clc;

clear;

img = imread('1.jpg');

gray\_img = rgb2gray(img);

binary\_img = im2bw(gray\_img, 0.3); **% Threshold=0.3, for n=0.3.**

imwrite(binary\_img, 'binary\_image.jpg');

img2 = imread('binary\_image.jpg');

num\_bands =100; % band number

band\_height = floor(size(img2, 1) / num\_bands); **% band height**

bands = cell(num\_bands, 1);

for i = 1:num\_bands

start\_row = (i - 1) \* band\_height + 1;

end\_row = i \* band\_height;

band = image(start\_row:end\_row, :, :);

imwrite(band, sprintf('band\_%d.jpg', i)); **% Save band image**

end

img3 = imread('band50.jpg');

stats = regionprops(img3, 'Centroid');

centroids = [stats.Centroid];

disp(centroids)