

1. What does RGBA stand for?

RGBA stands for Red Green Blue Alpha. It is a color model used to represent colors in digital images and computer graphics. The RGBA model adds an additional alpha channel to the RGB model, representing the transparency or opacity of a color.

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

To get the RGBA value of an image using the Pillow module in Python, we can use the `getpixel()` method of the Image object. This method takes the coordinates (x, y) of a pixel and returns a tuple containing the RGBA values.

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

In the context of the Pillow module, a box tuple is a tuple containing four values: (left, upper, right, lower). It represents a rectangular region within an image. The coordinates are defined in pixels, where (0, 0) represents the top-left corner of the image. The box tuple is used to specify regions for various operations, such as cropping, resizing, and pasting.

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

To find out the width and height of an Image object using the Pillow module, we can use the `size` attribute. It returns a tuple containing the width and height of the image in pixels.

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

To get an Image object for a 100x100 image, excluding the lower-left quarter, you can use the `crop()` method. You need to define the box tuple specifying the region you want to crop.

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

After making changes to an Image object using the Pillow module, you can save it as an image file using the `save()` method. You need to provide the filename along with the desired file format.

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

The `ImageDraw` module within the Pillow library contains the shape-drawing code. It provides methods to draw various shapes, such as lines, rectangles, circles, and polygons, on an Image object.

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

The `ImageDraw` object, obtained from the `ImageDraw.Draw()` method, is used for drawing shapes and text on an Image object. This object provides methods like `line()`, `rectangle()`, `ellipse()`, and `text()` to perform drawing operations.