MATLAB PROJECT

COURSE NO: MATH 4422

PROJECT NAME:

**Measuring the Diameter of an Object within an Image using Matlab image processing tool**

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**SECTION : B**

**LAB GROUP : B-2**

**Objective**

A MATLAB program that will segment an image in order to isolate the desired object from the background and Image Processing Toolbox of Matlab will be used to determine the objects diameter

MATLAB CODE :

close all

clear all

clc

%%

obj=imread('ball4.jpg');

figure(1)

imshow(obj)

imtool(obj)

%%

imgred=obj(:,:,1)

imggreen=obj(:,:,2)

imgblue=obj(:,:,3)

%%

figure(2)

subplot(2,2,1)

imshow(obj)

title('Original Color Plane')

figure(2)

subplot(2,2,2)

imshow(imgred)

title('Red Color Plane')

figure(2)

subplot(2,2,3)

imshow(imggreen)

title('Green Color Plane')

figure(2)

subplot(2,2,4)

imshow(imgblue)

title('Blue Color Plane')

%%

figure(3)

level=0.4

imbwblue=im2bw(imgblue,level)

imbwred=im2bw(imgred,level)

imbwgreen=im2bw(imggreen,level)

imgsum=(imgblue&imgred&imggreen)

imshow(imbwblue)

%%

imgcomp=imcomplement(imbwgreen)

imgfilled=imfill(imbwblue,'holes')

figure, imshow(imgfilled)

%%

imclear=imclearborder(imgfilled)

%imshow(imclear)

se=strel('disk',35)

open=imopen(imgfilled,se)

imshow(open)

%%

diameter=regionprops(open,'MajorAxisLength')

figure(4)

imshow(obj)

d=imdistline

Screenshots :



