Homework 1 - Docker Core Concepts

These exercises focus on the Docker Engine, Docker Daemon, Docker Hub, container lifecycle commands, and working within a Linux environment.

Instructions:

- Run `docker commands` to solve these exercises and get evidences of every run.
- Make sure to show the command you run and the output you got.
- The evidences have to be screenshots.
- Create a **Public** repository (Github, Gitlab, etc).
- Save every command that you run to solve these exercises in a Bash script.
- Track your Bash script in your public repo.

To Deliver:

- Send your public repo's URL and your evidences in a PDF file to Caleb.Espinoza@jalasoft.com
- Use the email subject **Homework 1 - Docker Course**, please.

Deadline:

- Wednesday Abril 23, 2025 - 23:50 BO Time

Exercises

Exercise 1

1. Install **Docker Engine** using the official Docker APT repository.
2. Enable and start the Docker service.
3. Print the info of the Docker Client and Server.

Exercise 2

1. Search for the official repos of Ubuntu, Alpine, Nginx.
2. Run an Nginx container using the image from the official repo.

Exercise 3

1. Check Docker daemon status

2. Stop the Docker daemon
3. Run a container while it's stopped.
4. Restart the Docker daemon and run a container again.

Exercise 4

1. Run an Ubuntu container interactively.
2. Use apt update && apt install curl inside the container.
3. Exit the container.

Exercise 5

1. List running containers:
2. List all containers (including exited)

Exercise 6

1. Run a container in the background
2. Then Pause it
3. Unpause it:
4. Stop it
5. Restart it
6. Kill it

Exercise 7

- Remove a running container.

Exercise 8

1. Pull the `alpine` and `ubuntu` images.
2. List all the container images in your Docker Host.

Exercise 9

1. Run `alpine` and execute `echo "hello from alpine"`
2. Run `busybox` and execute `uname -a`
3. List all the container.

Exercise 10

1. Remove all stopped containers.

2. Remove unused images.
3. Inspect Docker disk usage.