
Assignment 2

Deadline: Tuesday, October 11, 2023 (end of day)

Objective

In this assignment we ask you to create a program that allows to represent a RGB image with indexed color using a limited number of colors with two different methods.

Task: Indexed colors

- (a) Define a universal color table with a maximum of 256 different colors.
- (b) Write an algorithm that transforms the initial pixel values with an index to the color table so that the return image looks as similar as possible to the original image.
- (c) Replace the universal color table by an adaptive colour table, which is optimized for the given input image.
- (d) Apply your two algorithms on the image "Lena" which is on ILIAS.
- (e) Submit on ILIAS 5 files:
 - An image of Lena with a maximum of 256 colors with the universal color table,
 - An image of the universal color table,
 - An image of Lena with a maximum of 256 colors with the adaptive colour table,
 - An image of the adaptive colour table,
 - A text file with your name, surname, the link to you GitHub and a brief description of your two algorithms.

If any of these conditions are not fulfilled, your exercise may not be read and considered as failed. If you have any questions you can contact me by email.