method

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OpenCV-Python is a library of Python bindings designed to solve computer vision problems. cv2.copyMakeBorder() method is used to create a border around the image like a photo frame.

> ***Syntax:*** *cv2.copyMakeBorder(src, top, bottom, left, right, borderType, value)*

Parameters:
src: *It is the source image.*
top: *It is the border width in number of pixels in top direction.*
bottom: *It is the border width in number of pixels in bottom direction.*
left: *It is the border width in number of pixels in left direction.*
right: *It is the border width in number of pixels in right direction.*
borderType: *It depicts what kind of border to be added. It is defined by flags like* ***cv2.BORDER_CONSTANT****,* ***cv2.BORDER_REFLECT****, etc* ***dest:*** *It is the destination image*

value: *It is an optional parameter which depicts color of border if border type is* ***cv2.BORDER_CONSTANT****.*

Return Value: *It returns an image.*

The borderType flags are described below:

cv2.BORDER_CONSTANT: *It adds a constant colored border. The value should be given as a keyword argument*

cv2.BORDER_REFLECT: *The border will be mirror reflection of the border elements. Suppose, if image contains letters "****abcdefg****" then output will be "****gfedcba|abcdefg|gfedcba****".*

cv2.BORDER_REFLECT_101 *or* ***cv2.BORDER_DEFAULT:*** *It does the same works as* ***cv2.BORDER_REFLECT*** *but with slight change. Suppose, if image contains letters "****abcdefgh****" then output will be "****gfedcb|abcdefgh|gfedcba****".*

cv2.BORDER_REPLICATE: *It replicates the last element. Suppose, if image contains letters "****abcdefgh****" then output will be "****aaaaa|abcdefgh|hhhhh****".*

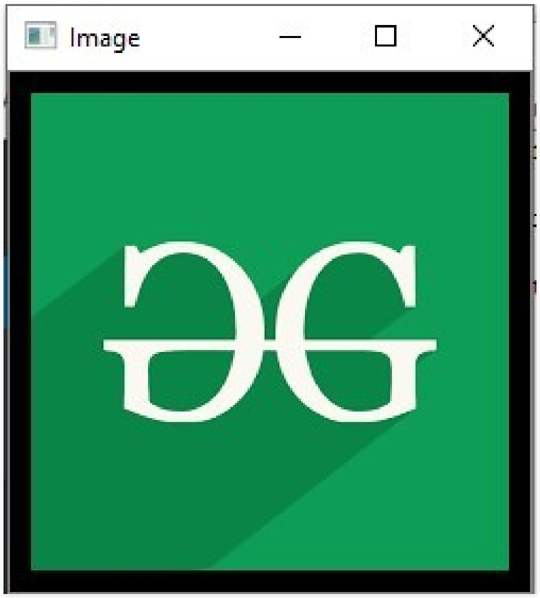
Image used for all the below examples:

Example #1:

Python3

```
# Python program to explain cv2.copyMakeBorder() method

# importing cv2
import cv2

# path
path = r'C:\Users\Rajnish\Desktop\geeksforgeeks\geeks.png'

# Reading an image in default mode
image = cv2.imread(path)

# Window name in which image is displayed
window_name = 'Image'

# Using cv2.copyMakeBorder() method
image = cv2.copyMakeBorder(image, 10, 10, 10, 10, cv2.BORDER_CONSTANT, None, value =

# Displaying the image
cv2.imshow(window_name, image)
```

utput:

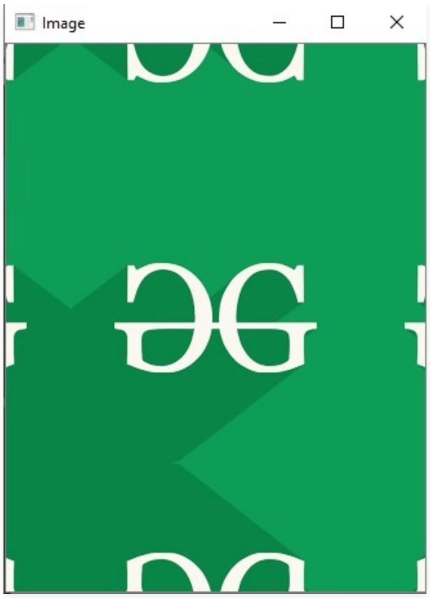


Example #2:

Python3

```
# Python program to explain cv2.copyMakeBorder() method

# importing cv2
import cv2

# path
path = r'C:\Users\Rajnish\Desktop\geeksforgeeks\geeks.png'

# Reading an image in default mode
image = cv2.imread(path)

# Window name in which image is displayed
window_name = 'Image'

# Using cv2.copyMakeBorder() method
image = cv2.copyMakeBorder(image, 100, 100, 50, 50, cv2.BORDER_REFLECT)

# Displaying the image
cv2.imshow(window_name, image)
```

Output:



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