Звіт
Лабораторна робота 3
ТЕХНОЛОГІЇ ПРОГРАМУВАННЯ
Большаков Андрій МІТ-31

Тема : ОСНОВИ БЕЗПЕРЕРВНОЇ ІНТЕГРАЦІЇ ПРОГРАМНОГО ЗАБЕЗПЕЧЕННЯ НА ПРИКЛАДІ Jenkins

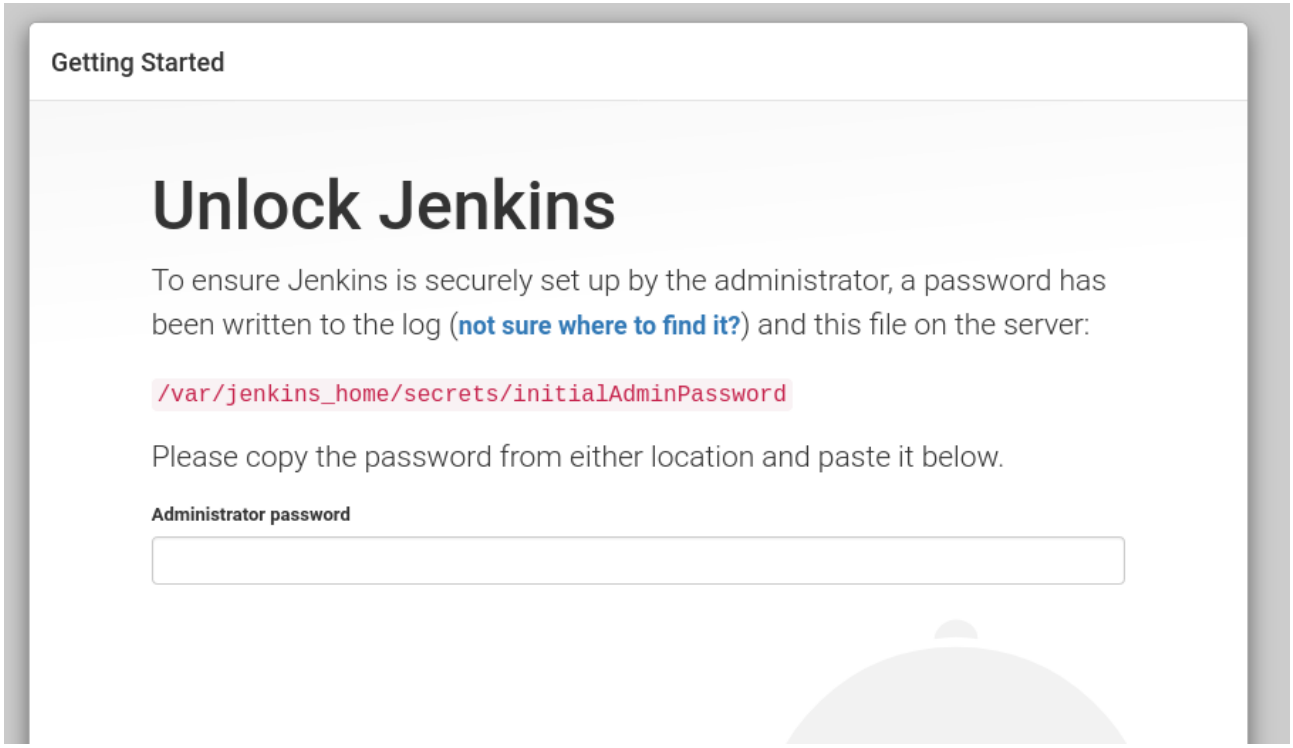
Мета: розглянути поняття безперервної інтеграції програмного забезпечення; навчитись встановлювати Jenkins та створювати у ньому завдання.

https://github.com/Utilka/univ_programming_technologies_proj

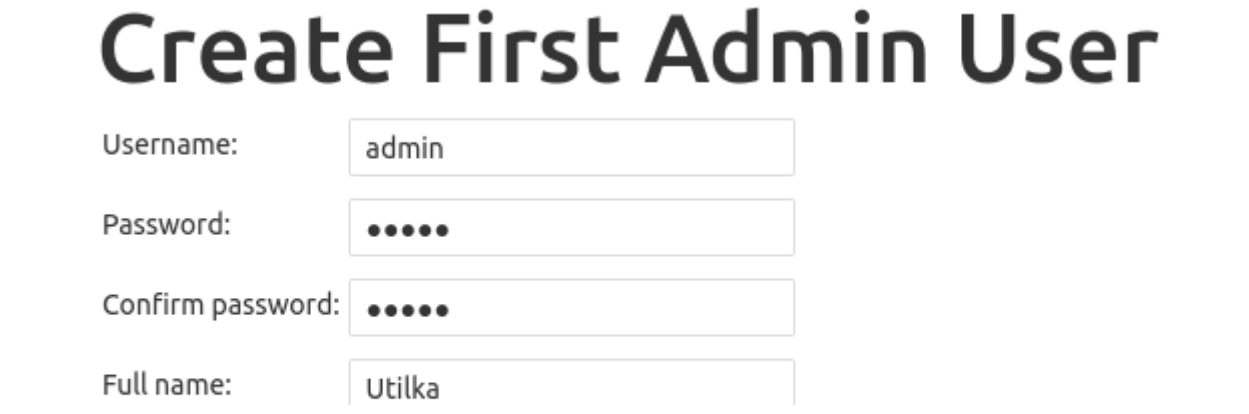
Инсталируем дженкинс

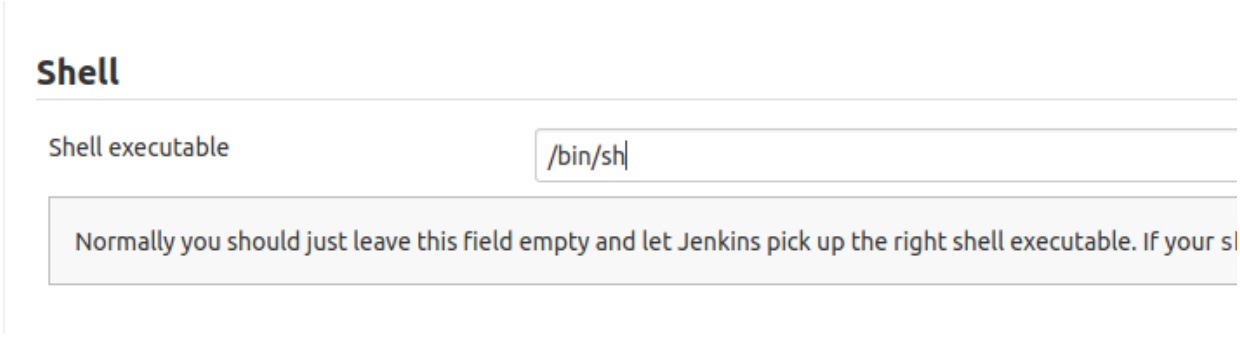
```
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker network create jenkins

945e38cb620097752ca99bacd821d89cfb653c26404580b1c26b74628a0041fc
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker network ls
NETWORK ID          NAME                DRIVER              SCOPE
ff35c58bd818        bridge              bridge              local
e2dfa1609b51        host                host                local
945e38cb6200        jenkins             bridge              local
5cbe44ba99e4        none                null                local
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker volume create jenkins-docker-certs
jenkins-docker-certs
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker volume create jenkins-data
jenkins-data
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker volume ls
DRIVER              VOLUME NAME
local               jenkins-data
local               jenkins-docker-certs

Run &apos;docker COMMAND --help&apos; for more information on a command.
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker container run \
>   --name jenkins-docker \
>   --rm \
>   --detach \
>   --privileged \
>   --network jenkins \
>   --network-alias docker \
>   --env DOCKER_TLS_CERTDIR=/certs \
>   --volume jenkins-docker-certs:/certs/client \
>   --volume jenkins-data:/var/jenkins_home \
>   --publish 2376:2376 \
>   docker:dind
Unable to find image &apos;docker:dind&apos; locally
dind: Pulling from library/docker
df20fa9351a1: Pull complete
25ad7478873d: Pull complete
4684f6177b5d: Pull complete
8ba584e970af: Pull complete
3cdc74d2b06d: Pull complete
4cf5a0d07c1f: Pull complete
```

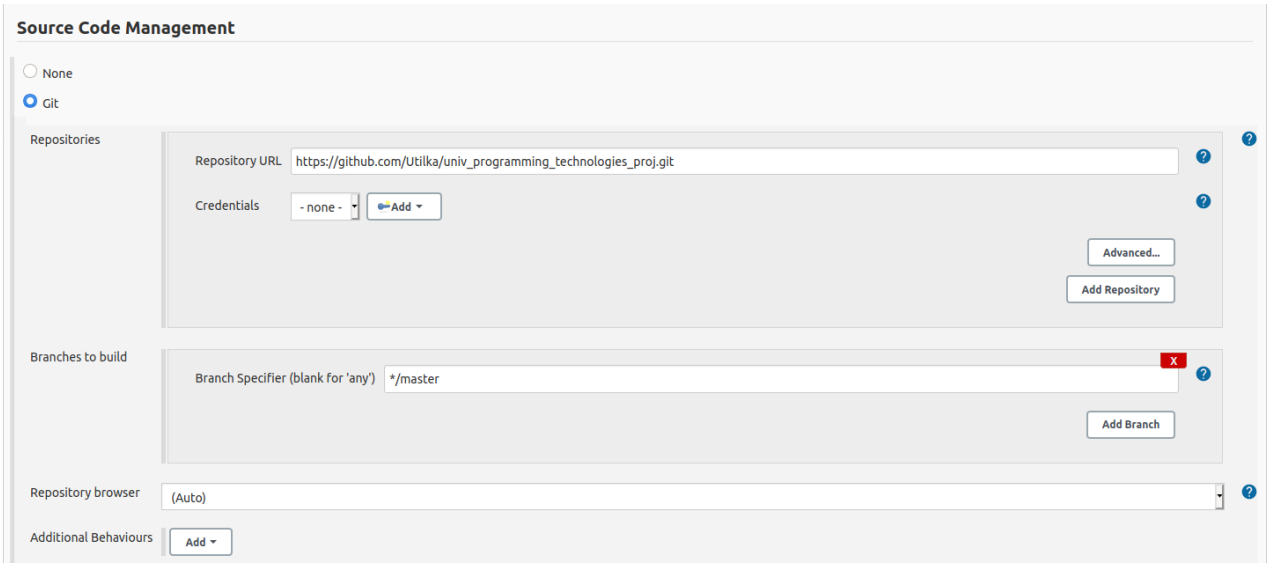
```
fca0ccc462d5: Pull complete
8a08b8f19995: Pull complete
e60a2aec8c6b: Pull complete
84edc63b9e2e: Pull complete
a8919df01d06: Pull complete
Digest: sha256:973c39d7eadb05e45923173bc484961e5b6b527d8b0693c0881e07e9d2fa8ee7
Status: Downloaded newer image for docker:dind
2f897a868cffd0f89e093b94c904a21e086931921d879c5333aae40f54241d7a
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker container run \

>   --name jenkins-blueocean \
>   --rm \
>   --detach \
>   --network jenkins \
>   --env DOCKER_HOST=tcp://docker:2376 \
>   --env DOCKER_CERT_PATH=/certs/client \
>   --env DOCKER_TLS_VERIFY=1 \
>   --publish 8080:8080 \
>   --publish 50000:50000 \
>   --volume jenkins-data:/var/jenkins_home \
>   --volume jenkins-docker-certs:/certs/client:ro \
>   jenkinsci/blueocean
Unable to find image &apos;jenkinsci/blueocean:latest&apos; locally
latest: Pulling from jenkinsci/blueocean
df20fa9351a1: Already exists
1cb481a13af0: Pull complete
f5efbd400588: Pull complete
7fbf3c26ba26: Pull complete
0540047d6c9d: Pull complete
485fd6d432e9: Pull complete
2fc77091a887: Pull complete
95d0dbf9fd7a: Pull complete
c913a3090f1e: Pull complete
35d4c7fc44a1: Pull complete
56eda281c994: Pull complete
5b3037357f30: Pull complete
5f3cef00cbcf: Pull complete
c3b2457cb5fd: Pull complete
a4f7cf2c02f7: Pull complete
694ca755a145: Pull complete
f484d51c8afe: Pull complete
Digest: sha256:260de220425a052d48b2800f88e2c56c339e680f2a05b05bf30e060c4fe83beb
Status: Downloaded newer image for jenkinsci/blueocean:latest
ef644faa1a056bc9d739ca4c07399ae3e822136cb845dff60cb5c45fcd0f0361
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker ps
CONTAINER ID        IMAGE                COMMAND                  CREATED
STATUS              PORTS                                              NAMES
ef644faa1a05        jenkinsci/blueocean   "/sbin/tini -- /usr/…"   15 seconds
ago      Up 13 seconds       0.0.0.0:8080->8080/tcp, 0.0.0.0:50000->50000/tcp
jenkins-blueocean
2f897a868cff        docker:dind          "dockerd-entrypoint.…"   About an hour
ago   Up About an hour    2375/tcp, 0.0.0.0:2376->2376/tcp
jenkins-docker
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$ docker container exec -it jenkins-blueocean bash
bash-5.0$
bash-5.0$ exit
exit
utilka@utilka-Inspiron-3580:~/Personal/productivity_stuff/learning/
learning_docker$
```

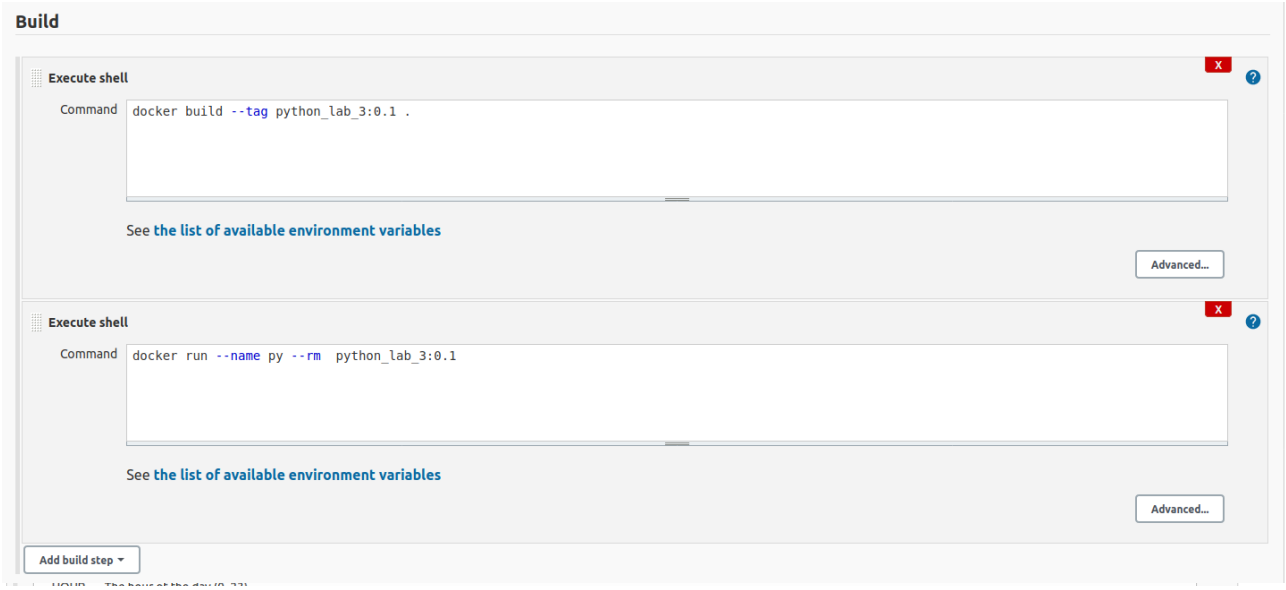



```
bash-5.0$ cat /var/jenkins_home/secrets/initialAdminPassword
77961aa9c8b648589702c2c45c982b4c
```

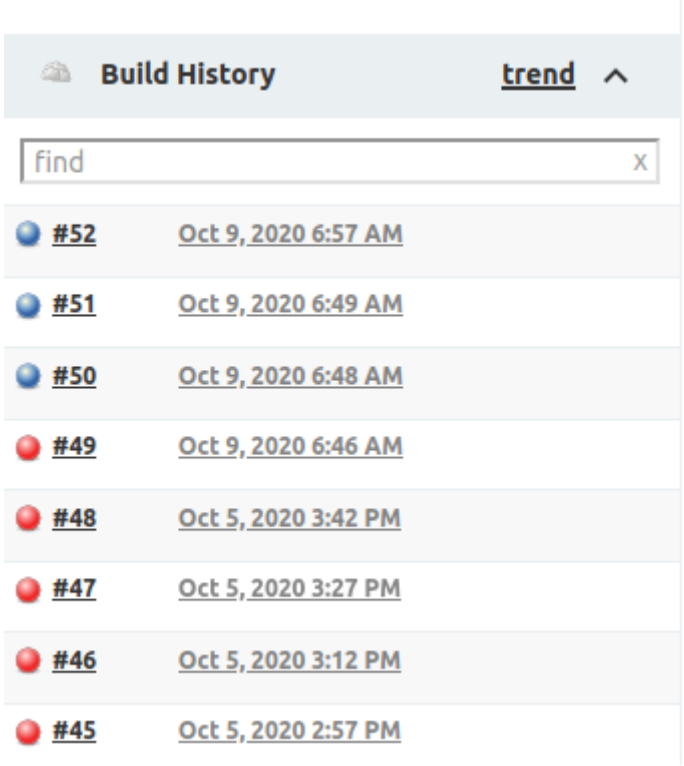



Shell
Shell executable
/bin/sh
Normally you should just leave this field empty and let Jenkins pick up the right shell executable. If your s


Source Code Management
None
Git
Repositories
Repository URL
https://github.com/Utilka/univ_programming_technologies_proj.git
Credentials
- none -
Add
Advanced...
Add Repository
Branches to build
Branch Specifier (blank for 'any')
*/master
Add Branch
Repository browser
(Auto)
Additional Behaviours
Add


Build
Execute shell
Command
docker build --tag python_lab_3:0.1 .
See the list of available environment variables
Advanced...
Execute shell
Command
docker run --name py --rm python_lab_3:0.1
See the list of available environment variables
Advanced...
Add build step

как итог дженкинс билдит проект (да он у меня поработал какоето время в фоне, до того как я его настроил как надо)




```
Fetching changes from the remote Git repository
 > git config remote.origin.url https://github.com/Utilka/univ_programming_technologies_proj.git # timeout=10
Fetching upstream changes from https://github.com/Utilka/univ_programming_technologies_proj.git
 > git --version # timeout=10
 > git --version # 'git version 2.26.2'
 > git fetch --tags --force --progress -- https://github.com/Utilka/univ_programming_technologies_proj.git +refs/he
 > git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision 6a10ec01fe795397344881e62a21225a30569580 (refs/remotes/origin/master)
 > git config core.sparsecheckout # timeout=10
 > git checkout -f 6a10ec01fe795397344881e62a21225a30569580 # timeout=10
Commit message: "dockerfile tests"
 > git rev-list --no-walk 6a10ec01fe795397344881e62a21225a30569580 # timeout=10
[lab_3] $ /bin/sh -xe /tmp/jenkins7984878597325981308.sh
+ docker build --tag python_lab_3:0.1 .
Sending build context to Docker daemon  952.3kB

Step 1/3 : FROM python
 ---> dfc47c6cee13
Step 2/3 : COPY . .
 ---> Using cache
 ---> 7276ac8ce1f5
Step 3/3 : CMD [ "python", "./unitTest.py" ]
 ---> Using cache
 ---> 29976006b5c0
Successfully built 29976006b5c0
Successfully tagged python_lab_3:0.1
[lab_3] $ /bin/sh -xe /tmp/jenkins5112158247012026043.sh
+ docker run --name py --rm python_lab_3:0.1
test_sorting (__main__.TestArr) ... ok
test_reverse_sorting (__main__.TestArr) ... ok
test_duplicates_removal (__main__.TestArr) ... ok
test_universality (__main__.TestArr) ... ok
test_merge (__main__.TestArr) ... ok
test_exceptions (__main__.TestArr) ... ok

----------------------------------------------------------------------
Ran 6 tests in 0.002s

OK
Finished: SUCCESS
```

Выводы:
розглянули поняття безперервної інтеграції програмного забезпечення; навчились встановлювати Jenkins та створювати у ньому завдання.