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LAMPIRAN

Lampiran 1

Tabel 4.1 Nilai atribut dataset citra apel *golden*.

No. Sampel	R	G	B	Recall
1	182,87	166,34	92,585	Yes
2	182,45	164,65	89,686	Yes
3	183,33	164,28	87,934	Yes
4	183,48	162,81	84,874	Yes
5	184,24	162,28	83,674	Yes
6	184,79	162,52	83,685	Yes
7	184,84	162,09	83,301	Yes
8	184,47	161,74	82,75	Yes
9	184,66	161,66	83,528	Yes
10	183,69	160,8	83,009	Yes
11	182,42	159,32	82,968	Yes
12	180,58	157,89	82,874	Yes
13	178,45	155,76	83,249	Yes
14	175,57	152,97	82,914	Yes
15	173,01	150,57	81,954	Yes
16	174,84	152,08	81,662	Yes
17	176,8	153,24	81,681	Yes
18	179,12	155,84	82,887	Yes
19	181,92	158,41	84,674	Yes
20	183,46	160,1	85,225	Yes
21	184,19	160,96	85,666	Yes
22	184,82	161,41	86,463	Yes
23	185,12	162,27	87,192	Yes
24	184,88	161,69	85,963	Yes
25	184,85	161,86	85,489	Yes
26	184,44	161,09	84,462	Yes
27	183,9	160,88	83,443	Yes
28	184,38	161,15	83,414	Yes
29	184,49	161,78	83,741	Yes
30	184,49	161,4	82,381	Yes
31	184,67	161,98	82,101	Yes
32	185,46	162,68	83,08	Yes
33	184,74	162,34	82,3	Yes
34	184,59	162,17	82,305	Yes
35	184,61	162,72	82,985	Yes
36	185,29	163,38	83,905	Yes
37	185,96	164,5	84,3	Yes
38	186,53	164,89	83,863	Yes
39	187,25	166,11	84,353	Yes
40	188	166,82	85,008	Yes
41	187,72	166,94	85,031	Yes
42	187,74	166,73	84,775	Yes
43	187,9	167,11	85,838	Yes
44	188,46	167,57	87,321	Yes
45	188,14	167,31	86,521	Yes
46	188,25	166,91	86,207	Yes
47	187,4	166,39	85,656	Yes
48	186,95	165,78	86,032	Yes
49	182,75	161,93	91,197	Yes
50	186,75	164,6	90,028	Yes
51	188,17	165,93	90,548	Yes
52	189,01	166,97	90,804	Yes
53	190,08	167,77	90,909	Yes
54	175,84	154,45	82,928	Yes
55	173,71	151,97	81,161	Yes
56	172,9	151,34	80,295	Yes
57	171,52	149,96	79,658	Yes
58	170,06	148,19	78,381	Yes
59	169,05	147,5	78,093	Yes
60	168,61	146,89	78,429	Yes
61	167,98	146,26	77,056	No
62	168,1	146,15	77,251	No
63	168,95	147,47	78,736	Yes
64	169,5	147,56	78,886	Yes
65	170,19	148,63	79,96	Yes
66	171,22	149,27	80,977	Yes
67	171,52	149,9	81,35	Yes
68	172,39	150,6	82,912	Yes
69	171,62	150,12	82,933	Yes
70	171,27	149,53	82,897	Yes
71	170,93	149,43	83,207	Yes
72	170,48	148,5	82,723	Yes
73	170,03	148,32	82,549	Yes
74	169,77	147,5	81,622	Yes
75	169,83	147,9	81,521	Yes
76	170,67	148,19	81,764	Yes
77	171,78	149,59	82,815	Yes
78	173,08	150,18	82,896	Yes
79	173,24	150,45	81,852	Yes
80	175,54	152,75	84,327	Yes
81	176,88	154,18	85,706	Yes
82	177,95	155,08	87,541	Yes
83	177,41	154,82	86,685	Yes
84	177,9	155,09	87,691	Yes
85	177,76	155,65	87,91	Yes
86	177,55	155,25	87,819	Yes
87	177,41	155,52	87,927	Yes
88	176,93	154,85	86,964	Yes
89	177,48	155,91	87,863	Yes
90	178	156,25	87,981	Yes
91	177,48	155,82	86,246	Yes
92	178,54	156,78	86,859	Yes
93	179,23	157,64	86,815	Yes
94	180,74	158,85	87,653	Yes
95	182,15	160,62	88,409	Yes
96	183,02	160,97	87,672	Yes
97	184,33	162,48	88,206	Yes
98	185,96	163,75	89,326	Yes
99	187,02	164,74	89,728	Yes
100	187,37	165,45	90,307	Yes
101	188,72	181,08	102,63	Yes
102	189,11	181,43	102,26	Yes
103	188,87	181,35	101,8	Yes
104	188,46	181,09	101,47	Yes
105	187,56	180,4	100,96	Yes
106	191,3	183,68	102,45	Yes
107	191,06	183,6	103,13	Yes
108	191,02	183,5	103,67	Yes

109	190,75	183,22	103,69	Yes
110	190,14	182,52	102,62	Yes
111	190,16	182,76	103,15	Yes
112	190,81	183,23	104,5	Yes
113	190,7	183,27	104,15	Yes
114	191,03	183,34	105	Yes
115	190,89	183,3	105,25	Yes
116	190,28	182,57	104,8	Yes
117	189,95	182,43	105,64	Yes
118	189,8	182,13	106,61	Yes
119	189,49	182,09	107,18	Yes
120	189,91	182,4	108,2	Yes
121	189,57	182,28	107,72	Yes
122	189,77	182,36	107,63	Yes
123	189,24	181,99	106,8	Yes
124	189,23	181,9	106,42	Yes
125	189,04	181,85	105,74	Yes
126	189,73	182,42	106,44	Yes
127	190,29	183,24	107,27	Yes
128	190,21	183,06	107,61	Yes
129	189,42	182,56	106,54	Yes
130	189,59	182,52	106,54	Yes
131	189,84	182,93	106,92	Yes
132	189,8	182,73	106,29	Yes
133	189,69	182,88	105,96	Yes
134	189,35	182,19	104,57	Yes
135	189,02	182	103,52	Yes
136	189,54	182,21	103,51	Yes
137	190	182,73	103,99	Yes
138	191,22	183,57	105,11	Yes
139	191,64	184,25	105,52	Yes
140	191,83	184,05	105,33	Yes
141	191,26	183,69	104,88	Yes
142	191,59	183,77	106,03	Yes
143	191,19	183,48	105,23	Yes
144	191,23	183,2	105,38	Yes
145	190,53	182,58	103,88	Yes
146	190,33	182,39	104,06	Yes
147	189,67	182,07	103,78	Yes
148	188,83	181,07	102,46	Yes
149	188,61	181,05	102,4	Yes
150	188,53	180,8	101,27	Yes
151	184,12	175,61	99,968	Yes
152	186,63	178,16	103,14	Yes
153	187	178,69	102,43	Yes
154	188,44	180,47	103,99	Yes
155	189,87	182,21	105,87	Yes
156	176,06	169,17	99,756	Yes
157	175,89	169,14	99,295	Yes
158	176,45	169,42	99,749	Yes
159	177,62	170,98	102,53	Yes
160	178,13	171,3	103,84	Yes
161	179,57	173	107,34	Yes
162	179,96	173,31	109	Yes
163	178,96	172,42	107,12	Yes
164	178,47	171,56	106,15	Yes
165	176,94	170,07	103,61	Yes
166	176,26	168,83	101,77	Yes
167	175,46	168,36	100,84	Yes
168	176,58	169,18	102,11	Yes
169	177,35	170,06	102,46	Yes

170	178,44	170,98	102,9	Yes
171	180,17	172,95	104,51	Yes
172	182,56	175,15	106,33	Yes
173	184,72	177,24	107,17	Yes
174	188,08	180,4	109,83	Yes
175	190,75	183,33	112,4	Yes
176	193,26	185,7	114,18	Yes
177	194,76	187,25	115,25	Yes
178	195,19	187,49	114,98	Yes
179	193,95	186,34	114,44	Yes
180	193,21	185,34	114,1	Yes
181	192,31	184,66	112,86	Yes
182	190,97	183,04	110,91	Yes
183	190,02	182,23	109,34	Yes
184	189,09	181,06	107,71	Yes
185	188,01	180,08	105,99	Yes
186	186,69	178,44	103,47	Yes
187	185,53	177,33	102,15	Yes
188	184,76	176,11	100,74	Yes
189	183,51	174,78	99,31	Yes
190	182,38	173,28	98,55	Yes
191	181,44	172,4	97,603	Yes
192	181,02	171,9	97,539	Yes
193	179,83	170,23	95,799	Yes
194	178,77	169,39	94,763	No
195	178,67	168,92	94,239	No
196	178,74	169,49	94,768	No
197	180,36	170,94	96,986	Yes
198	181,22	172,03	97,605	Yes
199	183,25	174,17	99,89	Yes
200	184,34	175,5	100,14	Yes
201	150,97	146,82	82,729	Yes
202	146,94	142,85	79,365	Yes
203	145,39	141,1	77,808	Yes
204	143,82	139,73	76,078	Yes
205	142,81	138,29	74,711	Yes
206	153,05	145,38	82,569	Yes
207	153,09	145,53	82,543	Yes
208	153,16	145,33	83,286	Yes
209	153,81	146,11	85,096	Yes
210	152,24	144,32	83,236	Yes
211	151,76	143,83	83,535	Yes
212	151,86	143,66	83,644	Yes
213	150,38	142,15	81,13	Yes
214	152,22	143,87	84,116	Yes
215	151,3	143,17	82,41	Yes
216	152,51	144,04	83,404	Yes
217	152,54	144,26	82,64	Yes
218	154,45	145,9	84,517	Yes
219	155,92	147,64	86,158	Yes
220	158,04	149,49	88,3	Yes
221	159,07	150,62	88,689	Yes
222	159,27	150,71	88,922	Yes
223	160,54	152,05	89,901	Yes
224	162,15	153,85	91,431	Yes
225	163,73	155,29	92,498	No
226	165,32	157,05	94,073	No
227	166,31	157,85	94,896	No
228	166,31	158,07	94,72	No
229	166,07	157,73	94,575	No
230	165,45	157,53	94,526	No

231	164,93	156,73	94,387	No
232	164,29	156,54	94,604	No
233	162,97	155,13	93,067	No
234	161,86	154,25	91,784	Yes
235	160,76	153,17	90,698	Yes
236	158,96	151,6	88,584	Yes
237	157,94	150,75	87,487	Yes
238	158,03	151,25	88,632	Yes
239	157,08	150,31	87,374	Yes
240	156,14	149,83	85,823	Yes
241	156,71	150,54	86,814	Yes
242	155,42	149,67	84,51	Yes
243	156,51	150,69	85,995	Yes
244	155,93	150,58	85,369	Yes
245	155,34	150,09	84,731	Yes
246	154,8	150	84,493	Yes
247	154,42	149,53	84,284	Yes
248	153,26	148,54	82,976	Yes
249	142,67	137,49	75,823	Yes
250	145,51	139,85	76,957	Yes
251	146,9	140,8	78,369	Yes
252	147,31	141,38	78,874	Yes
253	148,99	142,53	81,603	Yes
254	156,03	147,81	85,725	Yes
255	158,68	150,16	87,775	Yes
256	160,02	151,69	89,197	Yes
257	161,39	152,77	90,203	Yes
258	161,21	152,61	89,189	Yes
259	162,04	153,2	90,802	Yes
260	160,27	151,54	90,351	Yes
261	158,05	149,24	90,269	Yes
262	154,26	145,54	87,501	Yes
263	151,12	142,32	85,72	Yes
264	147,95	139,24	82,965	Yes
265	145,43	136,44	79,915	Yes
266	144,92	136,2	79,428	Yes

267	144,37	135,62	77,357	Yes
268	145,14	136,58	76,618	Yes
269	146,14	137,56	76,014	Yes
270	146,62	138,19	76,085	Yes
271	147,72	139,63	76,55	Yes
272	149,37	141,2	77,255	Yes
273	150,73	142,93	77,884	Yes
274	152,38	144,49	79,353	Yes
275	153,34	145,78	80,282	Yes
276	154,08	146,42	81,287	Yes
277	154,14	146,87	81,857	Yes
278	154,78	147,53	83,442	Yes
279	153,14	146,37	81,977	Yes
280	151,7	145,15	80,748	Yes
281	149,75	143,59	79,198	Yes
282	147,59	141,49	76,814	Yes
283	146,78	141,35	76,918	Yes
284	146,31	140,8	77,118	Yes
285	144,9	139,96	75,947	Yes
286	144,5	139,51	75,595	Yes
287	143,98	138,97	74,82	Yes
288	143,48	138,78	74,274	Yes
289	144,18	139,51	74,976	Yes
290	143,93	139,46	74,075	Yes
291	145,41	140,99	75,652	Yes
292	145,69	141,23	75,383	Yes
293	146,47	141,87	77,387	Yes
294	144,71	140,19	76,226	Yes
295	143,45	138,78	75,977	Yes
296	141,84	137,16	75,021	Yes
297	140,94	135,86	73,997	Yes
298	140,91	135,9	73,962	Yes
299	142,87	137,5	76,191	Yes
300	143,81	138,26	76,34	Yes

Lampiran 2.

Tabel 4.3 Pengelompokan akhir data terhadap setiap variasi.

No.	R	G	B	Cluster terhadap variasi						
				A	B	C	D	E	F	G
1	182,87	166,34	92,585	1	1	3	1	1	1	1
2	182,45	164,65	89,686	1	1	3	1	1	1	1
3	183,33	164,28	87,934	1	1	3	1	1	1	1
4	183,48	162,81	84,874	1	1	3	1	1	1	1
5	184,24	162,28	83,674	1	1	3	1	1	1	1
6	184,79	162,52	83,685	1	1	3	1	1	1	1
7	184,84	162,09	83,301	1	1	3	1	1	1	1
8	184,47	161,74	82,75	1	1	3	1	1	1	1
9	184,66	161,66	83,528	1	1	3	1	1	1	1
10	183,69	160,8	83,009	1	1	3	1	1	1	1
11	182,42	159,32	82,968	1	1	3	1	1	1	1
12	180,58	157,89	82,874	1	1	3	1	1	1	1
13	178,45	155,76	83,249	1	1	2	1	1	1	1
14	175,57	152,97	82,914	1	2	2	1	1	1	1
15	173,01	150,57	81,954	1	2	2	1	1	1	1
16	174,84	152,08	81,662	1	2	2	1	1	1	1
17	176,8	153,24	81,681	1	2	2	1	1	1	1
18	179,12	155,84	82,887	1	1	2	1	1	1	1
19	181,92	158,41	84,674	1	1	3	1	1	1	1

20	183,46	160,1	85,225	1	1	3	1	1	1	1
21	184,19	160,96	85,666	1	1	3	1	1	1	1
22	184,82	161,41	86,463	1	1	3	1	1	1	1
23	185,12	162,27	87,192	1	1	3	1	1	1	1
24	184,88	161,69	85,963	1	1	3	1	1	1	1
25	184,85	161,86	85,489	1	1	3	1	1	1	1
26	184,44	161,09	84,462	1	1	3	1	1	1	1
27	183,9	160,88	83,443	1	1	3	1	1	1	1
28	184,38	161,15	83,414	1	1	3	1	1	1	1
29	184,49	161,78	83,741	1	1	3	1	1	1	1
30	184,49	161,4	82,381	1	1	3	1	1	1	1
31	184,67	161,98	82,101	1	1	3	1	1	1	1
32	185,46	162,68	83,08	1	1	3	1	1	1	1
33	184,74	162,34	82,3	1	1	3	1	1	1	1
34	184,59	162,17	82,305	1	1	3	1	1	1	1
35	184,61	162,72	82,985	1	1	3	1	1	1	1
36	185,29	163,38	83,905	1	1	3	1	1	1	1
37	185,96	164,5	84,3	1	1	3	1	1	1	1
38	186,53	164,89	83,863	1	1	3	1	1	1	1
39	187,25	166,11	84,353	1	1	3	1	1	1	1
40	188	166,82	85,008	1	1	3	1	1	1	1

41	187,72	166,94	85,031	1	1	3	1	1	1	1
42	187,74	166,73	84,775	1	1	3	1	1	1	1
43	187,9	167,11	85,838	1	1	3	1	1	1	1
44	188,46	167,57	87,321	1	1	3	1	1	1	1
45	188,14	167,31	86,521	1	1	3	1	1	1	1
46	188,25	166,91	86,207	1	1	3	1	1	1	1
47	187,4	166,39	85,656	1	1	3	1	1	1	1
48	186,95	165,78	86,032	1	1	3	1	1	1	1
49	182,75	161,93	91,197	1	1	3	1	1	1	1
50	186,75	164,6	90,028	1	1	3	1	1	1	1
51	188,17	165,93	90,548	1	1	3	1	1	1	1
52	189,01	166,97	90,804	1	1	3	1	1	1	1
53	190,08	167,77	90,909	1	1	3	1	1	1	1
54	175,84	154,45	82,928	1	2	2	1	1	1	1
55	173,71	151,97	81,161	1	2	2	1	1	1	1
56	172,9	151,34	80,295	1	2	2	1	1	1	1
57	171,52	149,96	79,658	1	2	2	1	1	1	1
58	170,06	148,19	78,381	1	2	2	1	1	1	1
59	169,05	147,5	78,093	1	2	2	1	1	1	1
60	168,61	146,89	78,429	1	2	2	1	1	1	1
61	167,98	146,26	77,056	3	2	2	3	3	3	2
62	168,1	146,15	77,251	3	2	2	3	3	3	2
63	168,95	147,47	78,736	1	2	2	1	1	1	1
64	169,5	147,56	78,886	1	2	2	1	1	1	1
65	170,19	148,63	79,96	1	2	2	1	1	1	1
66	171,22	149,27	80,977	1	2	2	1	1	1	1
67	171,52	149,9	81,35	1	2	2	1	1	1	1
68	172,39	150,6	82,912	1	2	2	1	1	1	1
69	171,62	150,12	82,933	1	2	2	1	1	1	1
70	171,27	149,53	82,897	1	2	2	1	1	1	1
71	170,93	149,43	83,207	1	2	2	1	1	1	1
72	170,48	148,5	82,723	1	2	2	1	1	1	1
73	170,03	148,32	82,549	1	2	2	1	1	1	1
74	169,77	147,5	81,622	1	2	2	1	1	1	1
75	169,83	147,9	81,521	1	2	2	1	1	1	1
76	170,67	148,19	81,764	1	2	2	1	1	1	1
77	171,78	149,59	82,815	1	2	2	1	1	1	1
78	173,08	150,18	82,896	1	2	2	1	1	1	1
79	173,24	150,45	81,852	1	2	2	1	1	1	1
80	175,54	152,75	84,327	1	2	2	1	1	1	1
81	176,88	154,18	85,706	1	2	2	1	1	1	1
82	177,95	155,08	87,541	1	1	2	1	1	1	1
83	177,41	154,82	86,685	1	1	2	1	1	1	1
84	177,9	155,09	87,691	1	1	2	1	1	1	1
85	177,76	155,65	87,91	1	1	2	1	1	1	1
86	177,55	155,25	87,819	1	1	2	1	1	1	1
87	177,41	155,52	87,927	1	1	2	1	1	1	1
88	176,93	154,85	86,964	1	1	2	1	1	1	1
89	177,48	155,91	87,863	1	1	2	1	1	1	1
90	178	156,25	87,981	1	1	3	1	1	1	1
91	177,48	155,82	86,246	1	1	2	1	1	1	1
92	178,54	156,78	86,859	1	1	3	1	1	1	1
93	179,23	157,64	86,815	1	1	3	1	1	1	1
94	180,74	158,85	87,653	1	1	3	1	1	1	1
95	182,15	160,62	88,409	1	1	3	1	1	1	1
96	183,02	160,97	87,672	1	1	3	1	1	1	1
97	184,33	162,48	88,206	1	1	3	1	1	1	1
98	185,96	163,75	89,326	1	1	3	1	1	1	1
99	187,02	164,74	89,728	1	1	3	1	1	1	1
100	187,37	165,45	90,307	1	1	3	1	1	1	1
101	188,72	181,08	102,63	2	1	3	2	2	2	3

102	189,11	181,43	102,26	2	1	3	2	2	2	3
103	188,87	181,35	101,8	2	1	3	2	2	2	3
104	188,46	181,09	101,47	2	1	3	2	2	2	3
105	187,56	180,4	100,96	2	1	3	2	2	2	3
106	191,3	183,68	102,45	2	1	3	2	2	2	3
107	191,06	183,6	103,13	2	1	3	2	2	2	3
108	191,02	183,5	103,67	2	1	3	2	2	2	3
109	190,75	183,22	103,69	2	1	3	2	2	2	3
110	190,14	182,52	102,62	2	1	3	2	2	2	3
111	190,16	182,76	103,15	2	1	3	2	2	2	3
112	190,81	183,23	104,5	2	1	3	2	2	2	3
113	190,7	183,27	104,15	2	1	3	2	2	2	3
114	191,03	183,34	105	2	1	3	2	2	2	3
115	190,89	183,3	105,25	2	1	3	2	2	2	3
116	190,28	182,57	104,8	2	1	3	2	2	2	3
117	189,95	182,43	105,64	2	1	3	2	2	2	3
118	189,8	182,13	106,61	2	1	3	2	2	2	3
119	189,49	182,09	107,18	2	1	3	2	2	2	3
120	189,91	182,4	108,2	2	1	3	2	2	2	3
121	189,57	182,28	107,72	2	1	3	2	2	2	3
122	189,77	182,36	107,63	2	1	3	2	2	2	3
123	189,24	181,99	106,8	2	1	3	2	2	2	3
124	189,23	181,9	106,42	2	1	3	2	2	2	3
125	189,04	181,85	105,74	2	1	3	2	2	2	3
126	189,73	182,42	106,44	2	1	3	2	2	2	3
127	190,29	183,24	107,27	2	1	3	2	2	2	3
128	190,21	183,06	107,61	2	1	3	2	2	2	3
129	189,42	182,56	106,54	2	1	3	2	2	2	3
130	189,59	182,52	106,54	2	1	3	2	2	2	3
131	189,84	182,93	106,92	2	1	3	2	2	2	3
132	189,8	182,73	106,29	2	1	3	2	2	2	3
133	189,69	182,88	105,96	2	1	3	2	2	2	3
134	189,35	182,19	104,57	2	1	3	2	2	2	3
135	189,02	182	103,52	2	1	3	2	2	2	3
136	189,54	182,21	103,51	2	1	3	2	2	2	3
137	190	182,73	103,99	2	1	3	2	2	2	3
138	191,22	183,57	105,11	2	1	3	2	2	2	3
139	191,64	184,25	105,52	2	1	3	2	2	2	3
140	191,83	184,05	105,33	2	1	3	2	2	2	3
141	191,26	183,69	104,88	2	1	3	2	2	2	3
142	191,59	183,77	106,03	2	1	3	2	2	2	3
143	191,19	183,48	105,23	2	1	3	2	2	2	3
144	191,23	183,2	105,38	2	1	3	2	2	2	3
145	190,53	182,58	103,88	2	1	3	2	2	2	3
146	190,33	182,39	104,06	2	1	3	2	2	2	3
147	189,67	182,07	103,78	2	1	3	2	2	2	3
148	188,83	181,07	102,46	2	1	3	2	2	2	3
149	188,61	181,05	102,4	2	1	3	2	2	2	3
150	188,53	180,8	101,27	2	1	3	2	2	2	3
151	184,12	175,61	99,968	2	1	3	2	2	2	3
152	186,63	178,16	103,14	2	1	3	2	2	2	3
153	187	178,69	102,43	2	1	3	2	2	2	3
154	188,44	180,47	103,99	2	1	3	2	2	2	3
155	189,87	182,21	105,87	2	1	3	2	2	2	3
156	176,06	169,17	99,756	2	1	3	2	2	2	3
157	175,89	169,14	99,295	2	1	3	2	2	2	3
158	176,45	169,42	99,749	2	1	3	2	2	2	3
159	177,62	170,98	102,53	2	1	3	2	2	2	3
160	178,13	171,3	103,84	2	1	3	2	2	2	3
161	179,57	173	107,34	2	1	3	2	2	2	3
162	179,96	173,31	109	2	1	3	2	2	2	3

163	178,96	172,42	107,12	2	1	3	2	2	2	3
164	178,47	171,56	106,15	2	1	3	2	2	2	3
165	176,94	170,07	103,61	2	1	3	2	2	2	3
166	176,26	168,83	101,77	2	1	3	2	2	2	3
167	175,46	168,36	100,84	2	1	3	2	2	2	3
168	176,58	169,18	102,11	2	1	3	2	2	2	3
169	177,35	170,06	102,46	2	1	3	2	2	2	3
170	178,44	170,98	102,9	2	1	3	2	2	2	3
171	180,17	172,95	104,51	2	1	3	2	2	2	3
172	182,56	175,15	106,33	2	1	3	2	2	2	3
173	184,72	177,24	107,17	2	1	3	2	2	2	3
174	188,08	180,4	109,83	2	1	3	2	2	2	3
175	190,75	183,33	112,4	2	1	3	2	2	2	3
176	193,26	185,7	114,18	2	1	3	2	2	2	3
177	194,76	187,25	115,25	2	1	3	2	2	2	3
178	195,19	187,49	114,98	2	1	3	2	2	2	3
179	193,95	186,34	114,44	2	1	3	2	2	2	3
180	193,21	185,34	114,1	2	1	3	2	2	2	3
181	192,31	184,66	112,86	2	1	3	2	2	2	3
182	190,97	183,04	110,91	2	1	3	2	2	2	3
183	190,02	182,23	109,34	2	1	3	2	2	2	3
184	189,09	181,06	107,71	2	1	3	2	2	2	3
185	188,01	180,08	105,99	2	1	3	2	2	2	3
186	186,69	178,44	103,47	2	1	3	2	2	2	3
187	185,53	177,33	102,15	2	1	3	2	2	2	3
188	184,76	176,11	100,74	2	1	3	2	2	2	3
189	183,51	174,78	99,31	2	1	3	2	2	2	3
190	182,38	173,28	98,55	2	1	3	2	2	2	3
191	181,44	172,4	97,603	2	1	3	2	2	2	3
192	181,02	171,9	97,539	2	1	3	2	2	2	3
193	179,83	170,23	95,799	2	1	3	2	2	2	3
194	178,77	169,39	94,763	1	1	3	1	1	1	1
195	178,67	168,92	94,239	1	1	3	1	1	1	1
196	178,74	169,49	94,768	1	1	3	1	1	1	1
197	180,36	170,94	96,986	2	1	3	2	2	2	3
198	181,22	172,03	97,605	2	1	3	2	2	2	3
199	183,25	174,17	99,89	2	1	3	2	2	2	3
200	184,34	175,5	100,14	2	1	3	2	2	2	3
201	150,97	146,82	82,729	3	2	2	3	3	3	2
202	146,94	142,85	79,365	3	2	2	3	3	3	2
203	145,39	141,1	77,808	3	2	2	3	3	3	2
204	143,82	139,73	76,078	3	2	2	3	3	3	2
205	142,81	138,29	74,711	3	2	2	3	3	3	2
206	153,05	145,38	82,569	3	2	2	3	3	3	2
207	153,09	145,53	82,543	3	2	2	3	3	3	2
208	153,16	145,33	83,286	3	2	2	3	3	3	2
209	153,81	146,11	85,096	3	2	2	3	3	3	2
210	152,24	144,32	83,236	3	2	2	3	3	3	2
211	151,76	143,83	83,535	3	2	2	3	3	3	2
212	151,86	143,66	83,644	3	2	2	3	3	3	2
213	150,38	142,15	81,13	3	2	2	3	3	3	2
214	152,22	143,87	84,116	3	2	2	3	3	3	2
215	151,3	143,17	82,41	3	2	2	3	3	3	2
216	152,51	144,04	83,404	3	2	2	3	3	3	2
217	152,54	144,26	82,64	3	2	2	3	3	3	2
218	154,45	145,9	84,517	3	2	2	3	3	3	2
219	155,92	147,64	86,158	3	2	2	3	3	3	2
220	158,04	149,49	88,3	3	2	2	3	3	3	2
221	159,07	150,62	88,689	3	2	2	3	3	3	2
222	159,27	150,71	88,922	3	2	2	3	3	3	2
223	160,54	152,05	89,901	3	2	2	3	3	3	2

224	162,15	153,85	91,431	3	2	2	3	3	3	2
225	163,73	155,29	92,498	1	2	2	1	1	1	1
226	165,32	157,05	94,073	1	2	2	1	1	1	1
227	166,31	157,85	94,896	1	2	2	1	1	1	1
228	166,31	158,07	94,72	1	2	2	1	1	1	1
229	166,07	157,73	94,575	1	2	2	1	1	1	1
230	165,45	157,53	94,526	1	2	2	1	1	1	1
231	164,93	156,73	94,387	1	2	2	1	1	1	1
232	164,29	156,54	94,604	1	2	2	1	1	1	1
233	162,97	155,13	93,067	1	2	2	1	1	1	1
234	161,86	154,25	91,784	3	2	2	3	3	3	2
235	160,76	153,17	90,698	3	2	2	3	3	3	2
236	158,96	151,6	88,584	3	2	2	3	3	3	2
237	157,94	150,75	87,487	3	2	2	3	3	3	2
238	158,03	151,25	88,632	3	2	2	3	3	3	2
239	157,08	150,31	87,374	3	2	2	3	3	3	2
240	156,14	149,83	85,823	3	2	2	3	3	3	2
241	156,71	150,54	86,814	3	2	2	3	3	3	2
242	155,42	149,67	84,51	3	2	2	3	3	3	2
243	156,51	150,69	85,995	3	2	2	3	3	3	2
244	155,93	150,58	85,369	3	2	2	3	3	3	2
245	155,34	150,09	84,731	3	2	2	3	3	3	2
246	154,8	150	84,493	3	2	2	3	3	3	2
247	154,42	149,53	84,284	3	2	2	3	3	3	2
248	153,26	148,54	82,976	3	2	2	3	3	3	2
249	142,67	137,49	75,823	3	2	2	3	3	3	2
250	145,51	139,85	76,957	3	2	2	3	3	3	2
251	146,9	140,8	78,369	3	2	2	3	3	3	2
252	147,31	141,38	78,874	3	2	2	3	3	3	2
253	148,99	142,53	81,603	3	2	2	3	3	3	2
254	156,03	147,81	85,725	3	2	2	3	3	3	2
255	158,68	150,16	87,775	3	2	2	3	3	3	2
256	160,02	151,69	89,197	3	2	2	3	3	3	2
257	161,39	152,77	90,203	3	2	2	3	3	3	2
258	161,21	152,61	89,189	3	2	2	3	3	3	2
259	162,04	153,2	90,802	3	2	2	3	3	3	2
260	160,27	151,54	90,351	3	2	2	3	3	3	2
261	158,05	149,24	90,269	3	2	2	3	3	3	2
262	154,26	145,54	87,501	3	2	2	3	3	3	2
263	151,12	142,32	85,72	3	2	2	3	3	3	2
264	147,95	139,24	82,965	3	2	2	3	3	3	2
265	145,43	136,44	79,915	3	2	2	3	3	3	2
266	144,92	136,2	79,428	3	2	2	3	3	3	2
267	144,37	135,62	77,357	3	2	2	3	3	3	2
268	145,14	136,58	76,618	3	2	2	3	3	3	2
269	146,14	137,56	76,014	3	2	2	3	3	3	2
270	146,62	138,19	76,085	3	2	2	3	3	3	2
271	147,72	139,63	76,55	3	2	2	3	3	3	2
272	149,37	141,2	77,255	3	2	2	3	3	3	2
273	150,73	142,93	77,884	3	2	2	3	3	3	2
274	152,38	144,49	79,353	3	2	2	3	3	3	2
275	153,34	145,78	80,282	3	2	2	3	3	3	2
276	154,08	146,42	81,287	3	2	2	3	3	3	2
277	154,14	146,87	81,857	3	2	2	3	3	3	2
278	154,78	147,53	83,442	3	2	2	3	3	3	2
279	153,14	146,37	81,977	3	2	2	3	3	3	2
280	151,7	145,15	80,748	3	2	2	3	3	3	2
281	149,75	143,59	79,198	3	2	2	3	3	3	2
282	147,59	141,49	76,814	3	2	2	3	3	3	2
283	146,78	141,35	76,918	3	2	2	3	3	3	2
284	146,31	140,8	77,118	3	2	2	3	3	3	2

285	144,9	139,96	75,947	3	2	2	3	3	3	2
286	144,5	139,51	75,595	3	2	2	3	3	3	2
287	143,98	138,97	74,82	3	2	2	3	3	3	2
288	143,48	138,78	74,274	3	2	2	3	3	3	2
289	144,18	139,51	74,976	3	2	2	3	3	3	2
290	143,93	139,46	74,075	3	2	2	3	3	3	2
291	145,41	140,99	75,652	3	2	2	3	3	3	2
292	145,69	141,23	75,383	3	2	2	3	3	3	2

293	146,47	141,87	77,387	3	2	2	3	3	3	2
294	144,71	140,19	76,226	3	2	2	3	3	3	2
295	143,45	138,78	75,977	3	2	2	3	3	3	2
296	141,84	137,16	75,021	3	2	2	3	3	3	2
297	140,94	135,86	73,997	3	2	2	3	3	3	2
298	140,91	135,9	73,962	3	2	2	3	3	3	2
299	142,87	137,5	76,191	3	2	2	3	3	3	2
300	143,81	138,26	76,34	3	2	2	3	3	3	2

Lampiran 3. Sintaks pengolahan citra menggunakan octave

```

close all
clear
clc
% baca image
data = imread('0_100.jpg');
% tampilkan original image
% figure
% imshow(data)
RGB = double(data)
% Komponen R, G, dan B
R = RGB(:,:,1);
G = RGB(:,:,2);
B = RGB(:,:,3);
[b k t]=size(RGB)
SR=0;
SG=0;
SB=0;
N=0;
for mx=1:b
    for my=1:k
        if R(mx,my)<255
            if G(mx,my)<255
                if B(mx,my)<255
                    SR=SR+R(mx,my);
                    SG=SG+G(mx,my);
                    SB=SB+B(mx,my);
                    N=N+1;
                end
            end
        end
    end
end
rata (1,1) = SR/N;
rata (1,2) = SG/N;
rata (1,3) = SB/N;
% Tampilkan hasil segmentasi
% figure
% imshow(data)

```

Lampiran 4. Sintaks simulasi menggunakan scilab

```

clear
clc
sheet1=readxls("atribut.xls")
S1=sheet1(1);
data1=S1.value
for mx=1:3
    data(:,mx)=data1(:,mx)
end

```

```

end
[b k]=size(data)
atr=k
kelas = 3
nt = 17
C = zeros(kelas,k,nt)
C(:,1,1)=[179.8786 157.8767 84.50882;186.7556 179.073 104.3538;152.5373 145.5971 82.96364]
tas=zeros(b,nt)
tas(:,1)=data(:,k+1)
for mt = 1:1:nt
    for mx = 1:1:300
        for my = 1:1:kelas
            dum = 0
            for mz = 1:1:atr
                dum = dum+(C(my,mz,mt)-data(mx,mz))^2
            end
            J(mx,my,mt) = sqrt(dum)
        end
    end
    for mx = 1:1:b
        m(mx,1)=min(J(mx,:,mt))
    end
    Csem = zeros(kelas,atr)
    mb = zeros(atr,1)
    for mx = 1:1:b
        for mk = 1:1:kelas
            if m(mx,1)==J(mx,mk,mt)
                tas(mx,mt+1)=mk
                mb(mk,1)=mb(mk,1)+1
                for mz = 1:1:atr
                    Csem(mk,mz) = Csem(mk,mz)+data(mx,mz);
                end
            end
        end
    end
    for mx=1:1:kelas
        Csem1(mx,:)=Csem(mx,:)/mb(mx,1)
    end
    C(:,1,mt+1)=Csem1(:,1)
end
CM=zeros(3,3,6)
for mx=1:1:b
    if tas(mx,1)==1
        if tas(mx,nt+1)==1
            CM(1,1,1)=CM(1,1,1)+1;
        end
    end
    if tas(mx,1)==1
        if tas(mx,nt+1)==2
            CM(1,2,1)=CM(1,2,1)+1;
        end
    end
    if tas(mx,1)==1
        if tas(mx,nt+1)==3
            CM(1,3,1)=CM(1,3,1)+1;
        end
    end
end
end

```

```

if tas(mx,1)==2
    if tas(mx,nt+1)==1
        CM(2,1,1)=CM(2,1,1)+1;
    end
end
if tas(mx,1)==2
    if tas(mx,nt+1)==2
        CM(2,2,1)=CM(2,2,1)+1;
    end
end
if tas(mx,1)==2
    if tas(mx,nt+1)==3
        CM(2,3,1)=CM(2,3,1)+1;
    end
end
if tas(mx,1)==3
    if tas(mx,nt+1)==1
        CM(3,1,1)=CM(3,1,1)+1;
    end
end
if tas(mx,1)==3
    if tas(mx,nt+1)==2
        CM(3,2,1)=CM(3,2,1)+1;
    end
end
if tas(mx,1)==3
    if tas(mx,nt+1)==3
        CM(3,3,1)=CM(3,3,1)+1;
    end
end
STCM(1,1)=CM(1,1,1)+CM(2,2,1)+CM(3,3,1);
end
dum1= CM(:,1,1);
dum2= CM(:,2,1);
dum3= CM(:,3,1);
CM(:,1,2)=CM(:,1,1);
CM(:,2,2)=dum3;
CM(:,3,2)=dum2;
STCM(2,1)=CM(1,1,2)+CM(2,2,2)+CM(3,3,2);
CM(:,1,3)=dum2
CM(:,2,3)=dum1;
CM(:,3,3)=CM(:,3,1);
STCM(3,1)=CM(1,1,3)+CM(2,2,3)+CM(3,3,3);
CM(:,1,4)=dum2;
CM(:,2,4)=dum3;
CM(:,3,4)=dum1;
STCM(4,1)=CM(1,1,4)+CM(2,2,4)+CM(3,3,4);
CM(:,1,5)=dum3;
CM(:,2,5)=dum1;
CM(:,3,5)=dum2;
STCM(5,1)=CM(1,1,5)+CM(2,2,5)+CM(3,3,5);
CM(:,1,6)=dum3;
CM(:,2,6)=dum2;
CM(:,3,6)=dum1;
STCM(6,1)=CM(1,1,6)+CM(2,2,6)+CM(3,3,6);

```