ELEN-0060: Information and Coding Theory

Project 2 - Source coding, data compression and channel coding

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1 Channel coding

1.1 Question 16

In order to implement a function to read and display the given image, we used the methods `imread` and `imshow` provided by OpenCV.

1.2 Question 17

To encode the image signal, we used a fixed-length binary code of 8 bits. We have chosen 8 bits because there are 256 (from 0 to 255) possible values, so we need $\lceil log_2(256) \rceil = 8$.
The code is the binary representation of the grayscale value of each pixel.