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Mathematical modelling and computer simulations in theory and practice

Documentation of laboratory task no 9

Title: IMAGES MANIPULATION

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Field of studies: Informatics (sem.V)

Project Objective:
Project objective is to visualise diffrent procedures that can be used to manpulate images in Mathematica.

Description:
Our program is going to be taking diffrent kind of images and perform some basic manipulations on it. Apllying sharpening, blur or editing diffrent parameters is all going to be possible.

Inputs:
1. Paths to directory and names of both pictures.
2. Value of combination – 0 is fully the first image and 1 is fully the second picture.
3. Radius of blur.
4. Radius of sharpening.
5. Correction of brightness.
6. Corection of contrast.
7. Correction of gamma.

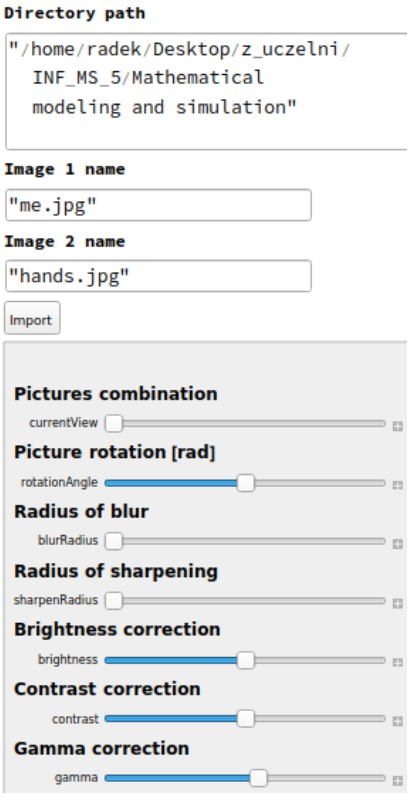

Figure 1: Program inputs.

Outputs:
As an output program displays our pictures with according filters and edits.When te program is first launched it may display error in manipulate, but don't worry – enter correct paths and names, after that press 'Import' button. If you ever want to change images or directories go with the same procedure.

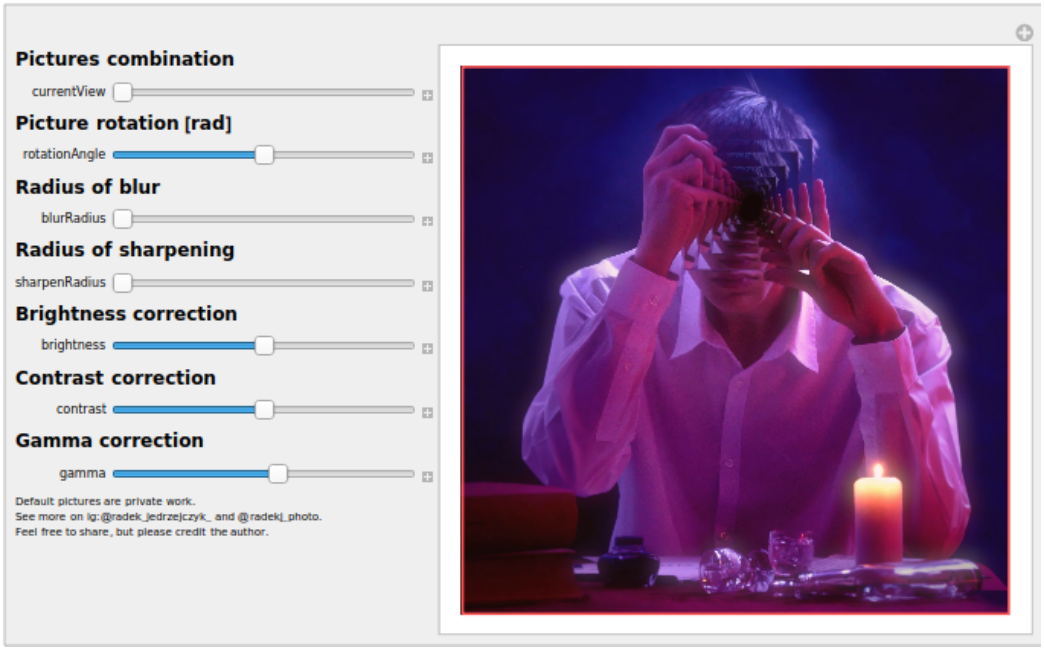

Figure 2: Default image after import.

All corrections are applied to both pictures at the same time.

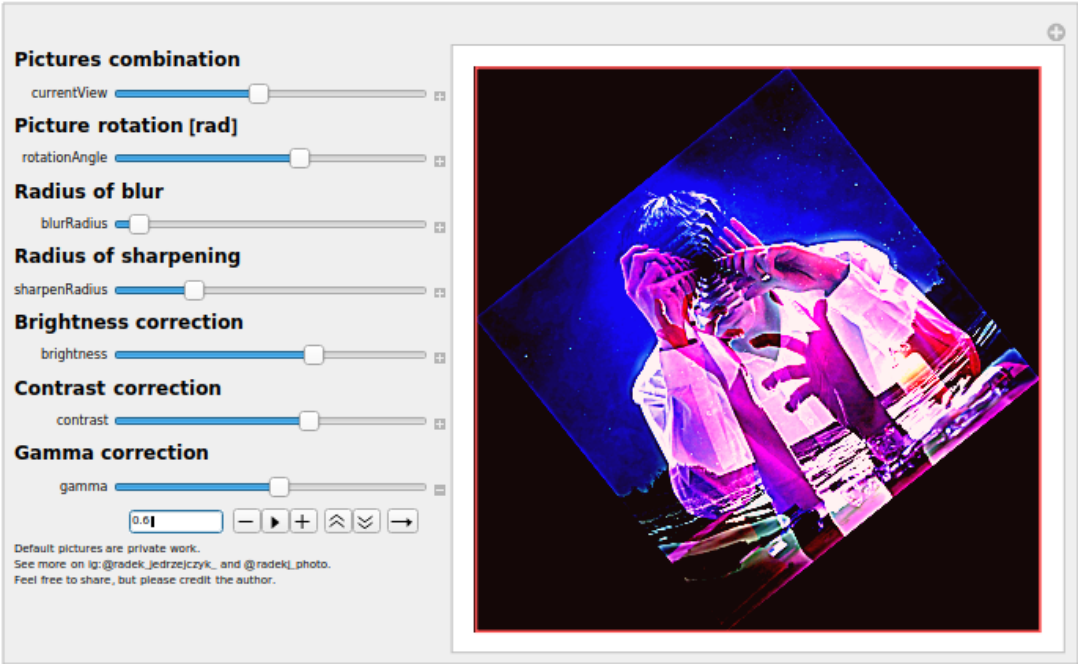

Figure 3: Default images after some edits.

Enclosures:

❑ File with the program (Jędrzejczyk_Radosław_proj_9)