1. What does RGBA stand for?

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

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

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

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

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

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

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

Answers:

1. RGBA stands for Red, Green, Blue, Alpha. It is a color model used to represent colors in digital images.
2. To get the RGBA value of an image using the Pillow module in Python, you can use the getpixel() method of an Image object. For example:

from PIL import Image

img = Image.open('my\_image.png')

rgba = img.getpixel((10, 10)) # get RGBA value at pixel (10, 10)

1. A box tuple is a tuple of four integers representing the coordinates of a rectangular region of an image. The tuple is in the format (left, upper, right, lower), where left is the x-coordinate of the left edge of the box, upper is the y-coordinate of the upper edge of the box, right is the x-coordinate of the right edge of the box, and lower is the y-coordinate of the lower edge of the box. The box tuple is used to define regions of an image for various operations, such as cropping or pasting.
2. To find the width and height of an Image object using the Pillow module in Python, you can use the size attribute of the Image object. For example:

from PIL import Image

img = Image.open('my\_image.png')

width, height = img.size

1. To get an Image object for a 100×100 image excluding the lower-left quarter of it, you can use the crop() method of an Image object. For example:

from PIL import Image

img = Image.open('my\_image.png')

cropped\_img = img.crop((50, 50, 100, 100)) # crop the region from (50, 50) to (100, 100)

1. After making changes to an Image object using the Pillow module in Python, you can save it as an image file using the save() method of the Image object. For example:

from PIL import Image

img = Image.open('my\_image.png') # make changes to the image here img.save('new\_image.png') # save the modified image as a new file

1. Pillow’s shape-drawing code is contained in the ImageDraw module.
2. ImageDraw objects have drawing methods, such as line(), rectangle(), and text(). To get an ImageDraw object, you can use the Draw() function of the ImageDraw module, passing an Image object as an argument. For example:

from PIL import Image, ImageDraw

img = Image.new('RGB', (100, 100), color='white')

draw = ImageDraw.Draw(img) # create an ImageDraw object for the image

# use drawing methods on the ImageDraw object here