1. What does RGBA stand for?

Ans. RGBA(Red-Green-Blue-Alpha)

The RGB color model is extended in this specification to include “alpha” to allow specification of the opacity of a color.

1. From the Pillow module, how do you get the RGBA value of any images?

Ans. from PIL import Image

img = Image.open(‘image.png’)

rgba = img.convert(“RGBA”)

datas = rgba.getdata()

1. What is a box tuple, and how does it work?

Ans. The box.tuple submodule provides read-only access for the tuple userdata type. It allows, for a single [tuple](https://www.tarantool.io/en/doc/latest/concepts/data_model/value_store/" \l "index-box-tuple): selective retrieval of the field contents, retrieval of information about size, iteration over all the fields, and conversion to a [Lua table](https://www.lua.org/pil/2.5.html).

tuple = box.tuple.new({scalar1, scalar2, ... scalar\_n}) -- scalars to tuple

lua\_table = {tuple:unpack()} -- tuple to Lua table

lua\_table = tuple:totable() -- tuple to Lua table

scalar1, scalar2, ... scalar\_n = tuple:unpack() -- tuple to scalars

tuple = box.tuple.new(lua\_table) -- Lua table to tuple

1. Use your image and load in notebook then, How can you find out the width and height of an Image object?

Ans. # import required module

**from** PIL **import** Image

# get image

filepath **=** "gops.png"

img **=** Image.open(filepath)

# get width and height

width **=** img.width

height **=** img.height

# display width and height

print("The height of the image is: ", height)

print("The width of the image is: ", width)

1. What method would you call to get Image object for a 100×100 image, excluding the lower-left quarter of it?

Ans. from PIL import Image

import numpy as np

# Opening the image and converting

# it to RGB color mode

# IMAGE\_PATH => Path to the image

img = Image.open(r"D:\pexels-moose-photos-1037993.jpg").convert('RGB')

# Extracting the image data &

# creating an numpy array out of it

img\_arr = np.array(img)

# Turning the pixel values of the 50x50 pixels to black

img\_arr[50 : -1, 50 : -1] = (0, 0, 0)

# Creating an image out of the previously modified array

img = Image.fromarray(img\_arr)

# Displaying the image

img.show()

6. After making changes to an Image object, how could you save it as an image file?

Ans. Imageobj.save(file name)

1. What module contains Pillow’s shape-drawing code?

Ans. The 'ImageDraw' module provides simple 2D graphics support for Image Object. Generally, we use this module to create new images, annotate or retouch existing images and to generate graphics on the fly for web use. The graphics commands support the drawing of shapes and annotation of text.

1. Image objects do not have drawing methods. What kind of object does? How do you get this kind of object?

Ans. ImageDraw have draw method for drawing.

We can get this as like this:

from PIL import ImageDraw