Lab 3 – Docker Engine
Manage containers and images

Docker status informations

1. Verify docker is installed and works:
   sudo systemctl status docker
2. To display information about the docker version:
   docker version
   - What is the client version ?
   - What is the docker engine version ?

Manage containers

3. List all docker containers
4. Find existing nginx images at the registry *hub.docker.com/* .
5. Start a container based on the latest nginx Docker Image
   - What is the id, name and status of the created conbtainer ?
   - Remove the container :
6. Start a container based on the latest nginx Docker Image in the background, with *nginx1* name.
   - What is the id, name and status of the created conbtainer ?
7. Display more informations about nginx1 container :
   - What is the ip address, netmask, gateway, MAC address of nginx1 container ?
8. Give the size of the container's root filesystem (/), without interactive connection ?
9. Connect to nginx1 container :
10. Stop nginx1 container and then start it.
11. Remove nginx1 container.
    - Is nginx image removed too ?

Manage images

12. Pull the latest version of alpine image
13. List all local docker images
14. Display detailed informations about the alpine image
    - What is the creation date of the alpine image ?
15. Save alpine image to alpine.tar image
16. Run a container with alpine image
17. Remove the alpine image
    - Is the alpine image removed ? Why ?

18. Stop the container, then remove the image.
- Is the alpine image removed ? How to remove the image ?

19. Load alpine image from alpine.tar archive

Build images

20. Write a C program that displays "Hello DevOps from LPI Maghreb".

21. Compile the program with a **static library**.

22. Write a dockerfile file with the following content:

```
FROM    scratch
COPY    app     app
CMD     ["./app"]
```

23. Build image myapp:1.0

24. Create new container with builded image.