2. Write a program to show rotation, scaling, and translation of an image.

import cv2

import numpy as np

img = cv2.imread('DIP/image.jpg')

angle = 60

scale = 1.5

tx, ty = 50, -30

h, w = img.shape[:2]

M\_rotate = cv2.getRotationMatrix2D((w//2, h//2), angle, scale)

M\_translate = np.float32([[1, 0, tx], [0, 1, ty]])

img\_rotated = cv2.warpAffine(img, M\_rotate, (w, h))

img\_transformed = cv2.warpAffine(img, M\_translate, (w, h))

cv2.imshow('Original', img)

cv2.imshow('Rotated', img\_rotated)

cv2.imshow('Transformed', img\_transformed)

cv2.waitKey(0)

cv2.destroyAllWindows()