Nama :   Gregory Nield Apriant

NIM   :   200209502102

Kelas :   PTIK C 2020

<center>Tugas 3 Pengolahan Citra Digital</center>

1. Buat histogram citra 3 bit dibawah ini

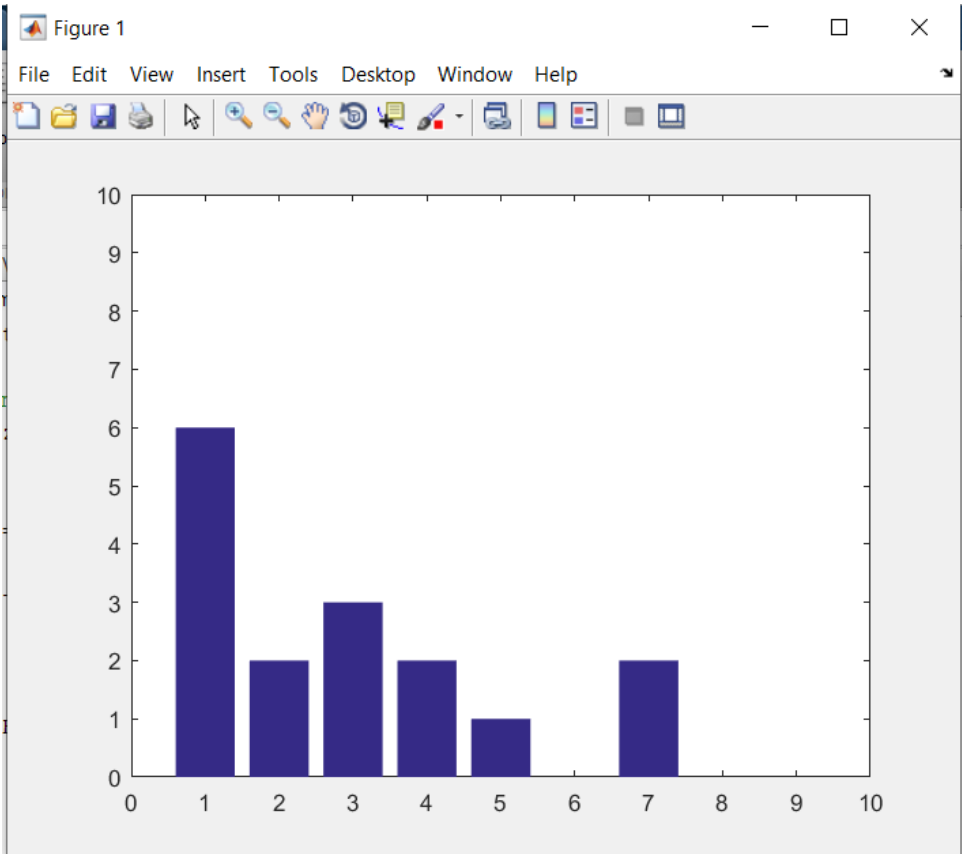| 1	3	4	5
1	2	1	1
3	3	4	7
2	1	1	7

Jawaban:

   ➢ Code Program:

```matlab
Citra_3_bit = [1 3 4 5; 1 2 1 1; 3 3 4 7; 2 1 1 7];

% Histogram
[n m] = size(Citra_3_bit);
H  = zeros(1,256);
for  x = 1 : n
    for y = 1: m
        ii = Citra_3_bit(x,y);
        H(ii+1) = H(ii+1) +1;
    end
end
figure(1)
bar(0:255,H);
axis([0 10 0 10])
```
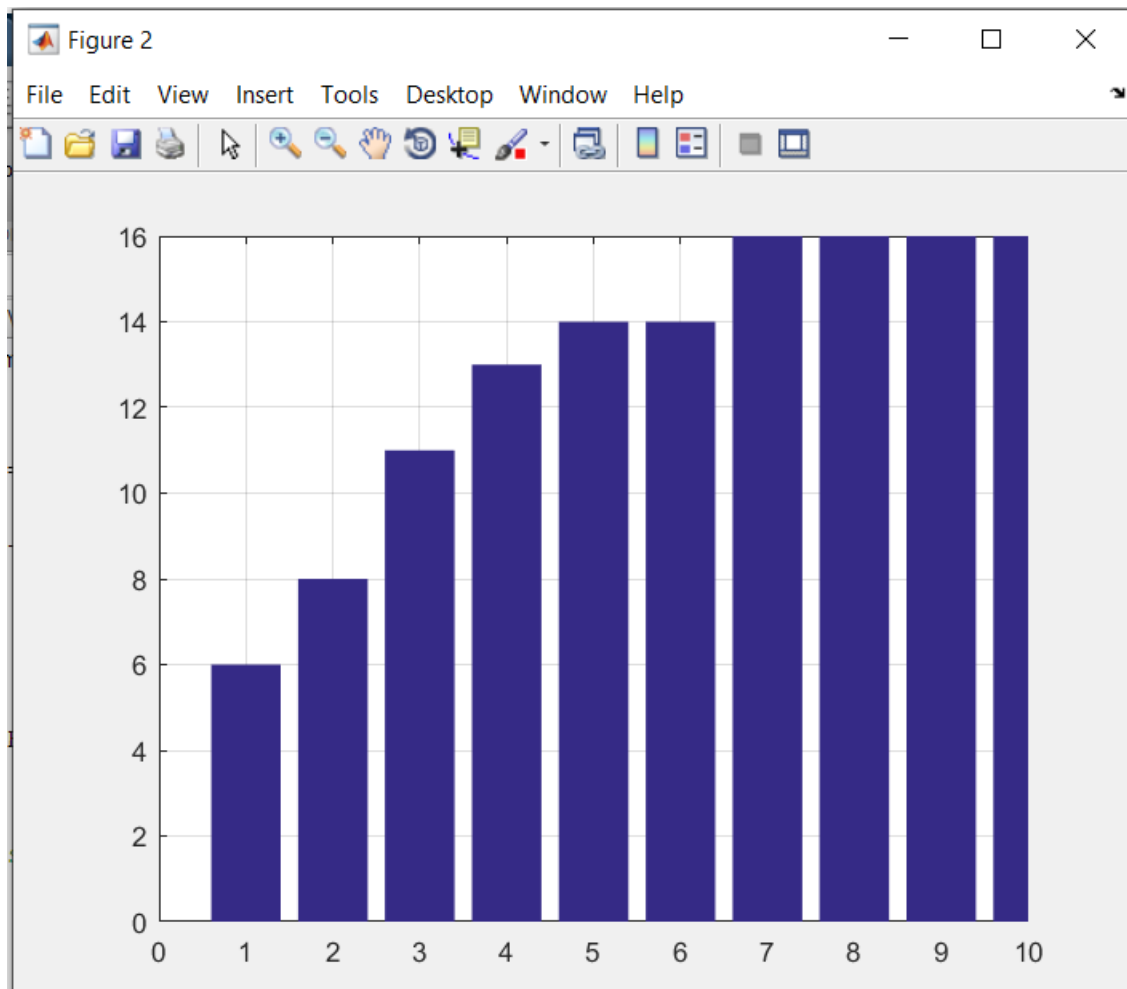
   ➢ Hasil:

2. Cari distribusi komulatifnya (grafiknya ditampilkan)

Jawaban:

> Code Program:

```matlab
% Distribusi Komulatif
for w = 1: 256
    c(w) = sum(H(1:w));
end
figure(2)
bar(0:255,c)
grid on
axis([0 10 0 m*n])
```

> Hasil:

3. Lakukan proses histogram equalisasi (tuliskan matriks citra hasil equalisasinya)

Jawaban:

➢ Code Program:

```
% Histogram Equalisasi
for k = 1 : 256
    wb(k) = round (c(k)*256/(m*n));
end
figure(3)
bar(0:255,wb)
axis([0 10 0 255])
grid on

c = Citra_3_bit;
[n m] = size(c);

for x = 1 : n
    for y = 1 : m
        ii = c(x,y);
        c(x,y) = wb(ii+1);
    end
end
```

➢ Hasil: