**1. What does RGBA stand for?**

* **RGBA** stands for **Red, Green, Blue, Alpha**.
  + **Red, Green, Blue**: Represent the color channels.
  + **Alpha**: Represents the transparency level (0 = fully transparent, 255 = fully opaque).

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

Use the getpixel() method of an Image object:

from PIL import Image

image = Image.open('example.png')

rgba\_value = image.getpixel((x, y)) # (x, y) are the coordinates of the pixel

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

* A **box tuple** is a tuple of four integers representing a rectangular region in an image. It is defined as (left, top, right, bottom):
  + left: The x-coordinate of the leftmost edge.
  + top: The y-coordinate of the topmost edge.
  + right: The x-coordinate of the rightmost edge.
  + bottom: The y-coordinate of the bottommost edge.

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

Use the size attribute of the Image object:

from PIL import Image

image = Image.open('example.png')

width, height = image.size

print(f"Width: {width}, Height: {height}")

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

Use the crop() method with a box tuple:

cropped\_image = image.crop((0, 50, 50, 100)) # Excludes the lower-left quarter

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

Use the save() method:

image.save('modified\_image.png')

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

The ImageDraw 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?**

* The ImageDraw object has drawing methods.
* You can create an ImageDraw object using the ImageDraw.Draw() function:

from PIL import Image, ImageDraw

draw = ImageDraw.Draw(image)