upf. Universitat Pompeu Fabra Barcelona

P4 - CDN & docker for encoding

- Today you're going to run virtual containers to understand better all the theory lessons.
  Work with your bestie hand-to-hand.
- If you create code snippets, you can use ANY programming language
- Deliver the report in aula global.

Let's go!

You can use the internet to search for resources and understand the use of the software

1.-) Download Docker for command line or for Desktop and install it.

The first you are going to create a container which contains the software FFmpeg and you are going to be able to run that container passing FFmpeg commands

2.-) Now that you have your container ready, download any video you like from the internet (if lack of ideas, try BBB). Cut it to 1 minute and try to package it like this:

a)

- MP4 container with HLS

- Video .h264 AVC, audio AAC

b)

- MKV container with MPEG-DASH

- Video VP9, audio AAC

3.-) Now that you know how to ‘Docker’, search for the Bento4 software. Put it inside a Docker, and try to apply a DRM for the Previous packaged file.

Some remarks:

- **If you’re able to create an encoding ladder, that would be great!**
- **Maybe you need to go to the mp4 file and package again before applying DRM (mp4encrypt)**

4.-) Now that you understand video streaming, let's do something:

- Connect to your favourite VOD platform
- Use the developer tools from your browser
- Investigate about what technology you're using:
    - HLS/DASH?
    - Codec?
    - DRM?

Do a small report about it

Universitat Pompeu Fabra Barcelona

5.-) Now that you're a master using Docker, try to follow-up this tutorial, take screenshots and make your comments:

https://github.com/leandromoreira/cdn-up-and-running.git

Some remarks:

- **The way it works it's changing git versions (`git checkout`); this means when you move forward/back it will change files; if you get lost, try to repeat quick the git commands**

Thanks

franciscojavier.brines@upf.edu