

## 10. Perform transformation using Homography matrix.

### PROGRAM:

```
EXP-10.py - C:\Users\reddy\OneDrive\Desktop\COMPUTER VISION\EXP-10.py (3.11.9)
File Edit Format Run Options Window Help
import cv2
import numpy as np

# Read image
img = cv2.imread("C:/Users/reddy/OneDrive/Desktop/COMPUTER VISION\iii.jpg")

h, w = img.shape[2]

# Source points (from original image)
src_pts = np.float32([
    [50, 50],
    [50, 300],
    [300, 300],
    [300, 50]
])

# Destination points
dst_pts = np.float32([
    [10, 10],
    [10, h1],
    [w, h1],
    [w, 10]
])

# Find homography matrix
H, status = cv2.findHomography(src_pts, dst_pts)

# Apply homography transformation
homography_img = cv2.warpPerspective(img, H, (w, h))

# Display images
cv2.imshow("Original Image", img)
cv2.imshow("Homography Transformed Image", homography_img)

cv2.waitKey(0)
cv2.destroyAllWindows()
```

### OUTPUT:

