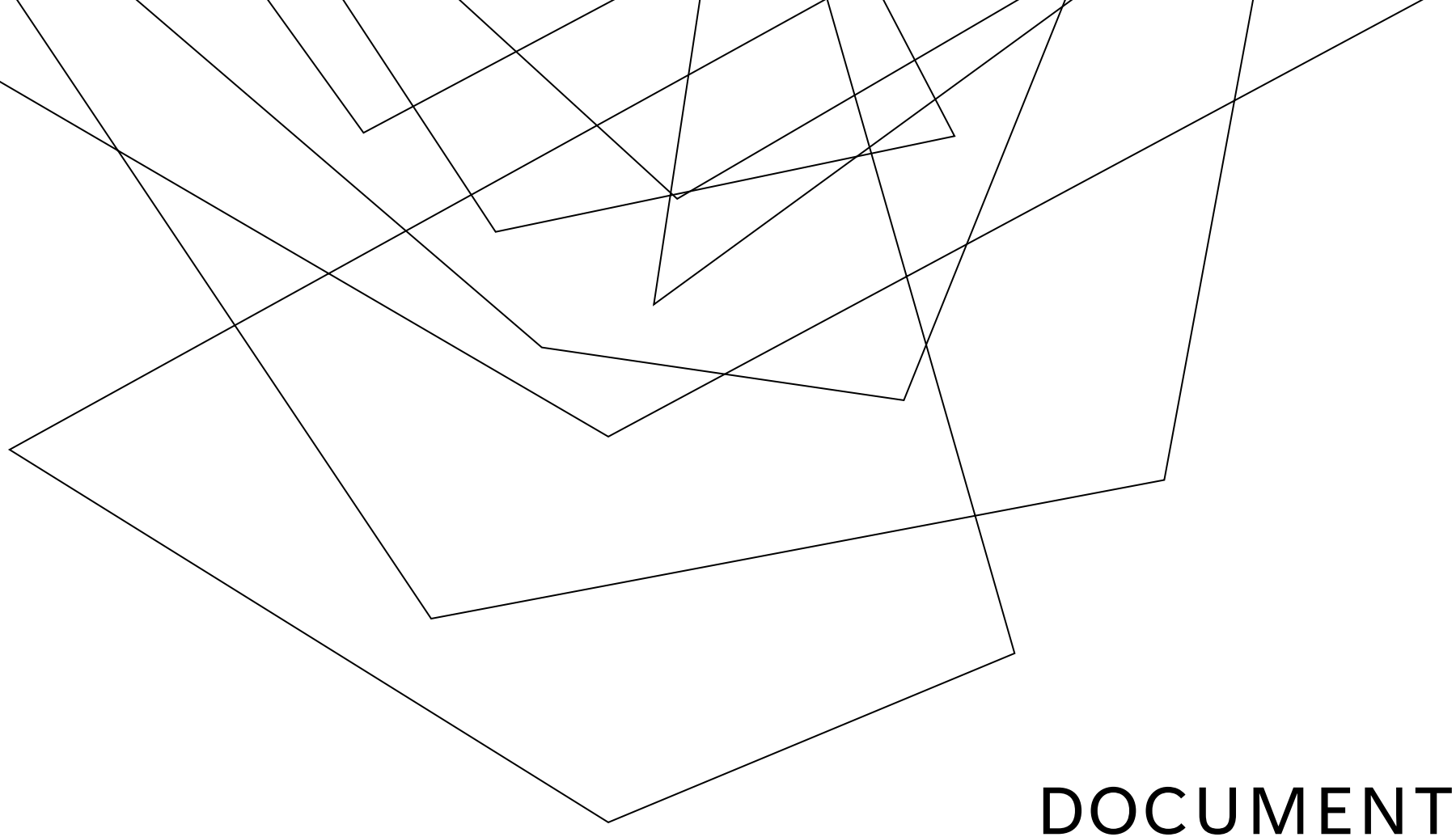
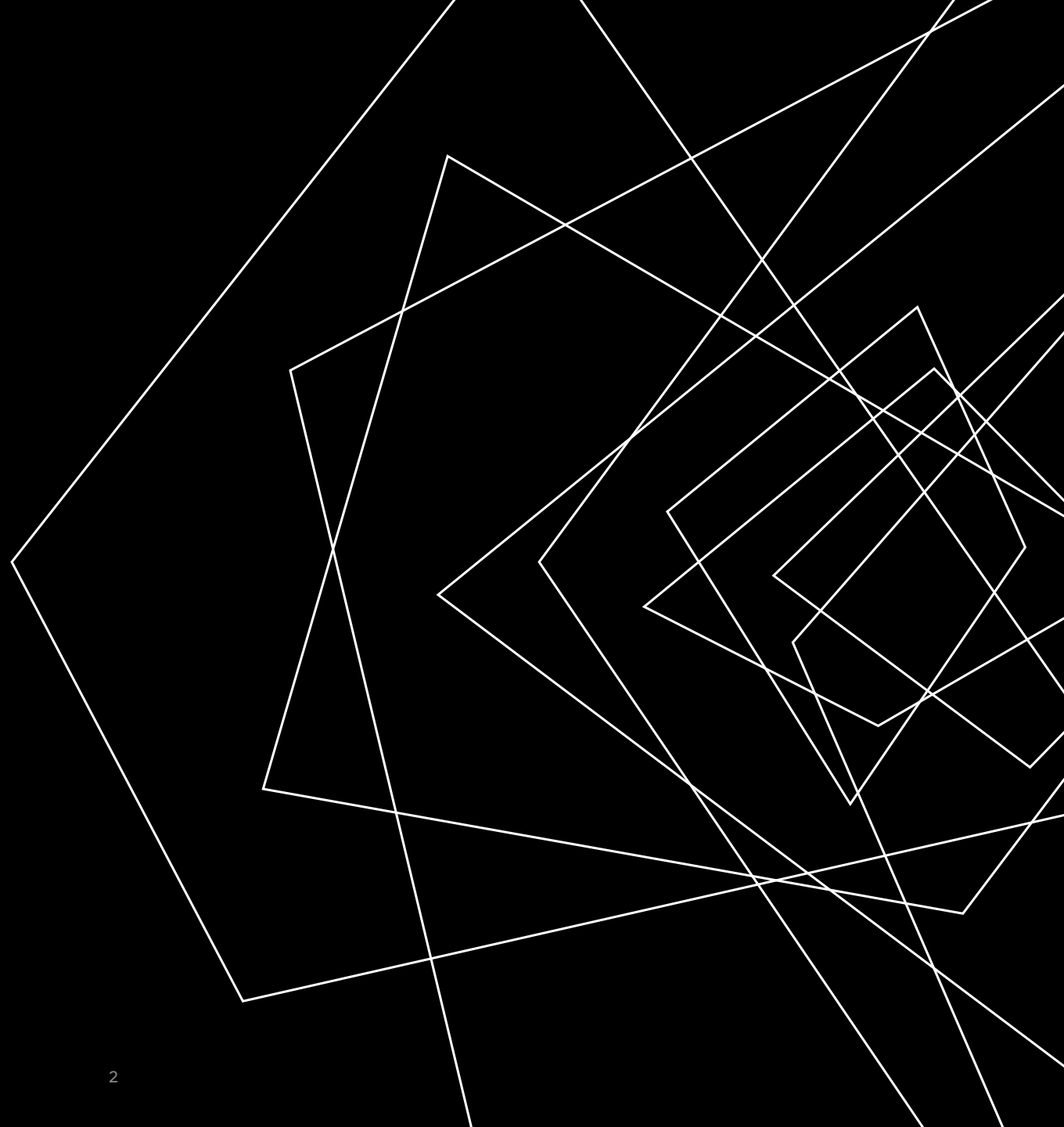


DOCUMENTATION DU PROJET

Tilaoui Ayoub

RESUME

- Requirements to Run the Executable.
- Interface.
- Choosing Pictures
- Saving The Manipulated Pictures



REQUIREMENTS

MATPLOTLIB

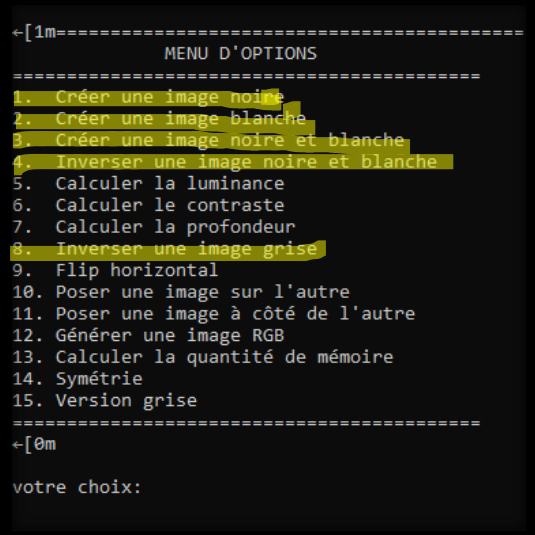
Matplotlib is a Python library for creating static, animated, and interactive visualizations.

NUMPY

In image processing, NumPy is commonly used to represent and manipulate images as arrays, where each pixel's color information is stored in the array elements. You can apply various transformations, filters, and manipulations to images using NumPy's array operations, making it a powerful tool for image analysis and processing tasks.

RANDOM

The random module in Python provides functions for generating random numbers.



Overview

The menu includes all functions each numbered with the name of the question provided in the PDF file

RGB and Numercial

The functions are split into 3 types,

1. Manipulating black and white pictures
2. Manipulating RGB and Black And white pictures

Black and White Functions

Functions 1 to 4 and 8

These functions have treatment of pixels ranging from 1 to 0, so we can't implement RGB pictures with pixels as high as 255

RGB and Black and white

For these functions the work with pictures with whose pixels range from 0 to 255 , 5 – 6 – 7 – 9 to 15

CHOOSING PICTURES

PICKING IMAGED

In the previous slide, we showed that there are 2 types of functions, each will manipulate a specific type of images with a specific format, else it will result in an error.

Format

Supported formats are *.png , *.jpg , *.jpeg

BLACK AND WHITE

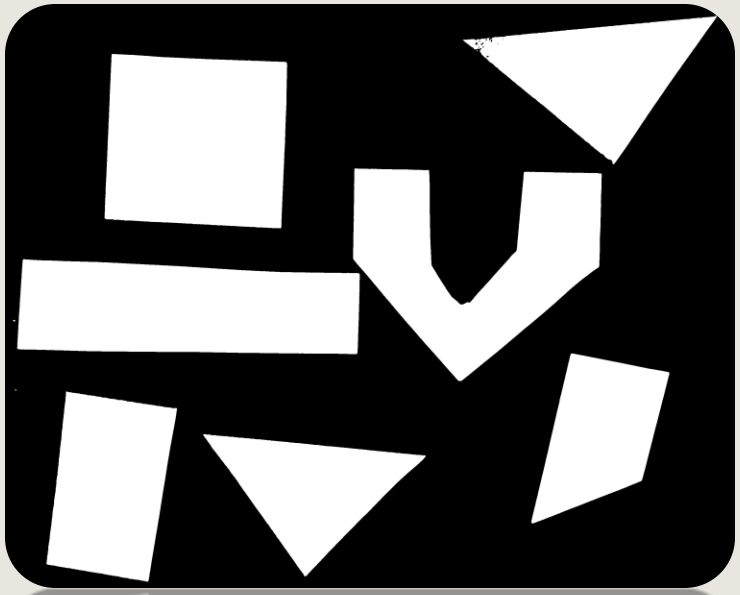
Black and white pictures, when converted to numpy arrays, the columns need to be in 0s and 1s [[0 ,1 , 1 , 1 , 0], [0 , 1 , 0 , 0 , 1]]

RGB

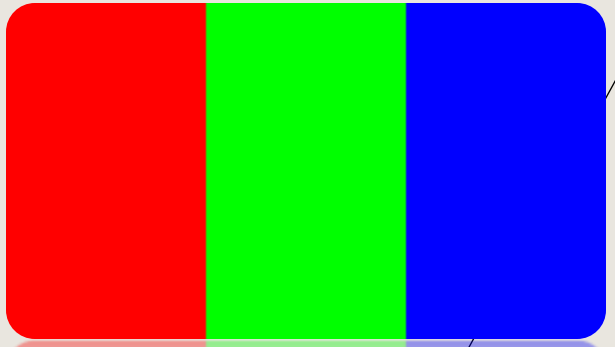
In RGB pictures , the pixels have to range from 0 to 255. The difference is that for RGB black is 0 and white is 255, while the previous only have 0 and 1s

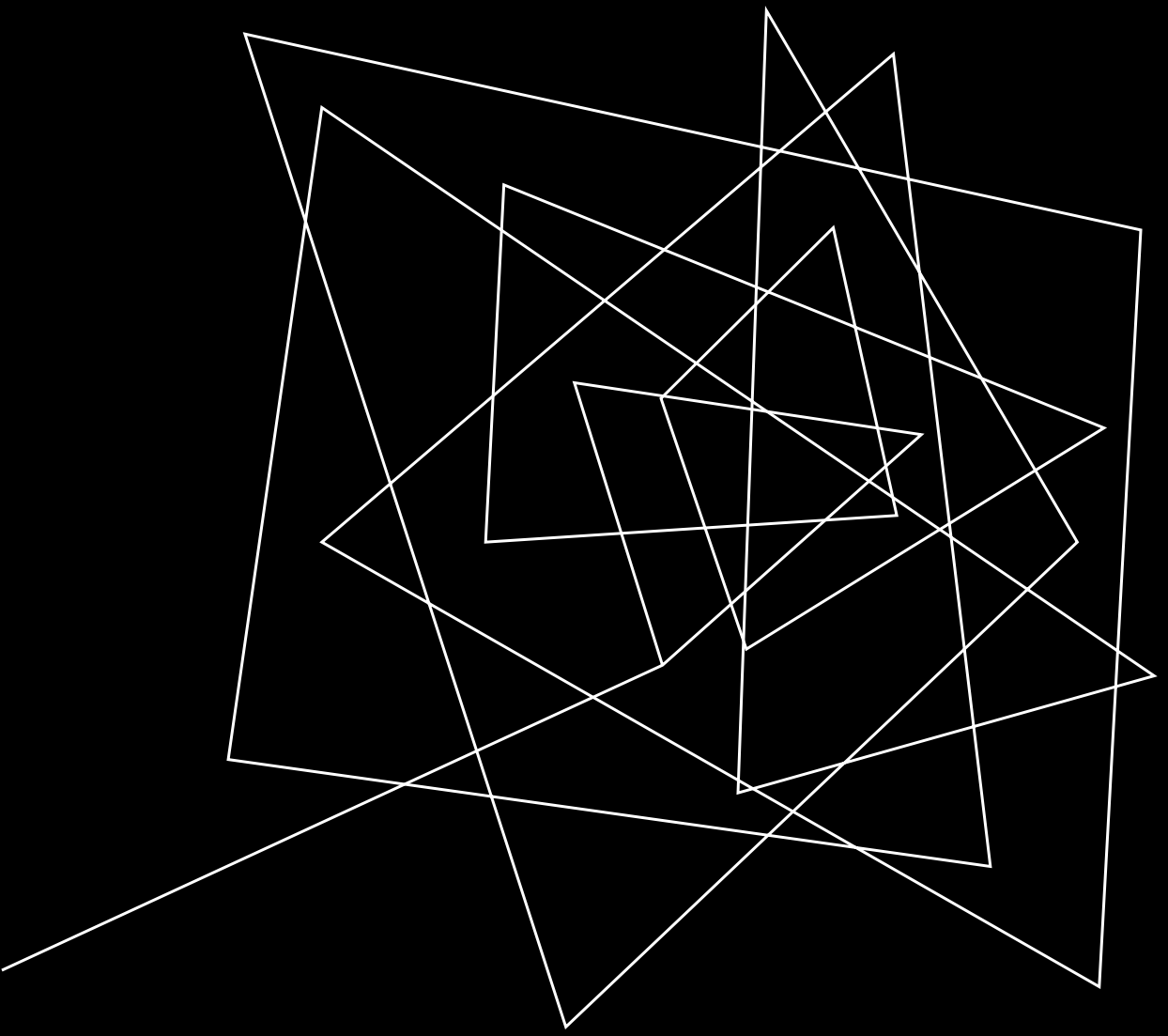
Next slide shows an example of each type :

BLACK AND WHITE



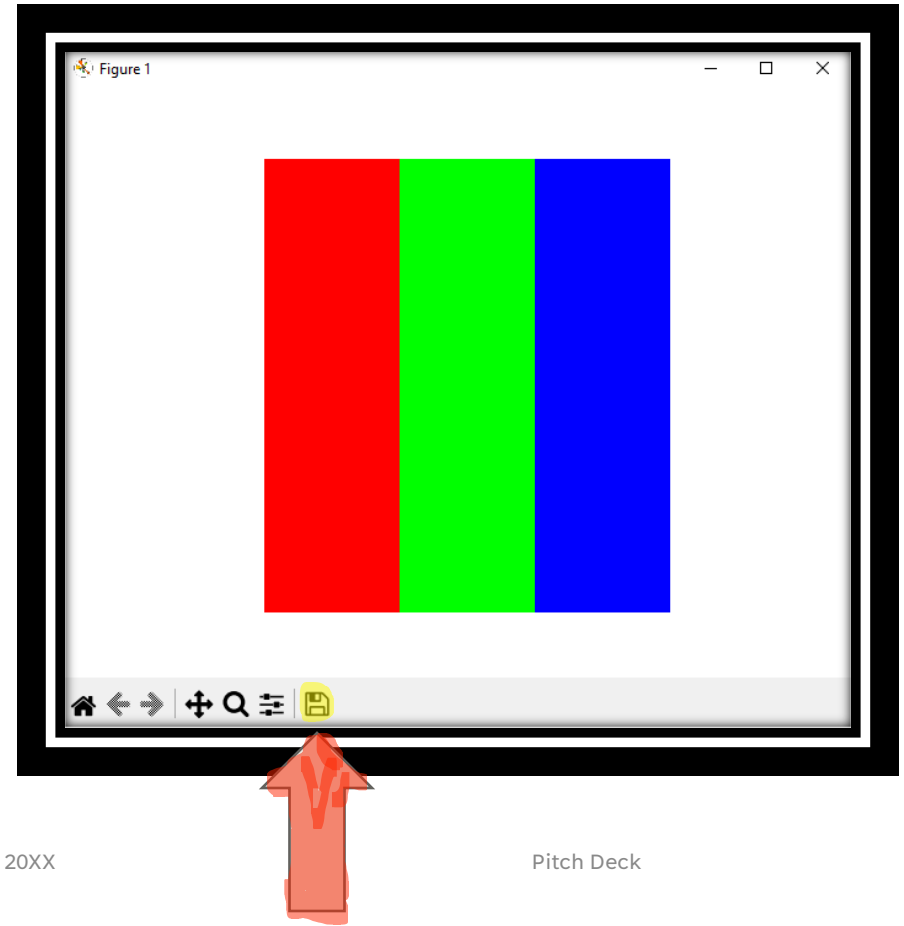
RGB





SAVING PICTURES?

YOU CAN SAVE PICTURES BY CLICKING THIS ICON UNDER THE GENERATED IMAGE



THANK YOU