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"Pengolahan Citra"

Rumus Konversi Grayscale

$$\text{GRAY} = (0.2989 \times R) + (0.5870 \times G) + (0.1140 \times B)$$

1. Pixel (213, 80, 155)

$$= (0.2989 \times 213) + (0.5870 \times 80) + (0.1140 \times 155)$$

$$= 63.58 + 46.96 + 17.67$$

$$= 127.81 \geq 110 \rightarrow \text{Biner} = \underline{1}$$

2. Pixel (24, 60, 122)

$$= (0.2989 \times 24) + (0.5870 \times 60) + (0.1140 \times 122)$$

$$= 7.17 + 35.22 + 13.91$$

$$= 53.57 < 110 \rightarrow \text{Biner} = \underline{0}$$

3. Pixel (212, 9, 19)

$$= (0.2989 \times 212) + (0.5870 \times 9) + (0.1140 \times 19)$$

$$= 63.40 + 5.28 + 2.17$$

$$= 67.59 < 110 \rightarrow \text{Biner} = \underline{0}$$

4. Pixel (211, 200, 155)

$$= (0.2989 \times 211) + (0.5870 \times 200) + (0.1140 \times 155)$$

$$= 63.12 + 117.40 + 17.67$$

$$= 195.46 \geq 110 \rightarrow \text{Biner} = \underline{1}$$

5. Pixel (153, 155, 154)

$$= (0.2989 \times 153) + (0.5870 \times 155) + (0.1140 \times 154)$$

$$= 45.73 + 90.89 + 17.56$$

$$= 154.18 \geq 110 \rightarrow \text{Biner} = \underline{1}$$

6. Pixel (8, 8, 100)

$$= (0.2989 \times 8) + (0.5870 \times 8) + (0.1140 \times 100)$$

$$= 2.39 + 4.70 + 11.40$$

$$= 19.82 < 110 \rightarrow \text{Biner} = \underline{0}$$

7. Pixel (213, 222, 12)

$$= (0.2989 \times 213) + (0.5870 \times 222) + (0.1140 \times 12)$$

$$= 63.69 + 130.31 + 1.37$$

$$= 195.37 \geq 110 \rightarrow \text{Biner} = \underline{1}$$

8. Pixel (15, 25, 155)

$$= (0.2989 \times 15) + (0.5870 \times 25) + (0.1140 \times 155)$$

$$= 4.48 + 14.68 + 17.67$$

$$= 36.83 < 110 \rightarrow \text{Biner} = \underline{0}$$

9. Pixel (143, 100, 123)

$$= (0.2989 \times 143) + (0.5870 \times 100) + (0.1140 \times 123)$$

$$= 42.73 + 58.70 + 14.02$$

$$= 115.45 \geq 110 \rightarrow \text{Biner} = \underline{1}$$

1 0 0

1 1 0

1 0 1