**CODING**

% Demo macro to very, very simple color detection in RGB color space

% by ImageAnalyst

clc;

close all;

% Read standard MATLAB demo image.

%rgbImage = imread('D:\1.jpg');

%rgbImage = imread('D:\2.jpg');

%rgbImage = imread('D:\3.jpg');

%rgbImage = imread('D:\4.jpg');

%rgbImage = imread('D:\5.jpg');

%rgbImage = imread('D:\6.jpg');

rgbImage = imread('D:\9.jpg');

%rgbImage = imread('D:\10.jpg');

%rgbImage = imread('D:\11.jpg');

%rgbImage = imread('D:\13.jpg');

%rgbImage = imread('D:\M1.jpg');

%rgbImage = imread('D:\M2.jpg');

%rgbImage = imread('D:\M3.jpg');

%rgbImage = imread('D:\M4.jpg');

%rgbImage = imread('D:\M5.jpg');

%rgbImage = imread('D:\M6.jpg');

%rgbImage = imread('D:\M7.jpg');

%rgbImage = imread('D:\M8.jpg');

%rgbImage = imread('D:\M9.jpg');

%rgbImage = imread('D:\M10.jpg');

%rgbImage = imread('D:\M11.jpg');

%rgbImage = imread('D:\M12.jpg');

%rgbImage = imread('D:\13.jpg');

%rgbImage = imread('D:\M14.jpg');

%rgbImage = imread('D:\M15.jpg');

%rgbImage = imread('D:\M16.jpg');

%rgbImage = imread('D:\M17.jpg');

%rgbImage = imread('D:\M18.jpg');

%rgbImage = imread('D:\M19.jpg');

%rgbImage = imread('D:\M20.jpg');

%rgbImage = imread('D:\M21.jpg');

%rgbImage = imread('D:\M22.jpg');

%rgbImage = imread('D:\M23.jpg');

%rgbImage = imread('D:\t3.jpg');

%rgbImage = imread('D:\t4.jpg');

%rgbImage = imread('D:\t5.jpg');

% Display the original image.

subplot(3, 4, 1);

imshow(rgbImage);

title('Original RGB Image');

% Maximize figure.

set(gcf, 'Position', get(0, 'ScreenSize'));

% Split the original image into color bands.

redBand = rgbImage(:,:, 1);

greenBand = rgbImage(:,:, 2);

blueBand = rgbImage(:,:, 3);

% Display them.

subplot(3, 4, 2);

imshow(redBand);

title('Red band');

subplot(3, 4, 3);

imshow(greenBand);

title('Green band');

subplot(3, 4, 4);

imshow(blueBand);

title('Blue Band');

% Threshold each color band.

redthreshold = 68;

greenThreshold = 70;

blueThreshold = 72;

redMask = (redBand > redthreshold);

greenMask = (greenBand < greenThreshold);

blueMask = (blueBand < blueThreshold);

% Display them.

subplot(3, 4, 6);

imshow(redMask, []);

title('Red Mask');

subplot(3, 4, 7);

imshow(greenMask, []);

title('Green Mask');

subplot(3, 4, 8);

imshow(blueMask, []);

title('Blue Mask');

% Combine the masks to find where all 3 are "true."

redObjectsMask = uint8(redMask & greenMask & blueMask);

subplot(3, 4, 9);

imshow(redObjectsMask, []);

title('Red Objects Mask');

maskedrgbImage = uint8(zeros(size(redObjectsMask))); % Initialize

maskedrgbImage(:,:,1) = rgbImage(:,:,1) .\* redObjectsMask;

maskedrgbImage(:,:,2) = rgbImage(:,:,2) .\* redObjectsMask;

maskedrgbImage(:,:,3) = rgbImage(:,:,3) .\* redObjectsMask;

subplot(3, 4, 10);

imshow(maskedrgbImage);

title('Masked Original Image');