Date : ____________

Ex.No 14   fuzzy Logic - Image Processing
Date :

Aim :

implement fuzzy Logic - Image processing

Code

```
import the Image
Irgb = imread ("peppers.png');
Irgb is a 384x
Igray = rgb2gray(Irgb
figure
image (Igray, 'CDataMapping'; 'Scaled')
Colormap('gray')
title ('Input Image in Grayscale')
```

```
I = im2double (Igray);
Gx = [-1 1];
Gy = Gx';
Ix = Conv2(I, Gx, 'Same');
Iy = Conv2(I, Gy, 'Same');

figure
image (Ix, 'CDataMapping', 'Scaled')
colormap('gray')
title('Ix')
```

Date :

```
fig
image(Iy,'CDataMapping','Scaled');
Colormap('gray')
title('Iy')
```

```
edgefis = mamfis('Name','edgeDetection');
edgefis = addInput(edgesfis,[-1 1],'Name','Ix');
edgesfis = addInput(edgesfis,[-1 1],'Name','Iy');

Sx = 0.1;

Sx = 0.1;
edgesfis = addmf(edgesfis,'Ix','gaussmf',[Sx 0],'Name','ze

wa = 0.1;
wb = 1;
wc = 1;
a = 0;
bb = 0;
bc = 0.7;
```

Date :

```
edgefis = addMF(edgefis,'Iout','trimf',
        [wa wb wc], 'Name','white');

Subplot(2,2,1)
Plotmf(edgefis,'input',1)
title('Ix')
Subplot(2,2,2)
plotmf(edgefis,'input',2)
title('Iy')
Subplot(2;2,[3 4])
Plotmf(edgefis,'output',1)
title('Iout')
```

```
r1 = "If Ix zero"
r2 = "If Ix anot zero
edges(edges[r1 r2]);
edgefis.rules
ans =    1x2 fisrule array with properties
```