EDITING IMAGE USING PYTHON PROGRAMMING

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ABSTRACT

The Python programming language excels at integrated tasks. It is widely used as a high level, free and open source language and is dynamic. Image processing with Python is a very efficient and effective process for carrying out operations such as improving the quality, enhancing, zooming, blurring, inverting the image, writing text on the images, greyscale, performing image restoration, recovering, etc. is possible with Python.

The Python Imaging Library, or PIL for short, is one of the core libraries for image manipulation in Python programming language and is freely avail-able on internet to download. Many of the image processing tasks can be carried out using the PIL library such as image inversion, binary conversion, cropping, writing text on images, changing intensity, brightness, image filtering, such as blurring, contouring, smoothing and many more

FLOW OF PROGRAM

Main Menu

- Choose from among 8 Different options
  - Open Image
  - Copy Image
  - Basic Menu
  - Create Thumbnail
  - Create Custom menu
  - Filter Menu
  - Image process Menu
  - Get Colors

Open Image

- Opens the Image for which the location is given.

FLOW OF PROGRAM

Copy Image

- Copies Image in a given location to a new Location

Basic Menu

- Choose from 4 Different Options
  - Rotate Image
  - Resize Image
  - Crop Image
  - Flip Image

FLOW OF PROGRAM

Create Thumbnail Image

- Create a thumbnail Image of the input Image (Resize Image keeping the aspect ratio).

New Custom Image Menu

- Choose from 4 Different Options
  - Image containing Noise
  - Linear Gradient Image
  - Radial Gradient Image
  - Coloured Image
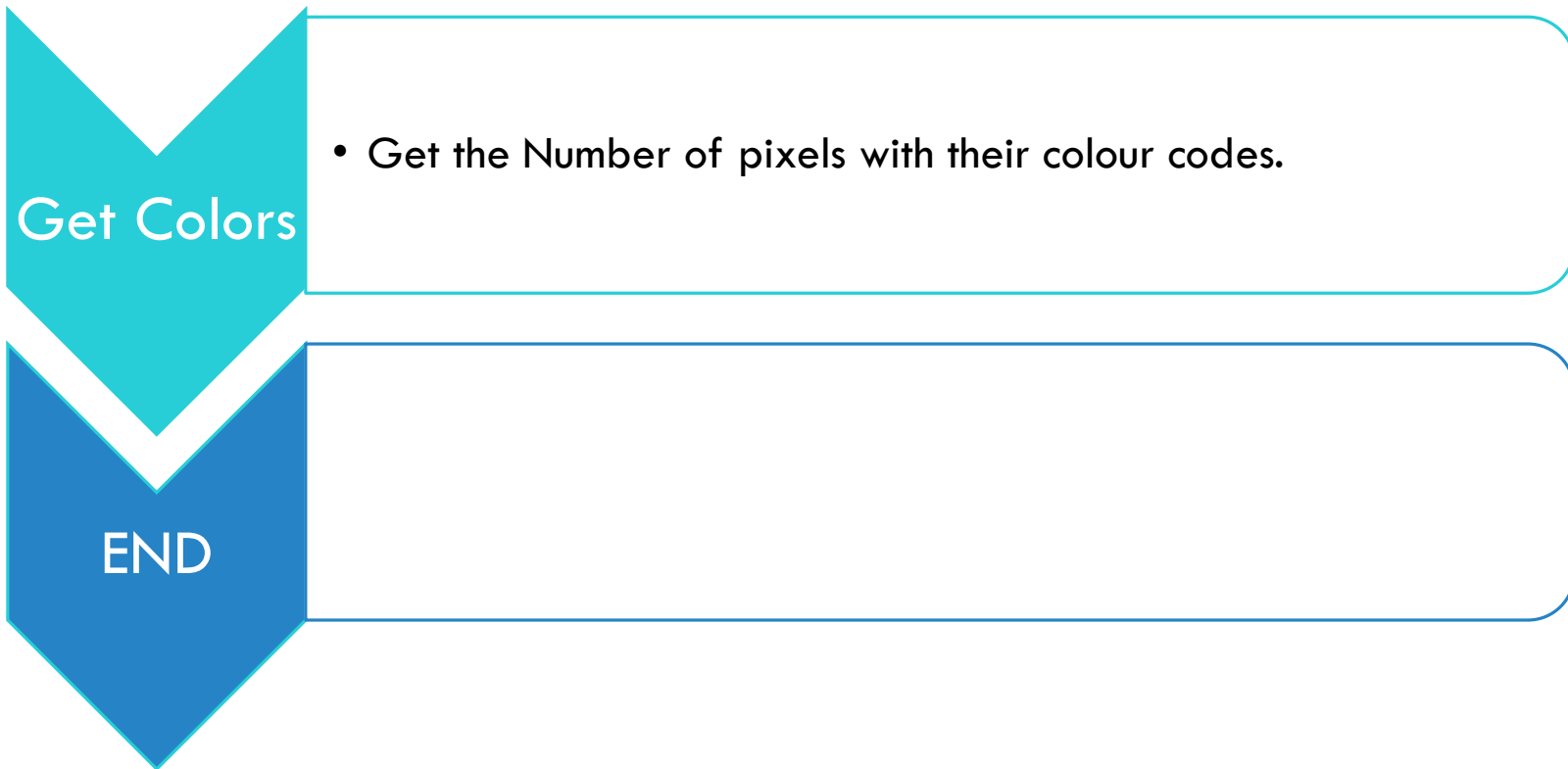
FLOW OF PROGRAM

Filter Menu

- Choose from 10 Different Options
  - Spread Blur
  - Enhance Colour
  - Enhance Contrast
  - Enhance Brightness
  - Enhance Sharpness
  - Guassian Blur
  - Contour
  - Detailed
  - Enhance Edges
  - Smoothen

Image Process Menu

- Choose from 4 Different Options
  - Blending Image.
  - Alpha Image.
  - Composite Image

FLOW OF PROGRAM

Get Colors

- Get the Number of pixels with their colour codes.

END

LIST OF THE TOPICS COVERED FROM THE SYLLABUS

Functions:-

- Define a function
- Call a Function
- Recursive Functions

If-else

- If statement
- If-elif-else ladder

Input Function

LIST OF THE TOPICS OUT OF SYLLABUS

PIL Library

- Image
  - E.g.:- Image.open()
- Image Enhance
  - E.g.:- ImageEnhance.Brightness().enhance()
- Image Filter
  - E.g.:- ImageFilter.CONTOUR

System

- System('cls')

CONCLUSION

This program can be used to perform different actions on an Image like, crop, copy, apply filters, merge two images, etc.

The use of PIL Library makes it easier to perform editing and processing actions.