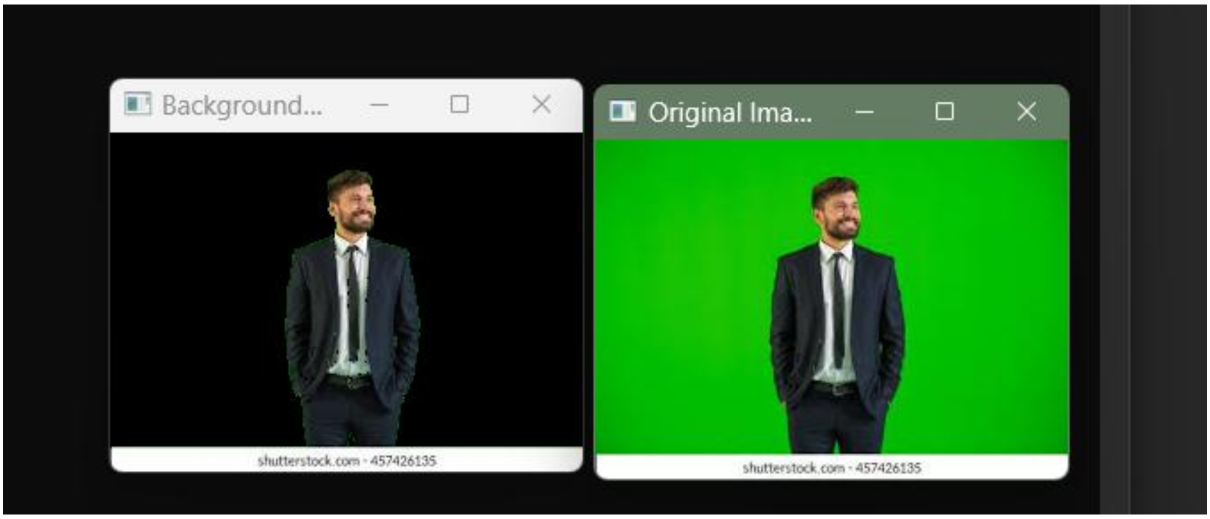
36)Write a Python function to subtract the background of the given input image based on color levels using Open CV

Code:

```
import cv2
import numpy as np

def subtract_background_by_color(image_path, lower_bgr, upper_bgr):
    """
    Subtracts the background of the given image based on BGR color levels.

    Parameters:
    - image_path: str - Path to the input image.
    - lower_bgr: tuple - Lower bound for BGR color (e.g., (0, 100, 0)).
    - upper_bgr: tuple - Upper bound for BGR color (e.g., (100, 255, 100)).
    """
    # Load the image
    image = cv2.imread(r"C:\Users\harik\Downloads\CV LAB\GREEN.jpeg")
    if image is None:
        print("Error: Image not found.")
        return

    # Convert image to NumPy array and apply color threshold
    lower = np.array(lower_bgr, dtype=np.uint8)
    upper = np.array(upper_bgr, dtype=np.uint8)

    # Create mask for background
    mask = cv2.inRange(image, lower, upper)

    # Invert the mask to get foreground (non-background)
    mask_inv = cv2.bitwise_not(mask)

    # Apply mask to keep foreground
    foreground = cv2.bitwise_and(image, image, mask=mask_inv)

    # Display results
    cv2.imshow('Original Image', image)
    cv2.imshow('Background Removed', foreground)
    cv2.waitKey(0)
    cv2.destroyAllWindows()

    # Save result
    cv2.imwrite("foreground_output.jpg", foreground)

# ------------------------
# Example usage:
# Subtract green background (light green)
image_path = "your_image.jpg"  # Replace with your actual image file
lower_green_bgr = (0, 100, 0)
upper_green_bgr = (100, 255, 100)

subtract_background_by_color(image_path, lower_green_bgr, upper_green_bgr)
```

OUTPUT:


Background...
shutterstock.com · 457426135
Original Ima...
shutterstock.com · 457426135