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?

**SOLUTIONS**

1. *RGBA stands for Red, Green, Blue, and Alpha. RGBA is a color model used in computer graphics to represent colors in images and graphics with an added alpha channel for transparency.*
2. *In the Pillow module, you can get the RGBA value of an image using the "getpixel" method of the Image object. Here's an example:*

***from PIL import Image***

***img = Image.open("example.png")***

***rgba = img.getpixel((0, 0))***

***print(rgba)***

1. *A box tuple is a 4-tuple that defines the left, upper, right, and lower pixel coordinates of a rectangular region. In the Pillow module, box tuples are used to crop images or extract regions of interest.*
2. *To find out the width and height of an Image object in Pillow, you can access the "width" and "height" attributes of the Image object. Here's an example:*

***from PIL import Image***

***img = Image.open("example.png")***

***width, height = img.size***

***print(width, height)***

1. *To get an Image object for a 100x100 image excluding the lower-left quarter, you can crop the original Image object using the box tuple. Here's an example:*

***from PIL import Image***

***img = Image.open("example.png")***

***width, height = img.size***

***box = (0, 0, width / 2, height / 2)***

***cropped\_img = img.crop(box)***

1. *To save an Image object as an image file after making changes, you can use the "save" method of the Image object. Here's an example:*

***from PIL import Image***

***img = Image.open("example.png")***

***# make changes to the image***

***img.save("modified\_example.png")***

1. *The ImageDraw module in the Pillow library contains Pillow's shape-drawing code. This module provides functions to draw shapes like lines, rectangles, circles, and polyggon on an Image object.*
2. *Image objects do not have drawing methods, but you can get a drawable object by creating an ImageDraw object. Here's an example:*

*from PIL import Image, ImageDraw*

*img = Image.open("example.png")*

*draw = ImageDraw.Draw(img)*