P1 – JPEG

Let’s recap. What do you remember from JPG, MPEG and MPEG2?

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Please try to solve these exercises and deliver them. Some important notes:

- Use PYTHON only
- Be creative! Feel free to type code as you want
- Don’t forget to comment your code to make it understandable
- PEP8 is a must (use linterns)
https://www.python.org/dev/peps/pep-0008/

- It’s recommended to work with Atom or PyCharm, or any IDE you want

- You can INTERPRET as you want the following exercises

- It’s ALLOWED to COPY from the internet if the script works. Not allowed to copy from mates

1) Start a script called *rgb_yuv.py* and create a translator from 3 values in RGB into the 3 YUV values, plus the opposite operation.

You can choose the 3 values, or open them from a text file, receive it from command line... feel free.

2) Use ffmpeg to resize images into lower quality. Use Lenna https://en.wikipedia.org/wiki/Lenna

Do screenshots of your operations and upload the results.

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3) Use FFMPEG to transform the Lenna image into b/w. Do the hardest compression you can and comment the results

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4) Create a script which contains a function which applies a run-lenght encoding from a series of bytes given.

5) Create a script which can convert, can decode (or both) an input using the DCT. Not necessary a JPG encoder or decoder. A script only about DCT is OK too

Thanks

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