

1. Color Transformations: Lab-01.

<ProgramName.exe> <Command> <InputPath> <CommandArguments>

- ProgramName: Program name.
- Command: Command name (see table below).
- InputPath: Path of input image.
- CommandArguments: Command parameters depend on whether the sentence is yes or no (see the table below).

Numerical order	Request	Command	Command Arguments
1	Convert color image to grayscale image	--rgb2gray	No
2	Convert grayscale image to color image	--gray2rgb	No
3	Convert image from RGB color system to HSV color system	--rgb2hsv	No
4	Convert image from HSV color system to RGB color system	--hsv2rgb	No
5	Increase or decrease the brightness of the image	--bright	b: brightness
6	Increase or decrease the contrast of the image	--contrast	c: contrast
7	Draw histogram of color image, grayscale image	--hist	No
8	Histogram equalization	--equalhist	No

2. Geometric Transformation: Lab-02.

<Program.exe> <Command> <Interpolate> <InputPath> <CmdArguments>

- Program: Program name.
- Command: Command name (see table below).
- Interpolate: Interpolation method consists of 2 methods
 - --bl: Bilinear transformation method (bilinear method).
 - --nn: Nearest neighbor method.
- InputPath: Path of input image.
- CmdArguments: Command parameters depend on whether the sentence is yes or no (see the table below).

Numerical order	Request	Command	Command Arguments
1	Zoom in, zoom out images	--zoom	Zoom factor
2	Rotate image around center (preserve image content)	--rotate	Swivel angle
3	Rotate image around the center (not preserve image content)	--rotateN	Swivel angle

3. Image Filtering in Spatial Domain: Lab-03

<Program.exe> <Command> <InputPath> <CmdArguments>

- ProgramName: Program name.
- Command: Command name (see table below).
- InputPath: Path of input image.
- CommandArguments: Command parameters depend on whether the sentence is yes or no (see the table below).

Numerical order	Request	Command	Command Arguments
1	Mean Filters	--mean	Kernel size
2	Median filters	--median	Kernel size
3	Smooth image with Gauss	--gauss	Kernel size
4	Edge detection with Sobel	--sobel	Kernel size
5	Edge detection with Prewitt	--prewitt	Kernel size
	Edge detection with Laplace	--laplace	Kernel size

Kernel size: is a square matrix and is an odd number, you just need to enter 1 number.

Ex: 3, 5, 7, ... (equivalent to 3x3, 5x5, 7x7, ...).