# ANNEX A · CONTAINERS · PRACTICAL 6.4

**Name:** _____ **Date:** _____

Snapshot of `ubu-srv` first. You work on `ubu-srv` as your normal user. **Never type `sudo podman`.** Write what you see on the lines.

## LAB A · FIRST CONTAINERS

**1 · Install Podman.** From your host: `ssh srv`, then:

```
sudo apt update
sudo apt install -y podman
podman --version
```

☐ **Done when:** `podman --version` prints a version. Mine: _____

**2 · Your first container.**

```
podman run quay.io/podman/hello
```

☐ **Done when:** you see `!... Hello Podman World ...!`. Which animals are in the drawing? _____

**3 · A Debian inside an Ubuntu.** Start a box and get a shell **inside** it (the prompt changes):

```
podman run --rm -it docker.io/library/debian:13 bash
cat /etc/os-release
whoami
ls /home
uname -r
exit
```

Now run `cat /etc/os-release` and `uname -r` again, **outside**, on `ubu-srv`. Fill in:

| | Inside the container | On `ubu-srv` |
|---|---|---|
| `PRETTY_NAME` | | |
| `uname -r` (kernel) | | |

☐ **Done when:** you can say which line is the same in both columns, and why:

_____

**4 · What is left on the server.**

```
podman ps
podman ps -a
podman images
```

☐ **Done when:** you know the size of the `debian` image: _____ and of your VM's disk: _____

## PRACTICAL 6.4 · A WEB SERVER IN A BOX

Report: `practical-6.4-surname.md` on Google Classroom, with every command, its output (copied text, not photos) and the three answers of task 10.

**5 · Run nginx in the background.**

```
podman run -d --name web -p 8080:80 docker.io/library/nginx:1.30
```

☐ **Done when:** the command prints a long ID and gives the prompt back.

**6 · Prove that it serves.**

```
podman ps
curl -I http://localhost:8080
```

Open `http://192.168.122.10:8080` in the browser of your **host** PC.

☐ **Done when:** `curl` answers `HTTP/1.1 200 OK` and the browser shows "Welcome to nginx!". PORTS column says:

_____

**7 · Look inside.**

```
podman logs web
podman top web
podman exec -it web bash
cat /etc/os-release
exit
```

☐ **Done when:** you found the log line of your own browser visit, and you know which distribution the nginx image is built on: _____

**8 · Stop, start, remove.** Run one command at a time and look at `podman ps -a` between them.

```
podman stop web
podman start web
podman rm web
podman rm -f web
```

☐ **Done when:** `podman ps -a` no longer lists `web`. Why did `podman rm web` fail? _____

**9 · Two boxes from one image.** Start `web` again on host port 8080. Then start a second container called `web2` on host port **8081**. Before that, try two things that must fail and copy the errors into the report: a second container also called `web`, and a second container on host port 8080.

☐ **Done when:** `podman ps` shows two containers and both pages open in the browser.

**10 · Clean up, log and answer.** `podman rm -f web web2` (keep the images). Add today's entry to `~/server-log.md`. In the report, answer in your own words:

1. What is the difference between an image and a container?
2. Why was the kernel line of task 3 the same inside and outside?
3. What does `-p 8080:80` mean, and why did we not use `-p 80:80`?

**Marking (10):** tasks 5–6 with evidence 3 · task 7: 2 · tasks 8–9 with the errors explained 2 · the three answers 3.

## EXIT TICKET

Write the letter in the box.

☐ **1.** What does a container share with the server it runs on?
A) Its files B) The kernel C) Its list of users D) Nothing at all

☐ **2.** What is an image?
A) A running container B) A screenshot of a server C) The read-only template a container starts from D) A backup of a VM

☐ **3.** In `-p 8080:80`, which number is the port on the host?
A) 8080 B) 80 C) Both D) Neither

☐ **4.** Which command also lists the containers that are stopped?
A) `podman images` B) `podman ps` C) `podman logs` D) `podman ps -a`

☐ **5.** Which sentence about Docker and Podman is true?
A) They use different image formats B) They run the same OCI images with almost the same commands C) Both need a root daemon D) Neither can publish ports