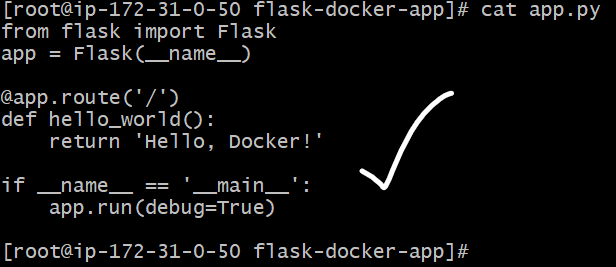
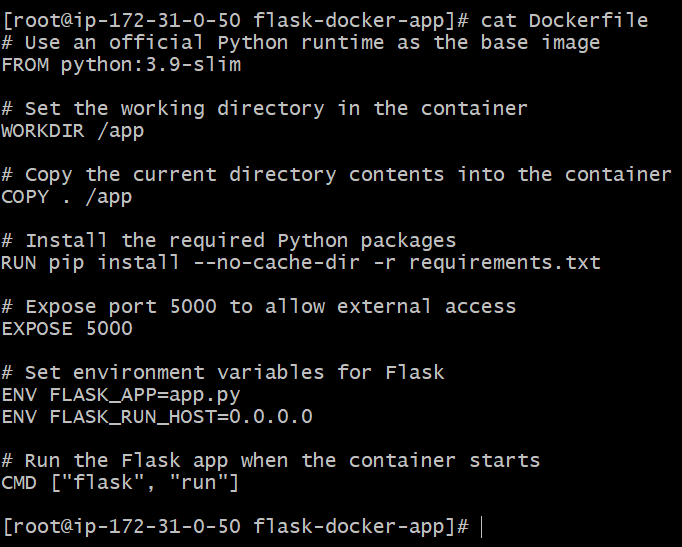
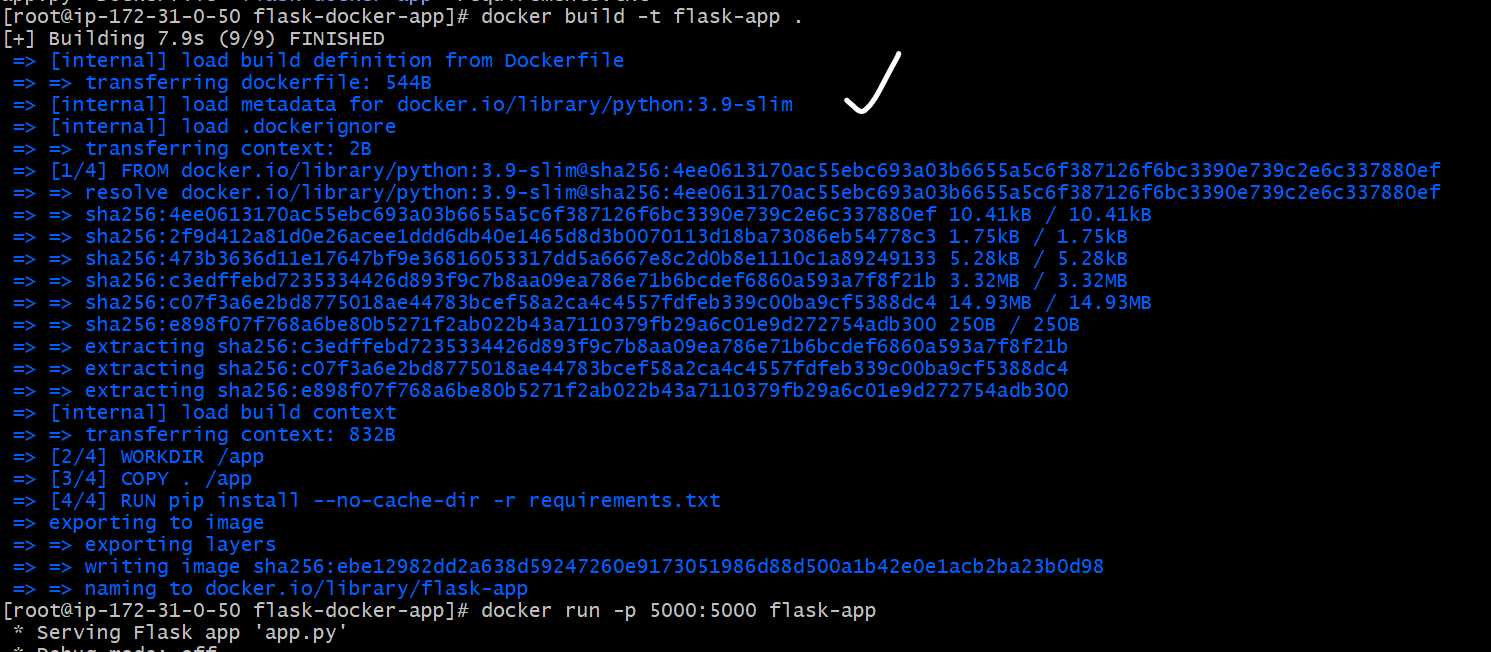
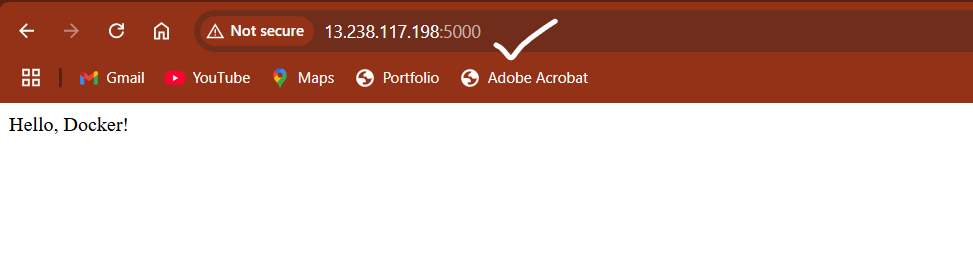
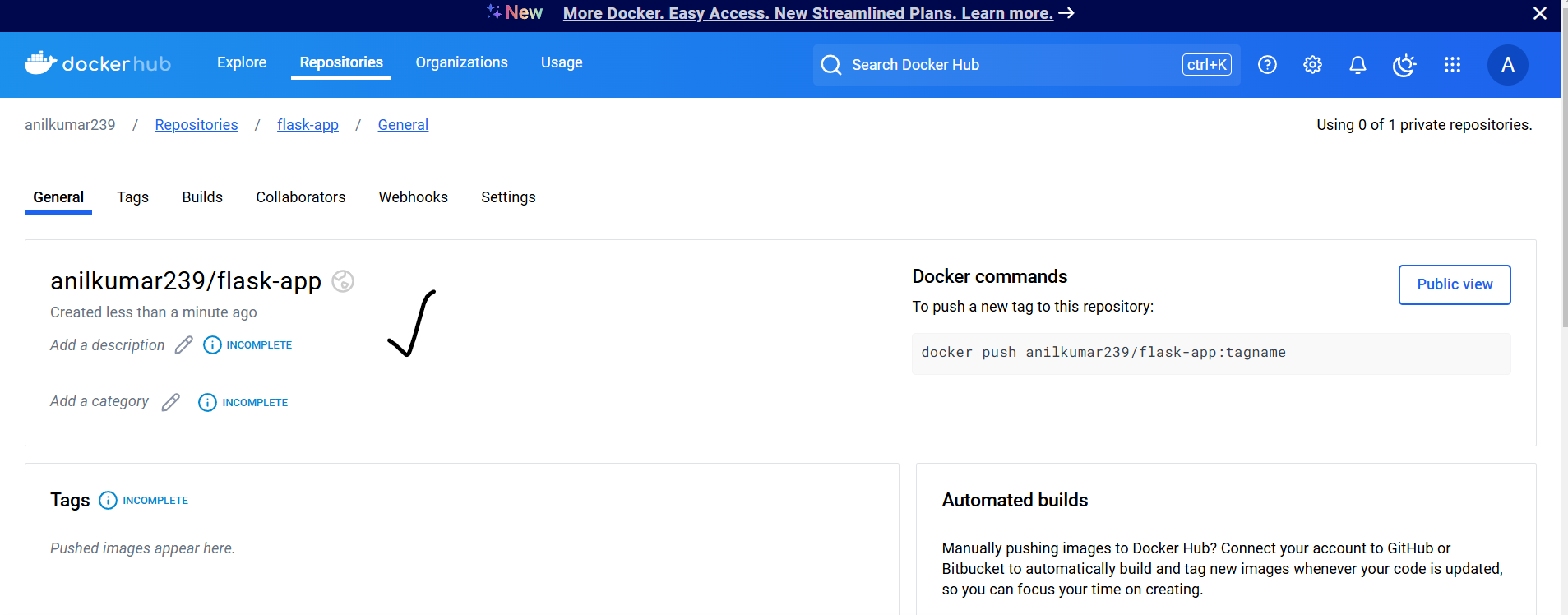
**1) Create a customized docker image by using Docker file.**

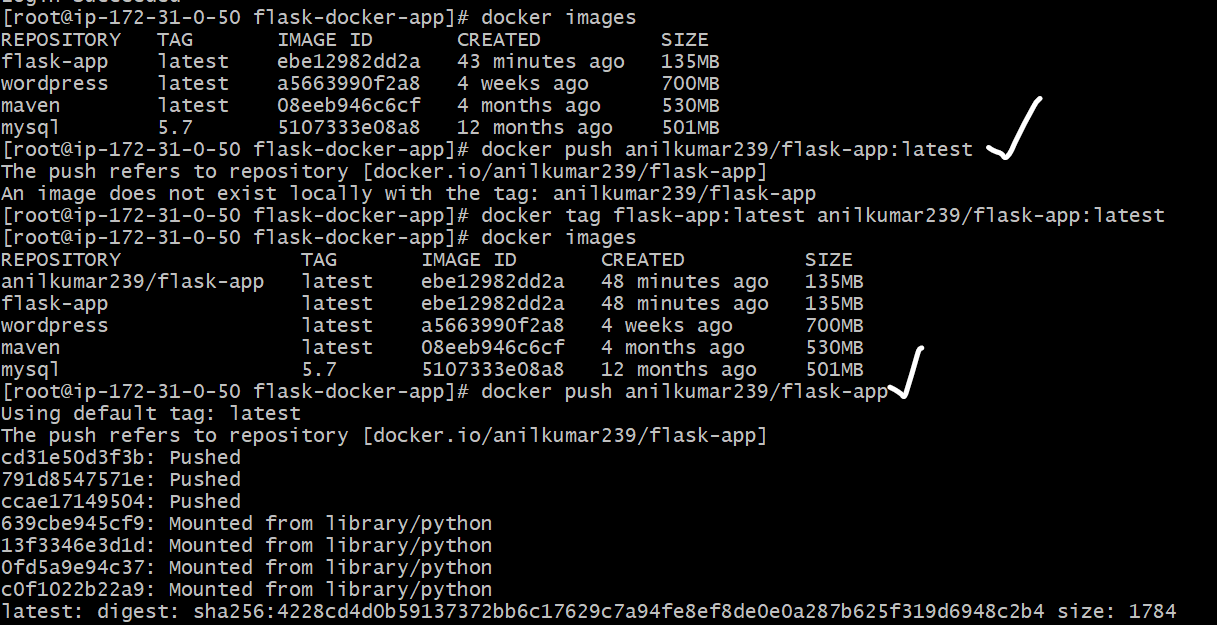
**Create a Project Directory**:  
  
**Create Your Flask Application**:  
  
**Add a requirements.txt File**:  
C:\Devops ScreenShots\Docker\extra3.png  
**Dockerfile:  
**

**Build the Image**:  
  


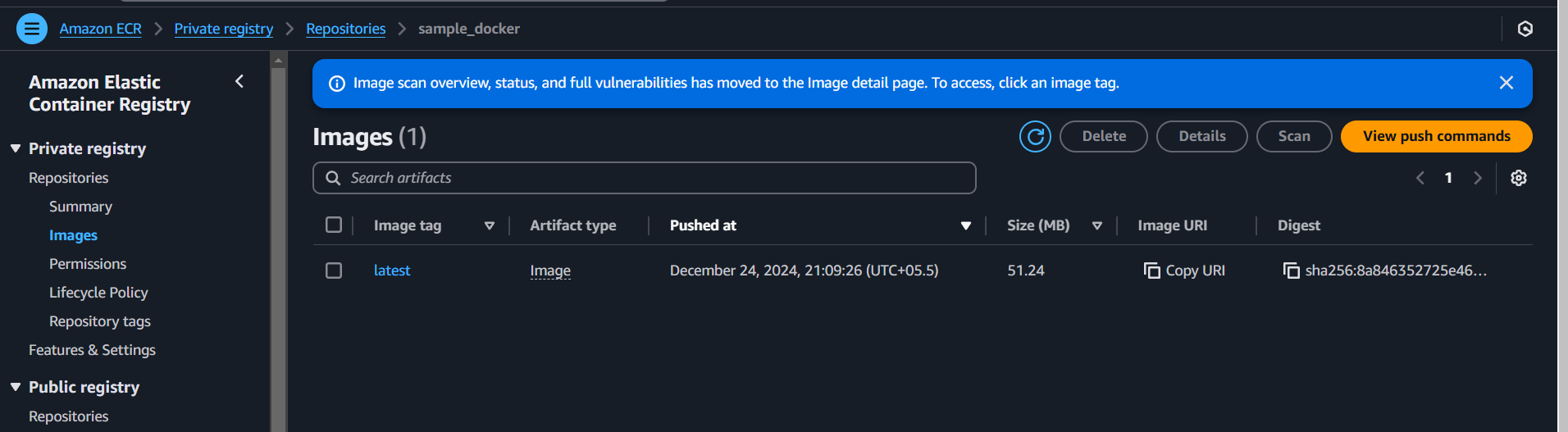
**2) Push the image to docker hub**

****

**3) Push the same Image to Amazon ECR**

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**4) Provision one ec2 using terraform and install Jenkins.**

resource "aws\_instance" "jenkins\_server" {

  ami           = "ami-0d6560f3176dc9ec0"

  instance\_type = "t2.micro"

  key\_name      = "docker"

  tags = {

    Name = "Jenkins-Server"

  }

  user\_data = <<-EOF

              #!/bin/bash

              sudo yum update -y

              sudo amazon-linux-extras enable java-openjdk11

              sudo yum install -y java-11-openjdk

              sudo curl -fsSL https://pkg.jenkins.io/redhat-stable/jenkins.io.key | sudo tee /etc/pki/rpm-gpg/RPM-GPG-KEY-jenkins

              sudo sh -c 'echo -e "[jenkins]\nname=Jenkins-stable\nbaseurl=http://pkg.jenkins.io/redhat-stable\ngpgcheck=1\ngpgkey=https://pkg.jenkins.io/redhat-stable/jenkins.io.key\nenabled=1" > /etc/yum.repos.d/jenkins.repo'

              sudo yum install -y jenkins

              sudo systemctl start jenkins

              sudo systemctl enable jenkins

              EOF

  vpc\_security\_group\_ids = [aws\_security\_group.jenkins\_sg.id]

}

resource "aws\_security\_group" "jenkins\_sg" {

  name        = "jenkins-sg"

  description = "Allow HTTP and SSH access"

  ingress {

    from\_port   = 22

    to\_port     = 22

    protocol    = "tcp"

    cidr\_blocks = ["0.0.0.0/0"]

  }

  ingress {

    from\_port   = 8080

    to\_port     = 8080

    protocol    = "tcp"

    cidr\_blocks = ["0.0.0.0/0"]

  }

  egress {

    from\_port   = 0

    to\_port     = 0

    protocol    = "-1"

    cidr\_blocks = ["0.0.0.0/0"]

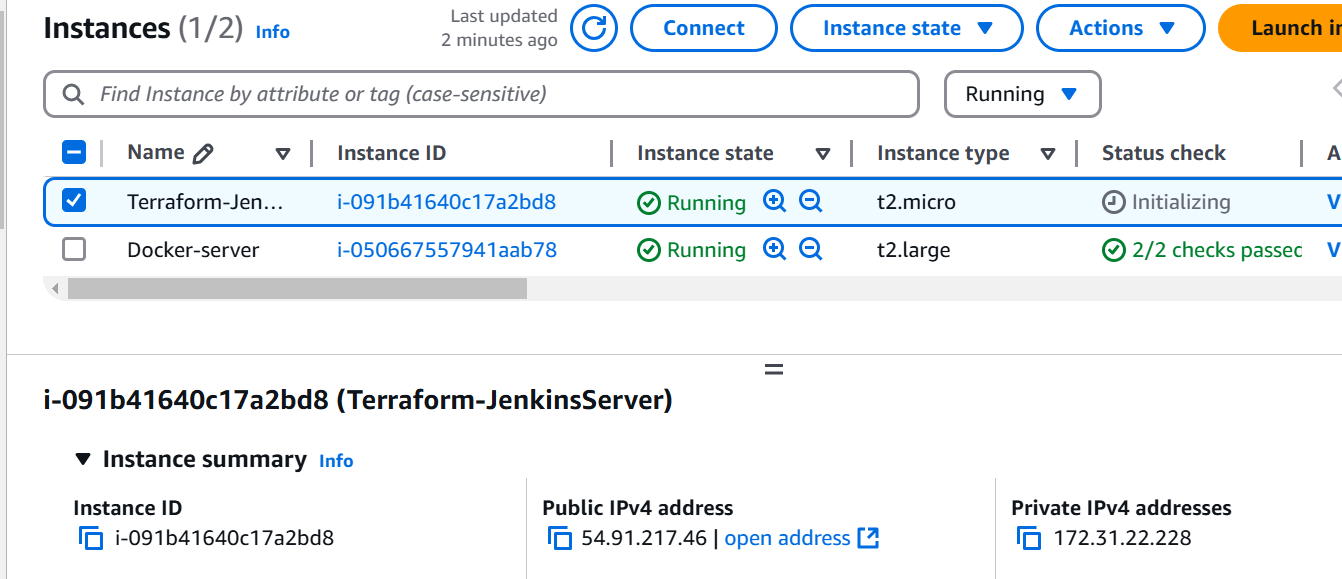
  }

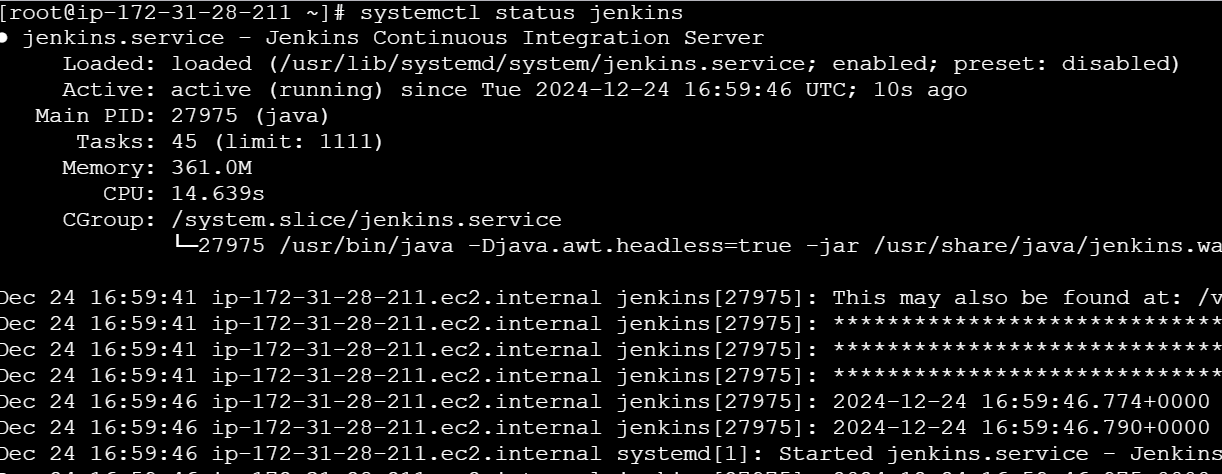
}

output "jenkins\_server\_ip" {

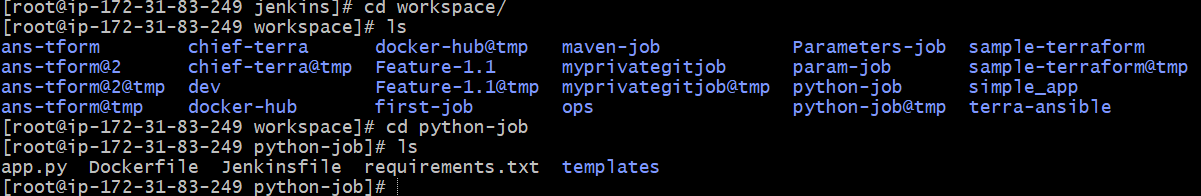
  value = aws\_instance.jenkins\_server.public\_ip

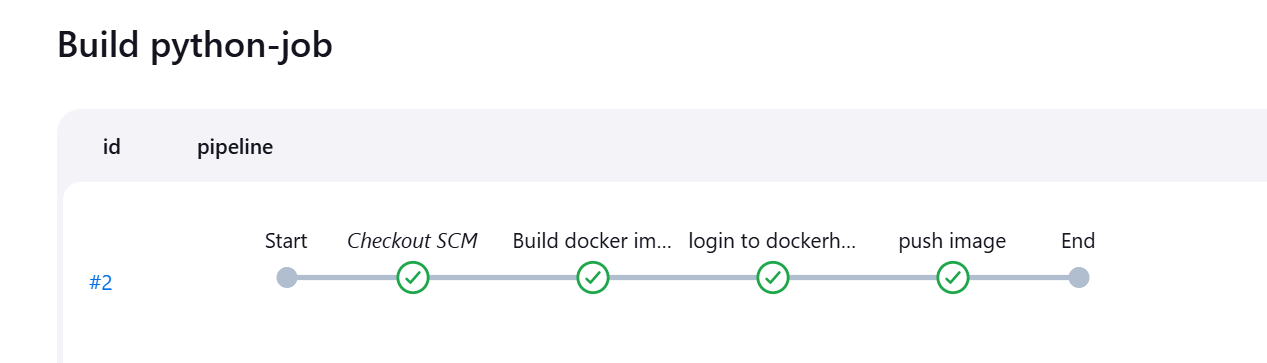
}

****

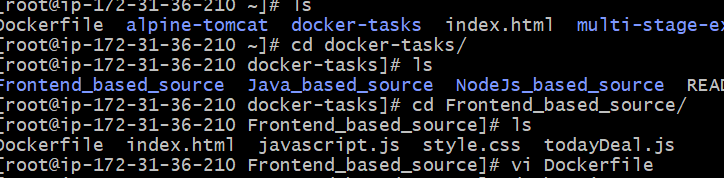
****

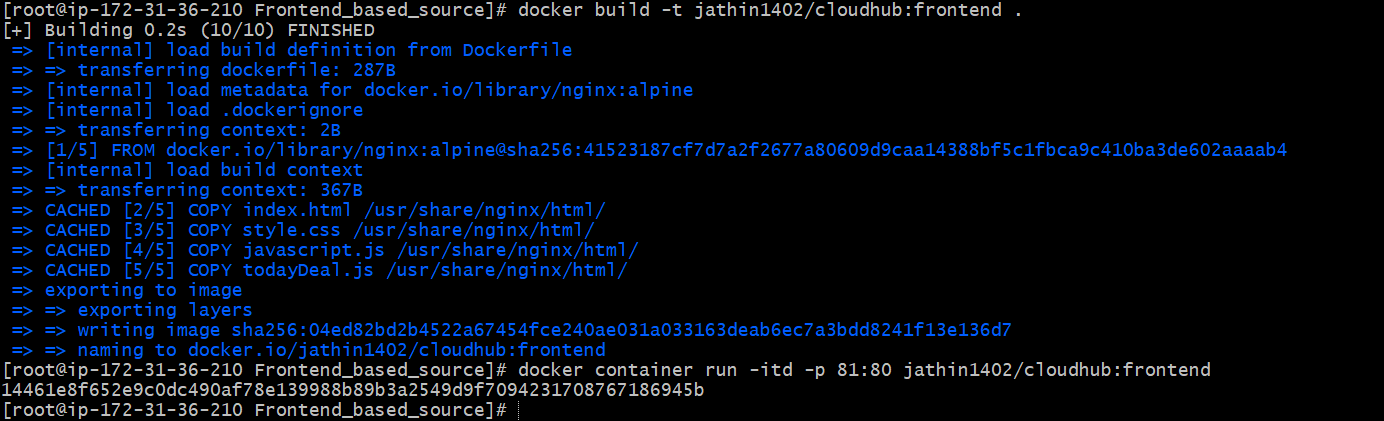
**5) Create One Jenkins job to Build and push the Docker image to Docker Hub. (**[**https://github.com/betawins/Python-app.git**](https://github.com/betawins/Python-app.git)**)**

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**1. From the source code of the frontend, Using that write a Docker file & build a docker image, run & push that image to your docker registry**

****

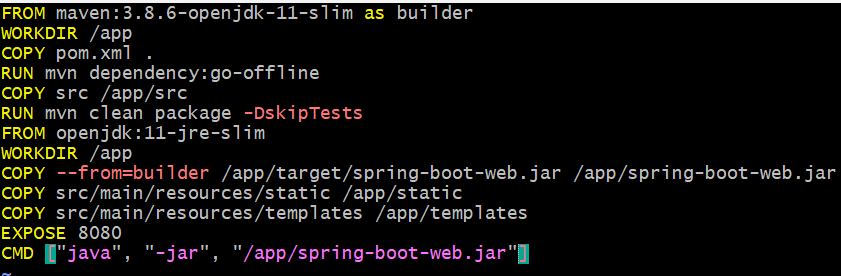
****

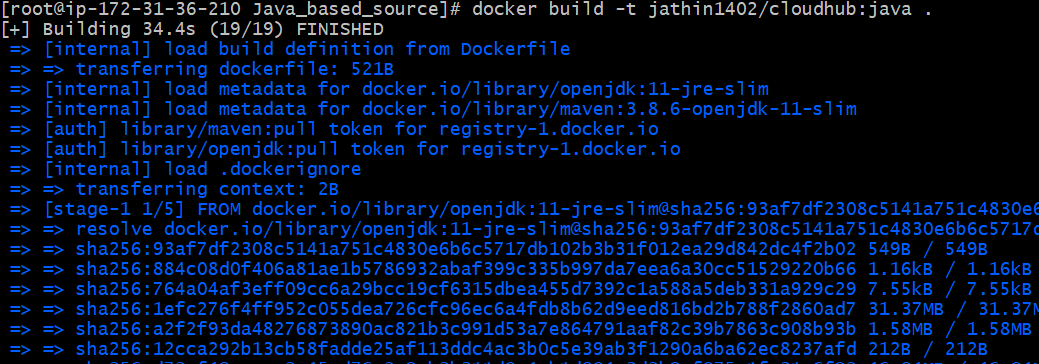
****

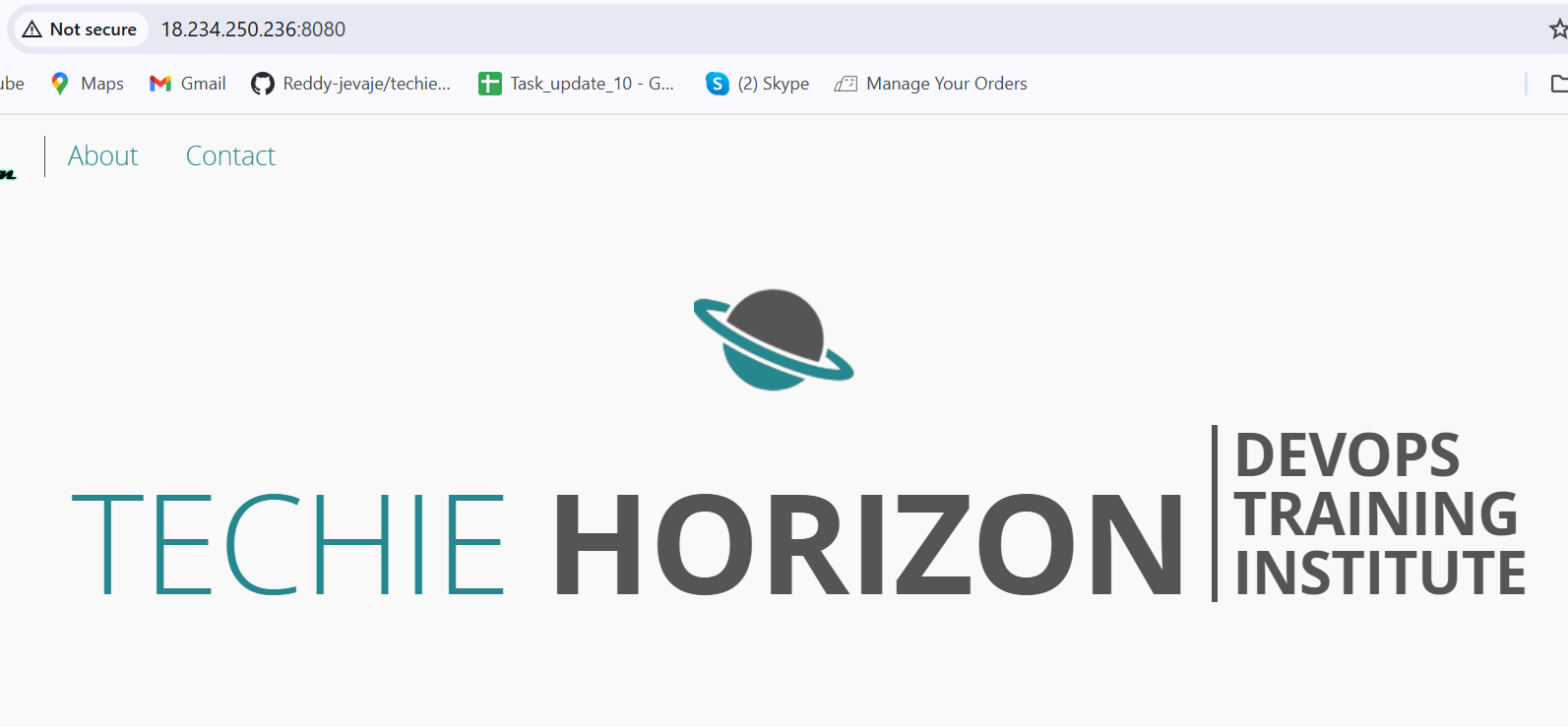
****

**2. From the Java Based Source Code, Write a Docker file, build, run & push to docker registry.**

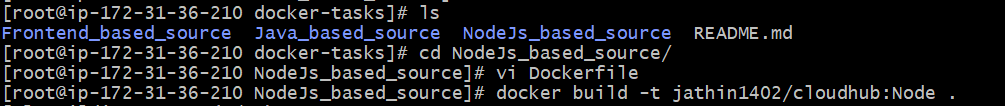
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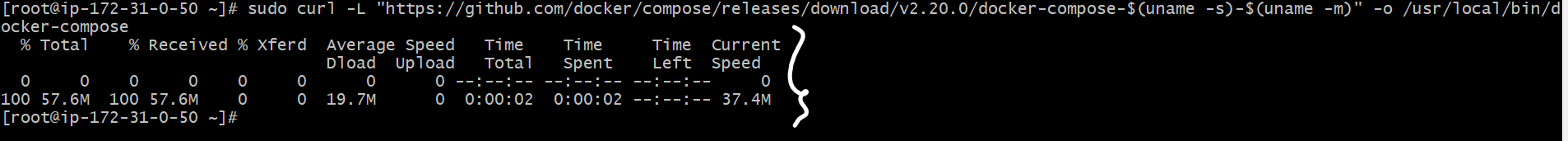
**3. From the NodeJS Based Source Code, Write a docker file, build with tag v1, run & push to docker registry.**

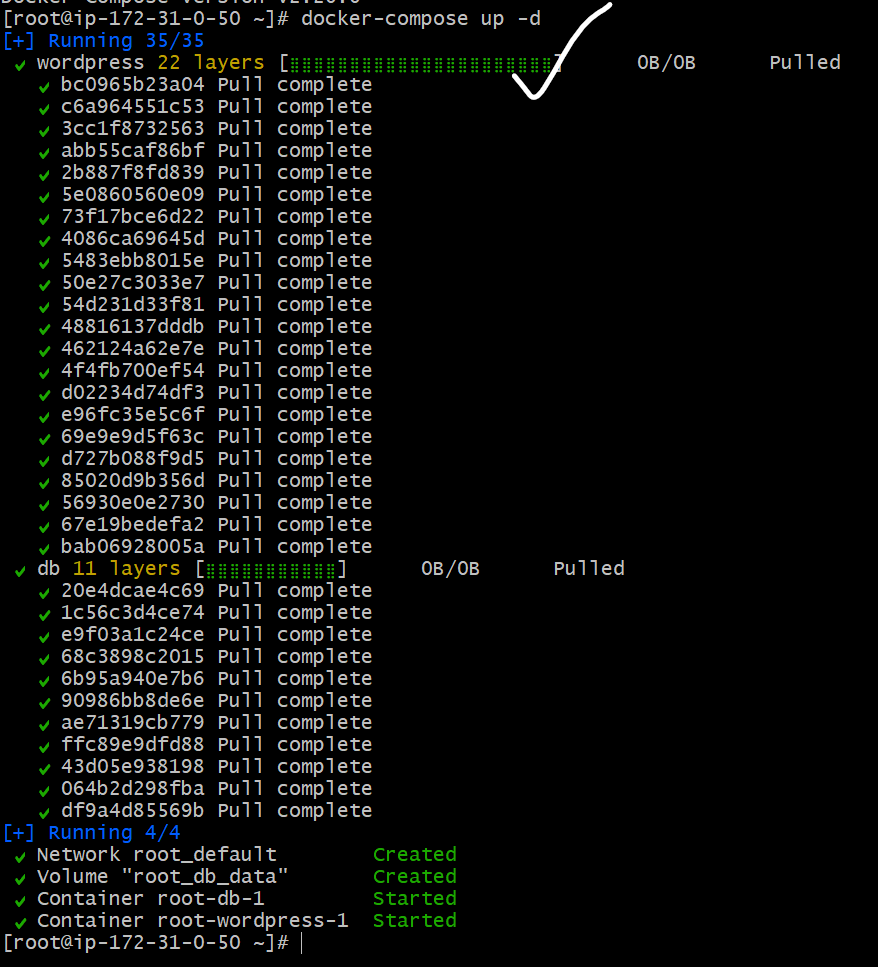
****

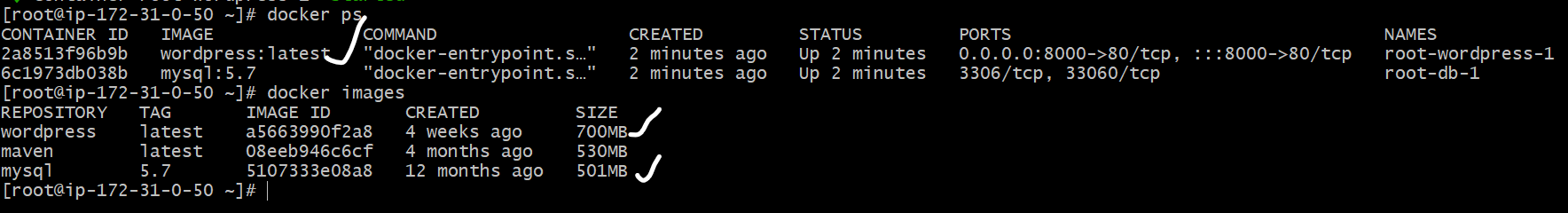
****

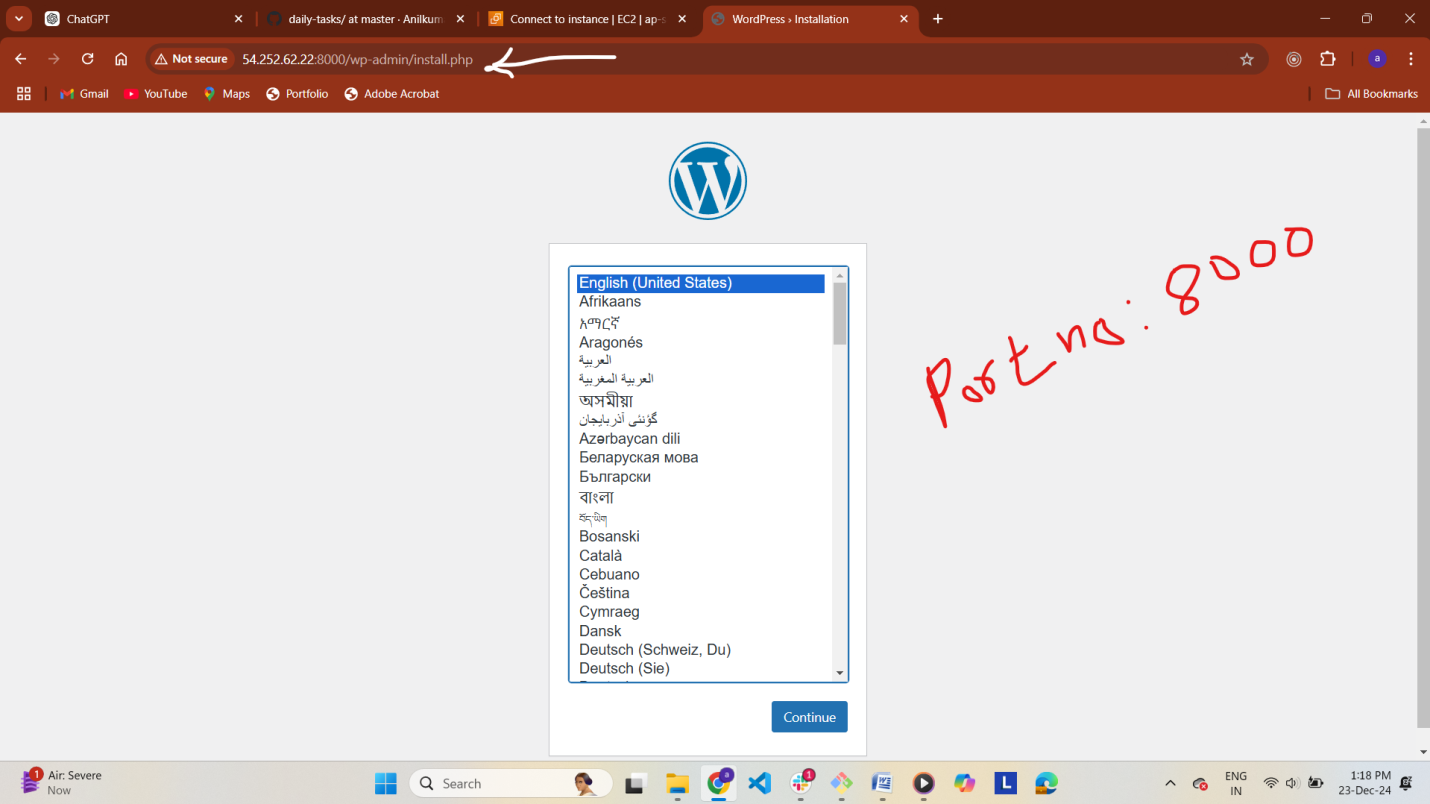
****

**4. Write a docker-compose docker file to setup WordPress with MySQL database**

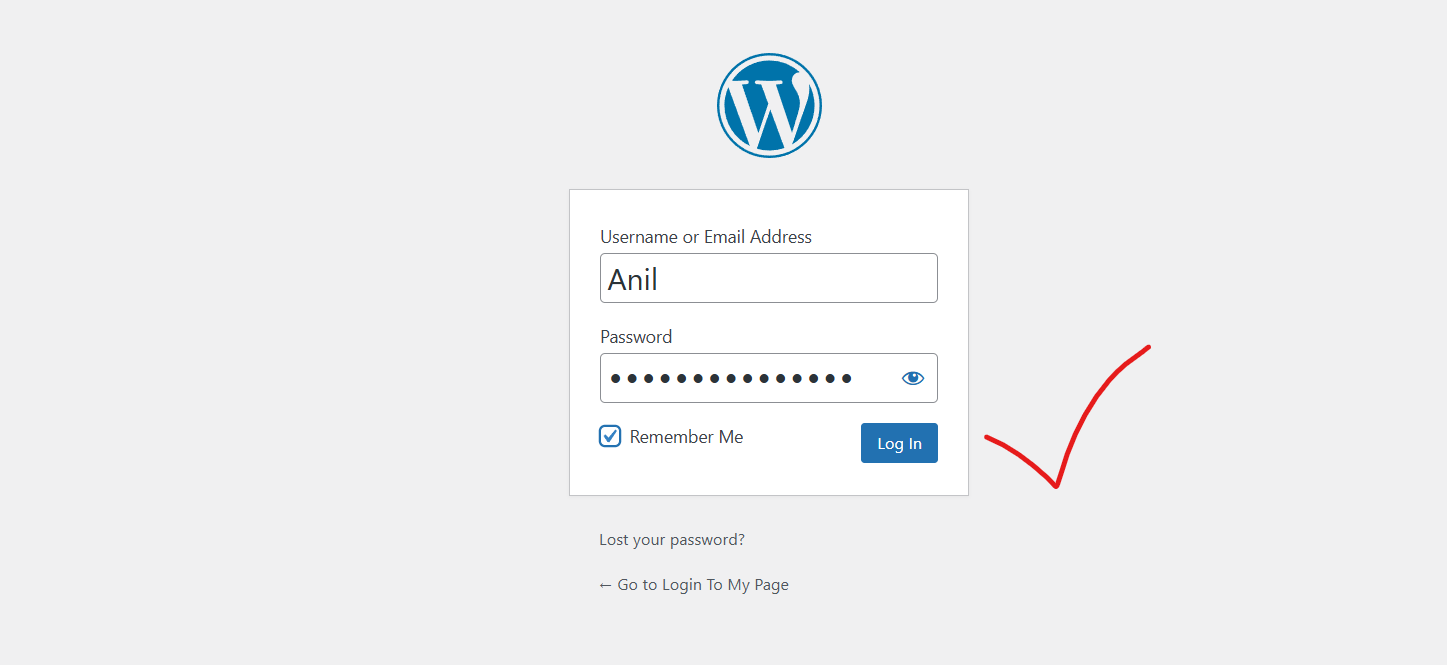
****

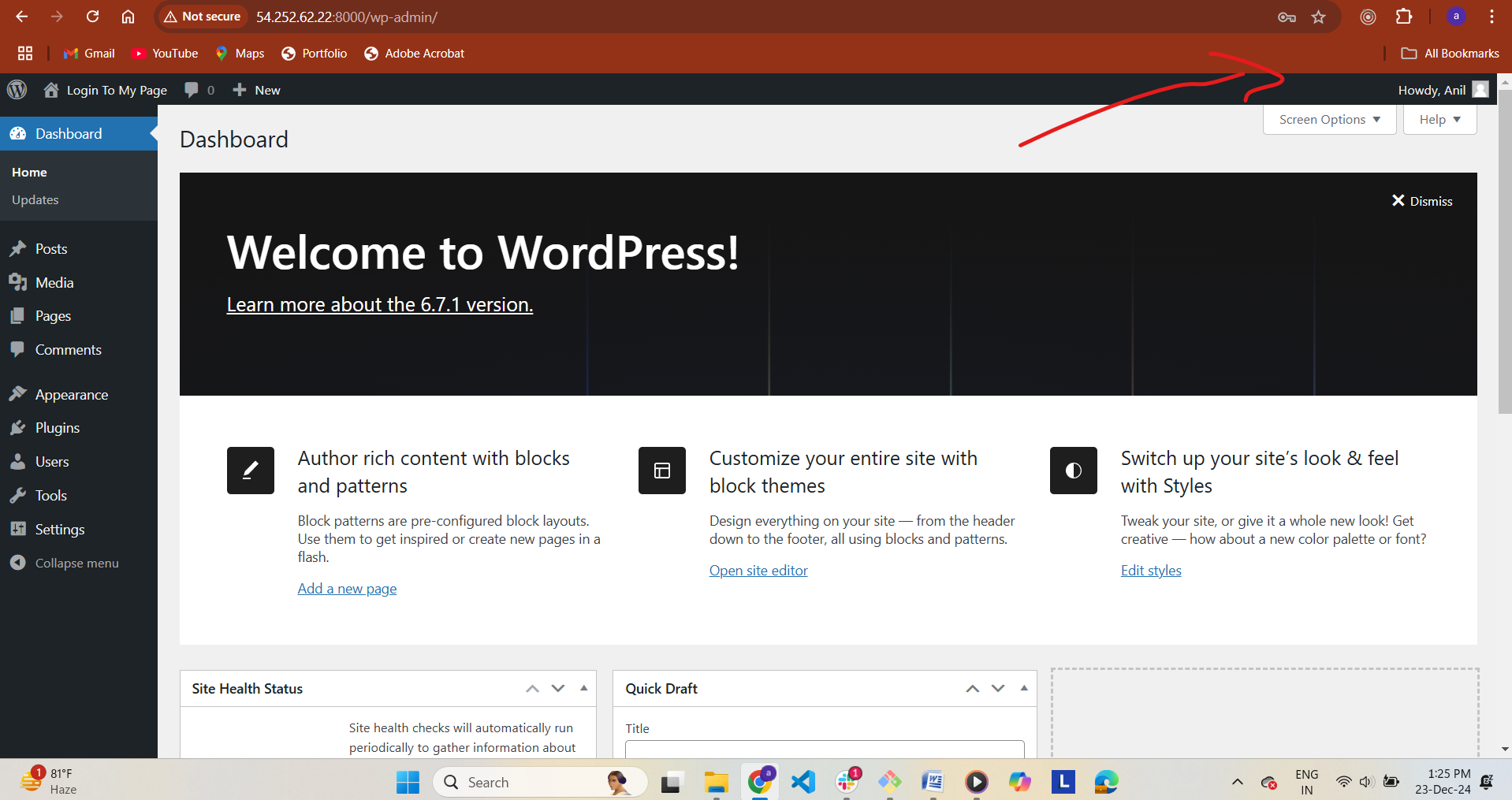
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