want to integrate a particular tool, you must install the plugins for that tool.

1. sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \

https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key

echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc]" \

https://pkg.jenkins.io/debian-stable binary/ | sudo tee \

/etc/apt/sources.list.d/jenkins.list > /dev/null

sudo apt-get update

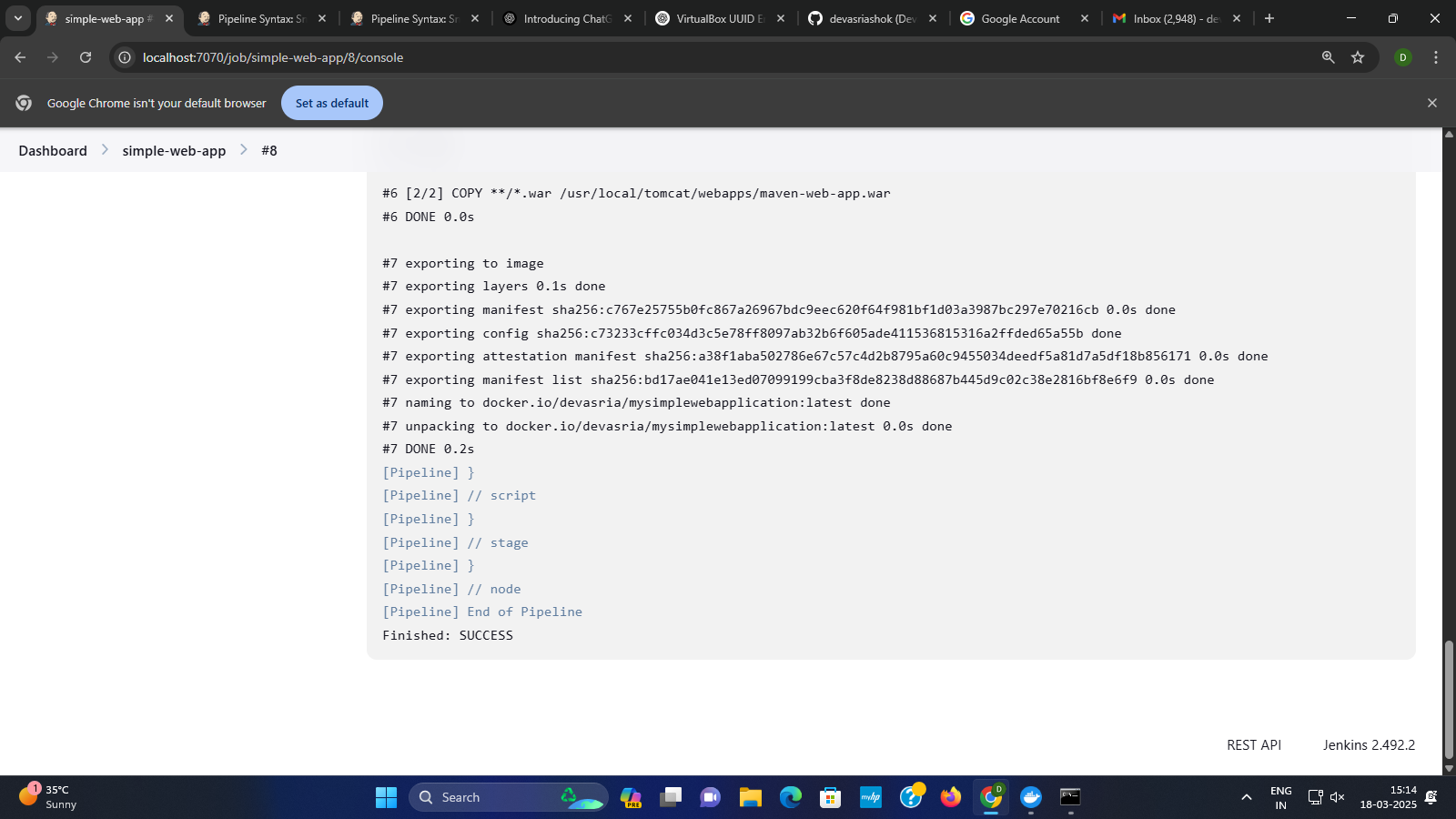
sudo apt-get install jenkins

2. sudo service Jenkins restart

3. sudo service Jenkins status

4. sudo cat /var/lib/jenkins/secrets/initialAdminPassword

Maven –build:



push to hub(simple-web-app)

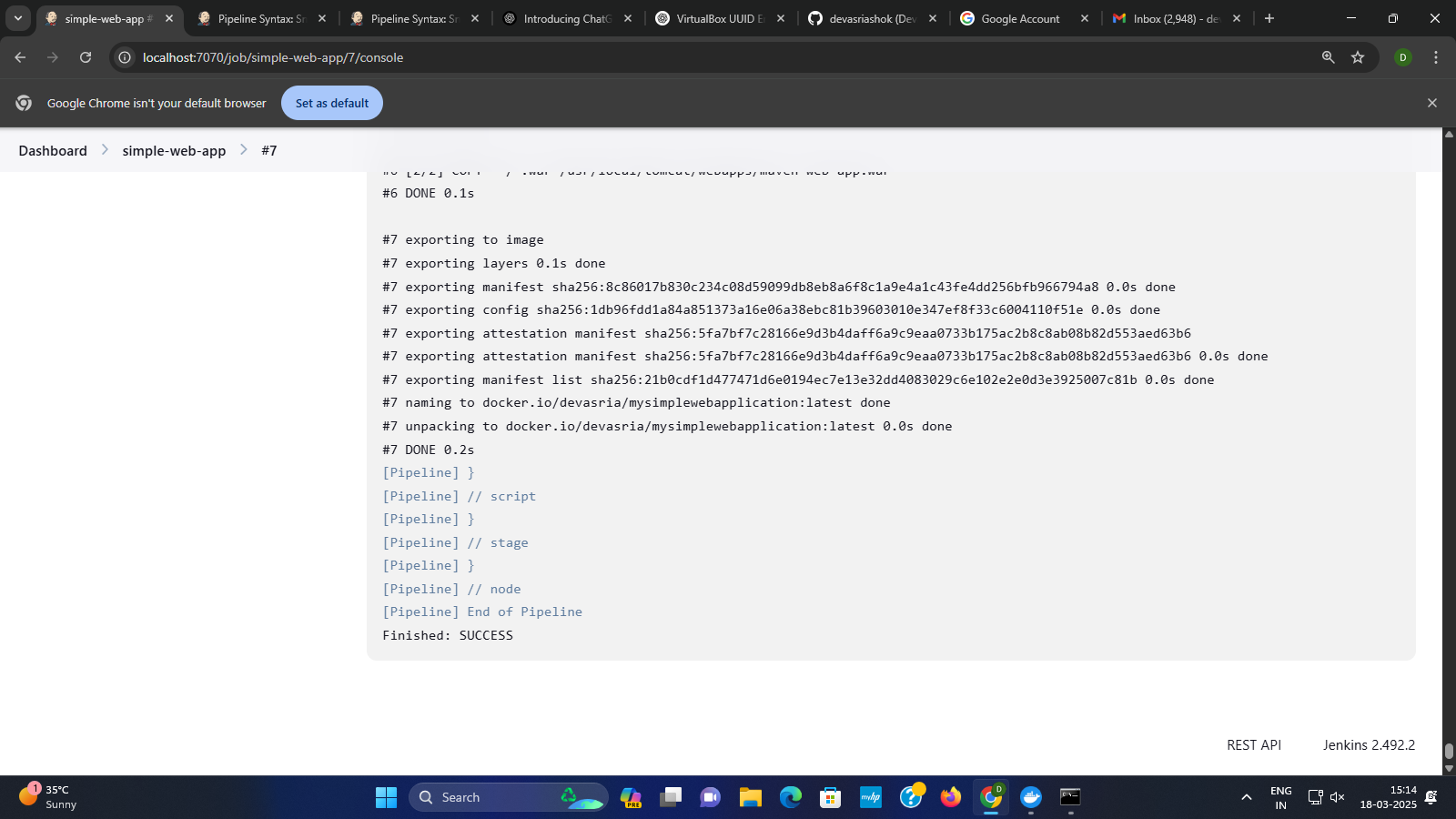
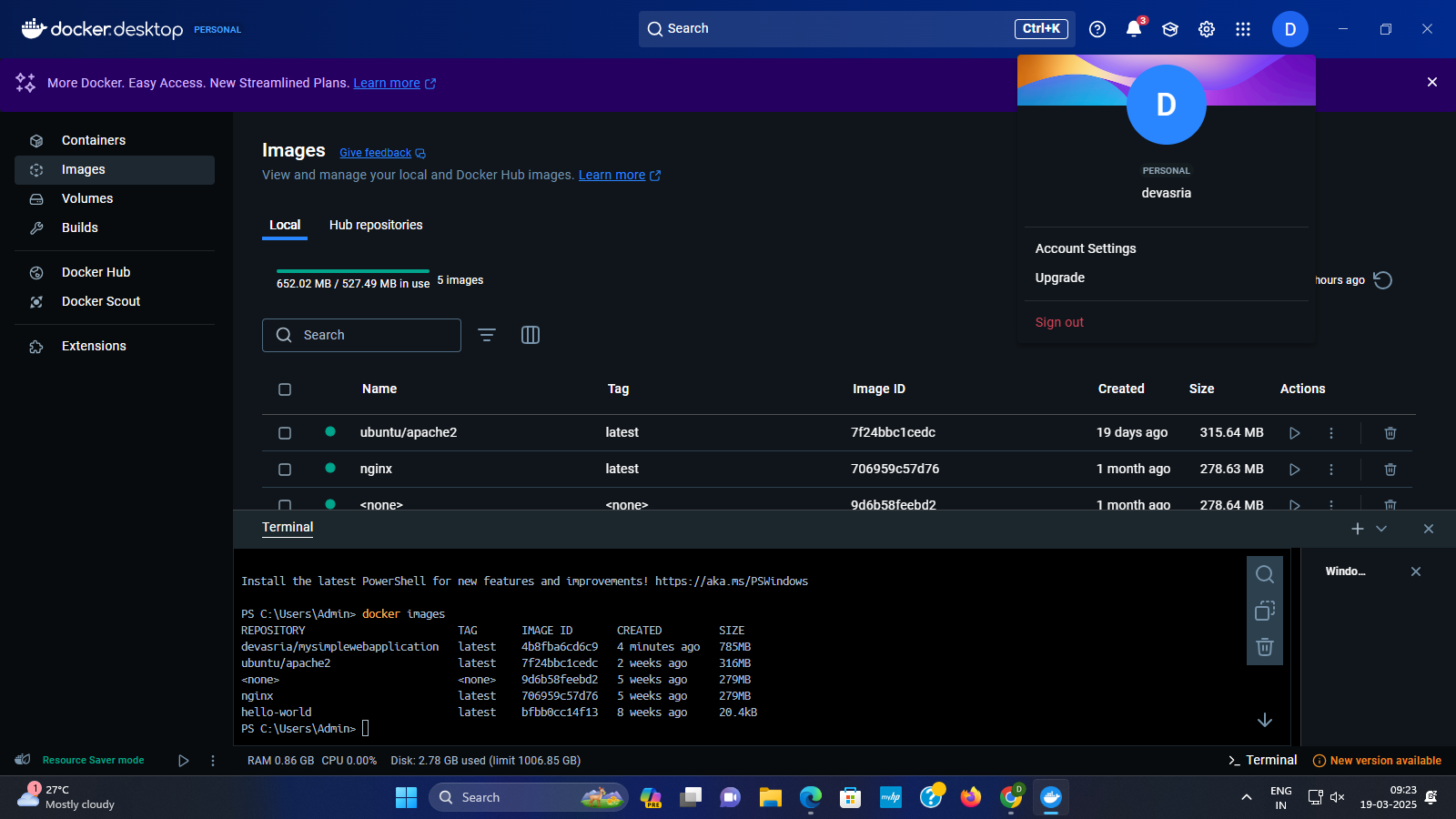


Image in hub:



DOCKER COMMANDS FOR UBUNTU

$ sudo apt update -y

$ sudo apt install docker -y

$ sudo service docker start (or) sudo systemctl start docker

$ sudo service docker enable (or) sudo systemctl enable docker

DOCKER COMPOSE

Docker Compose is a tool that allows you to define and manage multi-container Docker applications. It simplifies the process of running multiple containers, their configurations, and their interdependencies. Compose uses a YAML file to define the services, networks, and volumes required for your application.

 Docker Compose is a tool which is used to manage multi container-based applications.

 Using Docker Compose we can easily setup & deploy multi container-based applications.

 We will give containers information to Docker Compose using YML file (docker-compose.yml)

 Docker Compose YML should have all the information related to containers creation.

 Docker Compose YML File Looks Like:

Docker compose commands:

sudo apt install docker-compose

sudo nano docker-compose.yml

version: '3'

services:

web:

image: nginx:latest

ports:

- "80:80"

db:

image: mysql:latest

environment:

MYSQL\_ROOT\_PASSWORD: Devasri9104

docker-compose up -d

Creating network "devasri\_default" with the default driver

Pulling web (nginx:latest)...

latest: Pulling from library/nginx

6e909acdb790: Pull complete

5eaa34f5b9c2: Pull complete

417c4bccf534: Pull complete

e7e0ca015e55: Pull complete

373fe654e984: Pull complete

97f5c0f51d43: Pull complete

c22eb46e871a: Pull complete

Digest: sha256:124b44bfc9ccd1f3cedf4b592d4d1e8bddb78b51ec2ed5056c52d3692baebc19

Status: Downloaded newer image for nginx:latest

Pulling db (mysql:latest)...

latest: Pulling from library/mysql

804bb8ae89de: Pull complete

1b515e7ceb69: Pull complete

eaa11c0a9f08: Pull complete

8d18181893b8: Pull complete

e0a910cc8604: Pull complete

bc0c792ca096: Pull complete

8d73d2a73425: Pull complete

4a7e00d873b9: Pull complete

27a2553d6a80: Pull complete

69e76254f502: Pull complete

Digest: sha256:9b9d0aab4860798acff13d2a0ece3bc26639fe18b83fa5cd3e3d0e16b3ed05dd

Status: Downloaded newer image for mysql:latest

Creating devasri\_web\_1 ... done

Creating devasri\_db\_1 ... done

docker exec -it devasri\_db\_1 /bin/bash

bash-5.1# mysql -u -root -p

Enter password:

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 10

Server version: 9.2.0 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>