**% MATLAB code to generate skeleton mask of an object in an image**

clc; clear; close all;

% Read the input image

img = imread('image\_name.jpg'); %write the path of the image downloaded on your system

% Convert to grayscale if needed

if size(img, 3) == 3

img\_gray = rgb2gray(img);

else

img\_gray = img;

end

% Convert to binary image using Otsu's thresholding

threshold = graythresh(img\_gray);

bw = imbinarize(img\_gray, threshold);

% Perform morphological operations to remove noise

bw\_clean = bwareaopen(bw, 50); % Remove small objects

% Compute the skeleton of the binary image

skeleton = bwmorph(bw\_clean, 'skel', Inf);

% Display results

figure;

subplot(1,3,1), imshow(img), title('Original Image');

subplot(1,3,2), imshow(bw\_clean), title('Binary Mask');

subplot(1,3,3), imshow(skeleton), title('Skeleton Mask');

% Save the skeleton mask

imwrite(skeleton, 'skeleton\_mask.png');