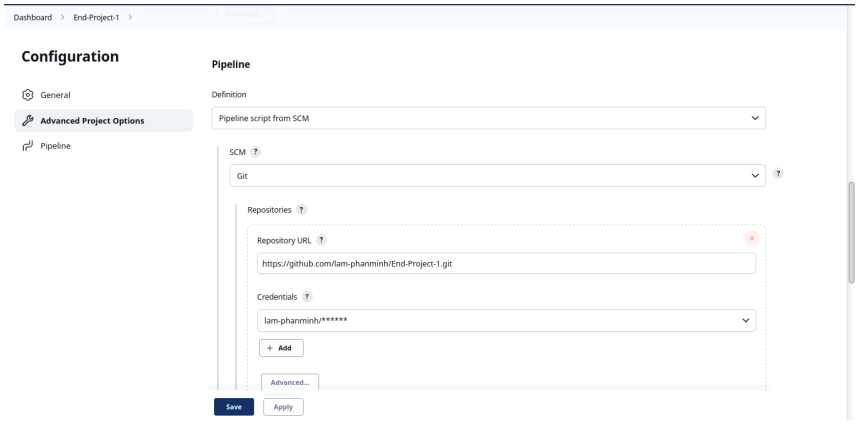
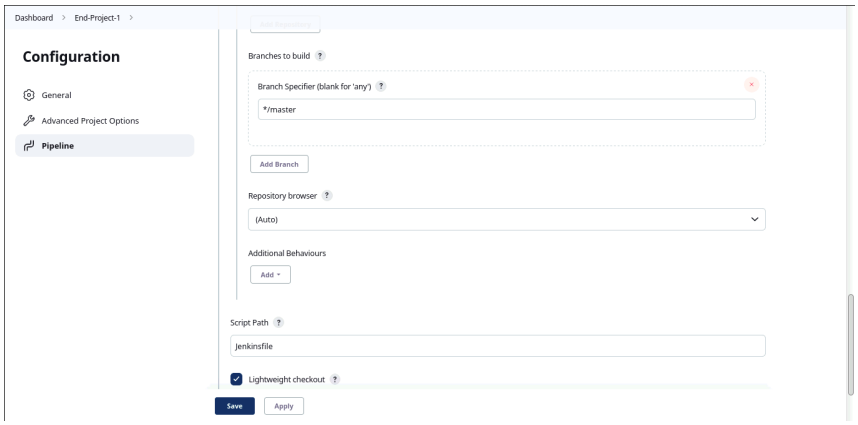
1. Link github repo: https://github.com/lam-phanminh/End-Project-1
    - In this repo, I add Dockerfile to build source code PHP.
    - About Dockerfile:

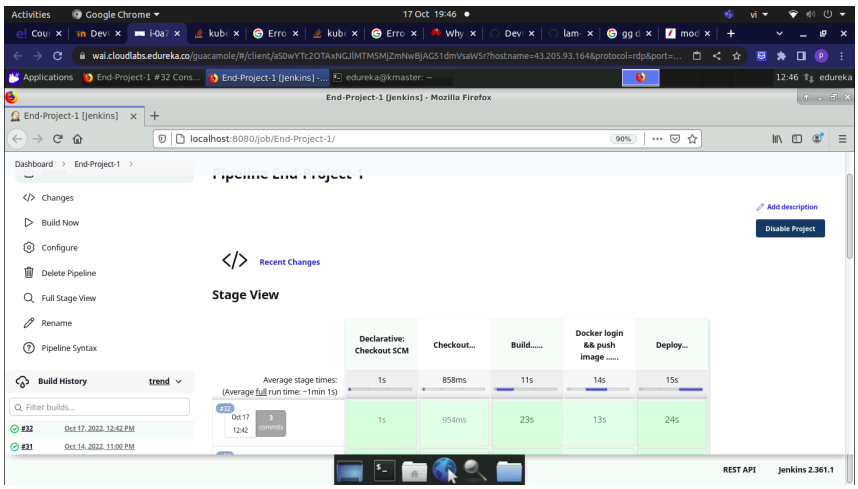
```
Dockerfile 2 ×
Dockerfile > ...
1   FROM    devopsedu/webapp
2   WORKDIR /var/www/html
3   RUN     rm -rf index.html index.php && \
4           rm -rf /etc/apache2/sites-enabled/000-default.conf
5   COPY    000-default.conf /etc/apache2/sites-enabled/
6   COPY    . /var/www/html
7   EXPOSE  80
8   CMD     ["apachectl", "-D", "FOREGROUND"]
```

    - Base image: `devopsedu/webapp`
    - My workdir is `/var/www/html`
    - I add line `DirectoryIndex  index.php` into `000-default.conf` file and copy `000-default.conf` from this directory to `/etc/apache2/sites-enabled/` of container.
    - Copy source code to `/var/www/html`
    - Expose port 80
    - Final, start apache.
2. Create Jenkins pipeline job and config:





- Job:



3. Jenkinsfile:

```
Jenkinsfile
pipeline{

    // agent {label 'kslave1'}

    agent any
    stages{
        stage('Checkout...'){
            steps{
                echo 'cloning..'
                git 'https://github.com/lam-phanminh/End-Project-1.git'
            }
        }
        stage('Build.....'){
            steps{
                sh 'docker build -t phanminhlam/php-app:$BUILD_NUMBER .'
            }
        }
        stage('Docker login && push image .....'){
            steps{

                withCredentials([usernamePassword(credentialsId: 'docker-hub', passwordVariable: 'passwd', usernameVariable: 'user')]) {

                sh 'echo "${passwd} | docker login -u ${user} --password-stdin" && docker push phanminhlam/php-app:$BUILD_NUMBER'

                }
            }
        }
        stage('Deploy...'){
            steps{
                // sh 'cd ansible-deploy && ansible-playbook -i inventory playbook.yml --extra-vars "tag=$BUILD_NUMBER"'
                ansiblePlaybook installation: 'ansible-kslave1', inventory: './ansible-deploy/inventory', playbook: './ansible-deploy/playbook.yml', extras:
                '--extra-vars tag=$BUILD_NUMBER'
            }

        }
    }

}
```

4. Ansible:

    - `Playbook`:

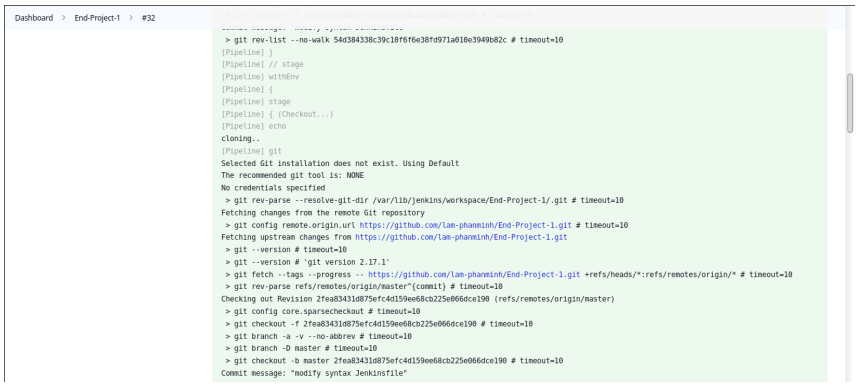
```
playbook.yml 1, M
ansible-deploy > playbook.yml > {} 0 > [ ] tasks > {} 0 > {} docker_container > [ ] ports > 0
Ansible Playbook (ansible.json)
---
- hosts: kslave1
  become: yes
  tasks:
    - name: deploy PHP app docker container
      docker_container:
        image: 'phanminhlam/php-app:{{ tag }}'
        name: php-app
        state: started
        ports:
          - "8888:80"
```

    - `Inventory`:

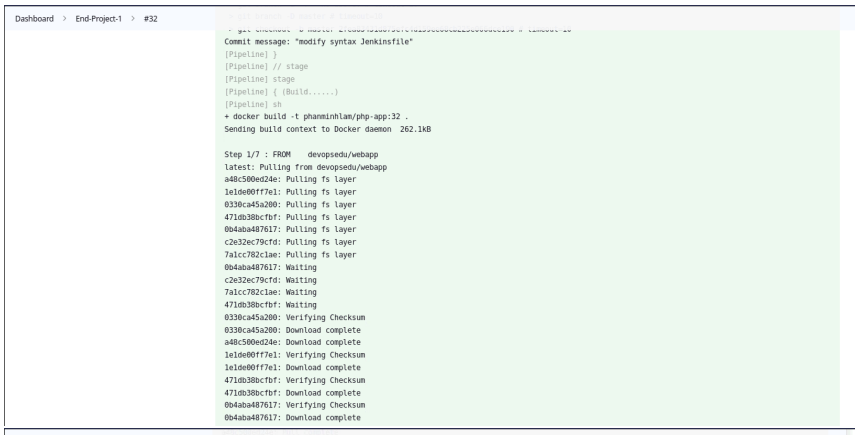
```
inventory
ansible-deploy > inventory
[kslave1]
172.31.31.158 ansible_user=root
```

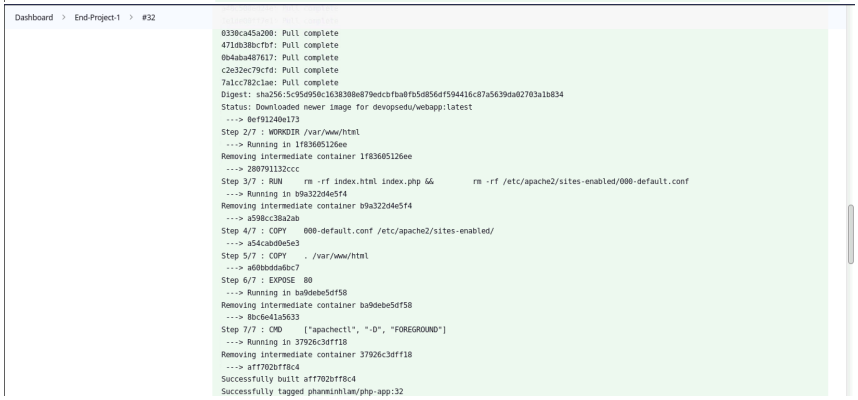
5. Console output:

    - Stage `Checkout...`:

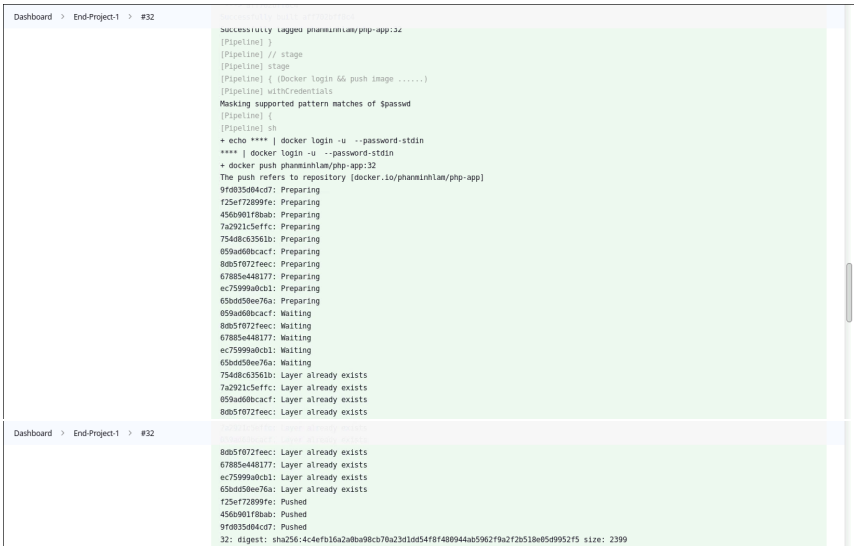


- Stage `Build......`:

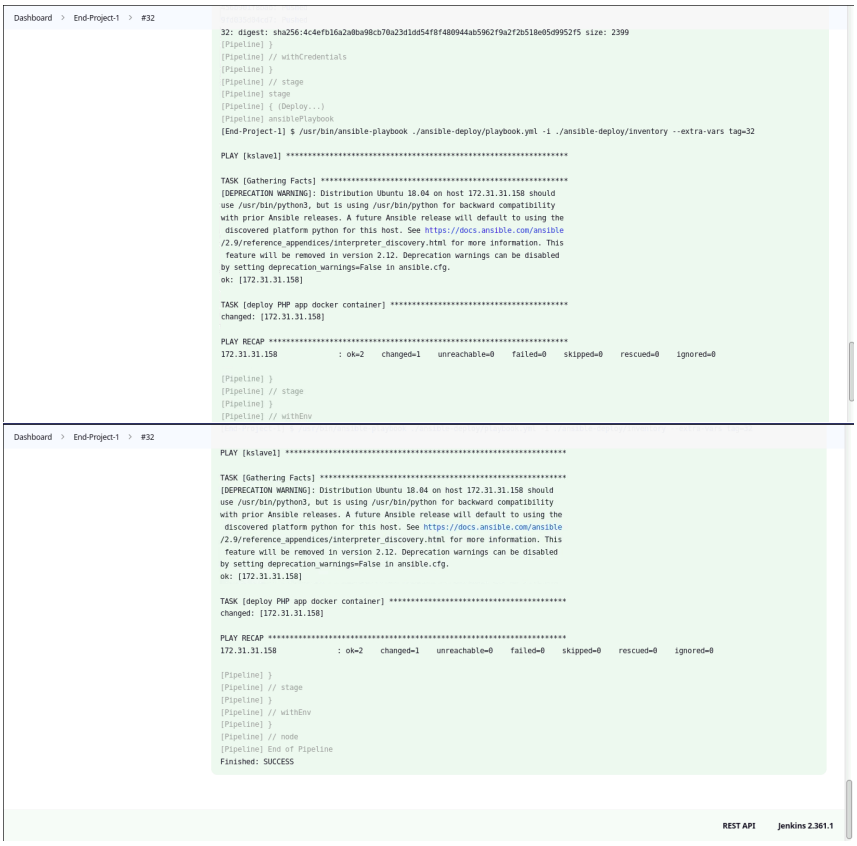




- Stage `Docker login && push image ......`



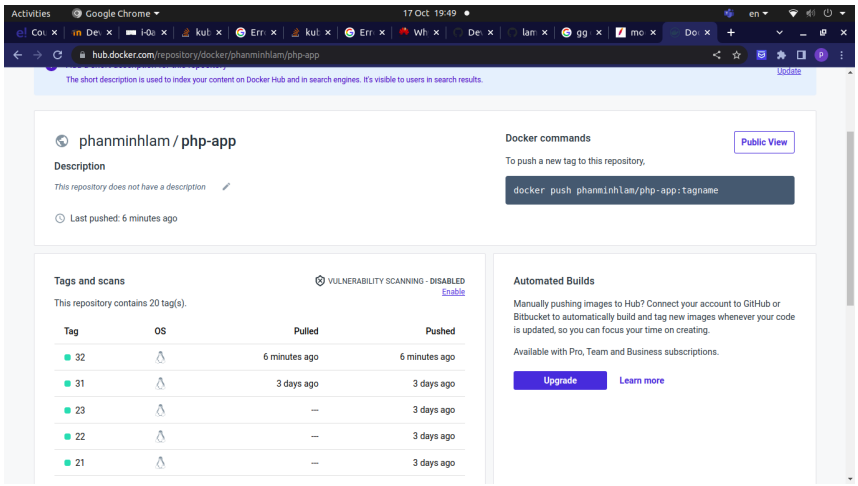
- Stage `Deploy...`



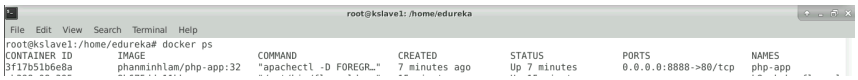
- Log ansible:

```
2022-10-14 16:01:07,612 p=19057 u=jenkins n=ansible | PLAY [kslave1] *********************************************************************
2022-10-14 16:01:07,626 p=19057 u=jenkins n=ansible | TASK [Gathering Facts] *********************************************************************
2022-10-14 16:01:11,352 p=19057 u=jenkins n=ansible | [DEPRECATION WARNING]: Distribution Ubuntu 18.04 on host 172.31.31.158 should
use /usr/bin/python3, but is using /usr/bin/python for backward compatibility
with prior Ansible releases. A future Ansible release will default to using the
 discovered platform python for this host. See https://docs.ansible.com/ansible
/2.9/reference_appendices/interpreter_discovery.html for more information. This
 feature will be removed in version 2.12. Deprecation warnings can be disabled
by setting deprecation_warnings=False in ansible.cfg.
2022-10-14 16:01:11,353 p=19057 u=jenkins n=ansible | ok: [172.31.31.158]
2022-10-14 16:01:11,380 p=19057 u=jenkins n=ansible | TASK [Log into DockerHub] ******************************************************************
2022-10-14 16:01:12,127 p=19057 u=jenkins n=ansible | ok: [172.31.31.158]
2022-10-14 16:01:12,155 p=19057 u=jenkins n=ansible | TASK [deploy PHP app docker container] *****************************************************
2022-10-14 16:01:29,092 p=19057 u=jenkins n=ansible | changed: [172.31.31.158]
2022-10-14 16:01:29,094 p=19057 u=jenkins n=ansible | PLAY RECAP *********************************************************************************
2022-10-14 16:01:29,094 p=19057 u=jenkins n=ansible | 172.31.31.158             : ok=3    changed=1    unreachable=0    failed=0    skipped=0    res
cued=0    ignored=0
2022-10-14 16:02:48,768 p=20092 u=jenkins n=ansible | PLAY [kslave1] *********************************************************************
2022-10-14 16:02:48,780 p=20092 u=jenkins n=ansible | TASK [Gathering Facts] *********************************************************************
2022-10-14 16:02:52,212 p=20092 u=jenkins n=ansible | [DEPRECATION WARNING]: Distribution Ubuntu 18.04 on host 172.31.31.158 should
use /usr/bin/python3, but is using /usr/bin/python for backward compatibility
with prior Ansible releases. A future Ansible release will default to using the
 discovered platform python for this host. See https://docs.ansible.com/ansible
/2.9/reference_appendices/interpreter_discovery.html for more information. This
 feature will be removed in version 2.12. Deprecation warnings can be disabled
by setting deprecation_warnings=False in ansible.cfg.
2022-10-14 16:02:52,212 p=20092 u=jenkins n=ansible | ok: [172.31.31.158]
2022-10-14 16:02:52,237 p=20092 u=jenkins n=ansible | TASK [deploy PHP app docker container] *****************************************************
2022-10-14 16:03:08,095 p=20092 u=jenkins n=ansible | changed: [172.31.31.158]
2022-10-14 16:03:08,099 p=20092 u=jenkins n=ansible | PLAY RECAP *********************************************************************************
2022-10-14 16:03:08,099 p=20092 u=jenkins n=ansible | 172.31.31.158             : ok=2    changed=1    unreachable=0    failed=0    skipped=0    res
cued=0    ignored=0
root@kmaster:/var/lib/jenkins/workspace/End-Project-1# 
```

6. Image pushed to dockerhub:



7. Container run:



8. Web built:

Applications
Home | Simple PHP We...
Problem loading page - ...
root@kmaster: /var/lib/j...
12:53
edureka
Home | Simple PHP Website - Mozilla Firefox
End-Project-1 #32 Cons
Home | Simple PHP Website
172.31.31.158:8888
Simple PHP Website
Home | About Us | Products | Contact
Home
This is home Welcome to test project -- this content is in file -- content/home.php Feel free to edit it and check in git to test the CI/CD flow
It is a long established fact that no one reads this and I may add anything and reader will be distracted by the readable content of a page when looking at its layout. The point of using Lorem Ipsum is that it has a more-or-less normal distribution of letters, as opposed to using 'Content here, content here', making it look like readable English. Many desktop publishing packages and web page editors now use Lorem Ipsum as their default model text, and a