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Soal 2.

Diketahui : $T = 110$.

hitung konversi citra biner dg T yang sudah disebutkan.

213, 80, 155	29, 60, 122.	212, 9, 19.
211, 200, 155	153, 155, 159.	8, 8, 100.
213, 222, 12.	15, 25, 155.	193, 100, 123.

Jawab : mengambil intensitas dg rumus

$$I = (0,2989 \times R) + (0,5870 \times G) + (0,1140 \times B).$$

Jika $I \geq 110$ maka nilainya 1 (putih).

Jika $I \leq 110$ maka nilainya 0 (hitam).

1) Baris 1.

$$a. I = (0,2989 \times 213) + (0,5870 \times 80) + (0,1140 \times 155).$$

$$= 63,6657 + 46,96 + 17,67 = 128,30$$

$$128,30 \geq 110 = 1$$

$$b. I = (0,2989 \times 29) + (0,5870 \times 60) + (0,1140 \times 122).$$

$$= 7,1736 + 35,22 + 13,908 = 56,30$$

$$56,30 \leq 110 = 0$$

$$c. I = (0,2989 \times 212) + (0,5870 \times 9) + (0,1140 \times 19)$$

$$= 63,3668 + 5,283 + 2,166 = 70,82$$

$$70,82 \leq 110 = 0$$

2) Baris 2. (29, 60, 122).

$$a. I = 63,1579 + 117,4 + 17,67 = 198,23$$

$$198,23 \geq 110 = 1$$

b. 153, 155, 159.

$$I = 45,2217 + 90,965 + 17,556 = 153,76$$

$$153,76 \geq 110 = 1$$

c. $\frac{8}{15}, \frac{8}{25}, \frac{100}{155}$.

$$I = 2,2912 + 1,696 + 11,1 = 18,49$$

$$18,49 \leq 110 = 0$$

3. Bens. 3.

a) $(213, 222, 12)$.

$$I = 63,6657 + 130,319 + 1,368 = 195,35.$$

$$195,35 \geq 110 = \textcircled{1}$$

b) $(15, 25, 155)$.

$$I = 4,4835 + 14,675 + 17,67.$$

$$= 36,83 \leftarrow \text{110}$$

$$36,83 \leq 110 = \textcircled{0}$$

c) $(193, 100, 123)$.

$$I = 12,2237 + 88,7 + 14,022 = 114,97$$

$$114,97 \geq 110 = \textcircled{1}$$

Hasil Akhir. Setelah konversi biner.

$$\begin{bmatrix} 1 & 0 & 0 \\ 1 & 1 & 0 \\ 1 & 0 & 1 \end{bmatrix}$$