13. Perform Edge detection using Sobel Matrix along X axis

PROGRAM:

```python
import cv2

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

if img is None:
    print("Image not found")
    exit()

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

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

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

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

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

OUTPUT: