PixelAccess Class

The PixelAccess class provides read and write access to `PIL.Image` data at a pixel level.

Note

Accessing individual pixels is fairly slow. If you are looping over all of the pixels in an image, there is likely a faster way using other parts of the Pillow API.

Example

The following script loads an image, accesses one pixel from it, then changes it.

```
from PIL import Image
im = Image.open('hopper.jpg')
px = im.load()
print (px[4,4])
px[4,4] = (0,0,0)
print (px[4,4])
```

Results in the following:

```
(23, 24, 68)
(0, 0, 0)
```

PixelAccess Class

class **PixelAccess**

__setitem__(self, xy, color):

Modifies the pixel at x,y. The color is given as a single numerical value for single band images, and a tuple for multi-band images

Parameters:
- **xy** – The pixel coordinate, given as (x, y).
- **value** – The pixel value.

`__getitem__(self, xy):`

> **Returns the pixel at x,y. The pixel is returned as a single**

value for single band images or a tuple for multiple band images

param xy: The pixel coordinate, given as (x, y).

returns: a pixel value for single band images, a tuple of pixel values for multiband images.

`putpixel(self, xy, color):`

Modifies the pixel at x,y. The color is given as a single numerical value for single band images, and a tuple for multi-band images

Parameters:
- **xy** – The pixel coordinate, given as (x, y).
- **value** – The pixel value.

`getpixel(self, xy):`

> **Returns the pixel at x,y. The pixel is returned as a single**

value for single band images or a tuple for multiple band images

param xy: The pixel coordinate, given as (x, y).

returns: a pixel value for single band images, a tuple of pixel values for multiband images.