

BCDV

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Term: Winter2024

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BCDV 4032 – Building scalable blockchain applications

Screenshots of Lab-1

```
the latest Powershell for new features and improvements! https://aka.ms/PSWindows

C:\S\system32> wsl --version
wsl: 2.0.14.0
version: 5.15.133.1-1
on: 1.0.50
ion: 1.2.4677
ersion: 1.611.1-81528511
sion: 10.0.25131.1002-220531-1700.rs-onecore-base2-hyp
rsion: 10.0.22621.3007
C:\S\system32> wsl --install
: Ubuntu
: been installed.
Ubuntu...
, this may take a few minutes...
ate a default UNIX user account. The username does not need to match your Windows username.
nformation visit: https://aka.ms/wslusers
UNIX username: Gagandeepkaur1015103702
lease enter a username matching the regular expression configured
ME_REGEX[SYSTEM] configuration variable. Use the "--force-badname"
relax this check or reconfigure NAME_REGEX.
UNIX username: gagandeepkaur
rd:
: password:
swords do not match.
thentication token manipulation error
ssword unchanged
[y/n] y
rd:
: password:
ssword updated successfully
on successful
ommand as administrator (user "root"), use "sudo <command>".
udo_root" for details.

Ubuntu 22.04.3 LTS (GNU/Linux 5.15.133.1-microsoft-standard-WSL2 x86_64)

tation: https://help.ubuntu.com
ent: https://landscape.canonical.com
: https://ubuntu.com/advantage

y confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
ised the bar for easy, resilient and secure K8s cluster deployment.

/ubuntu.com/engage/secure-kubernetes-at-the-edge

ge is shown once a day. To disable it please create the
ndeepkaur/.hushlogin file.
ur@APTOP-S6L9EABN:~$
```

```
ed
gagandeepkaur@LAPTOP-S6L9EABN:~$ docker login
Authenticating with existing credentials...
Login did not succeed, error: permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/auth": dial unix /var/run/docker.
ock: connect: permission denied
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-t
okens/

Username (gagan2580): gagandeepkaur
Password:
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/auth": dial unix /var/run/docker.sock: connect: permission deni
ed
gagandeepkaur@LAPTOP-S6L9EABN:~$ docker run hello-world
docker: permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/containers/create": dial unix /var/run/docker.sock: con
nect: permission denied.
See 'docker run --help'.
gagandeepkaur@LAPTOP-S6L9EABN:~$ docker -v
Docker version 24.0.7, build afdd53b
gagandeepkaur@LAPTOP-S6L9EABN:~$ sudo docker run hello-world
(sudo) password for gagandeepkaur:
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
c1ec31eb5944: Pull complete
Digest: sha256:4bd7811b6914a99dbc560e6a28eab57ff6655ae4da80c50b0c5491968cbc2e6
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/
gagandeepkaur@APTOP-S6L9EABN:~$
```

```
Command Prompt x gagandeepkaur@LAPTOP-S6L9EA8N x + v
gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker pull alpine
[sudo] password for gagandeepkaur:
Using default tag: latest
latest: Pulling from library/alpine
661ff4d9561e: Pull complete
Digest: sha256:51b67269f354137895d43f3b3d810bfacd3945438e94dc5ac55fdac340352f48
Status: Downloaded newer image for alpine:latest
docker.io/library/alpine:latest

What's Next?
  1. Sign in to your Docker account → docker login
  2. View a summary of image vulnerabilities and recommendations → docker scout quickview alpine
gagandeepkaur@LAPTOP-S6L9EA8N:~$
```

```
Command Prompt x gagandeepkaur@LAPTOP-S6L9EA8N x + v
gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker pull alpine
[sudo] password for gagandeepkaur:
Using default tag: latest
latest: Pulling from library/alpine
661ff4d9561e: Pull complete
Digest: sha256:51b67269f354137895d43f3b3d810bfacd3945438e94dc5ac55fdac340352f48
Status: Downloaded newer image for alpine:latest
docker.io/library/alpine:latest

What's Next?
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gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker images
REPOSITORY      TAG         IMAGE ID      CREATED        SIZE
alpine           latest      f8c20f8bbcb6  5 weeks ago   7.38MB
hello-world     latest     d2c94e258dcb  8 months ago  13.3kB
gagandeepkaur@LAPTOP-S6L9EA8N:~$
```

```
Command Prompt x gagandeepkaur@LAPTOP-S6L9EA8N x + v
dr-xr-xr-x 270 root root 0 Jan 15 00:36 proc
drwx----- 2 root root 4096 Dec 7 09:43 root
drwxr-xr-x 2 root root 4096 Dec 7 09:43 run
drwxr-xr-x 2 root root 4096 Dec 7 09:43/sbin
drwxr-xr-x 2 root root 4096 Dec 7 09:43/srv
dr-xr-xr-x 11 root root 0 Jan 15 00:36 sys
drwxrwxrwt 2 root root 4096 Dec 7 09:43 tmp
drwxr-xr-x 7 root root 4096 Dec 7 09:43/usr
drwxr-xr-x 12 root root 4096 Dec 7 09:43/var
gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker run alpine echo "hello from alpine"
hello from alpine
gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker run alpine /bin/sh
gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
TS NAMES
95d982fc9d17 alpine "/bin/sh" About a minute ago Exited (0) About a minute ago
distracted_jones
b91d5b9a7610 alpine "echo 'hello from al..." 3 minutes ago Exited (0) 3 minutes ago
optimistic_perlman
3e07c6ad2fc6 alpine "ls -l" 4 minutes ago Exited (0) 4 minutes ago
gifted_wiles
d5e5fb001e2a hello-world "/hello" 14 minutes ago Exited (0) 14 minutes ago
gallant_pascal
gagandeepkaur@LAPTOP-S6L9EA8N:~$
```

```
Command Prompt x gagandeepkaur@LAPTOP-S6L9EA8N x + v
1. Sign in to your Docker account → docker login
2. View a summary of image vulnerabilities and recommendations → docker scout quickview alpine
gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
alpine latest f8c20f8bbcb6 5 weeks ago 7.38MB
hello-world latest d2c94e258dc8 8 months ago 13.3kB
gagandeepkaur@LAPTOP-S6L9EA8N:~$ sudo docker run alpine ls -l
total 56
drwxr-xr-x 2 root root 4096 Dec 7 09:43 bin
drwxr-xr-x 5 root root 340 Jan 15 00:36 dev
drwxr-xr-x 1 root root 4096 Jan 15 00:36/etc
drwxr-xr-x 2 root root 4096 Dec 7 09:43/home
drwxr-xr-x 7 root root 4096 Dec 7 09:43/lib
drwxr-xr-x 5 root root 4096 Dec 7 09:43/media
drwxr-xr-x 2 root root 4096 Dec 7 09:43/mnt
drwxr-xr-x 2 root root 4096 Dec 7 09:43/opt
dr-xr-xr-x 270 root root 0 Jan 15 00:36/proc
drwx----- 2 root root 4096 Dec 7 09:43/root
drwxr-xr-x 2 root root 4096 Dec 7 09:43/run
drwxr-xr-x 2 root root 4096 Dec 7 09:43/sbin
drwxr-xr-x 2 root root 4096 Dec 7 09:43/srv
dr-xr-xr-x 11 root root 0 Jan 15 00:36/sys
drwxrwxrwt 2 root root 4096 Dec 7 09:43/tmp
drwxr-xr-x 7 root root 4096 Dec 7 09:43/usr
drwxr-xr-x 12 root root 4096 Dec 7 09:43/var
gagandeepkaur@LAPTOP-S6L9EA8N:~$
```

```
1 FROM node:18-alpine
2
3 WORKDIR /app
```

Usage: docker build build [OPTIONS] PATH | URL | -

Start a build

gagandeepkaur@LAPTOP-S6L9EABN:/mnt/c/Users/gurpr/OneDrive/Desktop/BCDV-4032-ASSIGNMENTS/lab1/my-app\$ docker build -t my-app .

[+] Building 15.2s (8/10)

-> [internal] load build definition from Dockerfile 0.1s

-> => transferring dockerfile: 171B 0.0s

-> [internal] load .dockerignore 0.1s

-> => transferring context: 59B 0.0s

-> [internal] load metadata for docker.io/library/node:18-alpine 3.8s

-> [auth] library/node:pull token for registry-1.docker.io 0.0s

-> [1/5] FROM docker.io/library/node:18-alpine@sha256:b1a0356f7d6b86c958a06949d3db3f7fb27f95f627aa6157cb98bc65c801efa2 9.6s

-> => resolve docker.io/library/node:18-alpine@sha256:b1a0356f7d6b86c958a06949d3db3f7fb27f95f627aa6157cb98bc65c801efa2 0.1s

-> => sha256:0f158788f409a5dec9495205daf4aa17df26d8219ddc12acab5949342866fe 40.24kB / 40.24kB 3.4s

-> => sha256:b1a0356f7d6b86c958a06949d3db3f7fb27f95f627aa6157cb98bc65c801efa2 1.43kB / 1.43kB 0.0s

-> => sha256:8842b060b01af71c882cee310b428a2d825e940df9e450e05d726aa66a480 1.16kB / 1.16kB 0.0s

[+] Building 117.0s (11/11) FINISHED

-> [internal] load build definition from Dockerfile 0.1s

-> => transferring dockerfile: 171B 0.0s

-> [internal] load .dockerignore 0.1s

-> => transferring context: 59B 0.0s

-> [internal] load metadata for docker.io/library/node:18-alpine 3.8s

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-> [internal] load build definition from Dockerfile 0.1s

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