TUGAS 3

HISTOGRAM CITRA

Diajukan Untuk Memenuhi Tugas Mata Kuliah Pengolahan Citra Digital

Disusun Oleh :

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PENDIDIKAN TEKNIK INFORMATIKA DAN KOMPUTER

TEKNIK INFORMATIKA DAN KOMPUTER

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1. Buat histogram citra 3 bit dibawah ini

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

Jawab :

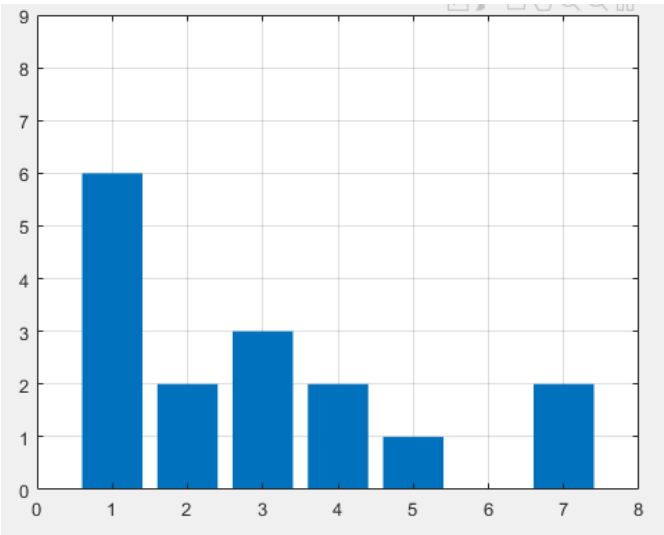
a. Code Program

Histogram.m

```
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 8 0 9])
grid on
```

b. Hasil



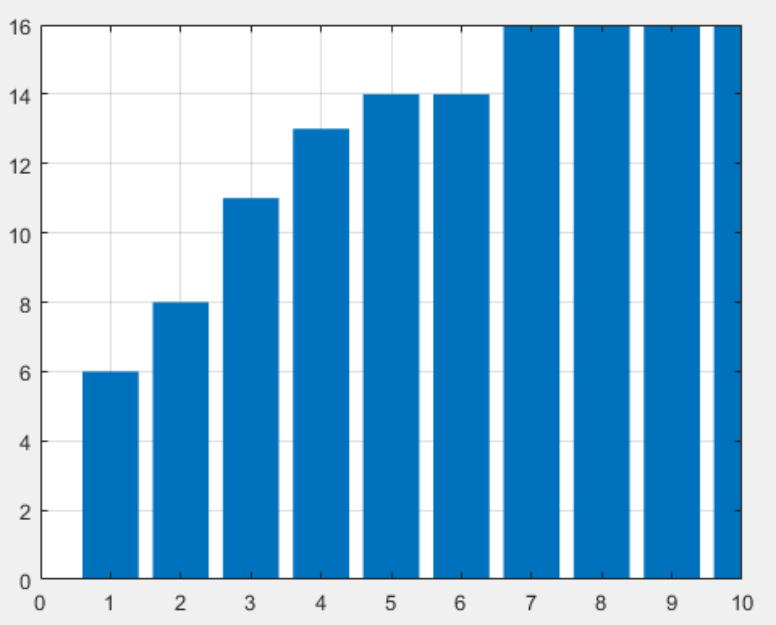
2. Cari distribusi komulatifnya (grafiknya ditampilkan)

Jawab :

a. Code Program

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

b. Hasil



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

Jawab :

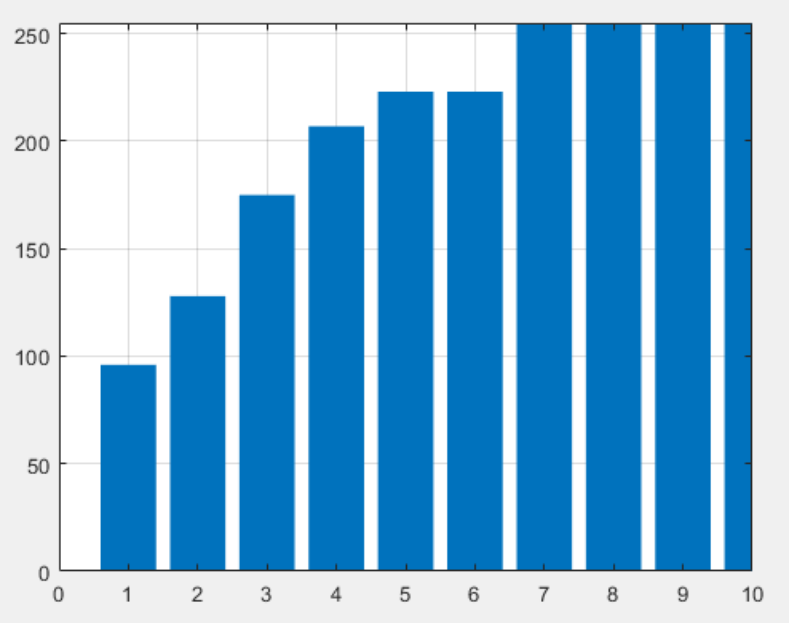
a. Code Program

```
%Histogram Equalitation
for k = 1 : 256
    wb(k) = round (c(k)*255/(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
```

b. Hasil



c. Matriks Citra Hasil Equalisasi

96	175	207	223
96	128	96	96
175	175	207	255
128	96	96	255

```
>> 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
>> c

c =

    96   175   207   223
    96   128    96    96
   175   175   207   255
   128    96    96   255
```