ASSIGNMENT1

DIGITAL IMAGE PROCESSING (DIP) - CSE 478

DEADLINE: 18TH AUGUST (THURSDAY), 11:50PM

(1) You are given two images (lena1.jpg and lena2.jpg). Find a clue in these images to answer this question??

(2) Extract the person from the image 'greens_screen.jpg' and paste him on a realistic background.

(3) Write a function to imitate blur effect of a narrow focal length camera capture. Your function can take some appropriate inputs from the user. For example, given a line annotated by the user, can you generate 'car_blur1.jpg' from the image 'car.jpg'. Similarly, given a circle and a line from the user, can you generate 'car_blur2.jpg' from the image 'car.jpg'.

(4) Write a function to convert the image 'lotus' to 'lotus_edited'. (Hint: Median or a Mode)

(5) An interesting web tool for extracting relevant colors from an image is shown on the following page: 'http://lokeshdhakar.com/projects/color-thief/'. Your task is to do something similar in Matlab or Python. Now use this information for an application (build any application of your choice)?

(6) Use a variation of the flood fill algorithm to solve the maze in image 'maze.png'. Your algorithm can take as input the image (with information of grid structure and the size of each block); the starting block coordinates (yellow) and the destination area coordinates (green).