P1 – JPEG & MPEG

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

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

- 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 it’s a plus https://www.python.org/dev/peps/pep-0008/

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- It's recommended to work with PyCharm or any other IDE

- 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.

Put it in a method.

2) Use ffmpeg to resize images into lower quality. Use any image you like

Now, create a method in previous script to automatise this order.

3) Create a method called *serpentine* which should be able to read the bytes of a JPEG file in the serpentine way we saw.

4) Use FFMPEG to transform the previous image into b/w. Do the hardest compression you can.

Add everything into a new method and comment the results

5) Create a method which applies a run-lenght encoding from a series of bytes given.

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

Thanks

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