14.

import cv2

import numpy as np

import matplotlib.pyplot as plt

from google.colab import files

uploaded = files.upload()

image\_path = next(iter(uploaded))

img = cv2.imread(image\_path)

img = cv2.cvtColor(img, cv2.COLOR\_BGR2RGB)

src\_pts = np.float32([

[100, 100],

[400, 100],

[400, 400],

[100, 400]

])

dst\_pts = np.float32([

[0, 0],

[300, 0],

[300, 300],

[0, 300]

])

H, status = cv2.findHomography(src\_pts, dst\_pts)

transformed\_img = cv2.warpPerspective(img, H, (300, 300))

plt.figure(figsize=(10, 5))

plt.subplot(1, 2, 1)

plt.title('Original Image')

plt.imshow(img)

plt.scatter(src\_pts[:, 0], src\_pts[:, 1], c='r', s=10) # mark selected points

plt.subplot(1, 2, 2)

plt.title('Transformed Image')

plt.imshow(transformed\_img)

plt.show()

OUTPUT:

