**DVA256 Data Management and Datafication**

**Answers for Assignment Exercise 1 (OVN1)**

*Please use this template to answer the questions and upload this doc file during submission.*

| *Q. No* | *Answer* | *Comments* |
| --- | --- | --- |
| *1.* | *.shape method from numpy* |  |
| *2.* | *The colors will be represented differently, color quality will decrease, and the file size will change. Compatibility issues can also occur. And the amount of channels will (if applicable) change, depending on whether it’s rgb or grayscale* |  |
| *3.* | *Color channels, for example RGB has 3 channels (0-2) and PNGs has an extra alpha channel, and grayscale only has 1 channel.* |  |
| *4.* | *In the exercise we reduced the resolution size, and as such we used an interpolation technique with the cv.resize method to calculate the new pixel values. As such, the new pixel values are the average values of a bunch of chosen pixels.* |  |
| *5.* | *First we converted the image to RGB, and then enhanced each channel (colour). Then we stacked the colours together using a the method np.dstack to get the enhanced image.* |  |
| *6.* | *Harris Corners returned the corners on a monochromatic grayscale, with the corners of objects only slightly highlighted. Sobel Edges highlighted all the edges on a grayscale, giving us more information for our eyes to observe rather than Harris Corners. The SIFT feature gives us circles that represent the size of the feature, while the line in the circle show the orientation the feature.* |  |
| *7.* | *It depends on what you are looking for. SIFT gives us accurate information, no matter whether the image has been enhanced or changed in some way. As information we receive more information from SIFT than the others. Sobel Edges give us an appealing image, and highlights the edges.* |  |