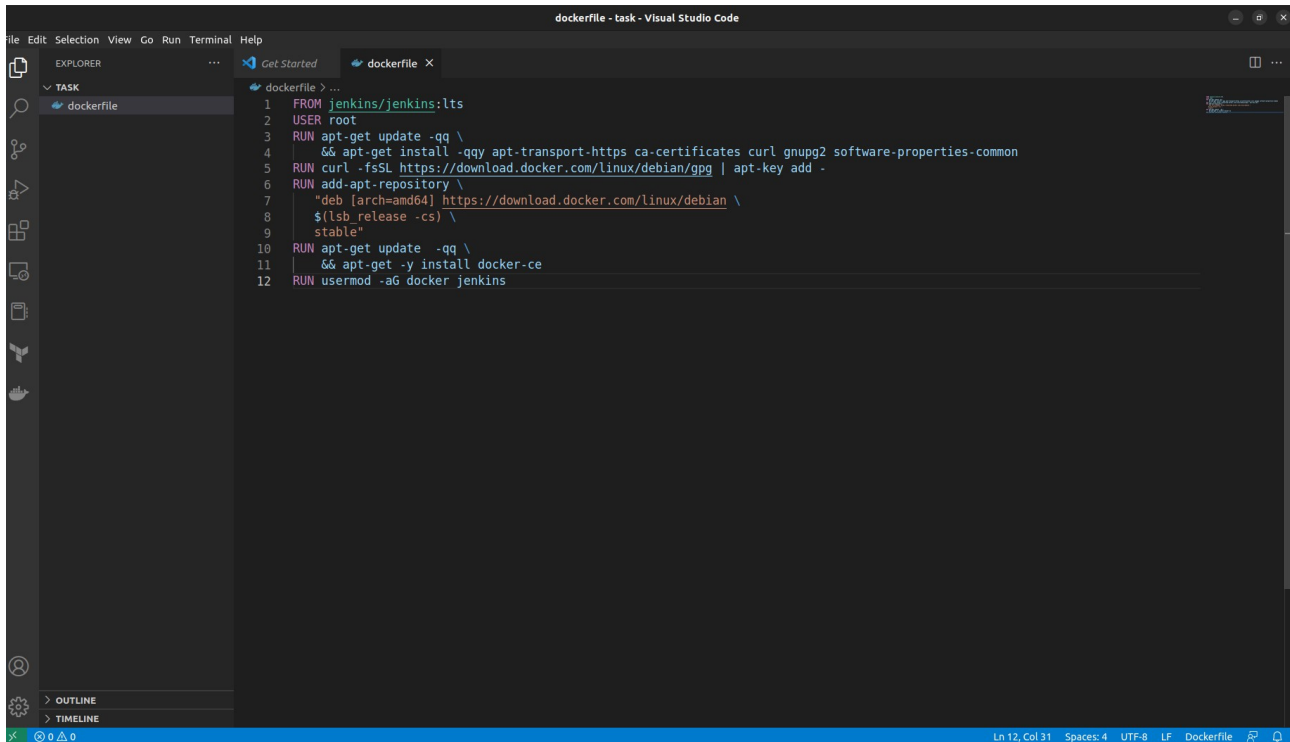➢ configure jenkins image to run docker commands on your hos docker daemon


```
FROM jenkins/jenkins:lts
USER root
RUN apt-get update -qq \
    && apt-get install -qqy apt-transport-https ca-certificates curl gnupg2 software-properties-common
RUN curl -fsSL https://download.docker.com/linux/debian/gpg | apt-key add -
RUN add-apt-repository \
    "deb [arch=amd64] https://download.docker.com/linux/debian \
    $(lsb_release -cs) \
    stable"
RUN apt-get update  -qq \
    && apt-get -y install docker-ce
RUN usermod -aG docker jenkins
```



```
os@os-Lenovo-ideapad-330-15IKB:~/Desktop/task$ sudo docker exec -it fb5305242cea  bash
[sudo] password for os:
root@fb5305242cea:/# docker ps
CONTAINER ID   IMAGE                      COMMAND                  CREATED       STATUS        PORTS                                                  NAMES
e7287b03e9c1   raniiaashraff/iticau:v1.0  "docker-entrypoint.s…"   5 hours ago   Up 5 hours    0.0.0.0:3000->3000/tcp, :::3000->3000/tcp              clever_wiles
fb5305242cea   jenkins_docker             "/usr/bin/tini -- /u…"   5 hours ago   Up 5 hours    50000/tcp, 0.0.0.0:8084->8080/tcp, :::8084->8080/tcp   ecstatic_rubin
cd6592878174   jenkins/jenkins:lts        "/usr/bin/tini -- /u…"   5 days ago    Up 9 hours    50000/tcp, 0.0.0.0:8083->8080/tcp, :::8083->8080/tcp   magical_kowalevski
root@fb5305242cea:/#
```

➢ create CI/CD for this repo https://github.com/mahmoud254/jenkins_nodejs_example.git

Script ?

```
 5    stage('Ci') {
 6        steps {
 7            git 'https://github.com/RaniiaAshraf/jenkins_nodejs_example'
 8            withCredentials([usernamePassword(credentialsId: 'dockerhub', passwordVariable: 'MY_PASS', usernameVariable: 'MY_USER')]) {
 9            sh """
10            docker login -u ${MY_USER} -p ${MY_PASS}
11            docker build . -f dockerfile -t raniiaashraff/iticau:v1.0
12            docker push raniiaashraff/iticau:v1.0
13            """
14            }
15        }
16    }
17
18    stage('Cd') {
19        steps{
20            withCredentials([usernamePassword(credentialsId: 'dockerhub', passwordVariable: 'MY_PASS', usernameVariable: 'MY_USER')]) {
21            sh """
22            docker login -u ${MY_USER} -p ${MY_PASS}
23            docker run -d -p 3000:3000 raniiaashraff/iticau:v1.0
24
```

New Item

People

Build History

Project Relationship

Check File Fingerprint

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

1 Idle

2 Idle

Add description

All +

S	W	Name ↓	Last Success	Last Failure	Last Duration	
✓		docker-pipeline	11 min #5	15 min #4	44 sec	▷

Icon: S M L

Icon legend   Atom feed for all   Atom feed for failures   Atom feed for just latest builds

REST API   Jenkins 2.375.2

Status

Changes

Console Output

View as plain text

Edit Build Information

Delete build '#5'

Git Build Data

Restart from Stage

Replay

Pipeline Steps

Workspaces

Previous Build

✓ Console Output

```
Started by user Rania Ashraf
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/jenkins_home/workspace/docker-pipeline
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Ci)
[Pipeline] git
The recommended git tool is: NONE
No credentials specified
 > git rev-parse --resolve-git-dir /var/jenkins_home/workspace/docker-pipeline/.git # timeout=10
Fetching changes from the remote Git repository
 > git config remote.origin.url https://github.com/RaniiaAshraf/jenkins_nodejs_example # timeout=10
Fetching upstream changes from https://github.com/RaniiaAshraf/jenkins_nodejs_example
 > git --version # timeout=10
 > git --version # 'git version 2.30.2'
 > git fetch --tags --force --progress -- https://github.com/RaniiaAshraf/jenkins_nodejs_example +refs/heads/*:refs/remotes/origin/* # timeout=10
 > git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision 76b82f9debde852cca6b5c1d574c0ce00b9c1600 (refs/remotes/origin/master)
 > git config core.sparsecheckout # timeout=10
 > git checkout -f 76b82f9debde852cca6b5c1d574c0ce00b9c1600 # timeout=10
 > git branch -a -v --no-abbrev # timeout=10
 > git branch -D master # timeout=10
 > git checkout -b master 76b82f9debde852cca6b5c1d574c0ce00b9c1600 # timeout=10
Commit message: "Update docker-publish.yml"
 > git rev-list --no-walk 76b82f9debde852cca6b5c1d574c0ce00b9c1600 # timeout=10
[Pipeline] withCredentials
Masking supported pattern matches of $MY_PASS
[Pipeline] {
[Pipeline] sh
Warning: A secret was passed to "sh" using Groovy String interpolation, which is insecure.
                 Affected argument(s) used the following variable(s): [MY_PASS]
                 See https://jenkins.io/redirect/groovy-string-interpolation for details.
+ docker login -u raniiaashraff -p ****
```
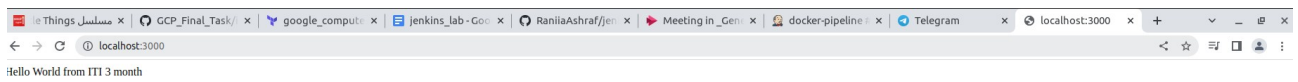
➤ create docker file to build image for jenkins slave

```
See "docker run --help".
os@os-Lenovo-ideapad-330-15IKB:~/Desktop/task$ sudo docker build -t jenkins-slave-image:v1 .
Sending build context to Docker daemon  2.56kB
Step 1/20 : FROM ubuntu
 ---> 6b7dfa7e8fdb
Step 2/20 : USER root
 ---> Using cache
 ---> 6dbc663d9105
Step 3/20 : RUN mkdir -p jenkins_home
 ---> Using cache
 ---> e765e6578643
Step 4/20 : RUN chmod 777 jenkins_home
 ---> Using cache
 ---> f62edbffb374
Step 5/20 : ENV DEBIAN_FRONTEND noninteractive
 ---> Using cache
 ---> 06854f3798d1
Step 6/20 : ENV TZ=Africa/Cairo
 ---> Using cache
 ---> 6860bfdcb928
Step 7/20 : RUN apt-get update
 ---> Using cache
 ---> 08f75efd50f8
Step 8/20 : RUN apt-get install -y tzdata
 ---> Using cache
 ---> 6355c4150af3
Step 9/20 : RUN apt-get install -y openjdk-11-jdk
 ---> Using cache
 ---> 371ac99470e8
Step 10/20 : RUN apt-get install -y openssh-server
 ---> Using cache
 ---> ce8ea88705cd
Step 11/20 : RUN apt-get install -y apt-transport-https ca-certificates curl gnupg-agent software-properties-common
 ---> Using cache
 ---> ebf7e96a771e
Step 12/20 : RUN curl -fsSL https://download.docker.com/linux/ubuntu/gpg | apt-key add -
 ---> Using cache
 ---> 737573d1e30a
Step 13/20 : RUN add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable"
 ---> Using cache
 ---> 77df292f93f7
Step 14/20 : RUN apt-get update
 ---> Using cache
 ---> 88f68fb05a59
Step 15/20 : RUN apt-get install -y docker-ce docker-ce-cli containerd.io
 ---> Using cache
 ---> f34da5f3e21e
Step 16/20 : RUN docker --version
 ---> Using cache
 ---> c6b03440df4f
Step 17/20 : RUN useradd -ms /bin/bash jenkins
 ---> Using cache
 ---> 36835b101988
Step 18/20 : RUN usermod -aG docker jenkins
 ---> Using cache
```

> create container from this image and configure ssh

```
Successfully tagged jenkins-slave-image:v1
os@os-Lenovo-ideapad-330-15IKB:~/Desktop/task$ sudo docker run -d --name jenkins-slave-container -it jenkins-slave-image:v1
c14675e02b48f6e6810b4a0dfe585388c6d34c13d9d0d82c87da41154f1567f8
os@os-Lenovo-ideapad-330-15IKB:~/Desktop/task$ sudo docker ps
CONTAINER ID   IMAGE                      COMMAND                  CREATED          STATUS          PORTS                                                           NAMES
c14675e02b48   jenkins-slave-image:v1     "/bin/bash"              14 seconds ago   Up 9 seconds                                                                    jenkins-slave-container
e7287b03e9c1   raniiaashraff/iticau:v1.0  "docker-entrypoint.s…"   16 hours ago     Up 16 hours     0.0.0.0:3000->3000/tcp, :::3000->3000/tcp                       clever_wiles
fb5305242cea   7d223f3475af               "/usr/bin/tini -- /u…"   17 hours ago     Up 17 hours     50000/tcp, 0.0.0.0:8084->8080/tcp, :::8084->8080/tcp            ecstatic_rubin
cd6592878174   jenkins/jenkins:lts        "/usr/bin/tini -- /u…"   6 days ago       Up 20 hours     50000/tcp, 0.0.0.0:8083->8080/tcp, :::8083->8080/tcp            magical_kowalevski
os@os-Lenovo-ideapad-330-15IKB:~/Desktop/task$ sudo docker images
REPOSITORY                 TAG          IMAGE ID       CREATED          SIZE
jenkins-slave-image        v1           8b563f6280d0   21 minutes ago   1.34GB
jenkins_docker             latest       8b563f6280d0   21 minutes ago   1.34GB
raniiaashraff/iticau       v1.0         b8f964cecb2c   17 hours ago     922MB
<none>                     <none>       7d223f3475af   18 hours ago     1.04GB
jenkins/jenkins            lts          3875608bd391   8 days ago       468MB
image1                     1.0          aa007bf59fc3   5 weeks ago      174MB
httpd                      latest       a1d258295ded   6 weeks ago      145MB
new-img                    latest       1403e55ab369   7 weeks ago      142MB
nginx                      latest       1403e55ab369   7 weeks ago      142MB
httpd                      <none>       73c10eb9266e   7 weeks ago      145MB
ubuntu                     22.04        6b7dfa7e8fdb   2 months ago     77.8MB
ubuntu                     latest       6b7dfa7e8fdb   2 months ago     77.8MB
mysql                      latest       7484689f290f   2 months ago     538MB
os@os-Lenovo-ideapad-330-15IKB:~/Desktop/task$
```

```
root@c14675e02b48:~/.ssh# vim id_rsa
root@c14675e02b48:~/.ssh# vim id_rsa.pub
root@c14675e02b48:~/.ssh# ls
id_rsa  id_rsa.pub
root@c14675e02b48:~/.ssh# cp id_rsa.pub authorized-keys
root@c14675e02b48:~/.ssh# vim authorized-keys
root@c14675e02b48:~/.ssh# cp id_rsa.pub authorized_keys
root@c14675e02b48:~/.ssh# rm authorized-keys
root@c14675e02b48:~/.ssh# ls
authorized_keys  id_rsa  id_rsa.pub
root@c14675e02b48:~/.ssh# vim authorized_keys
root@c14675e02b48:~/.ssh#
```

> from jenkins maste create new node with the slave container

```
USER=root
_=']'
Checking Java version in the PATH
openjdk version "11.0.17" 2022-10-18
OpenJDK Runtime Environment (build 11.0.17+8-post-Ubuntu-1ubuntu222.04)
OpenJDK 64-Bit Server VM (build 11.0.17+8-post-Ubuntu-1ubuntu222.04, mixed mode, sharing)
[02/09/23 12:45:24] [SSH] Checking java version of /jenkins/jdk/bin/java
Couldn't figure out the Java version of /jenkins/jdk/bin/java
bash: line 1: /jenkins/jdk/bin/java: No such file or directory

[02/09/23 12:45:24] [SSH] Checking java version of java
[02/09/23 12:45:24] [SSH] java -version returned 11.0.17.
[02/09/23 12:45:24] [SSH] Starting sftp client.
[02/09/23 12:45:24] [SSH] Remote file system root /jenkins does not exist. Will try to create it...
[02/09/23 12:45:24] [SSH] Copying latest remoting.jar...
[02/09/23 12:45:25] [SSH] Copied 1,368,830 bytes.
Expanded the channel window size to 4MB
[02/09/23 12:45:25] [SSH] Starting agent process: cd "/jenkins" && java  -jar remoting.jar -workDir /jenkins -jar-cache /jenkins/remoting/jarCache
Feb 09, 2023 12:45:25 PM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /jenkins/remoting as a remoting work directory
Feb 09, 2023 12:45:26 PM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /jenkins/remoting
<===[JENKINS REMOTING CAPACITY]===>channel started
Remoting version: 3077.vd69cf116da_6f
Launcher: SSHLauncher
Communication Protocol: Standard in/out
This is a Unix agent
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by jenkins.slaves.StandardOutputSwapper$ChannelSwapper to constructor java.io.FileDescriptor(int)
WARNING: Please consider reporting this to the maintainers of jenkins.slaves.StandardOutputSwapper$ChannelSwapper
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
Evacuated stdout
Agent successfully connected and online
```

REST API   Jenkins 2.375.2

Jenkins

🔍 Search (CTRL+K)   🔔 1   🛡 1   Rania Ashraf ⌄   log out

New Node

Configure Clouds

Node Monitoring

Build Queue ⌄

No builds in the queue.

Build Executor Status ⌄

Built-In Node

1 Idle

2 Idle

docker

1 Idle

Manage nodes and clouds

Refresh status

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time	
🖥	Built-In Node	Linux (amd64)	In sync	125.62 GB	⊘ 45.89 MB	125.62 GB	0ms	⚙
🖥	docker	Linux (amd64)	In sync	125.62 GB	⊘ 46.00 MB	125.62 GB	232ms	⚙
	Data obtained	1 min 37 sec	1 min 37 sec	1 min 36 sec	1 min 36 sec	1 min 36 sec	1 min 37 sec	

REST API   Jenkins 2.375.2

➢ integrate slack with jenkins

Slack

Workspace ?

iti-cqp8185

Credential ?

slack

[+ Add]
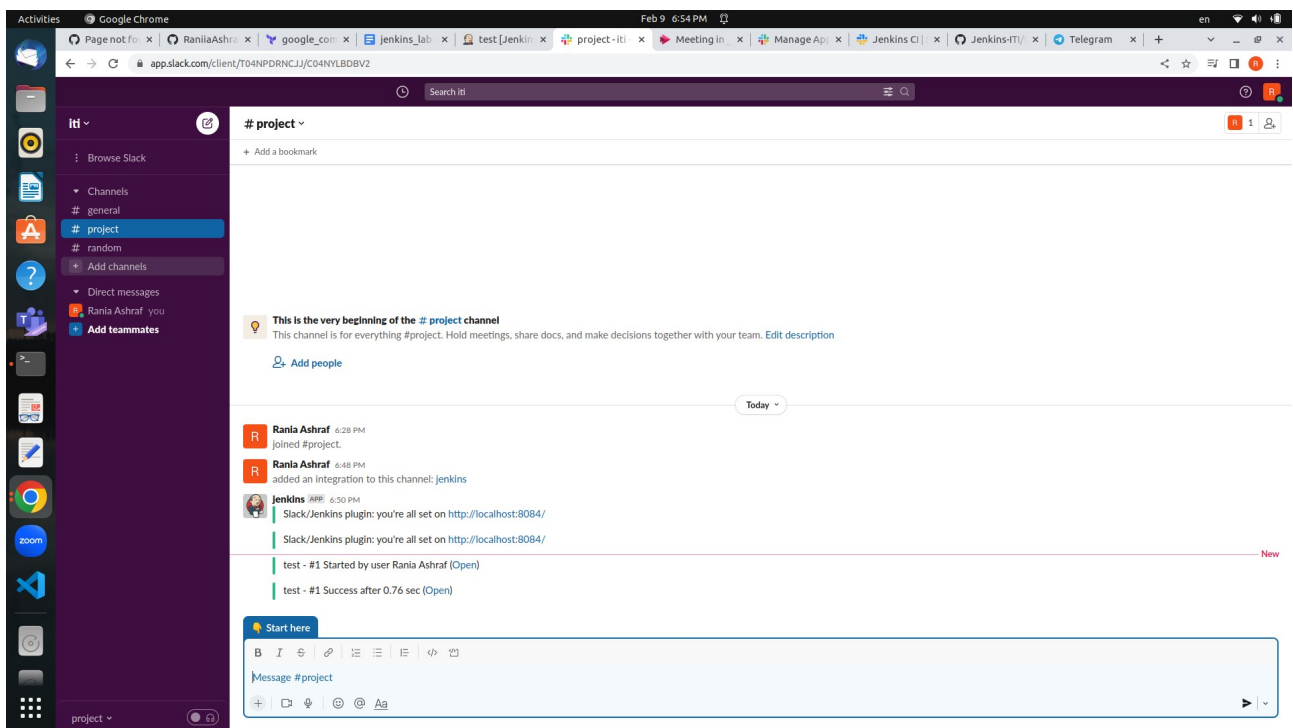
Default channel / member id ?
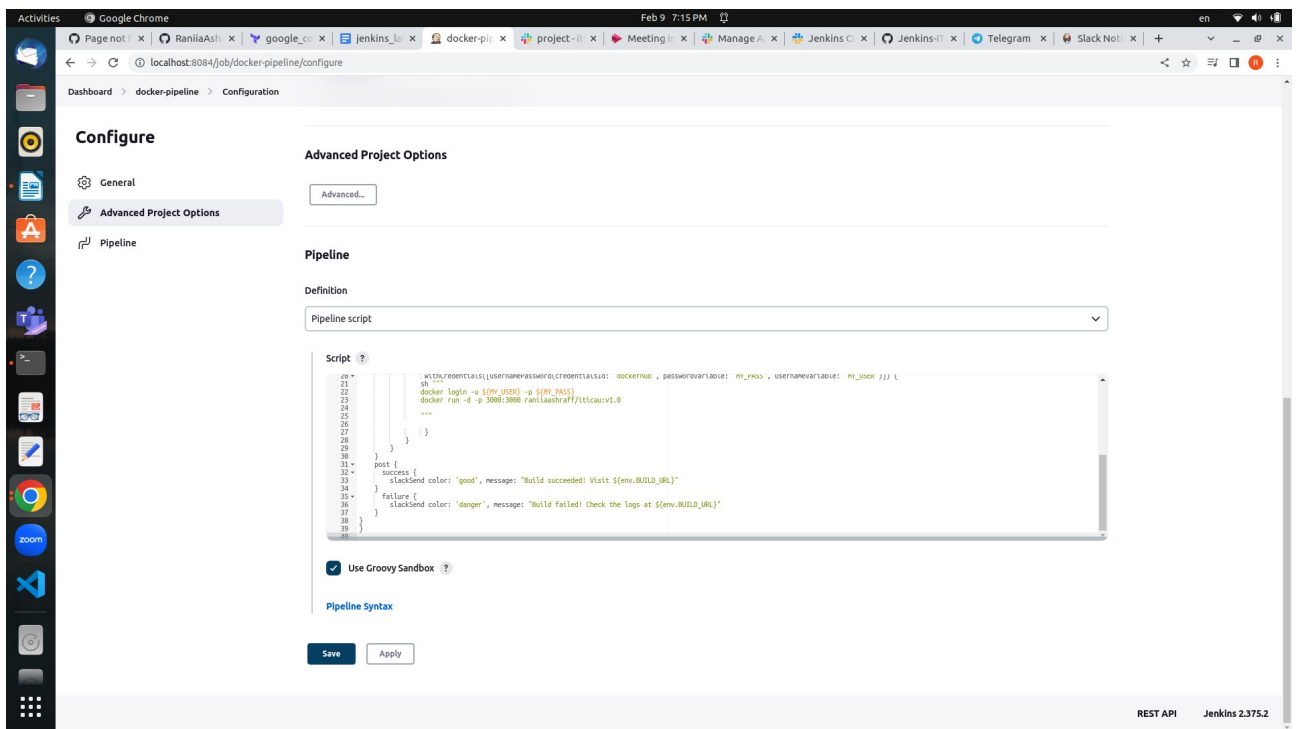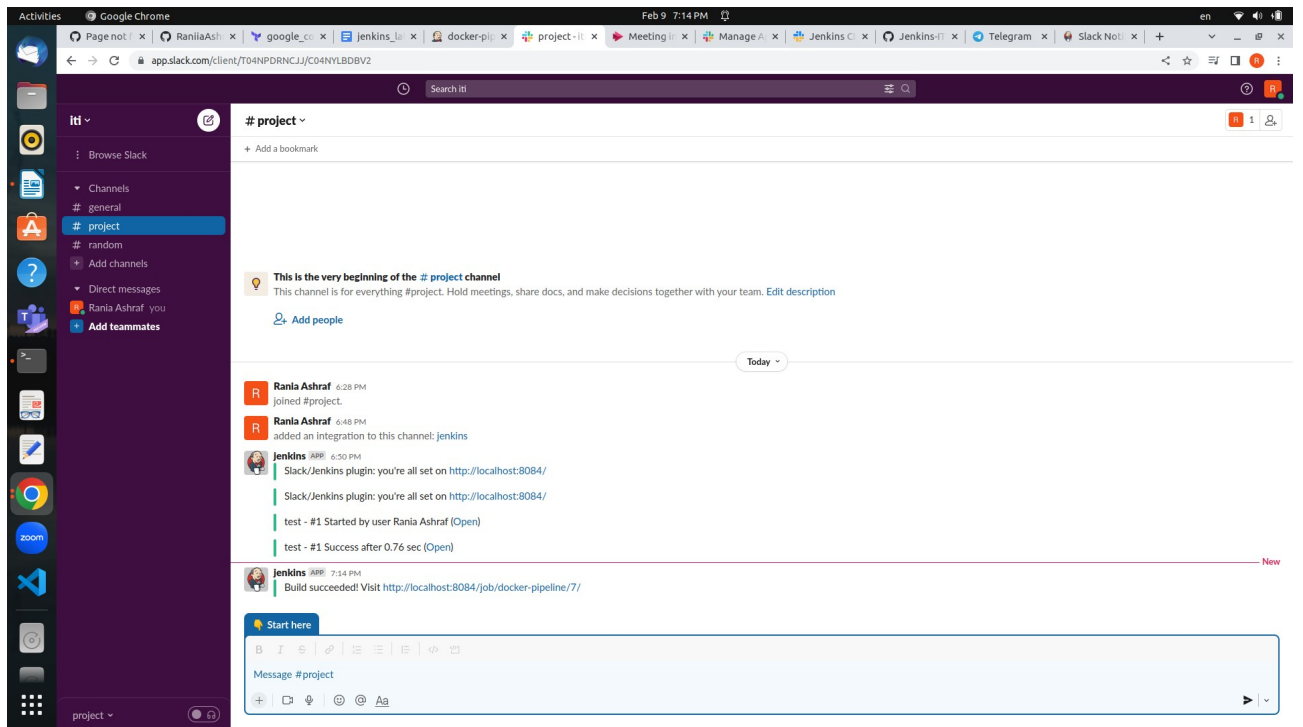
☐ Custom slack app bot user ?

[Advanced...]

Success

[Save] [Apply]

➢ send slack message when stage in your pipeline is successful

project ⌄

+ Add a bookmark

💡 **This is the very beginning of the # project channel**
This channel is for everything #project. Hold meetings, share docs, and make decisions together with your team. Edit description

👥 **Add people**

Today ⌄

Rania Ashraf 6:28 PM
joined #project.

Rania Ashraf 6:48 PM
added an integration to this channel: jenkins

Jenkins APP 6:50 PM
Slack/Jenkins plugin: you're all set on http://localhost:8084/

Slack/Jenkins plugin: you're all set on http://localhost:8084/

test - #1 Started by user Rania Ashraf (Open)

test - #1 Success after 0.76 sec (Open)

New

Jenkins APP 7:14 PM
Build succeeded! Visit http://localhost:8084/job/docker-pipeline/7/

👉 Start here

Message #project

Dashboard > docker-pipeline > Configuration

Configure

⚙ General

🔧 **Advanced Project Options**

Pipeline

Advanced Project Options

Advanced...

Pipeline

Definition

Pipeline script ⌄

Script ?

```
20          withCredentials([usernamePassword(credentialsId: 'dockerhub', passwordVariable: 'MY_PASS', usernameVariable: 'MY_USER')]) {
21              sh '''
22              docker login -u ${MY_USER} -p ${MY_PASS}
23              docker run -d -p 3000:3000 raniaashraff/iticau:v1.0
24              '''
25
26              }
27          }
28      }
29  }
30  }
31  post {
32      success {
33          slackSend color: 'good', message: "Build succeeded! Visit ${env.BUILD_URL}"
34      }
35      failure {
36          slackSend color: 'danger', message: "Build failed! Check the logs at ${env.BUILD_URL}"
37      }
38  }
39  }
40  }
```

☑ Use Groovy Sandbox ?

Pipeline Syntax

Save   Apply

REST API   Jenkins 2.375.2

➢ install audit logs plugin and test it

Time	Thread	Level	Logger	Message
2023-02-09T17:37:58.896Z	Handling POST /j_spring_security_check from 172.17.0.1 : Jetty (winstone)-20	OFF	AuditLogger	Audit [login timestamp="2023-02-09T17:37:58.89Z" userId="rania_714"]
MDC: {requestUri=/, userId=SYSTEM, requestId=221ede58-9a11-43b1-b54e-228d8a8a0150, requestMethod=GET}				
2023-02-09T17:40:08.39Z	Handling POST /job/test/doDelete from 172.17.0.1 : Jetty (winstone)-47	OFF	AuditLogger	Audit [updateItem itemName="test" itemUri="job/test/" timestamp="2023-02-09T17:40:08.39Z" userId="rania_714"]
MDC: {requestUri=/job/test/doDelete, userId=rania_714, requestId=939bf803-2d0a-4377-a032-69b40b3272ee, requestMethod=POST}				
2023-02-09T17:40:08.398Z	Handling POST /job/test/doDelete from 172.17.0.1 : Jetty (winstone)-47	OFF	AuditLogger	Audit [deleteItem itemName="test" itemUri="job/test/" timestamp="2023-02-09T17:40:08.397Z" userId="rania_714"]
MDC: {requestUri=/job/test/doDelete, userId=rania_714, requestId=939bf803-2d0a-4377-a032-69b40b3272ee, requestMethod=POST}				

➤ fork the following repo https://github.com/mahmoud254/Booster_CI_CD_Project and add dockerfile to run this django app and use github actions to build the docker image and push it to your dockerhub

RaniiaAshraf / **Booster_CI_CD_Project**   Public

forked from mahmoud254/Booster_CI_CD_Project

⚲ Pin   👁 Watch 0 ▾   Fork 120 ▾   ☆ Star 0 ▾

<> Code   ⇂↱ Pull requests   ⊙ Actions   ⊞ Projects   ▥ Wiki   ⛊ Security   ⮑ Insights   ⚙ Settings

⑂ master ▾   **Booster_CI_CD_Project** / **Dockerfile**   Go to file   ⋯

🧑 RaniiaAshraf Create Dockerfile   Latest commit d1966dc 34 minutes ago   ⏱ History

👥 **1** contributor

10 lines (10 sloc)   266 Bytes   Raw   Blame   ✎ ▾   ⧉   🗑

```
1    FROM ubuntu
2    RUN apt update -y
3    RUN apt-get install python3 -y
4    RUN apt install pip -y
5    COPY . .
6    RUN pip3 install -r requirements.txt
7    RUN python3 manage.py makemigrations
8    RUN python3 manage.py migrate
9    EXPOSE 8000
10   CMD ["python3","manage.py","runserver 0.0.0.0:8000"]
```

Give feedback

Waiting for collector.github.com...

RaniiaAshraf / **Booster_CI_CD_Project**   Public

forked from mahmoud254/Booster_CI_CD_Project

⚲ Pin   👁 Watch 0 ▾   Fork 120 ▾   ☆ Star 0 ▾

<> Code   ⇂↱ Pull requests   ⊙ Actions   ⊞ Projects   ▥ Wiki   ⛊ Security   ⮑ Insights   ⚙ Settings

← Docker Image CI

✔ **Update docker-image.yml** #2   Re-run all jobs   ⋯

🏠 **Summary**

Jobs

✔ build

Run details

⏱ Usage

⌁ Workflow file

Triggered via push 1 minute ago	Status	Total duration	Artifacts
🧑 RaniiaAshraf pushed ⚬ f3590d4 master	**Success**	**1m 16s**	–

docker-image.yml
on: push

✔ build   1m 7s

⛶ − +

docker hub | 🔍 Search Docker Hub | Explore Repositories Organizations Help ▾ | Upgrade | 🔒 raniiaashraff ▾

raniiaashraff ▾ | Search by repository name 🔍 | All Content ▾ | Create repository

raniiaashraff / django-app
Contains: Image | Last pushed: 2 minutes ago
🛡 Not Scanned   ☆ 0   ⬇ 0   🌐 Public

raniiaashraff / iticau
Contains: Image | Last pushed: 39 minutes ago
🛡 Not Scanned   ☆ 0   ⬇ 3   🌐 Public

Create an Organization
Manage Docker Hub repositories
with your team

**Community All-Hands:
On-Demand**

All sessions from our 6th
Community All-Hands are now
available on-demand! Over 35 talks
cover best practices, demos, open
source, product updates,
community news, and more. Catch
up on the sessions you missed — or
review your favorites.