

Home Work Summary

Integration of git ,jenkins and docker to deploy website on server automatically.

JOB1

If Developer push to dev branch then Jenkins will fetch from dev and deploy on testing environment.

JOB#2

If Developer push to master branch then Jenkins will fetch from master and deploy on prod_env environment.

JOB#3

Manually the QA team will check (test) for the website running in dev-docker environment. If it is running fine then Jenkins will merge the dev branch to master branch and trigger #job 2

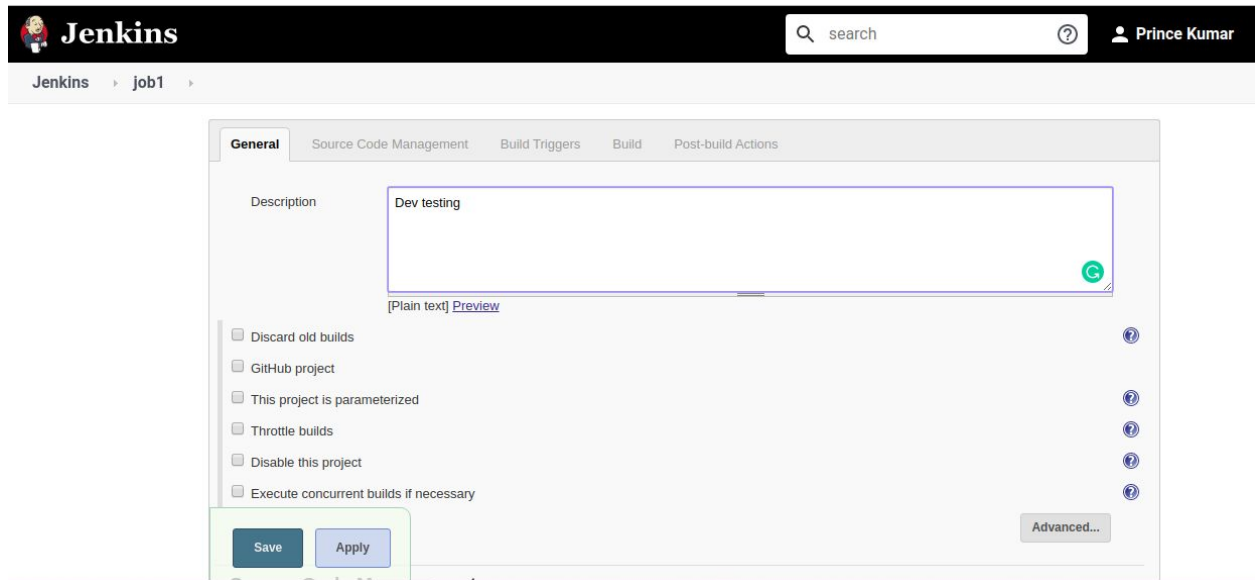
Prerequisite:

Install docker ,jenkin and git .

Stop firewall

JOB1

Created job1 as follows:



The screenshot shows the Jenkins Job Configuration page for 'job1' in the 'General' tab. The 'Description' field contains 'Dev testing'. Below it, there are several checkboxes: 'Discard old builds', 'GitHub project', 'This project is parameterized', 'Throttle builds', 'Disable this project', and 'Execute concurrent builds if necessary'. At the bottom left, there are 'Save' and 'Apply' buttons. At the bottom right, there is an 'Advanced...' button. The top navigation bar includes the Jenkins logo, a search bar, and the user name 'Prince Kumar'.

Jenkins

Search

Prince Kumar

Jenkins > job1 >

General Source Code Management Build Triggers Build Post-build Actions

Description: Dev testing

[Plain text] [Preview](#)

☐ Discard old builds

☐ GitHub project

☐ This project is parameterized

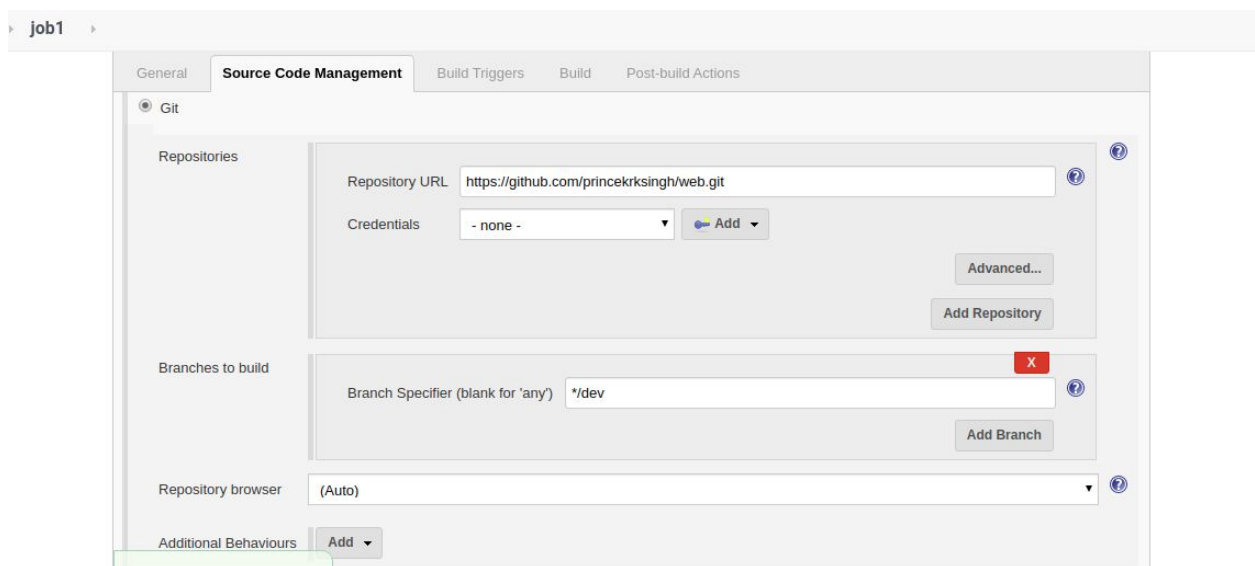
☐ Throttle builds

☐ Disable this project

☐ Execute concurrent builds if necessary

Save Apply

Advanced...



The screenshot shows the Jenkins Job Configuration page for 'job1' in the 'Source Code Management' tab. The 'Git' radio button is selected. Under 'Repositories', the 'Repository URL' is 'https://github.com/princekrksingh/web.git' and 'Credentials' is '- none -'. There are 'Add' and 'Advanced...' buttons. Below this is an 'Add Repository' button. Under 'Branches to build', the 'Branch Specifier (blank for 'any')' is '*/dev'. There is a red 'X' icon and an 'Add Branch' button. At the bottom, 'Repository browser' is set to '(Auto)' and there is an 'Add' button for 'Additional Behaviours'.

job1 >

General **Source Code Management** Build Triggers Build Post-build Actions

☒ Git

Repositories

Repository URL: <https://github.com/princekrksingh/web.git>

Credentials: - none - Add

Advanced...

Add Repository

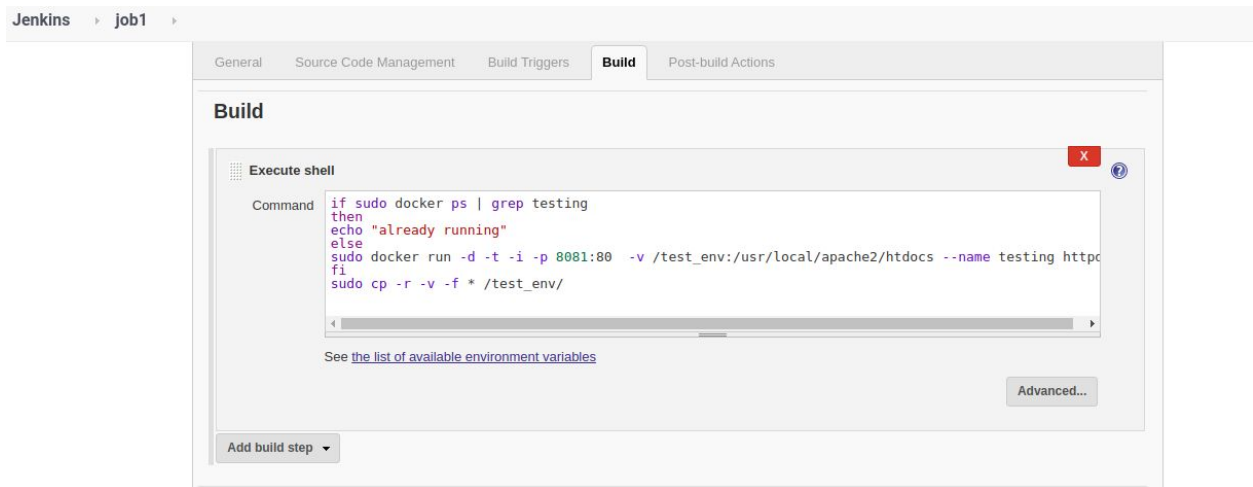
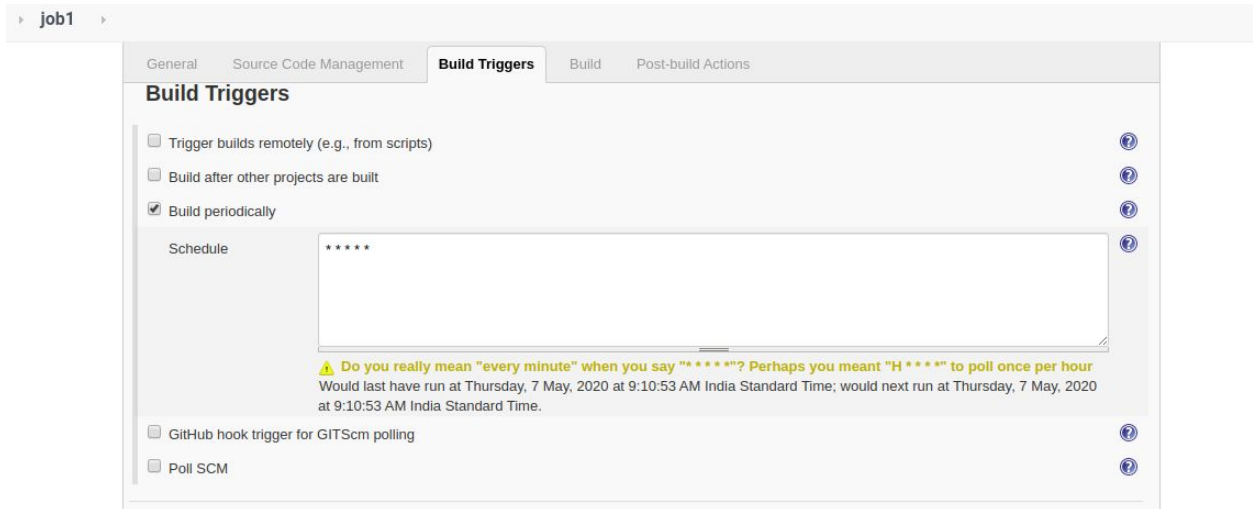
Branches to build

Branch Specifier (blank for 'any'): */dev

Add Branch

Repository browser: (Auto)

Additional Behaviours: Add



Docker container testing env

```
(base) prince@prince-Inspiron-3521:~$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED
STATUS        PORTS
41c833d56f81   httpd     "httpd-foreground"      4 minutes ago
Up 4 minutes   0.0.0.0:8081->80/tcp    testing
```

(base) prince@prince-Inspiron-3521:~\$

Jenkins console output

```
+ sudo docker ps
+ grep testing
41c833d56f81      httpd      "httpd-foreground"   4 minutes ago
testing
+ echo already running
already running
+ sudo cp -r -v -f README.md index.html /test_env/
'README.md' -> '/test_env/README.md'
'index.html' -> '/test_env/index.html'
Finished: SUCCESS
```

Exposed site



New Registration

Fill the details to Sign up

Full Name

Email

Mobile No.

Address

College Name

Gender

Job3

Created as follows:

job3

General Source Code Management Build Triggers Build Post-build Actions

Description QATTesting manually

[Plain text] [Preview](#)

- ☐ Discard old builds ?
- ☐ GitHub project ?
- ☐ This project is parameterized ?
- ☐ Throttle builds ?
- ☐ Disable this project ?
- ☐ Execute concurrent builds if necessary ?

job3

General Source Code Management Build Triggers Build Post-build Actions

Description QATTesting manually

[Plain text] [Preview](#)

- ☐ Discard old builds ?
- ☐ GitHub project ?
- ☐ This project is parameterized ?
- ☐ Throttle builds ?
- ☐ Disable this project ?
- ☐ Execute concurrent builds if necessary ?

General
Source Code Management
Build Triggers
Build
Post-build Actions

Repository browser
(Auto)

Additional Behaviours

Merge before build

Name of repository
origin

Branch to merge to
master

Merge strategy
default

Fast-forward mode
--no-ff

Add

Build Triggers

☐ Trigger builds remotely (e.g., from scripts)

☐ Build after other projects are built

General
Source Code Management
Build Triggers
Build
Post-build Actions

Post-build Actions

Git Publisher

Push Only If Build Succeeds
☒

Merge Results
☒

If pre-build merging is configured, push the result back to the origin

Force Push
☒

Add force option to git push

Tags

Add Tag

Tags to push to remote repositories

Branches

Add Branch

Branches to push to remote repositories

Notes

Add Note

Notes to push to remote repositories

Save
Apply

Job 2 trigger by job3 if job 3 is successfully build and tested by QAT

job2

General Source Code Management Build Triggers Build Post-build Actions

Git

Repositories

Repository URL

Credentials

Advanced...

Add Repository

Branches to build

Branch Specifier (blank for 'any')

Add Branch

Repository browser

job2

General Source Code Management Build Triggers Build Post-build Actions

Repository browser

Additional Behaviours

Build Triggers

☐ Trigger builds remotely (e.g., from scripts)

☒ Build after other projects are built

Projects to watch

No project specified

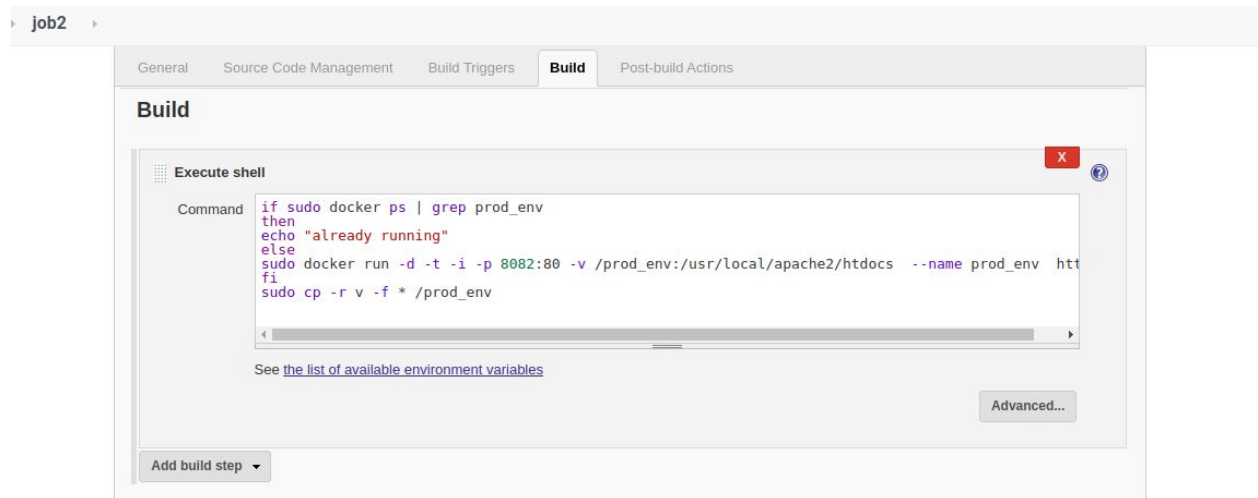
☒ Trigger only if build is stable

☐ Trigger even if the build is unstable

☐ Trigger even if the build fails

☒ Build periodically

Schedule



Conclusion: Merged and deployed on production env