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Course introduction


Application Programming Interfaces (APIs)


Manipulating Images


 **Reading:** How to Use PIL for Working With Images
4 min


Module 1 Project

 **Reading:** Project Problem Statement
4 min

 **Reading:** Glossary terms from course 6, module 1
2 min

 **Reading:** Qwiklabs Guidelines and Troubleshooting Steps
4 min

 **Ungraded App Item:** Qwiklabs assessment: Scale and convert images using PIL
1h 30m

 **Reading:** Exemplar: Scale and convert images using PIL
8 min

 **Graded Assignment:** Module 1 challenge: Scale and convert images using PIL
Started

How to Use PIL for Working With Images

As we've mentioned, for the project in this module, you'll use the Python Imaging Library to process a bunch of images. So, how does that work?

When using PIL, we typically create **Image** objects that hold the data associated with the images that we want to process. On these objects, we operate by calling different methods that either return a new image object or modify the data in the image, and then end up saving the result in a different file.

For example, if we wanted to resize an image and save the new image with a new name, we could do it with:

```
1 from PIL import Image
2 im = Image.open("example.jpg")
3 new_im = im.resize((640,480))
4 new_im.save("example_resized.jpg")
5
```

In this case, we're using the `resize` method that returns a new image with the new size, and then we save it into a different file. Or, if we want to rotate an image, we can use code like this:

```
1 from PIL import Image
2 im = Image.open("example.jpg")
3 new_im = im.rotate(90)
4 new_im.save("example_rotated.jpg")
5
```

This method also returns a new image that we can then use to create the new rotated file. Because the method returns a new object, we can even combine these operations into just one line that rotates, resizes, and saves:

```
1 from PIL import Image
2 im = Image.open("example.jpg")
3 im.rotate(180).resize((640,480)).save("flipped_and_resized.jpg")
4
```

There's a ton more that you can do with the PIL library. Have a look at [the docs](#) and try it on your computer

Go to next item

✓ Completed

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