

14. Perform Edge detection using Sobel Matrix along Y axis

PROGRAM:

```
EXP-14.py - C:\Users\reddy\OneDrive\Desktop\COMPUTER VISION\EXP-14.py (3.11.9)
File Edit Format Run Options Window Help
import cv2

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

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

# Apply Sobel operator along Y-axis
sobely = cv2.Sobel(gray, cv2.CV_64F, 0, 1, ksize=3)

# Convert to absolute values
sobely = cv2.convertScaleAbs(sobely)

# Display images
cv2.imshow("Original Image", img)
cv2.imshow("Sobel Y Edge Detection", sobely)

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

OUTPUT:

