1. **Read an image and extract and display low-level features such as edges, textures using filtering techniques.**

import cv2

img = cv2.imread('DIP/image.jpg', cv2.IMREAD\_GRAYSCALE)

blurred = cv2.GaussianBlur(img, (5, 5), 0)

edges = cv2.Canny(blurred, 100, 200)

laplacian = cv2.Laplacian(blurred, cv2.CV\_64F)

kernel = cv2.getGaborKernel((10, 10), 3, 0, 10, 0.5, 0, ktype=cv2.CV\_32F) gabor = cv2.filter2D(img, cv2.CV\_8UC3, kernel)

cv2.imshow('Original', img) cv2.imshow('Canny Edges', edges) cv2.imshow('Laplacian Edges', laplacian) cv2.imshow('Gabor Filtered', gabor)

cv2.waitKey(0)

cv2.destroyAllWindows()

## Output: