

## Practical 5

**Aim:** Write a program for image segmentation

- Local thresholding
- Global thresholding

### a) Local Thresholding

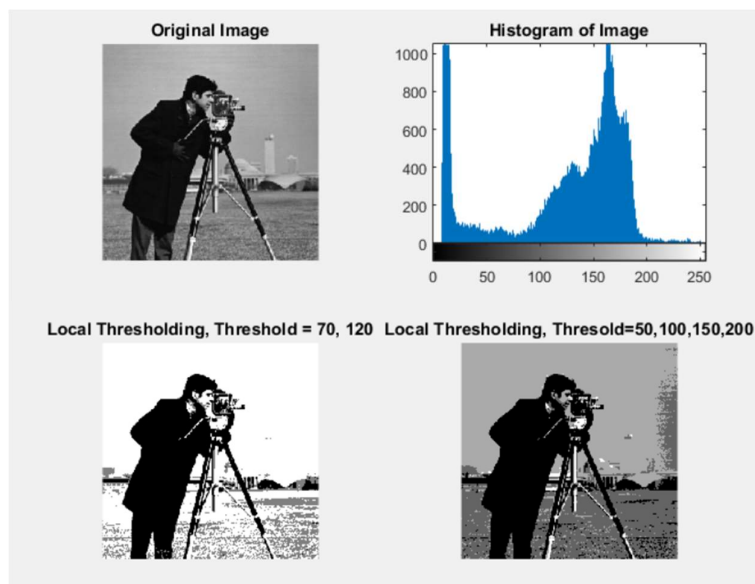
**Code:**

```

Editor - D:\Marwadi\SEM-5\IP-lab\Pr\local_thresholding.m
global_thresholding.m  local_thresholding.m  +
1  subplot(2,2,1);
2  A=imread('cameraman.tif');
3  imshow(A);
4  title('Original Image');
5
6  subplot(2,2,2);
7  imhist(A);
8  title('Histogram of Image');
9
10 subplot(2,2,3);
11 output1=A;
12 for i=1:size(A,1)
13     for j=1:size(A,2)
14         if A(i,j)>=120
15             output1(i,j)=255;
16         elseif A(i,j)>=70
17             output1(i,j)=128;
18         else
19             output1(i,j)=0;
20         end
21     end
22 end
23
24 end
25 imshow(output1);
26 title('Local Thresholding, Threshold = 70, 120');
27
28 subplot(2,2,4);
29 output1=A;
30 for i=1:size(A,1)
31     for j=1:size(A,2)
32         if A(i,j)>=200
33             output1(i,j)=255;
34         elseif A(i,j)>=150
35             output1(i,j)=170;
36         elseif A(i,j)>=100
37             output1(i,j)=100;
38         else
39             output1(i,j)=0;
40         end
41     end
42 end
43 imshow(output1);
44 title('Local Thresholding, Thresold=50,100,150,200');
45 fprintf('92000103073 Raj Chhadia');

```

**Output:**



## b) Global Thresholding

### Code:

```

Editor - D:\Marwadi\SEM-5\IP-lab\Prj\global_thresholding.m
global_thresholding.m x StandardAveragingFilter_2.m x +
1 subplot(2,2,1);
2 A=imread('cameraman.tif');
3 imshow(A);
4 title('Original Image');
5
6 subplot(2,2,2);
7 imhist(A);
8 title('Histogram of Image');
9
10 subplot(2,2,3);
11 output1=zeros(size(A));
12 for i=1:size(A,1)
13     for j=1:size(A,2)
14         if A(i,j)>=70
15             output1(i,j)=1;
16         else
17             output1(i,j)=0;
18         end
19     end
20
21 end
22 imshow(output1);
23 title('Global Thresholding, Threshold=70');
24
25 subplot(2,2,4);
26 output1=zeros(size(A));
27 for i=1:size(A,1)
28     for j=1:size(A,2)
29         if A(i,j)>=150
30             output1(i,j)=1;
31         else
32             output1(i,j)=0;
33         end
34     end
35 end
36 imshow(output1);
37 title('Global Thresholding, Threshold=150');
38 fprintf('92000103073 Raj Chhadia');

```

### Output:

