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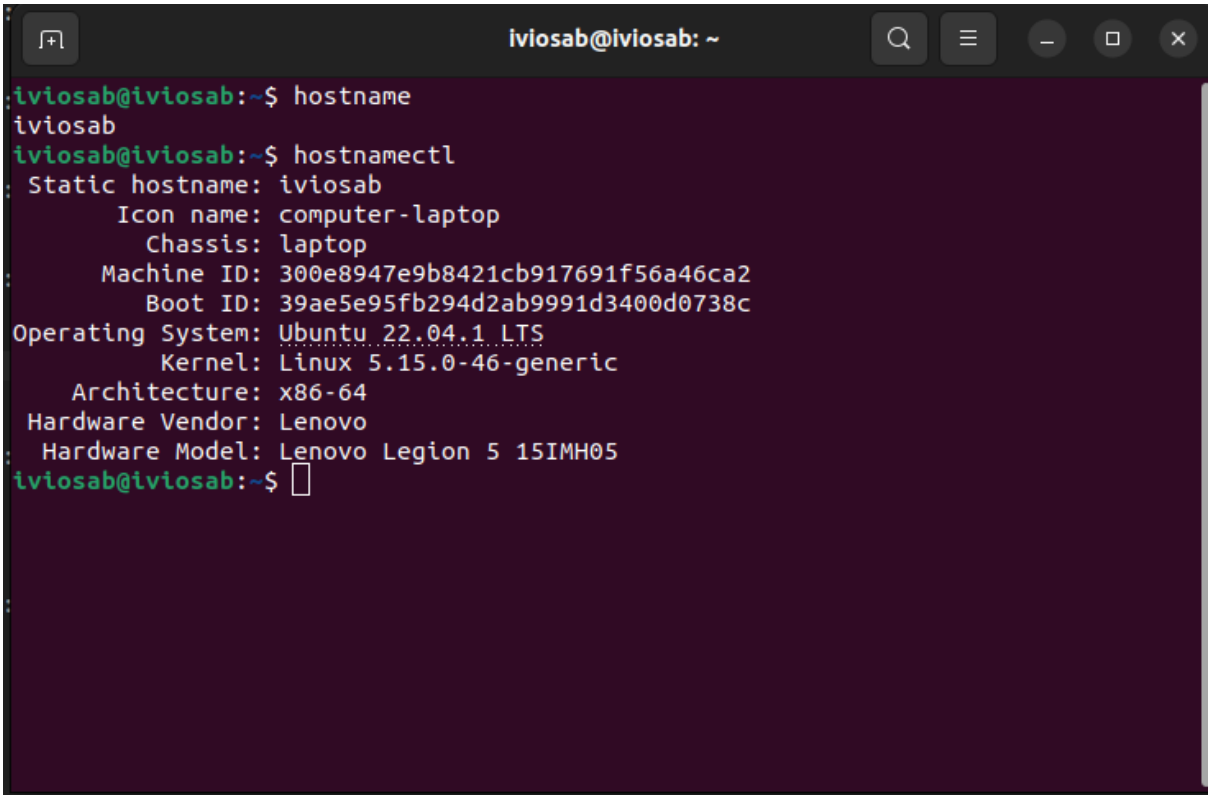
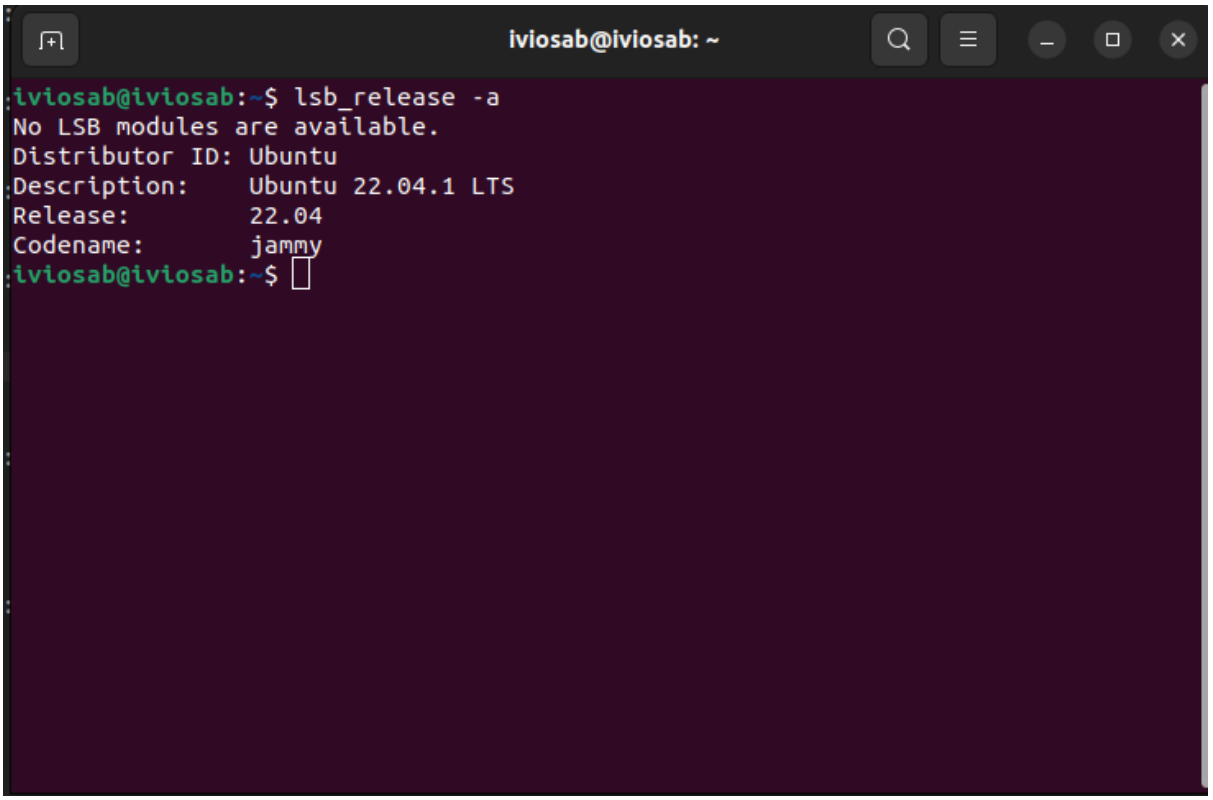
Lab 1: Introduction to Linux

Q1: What is your machine hostname? How did you check it?
Answer:
iviosab, by using "hostname" command or "hostnamectl" for more information other than only the hostname



Q2: What distribution of Linux did you install, and what is the version?
Answer:
Ubuntu, version 22.04
You can view information about the OS with lsb_release.



Q3: What is the root directory on your machine?

Answer:

/root which is represented as / and can be accessed by "cd /". it is the top-most directory in the hierarchy.

Q4: What is the difference between `/bin/bash` and `/bin/sh`?

Answer:

Implementation-wise there are too many differences to name, because bash is essentially a superset of sh.

But basically:

Bash is sh, but with more features and better syntax. While on the other hand sh is just scripting in any shell. On most systems /bin/sh is a symbolic link and will not invoke sh.

In ubuntu /bin/sh used to link to bash but now it links to another shell called dash.

Q5: Read the manual for `bash`. List three options and describe what they do.

Answer:

-x Print commands and their arguments as they are executed.

-v Print shell input lines as they are read.

-l Make bash act as if it had been invoked as a login shell. A login shell is one whose first character of argument zero is a -, or one started with the --login option.

Q6: Write five (5) Linux distributions you want to try. Write short notes on their purposes.

Answer:

1- mint: it minimizes the learning curve when switching from windows to linux, thanks to its simple ui and ease of use.

2- redhat: used for diverse purposes for the development and operation of software and hardware and it is known for its reliability and fast speed

3- OpenSUSE: offers a stable environment for its users and works well with almost all of the best Linux desktop apps.

4- fedora: it has great graphical tools and useful software for office work

5- CentOS: it runs faster than other distros thanks to its lightweight and reliable software

Q7: What is the POSIX standard?

Answer:

POSIX is a family of standards, used to clarify and make uniform the application programming interface.

The reason behind it is to be able to port programs easily among UNIX derivatives.

Q8: What are the advantages of the POSIX standard?
Answer:
With POSIX you are not dependent on any one entity to have thought of a comprehensive and robust set of application APIs. The POSIX standard is powerful and feature rich.
Having a rich and well proven set of APIs will speed up development time, which, in turn, reduces engineering costs.

Q9: Write the differences between Slackware and Debian.
Answer:
The packaging system is pretty much the biggest difference between Debian and Slackware, and is also what makes Debian superior.
It's much easier managing packages with dpkg and apt than the way slackware does it.
But on the other hand Slackware gives a lot more control to the user.

Q10: Explain all the details of the output from the command `uname -a`.
Answer:
It displays the operating system name as well as the system node, operating system release, operating system version, hardware name, processor type and hardware platform
note: processor type and hardware platform are not portable and omitted if they're unknown.