How to Translate images with opencv ?

Translate → Geometrical transformation.

There are two ways we can go ahead

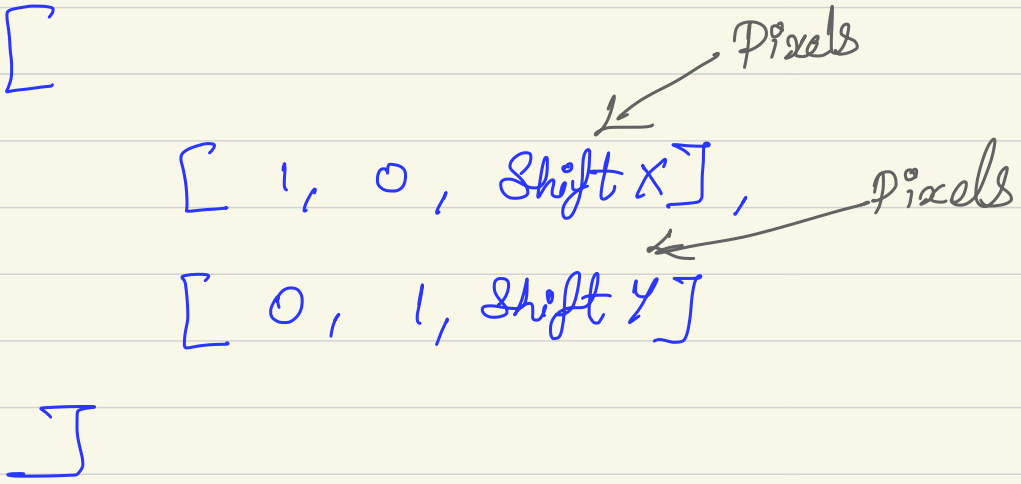
1) Using built in imutils Package

2) Using warpAffine function.

What is Translating ?

It is nothing but Shifting the image in X and Y direction.

To Translate an image is given by a numpy matrix in the form



Shift x and Shift y are the most important things.

Negative values of Shift x - It will shift the image to Left

Positive values of Shift x - It will shift the image to the right.

Negative value of Shift y - It will shift the image UP

Positive value of Shift y - It will shift the image down.

1) lets see an example for warpAffine

```
M = np.float32([[1,0,25],
                [0,1,50]])
```

The above example what it will do is that,

It will shift the image Right
and it will the image to down

So Now we have Constructed the Translation matrix ; all we have to do is apply warpAffine ()

```
Shifted = cv2.warpAffine(image, M,
                         (image.shape[1], image.shape[0]))
cv2.imshow("Shifted down and Right", Shifted)
```

2) Now lets see the example for imutils

```
# import the package.
import imutils
Shifted = imutils.translate(image, 0, 100)
cv2.imshow("Shifted Down", Shifted)
cv2.waitKey(0)
```

shiftX ↓ shiftY ↓

when we use imutils → it is going to be in one line, but not with the case of warpAffine