

FSDS ASSIGNMENT – 14

1. What does RGBA stand for?

Ans. RGBA tuples are 4-tuples where the respective tuple components represent red, green, blue, and alpha (opacity) values for a colour. Each value is a floating-point number between 0.0 and 1.0. For example, the tuple (1, 0, 0, 1) represents an opaque red, while (0, 1, 0, 0.5) represents a half transparent green.

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

Ans. We can get the RGBA value of any image by following:

- `from PIL import Image`
- `img = Image.open('image.png')`
- `rgba = img.convert("RGBA")`
- `datas = rgba.getdata()`

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

Ans. The `crop()` method on Image objects takes a box tuple and returns an Image object representing the cropped image. The cropping does not happen in place—that is, the original Image object is left untouched, and the `crop()` method returns a new Image object.

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

Ans. `PIL.Image.open()` is used to open the image and then `.width` and `.height` property of Image are used to get the height and width of the image. The same results can be obtained by using `'size'` property.

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

Ans. The PIL module is used for storing, processing, and displaying images in Python. To save images, we can use the `PIL.save()` function. This function is used to export an image to an external file. But to use this function, first, we should have an object which contains an image.

Code: `from PIL import Image`
`Img = Image.open('loadimage.jpg')`
`Img = img.save('savedimage.jpg')`

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

Ans. ImageDraw module of the Python image processing library Pillow (PIL) provides many methods for drawing figures, such as circles, squares, and straight lines.