Contents

[1. Create and Activate an Environment 2](#_Toc138000765)

[2. Run a Container & Make a Prediction 8](#_Toc138000766)

[3. Improve Logging & Save Output 10](#_Toc138000767)

[4. Upload the Docker Image 11](#_Toc138000768)

[5. Configure Kubernetes to Run Locally 12](#_Toc138000769)

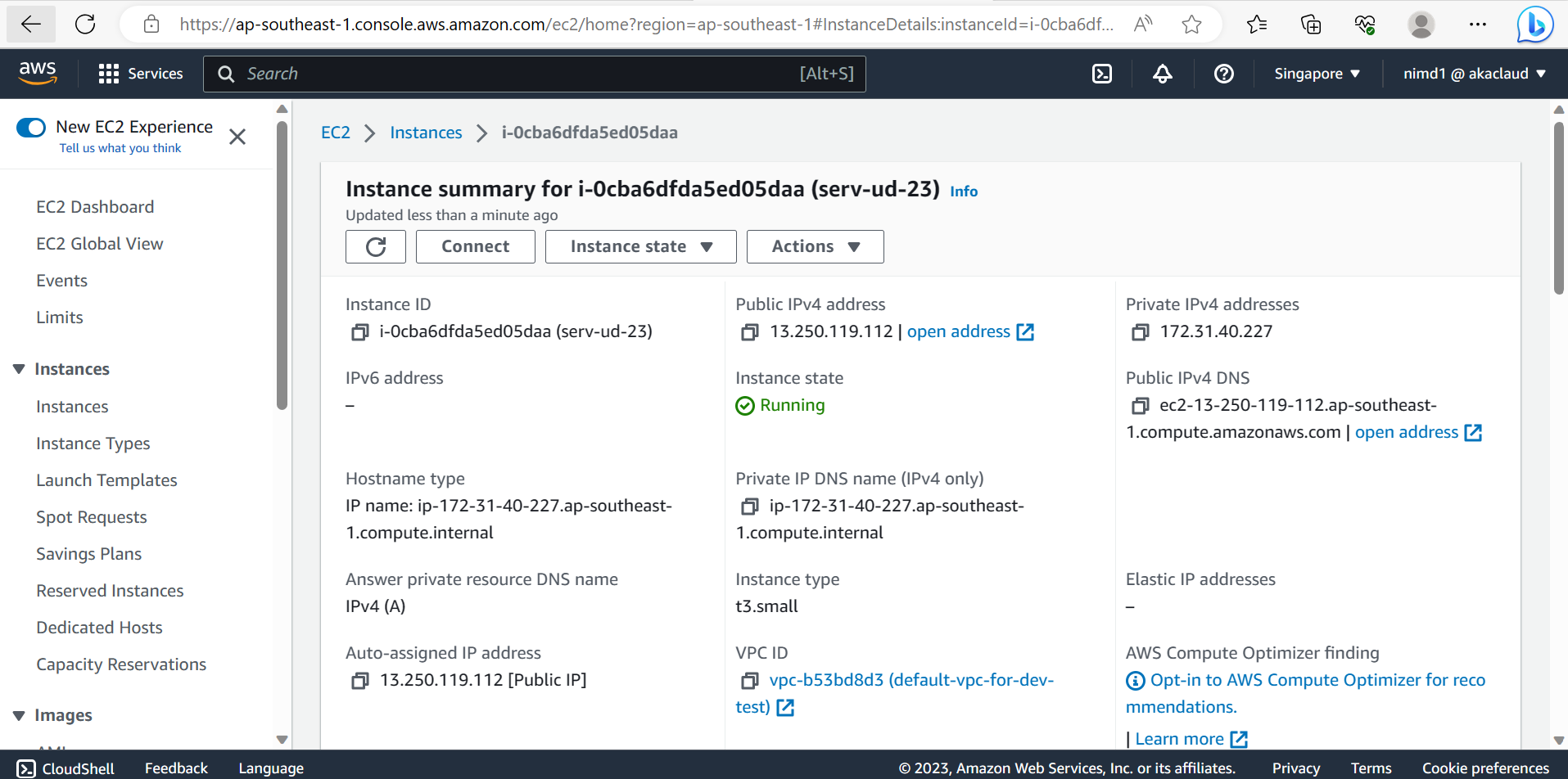
[6. Deploy with Kubernetes and Save Output Logs 13](#_Toc138000770)

[7. [Important] Delete Cluster 14](#_Toc138000771)

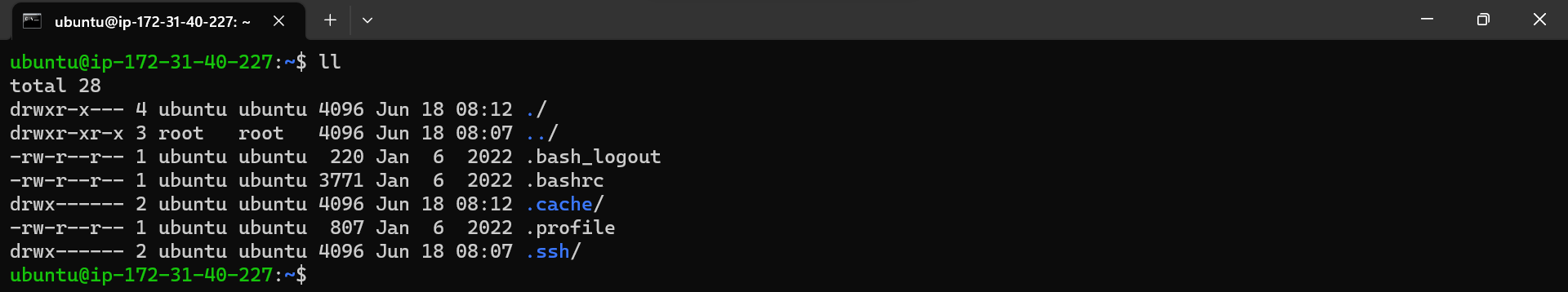
[8. CircleCI Integration 14](#_Toc138000772)

# Create and Activate an Environment

Create the Vm

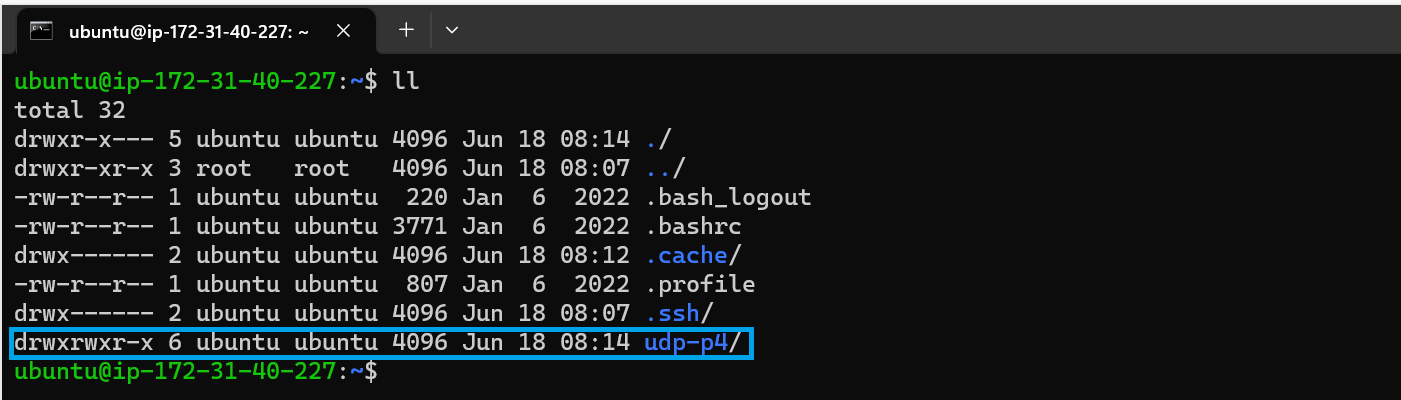


Connect the VM by the file pem



Get resource for the VM

**get clone** [**https://github.com/modani041384/udp-p4.git**](https://github.com/modani041384/udp-p4.git)



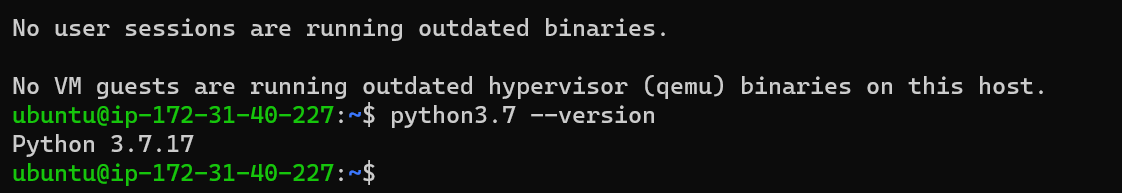
-Install python3.7 for ubuntu

sudo apt update

sudo apt install software-properties-common -y

sudo add-apt-repository ppa:deadsnakes/ppa

sudo apt install python3.7 –y



-Install pip3.7

sudo apt install python3-pip -y

wget https://bootstrap.pypa.io/get-pip.py

python3.7 get-pip.py

python3.7 -m pip install --upgrade pip

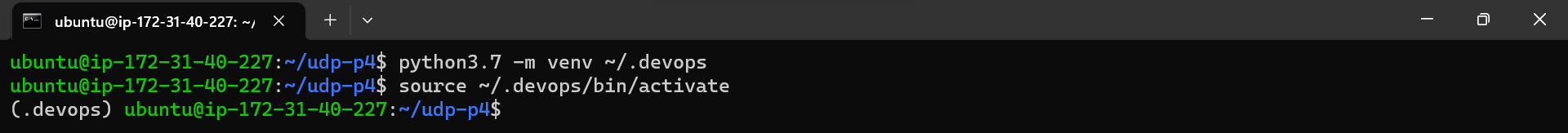


-Set up python3.7 for enviroment

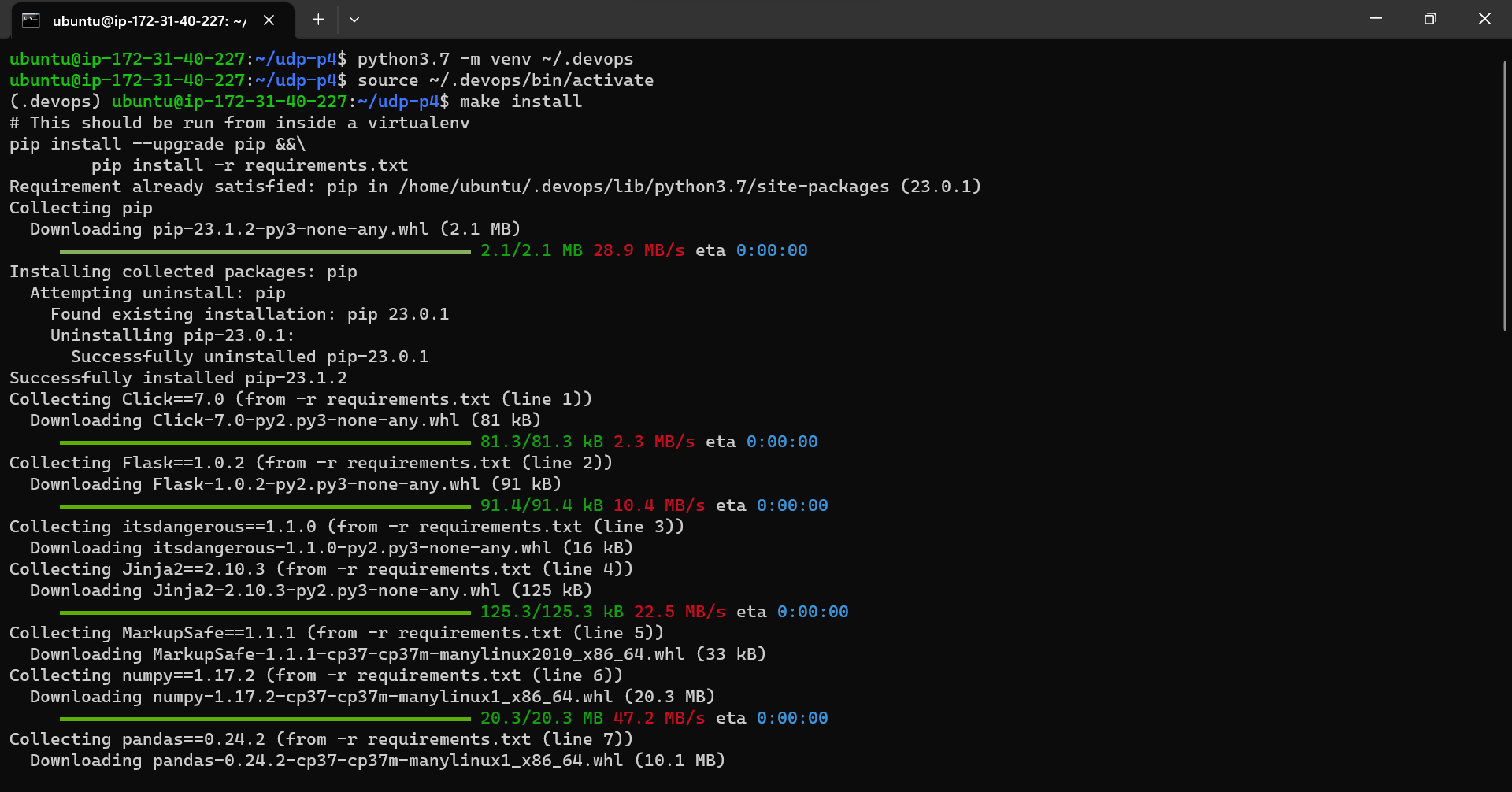
**sudo apt install python3.7-venv**

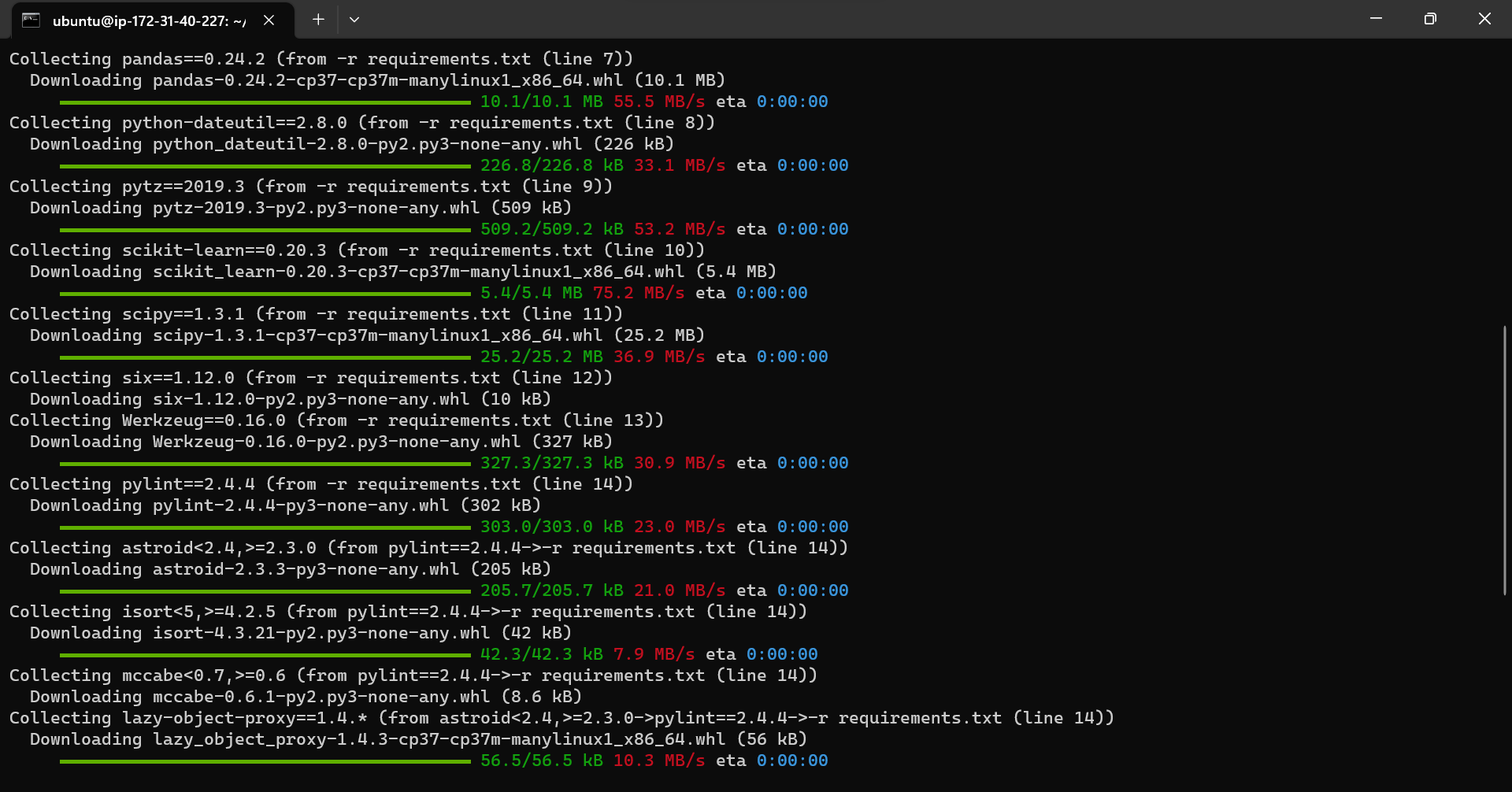
**python3.7 -m venv ~/.devops**

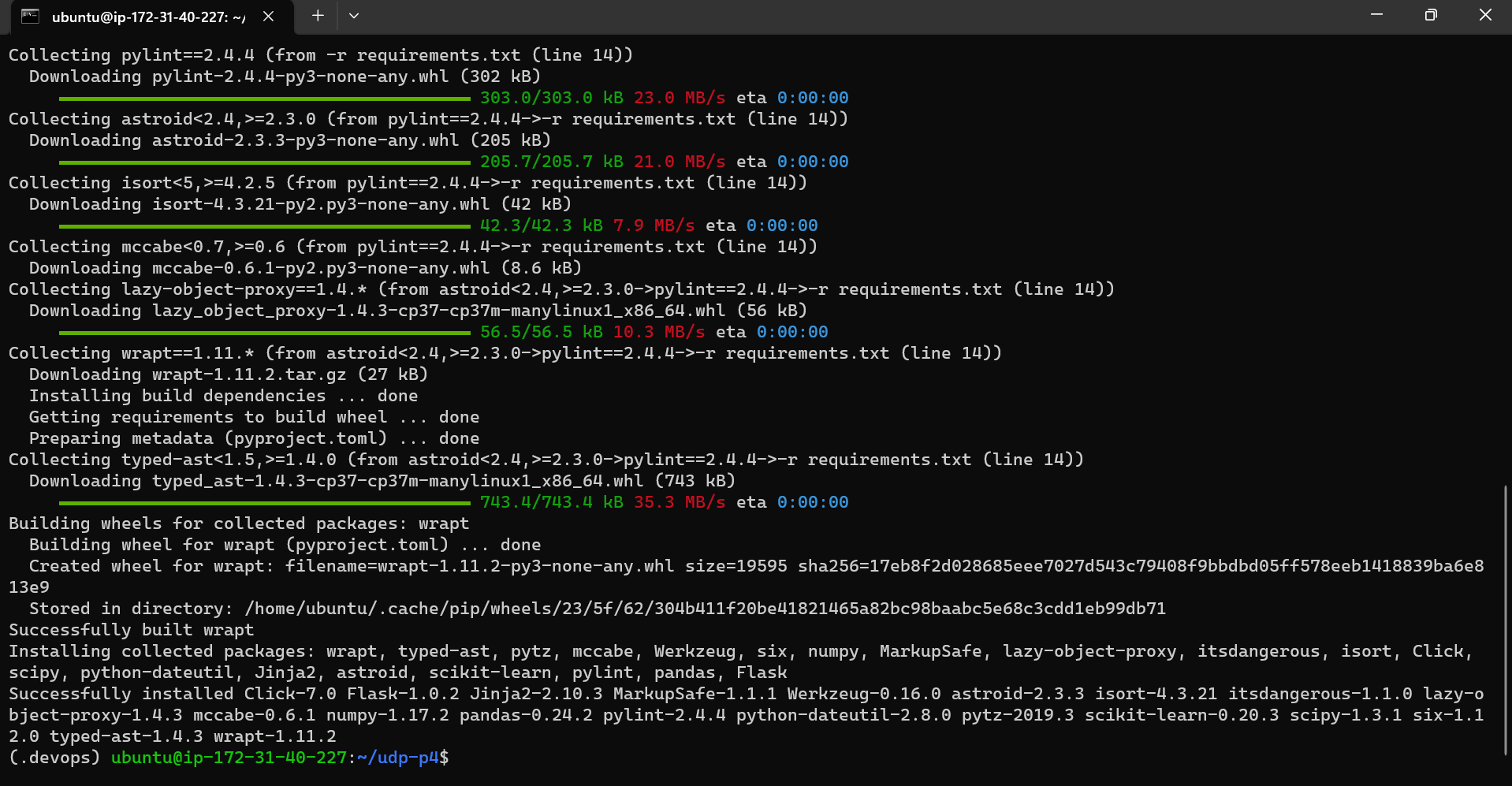
**source ~/.devops/bin/activate**

****

**Installing dependencies via project Makefile**







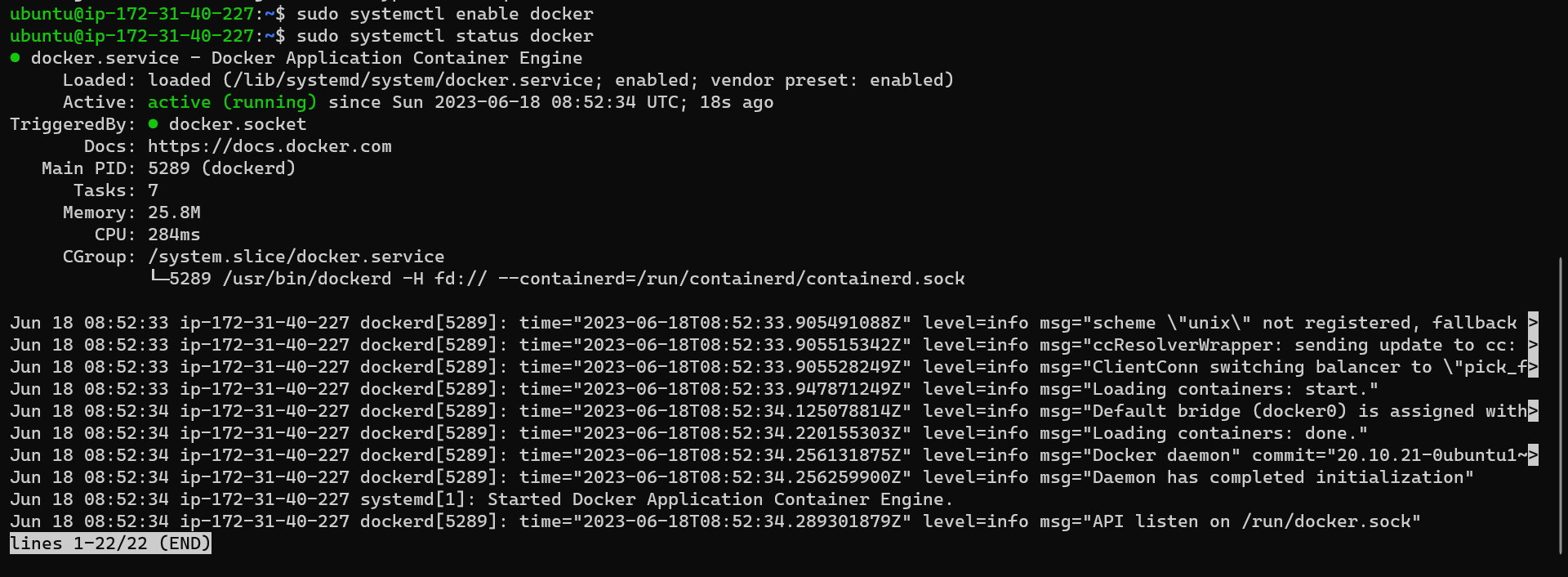
-Install Docker

sudo apt update

sudo apt install docker.io –y

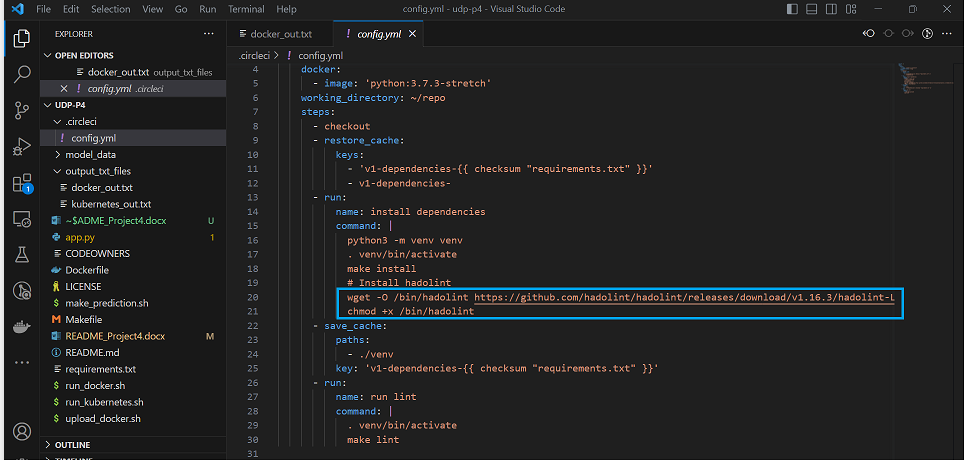
sudo systemctl enable docker

sudo systemctl status docker



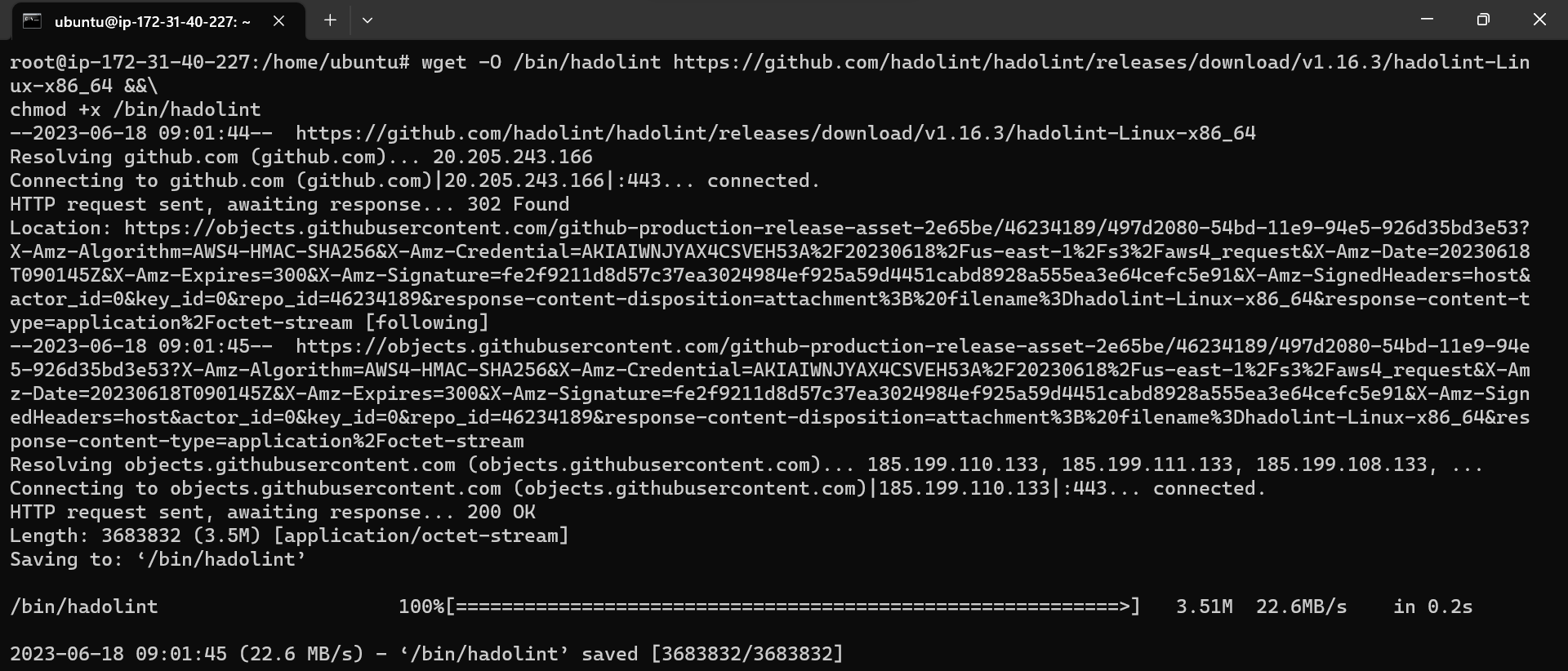
Run Lint Checks

**config.yml**



wget -O /bin/hadolint https://github.com/hadolint/hadolint/releases/download/v1.16.3/hadolint-Linux-x86\_64 &&\

chmod +x /bin/hadolint





Install Minikube

curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64

sudo install minikube-linux-amd64 /usr/local/bin/minikube

-Install kubectl

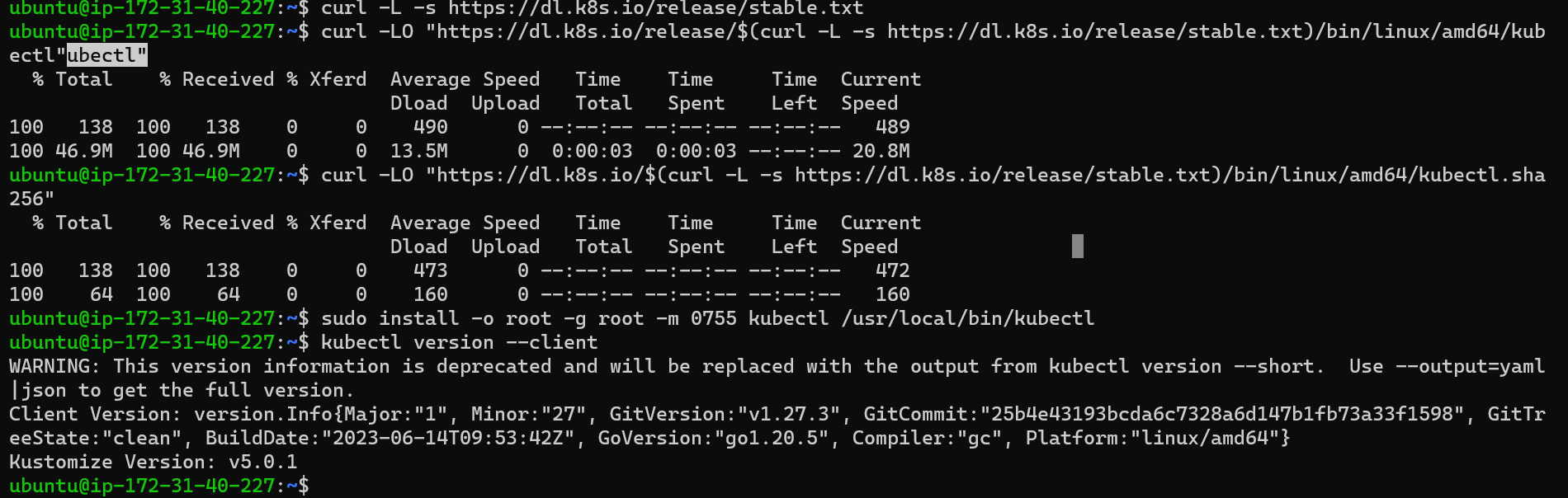
curl -L -s https://dl.k8s.io/release/stable.txt

curl -LO "https://dl.k8s.io/release/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl"

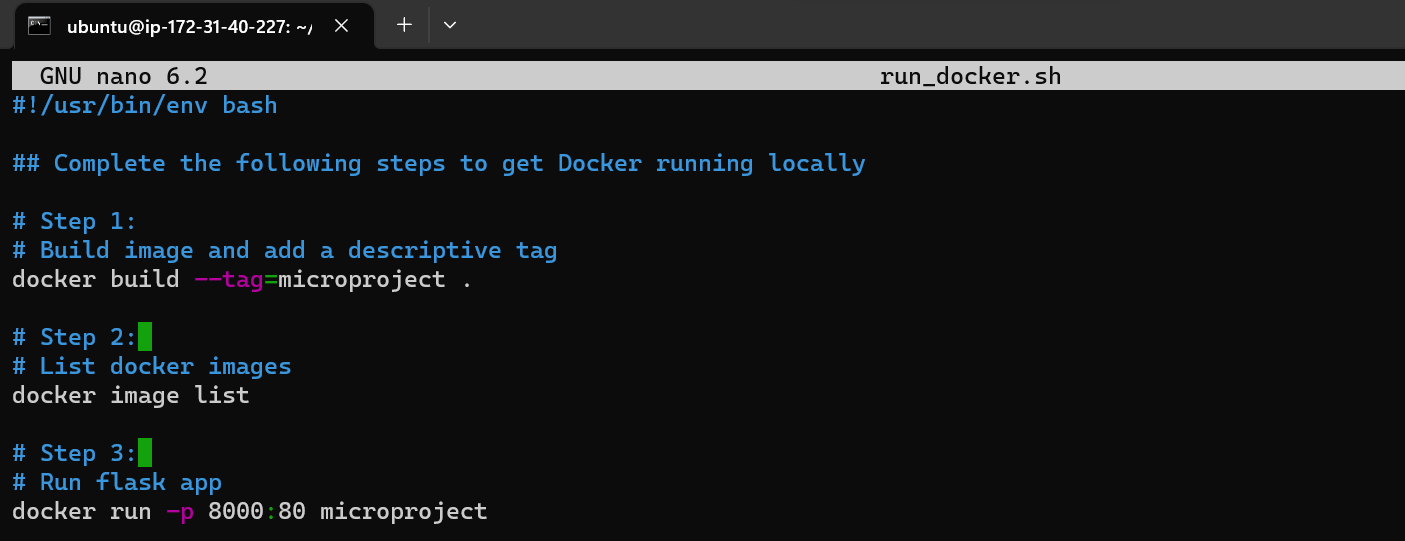
curl -LO "https://dl.k8s.io/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl.sha256"

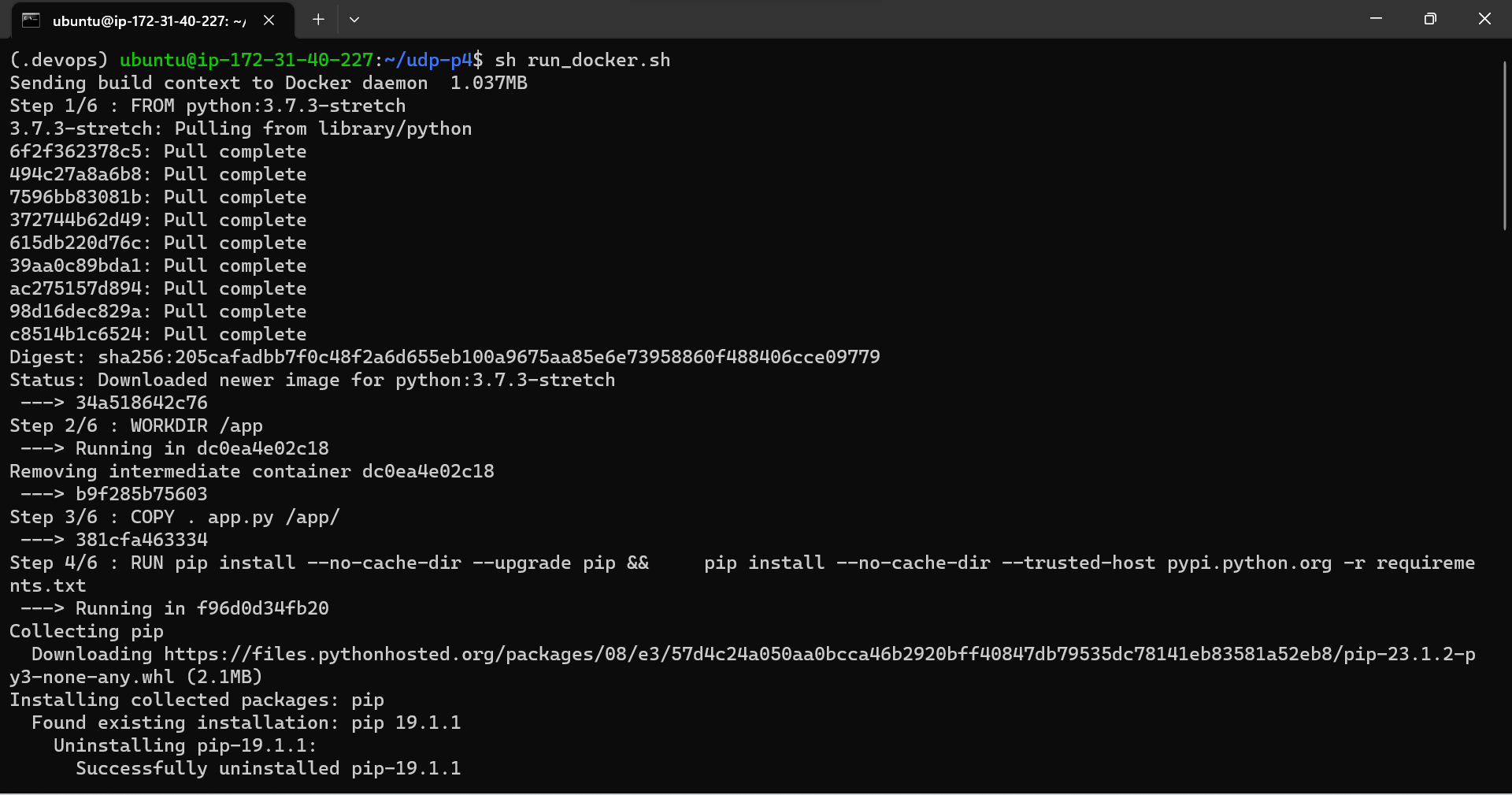
sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl

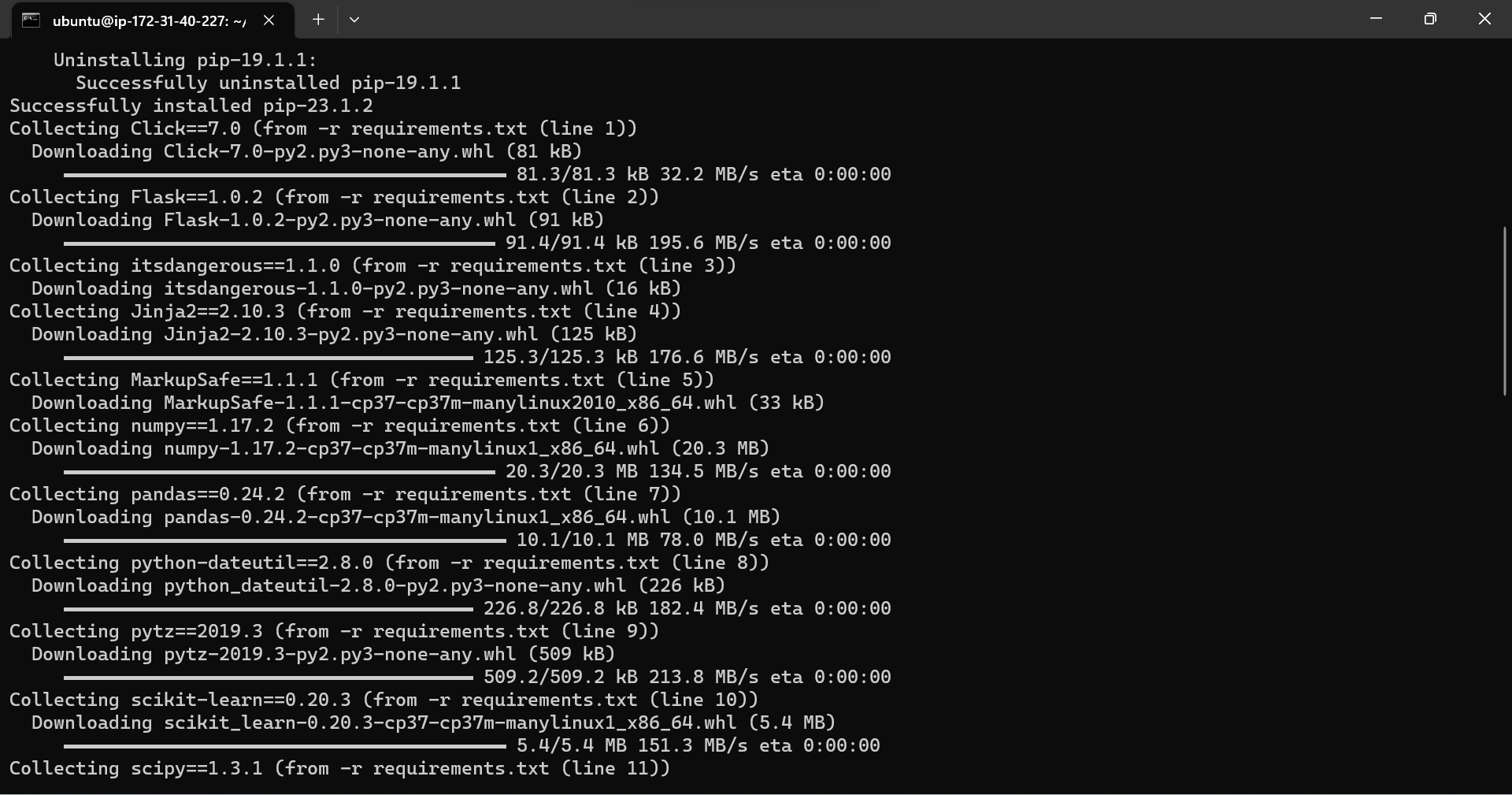
kubectl version –client

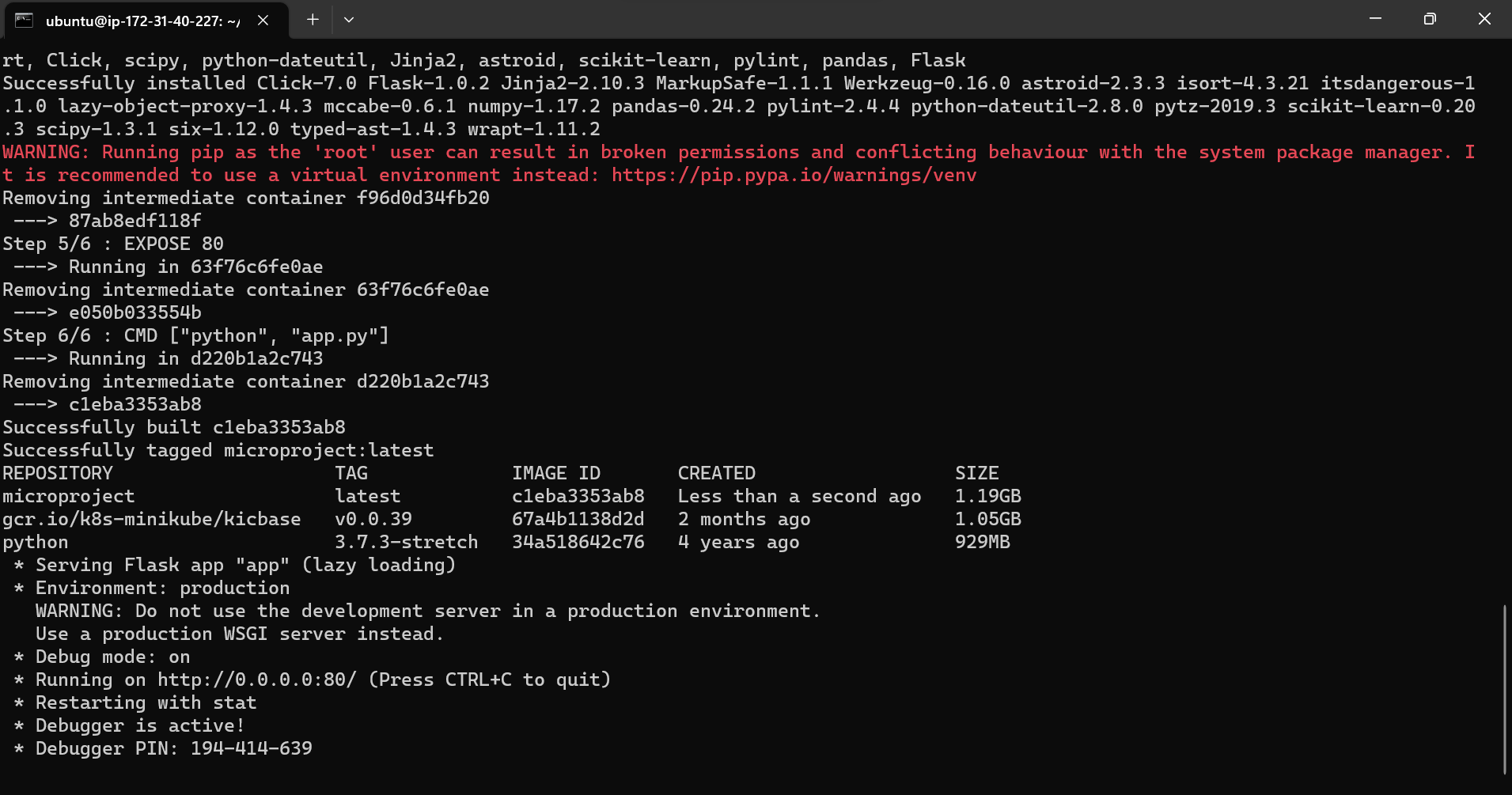


# Run a Container & Make a Prediction

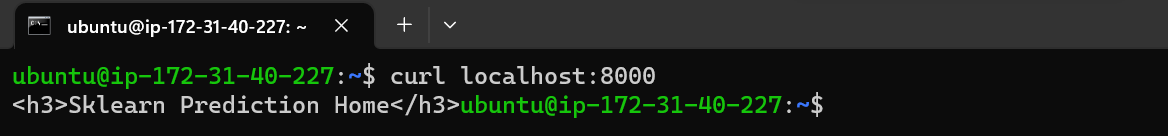




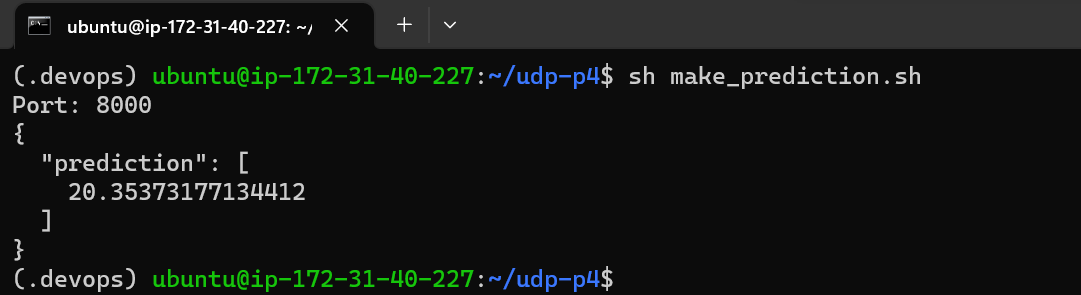




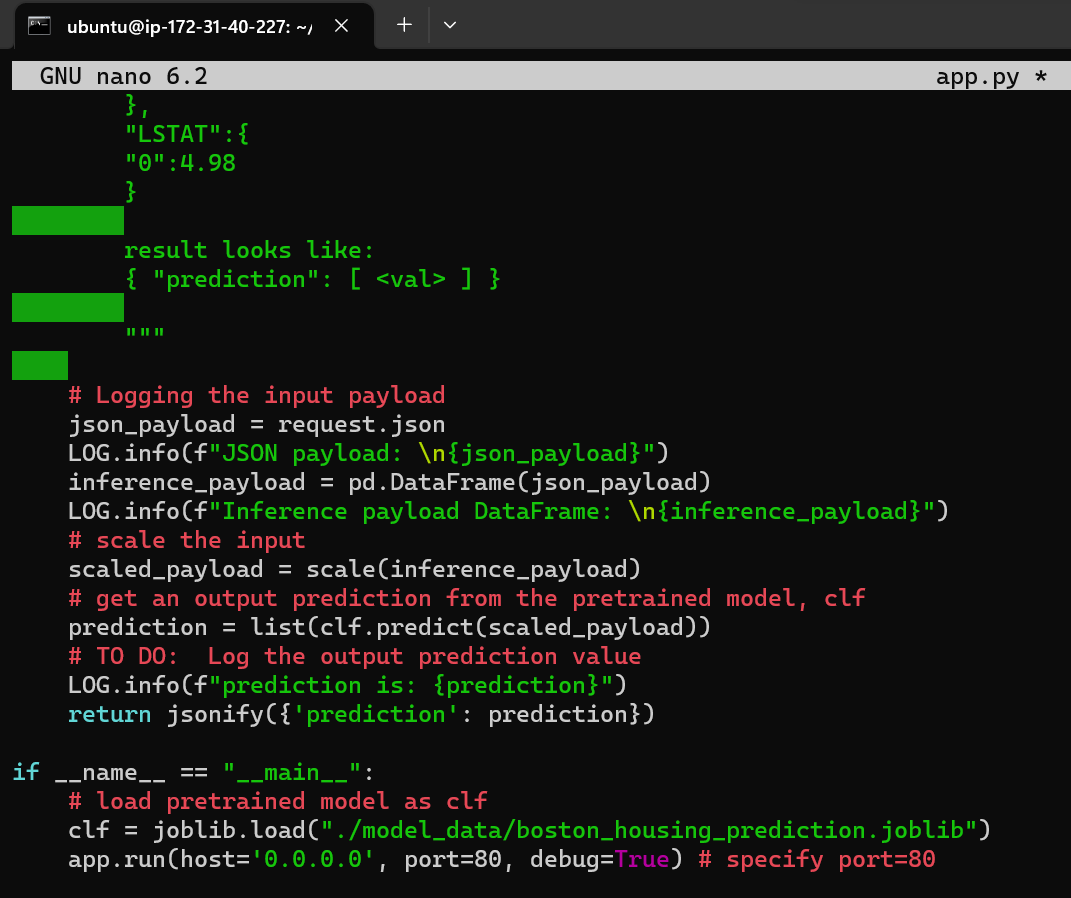
**Get connect**



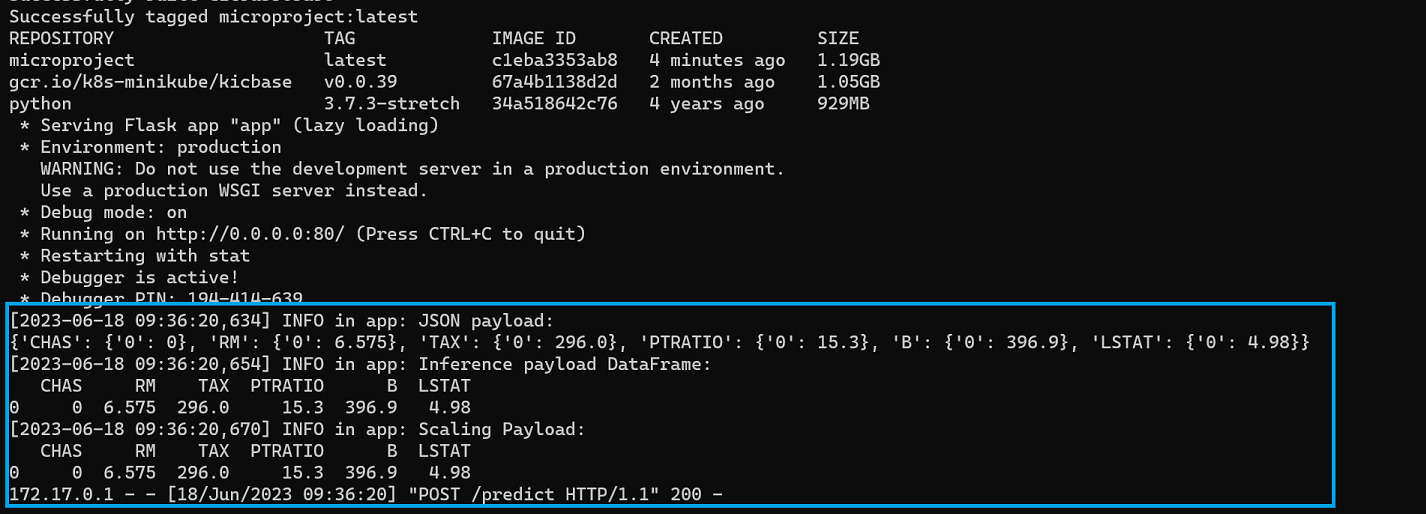
Making predictions

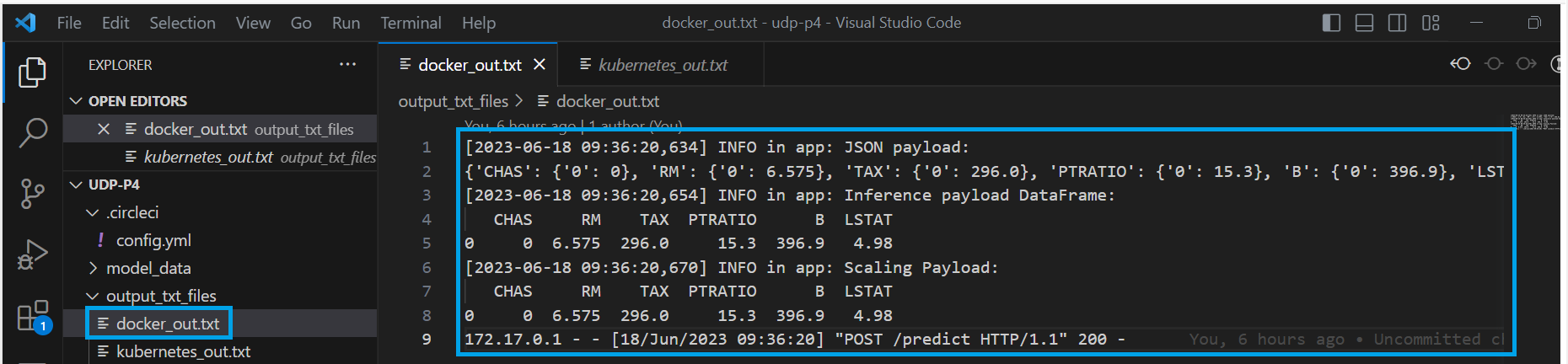


# Improve Logging & Save Output

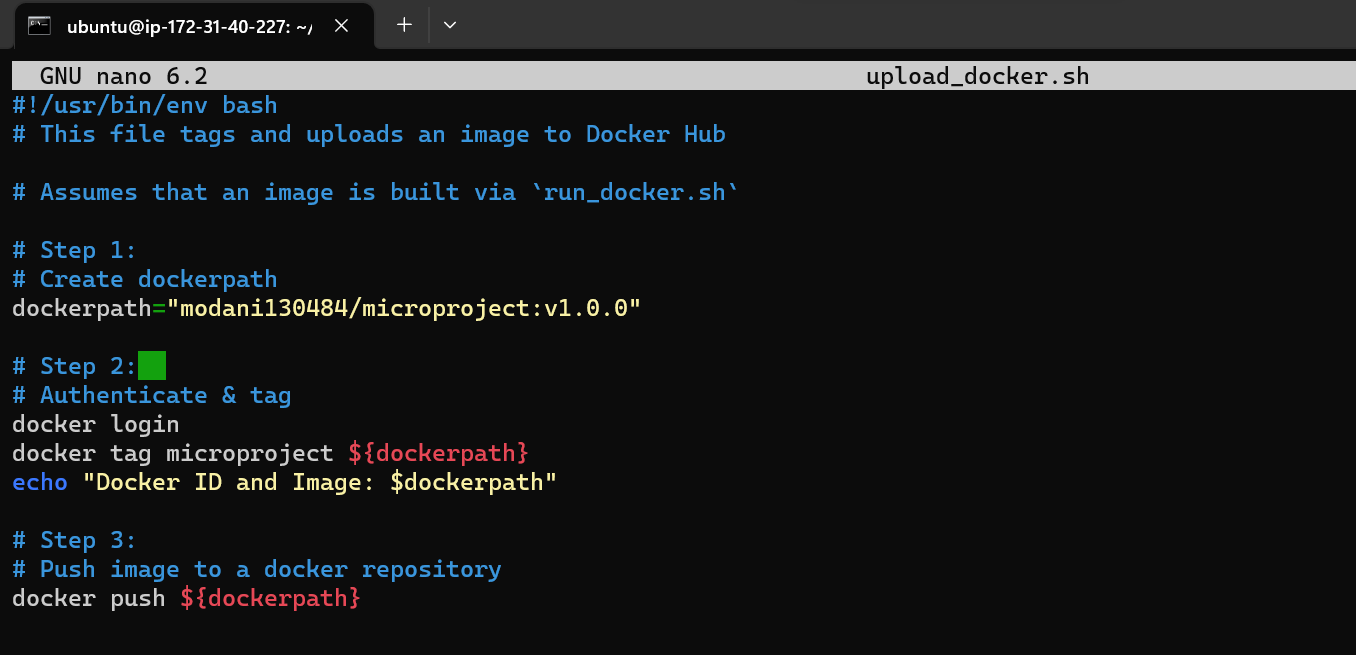


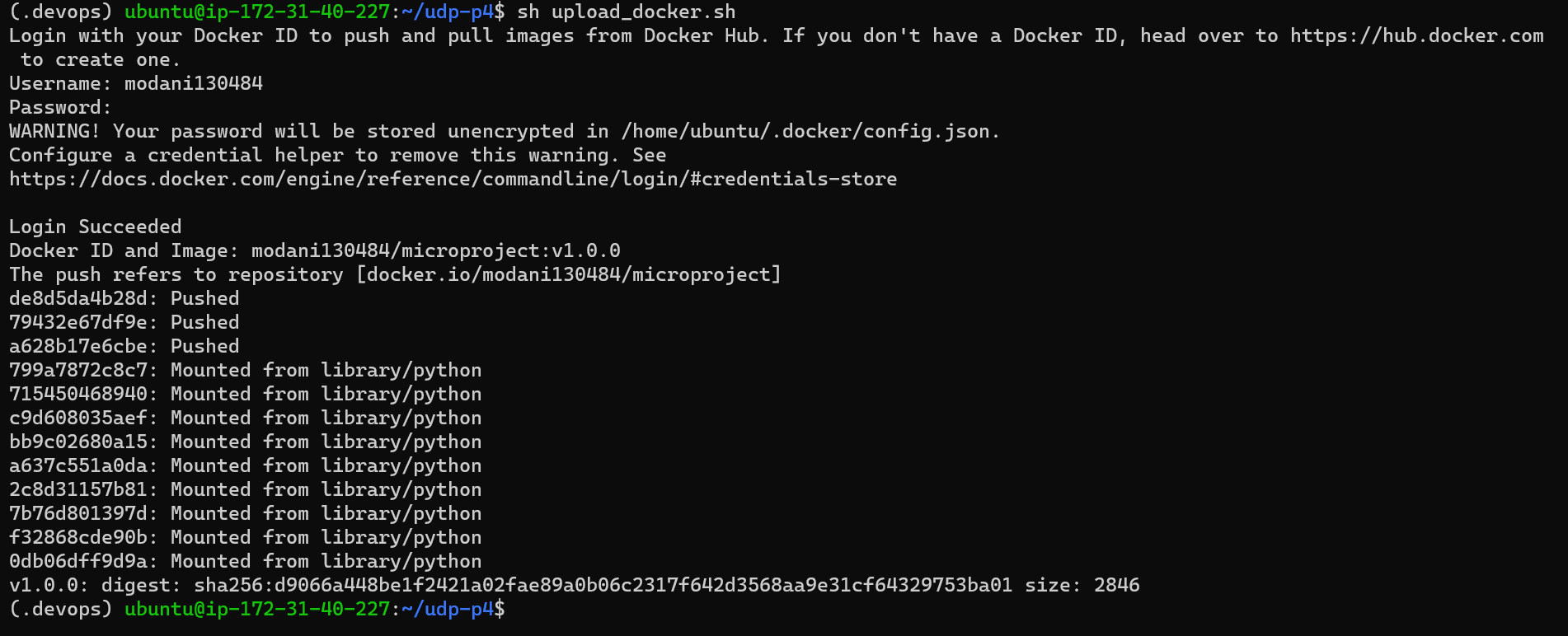
This terminal output, which has log info, in a text file

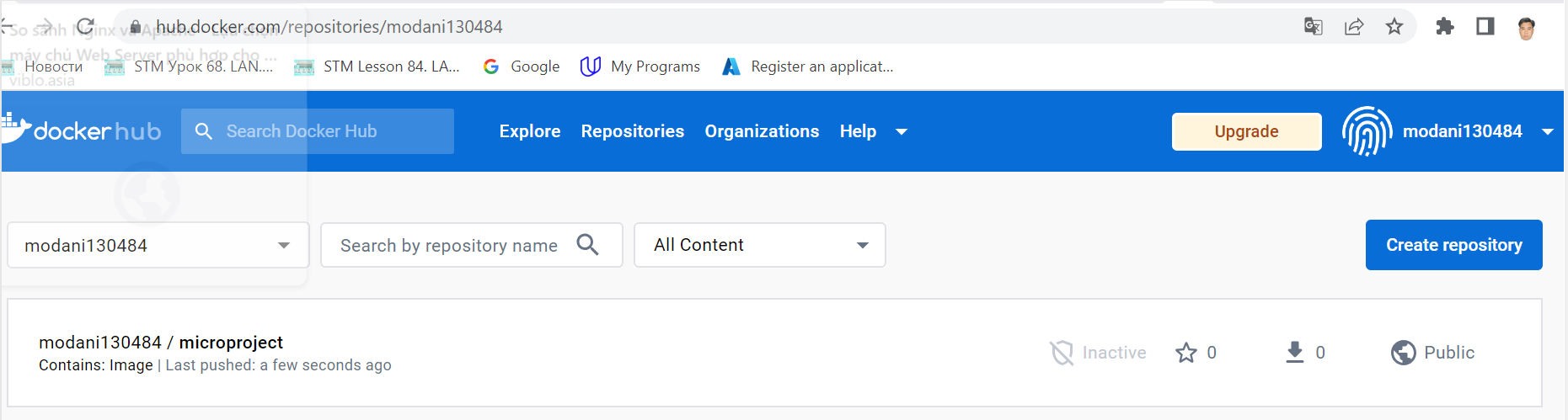


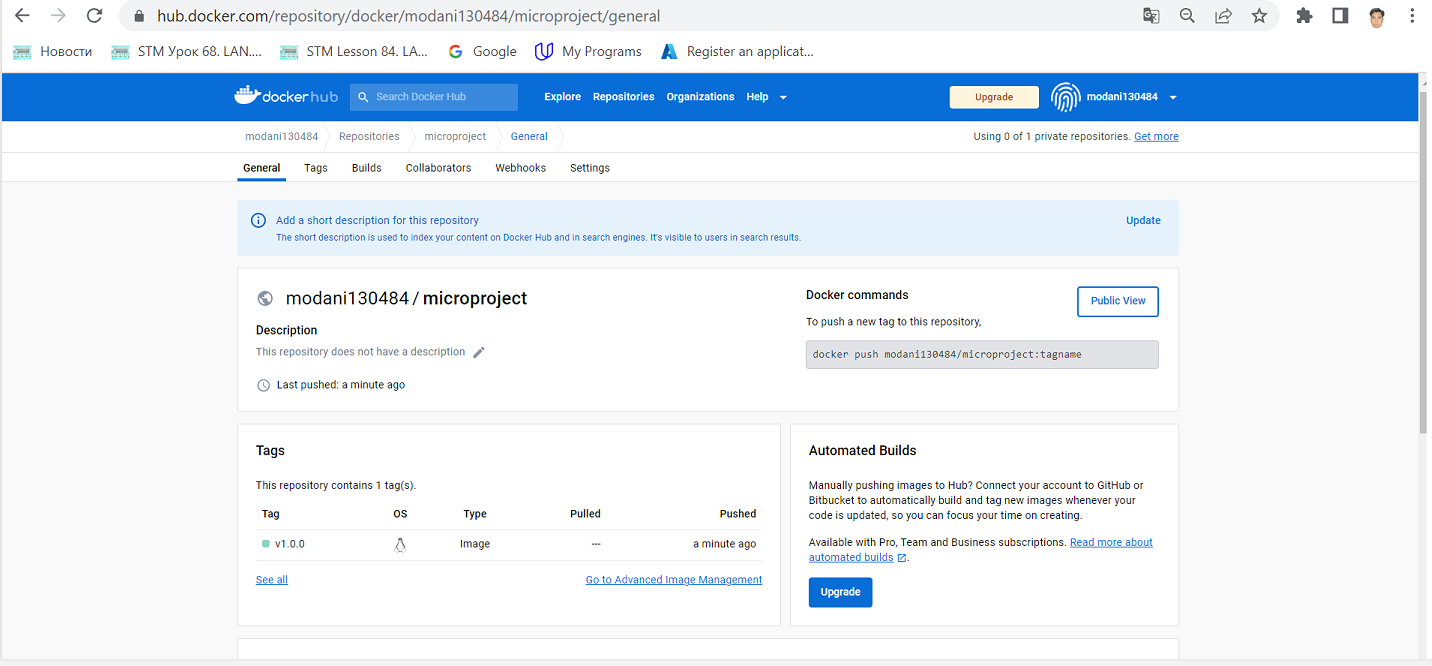


# Upload the Docker Image









# Configure Kubernetes to Run Locally

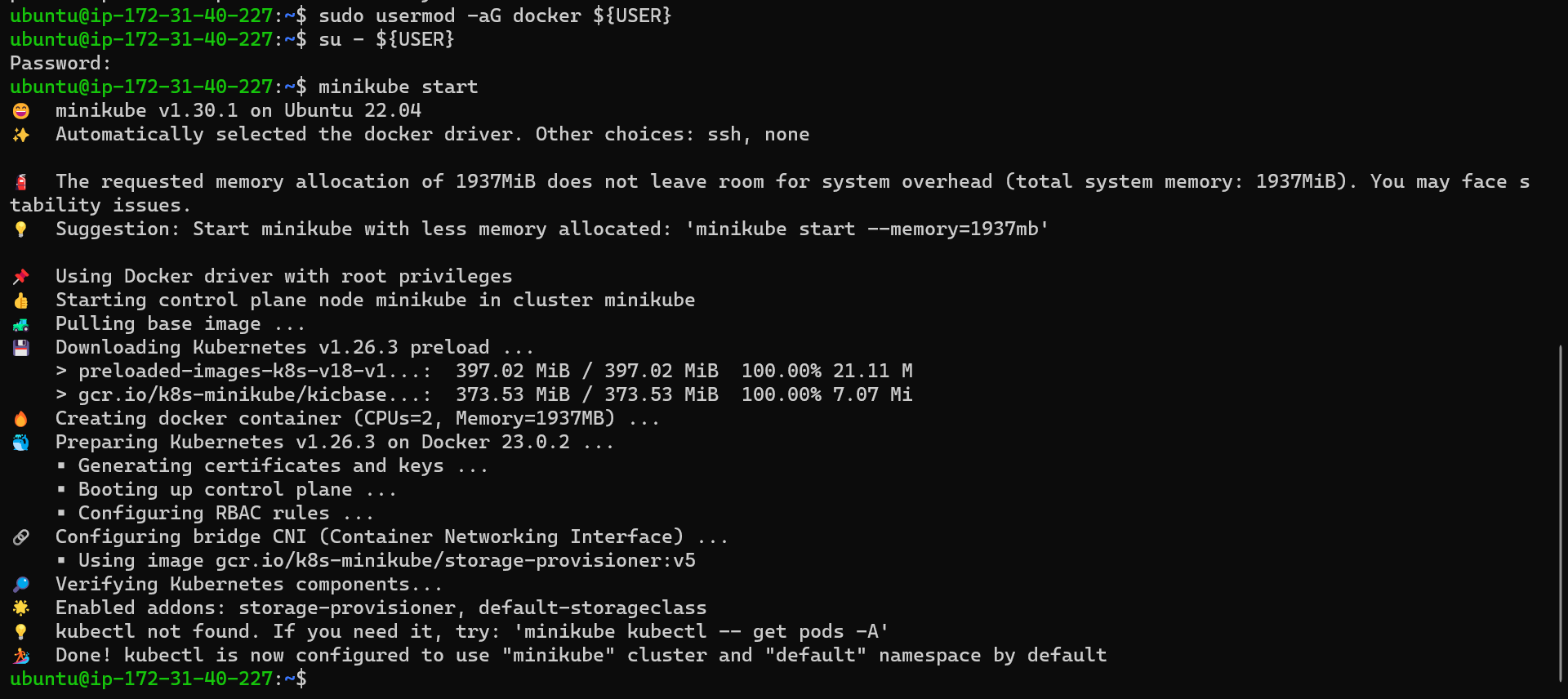
Start minikube  
-setup password for ubuntu

sudo passwd ubuntu  
-excute docker without su

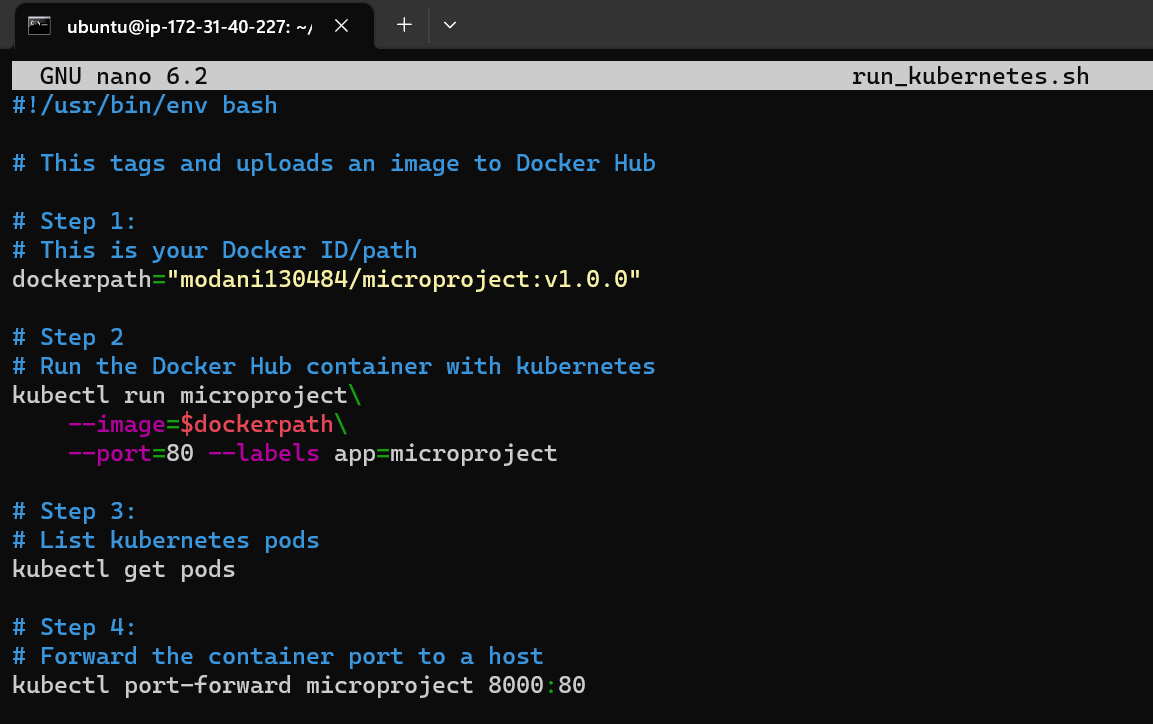
sudo usermod -aG docker ${USER}

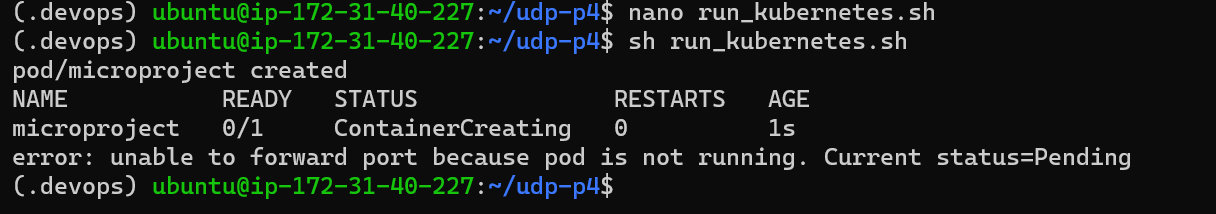
su - ${USER}

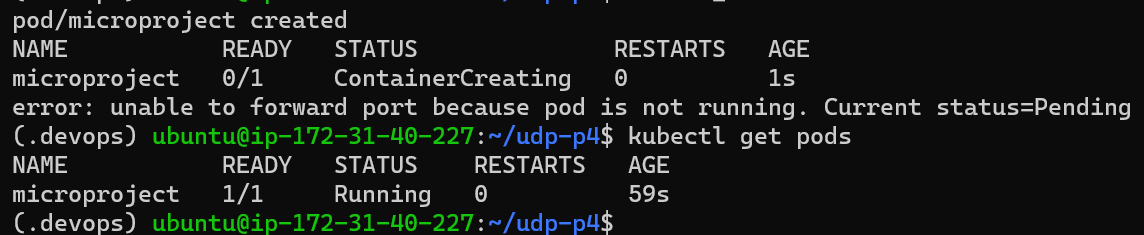
Then, we can start minikube



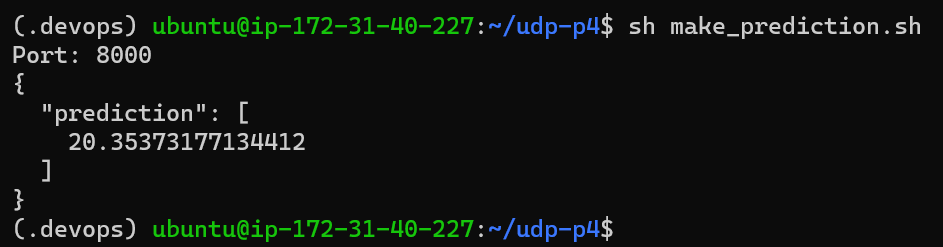
# Deploy with Kubernetes and Save Output Logs

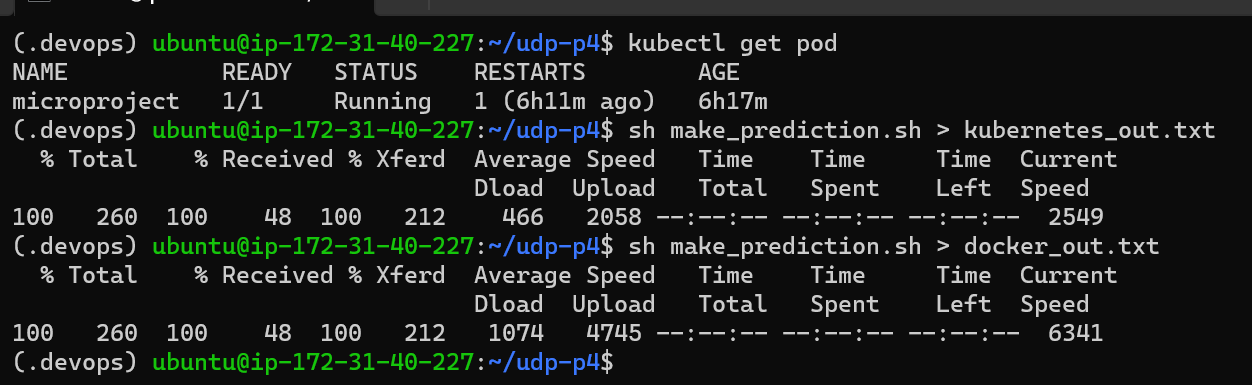


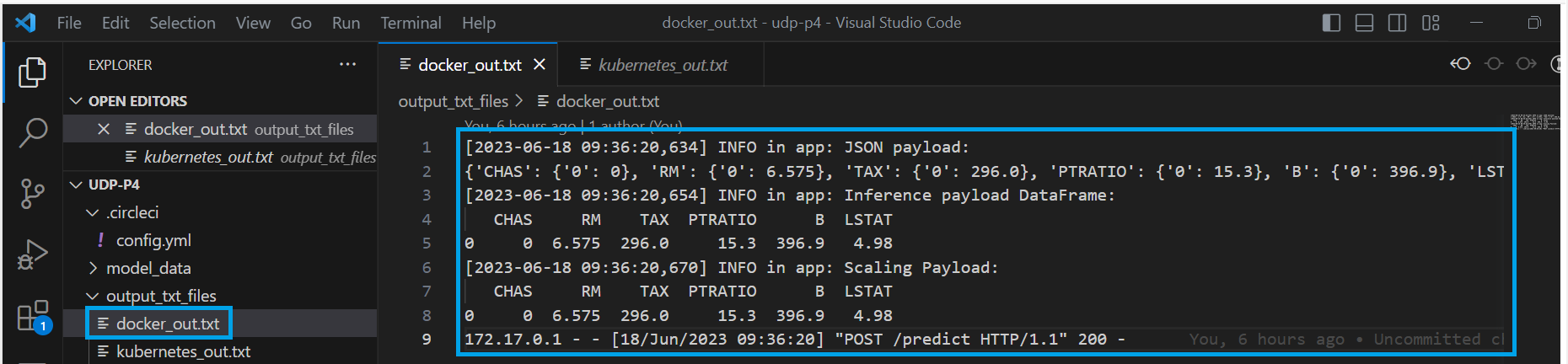


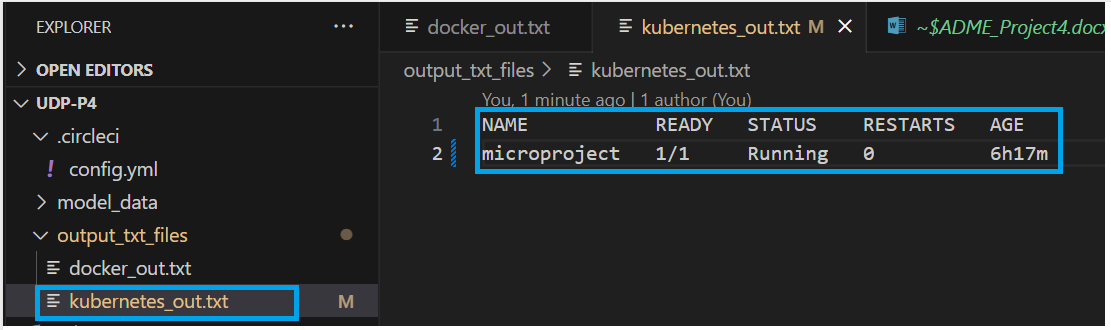


Make a prediction

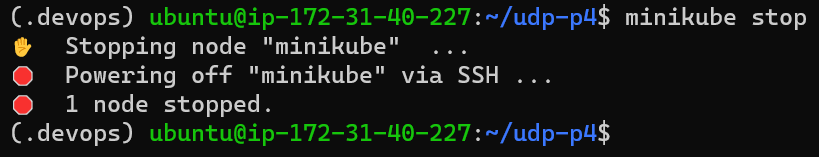




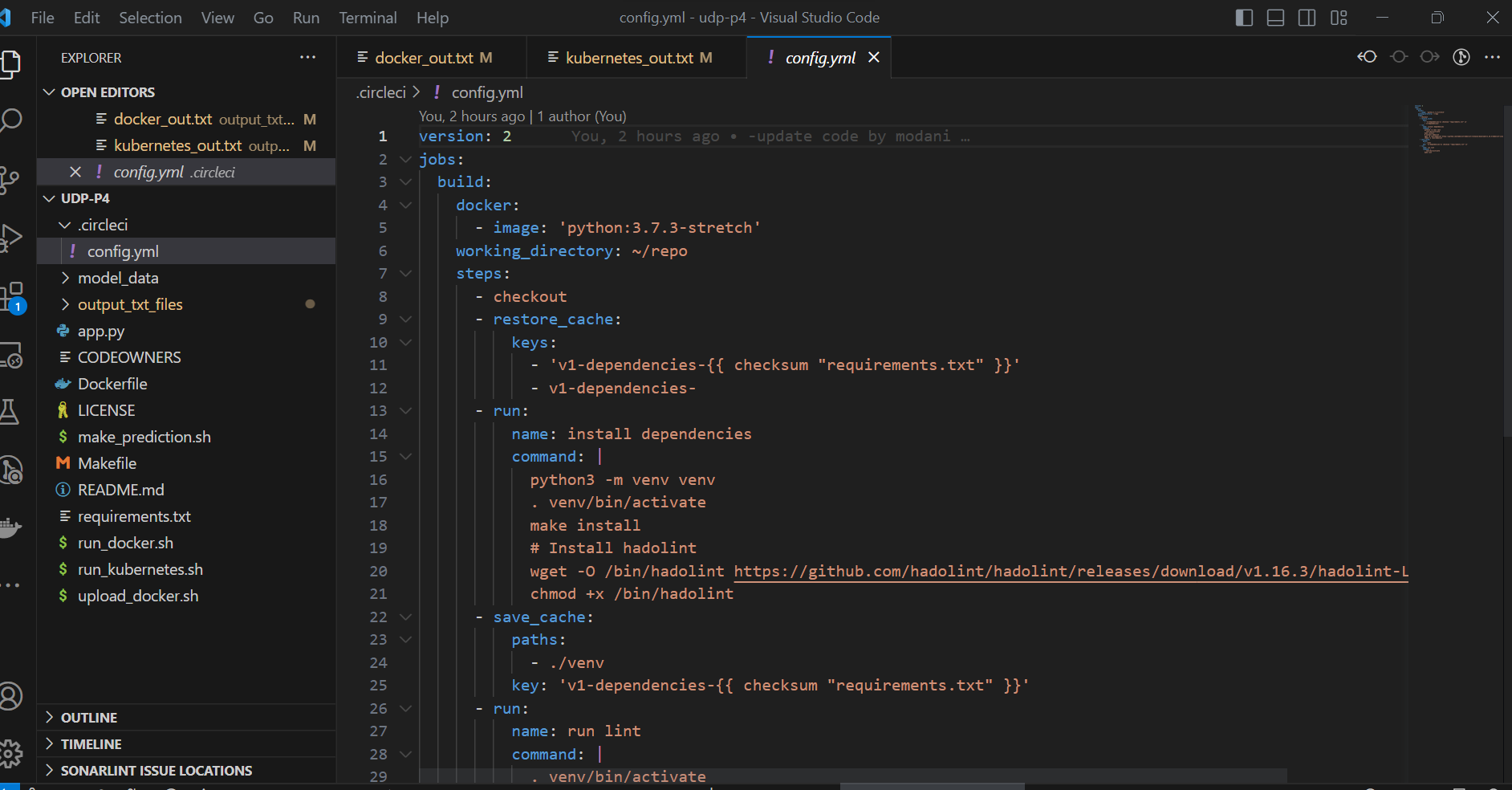


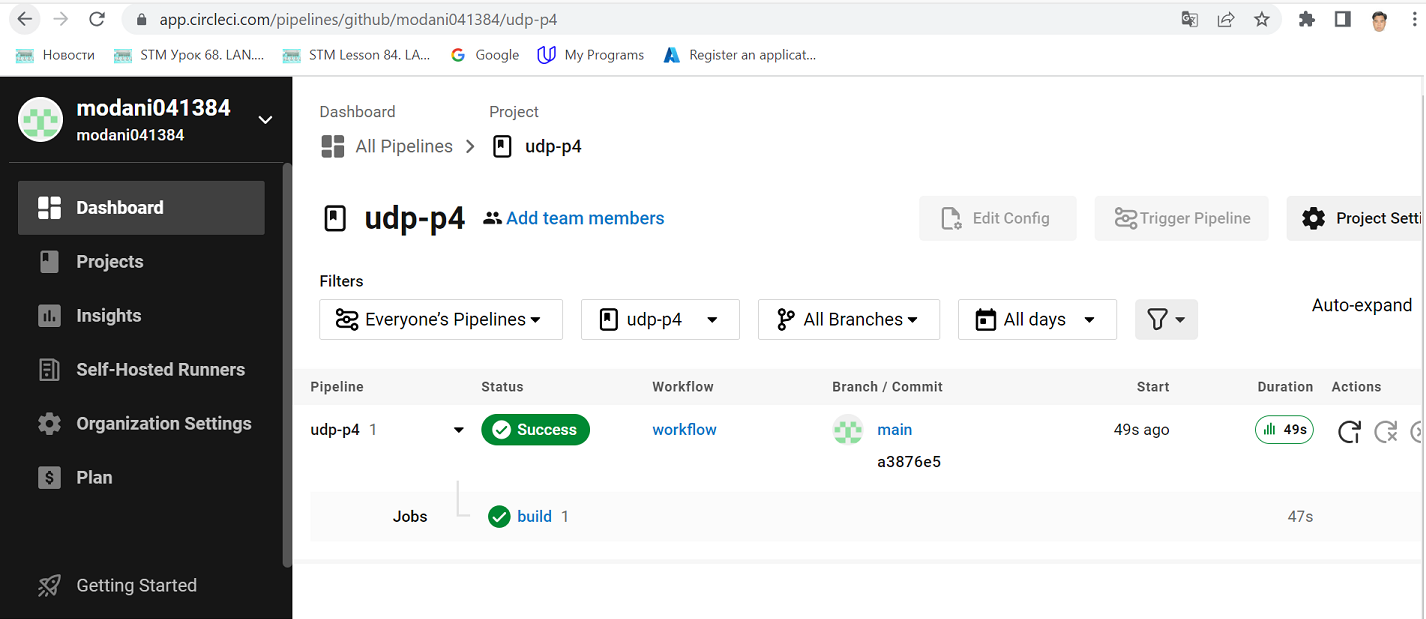


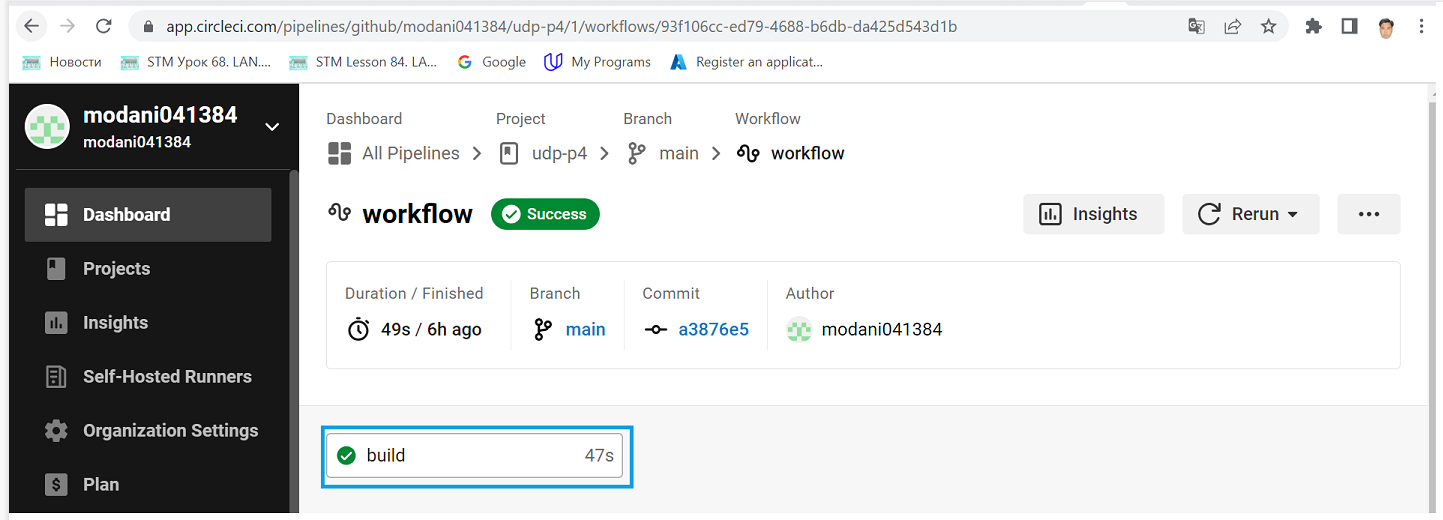
# [Important] Delete Cluster

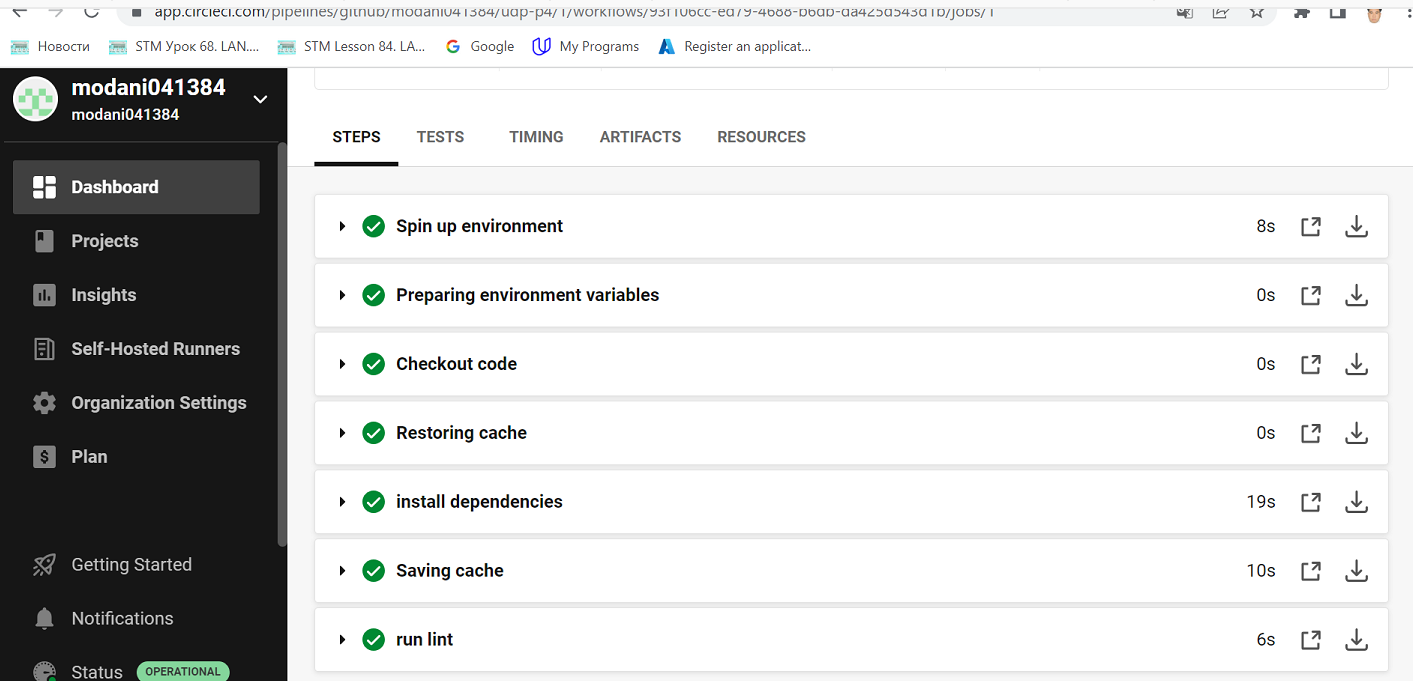


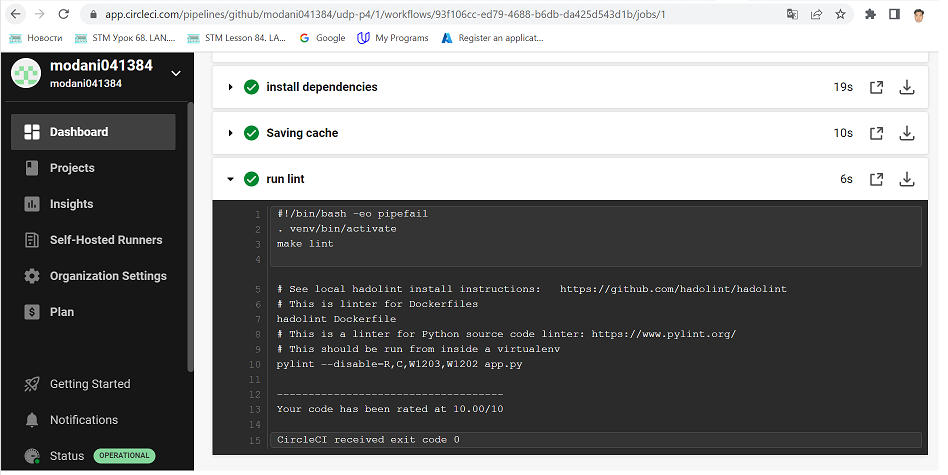
# CircleCI Integration











URL Git: <https://github.com/modani041384/udp-p4.git>