Soal 3

* Buat index setiap pixel berdasar color pallete

Color Pallete :

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)

213, 80, 155	24, 60, 122	212, 9, 19
211, 200, 155	153, 155, 154	8, 8, 100
213, 222, 12	15, 25, 155	193, 100, 123

Jarak = $\sqrt{(R_1-R_2)^2+(G_1-G_2)^2+(B_1-B_2)^2}$

* Pixel (213, 80, 155) :

$\sqrt{(213-0)^2+(80-0)^2+(155-0)^2} = \sqrt{45369+6400+24025} = \sqrt{75794} = 275,3$ | 0

$\sqrt{(213-255)^2+(80-0)^2+(155-0)^2} = \sqrt{1764+6400+24025} = \sqrt{32189} = 179,4$ | 1

$\sqrt{(213-0)^2+(80-255)^2+(155-0)^2} = \sqrt{45369+30625+24025} = \sqrt{100019} = 316,2$ | 2

$\sqrt{(213-0)^2+(80-0)^2+(155-255)^2} = \sqrt{45369+6400+10000} = \sqrt{61769} = 248,5$ | 3

* Pixel (24, 60, 122) :

$\sqrt{(24-0)^2+(60-0)^2+(122-0)^2} = \sqrt{576+3600+14884} = \sqrt{19060} = 138,1$ | 0

$\sqrt{(24-255)^2+(60-0)^2+(122-0)^2} = \sqrt{53361+3600+14884} = \sqrt{71845} = 268,1$ | 1

$\sqrt{(24-0)^2+(60-255)^2+(122-0)^2} = \sqrt{576+38025+14884} = \sqrt{53485} = 231,3$ | 2

$\sqrt{(24-0)^2+(60-0)^2+(122-255)^2} = \sqrt{576+3600+17689} = \sqrt{21865} = 147,9$ | 3

* Pixel (212, 9, 19) :

$\sqrt{(212-0)^2+(9-0)^2+(19-0)^2} = \sqrt{44944+81+361} = \sqrt{45386} = 213,0$ | 0

$\sqrt{(212-255)^2+(9-0)^2+(19-0)^2} = \sqrt{1849+81+361} = \sqrt{2291} = 47,9$ | 1

$\sqrt{(212-0)^2+(9-255)^2+(19-0)^2} = \sqrt{44944+60516+361} = \sqrt{105821} = 325,3$ | 2

$\sqrt{(212-0)^2+(9-0)^2+(19-255)^2} = \sqrt{44944+81+55696} = \sqrt{100721} = 317,3$ | 3

* Pixel (211, 200, 155):

$\sqrt{(211-0)^2+(200-0)^2+(155-0)^2} = \sqrt{49521+40000+24025} = \sqrt{113546} = 329,6$ | 0

$\sqrt{(211-255)^2+(200-0)^2+(155-0)^2} = \sqrt{1936+40000+24025} = \sqrt{65961} = 256,9$ | 1

$\sqrt{(211-0)^2+(200-255)^2+(155-0)^2} = \sqrt{49521+3025+24025} = \sqrt{76571} = 267,6$ | 2

$\sqrt{(211-0)^2+(200-0)^2+(155-255)^2} = \sqrt{49521+40000+10000} = \sqrt{99521} = 307,5$ | 3

* Pixel (153, 155, 154):

$\sqrt{(153-0)^2+(155-0)^2+(154-0)^2} = \sqrt{23409+24025+23716} = \sqrt{71150} = 266,9$ | 0

$\sqrt{(153-255)^2+(155-0)^2+(154-0)^2} = \sqrt{10404+24025+23716} = \sqrt{58145} = 241,2$ | 1

$\sqrt{(153-0)^2+(155-255)^2+(154-0)^2} = \sqrt{23409+10000+23716} = \sqrt{57125} = 239,0$ | 2

$\sqrt{(153-0)^2+(155-0)^2+(154-255)^2} = \sqrt{23409+24025+10201} = \sqrt{57635} = 240,1$ | 3

* Pixel (8, 8, 100):

$\sqrt{(8-0)^2+(8-0)^2+(100-0)^2} = \sqrt{64+64+10000} = \sqrt{10128} = 100,6$ | 0

$\sqrt{(8-255)^2+(8-0)^2+(100-0)^2} = \sqrt{61009+64+10000} = \sqrt{71073} = 266,8$ | 1

$\sqrt{(8-0)^2+(8-255)^2+(100-0)^2} = \sqrt{64+61009+10000} = \sqrt{71073} = 266,8$ | 2

$\sqrt{(8-0)^2+(8-0)^2+(100-255)^2} = \sqrt{64+64+24025} = \sqrt{24153} = 155,4$ | 3

* Pixel (213, 222, 12):

$\sqrt{(213-0)^2+(222-0)^2+(12-0)^2} = \sqrt{45369+49284+144} = \sqrt{94797} = 308,0$ | 0

$\sqrt{(213-255)^2+(222-0)^2+(12-0)^2} = \sqrt{1764+49284+144} = \sqrt{51192} = 226,3$ | 1

$\sqrt{(213-0)^2+(222-255)^2+(12-0)^2} = \sqrt{45369+1089+144} = \sqrt{46602} = 215,8$ | 2

$\sqrt{(213-0)^2+(222-0)^2+(12-255)^2} = \sqrt{45369+49284+59049} = \sqrt{153702} = 392,1$ | 3

* Pixel (15, 25, 155):

$\sqrt{(15-0)^2+(25-0)^2+(155-0)^2} = \sqrt{225+625+24025} = \sqrt{24875} = 157,8$ | 0

$\sqrt{(15-255)^2+(25-0)^2+(155-0)^2} = \sqrt{57600+625+24025} = \sqrt{82250} = 286,8$ | 1

$\sqrt{(15-0)^2+(25-255)^2+(155-0)^2} = \sqrt{225+52900+24025} = \sqrt{77150} = 277,8$ | 2

$\sqrt{(15-0)^2+(25-0)^2+(155-255)^2} = \sqrt{225+625+10000} = \sqrt{10850} = 104,2$ | 3

* Pixel (143, 100, 123)

$\sqrt{(143-0)^2+(100-0)^2+(123-0)^2} = \sqrt{20449+10000+15129} = \sqrt{45578} = 213,5$ | 0

$\sqrt{(143-255)^2+(100-0)^2+(123-0)^2} = \sqrt{12544+10000+15129} = \sqrt{37673} = 194,1$ | 1

$\sqrt{(143-0)^2+(100-255)^2+(123-0)^2} = \sqrt{20449+24025+15129} = \sqrt{59603} = 244,2$ | 2

$\sqrt{(143-0)^2+(100-0)^2+(123-255)^2} = \sqrt{20449+10000+17424} = \sqrt{47873} = 218,8$ | 3

hasil =

1	0	1
1	2	0
2	3	1