3. FINDING HISTOGRAM EQUALIZATION OF AN IMAGE

PROGRAM:

```
-->clc;
-->clear();
-->xdel(winsid());
-->a=imread('Mini.jpg');
--> [m n]=size(a);
// Histogram of Input Image
-->for i=1:256
 -->b(i)=length(find(a==(i-1)));
-->end
//Applying Histogram Equalization
-->pb=b/(m*n)
-->cmpb(1)=pb(1);
-->for i=2:256
 -->cmpb(i)=pb(i)+cmpb(i-1)
-->end
 -->ni=(cmpb*255);
 -->new=uint8(round(ni))
-->for i=1:m
 -->for j=1:n
 -->ind=double(a(i,j));
 -->hea(i,j)=new(ind+1);
 -->end
-->end
-->figure
-->imshow(a)
-->title('Original image','fontsize',4)
-->figure
-->plot2d3(b);
```

-->title('Histogram of Original image','fontsize',4)

-->figure

-->imshow(uint8(hea));

-->title('Equalized image','fontsize',4)

-->for i=1:256

 -->c(i)=length(find(hea==i-1))

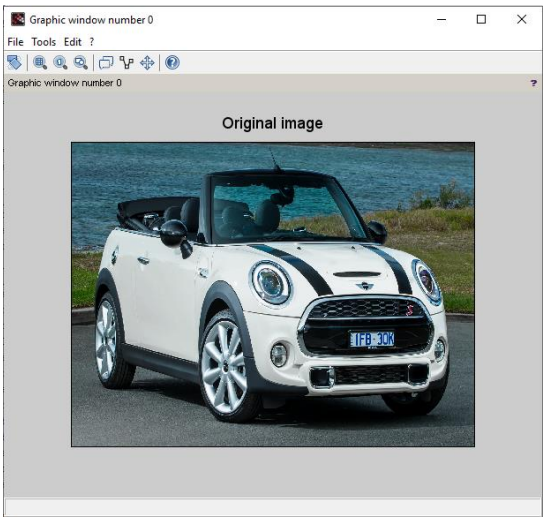
-->end

-->figure

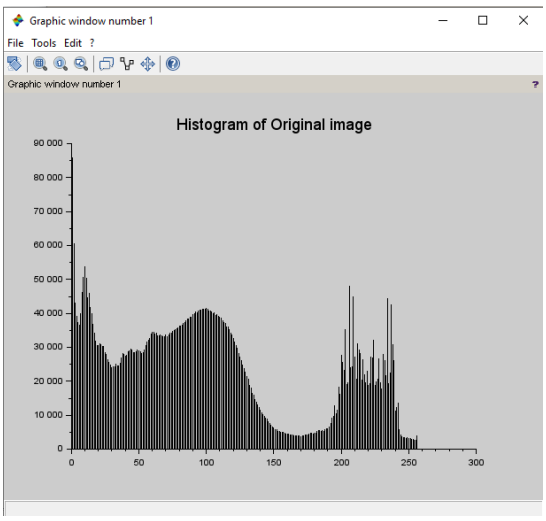
-->plot2d3(c)

-->title('Histogram representation of Equalized Image','fontsize',4)

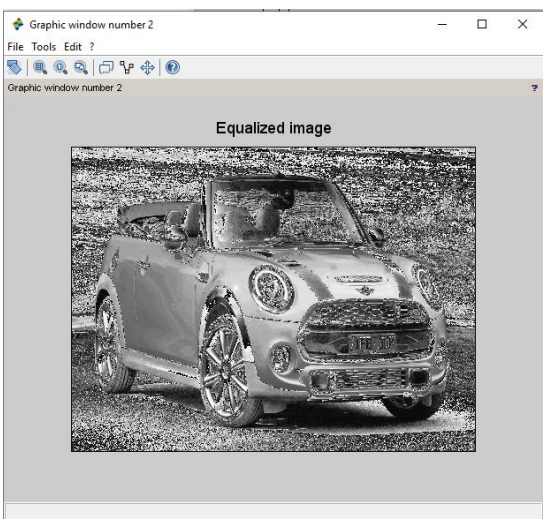
OUTPUT:



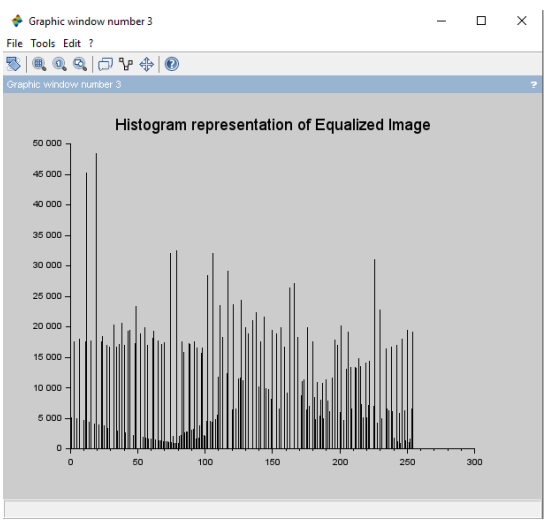
(Fig:1) Original Image



(Fig:2) Histogram of Original Image



(Fig:3) Equalized Image



(Fig:4) Histogram of Equalized Image