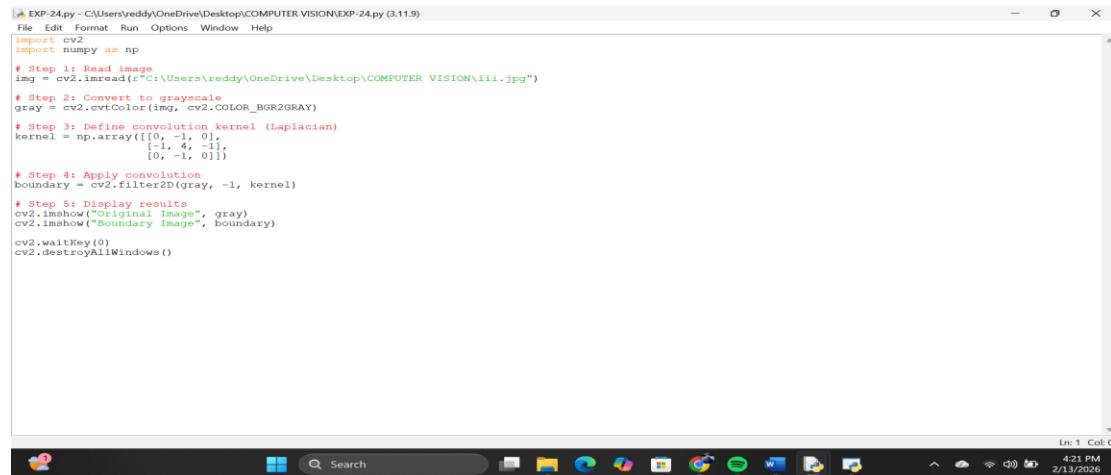


23. Find the boundary of the image using Convolution kernel for the given image.

PROGRAM:



```
EXP-24.py - C:\Users\reddy\OneDrive\Desktop\COMPUTER VISION\EXP-24.py (3.11.9)
File Edit Format Run Options Window Help
import cv2
import numpy as np

# Step 1: Read image
img = cv2.imread(r"C:\Users\reddy\OneDrive\Desktop\COMPUTER VISION\iii.jpg")

# Step 2: Convert to grayscale
gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)

# Step 3: Define convolution kernel (Laplacian)
kernel = np.array([[0, -1, 0],
                  [-1, 4, -1],
                  [0, -1, 0]])

# Step 4: Apply convolution
boundary = cv2.filter2D(gray, -1, kernel)

# Step 5: Display results
cv2.imshow("Original Image", gray)
cv2.imshow("Boundary Image", boundary)

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

OUTPUT:

