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Kelas : 3A

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1, 1	1, 2	1, 3	⇒	213, 80, 155	24, 60, 122	212, 9, 19
2, 1	2, 2	2, 3		211, 200, 155	153, 155, 154	8, 8, 100
3, 1	3, 2	3, 3		213, 222, 12	15, 25, 155	143, 100, 123

Letak Matrik Pixel

Dimana $T = 110$

Color Pallette

Warna 0 : Hitam	RGB	0, 0, 0
Warna 1 : Merah	RGB	255, 0, 0
Warna 2 : Hijau	RGB	0, 255, 0
Warna 3 : Biru	RGB	0, 0, 255

Soal 1 : Hitung konversi Grayscale Setiap Pixel

$$\begin{aligned}P_{1,1} &= 213, 80, 155 \\&= 0,299 \times 213 + 0,587 \times 80 + 0,114 \times 155 \\&= 63,687 + 46,96 + 17,67 \\&= 128,317\end{aligned}$$

$$\begin{aligned}P_{1,2} &= 24, 60, 122 \\&= 0,299 \times 24 + 0,587 \times 60 + 0,114 \times 122 \\&= 7,176 + 35,22 + 13,908 \\&= 56,304\end{aligned}$$

$$\begin{aligned}P_{1,3} &= 212, 9, 19 \\&= 0,299 \times 212 + 0,587 \times 9 + 0,114 \times 19 \\&= 63,388 + 5,283 + 2,166 \\&= 70,837\end{aligned}$$

$$\begin{aligned}P_{2,1} &= 211, 200, 155 \\&= 0,299 \times 211 + 0,587 \times 200 + 0,114 \times 155 \\&= 63,089 + 117,4 + 17,67 \\&= 198,159\end{aligned}$$

$$\begin{aligned}P_{2,2} &= 153, 155, 154 \\&= 0,299 \times 153 + 0,587 \times 155 + 0,114 \times 154 \\&= 45,747 + 90,985 + 17,556 \\&= 154,289\end{aligned}$$

$$\begin{aligned}
 P_{2,3} &= 8,8,100 \\
 &= 0,299 \times 8 + 0,587 \times 8 + 0,114 \times 100 \\
 &= 2,392 + 4,696 + 11,4 \\
 &= 18,488
 \end{aligned}$$

$$\begin{aligned}
 P_{3,1} &= 213,222,12 \\
 &= 0,299 \times 213 + 0,587 \times 222 + 0,114 \times 12 \\
 &= 63,687 + 130,314 + 1,368 \\
 &= 195,369
 \end{aligned}$$

$$\begin{aligned}
 P_{3,2} &= 15,25,155 \\
 &= 0,299 \times 15 + 0,587 \times 25 + 0,114 \times 155 \\
 &= 4,485 + 14,675 + 17,67 \\
 &= 36,83
 \end{aligned}$$

$$\begin{aligned}
 P_{3,3} &= 143,100,123 \\
 &= 0,299 \times 143 + 0,587 \times 100 + 0,114 \times 123 \\
 &= 42,757 + 58,7 + 14,022 \\
 &= 115,479
 \end{aligned}$$