**14. Perform Perspective Transformation on a video.**

**Aim:**

To perform perspective transformation on a video.

**Code:**

import cv2

import numpy as np

video\_path = r"C:\\Users\\prith\\Documents\\CV\\cvVideo.mp4"

cap = cv2.VideoCapture(video\_path)

if not cap.isOpened():

print("Error: Unable to open the video file")

exit()

ret, im\_src = cap.read()

if not ret:

print("Error: Unable to read the video frame")

cap.release()

exit()

pts\_src = np.array([[141, 131], [480, 159], [493, 630], [64, 601]])

pts\_dst = np.array([[318, 256], [534, 372], [316, 670], [73, 473]])

im\_dst = np.zeros\_like(im\_src)

h, status = cv2.findHomography(pts\_src, pts\_dst)

im\_out = cv2.warpPerspective(im\_src, h, (im\_src.shape[1], im\_src.shape[0]))

cv2.imshow("Source Image", im\_src)

cv2.imshow("Destination Image", im\_dst)

cv2.imshow("Warped Source Image", im\_out)

cv2.waitKey(0)

cap.release()

cv2.destroyAllWindows()

**Input:**

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**Output:**

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**Result:**

The python code to perform perspective transformation on an input video has been executed successfully.