Exp NO :- 10

Date

→ fuzzy logic - Image processing

Aim

→ to import RGB image and convert to Grayscale

Code:

2900
1700
1200

```
Irgb = imread('pepper.png');
Igray = rgb2gray(Irgb);
figure;
image(Igray, 'CDataMapping', 'scaled');
colormap('gray');
title('Input Image');
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');

figure;
image(Iy, 'CDataMapping', 'scaled');
```

```
Colormap ('gray')
title ('Iy');

edgeFIS = mamfis ('Name', 'edge Detection');
edgeFIS = addInput (edgeFIS, [-1, 1], 'Name', 'Ix');
edgeFIS = addInput (edgeFIS, [-1, 1], 'Name', 'Iy');
sx = 0.1; sy = 0.1;
edgeFIS = addMF (edgeFIS, 'Ix', 'gaussmf',
                 [sx 0], 'Name', 'zero');

figure;
subplot (2, 2, 1);
Colormap ('gray');
title ('Edge detection using fuzzy logic');
```

Result

Thus project of fuzzy logic - Image processing has been execute successfully