**CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY AND RESERACH**

**COMPUTER SCIENCE & ENGINEERING**

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| **Student ID** | 18DCS007 | **Student Name** | RUDRA BARAD |
| **Subject Code** | CS371 | **Subject Name** | Digital image processing |
| **Date of exam** | 29/10/2020 |  |  |

**AIM:**

Read your own image. Convert it to grayscale. Program to filter an image using averaging low pass filter in the spatial domain and median filter.

**CODE:**

clc;

close all;

clear all;

I = rgb2gray(imread('bird.jpg'));

a=im2double(I);

figure,imshow(a),title('Normal');

[s1 s2]=size(a);

m=zeros(s1,s2);

for i=2:s1-1

for j=2:s2-1

temp=a(i-1:i+1,j-1:j+1);

m(i,j)=median(temp(:));

end

end

figure,imshow(m),title('Median');

N = input("Enter dimensions of mask : ");

LPF = 1/N^2\*ones(N,N);

n = floor(N/2);

low\_pass = I;

for i=1+n:size(I,1)-n

for j=1+n:size(I,2)-n

M = I(i-n:i+n,j-n:j+n);

low\_pass(i,j) = sum(sum(M.\*LPF));

end;

end;

subplot(1,2,1), imshow(I), title('ORIGINAL');

subplot(1,2,2), imshow(low\_pass), title('LOW PASS');

printf("\n\nID - 18DCS007\nNAME - RUDRA BARAD\n\n")

**OUTPUT:**







