20 question

```
import cv2

import numpy as np


# Step 1: Load original image in grayscale

image = cv2.imread(r"C:\Users\SAIL\Downloads\CV\mountain.jpg", cv2.IMREAD_GRAYSCALE)    # Replace with your image file

if image is None:

    raise ValueError("Image not found! Check the file path.")


# Step 2: Apply binary thresholding

_, binary = cv2.threshold(image, 127, 255, cv2.THRESH_BINARY)


# Step 3: Define kernel and apply dilation

kernel = np.ones((5, 5), np.uint8)

dilated = cv2.dilate(binary, kernel, iterations=1)


# Step 4: Resize images for uniform display (optional but recommended)

height = 300

image_resized = cv2.resize(image, (int(image.shape[1] * height / image.shape[0]), height))

binary_resized = cv2.resize(binary, (image_resized.shape[1], height))

dilated_resized = cv2.resize(dilated, (image_resized.shape[1], height))


# Step 5: Stack all images horizontally

combined = cv2.hconcat([image_resized, binary_resized, dilated_resized])
```

Step 6: Show the result

cv2.imshow('Original | Binary | Dilated', combined)

cv2.waitKey(0)

cv2.destroyAllWindows()